

School of Ayurveda (KSVAMC&RC)



Shobhit University, Gangoh

(Established by UP Shobhit University Act No. 3, 2012)

SCHOOL OF AYURVEDA

Ordinances, Regulations & Syllabus

For

M.D in Kayachikitsa Three year Programme

(W.e.f. session 2022-2023)

Approved and adopted in the year 2022 (Board of Studies; 9th Meeting)

Programme Educational Objectives (PEOs)

1. **Mastery in Kayachikitsa:**
 - Develop expertise in Ayurvedic principles and practices of internal medicine, with a focus on understanding the pathophysiology, diagnosis, and treatment of systemic disorders.
 2. **Holistic Health Care Providers:**
 - Equip graduates to offer holistic treatment integrating Ayurveda's preventive, promotive, and curative aspects in managing chronic and lifestyle-related diseases.
 3. **Research and Innovation:**
 - Foster skills for conducting advanced research to validate Ayurvedic therapies and develop evidence-based treatment protocols.
 4. **Leadership in Healthcare:**
 - Prepare graduates to take leadership roles in promoting Ayurvedic medicine in healthcare systems locally and globally.
 5. **Ethics and Compassion:**
 - Instill a strong sense of ethical practice, cultural sensitivity, and patient-centered care.
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Programme Specific Objectives (PSOs)

1. **Clinical Excellence in Ayurveda:**
 - Achieve proficiency in diagnosing and managing diseases using Ayurvedic approaches such as Panchakarma, Rasayana, and dietary and lifestyle modifications.
 2. **Integration with Modern Medicine:**
 - Understand and collaborate with modern medical systems to provide integrative healthcare solutions, recognizing the indications and limitations of both.
 3. **Focus on Preventive Medicine:**
 - Implement preventive strategies through the Ayurvedic principles of Dinacharya, Ritucharya, and Sadvritta in public health.
 4. **Specialized Knowledge of Kayachikitsa:**
 - Gain expertise in managing chronic ailments like diabetes, arthritis, gastrointestinal disorders, and neurological conditions using Ayurvedic treatments.
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Programme Outcome Objectives (POOs)

1. **Comprehensive Ayurvedic Knowledge:**
 - Demonstrate advanced knowledge of classical Ayurvedic texts, including Charaka Samhita, and their application to contemporary health challenges.
2. **Patient-Centered Practice:**
 - Independently diagnose and manage a wide range of internal medical conditions using Ayurvedic tools and personalized treatment plans.
3. **Research Competence:**
 - Design and conduct research to evaluate the efficacy of Ayurvedic treatments, contributing to scientific literature and policy-making.
4. **Collaboration and Communication:**
 - Effectively communicate with patients, caregivers, and multidisciplinary teams to optimize patient outcomes.

5. Public Health Contribution:

- Apply Ayurvedic principles to improve community health through awareness, preventive care, and treatment strategies for non-communicable diseases.

6. Ethical and Professional Responsibility:

- Practice Ayurveda with a commitment to ethical principles, patient safety, and sustainable healthcare practices.

M.D.-AYURVEDA PRELIMINARY
10 .KAYACHIKITSA (General Medicine)

PAPER-II

Theory- 100 marks

PART A

50 marks

1. Understanding of fundamental concepts of Kayachikitsa like Vriddhi and Kshaya of Dosha, Dushya, Mala with Amshaamsha Kalpana. Srotodushti, Khavaigunya, Agni, Ama (Saama and Nirama Dosha, Dhatu & Mala). Aavarana, Rogamarga, Ashayapakarsha, Dosha Gati, Kriyakala. Aushadha Sevana Kala, Anupana, Pathya-Apathya and their scientific relevance during health and disease.
2. Detailed knowledge of Rogi Roga Pariksha including detailed history taking and systemic examination of patient. Clinical implementation of Dwividha Pariksha, Trividha Pariksha, Chaturvidha Pariksha, Panchavidha Pariksha, Shadvidha Pariksha, Ashtavidha Pariksha, Dashvidha Pariksha Bhavas and Prakrityadi Dashvidha Pariksha.
3. Principles of Kayachikitsa in disease management including Shodhana, Shamana and Naimittika Rasayana.
4. Introduction of the basic principles of Modern medicine, Homeopathy, Unani, Siddha, Tibetan Medicine, Yoga and Naturopathy and their relevance in light of the basic principles of Ayurvedic medicine.

PART B

50 marks

1. Chikitsa Siddhanta of Pranavaha, Annavaha, Udakavaha, Rasadi Dhatuvaha, Malavaha & Manovaha Srotovikara.
2. Emergency medicine: Acute Severe Asthma, pulmonary oedema, myocardial infarction, cerebrovascular accidents, water and electrolyte imbalance, haemorrhage, syncope, seizure, coma, hyperpyrexia, hypertensive encephalopathy.
3. Knowledge of conducting various medical procedures like infusions, tapping, lumbar puncture, Ryle's tube insertion, catheterization, tractions, water seal drainage, Cardio Pulmonary Resuscitation.
4. Basic knowledge of underlying principles of ECG, TMT, echo cardiography, vascular doppler studies, EEG, EMG, X-Ray, USG, CT scan, MRI, PET and their interpretation.
5. Knowledge of common Ayurvedic formulations and preparations used in treatment:
Churna- Triphala, Sitopaladi, Lavanbhaskara, Hingvashtaka, Avipattikara, Gangadhara, Shaddharana, Sudarshana, Panchasakara, Ajmodadi.
Kashaya- Dashamula, Rasnasaptaka, Asanadi, Pathyadi, Phalatrikadi, Punarnavashtaka, Gojivhadi, Mahamanjishthadi, Drakshadi Kashaya.
Asavas-Arista- Amritarishta, Kanakasava, Chitrakasava, Saraswatarishta, Ashwagandharishta, Chandanasava.
Vati- Sanjivani, Chandraprabha, Agnitundi, Chitrakadi, Khadiradi, Vyoshadi, Shankha Vati, Shiva Gutika.

Guggula-Kalpana-Triphalaguggula, Kaishoraguggula, Trayodashangaguggula, Simhanadaguggula, Yogarajaguggula, Gokshuradi guggula, Kanchanaraguggula. Rasaushadhi- Tribhuvanakirti Rasa, Arogyavardhini Rasa, Shwasakuthara Rasa, Rasamanikya Rasa, Smritisagara Rasa, Lakshmivilasa Rasa, Sutshekhara Rasa, Pravala Panchamrita Parpati, Hemagarbhapottali Rasa.

Taila- Mahanarayana Taila, Pindataila, Prasarinadi Taila, Ksheerabala Taila, Brihat Saindhavadi Taila, Panchaguna Taila, Amritadi Taila, Marichyadi Taila, Mahamasha Taila.

Ghrita- Mahatriphaladi Ghrita, Brahmi Ghrita, Panchtikta Guggulu Ghrita, Sukumara Ghrita, Dadimadya Ghrita, Kantakari Ghrita, Kalyanaka Ghrita.

Lehya- Chyavanaprasha Avaleha, Kushmanda Avaleha, Ashwagandha Avaleha, Agastya Hareetaki Rasayana, Drakshavaleha, Vasavaleha, Amrita-Bhallataka Rasayana.

PRACTICAL

100 marks

Content:-

Daily hospital duties in OPD, IPD and casualty

Bed-side case taking – 25 patients

Distribution of marks

(practical):

1. Case records of 25 Patients in detail 20 marks

2. Bedside clinical case taking-

Long case 20 marks

Short case 10 marks

3. Medical procedures/laboratory work 15 marks

4. Instruments and spotting 15 marks

5. Viva voce 20 marks

REFERENCE BOOKS-

Charak Samhita

-

Cakrapanidutta commentry Sushrut Samhita

-with all available commentaries. Ashtang

Samgraha

—Indu commentary

Ashtang Hridaya

—Arundutta and Hemadri commentry

Cikitsadarsha

- Pandit Rajesvardutta Shastri

Kayachikitsa

- Ramaraksha Pathak

Rog Pariksha Vidhi

- Priyavrat Sharma

Panchakarma Vigyan

- Haridas

Sridhar Kasture Ayurved Nidan Chikitsa

Siddhanta - Prof. R.H.Singh.

Kayachikitsa Vol. I-IV.

- Prof. Ajay

Kumar Davidson's Principles and Practice of Medicine.

API Text Book of Medicine.

Harrison's Text Bok of Medicine.

Cecil Text Book of Medicine.

Relevant texts of concerned subjects.



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(W.e.f. session 2022-2023)

**Approved and adopted in the year 2022 (Board of Studies; 9th
Meeting)**

Programme Educational Objectives (PEOs)

1. **Mastery of Shalyatantra:** Graduates will gain a deep understanding of Ayurvedic surgical principles, procedures, and their integration with contemporary surgical practices.
 2. **Research and Development:** Graduates will be equipped to undertake innovative research in Shalyatantra to advance the discipline and improve patient outcomes.
 3. **Holistic Healthcare Leadership:** Graduates will develop leadership qualities to promote the holistic approach of Ayurveda in addressing surgical and para-surgical challenges.
 4. **Professionalism and Ethics:** Emphasis on ethical practices, compassionate care, and adherence to classical Ayurvedic principles in professional life.
 5. **Lifelong Learning:** Graduates will pursue continual learning to adapt to advancements in surgical techniques and healthcare technologies.
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Programme Specific Objectives (PSOs)

1. **Core Competence in Shalyatantra:**
 - Gain expertise in Ayurvedic surgical techniques like Ksharasutra, Agnikarma, and Raktamokshana.
 - Understand and perform modern surgical interventions with an Ayurvedic perspective.
 2. **Integration with Modern Medicine:**
 - Ability to identify situations where modern surgical procedures are required and work collaboratively with contemporary medical professionals.
 3. **Patient-Centered Approach:**
 - Develop skills to provide individualized care using Shalyatantra principles while addressing patient needs effectively.
 4. **Community and Preventive Health:**
 - Apply Ayurvedic surgical principles in community healthcare, focusing on prevention and minimally invasive approaches.
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Programme Outcome Objectives (POOs)

1. **Comprehensive Knowledge:**
 - Demonstrate detailed knowledge of Shalyatantra texts (e.g., Sushruta Samhita) and their clinical applications.
2. **Clinical Proficiency:**
 - Independently diagnose and treat surgical conditions using Ayurvedic and contemporary methods.
3. **Research Acumen:**
 - Conduct and contribute to scholarly research in Ayurveda, focusing on evidence-based validation of Shalyatantra techniques.
4. **Communication and Collaboration:**
 - Effectively communicate with peers, patients, and multidisciplinary teams to improve healthcare delivery.
5. **Cultural Competency:**
 - Promote and practice Ayurvedic principles in a culturally sensitive manner, addressing diverse patient populations.

POST GRADUATE PRELIMINARY
13. M.S. (AYU) SHALYA TANTRA – GENERAL SURGERY

FUNDAMENTAL PRINCIPLES AND APPLIED ASPECTS OF SHALYA TANTRA

PAPER-II

THEORY- 100 MARKS
TEACHING HOURS – 100 HRS

PART A

50 MARKS

1. Etymology, Definition, Scope and Importance of Shalya Tantra.
2. Study of Sushruta Samhita Sutra Sthana from 1st to 29th chapter.
3. Study of modern surgical clinical methodology.
4. Applied anatomy, physiology and surgical pathology of common surgical conditions including relevant Ayurvedic aspects.
5. Applied aspect of Shat Kriyakala in the pathogenesis of surgical diseases.
6. Applied aspect of Prakriti in understanding the causes and role of treatment in surgical diseases.
7. Applied aspect of basic principles of Ayurveda in Rogi Pariksha (Trividha, Shadvidha, Ashtavidha and Dashavidha Pariksha).
8. Concept and applied aspect of Sadhya-Asadhya (Prognosis) - Arishtha lakshana.
9. Marma Sharira – Etymological derivation, definition, basic concept of Marma, origin, classification, Pramana. Consequences of Marmaghata and their management.
10. Concept of Shock - Its varieties, etiopathogenesis and management – Cardiopulmonary resuscitation (CPR), Endo-tracheal intubation and Tracheostomy. Drug reactions and Anaphylaxis – Management.
11. Basics of Fluid, Electrolyte, Acid Base Balance and Nutrition
12. Antibiotics, Analgesics, Anti-inflammatory and Emergency drugs in surgical practice.
13. Surgical Emergency conditions and its management.
14. Sushruta's concept of Rakta. Raktasrava – Haemorrhage – Types, Pathophysiology, clinical features and management. Concept of Raktastambhana – Haemostasis. Bloodtransfusion – Indications, blood groups, components, compatibility and complications with management.
15. Medico-legal aspects in Surgery. Knowledge of documentation and record keeping.

PART B

50 marks

16. Knowledge of ancient and recent Yantra and Shastra – Surgical instruments and their application in surgical practice.
17. Asepsis and Antisepsis. Sterilisation (Nirjivanukaran) - methods and types.
18. Surgical infections – Sepsis, Cellulitis, Erysipelas, Tetanus, Gas gangrene. Handling and care of HIV and Hepatitis positive patients. Knowledge of conditions like Bacteraemia, Septicaemia, Toxaemia and Pyaemia
19. Sangyahan / Anesthesiology - Types, methods, indications, contraindications, complications and its management.
20. Trividha Karma – Purva, Pradhan and Pashchat Karma. Modern principles of preoperative and post-operative care.
21. Ashtavidha Shastra Karmas.
22. Bandhana Karma – Recent advances.
23. Kshara Karma – Introduction, types, method of various preparations like Kshara, Kshara Varti, Kshara Pichu and applications.
24. Kshara Sutra – Method of preparation, standardization and applications.
25. Agnikarma – Introduction, types and applications.
26. Raktamokshana – Introduction, types and applications.
27. Application of Panchakarma therapy in surgical practice.
28. Scope of Pathya-Apathya in the management of surgical diseases.

PRACTICAL

100 MARKS

Content:

1. Hospital duties in OPD, IPD, OT and Casualty.
2. Case record – 50 cases.
3. Surgical cases – Observing/Assisting/Performing- 50 cases.
4. Knowledge of instruments required in surgical practices.
5. Ayurvedic and Modern diagnostic and therapeutic procedures.
6. Fluid therapy and blood transfusion.
7. Contraception and sterilizations.
8. Pre-operative, operative and post operative procedures.
9. Practical training of local Anaesthesia.
10. Interpretation of Imaging techniques.
11. Practical knowledge of Yogya vidhi – Experimental surgery and Simulators.

Distribution of marks (practical):

1. Presentation of related Research work like Synopsis and Case record - 20 marks
2. Bedside clinical case taking-

Long case	- 20 marks
Short case	- 10 marks
3. Identification of instruments, X-ray etc - 10 marks
4. Demonstration of Surgical and Parasurgical Procedure - 10 marks
5. Viva voce - 30 marks

REFERENCE BOOKS:

1. Sushruta Samhita
2. Ashtanga Sangraha
3. Ashtanga Hridaya
4. Charaka Samhita
5. The Surgical instruments of the Hindus - Girindranath Mukhopadhyaya
6. Shalya Tantra Samuchchaya - Pandit Ramadesh Sharma
7. Shalya Vigyan (Part 1-2) - Dr. Surendra Kumar Sharma
8. Shalya Samanvaya (Part 1-2) - Vd. Anantaram Sharma
9. Shalya Pradeepika - Dr. Mukund Swaroop Verma
10. Sushruti - Dr. Ram Nath Dwivedi
11. Clinical Shalya Vigyan - Dr. Akhilanand Sharma
12. Bhagna Chikitsa - Dr. Prabhakar Janardhan Deshpande
13. Kshara sutra management in anorectal ailments - Dr. S.K. Sharma, Dr. K.R.Sharma and Dr. Kulwant Singh.
14. A manual on Fistula-in-ano and Ksharasutra Therapy – Dr. Manoranjan Sahu
15. Recent trends in the management of Arshas / Haemorrhoids - Dr. P. Hemantha Kumar
16. Anorectal diseases in Ayurveda - Dr. Sizoria and Dr. Praveen Kumar Chowdary.
17. Adhunik Shalya Chikitsa Siddhanta - Dr. Katil Narshingham Udupa
18. Agnikarma Technology Innovation - Dr. P.D. Gupta
19. Shalya Tantra Ke Siddhant - Dr. K.K.Takral
20. Arsha Evum Bhagander Mein sutra Avacharan - Vd. Kanak Prasad Vyas
21. Recent advances in Kshara Sutra - Dr. M. Bhaskar Rao
22. Leech application in Ayurveda - Dr. M. Bhaskar Rao
23. Kshara Sutra - Dr. S.N.Pathak
24. Text book of Shalya Tantra (Ayurvedic Surgery) - Dr. P. Hemantha Kumar
25. Shalya Shalakya Tantra - Vd. S.G. Joshi
26. Surgical ethics of Ayurveda - Dr. D.N. Pande
27. Anushastra Karma - Dr. D.N. Pande
28. Concept of Vrana in Ayurveda - Dr. Lakshman Singh
29. Significance for Poorva Karma in Surgical Patient - Dr. Lakshman Singh
30. Sangyahan Prakash - Dr. D.N. Pande
31. Marma Science and Principles of Marma Therapy – Dr. Sunil Kumar Joshi
32. Recent trends in the management of Bhagandara / Fistula-in-ano - Dr. P. Hemantha Kumar
33. Principles and Practice of Agnikarma - Dr. Anand Kumar and Dr. Kanchan Shekokar.
34. Shalya Vigyan (Sachitra) - Anantram Sharma
35. Text book of Surgery - Sabistan
36. Operative Surgery – Rob and smith

37. Bailey and Love's Short Practice of Surgery - Norman.S. Williams,
Charles.V.
Mann and R.C.G. Russell
38. Text books of Operative Surgery - Farquharson's
39. Principles of Surgery - Schwartz
40. Emergency Surgery - Hamilton Bailey's
41. Manipal Manual of Surgery - Dr. Rajgopal Shenoy
42. SRB's Manual of Surgery - Sriram Bhat M
43. Surgery of the Anus, Rectum and Colon - John Goligher
44. Surgical pathology - Willing Worth
45. Clinical methods in surgery - S. Das
46. Textbook of Operative Surgery - S. Das
47. A concise Text Book of Surgery - S. Das
48. A manual on Clinical Surgery - S. Das
49. A System of Surgical Diagnosis - T.N. Patel
50. Clinical Anatomy/ Surgical Anatomy - John E.Skandalakis
51. A Practical Guide to Operative Surgery - S. Das
52. Manual of Surgical Instruments - M.M. Kapur
53. Ward Procedures - Patel Mansukh. B
54. Drugs and Equipment for Anaesthesia - Arun kumar
55. Primary Anaesthesia - Maurice King
56. Synopsis of Anaesthesia - Lee
57. Outline of Orthopedics - John Crawford
Adams and
David Hamblen. L
58. Fractures and Joint Injuries - Watson-Jones
59. Outline of Fracture - John Crawford Adams

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SCHOOL OF AYURVEDA

Ordinances, Regulations & Syllabus

For

M.D in Research Methodology Three year Programme

(W.e.f. session 2023-224)

**Approved and adopted in the year 2023 (Board of Studies; 10th
Meeting)**

Course Objectives:

1. **Foster Research Literacy:**
 - Introduce students to the principles and framework of scientific research and evidence-based practices.
2. **Research Design and Methodology:**
 - Teach students to select appropriate study designs and methodologies for clinical and academic research.
3. **Data Management and Statistical Analysis:**
 - Provide knowledge and hands-on training in collecting, organizing, and analyzing data using statistical tools.
4. **Critical Thinking and Literature Review:**
 - Develop the ability to critically evaluate research articles, systematic reviews, and meta-analyses.
5. **Ethical Conduct in Research:**
 - Instill a comprehensive understanding of research ethics, including consent processes, patient safety, and publication integrity.
6. **Scientific Communication:**
 - Enhance skills in writing research proposals, manuscripts, and effective presentation of research findings.
7. **Problem-Solving in Research:**
 - Train students to identify gaps in medical knowledge and formulate research questions that address these gaps.

{ANNEXURE-2}

M.D./M.S.-AYURVEDA PRELIMINARY PAPER-I RESEARCH METHODOLOGY AND MEDICAL STATISTICS

PART-A RESEARCH METHODOLOGY

- 1 Introduction to Research
 - A. Definition of the term research
 - B. Definition of the term anusandhan
 - C. Need of research in the field of Ayurveda
- 2 General guidelines and steps in the research process
 - A. Selection of the research problem
 - B. Literature review: different methods (including computer database) with their advantages and limitations
 - C. Defining research problem and formulation of hypothesis
 - D. Defining general and specific objectives
 - E. Research design: observational and interventional, descriptive and analytical, preclinical and clinical, qualitative and quantitative
 - F. Sample design G. Collection of the data
 - H. Analysis of data.
 - I. Generalization and interpretation, evaluation and assessment of hypothesis.
 - J. Ethical aspects related to human and animal experimentation.
 - K. Information about Institutional Ethics Committee (IEC) and Animal Ethics Committee (AEC) and their functions. Procedure to obtain clearance from respective committees, including filling up of the consent forms and information sheets and publication ethics.
- 3 Preparation of research proposals in different disciplines for submission to funding agencies taking EMR-AYUSH scheme as a model.
4. Scientific writing and publication skills.
 - a. Familiarization with publication guidelines- Journal specific and CONSORT guidelines.
 - b. Different types of referencing and bibliography.
 - c. Thesis/Dissertation: contents and structure
 - d. Research articles structuring: Introduction, Methods, Results and Discussions (IMRAD)
- 5 Classical Methods of Research.
Concept of Pratyakshadi Pramana Pariksha, their types and application for Research in Ayurveda.

Dravya-, Guna-, Karma-Parikshana Paddhati

Aushadhi-yog Parikshana Paddhati

Swastha, Atura Pariksha Paddhati

DashvidhaParikshya Bhava

Tadvidyasambhasha, vadmarga and tantrayukti
- 6 Comparison between methods of research in Ayurveda (Pratigya, Hetu, daharana, Upanaya, Nigaman) and contemporary methods in health sciences.

7. Different fields of Research in Ayurveda

Fundamental research on concepts of Ayurveda

- a. Panchamahabhuta and tridosha.
- b. Concepts of rasa, guna, virya, vipak, prabhav and karma
- c. Concept of prakriti-saradi bhava, ojas, srotas, agni, aam and koshtha.

8. Literary Research-

Introduction to manuscriptology: Definition and scope. Collection, conservation, ataloguing.

Data mining techniques, searching methods for new literature; search of new concepts in the available literature. Methods for searching internal and external evidences about authors, concepts and development of particular body of knowledge.

9. Drug Research (Laboratory-based)- Basic knowledge of the following: Drug sources: plant, animal and mineral. Methods of drug identification. Quality control and standardization aspects: Basic knowledge of Pharmacopoeial standards and parameters as set by Ayurvedic Pharmacopoeia of India. Information on WHO guidelines for standardization of herbal preparations. Good Manufacturing Practices (GMP) and Good Laboratory Practices (GLP).

10. Safety aspects: Protocols for assessing acute, sub-acute and chronic toxicity studies. Familiarization with AYUSH guidelines (Rule 170), CDCSO and OECD guidelines.

11. Introduction to latest Trends in Drug Discovery and Drug Development -Brief information on the traditional drug discovery process -Brief information on the latest trends in the Drug Discovery process through employment of rational approach techniques; anti-sense approach, use of micro and macro-arrays, cell culture based assays, use of concepts of systems biology and network physiology -Brief introduction to the process of Drug development

12. Clinical research:

Introduction to Clinical Research Methodology identifying the priority areas of Ayurveda

Basic knowledge of the following:-

Observational and Interventional studies

Descriptive & Analytical studies

Longitudinal & Cross sectional studies

Prospective & Retrospectives studies

Cohort studies

Randomized Controlled Trials (RCT) &their types Single-case design, case control studies, ethnographic studies, black box design, cross-over design, factorial design. Errors and bias in research. New concepts in clinical trial- Adaptive clinical trials/ Good clinical practices (GCP) Phases of Clinical studies: 0,1,2,3, and 4. Survey studies - Methodology, types, utility and analysis of Qualitative Research methods. Concepts of in-depth interview and Focus Group Discussion.

13. Pharmacovigilance for ASU drugs. Need, scope and aims & objectives. National Pharmacovigilance Programme for ASU drugs.

14. Introduction to bioinformatics, scope of bioinformatics, role of computers in biology. Introduction to Data base- Pub med, Medlar and Scopus. Accession of databases.

15. Intellectual Property Rights- Different aspect and steps in patenting. Information on Traditional Knowledge Digital Library (TKDL).

PART-B**40 marks****MEDICAL STATISTICS****Teaching hours: 80**

- 1 Definition of Statistics : Concepts, relevance and general applications of Biostatistics in Ayurveda
- 2 Collection, classification, presentation, analysis and interpretation of data (Definition, utility and methods)
- 3 Scales of Measurements - nominal, ordinal, interval and ratio scales. Types of variables – Continuous, discrete, dependent and independent variables. Type of series – Simple, Continuous and Discrete
- 4 Measures of Central tendency – Mean, Median and Mode.
- 5 Variability: Types and measures of variability – Range, Quartile deviation, Percentile, Mean deviation and Standard deviation
- 6 Probability: Definitions, types and laws of probability,
- 7 Normal distribution: Concept and Properties, Sampling distribution, Standard Error, Confidence Interval and its application in interpretation of results and normal probability curve.
- 8 Fundamentals of testing of hypotheses:
Null and alternate hypotheses, type I and type 2 errors.

Tests of significance: Parametric and Non-Parametric tests, level of significance and power of the test, 'P' value and its interpretation, statistical significance and clinical significance
- 9 Univariate analysis of categorical data:
Confidence interval of incidence and prevalence, Odds ratio, relative risk and Risk difference, and their confidence intervals
- 10 Parametric tests: 'Z' test, Student's 't' test: paired and unpaired, 'F' test, Analysis of variance (ANOVA) test, repeated measures analysis of variance
- 11 Non parametric methods: Chi-square test, Fisher's exact test, McNemar's test, Wilcoxon test, Mann-Whitney U test, Kruskal – Wallis with relevant post hoc tests (Dunn)
- 12 Correlation and regression analysis:
Concept, properties, computation and applications of correlation, Simple linear correlation, Karl Pearson's correlation co-efficient, Spearman's rank correlation. Regression- simple and multiple.
- 13 Sampling and Sample size computation for Ayurvedic research: Population and sample. Advantages of sampling, Random (Probability) and non random (Nonprobability) sampling. Merits of random sampling. Random sampling methods- simple random, stratified, systematic, cluster and multiphase sampling. Concept, logic and requirement of sample size computation, computation of sample size for comparing two means, two proportions, estimating mean and proportions.
- 14 Vital statistics and Demography: computation and applications - Rate, Ratio, Proportion, Mortality and fertility rates, Attack rate and hospital-related statistics
- 15 Familiarization with the use of Statistical software like SPSS/Graph Pad

PRACTICAL

100 marks

I. RESEARCH METHODOLOGY

Teaching hours 120

PRACTICAL NAME

- 1 **Pharmaceutical Chemistry**
Familiarization and demonstration of common lab instruments for carrying out analysis as per API
- 2 **Awareness of Chromatographic Techniques** Demonstration or Video clips of following:
 - Thin-layer chromatography (TLC).
 - Column chromatography (CC).
 - Flash chromatography (FC)
 - High-performance thin-layer chromatography (HPTLC)
 - High Performance (Pressure) Liquid Chromatography (HPLC)
 - Gas Chromatography (GC, GLC)
- 4 **Pharmacognosy** Familiarization and Demonstration of different techniques related to:- Drug administration techniques- oral and parenteral. Blood collection by orbital plexuses puncturing. Techniques of anesthesia and euthanasia. Information about different types of laboratory animals used in experimental research Drug identification as per API including organoleptic evaluation
- 5 **Pharmacology and toxicology**
Familiarization and demonstration of techniques related to pharmacology and toxicology
- 6 **Biochemistry (Clinical)**
Familiarization and demonstration of techniques related to basic instruments used in a clinical biochemistry laboratory – semi and fully automated clinical analyzers, electrolyte analyzer, ELISA- techniques, nephelometry.

Demonstration of blood sugar estimation, lipid profiles, kidney function test, liver function test.

HbA1c, cystatin and microalbumin estimation by nephelometry or other suitable techniques. Interpretation of the results obtained in the light of the data on normal values.
- 7 **Clinical Pathology**
Familiarization and demonstration of techniques related to basic and advanced instruments used in a basic clinical pathology lab. Auto cell counter, urine analyzer, ESR, microscopic examination of urine.
- 8 **Imaging Sciences**
Familiarization and demonstration of techniques related to the imaging techniques. Video film demonstration of CT-Scan, MRI-scan and PET-scan.
- 9 **Clinical protocol development**

II. MEDICAL STATISTICS

Practical hours:20

Statistical exercise of examples from Topic number 4, 5, 8-12, 14, 15. Records to be prepared.

Distribution of marks (practical):

- | | |
|--|------------|
| 1. Instrumental spotting test | – 20 marks |
| 2. Clinical protocol writing exercise on a given problem | – 20 marks |
| 3. Records: | |
| 4. Research methodology | -10 Mark |
| 5. Medical statistics | -10 marks |
| 6. Viva- Voce | -40 Marks |

REFERENCE BOOKS:

Pharmacognosy:

1. Aushotosh Kar "Pharmacognosy & Pharmacobiotechnology" New Age International Publisher. Latest Edition. New Delhi.
2. Drug Survey by Mayaram Uniyal
3. Fahn A (1981). Plant Anatomy 3rd Edition Pergamon Press, Oxford
4. Kokate, CK., Purohit, AP, Gokhale, SB (2010). Pharmacognosy. Nirali Prakashan. Pune.
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(Established by UP Shobhit University Act No. 3, 2012)

SCHOOL OF AYURVEDA

Ordinances, Regulations & Syllabus

For

M.D in Ayurveda Samhita And Siddhanta Three year Programme

(W.e.f. session 2023-24)

**Approved and adopted in the year 2023 (Board of Studies; 10th
Meeting)**

Programme Objectives:

- 1. Understanding Ayurvedic Foundations:**
 - Provide a deep understanding of the classical texts (Samhitas) and their core principles (Siddhanta) as the foundation of Ayurvedic knowledge.
 - 2. Holistic Learning Approach:**
 - Emphasize the integration of theory and practice, linking traditional wisdom with contemporary healthcare needs.
 - 3. Skill Development in Textual Analysis:**
 - Train students in reading, interpreting, and applying the teachings of classical Ayurvedic texts.
 - 4. Promotion of Research:**
 - Develop research aptitude in Samhita and Siddhanta to validate and innovate within the Ayurvedic framework.
 - 5. Ethics and Professionalism:**
 - Inculcate the ethical principles of Ayurveda and foster the professional development of scholars.
-

Specific Programme Objectives:

- 1. Mastery of Samhita Literature:**
 - Achieve proficiency in major Ayurvedic texts such as Charaka Samhita, Sushruta Samhita, and Ashtanga Hridaya.
 - 2. Application of Siddhanta:**
 - Equip students to apply Ayurvedic principles like Tridosha, Panchamahabhuta, and Prakriti in clinical and non-clinical contexts.
 - 3. Preservation of Ayurvedic Wisdom:**
 - Encourage the preservation, documentation, and propagation of traditional Ayurvedic knowledge.
 - 4. Critical Analysis and Commentary:**
 - Train students in comparative studies of different commentaries and interpretations of the Samhitas.
 - 5. Adaptation to Modern Needs:**
 - Integrate classical Ayurvedic knowledge with modern scientific methodologies to address contemporary health challenges.
-

Programme Outcomes:

- 1. Deep Understanding of Ayurvedic Texts:**

Develop expertise in interpreting and contextualizing classical Ayurvedic literature.

2. Practical Application of Theoretical Knowledge:

- Use the principles of Samhita and Siddhanta in clinical diagnosis, treatment, and health promotion.

3. Competence in Research:

- Conduct scholarly research to validate Ayurvedic concepts and develop innovative applications.

4. Critical Thinking and Analysis:

- Analyze traditional Ayurvedic theories in light of modern scientific advancements.

5. Ethical and Holistic Practice:

- Practice Ayurveda in a manner that reflects ethical, sustainable, and holistic healthcare principles.

6. Promotion and Propagation:

- Serve as ambassadors of Ayurveda by contributing to the global dissemination and acceptance of its principles.

7. Capacity for Lifelong Learning:

- Engage in continuous learning to stay updated with evolving knowledge and practices in Ayurveda and healthcare.

8. Leadership in Ayurveda:

- Demonstrate leadership in academic, clinical, and research domains related to Samhita and Siddhanta.

M.D.-AYURVEDA PRELIMINARY1. AYURVED SAMHITA & SIDDHANTA
(Ayurvedic Compendia & Basic Principles)

PAPER-II

THEORY- 100 marks

PART-A

Practical- Viva-Voce-100
50 marks

1. Learning and Teaching methodology available in Samhita- Tantrayukti, Tantraguna, Tantradosha, Tachchilya, Vadamarga, Kalpana, Arthashraya, TrividhaGyanopaya, teaching of Pada, Paada, Shloka, Vakya, Vakyartha, meaning and scope of different Sthana and Chatushka of Brihatrayee.
2. Manuscriptology - Collection, conservation, cataloguing, Critical editing through collation, receion (A critical revision of a text incorporating the most plausible elements found in varying sources), emendation (changes for improvement) and textual criticism (critical analysis) of manuscripts. Publication of edited manuscripts.
3. Concept of Bijachatustaya (Purush, Vyadhi, Kriyakaal, Aushadha according to Sushrut Samhita).
4. Introduction and Application of Nyaya (Maxims) - Like Shilaputrak Nyaya, Kapinjaladhikaran Nyaya, Ghunakshara Nyaya, Gobalivarda Nyaya, NaprishtahGuravoVadanti Nyaya,

Shringagrahika Nyaya, ChhatrinoGacchhanti Nyaya, Shatapatrabhedana Nyaya, Suchikatah Nyaya.

5. Importance and utility of Samhita in present era.
6. Importance of ethics and principles of ideal living as mentioned in Samhita in the present era in relation to life style disorders.
7. Interpretation and co-relation of basic principles with contemporary sciences.

PART-B

50

marks

1. Definition of Siddhanta, types and applied examples in Ayurveda.
2. Ayu and its components as described in Samhita.
3. Principles of Karana-Karyavada, its utility in advancement of research in Ayurveda.
4. Theory of Evolution of Universe (SrishtiUtpatti), its process according to Ayurveda and Darshana.
5. Importance and utility of Triskandha (Hetu, Linga, Aushadh) and their need in teaching, research and clinical practice.
6. Applied aspects of various fundamental principles: Tridosha, Triguna, Purusha and Atmanirupana, Shatpadartha, Ahara-Vihara. Scope and importance of Pariksha (Pramana).
7. Importance of knowledge of SharirPrakriti and ManasPrakriti.
8. Comparative study of Principles of Ayurveda and Shad Darshanas.

REFERENCE BOOKS:-

- 1 Charak Samhita Chakrapani commentary

2	Sushrut Samhita	Dalhana Commentary
3	AshtangaSamgraha	Indu commentary
4	AshtangaHridaya	Arundutta and Hemadri commentary
5	VaisheshikaDarshan	PrashastapadaBhasya
6	Nyaya Darshan	VatsyayanBhasyaPatanjala
7	Yoga Darshan	Vyas Bhasya
8	Vedantsara	
9	SarvadarshanSamgraha	
10	BhartiyaDarshan	BaldevUpadhayaya
11	Ayurved Darshanam	Acharya Rajkumar Jain



Shobhit University, Gangoh

(Established by UP Shobhit University Act No. 3, 2012)

SCHOOL OF AYURVEDA

Ordinances, Regulations & Syllabus

For

M.D in Rachna Sharir Three year Programme

(W.e.f. session 2023-224)

**Approved and adopted in the year 2023 (Board of Studies;
10th Meeting)**

Programme Educational Objectives (PEOs)

PEO 1 In-Depth Anatomical Knowledge: Graduates will acquire a comprehensive understanding of human anatomy, including structural and functional aspects relevant to both Ayurvedic and modern medical practices.

PEO 2 Application of Anatomical Principles: Graduates will be able to apply anatomical knowledge to clinical situations, enhancing diagnostic accuracy and treatment efficacy in Ayurvedic practice.

PEO 3 Research and Innovation: Graduates will engage in research related to anatomical studies, contributing to the body of knowledge in Rachna Sharira and promoting evidence-based practices in Ayurveda.

PEO 4 Holistic Perspective: Graduates will develop a holistic view of anatomy, integrating physical structures with functional and energetic concepts in Ayurveda, thereby enhancing patient care.

PEO 5 Interdisciplinary Collaboration: Graduates will be prepared to collaborate with professionals from various healthcare disciplines, facilitating a comprehensive approach to patient health that respects both Ayurvedic and conventional perspectives.

Programme Specific Objectives (PSO's)

PSO 1 Anatomical Proficiency: Graduates will demonstrate mastery of human anatomy through detailed knowledge of anatomical structures, relationships, and functions relevant to Ayurvedic medicine.

PSO 2 Dissection and Examination Skills: Graduates will acquire practical skills in dissection and examination techniques, enabling them to accurately identify anatomical structures in both cadaveric and clinical settings.

PSO 3 Integration of Ayurvedic Concepts: Graduates will integrate Ayurvedic anatomical concepts, such as the Srotas (channels) and Dhatus (tissues), with modern anatomical knowledge to enhance their understanding of health and disease.

PSO 4 Research Methodology: Graduates will be equipped to conduct research in anatomical studies, exploring the relationship between anatomical structures and Ayurvedic practices to contribute to evidence-based Ayurveda.

PSO 5 Application to Clinical Practice: Graduates will apply their anatomical knowledge in clinical scenarios, improving diagnosis, treatment planning, and patient management in Ayurvedic settings.

PSO 6 Educational Skills: Graduates will be prepared to educate students and healthcare professionals about the importance of anatomical knowledge in Ayurveda, fostering a deeper understanding of the subject.

Programme Outcome Objectives (POO's)

POO 1 Comprehensive Anatomical Knowledge: Graduates will demonstrate a thorough understanding of human anatomy, including detailed knowledge of anatomical structures and their functional relationships within the context of Ayurveda.

POO 2 Practical Dissection Skills: Graduates will exhibit proficiency in dissection techniques and anatomical examinations, enabling accurate identification and assessment of anatomical structures.

POO 3 Integration of Ayurvedic and Modern Anatomy: Graduates will effectively integrate Ayurvedic concepts of anatomy, such as the understanding of Dhatus and Srotas, with modern anatomical knowledge to enhance clinical practice.

POO 4 Research and Critical Thinking: Graduates will engage in research activities that advance the field of Rachna Sharira, applying critical thinking to evaluate and contribute to anatomical studies and their implications in Ayurveda.

POO 5 Clinical Application: Graduates will apply their anatomical knowledge to clinical practice, improving diagnostic accuracy and treatment outcomes for patients in Ayurvedic settings.

POO 6 Interdisciplinary Collaboration: Graduates will demonstrate the ability to work collaboratively with other healthcare professionals, contributing to a holistic approach to patient care that values both Ayurvedic and modern medical perspectives.

POO 7 Ethical Practice and Professionalism: Graduates will uphold high standards of ethics and professionalism in their practice, ensuring patient safety, confidentiality, and respectful interaction with colleagues and patients.

Course Structure

PAPER-II

Theory 100 marks

PART-A

50 marks

1. Basic principles of Sharira, Purushavichaya, RashiPurusha, Karma Purusha (Shad DhatujPurusha), ChaturvimshatiPurusha, EkDhatuPurusha. Relevant principles described in the Sharirasthan of Sushrut Samhita, Charak Samhita, AshtangSangrah and Ashtang Hridaya.
2. Basic principles of GarbhaSharira in Ayurveda: Definitions of Garbha, ShukraShonitaSiddhanta, Dauhrida, MatrijadiGarbhotpattikar bhava.
3. Types of tissues, histological study of liver, spleen, uterus, kidney, endocrine glands, mammary gland, skin, tongue, lungs, bronchi, bones, muscles, cartilages and nervous tissue.

PART-B

50 marks

1. ParibhashaSharira (Anatomical terminology)
2. PramanaSharira – Anguli and Anjali Pramana, SamapramanaSharira, Ayama – Vistara and their prognostic values.
3. Fundamental aspects of Asthi, Sandhi, PeshiSharir.
4. Fundamental aspects of Sira, Dhamani, Srotas – Definitions, Siravedha, AvedhyaSira. Fundamental aspect of SrotomoolaSthana.
5. Fundamental aspects of Kosktha and Koskthang: Hridaya, Yakrit, Vrikka, phupphusa, Aantra, Pleeha, Adhivrikkagranthi, Basti, Paurushagranthi, Amashaya, Agnyashaya and Vrishana.
6. Fundamental aspects of UttamangiyaSharir – Introduction to Nervous system - development, divisions, neuron–structure, types, functional anatomy.
7. Mritashodhan (as per Sushruta) and MritaSamrakshana (preservation method of human cadaver).

PRACTICAL

100 marks

Contents:

1. Practical study of bones
2. Practical study of organs
3. Practical study of surface and radiological anatomy.
4. ShavaVichhedana – detailed dissection of the whole body.
5. Practical study of location of Marma
6. Demonstration of histology slides (10 slides)

Distribution of marks (Practical)

- | | |
|--------------------|------------|
| 1. Spotting | - 20 Marks |
| 2. Surface Anatomy | - 20 Marks |
| 3. Dissection | - 30 Marks |

- | | | |
|----|--|------------|
| 4. | Imaging Anatomy – Basic Principles and Application | - 10 Marks |
| 5. | Viva-Voce | - 20 Marks |

REFERENCE BOOKS:

- | | | |
|-----|--|---------|
| 6. | Relevant matters of Brihatrayee and Laghutrayee | |
| 7. | PratyakshaShariram
GananathSen | - |
| 8. | AbhinavaShariram
Damodar Sharma Gaur | - |
| 9. | ParishadyamSabdarthaShariram
Damodara Sharma Gaur | - |
| 10. | BrihatShariram
Varier | - P S |
| 11. | Shiva Samhita | |
| 12. | Gray's Anatomy
Latest Edition | - |
| 13. | Human Anatomy
Chaurasia | - B D |
| 14. | Cunnigham's Companion to Manual of Practical Anatomy.Vol I, II & III | |
| 15. | Developing Human
L Moore &Persaud | - Keith |
| 16. | Clinically oriented Anatomy
Keith L Moore | - |
| 17. | Clinically oriented Neuro Anatomy
Richard Snell | - |
| 18. | Surface and Radiological Anatomy
Halim | - |
| 19. | Grant's Methods of Anatomy | -Grant |
| 20. | Grant's dissector | -Grant |
| 21. | Human Embryology
Singh | -I. B. |
| 22. | Ayuurvediya Human Anatomy
M. Kanthi | - G. |



Shobhit University, Gangoh

(Established by UP Shobhit University Act No. 3, 2012)

SCHOOL OF AYURVEDA

Ordinances, Regulations & Syllabus

For

M.D in Kriya Sharir Three year Programme (W.e.f. session
2023-224)

**Approved and adopted in the year 2023 (Board of Studies;
10th Meeting)**

Programme Educational Objectives (PEOs)

PED 1 Holistic Understanding: Graduates will develop a comprehensive understanding of the principles of Kriya, including its philosophical, physiological, and psychological aspects, enabling them to integrate these concepts into therapeutic practices.

PED 2 Clinical Application: Graduates will be equipped to apply Kriya techniques in clinical settings, effectively addressing a range of health issues and promoting overall well-being for diverse patient populations.

PED 3 Research and Evidence-Based Practice: Graduates will engage in research that contributes to the scientific validation of Kriya practices, fostering a culture of evidence-based treatment within the field.

PED 4 Professional Ethics and Leadership: Graduates will demonstrate ethical practice and leadership in healthcare, advocating for holistic health approaches and contributing to the advancement of Kriya therapy.

PED 5 Lifelong Learning and Adaptability: Graduates will commit to lifelong learning, staying updated with advancements in yoga therapy and related fields, and adapting their practices to meet evolving health challenges.

Programme Specific Objectives (PSO's)

PSO 1 Kriya Techniques Proficiency: Graduates will master a range of Kriya techniques, including breath control, meditation, and body postures, applying them effectively to promote physical and mental health.

PSO 2 Therapeutic Application: Graduates will be equipped to design and implement personalized Kriya therapy plans for patients, addressing specific health concerns and enhancing overall well-being.

PSO 3 Assessment Skills: Graduates will develop strong assessment skills to evaluate the physical and psychological health of individuals, integrating Kriya principles in their diagnostic approaches.

PSO 4 Research and Evidence-Based Practice: Graduates will engage in research related to Kriya practices, contributing to the body of evidence supporting their effectiveness in various therapeutic contexts.

PSO 5 Patient Education and Communication: Graduates will be skilled in educating patients about Kriya practices, fostering understanding and adherence to therapeutic regimens through effective communication strategies.

PSO 6 Interdisciplinary Collaboration: Graduates will be prepared to work collaboratively with other healthcare professionals, integrating Kriya with conventional medical practices to provide holistic care.

Programme Outcome Objectives (POO's)

POO 1 Expertise in Kriya Practices: Graduates will demonstrate comprehensive knowledge and practical skills in Kriya techniques, applying them effectively for therapeutic and wellness purposes.

POO 2 Holistic Patient Care: Graduates will provide holistic care by integrating Kriya principles with conventional medical practices, addressing both physical and mental health needs of patients.

POO 3 Clinical Assessment and Diagnosis: Graduates will be skilled in conducting thorough assessments, accurately diagnosing conditions, and developing personalized Kriya-based treatment plans.

POO 4 Research and Application: Graduates will engage in research activities that advance the understanding and efficacy of Kriya therapies, applying evidence-based practices in clinical settings.

POO 5 Patient Communication and Education: Graduates will effectively communicate with patients and families, promoting understanding of Kriya practices and encouraging adherence to therapeutic interventions.

POO 6 Professionalism and Ethics: Graduates will uphold high standards of professionalism and ethics in their practice, ensuring patient safety and confidentiality while advocating for holistic health approaches.

POO 7 Lifelong Learning and Adaptation: Graduates will commit to lifelong learning, remaining current with advancements in Kriya and integrative health practices to adapt to evolving healthcare needs.

Course Structure

Ordinance and Regulations

M.D.-AYURVEDA PRELIMINARY

3.KRIYA SHARIR

PAPER-II

Theory 100 Marks

PART-A

50 marks

1. Theory of Loka-PurushaSamya
2. Theory of Panchamahabhuta
3. Physiological aspects of Samanya – Visheshasiddhanta
4. Concepts of Tridosha and Triguna
5. Concept of Dhātu
6. Concept of Mala
7. Description of Ojas
8. Process of AharaParinama including Aharaparinamakara Bhava and AstaAharaVidhiVisesayatana
9. Physiological importance of Agni, its classification and functions
10. Dhātuposana theories
11. Concepts of Atma, Manas and Indriya.
12. Concepts of Prakriti and Ashtavidha Sara.
13. Concept of Srotas

PART-B

50 marks

Description of essential and relevant understandings related to contemporary physiology, both general physiology and systemic physiology.

1. Essentials of cell physiology – organization of cell.
2. Membrane physiology- transport across cell membrane, action potentials and resting membrane potentials.
3. Homeostasis- negative and positive feedback mechanisms.
4. Genetic code, its expression and regulation of gene expression.
5. Essentials of cardiovascular physiology- cardiac cycle, regulation of heart rate and blood pressure.
6. Essentials of respiratory physiology- regulation of respiration-chemical and neural, gaseous exchange, transportation of gases.
7. Gastrointestinal physiology- various digestive juices and their actions, gastrointestinal hormones, enteric nervous system.
8. Nervous system physiology- ANS, somatic nervous system, reflexes, general and special sensations, higher mental functions, functions of brain, brainstem and spinal cord.

9. Blood: Blood cells-RBCs, WBCs, platelets, plasma proteins and immunity.
10. Muscle physiology: properties and mechanisms of contraction of skeletal, cardiac and smooth muscles.
11. Physiology of excretion- mechanism of urine formation, micturition.
12. Endocrine physiology: Classification of hormones, hormones secreted by pituitary, thyroid, parathyroid, adrenal glands, pineal, pancreas and their functions.

Study of male and female reproductive system: functions of reproductive hormones.

PRACTICAL

100 marks

Contents:

Ayurvedic practicals

Assessment of Prakriti

Assessment of Sara

PramanaPariksha

Hematology

Hemoglobin estimation

Total RBC count

Total WBC count

Differential leukocyte count

Packed cell volume (PCV)

ESR

Bleeding time

Clotting time

Blood grouping and Rh typing

Urine examination -

Physical examination- Specific gravity and reaction of urine

Chemical examination

Albumin test

Sugar test

Ketone bodies

Bile salts and pigments

Distribution of marks (Practical)

1.	Laboratory Practical	- 20
2.	Human Experiment	- 15
3.	Spotting	- 15
4.	PrakritiSaradipariksha	- 20
5.	Practical Record	- 10
6.	Viva-voce	- 20

REFERENCE BOOKS:

1.	AyurvediyaKriyasharir	- Ranjit Rai Desai
2.	Kayachikitsa Parichaya	- C. Dwarkanath
3.	Prakrit Agni Vigyan	- C. Dwarkanath
4.	SharirKriyaVigyan	- Shiv Charan Dhyani
5.	AbhinavaSharirKriyaVigyana	- Acharya Priyavrata Sharma
6.	DoshaDhatu Mala Vigyana	- Shankar Gangadhar Vaidya
7.	PrakritaDoshaVigyana	- Acharya Niranjana Dev
8.	TridoshaVigyana	- Shri Upendranath Das
9.	ShariraTatvaDarshana	- HirlekarShastri
10.	Prakrita Agni Vigyana	- Niranjana Dev
11.	DehaDhatvagniVigyana	- Vd. Pt. HaridattShastri
12.	SharirKriyaVigyana (Part 1-2)	- Acharya Purnchandra Jain
13.	SharirKriyaVigyana	- Shri Moreshwar Dutta Vd.
14.	ShariraKriyaVijnana (Part 1-2)	- NandiniDhargalkar
15.	DoshaDhatu Mala Vigyana	- Basant Kumar Shrimal
16.	AbhinavaSharirKriyaVigyana	- Dr. Shiv Kumar Gaur
17.	PragyogikKriyaSharir	- Acharya P.C. Jain
18.	Kaya ChikitsaParichaya	- Dr. C. Dwarkanath
19.	Concept of Agni	- Vd. Bhagwan Das
20.	PurushVichaya	- Acharya V.J. Thakar
21.	KriyaSharir	- Prof. Yogesh Chandra Mishra
22.	SharirKriyaVigyana	- Prof. Jayaram Yadav & Dr.

Sunil Verma

23. Basic Principles of Kriya-Sharir (A treatise on Ayurvedic Physiology)
by -Dr. Srikant Kumar Panda

24. SharirKriya – Part I & II - Dr. Ranade, Dr. Deshpande & Dr. Chobhe

25. Human Physiology in Ayurveda -
DrKishorPatwardhan

26. SharirkriyaVignyan Practical Hand Book - Dr.Ranade, Dr.Chobhe, Dr. Deshpande

27. SharirKriya Part 1&2 - Dr.R.R.Deshapande,
Dr.Wavhal
28. Textbook of Physiology -
Gyton& Hall
29. Review of medical physiology -
William Ganong
30. Essentials Of Medical Physiology -
Sembulingam, K.
31. Concise Medical Physiology -
Chaudhari, Sujit. K.
32. Fundamental of Anatomy & Physiology -
Martini
33. Principals of Anatomy & Physiology -
Tortora& Grabowski
34. Human Physiology -
Richards, Pocock
35. Samson Wrights Applied Physiology, Keele, Neil, joels
36. Brainstem Control of Wakefulness And Sleep -
Steriade, Mirce
37. An Introduction to Human Physiology -
Green, J.h.
38. Ancient Indian Medicine -
Kutumbiah P.
39. Biographical History of Indian Medicine -
Srikanthamurthy KR
40. Ayurveda KriyaSharira - Yogesh
Chandra Mishra
41. Textbook of Medical Physiology -
InduKhurana
42. Tridosha Theory -
SubrahmanyaShastri
43. Statistics in Medicine
- K. Syamalan



Shobhit University, Gangoh

(Established by UP Shobhit University Act No. 3, 2012)

SCHOOL OF AYURVEDA

Ordinances, Regulations & Syllabus

For

M.D in Prasuti Tantra Evam Stree Roga And Three year Programme

(W.e.f. session 2023-224)

**Approved and adopted in the year 2023 (Board of Studies;
10th Meeting)**

Programme Educational Objectives (PEOs)

PEO 1 Comprehensive Knowledge: Graduates will acquire in-depth knowledge of Ayurvedic principles and practices related to obstetrics and gynecology, enabling them to manage maternal and child health effectively.

PEO 2 Clinical Proficiency: Graduates will develop advanced surgical skills and clinical competencies necessary for performing obstetric and gynecological procedures, ensuring safe and effective patient care.

PEO 3 Research and Evidence-Based Practice: Graduates will engage in research activities that contribute to the body of knowledge in Prasuti Tantra, promoting evidence-based practices in Ayurvedic obstetrics and gynecology.

PEO 4 Holistic Patient Management: Graduates will demonstrate the ability to provide holistic care to women throughout their reproductive life, addressing physical, mental, and emotional health needs.

PEO 5 Interdisciplinary Collaboration: Graduates will be prepared to collaborate with healthcare professionals from various disciplines, integrating Ayurvedic approaches with conventional practices to enhance maternal and child health outcomes.

Programme Specific Objectives (PSO's)

PSO 1 Surgical Skills Mastery: Graduates will develop advanced surgical skills in performing obstetric and gynecological procedures, including cesarean sections, laparoscopic surgeries, and other relevant interventions.

PSO 2 Comprehensive Patient Assessment: Graduates will acquire the ability to conduct thorough assessments of pregnant women and gynecological patients, utilizing Ayurvedic diagnostic techniques alongside modern medical evaluations.

PSO 3 Management of Complications: Graduates will be equipped to manage obstetric and gynecological emergencies and complications, ensuring prompt and effective care to improve patient outcomes.

PSO 4 Integrative Treatment Plans: Graduates will formulate and implement individualized treatment plans that combine Ayurvedic therapies and practices with conventional medical approaches for comprehensive care.

PSO 5 Research and Critical Analysis: Graduates will engage in research projects focused on Prasuti Tantra, contributing to the advancement of knowledge and practices in Ayurvedic obstetrics and gynecology.

PSO 6 Patient Education and Counseling: Graduates will effectively educate and counsel patients regarding reproductive health, prenatal care, and postnatal wellness, promoting informed decision-making and self-care.

Programme Outcome Objectives (POO's)

POO 1 Clinical Competence: Graduates will demonstrate advanced clinical skills in obstetrics and gynecology, effectively diagnosing and managing a wide range of conditions related to maternal and child health.

POO 2 Surgical Proficiency: Graduates will exhibit proficiency in performing complex surgical procedures specific to obstetrics and gynecology, ensuring high standards of patient care and safety.

POO 3 Holistic Patient Care: Graduates will provide holistic care that integrates Ayurvedic principles with modern medical practices, addressing the physical, emotional, and psychological needs of patients.

POO 4 Research Contribution: Graduates will engage in and contribute to research in Prasuti Tantra, critically evaluating and applying findings to enhance clinical practice and patient outcomes.

POO 5 Interdisciplinary Collaboration: Graduates will effectively collaborate with healthcare professionals across various disciplines, fostering a team approach to comprehensive maternal and child health care.

POO 6 Patient Communication and Education: Graduates will demonstrate effective communication skills, educating patients and families about reproductive health, treatment options, and preventive care.

POO 7 Ethics and Professionalism: Graduates will uphold ethical standards and professionalism in all aspects of practice, ensuring patient safety, confidentiality, and respect for diverse cultural backgrounds.

Course Structure

M.S.AYURVEDA PRELIMINARY 14. PRASUTI AVUM STRI ROGA (Gynecology & obstetrics)

PAPER-II

Theory- 100 marks

PART A

50 marks

1. Concept of Tridosha, Dhatu, Upadhatu, Agni, PanchaMahabhuta in relation to Prasuti and StriRoga.
2. Concept of Artava and Shukra.
3. Concept of Rasa, Guna, Veerya, Vipak and Karma of Dravya used in Prasuti and StriRoga.
4. Action and adverse drug reaction related to commonly used plants and Rasa Aushadhi in Prasuti and StriRoga.
5. Concept of Pathya- Apathya in relation to Prasuti and StriRoga.
6. Concept of Garbhadhan and Garbha.
7. Concept of Vrana and Vranadushti.
8. Concept of special therapies of Ayurved used in Prasuti and StriRoga.
9. Concept of Ashtavidha Shastra Karma, Yantra&shastra used in Prasuti and StriRoga

PRACTI CAL

100 marks

1. Applied anatomy and physiology of genito-urinary system, abdomen, pelvis, pelvic floor, anterior abdominal wall, inguinal ligament, inguinal canal, vulva, rectum and anal canal. 2. Abnormal development, structure and function of female and male urogenital systems
2. Development, structure and function of placenta, umbilical cord and amniotic fluid.
3. Physiological and neuro-endocrinal changes during puberty, adolescence and menstruation.
4. Introduction of hormones related with gynaecology and obstetrics. Ovulation, fertilization, climacteric and menopause. Biophysical and biochemical changes in uterus and cervix during pregnancy and labour.
5. Pre-natal, Natal and Post natal counseling and examination.
6. Pharmacological study of drugs used in gynaecology and obstetrics.
7. Knowledge of diagnostic techniques used in gynaecology and obstetrics.
8. Basic Knowledge of pathological and biochemical investigation used in gynaecology and obstetrics.
9. Ethics, law and Acts Related to gynaecology and obstetrics – laws of abortion and adoption.
10. Knowledge of contraception and sterilization procedures.
11. Pre-operative and post operative care in gynaecology and obstetrics.

PRACTICAL

100 marks

Contents:

- i. Hospital duties in OPD, IPD, labor room, OT and casualty 2. History taking and counseling - 25 cases.
 - ii. Labor cases - observation/performing - 10 cases
2. Knowledge of instruments required in gynaecology and obstetric practices.
3. Ayurvedic diagnostic and therapeutic procedures.
4. Fluid therapy and blood transfusion.
5. Contraception and sterilizations.
6. Pre-operative, operative and post operative procedures.
 - i. Distribution of marks (Practical)
7. Case records of Patients in Detail (25 Cases) - 20 Marks
8. Bedside clinical case taking
 - i. Long case - 20 Marks
 - ii. Short case - 10 Marks
9. Procedures - 15 Marks
10. Identification of instruments, X-ray etc& Spotting - 15 Marks
11. Viva - voce - 20 Marks

REFERENCE BOOKS:

1. Related matter from all thasamhitas and their commentaries. 2. Prasutitantraevumstreeroga by profTewari P V
2. Concepts of gynecology Dr Nirmala G Joshi.
3. Prasuti Tantra Prof. M. Dwivedi
4. Streerogavigyan - Dr VNK Usha 6. NavyaprasutiVigyanDr Pooja Bharadwaja
5. Text book of gynaecology-Berek and Novak.
6. Text book of obstetrics- Williums
7. Text book of obstetrics- D C Dutta
8. Text book of gynaecology - D C Dutta 11. Gabbe's normal and problem pregnancies.
9. Human embryology by Saddler.
 12. Jeffcoat's principles of gynaecology 14. Telinde'sgynaecological surgery.



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ShobhitUniversity, Gangoh

(Established by UP Shobhit University Act No. 3, 2012)

SCHOOL OF AYURVEDA

Ordinances,Regulations & Syllabus

For

BAMS FIVE AND HALF YEARS PROGRAMME

(W.e.f.session2021-2022)

**COURSE CURRICULUM FOR FIRST PROFESSIONAL BAMS
(PRESCRIBED BY NCISM)**



SAMHITA ADHYAYAN-1

(SUBJECT CODE- AyUG-SA1)

STUDY OF AYURVEDA CLASSICAL TEXT

(Applicable from 2021-22 batch onwards for 5 years or until further notification by NCISM, whichever is earlier)



BOARD OF AYURVEDA

**NATIONAL COMMISSION FOR INDIAN SYSTEM OF MEDICINE NEW
DELHI-110058**



Samhita

NCISM

I professional Ayurvedacharya (BAMS)

Subject Code: AyUG-SA1

Samhita Adhyayan 1

Summary

Total number of Teaching : 400			
Lecture (LH) - Theory		140	140 (LH)
Paper I	140		
Non-Lecture (NLH) – Theory		260	260 (NLH)
Paper I	260		

Examination (Papers & Mark Distribution)					
Item	Theory Component Marks	Practical Component Marks			
		Practical	Viva	Elective	IA
Paper I	100	--	75	10	15
				(Set-FC)	
Sub-Total	100	100			
Total marks	200				

PREFACE

The main purpose of Samhita teaching is to enable the students to read, understand and practice the Samhitas. Samhita is nothing but an ancient Practical Manual of Ayurveda. Samhita teaching and learning process need to be practically oriented for a better understanding of the subject. It is the need of time to make some addition in the current teaching and learning process of Samhita to make it more relevant, practical, and contemporary. New teaching technology tools will certainly be helpful in the effective delivery of knowledge of Samhita. As per the revised regulation, the nomenclature of the subject is **Samhita Adhyayana-I**.

The subject includes Ashtanga Hridayam Sutrasthana 1 to 15 chapters and Charaka Samhita Sutrasthana 1 to 12 chapters as a part of Samhita Adhyayana-I for First Professional BAMS course. In this revision, NCISM has tried its best to take Samhita teaching beyond the four walls of the classroom and connected it with today's living of people and society. For effective content delivery and to create interest in the subject of Samhita, it becomes evident to teach Samhita with practical demonstrations.

Samhita Path is the first step and most effective method of Samhita teaching adopted and practiced by our ancient acharyas. In order to facilitate practice the ancient Samhita learning, twice the non-lecture class of the total classes is exclusively reserved for Samhita learning activity. To make baseline uniformity in the process of learning, teaching methodology guidelines are provided which shall be followed while teaching the chapters of both the Samhitas. Students learn various principles of Ayurveda in Samhitas. Terminologies make the task initially difficult. Hence to make the Samhita learning more interesting, various education technology tools are included in the curriculum at various places understanding the need of the topic. Activity-based learning will enable the internalization of the concepts and will build a strong platform while learning other subjects of Ayurved.

As explained in Samhitas things learned in shastra(Science) and experience practically both when happens together will enhance the knowledge. It will further lead to application in practice.

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Course Code and Name of Course

	Course code	Name of Course
	AyUG-SA1	Samhita Adhyayan 1

AyUG SA1 Course

Table 1- Course learning outcomes and matched PO.

SR1	A1	B1
CO	Course learning Outcomes (CO) AyUG SA1	Course learning
No	At the end of the course AyUG-SA1, the students should be able to-	Outcomes matched with program learning outcomes.
CO1	Distinguish the different <i>Samhitas</i> , their importance and methodology and familiarize with the tools of <i>Samhita Adhyayan</i> . (eg: <i>tantrayukti</i>)	PO2, PO9
CO2	Interpret and apply the <i>sutras</i> from the <i>Samhitas</i> .	PO1
CO3	Apply and evaluate the <i>Tridosha</i> , <i>Saptadhatu</i> and <i>Mala</i> principles (theory).	PO1, PO3, PO5
CO4	Practice and prescribe <i>Dincharya</i> (daily regimen), <i>Ritucharya</i> (seasonal regimen) and dietary principles for preservation of health.	PO2, PO7, PO8
CO5	Explore and distinguish different types of food, food groups and medicinal <i>dravyas</i> mentioned in <i>Samhitas</i> .	PO1, PO2
CO6	Identify various etiopathological factors and predict different treatment principles	PO1, PO5
CO7	Recognize and explain the fundamentals behind various therapeutics (<i>Shodhan</i> and allied) and parasurgical therapies.	PO2, PO5
CO8	Develop a code of behavior and show mature behaviour in particular to the scientific deliberations.	PO 6, PO 9

Table 2 : Contents of Course AyUG-SA1

Sr No	A2 List of Topics AyUG-SA1	B2 Term	C2 Marks	D2 Lecture	E2 Non-Lecture
1.	Introduction to Samhita- i. Definition of Samhita and its types and nomenclature. (Samhita- forms, nomenclature, commentary, types etc.) ii. Brief Introduction of Samhitas (Bruhatrayee), their commentaries and commentators (Preceptors, aut hours, redactors, commentators) iii. Tantrayukti, Tantraguna and Tantradosha iv. RachanaShaili & BhashaShaili (Composition and Language style) of Bruhatrayee. v. Anubandha Chatushtya vi. Ashta-Prashna vii. Trividha Jnyanopaya	1	(Indicated in Viva)	15	09
Ashtang Hriday Samhita - Sutrasthan (1-15 Adhyaya) -			50 marks		
2.	AH Su.1. Ayushkamiya Adhyaya- i. Ashtang Hridaya parichaya (Introduction to Ashtang Hridaya) ii. Dosha-dhatu-mala parichaya (Introduction to dosha, dhatus and mala) iii. Agni- koshta swarup (Concept of digestive fire and bowel habits) iv. Rasa, virya, vipaka prabhav guna parichaya (Introduction to rasa, virya, vipaka, prabhav and guna) v. Rog-aarogya swarup (Concept of health and disease) vi. Roga-aatur parikshan (Assessment of disease and diseased) vii. Desha and kaala parichaya (Introduction to habitat and time) viii. Chikitsa bheda (Types of treatment) ix. Pada chatushtaya Swarupam (Concepts of four factors of treatment) x. Vyadhi sadhyasadyatva (Types of prognosis)	1		08	03

	xi. Recitation of important shlokas				
3.	AH Su.2. Dinacharya Adhyaya- i. Dinacharya vihaar (Importance of various regimen in Dinacharya) ii. Shuddhi Niyam (Personal hygiene) iii. Dharmapalan evam sadvrutta palan iv. Recitation of important shloka	1		05	04
4.	AH Su.3. Rutucarya Adhyaya- i. Shadrutu (Classification of seasons according to Uttarayan and Dakshinayan) ii. Rutucharya (detailed regimen of the six seasons) iii. Rutusandhi (inter-seasonal period) iv. Recitation of important shlokas	1		05	04
5.	AH Su.4. Roganutpadaniya Adhyaya- i. Adharaneeya vega and chikitsa (symptoms arising due to suppression of natural urges and their treatment) ii. Dharneeya vega (Concept of urges which hav eto be suppressed) iii. Shodhan chikitsa (Importance of purification treatments) iv. Hita-aahar-vihar sevan (Importance of following healthy lifestyle) v. Recitation of important shlokas	I		05	04
6.	AH Su.5. Dravadravya Vijnaniya Adhyaya- i. Jala Varga (Water from different sources, various states of water) ii. Dugdha Varga (Milk and milk products) iii. Ikshu Varga (Sugarcane and its products) iv. Madhu varnana (Properties of honey) v. Tail Varga (Oils of various sources) vi. Madya Varga (Types of alcoholic beverages) vii. Mutra Varnana (Types of urine) viii. Recitation of important shlokas	I		05	04
7.	AH Su.6. Annaswaroopa Vijnaneeya Adhyaya- i. Shuka- DhanyanamSamanya Gunah (Properties of various types of cereals)	II		05	03

	ii. Shimbi- Dhanyananam Samanya Gunah (Properties of various types of Pulses) iii. Mamsasya Samanya Gunah (Properties of meat of various animals) iv. Shakayoh Samanya Gunah (Properties of various types of vegetables) v. Phalayoh Samanya Gunah (Properties of various types of Fruits) vi. Kritanna varganam Samanya Gunah (Properties of various types of cooked food) vii. Aushadhanam Samanya Gunah (Properties of various types of medicinal herbs)				
8.	AH Su.7. Annaraksha Adhyaya- i. Rajnikate- Vaidyasthiti (Important place of Vaidya in Kings palace) ii. Savishanna Lakshanam (Properties of poisoned food) iii. Savishanna Pariksha (Examination of food contaminated with poison) iv. Savishanna-Lakshana- Aushadha (Signs of food poisoning and its treatment) v. Viruddha Aahar (Incompatible food and food practices) vi. Satmikaran Krama (Method of adaptation of wholesome food habits and to taper unwholesome food habits) vii. Aahar-Shayan-Abrahmacharya – Trayopasthambha (Three accessory pillars of Health) viii. Recitation of important shlokas	II		04	03
9.	AH Su.8. Matrashitiya Adhyaya- i. AaharMatra (appropriate quantity of food) ii. Heen-matra, ati-matra bhojan dosha (Demerits of excess and less quantity of food) iii. Alasak, Visuchika (Etiopathogenesis and management principles of Vishuchika and Alasak) iv. Apatarpan chikitsa	II		05	04

	v. Types of Ajeerna (indigestion) and its causes vi. Bhojan-samyak yog (Ideal regimen and time for taking food) vii. KukshiVibhag (Imaginary parts of the stomach) viii. Details of Anupan (Liquid consumed along with or after food) ix. Recitation of important shlokas				
10	AH Su.9. Dravyaadi Vijnaniya Adhyaya- i. Dravya shreshthtva(Predominance of Dravya) ii. Dravyasya panchbhautikatvam (Prevalence of Panchamahabhutas in dravyas) iii. Panchbhautik dravyanaam guna(Characteristics of PanchabhautikDravyas) iv. Principles of dravyas viz Veerya-Vipaka- Prabhava v. Recitation of important shlokas	II		04	04
11	AH Su.10. Rasabhedhiya Adhyaya- i. Shadrasanaam utpatti (Origin of Shadrasa) ii. Shadrasa parichaya (Identity of Six Rasas) iii. Shadrasa karma, guna, atiyoga lakshana (Functions, properties and presentation of excessive intake of Six Rasas.) iv. Recitation of important shlokas	II		05	04
12	AH Su.11. Doshadi Vijnaniya Adhyaya- i. Importance of dosha dhatu mala ii. Dosha dhatu mala prakruta and vaikruta karma (normal and abnormal functions) iii. Dosha dhatu mala ashraya- ashrayi bhava (relation between dosha and dhatus) iv. Samanya chikitsa siddhanta for dosha dhatu mala vrudhhi kshaya (treatment principles) v. Agni (Digestive fire) vi. General pathophysiology for origin of diseases vii. Ojus (Essence of dhatus)	III		08	05

	viii. Vridddhi-kshaya bhesaja ix. Recitation of important shlokas				
13	AH Su.12. Doshabhediya Adhyaya- i. Dosha and dosha bheda (Dosha and their types) ii. Dosha chaya, prakopa, prasham karanani (Causes of dosha accumulation, aggregation and alleviation) iii. Trividhakarana (three causative factors of disease) iv. Trividha Roga marga (three pathways of disease) v. Aatura parikshbhaav (assessment methods) vi. Recitation of important shlokas	III		08	05
14	AH Su.13. Doshopakramaniya Adhyaya- i. Tridosha- upakrama (Treatment principles of vitiated doshas) ii. Shuddha-ashuddha chikitsa lakshana (Accurate and inaccurate treatment) iii. Dosha gati (movement of doshas inside the body) iv. Concept of aama v. Dasha aushadha-kaala (ten types of times for administering medicines) vi. Recitation of important shlokas vii. Research Updates – Langan : Fasting and autophagy induction – how cell recycle and renew their content, a process called autophagy.	III		07	06
15	AH Su.14. Dvididhopakramaniya Adhyaya- i. Concept of Langan and Brihan therapies (Treatment procedures for making the body thin and for nourishment) ii. Concept of Shodhan and shaman therapies (Purification and palliative treatments) iii. Concept of Atistaulya and atikarshya (Obesity and emaciation) iv. Recitation of important shlokas	III		05	05

16	AH Su.15. Shodhanadigana Sangraha Adhyaya- i. Groups of dravyas according to specific action ii. Groups of dravyas according to major ingredient as well as action	III		02	04
Charak Samhita – Sutrasthan (1-12 Adhyaya):			50 marks		
17	Ch S Su 1. Deerghanjiviteeya Adhyaya- i. Ayurvedavataranam (Genealogy of Ayurveda) ii. Arogsya chaturvarge pradhanam karanam iii. Trisutra Ayurveda iv. Details of Shat padartha v. Ayurvedasya lakshanam tatha prayojan vi. Ayusho lakshanam paryayashcha vii. Samanyavisheshayorlakshanam viii. Tridanda ix. Vyadhinam trividho hetusamgrah x. Vyadhinam ashraya tatha Arogasya karanam xi. Atmano lakshanam xii. Details about Sharira and manas dosha xiii. Sadhyaasadyata vikara chikitsa xiv. Rasa varnanam xv. Dravya bheda xvi. Aushadhinam nama-rupa-upyog gyan xvii. Bhishagbubhushoh kartavyam xviii. Yuktasya bhaishajyasya lakshanam xix. Bhishaktamasya lakshanam xx. Recitation of important shlokas	1		07	02
18	Ch S Su 2. Apamarga Tanduliya Adhyaya- i. Shiro Virechana Dravya & Main Indications ii. Vamana Dravya & Main Indications iii. Virechana Dravya & Main Indications iv. Asthapana Dravya & Main Indications	II		02	03

	v. Anuvāsana Dravya & Main Indications vi. Ashtavimshathi Yavagu vii. Panchakarma Mahatwa & Vaidya Guna viii. Recitation of important shlokas				
19	Ch S Su 3. Aragvadhiya Adhyaya- i. Dwa Trimshath Churna Pradeha & Main Indications	II		01	03
20	Ch S Su 4. Shadvirechana-shatahritiya Adhyaya- i. Shadvirechan aashrya ii. Panchkashaya yoni iii. Panchvidh kashaya kalpana iv. Panch kashaya shatani	II		03	04
21	Ch S Su 5. Matrashiteeya Adhyaya- i. MatravatAhara ii. Nature of Ahara (Guru, Laghu) iii. AharaMatra iv. MatravatAharaPhala v. AharaSevanaVidhana on the bases of its nature vi. Swasthavrutta vii. Anjana viii. Dhumapana ix. Nasya x. Dantadhavana xi. Jivhanirlekhana xii. Gandusha xiii. Abyanga xiv. Parimarjana xv. VastraGandhaMalyadiDharana xvi. Shouchavidhi xvii. Kshoura Karma xviii. PadatraDharana xix. ChatraDharana xx. Important Shlokas for recitation xxi. Research Updates: Role of Dinacharya to maintain circadian rhythm Role of therapeutic message for cell rejuvenation Mechanism of satiation and proper quantity of food (Sauhitya Matra)	II		03	05

22	<p>Ch S Su 6. Tasyashiteeya Adhyaya-</p> <ul style="list-style-type: none"> i. Classification Samvastara ii. Visarga Kala iii. Adana kal;a iv. Shadrutuvivechana and Charya v. Hamsodaka vi. Saatmya vii. Important shlokas for recitation viii. Research Updates: What causes the season: Summer and winter solistice- Equinoxes- Rotation of earth around sun. 	II		04	04
23	<p>Ch S Su 7. Naveganadharaniya Adhyaya-</p> <ul style="list-style-type: none"> i. Adharneeya-Dharneeya vega lakshan, chikitsa ii. Vyayam (Details regarding exercise) iii. Ahita sevan evam varjya vidhi iv. Deha prakruti (Body constitution) v. Agantuja evam Pradnyaapradh janya vyadhi evam chikitsa vi. Impotant Shlokas for recitation vii. Research Updates: Corelation of genomic variation with the classification of Prakriti 	II		04	04
24	<p>Ch S Su 8. Indriyopakramaniya Adhyaya-</p> <ul style="list-style-type: none"> i. Enumeration of Indriya, Dravya, Adhishtana, Artha, Buddhi ii. Manas Lakshana iii. Ekatvam of Manas iv. Sattvikatva, Rajasatva and Tamasatva of Manas v. Indriya PanchaPanchaka vi. Adhyatma Dravya Guna Sangraha vii. Mahabhuta – Indriya sambandh viii. Prakriti – Vikriti hetu ix. SadvrittaAnushthana x. Hetuchatushtaya xi. AnuktaSadvritta xii. Important Shlokas for Recitation xiii. Research updates: Mental health and gut microbiota. 	II		04	03
25	<p>Ch S Su 9. Khuddakachatushpada Adhyaya-</p> <ul style="list-style-type: none"> i. Chikitsa Chatushpada ii. Roga-Arogya Lakshana 	II		03	03

	iii. Chikitsa Lakshana iv. Vaidya, Dravya (Bheshaja), Paricharaka, Aatura guna v. Vaidya pradhanatva vi. Adnya chikitsak dosha vii. Sadvaidya lakshana viii. Vaidya kartavya ix. Vaidya Vritti x. Recitation of important Shlokas xi. Research Updates: Medical ethics-principles Soft Skill development for medical students Emotional Intelligence as a crucial component in medical education				
26	Ch S Su 10. Mahachatushpada Adhyaya- i. Catushpaada-bheshajam alam aarogyaayeti (aatreya-kṛta) ii. Bheshaja-abheshajayo tulyatva pratipaadana – (maitreya-kṛta) iii. Its conclusion by Atreya iv. Pareekshya-kaarino hi kusalaa bhavanthi v. Cikitsaa sootram vi. Cikitsaayaam yasolaabhe kaaranam vii. Asaadhyaroga-cikitsaayaam haani viii. Further division of saadhya-asaadhyata ix. Sukha-saadhya lakshanam x. Krcchra-saadhya lakshanam xi. Yaapya lakshanam xii. Pratyakhyeya lakshanam xiii. Benefit of knowledge of prognosis xiv. The versatile usage of the term ‘mithyaa-buddhi’ xv. Recitation of important shlokas	II		03	03
27	Ch S Su 11. Tisraishaniya Adhyaya- i. TrividhaEshana (Three Desires of life) ii. Paralokaeshana iii. Chaturvidhapariksha iv. Punarjanma siddhi by Chaturvidhpramanas v. Trayopasthambha vi. Trividhabala	III		06	04

	vii. Trividhaayatana viii. Atiyoga, Heenayoga and Mithya yoga of artha, karma and kaala ix. Trividharoga x. Treatment for manasavyadhi xi. Trividharogamarga xii. Trividhavaidya xiii. Trividhaoushadha xiv. Ashtatrika xv. Important Shloka for Recitation				
28	Ch S Su 12. Vatakalakaliya Adhyaya- i. Vata guna ii. Views of various Acharyas on Vata dosha Guna avum Karma iii. Vayu prakop-prasham karan iv. Akupita, kupita vayu karma v. Vata Dosha – Clinical application vi. Akupita-kupita pitta karma vii. Akupita- kupita kapha karma viii. Atreya's exploration on Tridosha ix. Important shloka for recitation	III		04	05 + 15 (for yearly competitions)
<ul style="list-style-type: none"> Note- In this column distribution of 130 activity is given. Remaining 130 is for Samhita Pathan. 					

Table 3: Learning objectives (Theory) of Course AyUG-SA1

AyUG-SA1 Learning Objective									
A3 Course outcome	B3 Learning Objective (At the end of the session, the students should be able to)	C3 Domain/s ub	D3 Must to know/ desirabl e to know/Ni ce to know	E3 Level Does/ Shows how/ Knows how/ Know	F3 T-L method	G3 Assessment	H3 Formati ve /summat ive	I3 Te rm	J3 Integra tion
Topic 1- Introduction To Samhitas: Time (Lecture:-15 ; Non lecture:-09 hours)									
CO1	Explain the term Samhita	Cognitive/ Comprehe nsion	Must know	Knows	Lecture	Written or Viva	F & S	I	
CO1	Identify Bruhatrayee	Cognitive/ Recall	Must know	Knows	Lecturer	Written or Viva	F & S	I	
CO1	Discuss the various Samhitas and Commentaries in brief	Cognitive/ Comprehe nsion	Must know	Knows	Lecturer / Group Discussion	Written or Viva	F & S	I	
CO1	Discuss the various preceptors, aut hours, redactors and commentators in brief	Cognitive/ Comprehe nsion	Must know	Knows	Lecturer	Written or Viva	F & S	I	
CO1	Apply various Tantrayukties like Adhikaran, Yoga, Padarth, Uddesh, Nirdesh, Vaakyashesh, Prayojan, Upadesh, arthapatti, Ekant,	Cognitive/ Applicatio n	Must know	Knows how	Lecturer/ Group discussion	Viva	Formative	I	

	Anumat, Vyakhyan, Samshay, Atitavekshan, Anagatavekshan, Swasadnya, Samucchaya, Nidarshan, Nirvachan, Niyog.								
CO1	Describe various Tantraguna	Cognitive/ Comprehe nsion	Must now	Knows how	Lecturer	Written or Viva	Formativ e and Summati ve	I	
CO1	Describe various Tantradosha	Cognitive/ Comprehe nsion	Must know	Knows	Lecturer	Written or Viva	Formativ e and Summati ve	I	
CO1	Describe rachanashaili (composition style) and bhashashaili (language style) of Samhitas	Cognitive/ Comprehe nsion	Must know	Knows how	Lecturer / Discussion	Written or Viva	F & S	I	<u>Ay</u> <u>urv</u> <u>ed</u> <u>Itih</u> <u>as</u>
CO1	Discuss about pattern (method) of writing of classical texts	Cognitive / Comprehe nsion	Must know	Knows how	Lecturer	Puzzle	Formativ e	I	<u>Ay</u> <u>urv</u> <u>ed</u> <u>Itih</u> <u>as</u>
CO1	State different types of styles of language of classical text	Cognitive/ Recall	Must know	Knows	Lecturer Audio-Visual aids	Viva	Formativ e and summati ve	I	
CO1	Interpret Anubandha chatushtya with examples	Cognitive/ Problem solving	Must know	Knows how	Lecturer / Class discussion	Enquiry Based Learning	Formativ e	I	

CO1	Interpret Ashta Prashna with example	Cognitive/ Problem solving	Must know	Knows how	Lecturer/ Demonstration	Enquiry Based Learning	Formative	I	
Topic 2- Ashtang Hriday Samhita Sutrasthan Chapter-1- Ayushkamiya Adhyaya: Time (Lecture:- 08 ; Non lecture- 03 hours)									
CO1	Discuss the hierarchy of Ayurvedotpatti (descend of Ayurveda)	Cognitive /Recall	Must know	Know	Lecture	Written or Viva	F & S	I	
CO1	Explain the significance of Ashtanga Hrudaya	Cognitive /Recall	Must know	Knows how	Lecture	Written or Viva	F & S	I	
CO1	Enlist the eight branches of Ayurveda	Cognitive/ Recall	Must know	Knows how	Lecture	Written or Viva	F & S	I	
CO3	Discuss the concept of dosha with respect to qualities (guna), location in body and time period (kaala)	Cognitive/ comprehension	Must know	Knows how	Lecture and Group Discussion	Written & Viva	F & S	I	
CO3	Discuss role and superiority of dosha in manifestation of diseases	Cognitive/ comprehension	Must know	Knows how	Lecture/ Group discussion	Written & Viva	F & S	I	
CO3	Identify the dosha sthanas	Cognitive/ comprehension	Must know	Knows how	Discussion	Model Making (Working Model)	Formative	I	
CO3	Enlist the saptadhatu and mala.	Cognitive/ Recall	Must know	Know	Lecture	Written & Viva	F & S	I	
CO4	Explain the concept of Samsarga (combination of 2 dosha) & Sannipata	Cognitive/ Comprehension	Must know	Knows how	Lecture	Written & Viva	F & S	I	

	(combination of 3 dosha)								
CO4	Elucidate concept of Prakruti (body constitution)	Cognitive/Comprehension	Must know	Knows how	Lecture/Discussion	Written & Viva	F & S	I	
CO6	Explain the three types of digestive fire (agni)	Cognitive/Comprehension	Must know	know How	Lecture/Demonstration in healthy volunteers.	Written or Viva	F & S	I	
CO6	Describe the three types of Koshtha	Cognitive/Comprehension	Must know	Knows how	Lecture/Demonstration in healthy volunteers.	Written or Viva	F & S	I	
CO5	Explain the effect of rasas on tridosha	Cognitive/Comprehension	Must know	Knows how	Lecture/ Group discussion	Written & Viva	F & S	I	
CO5	Describe the two types of potencies (Dwividha Virya)	Cognitive/Comprehension	Must know	Knows how	Lecture/ Group discussion	Written & Viva	F & S	I	
CO5	Describe the three types of Vipaka	Cognitive/Comprehension	Must know	Knows how	Lecture/ Group discussion	Written & Viva	F & S	I	
CO5	Explain the three types of dravya on the basis of Prabhav	Cognitive/Comprehension	Must know	Knows how	Lecture/ Group discussion	Written & Viva	F & S	I	
CO5	Explain the concept of Vruddhi & Kshaya (increase and decrease)	Cognitive/Comprehension	Must know	Knows how	Lecture/ Group discussion	Written & Viva	F & S	I	

CO6	Discuss the causative factors of health and disease	Cognitive/ comprehension	Must know	Know how	Lecture/group discussion	Puzzle / Viva	Formative and summative	I	
CO6	Define health (aarogya) and disease stage(roga)	Cognitive/ Recall	Must know	Know	Lecture	Written & Viva	Formative and summative	I	
CO6	Explain prakruta (normal) and vikruta (abnormal) conditions	Cognitive/ comprehension	Must know	Knows how	Lecture	Written & Viva	Formative and summative	I	
CO6	Explain the types of diseases (Roga)	Cognitive/ Comprehension	Must know	knows How	Lecture	Written or Viva	F & S	I	
CO6	Explain the concept of Roga Adhishthana (abode of diseases)	Cognitive/ Cognitive/ Comprehension	Must know	Knows how	Lecture	Written or Viva	F & S	I	
CO6	Enumerate Manas dosha	Cognitive/ Recall	Must know	Knows how	Lecture	Written or Viva	F & S	I	
CO6, CO8	Discuss the methods of assessment of patient	Cognitive/ Comprehension	Must know	Knows How	Lecture	Written or Viva	F & S	I	
CO8	Explain the methods of examination of disease	Cognitive/ Comprehension	Must know	Knows how	Lecture/OPD clinics	Written & Viva	F & S	I	
CO6	Explain the three types of habitats(desha)	Cognitive/ Comprehension	Must know	Knows how	Lecture/Multimedia aids	Written or Viva	F & S	I	

CO6	Explain the two types of Bheshaja Kala	Cognitive / Comprehension	Must know	Knows how	Lecture	Written or Viva	F & S	I	
CO6	Explain the Classification the treatment modules (Aushadha)	Cognitive / Comprehension	Must know	Know How	Lecture	Written or Viva	F & S	I	
CO6	Explain the treatment module for mental diseases (Mano Dosh Aushadham)	Cognitive / Comprehension	Must know	Knows how	Lecture	Written or Viva	F & S	I	
CO6, CO8	Elaborate chikitsa chatuspada (4 factors in treatment)	Cognitive / Comprehension	Must know	Know How	Lecture/ Demonstration in hospital	Written or Viva	F & S	I	
CO6	Explain the types of prognosis of disease	Cognitive/ Comprehension	Must know	Know How	Lecture/ Demonstration on patients / Multimedia aids	Written or Viva	F & S	I	
CO6	Explain Concept of anupakramaneeya Atura Lakshana	Cognitive/ Comprehension	Must know	Knows how	Lecture	Written or Viva	F & S	I	
CO1	Enlist the chapters of Sutra Sthana	Cognitive/ Comprehension	Must Know	Knows	Self-learning	Written or Viva	F & S	I	
CO1	Enlist all Sthana and Adhyayas of Ashtang Hridaya and Uttara Tantra	Cognitive/ Recall	Nice to Know	Knows	Self-learning	Written or Viva	F & S	I	
CO2	Recite the shloka from 1 to 35	Cognitive/ Recall	Must Know	Show	Self-learning	Viva	F & S	I	
CO1	Identify Adhikaran, Yoga, Padarth, Uddesh,	Cognitive/ Application	Must know	Knows how	Lecturer/ Group discussion	Viva	F & S	I	

	Anagatavekshan Tantrayukti in this chapter.								
Topic -3. Ashtang Hriday Samhita Sutrasthan Chapter-2- Dinacharya Adhyaya Time (Lecture:- 05 Non lecture- 04 hours)									
CO4	Explain the need of waking up before sunrise	Cognitive/ Comprehe nsion	Must know	Know how	Lecture	Written & Viva	F & S	I	
CO4	Explain the importance of Shaucha Vidhi	Cognitive/ Comprehe nsion	Must know	Knows how	Lecture	Written & Viva	F & S	I	
CO4	Explain the importance and contraindications of brushing (Dantadhavana)	Cognitive/ Comprehe nsion	Must know	Knows how	Lecture/ Multimedia aids	Written & Viva	F & S	I	
CO4	Identify the herbs used for Dantadhavan	Cognitive/ Applicatio n	Must know	Shows how	Herbal garden visit	Written or Viva Group Activity (For identifications of Currently using tooth paste. Herbal pastes. Types of pastes)	F & S	I	Dravya guna dept
CO4	Distinguish Sauveeranjana and Rasanjan	Cognitive/ Comprehe nsion	Must know	Know how	Lecture/Demonstratio n	Written or Viva Debate (Students will search benefits and harms supported by current literature. Dabate in class)	F & S	I	Visit to Rasash astra dept for Identifi cation of drugs

CO4	Discuss contraindications of betel leaf consumption (Tambula)	Cognitive/ Application	Must know	Know how	Lecture/ Debate on benefits and harms of Betel leaf consumption. supported by current literature.	Written or Viva	F & S	I	
CO4	Elaborate the concept of Abhyanga along with contraindications	Cognitive/ Comprehension	Must know	Know How	Lecture/ /Multimedia aids	Written & Viva	F & S	I	Panchk arma dept
CO4	Discuss the importance, contraindications of exercise	Cognitive/ Application	Must know	Knows How	Lecture/ Multimedia aids	Written & Viva	F & S	I	
CO4	Discuss the rules regarding exercise and adverse effects of excessive exercise	Cognitive/ Application	Must know	Knows how	Group Discussion Debate: Types of Exercise. e.g Arobiuc and anaerobic etc. supported by current literature discussions on Concept.	Written & Viva	F & S	I	
CO4	Explain the benefits of powder massage (udvartan)	Cognitive/ Comprehension	Must know	Know how	Lecture/demonstration ECE	Written & Viva	F & S	I	Panchk arma dept
CO4	Elucidate the benefits and contraindications of bathing (snana)	Cognitive/ Comprehension	Must know	Knows how	Lecture/group discussion Literature search and Discussion by students.	Written & Viva	F & S	I	
CO4	Explain the time of having food.	Cognitive/ Comprehension	Must know	Know how	Lecture	Written or Viva	F & S	I	
CO4	Explain rules regarding natural	Cognitive/ Comprehension	Must know	Know how	Lecture	Written or Viva	F & S	I	

	urges.	nsion							
CO4	Explain the importance of righteousness (Dharmapalan)	Cognitive/ Comprehe nsion	Must know	Know how	Flipped Classroom Group Activity: self identification of Mistake they are doing Plan to rectify and reassessment after duration.(6 months)	Written or Viva	F & S	I	
CO4	Enumerate the types of bad deeds(Dasha Vidha Papakarma)	Cognitive/ Recall	Must know	Know How	Flipped Classroom	Written or Viva	F & S	I	
CO4, CO8	Explain the concept of good principles and conduct (Sadvrutta)	Cognitive	Must know	Knows how	Flipped Classroom	Written or Viva	F & S	I	
CO4	Explain the principles of personal hygiene (shuddhi)	Cognitive/ Comprehe nsion	Must know	Knows how	Flipped Classroom	Written or Viva	F & S	I	
CO2	Recite the shlokas from 1 to 48	Cognitive/ Recall	Must know	Show	Self-learning	MCQ/viva/quiz	F & S	I	
CO8	Assess and observe the Dincharya Priciples.	Skill	Must know	Does	Proforma based assessment in healthy volunteers/ patients.	Work book- Viva	F & S	I	
CO8	Justify the importance of Dincharya	Cognitive/ Applicatio n	Must know	Does	Application of Principles in own life	Viva	F & S	I	
CO1	Identify Upadesh, Ekant, Prayojan Tantrayukties in this chapter.	Cognitive/ Applicatio n	Must know	Knows how	Lecturer/ Group discussion	Viva	F & S	I	

Topic – 4. Ashtang Hriday Samhita – Sutrasthan Chapter 3- Rutucarya Adhyaya-Time (Lecture:- 05 : Non lecture 04 hours)

CO4	Explain the six seasons and the months in which they fall	Cognitive/Comprehension	Must know	Knows	Lecture/group discussions/Multimedia aids	Written & Viva	F & S	I	
CO4	Elicudate the status of strength (bala) in Uttarayana and Dakshinayana	Cognitive/Recall	Must know	Knows How	Lecture/group discussions/Multimedia aids	Written & Viva	F & S	I	
CO4	Explain the relation between strength (bala)& seasons	Cognitive/Comprehension	Must know	Knows How	Lecture	Written & Viva	F & S	I	
CO4	Discuss the climatic conditions, health status(bala, agni, dosha), appropriate food and regimen for Hemant rutu.	Cognitive/Application	Must know	Knows How	Lecture/group discussions/Multimedia aids	Written or Viva	F & S	I	
CO4	Discuss the climatic conditions, health status (bala, agni, dosha), appropriate food and regimen for Shishira rutu.	Cognitive/Application	Must know	Knows How	Lecture/group discussions/Multimedia aids	Written & Viva	F & S	I	
CO4	Discuss the climatic conditions, health status (bala, agni, dosha), appropriate food and regimen for Shishira rutu.	Cognitive/Application	Must know	Knows How	Lecture/group discussions/Multimedia aids	Written or Viva	F & S	I	
	Discuss the climatic conditions, health status (bala, agni,	Cognitive/Application	Must know	Knows How	Lecture/group discussions/Multimedia aids	Written & Viva	F & S	I	

	dosha), appropriate food and regimen for Greeshma rutu.								
CO4	Discuss the climatic conditions, health status (bala, agni, dosha), appropriate food and regimen for Varsha rutu.	Cognitive/ Application	Must know	Knows How	Lecture/group discussions/Multimedia aids	Written & Viva	F & S	I	
CO4	Discuss the climatic conditions, health status (bala, agni, dosha), appropriate food and regimen for Sharad rutu.	Cognitive/ Application	Must know	Knows How	Lecture/group discussions/Multimedia aids	Written & Viva	F & S	I	
CO8	Justify the importance of Rutucharya	Affective	Must Know	Does	Group discussions	Viva	F & S	I	
CO4	Describe the special instructions pertaining diet (rasa, guna) and seasons	Cognitive/ Comprehension	Must know	Knows How	Lecture/group discussions/Multimedia aids	Written & Viva	F & S	I	
CO4	Identify the significance of Rutusandhi	Cognitive/ Comprehension	Must know	Knows How	Lecture	Written or Viva	F & S	I	
CO2	Recite the shloks - 1 to 6, 55-58	Cognitive/ Recall	Must Know	Show	Self learning	Written/viva/quiz	F & S	I	
CO4	Apply the Principles of Rutucharya in practice	Skill	Must Know	Does	Proforma based assessment of healthy individuals or patients	Viva	F & S	I	
CO1	Identify Prayojan, Swasdnya, Apadesh Tantrayukties in this chapter.	Cognitive/ Application	Must know	Knows how	Lecturer/ Group discussion	Viva	F & S	I	

Topic -5 Ashtang Hriday Samhita – Sutrasthan- Chapter 4. Roganutpadaniya Adhyaya--Time (Lecture:- 05 ; Non lecture 04 hours)

CO6	Enlist the adharaneeya vega (natural urges not to be suppressed by force)	Cognitive/ Recall	Must know	Knows How	Lecture	Written & Viva	F & S	I	
CO6	Specify the diseases due to suppression of adhovata (flatus) and its treatment	Cognitive/ Recall	Must know	Knows How	Lecture	Written & Viva	F & S	I	
CO6	Specify the diseases due to suppression of purisha (fecal matter/ defecation) and its treatment	Cognitive/ Recall	Must know	Knows How	Lecture	Written & Viva	F & S	I	
CO6	Specify the diseases due to suppression of mootra (urine) and its treatment	Cognitive/ Recall	Must know	Knows How	Lecture	Written & Viva	F & S	I	
CO6	Specify the diseases due to suppression of udgaar (belching) and its treatment	Cognitive/ Recall	Must know	Knows How	Lecture	Written & Viva	F & S	I	
CO6	Specify the diseases due to suppression of kshvathu (sneezing) and its treatment	Cognitive/ Recall	Must know	Knows How	Lecture	Written & Viva	F & S	I	
CO6	Specify the diseases due to suppression of trushna (thirst) and its treatment	Cognitive/ Recall	Must know	Knows How	Lecture	Written & Viva	F & S	I	

CO6	Specify the diseases due to suppression of kshudha (hunger) and its treatment	Cognitive/ Recall	Must know	Knows How	Lecture	Written/viva	F & S	I	
CO6	Specify the diseases due to suppression of nidra (sleep) and its treatment	Cognitive/ Recall	Must know	Knows How	Lecture	Written & Viva	F & S	I	
CO6	Specify the diseases due to suppression of kaasa (cough) and its treatment	Cognitive/ Recall	Must know	Knows	Lecture	Written & Viva	F & S	I	
CO6	Enumerate the diseases due to suppression of shrama shwasa and its treatment	Cognitive/ Recall	Must know	Knows	Lecture	Written & Viva	F & S	I	
CO6	Specify the diseases due to suppression of jumbha (yawning) and its treatment	Cognitive/ Recall	Must know	Knows	Lecture	Written & Viva	F & S	I	
CO6	Specify the diseases due to suppression of ashru (tears) and its treatment	Cognitive/ Recall	Must know	Knows	Lecture	Written & Viva	F & S	I	
CO6	Specify the diseases due to suppression of vaman(vomiting) and its treatment	Cognitive/ Recall	Must know	Knows How	Lecture	Written & Viva	F & S	I	
CO6	Specify the diseases due to suppression of shukra (semen) and its treatment	Cognitive/ Recall	Must know	Knows How	Lecture	Written & Viva	F & S	I	

CO6	Describe the incurable condition of Vegadharan	Cognitive/ Comprehe nsion	Must know	Knows How	Lecture	Written or Viva	F & S	I	
CO6	Explain vegdharan as the root cause for many diseases and its common treatment	Cognitive/ Comprehe nsion	Must know	Knows How	Lecture	Written & Viva	F & S	I	
CO6	Explain the dharaneeya vega (urges to be controlled)	Cognitive/ Comprehe nsion	Must know	Knows How	Lecture/ Group discussion	Written or Viva	F & S	I	
CO8	Justify the importance of adharneeya and dharneeya vega to maintain health	Cognitive/ Applicatio n	Must know	Does	Group discussions	Group discussions/ Class activities	F & S	I	
CO6	Explain importance of Shodhana chikitsa (purification techniques)	Cognitive/ Comprehe nsion	Must know	Knows How	Lecture	Written & Viva	F & S	I	
CO6	Explain the importance of Brumhana after Shodhana chikitsa	Cognitive/ Comprehe nsion	Must know	Knows How	Lecture	Written & Viva	F & S	I	
CO6	Explain the concept of Aagantu roga (traumatic diseases) and its treatment	Cognitive/ Comprehe nsion	Must know	Knows How	Lecture	Written or Viva	F & S	I	
CO6	Discuss the concept of rutu-shodhana (elimination of doshas according to seasons)	Cognitive/ Applicatio n	Must know	Knows How	Lecture/Group Discussion	Written & Viva	F & S	I	

CO6 CO8	Describe the importance of healthy diet and regimen.	Cognitive/Comprehension	Must know	Knows How	Lecture/Group discussion	Written & Viva	F & S	I	
CO6	Comply with health rules regarding vegdharan and hita-aahar-vihar.	Cognitive/Comprehension	Must know	Shows		Group discussion/Class activities	F & S	I	
CO2	Recite the shlokas from number 1 to 22, 24-31, 35	Cognitive/Recall	Must know	Show	Self-learning	Written/viva/quiz	F & S	I	
CO3, CO6	Assess the sign and symptoms caused due to suppression of Adharaneeya Vegas.	Skill	Must Know	Show how	Proforma based assessment in healthy volunteers/patients.	Problem based assessment	Formative	I	
CO1	Identify Uddesh, Nirdesh, Tantrayukties in this chapter.	Cognitive/Application	Must know	Knows how	Lecturer/Group discussion	Viva	F & S	I	

Topic -6 Ashtang Hriday Samhita – Sutrasthan- Chapter 05 Dravadravya Vijnaniya Adhyaya--**Time** (Lecture:- 05 ; Non lecture 04 hours)

CO5	Differentiate between Gangambu (rain water) and Samudrambu (sea water)	Cognitive/Comprehension	Desirable	Knows	Lecture discussion	Written or Viva	Formative	I	
CO5	Describe attributes of water from different sources	Cognitive/Comprehension	Nice to know	Knows	Lecture discussion	Written or Viva	Formative	I	
CO5	Explain the utilities of different states of water (avoiding of drinking water, hot water (ushnambu), cold water	Cognitive/Comprehension	Must know	Knows how	Lecture discussion	Written or Viva	F & S	I	

	(sheetambu), Boiled and cold water (kwathita-sheetambu)								
CO5	Write the qualities of Narikelodakam (coconut water)	Cognitive/ Recall	Must know	Knows	Discussion	Written or Viva	F & S	I	
CO5	Discuss the properties of ksheeram (milk), Dadhi (curd), Takra (mastu), navaneetam (white butter), Ghritam	Cognitive/ Comprehension	Must know	Knows how	Lecture discussion	Written or Viva	F & S	I	
CO5	List Properties of milk (ksheeras) of different sources.	Cognitive/ Recall	Nice to know	Knows	Lecture	Written or Viva	Formative	I	
CO5	Differentiate the properties of ama (unboiled) and shruta (boiled) ksheeram (milk)	Cognitive/ Comprehension	Must know	Knows	Lecture	Written or Viva	F & S	I	
CO5	Explain the rules for curd consumption	Cognitive/ Comprehension	Must know	Know how	Lecture discussion	Written or Viva	F & S	I	
CO5	Write the properties of various milk preparations	Cognitive/ Recall	Nice to know	Know	Lecture discussion	Written or Viva	Formative	I	
CO5	Identify the properties and uses of sugarcane and its products	Cognitive/ Recall	Nice to know	Know	Lecture discussion	Written or Viva	F & S	I	
CO5	Enlist the properties of honey and Identify the various guidelines related to use of honey	Cognitive/ Recall	Must know	Knows how	Lecture discussion	Written or Viva	F & S	I	
CO5	Write the properties of tilaitailam (Sesame oil)	Cognitive/ Recall	Must know	Know	Lecture discussion	Written or Viva	F & S	I	

CO5	Identify the characteristics of different oils	Cognitive/Comprehension	Nice to know	Know	Lecture discussion	Written or Viva	Formative	I	
CO5	Classify various types of madyas (wines)	Cognitive/Comprehension	Nice to know	Know	Lecture discussion	Written or Viva	Formative	I	
	explain the properties of Shukta, Dhanyamlam, sauveeraka, tushodaka etc.,	Cognitive/Comprehension	Nice to know	Know	Lecture discussion	Written or Viva	Formative	I	
CO5	Describe the properties and uses of various types of urine	Cognitive/Comprehension	Nice to know	Know	Lecture discussion	Written or Viva	Formative	I	
CO2	Recite the shlokas- 1,16-17, 20,29-32, 51,52,56	Cognitive/Recall	Must know	Show	Self-learning	Written or Viva	F & S	I	
CO5	Classify some common dravyas like milk, ghee, sugar, jaggery etc according to their varga (group) and qualities	Skill	Must know	Show how	class Discussion	Viva/ class activities	F & S	I	
CO1	Identify Vaakyashesh, Samucchaya, Yog Tantrayukties in this chapter.	Cognitive/ Application	Must know	Knows how	Lecturer/ Group discussion	Viva	F & S	I	

Topic -7 Ashtang Hriday Samhita – Sutrasthan- Chapter 6. Annaswaroopa Vijnaneeya Adhyaya- Time (Lecture:- 05 ; Non lecture 03 hours)

CO5	To classify the shukadhanya (cereals)	Cognitive/Recall	Must know	Know	Lecture	Written or Viva	F & S	II	Dravyaguna
CO5	Enumerate the qualities of each shukadhanya (cereals)	Cognitive/Recall	Desire to know	Know	Lecture	Written or Viva	Formative	II	Dravyaguna
CO5	Classify the shimbidhanya (pulses)	Cognitive/Recall	Must know	Know	Lecture	Written or Viva	F & S	II	Dravyaguna

CO5	Enumerate the qualities of each shimbi dhanya (pulses)	Cognitive/ Recall	Desire to know	Know	Lecture discussion	Written or Viva	Formative	II	Dravyagu na
CO5	Enumerate the qualities of various types of mamsa (meat)	Cognitive/ Recall	Nice to know	Knows	Lecture discussion	Written or Viva	Formative	II	
CO5	Enumerate the qualities of various types of shaka	Cognitive/ Recall	Must know	Knows	Lecture discussion	Written or Viva	Formative and summative	II	Dravyagu na
CO5	Enumerate the qualities of various types of fruits	Cognitive/ Recall	Desire to know	Knows	Lecture discussion	Written or Viva	Formative	II	Dravyagu na
CO5	Enumerate the qualities of various types of krtannavarga (cooked food)	Cognitive/ Recall	Must to know	Know	Lecture discussion	Written or Viva	Formative and summative	II	Bhaishajy akalpana
CO5	Enumerate the qualities of various types of medicinal dravyas (herbs)	Cognitive/ Recall	Must know	Knows	Lecture discussion	Written or Viva	F & S	II	Dravyagu na
CO5	Classify certain common dravyas according to varga and functions	Skill	Must know	Show how	Group activities	Viva	F & S	II	
CO1	Identify Samucchaya, Prayojan, Tantrayukties in this chapter.	Cognitive/ Application	Must know	Knows how	Lecturer/ Group discussion	Viva	F & S	II	
Topic -8 Ashtang Hriday Samhita – Sutrasthan- Chapter 7. Annaraksha Adhyaya- Time (Lecture:- 04 ; Non lecture 03 hours)									
CO8	Describe the role of Rajavaidya (Noble Physiiian)	Cognitive/ Comprehe nsion	Nice to know	Know	Discussion	Written or Viva	Formative	II	

CO6	Identify the characteristics adulterated food stuffs	Cognitive/ Comprehe nsion	Nice to know	Knows	Discussion	Written or Viva	Formative	II	Agadatant ra
CO6	Describe the symptoms caused by poisoned or adulterated food	Cognitive/ Comprehe nsion	Desire to know	Know	Discussion	Written or Viva	Formative	II	Agadatant ra
CO6	Discuss the treatment module for poisoning	Cognitive/ Comprehe nsion	Desire to know	Know how	Discussion	Written or Viva	Formative	II	Agadatant ra
CO6	Define virudhahara (incompatible foods) with examples	Cognitive/ Recall	Must know	Know	Lecture discussion	Written & Viva	F & S	II	
CO6	Discuss the treatment methods for virudhahara (incompatible foods)	Cognitive/ Comprehe nsion	Must know	Know how	Lecture discussion	Written & Viva	F & S	II	
CO6	Follow the principles regarding viruddh aahar	Cognitive/ Applicatio n	Must know	Know how	Discussion	Class Activities	Formative	II	
CO4	Explain the process of satmikaran (accustomization)	Cognitive/ Comprehe nsion	Must know	Know how	Lecture discussion	Written & Viva	F & S	II	
CO4	Explain the three accessory pillars of life (diet, sleep and non-celibacy)	Cognitive/ Comprehe nsion	Must know	Know how	Lecture discussion	Written & Viva	Formative	II	
CO4	Explicate the significance of judicious sleep	Cognitive/ Comprehe nsion	Must know	Know how	Discussion	Written & Viva	F & S	II	
CO2	Recite the shloka- 45, 48, 50, 53-55	Cognitive/ Recall	Must know	Shows	Self-learning	Written or Viva	F & S	II	
CO1	Identify Nidarshan, Samucchay, Prayojan,	Cognitive/ Applicatio n	Must know	Knows how	Lecturer/ Group discussion	Viva	F & S	II	

	swasadnya Tantrayukties in this chapter.								
Topic -9 Ashtang Hriday Samhita – Sutrasthan- Chapter 8. Annaraksha Adhyaya- Time (Lecture:- 05 ; Non lecture 04 hours)									
CO4	Explain the importance of matra (proper quantity of food) for maintenance of health	Cognitive/ Comprehe nsion	Must know	Knows how	Lecture	Written or Viva	F & S	II	
CO4	Describe how to quantify food	Cognitive/ Comprehe nsion	Must know	Knows	Lecture	Written or Viva	F & S	II	
CO4	Determine the adverse effects of heena matra (inadequate quantity of food) and atimatra (excess quantity of food) ahara	Cognitive/ Comprehe nsion	Must know	Knows how	Lecture	Written or Viva	F & S	II	
CO6	Discuss the etiopathogenesis, symptoms and treatment principles of Alasaka and Visuchika.	Cognitive/ Applicatio n	Must know	Knows how	Lecture/PB L	Written or Viva	F & S	II	
CO6	Classify between various types of Apatarpan therapies	Cognitive/ Comprehe nsion	Must know	Knows how	Lecture	Written or Viva	F & S	II	
CO6	Classify various types of ajeerna	Cognitive/ Comprehe nsion	Must know	Knows how	Lecture	Written or Viva	F & S	II	
CO6 , CO4	Enlist unwholesome food items	Cognitive/ Recall	Must know	Knows	Group discussion	Written or Viva	F & S	II	
CO4	Identify various unhealthy food habits	Cognitive/ Comprehe nsion	Must know	Knows	Group discussion	Written or Viva	F & S	II	

CO4	Recommend ideal regimen for consumption of food (aaharvidhi)	Cognitive/ Comprehe nsion	Must know	Knows how	Discussion	Written or Viva	F & S	II	
CO4	Differentiate between the food items recommended and non-recommended for daily use	Cognitive/ Comprehe nsion	Must know	Knows	Lecture Group Activity.	Written or Viva	F & S	II	
CO4	Advise the right order of food items in a meal	Cognitive/ Applicatio n	Must know	Does	Discussion/ activities	Viva/ proforma activity	F & S	II	
CO4	Select anupanas (after drink) based on ahara and aushadha	Cognitive/ Comprehe nsion	Must know	Knows how	Lecture/Dis cussion	Written or Viva	F & S	II	
CO4	Identify the conditions where Anupan is contraindicated	Cognitive/ Comprehe nsion	Desire to know	Knows	Lecture/Dis cussion	Written or Viva	F & S	II	
CO4	Advise the right time of food consumption (Aahar Kala)	Cognitive/ Applicatio n	Must know	Shows	Lecture/Dis cussion/acti vities	Written or Viva	F & S	II	
CO2	Recite the shlokas-1-3, 6,7, 17, 19, 20,21, 25-30, 33-34	Cognitive/ Recall	Must know	Shows	Self - learning	Written or Viva	F & S	II	
CO4	Justify the various principles of diet regarding quantity and time	Cognitive/ Applicatio n	Must know	Does	Discussion/ activities	Viva/activities	Formaive/Sum mative	II	
CO1	Identify Prayojan, Upadesh, Padartha, Yog, Swasdnya Tantrayukties in this chapter.	Cognitive/ Applicatio n	Must know	Knows how	Lecturer/ Group discussion	Viva	F & S	II	

Topic -10 Ashtang Hriday Samhita – Sutrasthan- Chapter 9. Dravyaadi Vijnaniya Adhyaya-**Time** (Lecture:- 04 ; Non lecture 04 hours)

CO5	Justify the predominance of Dravya	Cognitive/Comprehension	Must know	Knows how	Lecture	Written or Viva	F & S	II	
CO5	Elaborate the prevalence of Panchamahabhutas in Dravyas	Cognitive/Comprehension	Must know	Knows how		Written or Viva	F & S	II	
CO5	Differentiate between Rasa and Anurasa (primary taste and secondary taste)	Cognitive/Comprehension	Must know	Knows	Lecture	Written or Viva	F & S	II	
CO5	Analyse the characteristics of Panchabhautik dravyas	Cognitive/Application	Must know	Shows	Lecture	Written or Viva	F & S	II	
CO5	Recognise the aushadatva (medicinal value) of all substances	Cognitive/Comprehension	Must know	Knows how	Lecture	Written or Viva	F & S	II	
CO5	Demonstrate the importance of Panchabhautikdravyas in restoration and continuation of health.	Cognitive/Comprehension	Must know	Knows how	Lecture	Written or Viva	F & S	II	
CO5	Explain the importance of Mahabhutas and drug action	Cognitive/Comprehension	Must know	Knows how	Lecture	Written or Viva	F & S	II	
CO5	Define Veerya and Vipaka	Cognitive/Recall	Must know	Knows	Lecture	Written or Viva	F & S	II	
CO5	Discuss the types and the various opinions related with Veerya.	Cognitive/Comprehension	Must know	Knows how	Lecture	Written or Viva	F & S	II	
CO5	Explain Vipaka and its types.	Cognitive/Comprehension	Must know	Knows	Lecture	Written or Viva	F & S	II	

CO5	Discuss the hierarchy of active principles of Dravya (matter)	Cognitive/Comprehension	Must know	Knows how	Lecture	Written or Viva	F & S	II	
CO5	Define Prabhava	Cognitive/Recall	Must know	Knows	Lecture	Written or Viva	F & S	II	
CO5	Recall the exemplified functions of various active principles	Cognitive/Recall	Must know	Knows	Lecture	Written or Viva	F & S	II	
CO5	Describe the Saman pratyayarabdha and Vichitra-praty-arabdha Dravyas.	Cognitive/Comprehension	Must know	Knows how	Lecture	Written or Viva	F & S	II	
CO2	Recite the shlokas – 1,2,3, 4,10, 12, 13, 20,26,27,28	Cognitive/Recall	Must know	Knows	Self-learning	Written , Viva/quiz	F & S	II	
CO1	Identify Swasdnaya, Nirvachan Tantrayukties in this chapter.	Cognitive/Application	Must know	Knows how	Lecturer/Group discussion	Viva	F & S	II	

Topic -11 Ashtang Hridaya Samhita – Sutrasthan- Chapter 10. Rasabhedhiya Adhyaya- Time (Lecture:- 05 ; Non lecture 04 hours)

CO2	Describe the formation of rasa from mahabhoota	Cognitive/Comprehension	Must know	Know	Lecturer Audio-Visual aids	Written or Viva	Formative or Summative	II	Dravyaguna
CO2	Identify the examples and exceptions of the six rasa	Cognitive/Comprehension	Must know	Know	Lecturer Audio-Visual aids	Written or Viva	Formative or Summative	II	Dravyaguna
CO2	Explain the features of six rasa with examples and exceptions	Cognitive/Comprehension	Must know	Knows how	Lecturer Audio-Visual aids	Written or Viva	Formative or Summative	II	
CO2	Explain the functions of six rasa	Cognitive/Comprehension	Must know	Knows how	Lecturer Audio-Visual aids	Written or Viva	Formative or Summative	II	

CO2	Describe the symptoms due to excess use (atiyog) of the six rasa	Cognitive/Comprehension	Must know	Knows how	Lecturer Audio-Visual aids	Written or Viva	Formative or Summative	II	
CO2	Analyze the tartamatva of rasas (hierarchy of rasa on the basis of characteristics)	Cognitive/Application	Must know	Knows how	Lecturer Audio-Visual aids	Written or Viva	Formative or Summative	II	Dravyaguna
CO2	Enlist the 63 types of permutation and combination of rasa	Cognitive/Recall	Nice to know	Know how	Lecturer Audio-Visual aids	Written or Viva	F & S	II	Dravyaguna
CO2	Classify the dravyas according to the rasa skand (group)	Skill	Must know	Know how	Discussion/activities based proformas	Viva/Activities	F & S	II	
CO2	Recite the shloks-1-21, 33-38	Cognitive/Recall	Must know	Knows	Self-learning	Written or Viva	F & S	II	
CO1	Identify Uddesh, Niradesh, Apavarga Tantrayukties in this chapter.	Cognitive/Application	Must know	Knows how	Lecturer/Group discussion	Viva	F & S	II	
<u>Topic -12 Ashtang Hriday Samhita – Sutrasthan- Chapter 11. Doshadi Vijnaniya Adhyaya- Time (Lecture:- 08 ; Non lecture 05 hours)</u>									
CO3	Discuss the importance of dosha dhatu mala	Cognitive/Application	Must know	Know how	Lecturer Audio-Visual aids	Written & Viva	Formative or Summative	III	
CO3	Explain dosha dhatu mala prakruta karma (normal functions)	Cognitive/Comprehension	Must know	Knows how	Lecturer Audio-Visual aids	Written & Viva	Formative or Summative	III	

CO3	Identify the normal functions of dosha, dhatu and mala	Skill	Must know	Show How	Activity based proformas	Viva/ through various Activities	Formative or Summative	III	
CO3	Explain dosha dhatu mala vaikruta (vruddha and ksheena) karma (abnormal functions)	Cognitive/ Comprehe nsion	Must know	Knows how	Lecturer Audio- Visual aids	Written & Viva	Formative or Summative	III	
CO3	Identify the effects due to vruddhi (increase) or kshaya (decrease) of dosha,dhatu and mala	Skill	Must know	Show How	Activity based proformas	Viva/ through various Activities	Formative or Summative	III	
CO3	Explain the relation between dosha and dhatu.	Cognitive/ Comprehe nsion	Must know	Know how	Lecturer Audio- Visual aids	Written & Viva	Formative or Summative	III	
CO5	Explain the treatment principles for vitiated dosha, dhatu and mala	Cognitive/ Comprehe nsion	Must know	Know how	Lecturer Audio- Visual aids	Written & Viva	Formative or Summative	III	
CO3	Elucidate the concept of agni	Cognitive/ Comprehe nsion	Must know	Know how	Lecturer Audio- Visual aids	Written & Viva	Formative or Summative	III	
CO3	Discuss Superiority of Jatharagni	Cognitive/ Applicatio n	Must know	Know how	Lecture, Discussion	Written & Viva	Formative or Summative	III	
CO3	Assess the status of Agni.	Skill	Must know	Shows	Activities	Viva/ Activites	Formative or Summative	III	
CO6	Explain the general pathophysiology for origin of Diseases	Cognitive/ Comprehe nsion	Must know	Know how	Lecturer Audio- Visual aids	Written or Viva	Formative or Summative	III	

CO3 CO6	Explain the concept of Ojas	Cognitive/Comprehension	Must know	Know how	Lecture, Discussion	Written or Viva	Formative or Summative	III	
CO3 CO6	Explain aetiological factors for Ojakshaya	Cognitive/Comprehension	Must know	Know how	Lecturer	Written or Viva	Formative or Summative	III	
CO3 CO6	Explain Ojakshaya Lakshana	Cognitive/Comprehension	Must know	Know how	Lecture, Discussion	Written or Viva	Formative or Summative	III	
CO3 CO6	Identify Ojakshaya Lakshana	Skill	Must know	Show how	Lecturer Audio-Visual aids	Viva/activities	Formative or Summative	III	
CO5	Discuss general diet principles for vridhhi and kshaya (vitiated doshas)	Cognitive/ Application	Must know	Show How	Activity based proformas	Viva/ planned activities	Formative or Summative	III	
CO2	Recite shlokas from 1 to 45	Cognitive	Must Know	Knows	Self-learning	Written or Viva	Formative or Summative	III	
CO1	Identify Samucchaya, Adhikaran, Vakyashesh Tantrayukties in this chapter.	Cognitive/ Application	Must know	Knows how	Lecturer/ Group discussion	Viva	F & S	III	
<u>Topic -13 Ashtang Hriday Samhita – Sutrasthan- Chapter 12. Doshabhediya Adhyaya- Time (Lecture:- 08 ; Non lecture 05 hours)</u>									
CO3	Enumerate the seats of vata, pitta and kapha doshas	Cognitive/ Recall	Must know	Knows	Lecturer Audio-Visual aids	Written or Viva	Formative or Summative	III	
CO3	Enlist types of vata, pitta and kapha dosha.	Cognitive/ Recall	Must know	Knows	Lecturer Audio-Visual aids	Written or Viva	Formative or Summative	III	
CO3	Describe the specific seats and functions of types of vata, pitta and kapha doshas.	Cognitive/ Recall	Must know	Knows	Lecturer Audio-Visual aids	Written or Viva	Formative or Summative	III	

CO3	Discuss the importance of types of vata, pitta and kapha doshas.	Cognitive/ Application	Must know	Knows how	Lecturer Audio-Visual aids	Written or Viva	Formative or Summative	III	
CO3	Identify the different types of dosha according to location and functions	Skill	Must know	Knows how	Proforma based activities	Written or Viva	Formative or Summative	III	
CO3	Elucidate the concept of Chaya (accumulation), Prakopa (aggravation) and Prashama (alleviation) of vata, pitta and kapha doshas.	Cognitive/ Comprehension	Must know	Knows how	Lecturer Audio-Visual aids	Written or Viva	Formative or Summative	III	
CO3	Discuss the impact of seasonal variation in accumulation and aggravation of vata, pitta and kapha doshas.	Cognitive/ Application	Must know	Knows how	Lecturer Audio-Visual aids/Discussion	Written or Viva	Formative or Summative	III	
CO3	Discuss the superiority of dosha in manifestation of diseases	Cognitive/ Application	Must know	Know how	Lecturer Audio-Visual aids/Discussion	Written or Viva	Formative or Summative	III	
CO3	Identify general aetiological factors responsible for manifestation of diseases	Cognitive/ Application	Must know	Know how	Lecturer/ Discussion	Written or Viva	Formative or Summative	III	
CO3	Describe Trividha Roga marga (pathways of diseases)	Cognitive/ Comprehension	Must know	Knows	Lecturer	Written or Viva	Formative or Summative	III	
CO3	Enlist various disorders of Trividha Roga marga (pathways of diseases)	Cognitive/ Recall	Must know	Knows	Lecturer/	Written or Viva	Formative or Summative	III	

CO3	Recognise the importance of concept of Trividha Roga marga in diagnosis and prognosis of diseases.	Cognitive/ Application	Must know	Knows how	Discussion	Written or Viva	Formative or Summative	III	
CO3	Enumerate the symptoms of aggravated Vata-Pitta – Kapha dosha	Cognitive/ Recall	Must know	knows	Lecture, Discussion	Written or Viva	Formative or Summative	III	
CO3	Identify the prakopa lakshana of dosha in various diseases	Skill	Must know	Show How	Discussion, Group activities	Written or Viva	Formative or Summative	III	
CO3	Explain the concept of unnamed diseases	Cognitive/ Comprehension	Must know	Knows how	Lecture, Discussion	Written or Viva	Formative or Summative	III	
CO3	Define svatantra and partantra vyadhi (primary and secondary diseases)	Cognitive/ Recall	Must know	Know	Lecture	Written or Viva	Formative or Summative	III	
CO3	Enumerate the types of assessment methods	Cognitive/ Recall	Must know	Know	Lecture, Discussion	Written or Viva	Formative or Summative	III	
CO3	Demonstrate the types of assessment methods.	Skill	Must know	Shows how.	Group Activities	Viva	Formative	III	
CO3	Explain the concept of Guru Vyadhit and LaghuVyadhit (gravity of disease and contrary presentation)	Cognitive/ Comprehension	Must know	Knows how	Lecture, Discussion	Written or Viva	Formative or Summative	III	
CO3	Enlist the 63 types of Permutation and combination of dosha	Cognitive/ Recall	Nice to know	Knows	Lecture	Written or Viva	Formative or Summative	III	
CO2	Recite the shlokas 1-72	Cognitive/ Recall	Must know	Shows	Self-learning	Written, Viva/Quiz	F & S	III	

CO1	Identify Apadesh, Samucchaya Tantrayukties in this chapter Tantrayukties in this chapter.	Cognitive/ Application	Must know	Knows how	Lecturer/ Group discussion	Viva	F & S	III	
Topic -14 Ashtang Hriday Samhita – Sutrasthan- Chapter 13 Doshopakramaniya Adhyaya-Time (Lecture:- 07 ; Non lecture 06 hours)									
CO3	Explain the therapeutic procedures and specific management of vata, pitta and kapha dosha	Cognitive/ Comprehension	Must know	Knows how	Lecture	Written or Viva	F & S	III	
CO6	Explain the seasonal regimen to be adopted in various combinations of vitiated Doshas	Cognitive/ Comprehension	Must know	Knows	Lecture/Group Discussions	Written or Viva	F & S	III	
CO6	Discuss the importance of treatment of doshas in accumulation stage	Cognitive/ Application	Must know	Knows how	Lecture/Group Discussions	Written or Viva	F & S	III	
CO6	Differentiate the accurate and inaccurate therapeutic procedures.	Cognitive/ Comprehension	Must know	Knows how	Lecture/Group Discussions	Written or Viva	F & S	III	
CO6	Elaborate the factors responsible for movement of doshas from koshta to shakha and shakha to koshta.	Cognitive/ Comprehension	Must to know	Knows how	Lecture	Written or Viva	F & S	III	
CO6	Elaborate the concept of tiryag-gatadosha (migration to other abodes) and its treatment principle.	Cognitive/ Comprehension	Must to know	Knows how	Lecture	Written or Viva	F & S	III	
CO6	Describe the line of treatment for Sthanidosha (native) and Aagantudosha (immigrant)	Cognitive/ Comprehension	Must to know	Knows how	Lecture	Written or Viva	F & S	III	

CO6	Explain the concept of Aama.	Cognitive/Comprehension	Must to know	Knows how	Lecture	Written or Viva	F & S	III	
CO6	Enumerate the symptoms of saam and niraam doshas.	Cognitive	Must to know	Knows	Lecture	Written or Viva	F & S	III	
CO6	Elaborate the symptoms of saamadasha and their treatment	Cognitive	Must to know	Knows	Lecture	Written or Viva	F & S	III	
CO6	Analyze the 10 types of aushadha sevan kaal (Time, Method and indications of administration of medicine).	Cognitive/Application	Must to know	Knows how	Lecture/Discussion	Written or Viva	F & S	III	
CO2	Recite the shlokas-1-41	Cognitive/Recall	Must know	Shows	Self-learning	Written or Viva	F & S	III	
CO1	Identify Swasadnya, Nidarshan, Uddesh, Nirdesh Tantrayukties in this chapter.	Cognitive/Application	Must know	Knows how	Lecturer/Group discussion	Viva	F & S	III	
Topic -15 Ashtang Hridaya Samhita – Sutrasthan- Chapter 14 Dvidividhopakramaniya Adhyaya-Time (Lecture:- 05 ; Non lecture 05 hours)									
CO6	Elaborate the concept of two types of therapies - Langhan and Brihan	Cognitive/Comprehension	Must know	Know how	Lecture	Written or Viva	F & S	III	
CO6	Describe the indications, methods, benefits of Brihan and symptoms of excess Brihan	Cognitive/Comprehension	Must know	Know how	Lecture/Discussion	Written or Viva	F & S	III	
CO6	Explain the indications, methods, benefits of Langhan and symptoms of excess Langhan	Cognitive/Comprehension	Must know	Know how	Lecture/Discussion	Written or Viva	F & S	III	

CO6	Describe the indications of shodhan and shaman therapies	Cognitive/Comprehension	Must know	Know how	Lecture	Written or Viva	F & S	III	
CO6	Elaborate the concept of Atisthaulya with the treatment module	Cognitive/Comprehension	Must know	Know how	Lecture	Written or Viva	F & S	III	
CO6	Elaborate the concept of Atikarshya with the treatment module	Cognitive/Comprehension	Must know	Know how	Lecture	Written or Viva	F & S	III	
CO2	Recite the shlokas – 1 to 7, 31 to 36	Cognitive/Recall	Must know	Shows	Self-learning	Written or Viva	F & S	III	
CO1	Identify Nirvachan, Samucchay, Nidarshan Tantrayukties in this chapter.	Cognitive/Application	Must know	Knows how	Lecturer/Group discussion	Viva	F & S	III	
<u>Topic -16 Ashtang Hridaya Samhita – Sutrasthan- Chapter 15, Shodhanadigana Sangraha Adhyaya- Time (Lecture:- 02 ; Non lecture 04 hours)</u>									
CO7	Select the vaman, virechan, niruha, nasya gana according to their functions	Cognitive/Comprehension	Nice to know	Knows how	Lecture/Multimedia aids	Viva	Formative	III	Dravyaguna
CO7	Define the dravyas with their ingredients and actions.	Cognitive/Recall	Nice to know	Know	Lecture/Multimedia aids	Viva	Formative	III	
CO7	Identify the dravyas frequently used in treatments	Skill	Nice to know	Shows	Herbal garden visit	Viva	Formative	III	
<u>Topic-17. Charak Samhita Sutrasthan Chapter 1. Dirghamjivitiyam Adhyaya; Time (Lecture:- 07 ; Non lecture 02 hours)</u>									
CO1	Discuss the Ayurvedavataranam (Genealogy of Ayurveda)	Cognitive	Must know	Knows how	Lecture	Written or Viva	F & S	I	
CO8	Discuss the chaturvarga and its main factor for achieving it	Cognitive	Must know	Knows how	Lecture	Written or Viva	F & S	I	

CO6	Discuss about the trisutra of Ayurveda (three principles of health and disease)	Cognitive	Must know	Know how	Lecture	Written or Viva	F & S	I	
CO2	Discuss the about the six padarthas (six basic principles)	Cognitive	Must know	Know how	Lecture	Written or Viva	F & S	I	
CO1	Discuss the characteristics of Ayurveda	Cognitive	Must know	Know how	Lecture	Written or Viva	F & S	I	
CO2	Discuss the characteristics of Ayu (life) and its synonyms	Skill	Must know	Knows how	Lecture	Written or Viva	F & S	I	
CO2	Discuss the characteristics of samanya (similarity) and visha (difference/uniqueness)	Cognitive	Must know	Knows how	Lecture	Written or Viva	F & S	I	
CO2	Discuss about the Tridanda (tripod of life)	Cognitive	Must know	Knows how	Lecture	Written or Viva	F & S	I	
CO2	Discuss the classification and characteristics of the dravyas (basic elements)	Cognitive	Must know	Knows how	Lecture	Written or Viva	F & S	I	
CO2	Discuss the classification and characteristics of the gunas	Cognitive	Must know	Show How	Lecture	Written or Viva	F & S	I	
CO2	Define karma (actions)	Cognitive	Must know	Knows how	Lecture	Written or Viva	F & S	I	
CO2	Explain samavaya (inseparable concomitance)	Cognitive	Must know	Knows how	Lecture	Written or Viva	F & S	I	
CO1	Explain the aims of Ayurveda	Cognitive	Must know	Knows how	Lecture	Written or Viva	F & S	I	

CO6	Explain the three causative factors of disease	Cognitive	Must know	Knows how	Lecture	Written or Viva	F & S	I	
CO6	Explain the abode of vyadhi and arogya	Cognitive	Must know	Show how	Lecture	Written or Viva	F & S	I	
CO2	Discuss the characteristics of Atma	Cognitive	Must know	Know how	Lecture	Written or Viva	F & S	I	
CO6	Explain the sharira and manasa doshas	Cognitive	Must know	Know how	Lecture	Written or Viva	F & S	I	
CO6	Discuss the treatment of sharira and manasa doshas	Cognitive	Must know	knows How	Lecture	Written or Viva	F & S	I	
CO3	Discuss the gunas of vayu and its treatment	Cognitive	Must know	Knows how	Lecture	Written or Viva	F & S	I	
CO3	Discuss the gunas of pitta and its treatment	Cognitive	Must know	Knows how	Lecture	Written or Viva	F & S	I	
CO3	Discuss the gunas of shleshma and its treatment	Cognitive	Must know	Knows How	Lecture	Written or Viva	F & S	I	
CO6	Discuss about the treatment for sadhya and asadhya vikara (curable and incurable disease)	Cognitive	Must know	Knows how	Lecture	Written or Viva	F & S	I	
CO2	Explain the rasa	Cognitive	Must know	Knows how	Lecture	Written or Viva	F & S	I	
CO2	Classify the dravya based on their effects on body and their origin	Cognitive	Must know	Know how	Lecture	Written or Viva	F & S	I	
CO7	Enumerate the dravya based on the useful parts (upayuktanga)	Cognitive	Desirable to know	Know how	Lecture/Mul timedia aids	Written or Viva	F & S	I	
CO7	Discuss about the identification of drugs by name, form and its action	Cognitive	Must know	Know how	Lecture/Mul timedia aids	Written or Viva	F & S	I	

CO8	Discuss about the duties for one aspires to be a physician.	Cognitive	Must know	Know how	Lecture	Written or Viva	F & S	I	
CO7	Discuss about the best drug	Cognitive	Must know	Know how	Lecture	Written or Viva	F & S	I	
CO8	Discuss about the best physician endowed with all good qualities	Cognitive	Must know	Know how	Lecture	Written or Viva	F & S	I	
CO2	Recite the shlokas 15, 24,28,29, 31, 41, 42, 44-67, 134,135	Cognitive/ Recall	Must know	Shows	Swadhyaya (self learning)	Written or Viva	F & S	I	
CO1	Identify Uddesha, Niradesh Tantrayukties in this chapter	Cognitive/ Application	Must know	Knows how	Lecturer/ Group discussion	Viva	F & S	I	

Topic-18. Charak Samhita Sutrasthan Chapter 2. Apamarga Tanduliya Adhyaya; Time (Lecture:- 02 ; Non lecture 03 hours)

CO7	Enumerate few Shiro Virechana Dravya & Main Indications	Cognitive	Desirable to know	Knows	Lecture/Audiovisual aids/ Herbal garden visit	Written or Viva	F & S	II	Dravyaguna
CO7	Enumerate few Vamana Dravya & Main Indications	Cognitive	Desirable to know	Knows	Lecture/Audiovisual aids/ Herbal garden visit	Written or Viva	F & S	II	Dravyaguna
CO7	Enumerate few Virechana Dravya & Main Indications	Cognitive	Desirable to know	Knows	Lecture/Audiovisual aids/ Herbal garden visit	Written or Viva	F & S	II	Dravyaguna
CO7	Enumerate few Asthapana Basti Dravya & Main Indications	Cognitive	Desirable to know	Knows	Lecture/Audiovisual aids/ Herbal garden visit	Written or Viva	F & S	II	Dravyaguna

CO7	Enumerate few Anuvasana Basti Dravya & Main Indications	Cognitive	Desirable to know	Knows	Lecture/Audiovisual aids/ Herbal garden visit	Written or Viva	F & S	II	Dravyaguna
CO7	Enumerate the names & Main Indications of 28 Types of Yavagu	Cognitive	Desirable to Know	Knows	Lecture/Audiovisual aids	Written or Viva	F & S	II	Rasshastra-bhaishjya dept
CO7	Explain the Importance Of Panchakarma	Cognitive	Must know	Knows	Lectures	Written or Viva	F & S	II	Panchkarma
CO7	Explain the features of Vaidya	Cognitive	Must know	Knows	Lecture/Group Discussion	Written or Viva	F & S	II	
CO7	Recite Shlokas 15,16,36	Cognitive/Recall	Must know	Shows	Self-learning	Written or Viva	F & S	II	
CO7	Identify the dravyas on the basis of actions	Psychomotor	Must know	Shows	Herbal garden visit	Viva	Summative	II	Dravyaguna
CO1	Identify Upadesh, Samucchaya Tantrayukties in this chapter.	Cognitive/ Application	Must know	Knows how	Lecturer/ Group discussion	Viva	F & S	II	
Topic-19. Charak Samhita Sutrasthan Chapter 3. Aragvadhiya Adhyaya-Time (Lecture:- 01 ; Non lecture 03 hours)									
CO7	Mention Thirty Two Churna Pradeha & Main Indications	Cognitive	Desirable to know	Knows	Lectures/Multimedia aids	Written or Viva	Formative	II	Ras-bhaishjya/Kayachikitsa
Topic-20. Charak Samhita Sutrasthan Chapter 4. Shadvirechana-shatashritiya Adhyaya-Time (Lecture:- 03 ; Non lecture 04 hours)									
CO7	List the six abodes of purgatives	Cognitive/Recall	Must know	Know	Discussion	Written or Viva	F & S	II	Dravyaguna
CO7	Enlist the five tastes for medicinal preparation	Cognitive/Recall	Must know	Know	Lecture, discussion	Written or Viva	F & S	II	Rasashastra &

									bhaishajya Kalpana
CO7	Define the five types of medicinal preparations/ forms	Cognitive/ Recall	Must know	Know	Lecture / Multimedia aids	Written or Viva	F & S	II	Ras-bhaishjya
CO7	Enlist the 50 groups of medicines as per their actions	Cognitive/ Recall	Desirable to know	Know	Lecture	Written or Viva	F & S	II	Dravya guna
CO7	Limitations for description of medicinal drugs in Samhita	Cognitive/ Comprehension	Nice to know	Know how	Lecture	Written or Viva	Formative	II	
CO1	Identify Swasadnya , Samucchaya, Yog Tantrayukties in this chapter.	Cognitive/ Application	Must know	Knows how	Lecturer/ Group discussion	Viva	F & S	II	
Topic-21. Charak Samhita Sutrasthan Chapter-05 Matrashiteeya Adhyaya_ Time (Lecture:- 03 ; Non lecture 05 hours)									
CO5	Explain Matravat Ahara	Cognitive/ Recall	Must know	Know	Lecturer, Audio-Visual aids, Group Discussion	Written or Viva	Formative and Summative	II	Swastarutta
CO5	Define and enlist Nature of Ahara (Guru, Laghu)	Cognitive/ Recall	Must know	Knows how	Lecturer Audio-Visual aids Group Discussion	Written or Viva	Formative and Summative	II	Swastarutta
CO5	Explain the significance of MatravatAharaPhala	Cognitive/ Recall	Must know	Know how	Lecturer, Audio-Visual aids, Group Discussion	Written or Viva	Formative and Summative	II	Swastarutta
CO5	Discuss role of AharaSevanaVidhana on the bases of its nature	Cognitive/ Comprehension	Must know	Know how	Lecturer Audio-Visual aids	Written or Viva	Formative and Summative	II	Swastarutta

					Group Discussion				
CO2	Define Swasthavrutta	Cognitive/ Recall	Must know	Knows	Lecturer Audio-Visual aids Group Discussion	.Viva	Formative and Summative	II	Swastarutta
CO6	Explain Anjana	Cognitive/ Comprehension	Must know	Know	Lecturer Audio-Visual aids Group Discussion	Written or Viva	Formative and Summative	II	Swastarutta
CO6	Explain Dhumapana	Cognitive/ Comprehension	Must know	Knows how	Lecturer Audio-Visual aids Group Discussion	Written or Viva	Formative and Summative	II	Swastarutta, Shalakya, Panchakarman
CO6	Explain Nasya	Cognitive/ Comprehension	Must know	Knows how	Lecturer Audio-Visual aids Group Discussion	Written or Viva	Formative and Summative	II	Swastarutta, Shalakya, Panchakarman
CO6	Explain Dantadhavana	Cognitive/ Comprehension	Must know	know How	Lecturer Audio-Visual aids Group Discussion	Written or Viva	Formative and Summative	II	Swastarutta,
CO6	Explain Jivhanirlekhana	Cognitive/ Comprehension	Must know	know How	Lecturer Audio-Visual aids Group Discussion	Written or Viva	Formative and Summative	II	Swastarutta,
CO6	Explain Gandusha	Cognitive/ Comprehension	Must know	Knows how	Lecturer Audio-Visual aids	Written or Viva	Formative and Summative	II	Swastarutta,

					Group Discussion				
CO6	Explain Abhyanga with types	Cognitive/Comprehension	Must know	Knows how	Lecturer Audio-Visual aids Group Discussion	Written or Viva	Formative and Summative	II	Swastarutta, Panchakarma
CO6	Describe Parimarjana	Cognitive/Comprehension	Must know	Knows how	Lecturer Audio-Visual aids Group Discussion	Written or Viva	Formative and Summative	II	Swastarutta,
CO4	Describe the VastraGandhaMalyadiDhara	Cognitive/Comprehension	Must know	Knows how	Lecturer Audio-Visual aids Group Discussion	Written or Viva	Formative and Summative	II	Swastarutta,
CO4	Explain the concept of Shouchavidhi	Cognitive/Comprehension	Must know	Knows how	Lecturer Audio-Visual aids Group Discussion	Written or Viva	Formative and Summative	II	Swastarutta,
CO4	Discuss the Kshourakarma	Cognitive/Comprehension	Must know	Know how	Lecturer Audio-Visual aids Group Discussion	Written or Viva	Formative and Summative	II	Swastarutta,
CO4	Define PadatraDharan with importance	Cognitive/Recall	Must know	Know how	Lecturer Audio-Visual aids Group Discussion	Written or Viva	Formative and Summative	II	Swastarutta,
CO4	Explain the ChatraDharana	Cognitive/Recall	Must know	knows How	Lecturer Audio-Visual aids	Written or Viva	Formative and Summative	II	Swastarutta,

					Group Discussion				
CO4	Justify the importance of the procedures mentioned as dincharya	Cognitive/ Application	Must know	Shows how	Group Discussion	Group Discussion/ Project work	Formative and Summative	II	
CO2	Recite the shlokas 4, 12-13, 34-35, 56-57,68-69, 81-83, 103	Cognitive/ Recall	Must know	Shows	Swadhyaya (self learning)	Viva	F & S	II	
CO1	Identify Upadesh, Padarth,, Nidarshan Tantrayukties in this chapter.	Cognitive/ Application	Must know	Knows how	Lecturer/ Group discussion	Viva	F & S	II	
CO4	Research Updates: Role of Dinacharya to maintain circadian rhythm Role of therapeutic message for cell rejuvenation Mechanism of satiation and proper quantity of food (Sauhitya Matra)	Cognitive	Nice to know	Knows how	Lecture; Audio-visual aids	Group discussion	-	II	
Topic-22. Charak Samhita Sutrasthan Chapter-6. Tasyashiteeya Adhyaya-<u>Time</u> (Lecture:- 04 ; Non lecture 04 hours)									
CO2	Discuss the importance of Classification of Samvastara	Cognitive/ Comprehension	Must know	Knows how	Lecture Audio-Visual aids Group Discussion	Written or Viva	Formative and Summative	II	
CO2	Explain the significance of Visarga Kala	Cognitive/ Comprehension	Must know	Know how	Lecture Audio-Visual aids Group Discussion	Written or Viva	Formative and Summative	II	

CO2	Explain the significance of Adana kala	Cognitive/ Recall	Must know	Know how	Lecture Audio- Visual aids Group Discussion	Written or Viva	Formative and Summative	II	
CO4	Explain the nature of climate in Shadrutu	Cognitive/ Recall	Must know	Know how	Lecture Audio- Visual aids Group Discussion	Written or Viva	Formative and Summative	II	
CO4	Explain Sevaniya and Nishiddh Ahara Vihara in Shadrutu	Cognitive/ Recall	Must know	Know how	Lecture Audio- Visual aids Group Discussion	Written or Viva	Formative and Summative	II	
CO4	Define and explain the properties of Hamsodaka	Cognitive/ Recall	Must know	Knows	Lecture Audio- Visual aids Group Discussion	Written or Viva	Formative and Summative	II	
CO4	Justify the regimen mentioned as per seasons	Cognitive/ Application	Must know	Show how	Group Discussion	Group Discussion/ Project work/viva	Formative and Summative	II	
CO2	Describe Saatmya and its types	Cognitive/ Recall	Must know	Knows	Lecture Audio- Visual aids Group Discussion	Written or Viva	Formative and Summative	II	
CO2	Recite Shloka number 18, 21, 29, 35, 45, 49, 50	Cognitive/ Recall	Must know	Knows	Swadhyaya –Self learning	Written or Viva	Formative and Summative	II	
CO1	Identify Uddesh- Nirdesh , swasadnya Tantrayukties in this chapter..	Cognitive/ Application	Must know	Knows how	Lecturer/ Group discussion	Viva	F & S	II	

CO4	Research Updates: What causes the season: Summer and winter solistice- Equinoxes- Rotation of earth around sun.	Cognitive/ Applicatio n	Nice to know	Knows	Lecture, Audio- vidual aids	Group discussion	-	II	
Topic-23. Charak Samhita Sutrasthan Chapter-7. Naveganadharaniya Adhyaya-Time (Lecture:- 04 ; Non lecture 04 hours)									
CO4	Enumerate Adharaniya and Dharaniya Vega	Cognitive/ Recall	Must to know	know	lecture/ Group discussion/	Written or Viva	F & S	II	
CO4 CO6	Describe symptoms and treatment pattern of Adharaniya Vega	Cognitive	Must to know	Know how	lecture/ Group discussion /quiz	Written or Viva	F & S	II	
CO4	Cite symptoms and treatment pattern of Dharaniya Vega	Cognitive	Must to know	Know how	lecture/ quiz/Group discussion	Written or Viva	F & S	II	
CO4	Quote the contraindicated actions of mind, speech and body.	Cognitive	Must to know	Know	lecture/ quiz/Group discussion	Written or Viva	F & S	II	
CO4	Describe concept, effects and benefits of exercise	Cognitive	Must to know	Know how	lecture/ recitation/ quiz/Audiov isual aids	Written or Viva	F & S	II	Swasthav ritta
CO4	describe symptoms due to excessive exercise	Cognitive	Must to know	Know	lecture/ Group discussion/ quiz/Audiov isual aids	Written or Viva	F & S	II	Swasthav ritta
CO4	Describe the action which should be avoided in excess	Cognitive	Must to know	Know how	lecture/ Group discussion /quiz	Written or Viva	F & S	II	

CO4	Describe pattern of Ahita Krama tyaga	Cognitive	Must to know	Know how	lecture/ Group discussion/ quiz	Written or Viva	F & S	II	
CO4	Classify deha prakruti	Cognitive	Must to know	Know	lecture/ Group discussion/ quiz	Written or Viva	F & S	II	
CO6	Describe Aagantuj vyadhis (exogenous diseases)	Cognitive	Must to know	Know	lecture/ Group discussion/ quiz	Written or Viva	F & S	II	Nidan
CO6	Describe Pradnyaparadhaj vyadhi	Cognitive	Must to know	Know	lecture/ Group discussion/ quiz	Written or Viva	F & S	II	Nidan
CO4	State Vikar Anutpatti Vidhi (Preventive measures of diseases)	Cognitive	Must to know	Know how	lecture/ Group discussion/ quiz	Written or Viva	F & S	II	
CO6	describe treatment of Aagantuj (exogenous) and Manas (psychological)diseases	Cognitive	Must to know	Know how	lecture/ Group discussion/ quiz	Written or Viva	F & S	II	
CO4	Describe shodhan treatment as per season	Cognitive	Must to know	Know how	lecture/ Group discussion/ quiz	Written or Viva	F & S	II	Panchkar ma
CO4	Describe Aapta and anapta purush	Cognitive	Must to know	Know	lecture/ Group discussion/ quiz	Written or Viva	F & S	II	
CO4	Describe the rules of eating curd	Cognitive	Must to know	Know how	lecture/ Group	Written or Viva	F & S	II	

					discussion/ quiz				
CO2	Recite shloka number 27, 28, 29, 30, 31, 39, 40, 55, 60.	Cognitive	Must to know	Know how	lecture/ Group discussion/ quiz	Written or Viva	F & S	II	
CO1	Identify Arthapatti , Nirvachan, Vyakhyan Tantrayukties in this chapter.	Cognitive/ Application	Must know	Knows how	Lecturer/ Group discussion	Viva	F & S	II	
CO4	Research Updates: Corelation of genomic variation with the classification of Prakriti	Cognitive/ Recall	Desire to know	Know	lecture/ Audio- vidual aids	Group discussion	-	II	

Topic-24. Charak Samhita Sutrasthan Chapter-8. Indriyopakramaniya Adhyaya- Time (Lecture:- 04 ; Non lecture 03 hours)

CO2	Enumerate Indriya/ Dravya/Adhishthana/ Artha/ Buddhi	Cognitive/ Recall	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	II	
CO4	Write the characteristics of Mana	Cognitive/ Recall	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	II	
CO4	Justify the ektvam of Manas	Cognitive/ Comprehension	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	II	
CO4	State that Sattvikatva, Rajasatva and Tamasatva of Manas	Cognitive/ Recall	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	II	
CO4	Tabulate Indriya PanchaPanchaka	Cognitive/ Recall	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	II	
CO4	Quote Adhyatma Dravya Guna Sangraha	Cognitive/ Recall	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	II	

CO4	State the predominant Mahabhuta in each Indriya	Cognitive/ Recall	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	II	
CO4	Know the role of Indriya and Mana in Prakriti and Vikriti	Cognitive/ Recall	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	II	
CO4	Discuss the Causes and Benefits of Sadvritta Anushthana	Cognitive/ Comprehe nsion	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	II	
CO4	Elaborate the Do's and Don'ts in Sadvritta	Cognitive/ Recall	Must know	Know	Lectures/ Audio- Visual Aids/ Group Discussion	Written or Viva	Formative & Summative	II	
CO4	Explain Hetuchatushtaya	Cognitive/ Recall	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	II	
CO4	State the guideline for Anukta Sadvritta	Cognitive/ Recall	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	II	
CO2	Recite the shloka number 7-13, 34	Cognitive/ Recall	Must know	Shows	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	II	
CO1	Identify Upadesh , Samucchaya, Yog Tantrayukties in this chapter.	Cognitive/ Applicatio n	Must know	Knows how	Lecturer/ Group discussion	Viva	Formative & Summative	II	
CO4	Research updates: Mental health and gut microbiota.	Cognitive/ Applicatio n	Nice to know	Know	Lectures/ Audio- Visual Aids	Group discussion	-	II	
Topic-2CO Charak Samhita Sutrasthan Chapter-9. Khuddakachatushpada Adhyaya- Time (Lecture:- 03 ; Non lecture 03 hours)									
CO8	Cite Chikitsa Chatushpada (four components of healthcare)	Cognitive	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	II	

CO8	Define Roga-Arogya (disease-health)	Cognitive/ Recall	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	II	
CO8	Define Chikitsa (treatment)	Cognitive/ Recall	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	II	
CO8	List the Qualities of Vaidya (physician)	Cognitive/ Recall	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	II	
CO8	List the Qualities of Dravya (medicine)	Cognitive/ Recall	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	II	
CO8	List the Qualities of Paricharaka (nursing staff)	Cognitive/ Recall	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	II	
CO8	List the Qualities of Aatura (patient)	Cognitive/ Recall	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	II	
CO8	State the importance of Vaidya in the 4 components of healthcare	Cognitive/ Recall	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	II	
CO8	Write the Complications due to ignorant physician	Cognitive/ Recall	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	II	
CO8	Describe the Sadvaidya Qualities (good physician)	Cognitive/ Comprehension	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	II	
CO8	Write the duties of the physician	Cognitive/ Comprehension	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	II	
CO8	List Four types of Vaidya vrutti (attitude of the physician)	Cognitive/ Recall	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	II	

CO8	Recite the shloka number 3,4,5,18,20,21, 24,25,26	Cognitive/ Recall	Must know	Shows	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	II	
CO8	Discuss the qualities and duties of a good physician	Cognitive/ Application	Must know	Shows how		Written or Viva	Formative	II	
CO1	Identify Uddesh, Nirdeś, Nidarshan Tantrayukties in this chapter.	Cognitive/ Application	Must know	Knows how	Lecturer/ Group discussion	Viva	F & S	II	
CO8	Research Updates: Medical ethics-principles Soft Skill development for medical students Emotional Intelligence as a crucial component in medical education	Cognitive	Nice to know	Knows	Lecture / Audio- Visual aids	Group discussion	-	II	

Topic-26. Charak Samhita Sutrasthan Chapter-10. Mahachatushpada Adhyaya- Time (Lecture:- 03 ; Non lecture 03 hours)

CO6	Substantiation of Chatushpaada- bheshajam alam aarogyaayeti (aatreya-kṛta), Bhesaja-abheshajayo tulyatva pratipaadana – (maitreya-kṛta), Its conclusion by Atreya,	Cognitive/ Recall	Desirable to know	Knows	Lecture with substantiation of the point by mentioning contemporary examples	Written & Viva	F & S	II	
CO6	Explain the Cikitsa sootram- Cikitsaayaam yasolaabhe kaaranam,	Cognitive/ Recall	Desirable to know	Knows	Lecture with substantiation of the point by mentioning	Written or Viva	F & S	II	

					contemporar y examples				
CO6	Asaadhyaroga- cikitsaayaam haani,	Cognitive/ Recall	Desirable to know	Knows	Lecture with substantiatio n of the point by mentioning contemporar y examples	Written or Viva	F & S	II	
CO6	Describe the upamaana pramaana	Cognitive/ Recall	Desirable to know	Knows	Lecture with substantiatio n of the point by mentioning contemporar y examples	Written or Viva	F & S	II	
CO6	Enumerate and analyse the further classification of saadhya-asaadhyata	Cognitive/ Recall	Must know	Knows	Lecture with live demonstrati on in OP	Written or Viva	F & S	II	
CO6	Identify, judge and discuss Sukha-saadhya lakshanam, Krcchra- saadhya lakshanam, Yaapya lakshanam and Pratyaakhyeya lakshanam	Cognitive/ Recall	Must know	Knows how	Lectures and clinical demonstrati on	Viva / written Problem based assessment	F & S	II	
CO6	Apply and interpret the benefit of knowledge of prognosis	Cognitive/ Recall	Must know	Knows	Lectures	Written or Viva	F & S	II	
CO6	Analyse the term mithyaa- buddhi and accept responsibility to not end up as a mithyaa-buddhi at	Cognitive/ Recall	Must know	Knows	Lectures	Written or Viva Discussions	F	II	

	any point of time of the profession								
CO6	Recite Shloka number 14 to 20	Cognitive/ Recall	Must know	Knows	Lecture, swaadhyaya	Viva	F & S	II	
CO1	Identify Nirnaya, Swasdnya, Sanshaya, Ekant Tantrayukties in this chapter.	Cognitive/ Application	Must know	Knows how	Lecturer/ Group discussion	Viva	F & S	II	
Topic-27. Charak Samhita Sutrasthan Chapter-11. Tisraishaniya Adhyaya- <u>Time</u> (Lecture:- 06 ; Non lecture 05 hours)									
CO4	Explain the significance of the three desires for prana (life) and dhana(means of life).	Cognitive/ Recall	Must know	Know how	Lectures/ Audio- Visual Aids	Written & Viva	Formative & Summative	III	
CO4	Discuss the concept of paraloka	Cognitive/ Recall	Must know	Know how	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	III	
CO4	Discuss different opinions on the concept of punarjanma (re-birth)	Cognitive/ Recall	Must know	Know how	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	III	
CO2	Define characteristics of Aapta	Cognitive/ Recall	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	III	
CO2	Define pratyaksha, anumana and yukti pramana with example	Cognitive/ Recall	Must know	Know how	Lectures/ Audio- Visual Aids	Lectures/ Audio- Visual Aids	Formative & Summative	III	

CO2	Justify punarjanma by using aaptopadesha, pratyaksha, Anumana and yuktipramana	Cognitive/ Application	Must know	Know how	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	III	
CO4	Explain the importance of thrayopasthamba (sub-pillars of life).	Cognitive/ Application	Must know	Know how	Lectures/ Audio- Visual Aids	Written-MCQ/ SAQ/ LAQ & Viva	Formative & Summative	III	
CO4	Discuss the three types of bala (strength) and its importance.	Cognitive/ Application	Must know	Know how	Lectures/ Audio- Visual Aids	Written & Viva	Formative & Summative	III	
CO6	Describe the three causes of disease.	Cognitive/ Application	Must know	Know	Lectures/ Audio- Visual Aids	Written & Viva	Formative & Summative	III	
CO6	Identify the symptoms due to excessive, less and improper use of sense organs	Cognitive/ Recall	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	III	
CO6	Identify the symptoms due to excessive, less and improper verbal, psychic and physical actions.	Cognitive/ Recall	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	III	
CO6	Define Prajnaparadha	Cognitive/ Recall	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	III	

CO6	Identify the signs of excess, less and improper kaala (season)	Cognitive/ Recall	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	III	
CO6	Define nija, agantu and manasa roga.	Cognitive/ Recall	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	III	
CO6	Discuss general treatment protocol for manasavyadhi (psychological disorders)	Cognitive/ Comprehe nsion	Must know	Know how	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	III	
CO6	Discuss the three disease pathways	Cognitive/ Comprehe nsion	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	III	
CO8	Classify the three types of physicians	Cognitive/ Comprehe nsion	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	III	
CO6	Describe daivavyapashraya, yuktivyapashraya and satvavajayachikitsa	Cognitive/ Comprehe nsion	Must know	Know how	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	III	
CO6	Describe antahaparimarjana, bahiparimarjana, shastrapr anidhanachikitsa.	Cognitive/ Comprehe nsion	Must know	Know how	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	III	

CO2	Discuss importance of ashta trika.	Cognitive/ Application	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	III	
CO2	Recitation of Shloka number 18,19,20,21,22,23,24, 25, 47.	Skill	Must know	Know	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	III	
CO1	Identify Swasadnyaa, samucchaya , Samshaya, Nirvachan Tantrayukties in this chapter.	Cognitive/ Application	Must know	Knows how	Lecturer/ Group discussion	Viva	F & S	III	

Topic-28. Charak Samhita Sutrasthan Chapter-12. Vatakalakaliya Adhyaya-Time (Lecture:- 04; Non lecture 05 hours)

CO4	explore the various properties of vata	Cognitive/ Recall	Must know	Knows how	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	III	
CO4	Discuss the opinions of various aacharyas on different aspects of Vata dosha	Cognitive/ Recall	Must Know	Knows	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	III	
CO4	Explore various factors responsible for aggravation and and pacification of vata dosha	Cognitive/ Recall	Must know	Knows how	Lectures/ Audio- Visual Aids/Group Discussion	Written or Viva	Formative & Summative	III	
CO4	enumerate prakrita and vikrita karma of vata	Cognitive/ Recall	Must know	Knows how	Lectures/ Audio- Visual Aids/ Group Discussion	Written or Viva	Formative & Summative	III	
CO4	Explain the clinical application of Vata Guna	Cognitive/ Recall	Desirable to know	Knows how	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	III	

CO4	Describe the action of normal and aggravated Pitta	Cognitive/ Comprehe nsion	Must know	Knows how	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	III	
CO4	Describe the action of normal and aggravated Kapha	Cognitive/ Comprehe nsion	Must know	Knows how	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	III	
CO4	Describe atreya's exploration on Tridosha and its importance	Cognitive/ Comprehe nsion	Must know	Knows how	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	III	
CO4	Recite the shlokas- 8,11,12	Cognitive/ Recall	Must know	Shows	Lectures/ Audio- Visual Aids	Written or Viva	Formative & Summative	III	
CO1	Identify Padartha, Vyakhyan , Anumat Tantrayukties in this chapter	Cognitive/ Applicatio n	Must know	Knows how	Lecturer/ Group discussion	Viva	Formative & Summative	III	

Table 4 : Practical/ Activities for AyUG - SA 1

Term wise distribution of allotted time				
Term	Total teaching (400 hrs)	Lecture (140 hrs)	Non Lecture (260hrs)	
			Samhita Pathan (130 hrs)	Activities- In class/ Hospital (130 hrs)
I	130 hrs.	50 hrs.	50	30
II	140 hrs.	50 hrs.	40	50
III	130 hrs.	40 hrs.	40	50

Table 5: Non Lecture Activities Course AyUG-SA1

Non Lecture activities- (Samhita Pathan / In Class Activities & Hospital Based activities)

: 260 hrs

SN	Name of Practical	Term	
1.	Samhita Pathan	I, II, III	Total 130 in all three terms. (Term I-50 hrs; Term II - 40hrs; Term III - 40hrs)
	In Class Activities/ Case Based Activities/ Field Activities		
2.	1. Introduction to Samhita Problem based learning : Application of Tantrayukti for chapter number 1, 2 of Ashtang Hridaya and chapter 1 st of charak Samhita.	I	5 hrs.
	Group Activity Interpret Anubandha Chatushtya with examples Interpret Ashta Prashna with example	I	4 hrs
	Ashtang Hriday Samhita - Sutrasthan (1-5Adhyaya)		
3.	AH Su 1. Ayushkamiya Adhyaya Commentary Based activity- Fetch the meaning of important terms on the basis of commentary. (Any 30 important words). Make your own dictionary.	I	3 hrs
4.	AH Su 2. Dinacharya Adhyaya- Survey Activity: Application of concepts- Dinacharya and its application: Proforma based assessment in healthy volunteers/ patients. Daily routine shall be recorded on the basis of predesigned proforma and then shall discuss. Communication Skill introduction. Survey Role play.	I	4 hrs

5.	<p>AH Su 3. Rutucarya Adhyaya- Application of concepts- Ritucharya and application -</p> <p>Proforma based assessment in healthy individuals or patients.</p>	I	4 hrs
6.	<p>AH Su 4. Roganutpadaniya Adhyaya- Case Based Activity/Learning- Assess the sign and symptoms of given case on the basis of learning of Adharaneeya Vegas and find out the probable causative factors on the basis of principles taught.</p>	I	4 hrs
7.	<p>AH Su 5. Dravadravya Vijnaniya Adhyaya Group Activity-(Group presentation)- Utility of Dravyas:- Allocate the Dravadravya Vargas among student groups. Every group will Justify (represent) the practical utility of dravyas allotted to them.</p>	I	4 hrs
8.	<p>6. Annaswaroop Vijnaneeya Adhyaya- Group presentation- Justify the utility of this chapter in present era- Every group will illustrate the utility of their assigned Aahara Dravya Varga (Discuss practically available dravyas)</p>	II	3 hrs
9.	<p>7. Annaraksha Adhyaya- Discussion- Explore the present dietary habits- Explore the Various diet combinations used in present society (by four family/ Relatives/ neighborhood) on the basis of principles learned for viruddhahar. Discuss them in class.</p> <p>Trayopastambha -Importance of Nidra- Flipped classroom- Share the prerecorded videos/ other material with students before class. On the basis of these have discussion.</p>	II	4 hrs
10.	<p>8. Matrashitiya Adhyaya- Case Based learning- Determine adverse effects of heena matra</p>	II	4 hrs

	<p>(inadequate quantity of food) and atimatra (excess quantity of food) ahara:- (Video clip of patient suffering from a type of Ajeerna can be shared in class and then group wise discussion on the concept.)</p> <p>Group Activity- Differentiate between the food items recommended and non-recommended for daily use:- Cross refer the previous chapters and demonstrate the rationale behind the wholesome or unwholesome nature of these enlisted Dravyas referring their qualities.</p>		
11.	<p>9. Dravyaadi Vijnaniya Adhyaya- Application of concepts- Enlist the dravyas according to Rasa, Veerya, Vipaka, Prabhav. (Can refer chapter 5,6,10 of Ashtang Hriday and Chapter 2, 3, 4 of Charak Samhita). Apply the concepts learned in present chapter to understand the action of Dravyas.</p>	II	4 hrs
12.	<p>10. Rasabhedhiya Adhyaya- Case based learning- Prepare proforma enlisting the sign and symptoms of excess consumption of six Rasas and regular diet pattern. Assess the predominance of Rasa consumption in patients or healthy volunteers. Then Correlate with the case findings.</p>	II	4 hrs
13.	<p>11. Doshadi Vijnaniya Adhyaya- Case Based learning-(CBL)- Assess the patient for Vriddhi and Kshaya Lakshanas of Dosha-Dhatu-Mala, based on predesigned proforma. Discuss these case findings later in class.</p>	III	5 hrs
14.	<p>12. Doshabhedhiya Adhyaya- Model making Activity- Working models on Dosha Sthanas or Subtypes of Doshas, Chaya, Prakop and Prashama of Doshas: PBL/CBL</p>	III	5 hrs

	Give one problem/case based on Samanya Dosh Nidan. Student will identify possible causative factors responsible for vitiation of Doshas in given problem.		
15.	<p>13. Doshopakramaniya Adhyaya- Case Based learning-(CBL)- Group activity- Observe the signs and symptoms of Ama in any five patients (Group wise) and present and discuss it in class.</p> <p>Seminar Presentation-</p> <ol style="list-style-type: none"> Understand Aushadha Kaal in relation with suntypes of Vata Dosha. Recognize the principles applicable during treatment of Saam Dosha and Dushyas. 	III	6 hrs
16.	<p>14. Dvividhopakramaniya Adhyaya-</p> <p>Case based learning- Find out the causative factors of Atishualya in present era (On the basis of predesigned proforma) CBL Share video clip of any patient suffering from Atikarshya- On the basis of previous learning discuss the contributing factors responsible for malnourishment. (Explore Dhatu Sneha Parampara in present context).</p>	III	5 hrs
17.	<p>15. Shodhanadigana Sangraha Adhyaya- Group Presentation- Divide the various Aushadha Vargas among students and a group will represent each varga and related practical information.</p>	III	4 hrs
	Charak Samhita – Sutrasthan (1-12 Adhyaya)		
18.	<p>CS Su 1. Deerghanjiviteeya Adhyaya-</p> <p>Compilation work: (based on commentry)</p> <ul style="list-style-type: none"> Student has to write 20 terminologies with meanings referring Chakrapani commentary. Then after these terms shall be discussed in class. 	I	2

19.	CS Su 2. Apamarga Tanduliya Adhyaya- Visit to Dravyaguna Department- Identify the dravyas on the basis of different karmas	II	3 hrs
20.	CS Su 3. Aragvadhiya Adhyaya- Group Discussion- Probable mode of action of drugs applied externally? In which form they will more absorbable? (May take help of published literature; discuss linking with Ayurveda fundamentals.) Practical demonstrations in Panchakarma unit on patients. Workshop/ demonstration of preparation of different lepas useful in different conditions.	II	3 hrs
21.	CS Su 4. Shadvirechana-shataashritiya Adhyaya- Practical Demonstration: Visit to Dravyaguna Department and demonstration of various Mahakashaya and its uses (Integration with Dravyaguna department)	II	4 hrs
22.	CS Su 5. Matrashiteeya Adhyaya- Visit to Panchakarma Unit of Hospital – Demonstration of abhyanga, mardana, udvartana and other procedures to be followed in daily routine (Integration with Panchakarma Department) Group Project : Gather information about nutritive values of Nitya Sevaniya Dravyas. Assess their classical properties. Discuss why these dravyas are specially advised for regular consumption.	II	5 hrs
23.	CS Su 6. Tasyashiteeya Adhyaya- Documentation- Festival and rutu- Documenting the changes in the food habits and	II	4 hrs

	<p>lifestyle as per the rutu with the parents and elders and also discussing on relevance of rutucharya concept with Indian festivals.</p> <p>Short Essay writing /Poster making- Does and don'ts to be followed according to various seasons (Refer both the Samhitas for this activity)</p>		
24.	<p>CS Su 7. Naveganadharaniya Adhyaya:-</p> <p>Vedio clip making Activity- Educating people about harms of vega dharana by social media campaigns</p> <p>Group Discussion- Finding reasons for vega dharana in present day lifestyle.</p>	II	4 hrs
25.	<p>CS Su 8. Indriyopakramaniya Adhyaya- Group Presentation- Sadvrutta – Interpreting relevance of different sadvrutta in present scenario. Developing new sadvruttas as per todays' lifestyle referring classics.</p>	II	3 hrs
26.	<p>CS Su 9. Khuddakachatushpada Adhyaya- Doctor Patient communication introduction, Role play. Feedback collection of chikitsa chatushpada Group activity- Collect Feedback on qualities of Vaidya from rogi and upasthata. Collect Feedback on qualities of rogi from vaidya and upasthatha Collect Feedback on qualities of upasthatha from rogi and Vaidya Collect feedback on qualities of dravya from the experts of dravyaguna and rasa shastra</p>	II	3 hrs
27.	<p>CS Su 10. Mahachatushpada Adhyaya- Developing proforma for sadhya asadhya vyadhi lakshanas-</p>	II	3 hrs

	Guide students on how to prepare a proforma to assess any available parameters.		
28.	CS Su 11. Tisraishaniya Adhyaya- Debate :- Punarjanma siddhant as per different thoughts. Debate on punarjanma with different references as per classics and contemporary understanding.	III	5 hrs
29.	CS Su 12. Vatakalakaliya Adhyaya- Role Play (Enact sambhasha parishad) – Distribute the characters of the rishis given in chapter. And guide them with the script. Arrange a forum where these students will be doing sambhasha parishad on vata kala-akala. Decode the sutras- Students in groups will use different tools like infographics/ animation/ ppts to illustrate the normal functions of Vata Dosha explained in present chapter. (Refer Chakrapani commentary thoroughly to understand the meaning of Sanskrit shlokas). Introduction to Group Dynamics. Communication skills for Group Discussions.	III	5 hrs
30.	Shloka Recitation Competition- At the end of the year/ every term such competition shall organized by department.	III	5 hrs
31.	Ayurveda Quiz- On the basis of assigned syllabus.	III	5 hrs
32.	Poster making Competition / SA writing completion / Making video clips for general people to make awareness about Ayurved living.	III	5 hrs

Table 6: Assessment Summary**6 A - Number of Papers and Marks Distribution**

S.No.	Subject Code	Papers	Theory	Practical/Clinical Assessment					Grand Total
				Practical/ Clinical	Viva	Electives	IA	Sub Total	
1.	AyUG-SA1	1	100	-	75	10 (Set-FC)	15	100	200

6 B - Scheme of Assessment (formative and Summative)

SR.NO.		PROFESSIONAL COURSE	DURATION OF PROFESSIONAL COURSE		
			First Term (1-6 Months)	Second Term (7-12 Months)	Third Term (13-18 Months)
1	AyUG-SA1	First	3 PA & First TT	3 PA & Second TT	3 PA & UE
		PA: Periodical Assessment; TT: Term Test; UE: University Examinations			

6 C - Calculation Method for Internal assessment Marks (15 Marks)

TERM	PERIODICAL ASSESSMENT*					TERM TEST**	TERM ASSESSMENT	
	A	B	C	D	E	F	G	H
	1 (15 Marks)	2 (15 Marks)	3 (15 Marks)	Average (A+B+C/3)	Converted to 15 Marks (D/15*15)	Term Test (Marks converted to 15) (15 Marks)	Sub Total _/30 Marks	Term Assessment (..../15)
FIRST							E+F	(E+F)/2
SECOND							E+F	(E+F)/2
THIRD						NIL		E
Final IA	Average of Three Term Assessment Marks as Shown in 'H' Column.							
	Maximum Marks in Parentheses *Select an Evaluation Method which is appropriate for the objectives of Topics from the Table 6 D for Periodic assessment. Conduct 15 marks assessment and enter marks in A, B, and C. ** Conduct Theory (100 Marks)(MCQ(20*1 Marks), SAQ(8*5), LAQ(4*10)) and Practical (100 Marks) Then convert to 15 marks.							

6 D - Evaluation Methods for Periodical Assessment

S. No.	Evaluation Methods
1.	Activities Indicated in Table 3 - Column G3 as per Indicated I, II or III term in column I3.
2.	Practical / Clinical Performance

3.	Viva Voce, MCQs, MEQ (Modified Essay Questions/Structured Questions)
4.	Open Book Test (Problem Based)
5.	Summary Writing (Research Papers/ Samhitas)
6.	Class Presentations; Work Book Maintenance
7.	Problem Based Assignment
8.	Objective Structured Clinical Examination (OSCE), Objective Structured Practical Examination (OPSE), Mini Clinical Evaluation Exercise (Mini-CEX), Direct Observation of Procedures (DOP), Case Based Discussion (CBD)
9.	Extra-curricular Activities, (Social Work, Public Awareness, Surveillance Activities, Sports or Other Activities which may be decided by the department).
10.	Small Project

6 E - Paper Layout

I PROFESSIONAL BAMS EXAMINATIONS AyUG- SA1

Time: 3 Maximum Marks: 100

INSTRUCTIONS: All questions compulsory

TOTAL MARKS 100

		Number of Questions	Marks per question	Total Marks
Q 1	Multiple Choice Questions (MCQ)	20	1	20
Q 2	Short answer questions (SAQ)	8	5	40
Q 3	Long answer questions (LAQ)	4	10	40
				100

6 F - Distribution of Theory Exam

	AyUG-SA1			D Type of Questions "Yes" can be asked. "No" should not be asked.		
	A List of Topics	B Term	C Marks	MCQ (1 Mark)	SAQ (5 Marks)	LAQ (10 Marks)
1.	Introduction to Samhita-	1		No	/NO	NO
Ashtang Hriday Samhita - Sutrasthan (1-15 Adhyaya) 50 marks						
2.	AH Su.1. Ayushkamiya Adhyaya	1	50	YES	YES	YES

3.	AH Su.2. Dinacharya Adhyaya	I		YES	YES	YES
4.	AH Su.3. Rutucarya Adhyaya	I		YES	YES	YES
5.	AH Su.4. Roganutpadaniya Adhyaya	I		YES	YES	YES
6.	AH Su.5. Dravadravya Vijnaniya Adhyaya	I		NO	YES	NO
7.	AH Su.6. Annaswaroopo Vijnaneeya Adhyaya	II		NO	YES	NO
8.	AH Su.7. Annaraksha Adhyaya	II		NO	YES	NO
9.	AH Su.8. Matrashitiya Adhyaya	II		YES	YES	YES
10.	AH Su.9. Dravyaadi Vijnaniya Adhyaya	II		YES	YES	YES
11.	AH Su.10.Rasabhedhiya Adhyaya	II		YES	YES	YES
12.	AH Su.11.Doshadi Vijnaniya Adhyaya	III		YES	YES	YES
13.	AH Su.12.Doshabhedhiya Adhyaya	III		YES	YES	YES
14.	AH Su.13.Doshopakramaniya Adhyaya	III		YES	YES	YES
15.	AH Su.14.Dvividhopakramaniya Adhyaya	III		YES	YES	YES
16.	AH Su.15.Shodhanadigana Sangraha Adhyaya	III		NO	NO	NO
Charak Samhita – Sutrasthan (1-12 Adhyaya):						
17.	CS S 1. Deerghanjiviteeya Adhyaya-	I	50	YES	YES	YES
18.	CS S 2. Apamarga Tanduliya Adhyaya-	II		NO	YES	NO
19.	CS S 3. Aragvadhiya Adhyaya-	II		NO	YES	NO
20.	CS S 4. Shadvirechana-shatashrutiya Adhyaya-	II		NO	YES	NO
21.	CS S 5. Matrashiteeya Adhyaya-	II		YES	YES	YES
22.	CS S 6. Tasyashiteeya Adhyaya-	II		YES	YES	YES
23.	CS S 7. Naveganadharaniya Adhyaya-	II		YES	YES	YES
24.	CS S 8. Indriyopakramaniya Adhyaya-	II		YES	YES	YES
25.	CS S 9. Khuddakachatuspada Adhyaya-	II		YES	YES	YES
26.	S 10. Mahachatuspada Adhyaya-	II		YES	YES	YES
27.	S 11. Tisraishaniya Adhyaya-	III		YES	YES	YES
28.	S 12. Vatakalakaliya Adhyaya-	III			YES	YES

6 G - Question paper blue print

A Question Sr. No	B Type of Question	C Question Paper Format 50 marks AH/S 50 Marks CS/S
Q1	Multiple choice Questions	1. Topic number 2 (A.H.Su.Ch.1)

	<p>(MCQ)</p> <p>20 Questions</p> <p>1 mark each</p> <p>All compulsory</p> <p>From Must know part 15 MCQ</p> <p>From Desirable to know 3 MCQ</p> <p>From Nice to know 2 MCQ</p>	<ol style="list-style-type: none"> Topic number 3 (A.H.Su.Ch.2) Topic number 4 (A.H.Su.Ch.3) Topic number 5 (A.H.Su.Ch.4) Topic number 9 (A.H.Su.Ch.8) Topic number 10 (A.H.Su.Ch.9) Topic number 11 (A.H.Su.Ch.10) Topic number 12 (A.H.Su.Ch.11) Topic number 13 (A.H.Su.Ch.12) Topic number 14 (A.H.Su.Ch.13) Topic number 15 (A.H.Su.Ch.14) Topic number 17 (C.S.Su.Ch.1) Topic number 21 (C.S.Su.Ch.5) Topic number 22 (C.S.Su.Ch.6) Topic number 23 (C.S.Su.Ch.7) Topic number 24 (C.S.Su.Ch.8) Topic number 25 (C.S.Su.Ch.9) Topic number 26 (C.S.Su.Ch.10) Topic number 27 (C.S.Su.Ch.11) Topic number 28 (C.S.Su.Ch.12)
Q2	<p>Short answer Questions (SAQ)</p> <p>Eight Questions</p> <p>5 Marks Each</p> <p>All compulsory</p> <p>Must know 7,</p> <p>Desirable to know 1</p> <p>No Questions on Nice to know</p>	<ol style="list-style-type: none"> Topic no. 2 (A.H.Su.Ch.1) / Topic no. 25 (C.S.Su.Ch.9)/ Topic number 26 (C.S.Su.Ch.10) Topic no. 3(A.H.Su.Ch.2) / Topic no. 9(A.H.Su.Ch.8) / Topic no. 21(C.S.Su.Ch.5) / Topic no. 24 (C.S.Su.Ch.8) Topic no. 4 (A.H.Su.Ch.3) / Topic no. 22 (C.S.Su.Ch.6) / Topic no. 5 (A.H.Su.Ch.4) / Topic no. 23 (C.S.Su.Ch.7)/ Topic no. 12 (A.H.Su.Ch.11) / Topic no. 13 (A.H.Su.Ch.12)/ Topic no.28 (C.S.Su.Ch.12) Topic no. 17 (C.S.Su.Ch.1) Topic no. 6 (A.H.Su.Ch.5)/ Topic no.7 (A.H.Su.Ch.6)/ Topic no.18 (C.S.Su.Ch.2)/ Topic no.19 (C.S.Su.Ch.3) / Topic no.20 (C.S.Su.Ch.04) / Topic no.16 (A.H.Su.Ch.15) Topic no.8 (A.H.Su.Ch.7) /Topic no. 10 (A.H.Su.Ch.9) / Topic no.11 (A.H.Su.Ch.10)/ Topic no. 14 (A.H.Su.Ch.13) Topic no.15 (A.H.Su.Ch.14)/ Topic no. 27 (C.S.Su.Ch.11)
Q3	<p>Long answer Questions (LAQ)</p> <p>Four Questions</p> <p>10 marks each</p> <p>All compulsory</p>	<ol style="list-style-type: none"> Topic no. 2 (A.H.Su.Ch.1) / Topic no. 17 (C.S.Su.Ch.1)/ Topic no. 25 (C.S.Su.Ch.9)/ Topic number 26 (C.S.Su.Ch.10) Topic no.3(A.H.Su.Ch.2) / Topic no. 4 (A.H.Su.Ch.3)/ Topic no. 21(C.S.Su.Ch.5) / Topic no. 22 (C.S.Su.Ch.6)

	All questions on Must to know. No Questions on Nice to know and Desirable to know	3. Topic no. 12 (A.H.Su.Ch.11) / Topic no. 13 (A.H.Su.Ch.12)/ Topic no. 14 (A.H.Su.Ch.13)/ Topic no.15 (A.H.Su.Ch.14) / Topic no.28 (C.S.Su.Ch.12) 4. Topic no. 9(A.H.Su.Ch.8)/ Topic no. 10 (A.H.Su.Ch.9) / Topic no.11 (A.H.Su.Ch.10)/ Topic no. 27 (C.S.Su.Ch.11)/ Topic no.5 (A.H.Su.Ch.4)/ Topic no. 23 (C.S.Su.Ch.7)
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6 H - Distribution of Practical Exam

Practical 100 Marks – (Viva 75 + Elective 10 (Set-FC) + IA 15) Marks

SN		Heads	Marks
A		Viva (75 Marks)	
	1	Viva on Record Book (of yearly conducted non lecture activities) (Refer Table 5)	15
	2	Viva on Shloka Book and Shloka Recitation (Ref table 3. Recitation)	10
	3	Identification of Tantrayukti Viva on .Introduction to Samhita (ref Table 2: 1)	15
	4	Viva Voce on AH	15
	5	Viva Voce on Ch Su	15
	6	Communication Skill	05
B		Internal Assessment	15
C		Electives	10
		Total Marks	100

7. Reference books/Resources

- **Introduction to Samhita**

1. Ashtanghridayam with the commentaries ‘Sarvangasundara’ of Arundatta and ‘Ayurvedarasayana’ of Hemadri, Collated by Dr. Anna Moreshwar Kunte and Krishna Ramchandra Shastri Navre
2. Sushruta Samhita by Dr. Ambikadutta Shastri
3. Ayurvedeeya Padartha Vijnana by Prof. C. R. Agnivesh
4. Ayurvedeeya Padartha Vijnana and Ayurvedeeya itihaasam by Prof. C. R. Agnivesh
5. Ayurvediya Padarth Vidnyan by Vd. Ranjit Rai Desai
6. History of Medicine in India by Acharya Priyavrat Sharma
7. History of Indian Medicine by J. Jolly

- **Ashtang Hridaya**

1. Ashtanghridayam with the commentaries 'Sarvangasundara' of Arundatta and 'Ayurvedarasayana' of Hemadri, Collated by Dr. Anna Moreshwar Kunte and Krishna Ramchandra Shastri Navre
2. Ashtanga Hridaya : English commentary by Dr. T. Shreekumar
3. Ashtanga Hridaya : English commentary by Dr. Vishwavasudha Gaur
4. Ashtanga Hridayam : English translation by Prof. K.R. Srikantha Murthy
5. Ashtanga Hridaya –English translation by Vd. Anantram Shastri
6. Ashtanga Hridayam by Dr. B. Ramarao
7. Illustrated Ashtanga Hridaya text with English Translation by Dr. R. Vidyanath
8. Ashtanga Hridaya, Hindi commentary by Lalchanda Vaidya
9. Ashtanga Hridaya: Hindi commentary by Vd. B.L.Gaur

• Charak Samhita

1. Charakasamhita by Agnivesha Revised by Charaka and Dridhbala with the Ayurveda Dipika commentary of Chakrapanidatta Edited by Vaidya Yadavji Trikamji Acharya
2. Charak Samhita (English Commentary): Dr. Ram Karan Sharma and Vd. Bhagwan Dash or Acharya Priyavrata Sharma
3. Charak Samhita with translation of Chakrapani commentary by Harishchandra Kushvaha
4. Charak Samhita by Acharya P.V.Sharma
5. Charak Samhita (Hindi commentary): Vaidya Jayadev Vidyalankar
6. Charak Samhita (Hindi commentary): Vaidya Atridev Vidyalankar
7. Charak Samhita (Hindi commentary): Prof. Gorakhanath Chaturvedi and Kashinath Shastri
8. Charak Samhita (Hindi commentary): Dr. Brahmanand Tripathi
9. Charak Samhita (Hindi commentary): Dr. Ravidatta Tripathi
10. Charaka Samhita –Ayurveda Dipika Commentary- Hindi translation by Dr. B.L.Gaur
11. Legacy of Charak – M S Valiathan
12. Charak e-Samhita –National Institute of Indian Medical Heritage –
<http://niimh.nic.in/ebooks/ecaraka>
13. Charakasamhitaonline.com- [Charak Samhita New Edition \(carakasamhitaonline.com\)](http://Charak Samhita New Edition (carakasamhitaonline.com))

COURSE CURRICULUM FOR FIRST PROFESSIONAL BAMS(PRESCRIBED BY NCISM)

शास्त्रं ज्योतिषं चैव प्रकाशयति दशनं बुद्धिं चिरात्त्मनिः/



RACHANA SHARIRA
(SUBJECT CODE- AyUG-RS)

HUMAN ANATOMY

**(Applicable from 2021-22 batch onwards for 5 years or until further
notification by NCISM, whichever is earlier)**

BOARD OF AYURVEDA

**NATIONAL COMMISSION FOR INDIAN SYSTEM OF MEDICINE
NEW DELHI-110058**

NCISM

I Professional Ayurvedacharya (BAMS)

Subject Code: AyUG-RS

Rachana Sharir (Human Anatomy)

Summary

AyUG-RS Total number of Teaching hours: 500			
Lecture hours (LH) - Theory		180 Hours	180 Hours (LH)
Paper I	90 Hours		
Paper II	90 Hours		
Non-Lecture hours (NLH) – Theory		80 Hours	320 Hours (NLH)
Paper I	40 Hours		
Paper II	40 Hours		
Non-Lecture hours (NLH) - Practical		240 Hours	

AyUG-RS Examination (Papers & Mark Distribution)					
Item	Theory Component Marks	Practical Component Marks			
		Practical	Viva	Elective	IA
Paper I	100	100	70	--	30
Paper II	100				
Sub-Total	200	200			
Total marks	400				

Preamble

The primary purpose for teaching Rachana sharir to undergraduate students is to provide a thorough understanding of the basic principles of Sharir. Gross and microscopic structure and development of the human body in perspective of ancient and modern sciences, as well as to acquire necessary skills. Sharir in Ayurveda also provides in depth views to concepts like Marma and srotas.

Learning of Sharir is most useful in further years in diagnosis and management of the diseases.

Various teaching and learning methods, including didactic, demonstration, tutorial, group discussion, seminars, Integrated Teaching (IT), Problem Based Learning (PBL), and Early Clinical Exposure (ECE), Case-Based Learning (CBL), Virtual Dissection, and cadaveric dissection, are used to transfer knowledge to students, and the syllabus is constructed accordingly. As a result, the students appreciate being a part of the teaching and learning process. This will help the students to become competent, self-assured, caring, and concerned humans capable of providing ethical medical treatment.

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Course Code and Name of Course

	Course code	Name of Course
	AyUG RS	Rachana Sharir (Human Anatomy)

AyUG RS

Table 1- Course learning outcomes and matched PO.

SR1	A1	B1
CO	Course learning Outcome (CO) AyUG RS	Course learning Outcome matched with program learning outcomes.
No	At the end of the course AyUG RS, the student should be able to-	
CO1	Describe the fundamentals of Rachana Sharir, interpret and analyze it in relevant context and recognize its significance in Ayurveda	PO1, PO2
CO 2	Explain Garbha Sharir and Embryology in Ayurveda and modern science respectively with clinical significance	PO1, PO2
CO 3	Describe and demonstrate all the bones and joints with attachments of associated structures and its clinical application	PO1, PO2
CO 4	Explain the concept of Sira-Dhamani-Strotas, their organization in the human body and its applied aspect	PO1, PO2
CO 5	Identify the Marma and understand its classification along with its importance in preventive and therapeutic aspect	PO1, PO2
CO 6	Explain and demonstrate the gross anatomy of the organs of various systems and their applied anatomy in perspective of Ayurveda and Modern science	PO1, PO2, PO3
CO 7	Explain the Indriya Sharir and Sensory organs with its application in preventive and therapeutic domain.	PO1, PO2
CO 8	Identify and locate all the structures of body and mark the topography of the living Sharir.	PO1, PO3
CO 9	Respect the cadaver and perform dissection with commitment to reiterate the theoretical aspect of Ayurved Rachana Sharir and contemporary sciences.	PO1, PO3, PO5
CO 10	Describe the basic principles of imaging technologies and identify the anatomical structures in the radiograph	PO1, PO2, PO3

Table 2: Contents of Course AyUG-RS

Paper I					
SN	A2 List of Topics AyUG-RS	B2 Term	C2 Marks	D2 Lecture hours	E2 Non- Lecture hours
1	Shariropkramaniya Shaarira <ul style="list-style-type: none"> Sharir and Shaarir vyakhya (definitions of sharira and sharira) Shadangatvam (Six regions of the body) Anga Pratyanga vibhaga (subdivisions) Sharir shastra vibhag Sharir gyan prayojan and its description in contemporary science with its clinical importance 	I	6	4	2
2	Paribhasha Shaarira <ul style="list-style-type: none"> Kurcha, Kandara, Jala, Asthisamghata, Seemnta, Seevani, Rajju, and lasika Terminologies related shadang sharir 	I	4	3	1
3.	Garbha Shaarira <ul style="list-style-type: none"> Garbha Vyakhya (Definition of Garbha) Concept of Shukra and Artava Garbhavkranti. Masanumasik grabhavruddhi Role of panchamahabhoot in Garbhavruddhi Concept of Beeja, Beejabhaga, Beejabhagavayava Garbhposhana Apara nirmiti, Garbhanabhinadi Garbha Angapratyanga utpatti according to different Acharya Garbha Vikruti 	I	15	17	5
4.	Asthi Shaarira Enumeration of Asthi, Types, asthi swaroopa, with its applied aspect	I	4	2	1
5.	Sandhi Shaarira <ul style="list-style-type: none"> Description of Sandhi and its enumeration, Types of Sandhi with its clinical importance Introduction of diseases of Sandhi explained in Ayurveda 	II	4	2	3
6.	Snayu sharir Concept of Snayu and its clinical importance	II	3	2	1
7.	Peshi Shaarira <ul style="list-style-type: none"> Description of Peshi, Utpatti, types, Swaroop, function with its importance 	II	3	2	1
8.	Kesha, Danta, Nakha Sharir <ul style="list-style-type: none"> Description of Panchbhautik swaroop and its applied value Explanation of its swabhava (Pitruja) and its applied value Description of Prakrita (normal) and Vikruta(abnormal) Swaroop (appearance) of kesha, danta, nakha in concern with disease Importance of examination of kesha, danta, nakha 	II	4	2	1

	as diagnostic tool				
9	Embryology <ul style="list-style-type: none"> Definitions and branches of embryology. Embryo and Fetus. Sperm and Ovum, Fertilization, Cleavage. Germ layers formation and their derivatives. Laws of heredity, Sex determination and differentiation, Month-wise development of embryo. Fetal circulation, Placenta formation, Umbilical cord formation 	I	5	7	2
10	Osteology <ul style="list-style-type: none"> Bone: structure, types and ossification. Description of each bone with clinical anatomy 	I	12	9	6
11	Arthrology <ul style="list-style-type: none"> Joints: structure, types and movements. Description of joints of extremities, inter-vertebral joints and temporomandibular joint with their clinical anatomy. 	II	10	10	6
12	Myology <ul style="list-style-type: none"> Structure and types of muscles. Description of important muscles: origin, insertion, actions, nerve supply and clinical anatomy. Muscle movements in Yogasana 	II	4	6	2
13	Nervous System <ul style="list-style-type: none"> Nervous system: Introduction and classification Meninges Description of Brain and Spinal cord. Description of Peripheral Nervous System: Cranial and Spinal nerves, Brachial, Cervical, Lumbar and Sacral nerve plexus, Anatomical consideration of Autonomic Nervous System, Formation and circulation of cerebrospinal fluid Blood supply of Brain and Spinal cord. 	III	14	14	4
14	Endocrinology <ul style="list-style-type: none"> Description of endocrine glands (Pituitary, Thyroid, Parathyroid, Thymus, Pineal and Suprarenal glands) with clinical aspects. Histology of all glands. 	III	8	8	3
15	Lymphatic system <ul style="list-style-type: none"> Introduction Structure included in lymphatic system: Lymph vessels, Lymph nodes, Lymph glands with their clinical importance. 	III	4	2	2

Paper II AyUG-RS					
SN	A2 List of Topics AyUG-RS	B2 Term	C2 Marks	D2 Lecture hours	E2 Non- Lecture hours
1	Pramana Sharira: Anguli pramana & Anjali praman with its applied importance	II	2	2	1
2	Koshtha Evam Ashaya Sharira <ul style="list-style-type: none"> • Definition of Kostha with its applied importance and • Enumeration of Koshthanga and its description • Concept of Ashaya with its clinical importance 	I	4	2	1
3.	Sira Sharir <ul style="list-style-type: none"> • Concept of Sira • Nirukti, types, enumeration of Sira and its applied aspect • Introduction to Sira vedha 	II	4	3	1
4.	Dhamani Sharir <ul style="list-style-type: none"> • Concept of Dhamani • Nirukti, types, enumeration of Dhamani and its applied aspect 	II	2	2	1
5.	Strotas Shaarira <ul style="list-style-type: none"> • Concept of Strotas • Nirukti, types, number of Srotas, Strotomool and its applied aspect • Types of Strotas and its description. • Applied aspect of Strotas 	II	7	8	3
6.	Kala Shaarira <ul style="list-style-type: none"> • Definition and etymology of Kala • Enumeration and description of Kala • Applied aspect of Kala 	III	4	2	2
7.	Indriya Shaarira <ul style="list-style-type: none"> • Definition of Indriya, Indriya artha and Indriya adhisthan, • Number and importance of Indriya • Description of Gyanendriya, Karmendriya and Ubhayendriya (Manas). • Ayurved sharir of Indriya adhistan- Karna, Twacha, Netra, Jivha, Nasa • Applied aspect of Indriya 	III	3	3	1
8.	Twacha Sharir Definition, types and characteristics of Twacha with its clinical importance, significance of Twacha adhisthana in disease manifestation, its relation with Dhatu.	III	3	2	2
9	Marma Sharira <ul style="list-style-type: none"> • Marma: definition, enumeration, classification, location • Surface demarcation of Marma • Explanation of Trimarma 	II	15	13	4

	<ul style="list-style-type: none"> • Detail description of Marma with its applied importance. 				
10	Respiratory System <ul style="list-style-type: none"> • Bronchial tree and Lungs with their clinical aspects. • Respiratory tract: Nasal cavity, Pharynx, Larynx, Trachea • Pleura with its clinical aspects • Diaphragm and its opening • Histology of all organs 	II	10	6	4
11	Digestive system <ul style="list-style-type: none"> • Regions of abdomen • Organs of digestive tract (alimentary tract) with their clinical aspects. • Digestive glands: Liver, Spleen and Pancreas. • Description of peritoneum with its clinical aspects • Histology of all organs 	I	12	10	6
12	Cardiovascular system <ul style="list-style-type: none"> • Description of Heart • Structure of artery & vein • Importance blood vessels with their course and branches. • Pericardium with applied aspect • Histology of Heart 	II	8	8	3
13	Urinary System <ul style="list-style-type: none"> • Urinary tract: Kidney, Ureter, Urinary Bladder and Urethra with their clinical aspects • Histology of all organs 	II	10	8	3
14	Reproductive system <ul style="list-style-type: none"> • Male Reproductive system: Reproductive organs, Scrotum and glands (Testis, Prostate and Seminal vesicles) with their clinical aspects. • Female reproductive system: Introduction of external genital organ in brief and internal reproductive organs in detail, tract and glands with clinical importance. • Histology of all organs 	III	6	7	3
15	Sensory organs Description of structures of Eye, Ear, Nose, Tongue and Skin with their clinical aspects.	III	10	14	5

Table 3: Learning objectives (Theory) of Course AyUG-RS

Paper I RACHANA SHARIR –									
A3 Course outcom e	B3 Learning Objective (At the end of the session, the students should be able to)	C3 Domain/ sub	D3 Must to know/ desirable to know/Ni ce to know	E3 Level Does/ Shows how/ Knows how/ Know	F3 T-L method	G3 Assessment	H3 Formati ve /summa tive	I3 Te rm	J3 Integrat ion
Topic 1- Shariroupkramaniya [Time: Lecture: 04 hours, non-lecture 02 hours] Practical- 02 hours									
CO1	Define Sharir.	Cognitive / Recall	MK	Knows	Lecture	Written / viva-voce/ Open book test	F&S	I	
CO1	Describe the constitutional elements of Sharir	Cognitive/ Comprehensi on	MK	Knows	Lecture	Written/ viva-voce	F&S	I	
CO1	Analyze the Constitutional hierarchy of Sharir and its relevance	Cognitive/ analyze	DK	Knows how	Lecture/ GD	Written / viva-voce	F&S	I	
CO1	Enlist Anga -Pratyanga and specific terms for each Pratyanga	Cognitive/ Recall	MK	Knows	Lecture/ GD	Written/ viva-voce	F&S	I	
CO1	Describe the Importance of Pratyaksha (Demonstration & Dissection) method of learning Sharir	Cognitive - comprehensi on	MK	Knows how	Lecture/ demonstration/ TT/ GD	Written / viva-voce	F&S	I	
CO1	Explain the Mruta Samshodhana as mentioned	Cognitive / Comprehensi on	MK	Knows	Demonstration/ simulation/	Written / viva-voce	F&S	I	

	in Sushruta Samhita and as per the modern science.	Psychomotor							
CO1	Appraise the concept of body donation and its relevance in present scenario	Cognitive - analysis, Affective	NK	Knows	Lecture/ educational video/ SDL	Written / viva-voce	F&S	I	
Topic 2- Paribhasha Sharir [Time: Lecture: 03 hours, non-lecture 01 hours] Practical- 6 hours									
CO1	Explain the terms Kandara, Kurcha, Mamsa, Rajju, Sevani, Jala, Seemant, Asthi Sanghat in context to its enumeration, site and structure.	Cognitive / comprehension	MK	Knows	Lecture/ Demonstration	Written/ viva-voce/ Open book test	F&S	I	
CO1	Evaluate the clinical importance of Kandara, Kurcha, Mamsa, Rajju, Sevani, Jala Seemant, Asthi and Sanghat	Cognitive/ Application	DK	Knows how	Lecture/ Demonstration/ SDL	Written/ viva-voce	S	I	
Topic 3- Garbha Sharir [Time: Lecture: 17 hours, non-lecture 05 hours]									
CO 2	Define Garbha and recall the related verse from samhitas.	Cognitive / knowledge	MK	Knows	Lecture/ Recitation	Written/ viva-voce	F & S	I	-
CO 2	Explain the concept of Shukra and recall the related verse from samhitas.	Cognitive / comprehension	MK	Knows	Lecture/ Recitation	Written/ viva-voce	F & S	I	-
CO 2	Explain the concept of Artava and recall the related verse from samhitas.	Cognitive / comprehension	MK	Knows	Lecture/ recitation	Written/ viva-voce	F & S	I	-
CO 2	Describe the role of tridosha and panchamahabhuta in the fetal development	Cognitive / comprehension	MK	Knows how	Lecture/ IT	Written/ viva-voce	F & S	I	Dept. of Streerog Prasuti tantra
CO 2	Explain the concept of Beeja, Beejbhaag, Beejabhagavayava	Cognitive / Comprehension	MK	Knows	Lecture/ GD/ TT	Written/ viva-voce	F & S	I	Dept. of Streerog Prasuti tantra

CO 2	Describe Masanumasik Garbha vriddhi kram and recall the related verse from samhitas.	Cognitive / comprehension	MK	Knows how	Lecture/ Recitation/ demonstration with 3D animated video	Written/ viva-voce/ Open book test	F & S	I	-
CO 2	Describe Garbhaposhana	Cognitive / comprehension	MK	Knows how	Lecture	Written/ viva-voce/ Open book test	F & S	I	-
CO 2	Describe the formation of Apra according to Ayurved	Cognitive / knowledge	MK	Knows, Knows how	Lecture/ demonstration with 3D animated video	Written/ viva-voce/ Open book test	F & S	I	-
CO 2	Describe Garbha nabhinadi	Cognitive / knowledge	MK	Knows	Lecture	Written/ viva-voce	F & S	I	-
CO 2	Explain Angapratyanga utpatti with the related verse from samhitas.	Cognitive / comprehension	MK	Knows how	Lecture/ demonstration with 3D animated video/	Written/ viva-voce/ Assignments/ Open book test	F & S	I	Dept. of Streerog Prasuti tantra
Topic 4- Asthi Shaarira [Time: Lecture: 02 hours, non-lecture 01 hours]									
CO1	Enlist the number of Asthi according to different Acharyas	Cognitive/ Recall	MK	Knows how	Lecture	Written / viva-voce/ Open book test	F & S	I	
CO1	Describe the Asthi Sanghata and Asthi Simanta	Cognitive/ comprehension	MK	Knows	Lecture/ Demonstration	Written / viva-voce	F & S	I	
Topic 5- Sandhi Sharir [Time: Lecture: 02 hours, non-lecture 03 hours]									
CO 3	Define the term Sandhi	Cognitive – Recall	MK	Knows	Lecture	Written/ viva-voce	F&S	II	
CO 3	Classify Sandhi into different types.	Cognitive – Recall	MK	Knows	Lecture	Written/ viva-voce/ project work	F&S	II	
CO 3	Demonstrate the movements of Chala Sandhi and	Cognitive – Application	MK	shows	Lecture +	Written/ viva-voce	F&S	II	

	comprehend the structural appearance	Psychomotor			Demonstration thorough model/ simulation				
CO 3	Illustrate the applied aspect of Sandhi and introduction of diseases of Sandhi explained in Ayurveda	Cognitive - Application	DK	Knows how	Lecture/ ECE/ SDL/ Seminar	Written/ viva-voce/ Assignment	F&S	II	Kayachikitsa
Topic 6- Snayu Sharir [Time: Lecture: 02 hours, non-lecture 01 hours]									
CO 6	Describe Snayu with respect to its definition, structure, types, number, importance with its clinical importance	Cognitive/ comprehension	MK	Knows how	Lecture with demonstration/ SDL/Seminar	Written/ Viva -voce/ Open book test	F&S	II	
Topic 7- Peshi Sharir [Time: Lecture: 02 hours, non-lecture 01 hours]									
CO 5	Describe Peshi Sharir and its classification as per Ayurveda	Cognitive – comprehension	MK	Knows	Lecture/ Demonstration/ SDL/ Seminar	Written/ Viva-voce/ Open book test	F&S	II	
Topic 8- Kesha, Danta, Nakha Sharir [Time: Lecture: 02 hours, non-lecture 01 hours]									
CO 6	Describe Panchabhautik Swaroop, Swabhav (Pitruja) with its applied value in Prakriti and also explain related diseases with importance of examination kesha, danta, nakha as diagnostic tool	Cognitive/ comprehension	MK	Knows how	Lecture with demonstration with 3D animated video/ SDL	Written/ Viva -voce/ Open book test/ Assignment	F&S	II	
Topic 9- Embryology [Time: Lecture: 07 hours, non-lecture 02 hours]									
CO 2	Define embryology and enlist its branches	Cognitive / knowledge / recall	DK	Knows	Lecture	Written/ viva-voce	F & S	I	
CO 2	Define Embryo and Foetus	Cognitive / knowledge / recall	MK	Knows	Lecture	Written/ viva-voce	F & S	I	

CO 2	Describe the anatomical structure of Sperm and Ovum and explain its clinical importance	Cognitive / comprehension	MK	Knows how	Lecture/ Demonstration	Written/ viva-voce/ Assignment	F & S	I	
CO 2	Define term of fertilization	Cognitive / knowledge / recall	MK	Knows	Lecture/ Seminar	Written/ viva-voce	F & S	I	
CO 2	Describe the process of cleavage	Cognitive / comprehension	MK	Knows how	Lecture/ Educational 3D Animated videos	Written/ viva-voce	F & S	I	--
CO 2	Explain the process of germ layer formation and its derivatives	Cognitive / comprehension	MK	Knows how	Lecture/ Educational 3D Animated videos	Written/ viva-voce	F & S	I	Dept. of Streerog Prasuti tantra
CO 2	Explain the laws of heredity	Cognitive / comprehension	MK	Knows how	Lecture/ Seminar	Written/ viva-voce	F & S	I	Dept. of Streerog Prasuti tantra
CO 2	Describe the process of sex determination and differentiation	Cognitive / comprehension	NK	Knows how	Lecture/ Seminar	Written/ viva-voce	F & S	I	--
CO 2	Explain the month wise development of Foetus	Cognitive / comprehension	MK	Knows how	Lecture/ Demonstration	Written/ viva-voce/ Open book test/ Project work	F & S	I	Dept. of Streerog Prasuti ta
CO 2	Explain foetal circulation and the changes in the circulation after birth	Cognitive / comprehension	MK	Knows how	Lecture/Demonstration	Written/ viva-voce	F & S	I	--
CO 2	Describe Placenta formation & its structure with applied anatomy	Cognitive / application	MK	Knows how	Lecture/ Seminar/ ECE	Written/ viva-voce	F & S	I	Dept. of Streerog Prasuti tantra
CO 2	Describe Umbilical cord with clinical importance	Cognitive / knowledge / application	MK	Knows how	Lecture/ Seminar/ ECE	Written/ viva-voce	F & S	I	Dept. of Streerog Prasuti tantra

Topic 10- Osteology [Time: Lecture: 09 hours, non-lecture 06 hours] Practical- 20 hours									
CO3	Explain skeleton and its importance	Cognitive/ comprehension	MK	knows	Lecture/ Demonstration/ Seminar	Written / viva-voce	F & S	I	
CO3	Describe the uses of bones	Cognitive/ comprehension	MK	Knows	Lecture	Written / viva-voce	F & S	I	
CO3	Describe and demonstrate the processes and depressions of various bones	Cognitive/ comprehension, Application	MK	Show how	Lecture / Demonstration	Written / viva-voce	F & S	I	
CO3	Describe the characteristics of the bones	Cognitive/ comprehension	MK	Knows	Lecture	Written / viva-voce	F & S	I	
CO3	Describe the development and ossification of bones	Cognitive/ comprehension	DK	Knows how	Lecture	Written / viva-voce	F & S	I	
CO3	Describe and demonstrate Cranial bones and its applied anatomy	Cognitive / comprehension, Application	MK	Shows how	Lecture/ Demonstration	Written / viva-voce	F & S	I	
CO3	Describe and demonstrate Facial bones and its applied anatomy	Cognitive / comprehension, Application	DK	Shows how	Lecture/ Demonstration	Written / viva-voce	F & S	I	
CO3	Describe and demonstrate pelvic bones and its applied anatomy	Cognitive / comprehension, Application	MK	Shows how	Lecture/ Demonstration	Written / viva-voce	F & S	I	
CO3	Describe and demonstrate vertebral column and its applied anatomy	Cognitive / comprehension, Application	MK	Shows	Lecture/ Demonstration	Written / viva-voce	F & S	I	
CO3	Describe and demonstrate thorax bones and its applied anatomy	Cognitive / comprehension	MK	Shows how	Lecture/ Demonstration	Written / viva-voce	F & S	I	

		on, Application							
CO3	Describe & demonstrate Clavicle and Scapula and its applied anatomy	Cognitive / comprehensi on, Application	MK	Shows how	Lecture/ Demonstration	Written / viva-voce	F & S	I	Kayachi kitsa
CO3	Describe Phalanges, Carpal and Tarsal Bones and its applied anatomy	Cognitive / comprehensi on	DK	Knows	Lecture/ Demonstration	Written/ viva-voce	F & S	I	
CO3	Describe & demonstrate bones of the upper & lower extremity and its applied anatomy	Cognitive / comprehensi on, Application	MK	Shows how	Lecture/ Demonstration	Written / viva-voce/ Project work	F & S	I	
CO3	Describe & demonstrate Patella and its applied anatomy	Cognitive / comprehensi on, Application	DK	Shows	Lecture/ Demonstration	Written / viva-voce	F & S	I	
CO10	Recognize and describe the Radiological structures in radiograph	Cognitive / comprehensi on, Application	MK	Shows	Lecture/ Demonstration/ PBL/ ECE/ SDL	Written / viva-voce/ Project work/ Assignment	F & S	I	
Topic 11- Arthrology [Time: Lecture: 10 hours, non-lecture 06 hours] Practical- 8 hours									
CO 3	Recall the classification of Joints	Cognitive – Recall	MK	Knows	Lecture	Written/ viva-voce	F&S	II	
CO 3	Demonstrate movements of Synovial Joints and comprehend the structural aspect helping in movements.	Cognitive – Application Psychomotor	MK	Knows how	Lecture/ Demonstration/ Simulation	Written/ viva-voce	F&S	II	
CO 3	Describe constitutional anatomy of joint	Cognitive – Comprehensi on	MK	Knows	Lecture	Written/ viva-voce	F&S	II	
CO 3	Describe joints of upper limb and lower limb region, TM joint, and its related applied aspect	Cognitive – Application	MK	Knows how	Lecture/ PBL/ ECE	Written/ viva-voce/ Open book test/ Assignment	F&S	II	Kaychikit sa

CO 3	Demonstrate the examination of synovial joints	Psychomotor	MK	Knows + Shows	Demonstration with case presentation in relative aspect/ ECE/ SDL/ 3D Animated videos	Written/ viva-voce/ Practical performance	F&S	II	Rognidan
Topic 12- Myology [Time: Lecture: 06 hours, non-lecture 02 hours] Practical- 8 hours									
CO5	State the types of muscles.	Cognitive – application Psychomotor	MK	Knows	Lecture	Written/ Viva-voce	F & S	II	
CO5	Describe and demonstrate the muscles of upper and lower extremity with their origin, insertion, action & nerve supply and applied aspect and its role in Yogasana	Cognitive – application	MK	Shows	Lecture/ Demonstration/ GD/TT/ SDL/ 3D Animated videos	Written/ Viva-voce/ Open book test/ Project work	F & S	II	Swasthvritta
CO5	Describe and demonstrate muscles of thorax and abdomen with their origin, insertion, action & nerve supply and applied aspect and its role in Yogasana	Psychomotor	MK	Shows	Lecture/ Demonstration/ GD/TT/ SDL/ 3D Animated videos	Written/ Viva-voce/ Open book test/ Project work	F & S	II	Swasthvritta
CO5	Describe and demonstrate muscles of back with origin, insertion, action & nerve supply and applied aspect and role in Yogasana	Cognitive – application	DK	Shows	Lecture/ Demonstration/ GD/TT/ SDL/3D Animated videos	Written/ Viva-voce/ Open book test/ Project work	F & S	II	Swasthvritta
Topic 13- Nervous System [Time: Lecture: 14 hours, non-lecture 04 hours] Practical- 12 hours									
CO6	Explain the hierarchy of structural unit	Cognitive-/ comprehension	MK	Knows	Lecture/ Demonstration	Written/ viva-voce	F&S	III	
CO6	Describe the functional and structural division of the nervous system	Cognitive- comprehension	MK	Knows how	Lecture/ Seminar	Written/ viva-voce	F&S	III	

CO6	Explain the parts of Brain (Cerebrum, Cerebellum)	Cognitive – comprehension	MK	Knows, Knows how	Lecture/ Demonstration	Written/ viva-voce/ Open book test	F&S	III	
CO6	Describe external and internal features of Spinal cord.	Cognitive – comprehension	MK	Knows, Knows how	Lecture/ Demonstration/ 3D animated videos	Written/ viva-voce/ Open book test	F&S	III	
CO6	Illustrate the Blood supply of Brain and Spinal cord.	Cognitive – comprehension	MK	Knows, Knows how	Lecture/ Demonstration/ 3D animated videos	Written/ viva-voce/ Open book test	F&S	III	
CO6	Describe the external features of diencephalon Mid brain, Pons, Medulla oblongata.	Cognitive-Comprehension	DK	Knows	Lecture/ Demonstration/ 3D animated videos	Written/ viva-voce/ Open book test	F&S	III	
CO6	Describe the limbic system	Cognitive-Comprehension	NK	Knows	Lecture/ Demonstration/ 3D animated videos	Written/ viva-voce/ Open book test	F&S	III	
CO6	Describe the general Sulci and gyri of cerebrum and determine the clinical importance of Broadman's classification	Cognitive – application	MK	Knows Knows how	Lecture/ Demonstration/ 3D animated videos	Written/ viva-voce/ Open book test	F&S	III	
CO6	Describe the ascending, descending pathways, upper motor neurons and lower motor neurons, its applied aspect in examination of nervous system	Cognitive/ application Affective /responding	DK	Knows how	Lecture/ Demonstration/ CBL, ECE	Written/ viva-voce/ Open book test	F&S	III	Kaya chikitsa
CO6	Demonstrate the superficial and deep reflexes and its clinical importance	Cognitive /application Psychomotor /perception Affective /responding	DK	shows	Lecture + Demonstration though living object/ ECE/ PBL/ SDL/ CBL	Viva-Voce/ Practical performance	F&S	III	Kayachi kitsa

CO6	Recall the general anatomical consideration of ANS	Cognitive/ Recall	MK	Knows	Lecture/ SDL	Written	F&S	III	
CO6	Describe the cranial and spinal nerves along with formation of nerve plexuses and applied anatomy	Cognitive / Application	DK	Knows how	Lecture/ PBL/ ECE/ SDL	Written / viva-voce/ Assignment	F & S	III	
CO6	Describe the Formation and circulation of cerebro- spinal fluid	Cognitive/ comprehensi on	MK	Knows how	Lecture	Written / viva-voce	F&S	III	
Topic 14- Endocrinology [Time: Lecture: 08 hours, non-lecture 03 hours] Practical- 02 hours									
CO 6	Define Endocrine Glands and enlist them	Cognitive/ Recall	MK	Knows	Lecture	Written / viva-voce	F & S	III	
CO 6	Describe Structure and Functions of Endocrine Glands	Cognitive-/ Comprehensi on	MK	Knows	Lecture	Written / viva-voce	F & S	III	
CO 6	State the location, Dimension & Shape of Pituitary	Cognitive/ Recall	MK	Knows	Lecture/ Demonstration	Written / viva-voce	F & S	III	
CO 6	Describe the Parts & subdivisions of Pituitary	Cognitive / comprehensi on	MK	Knows	Lecture/ Demonstration	Written / viva-voce	F & S	III	
CO 6	Describe the Blood Supply, Nerve Supply & Lymphatic drainage of Pituitary	Cognitive /comprehensi on	MK	Knows	Lecture/ Demonstration/ CBL	Written / viva-voce	F & S	III	
CO 6	Enlist the hormones secreted by Pituitary, & histology and discuss its clinical anatomy.	Cognitive/ Application	MK	Knows	Lecture/ Demonstration/ GD	Written / viva-voce/ Open book test	F & S	III	
CO 6	State the location, Dimension & Shape of Thyroid gland	Cognitive/Re call	MK	Knows	Lecture/ Demonstration	Written / viva-voce	F & S	III	
CO 6	Describe the lobes, border & surfaces of Thyroid gland with its relation.	Cognitive /comprehensi on	MK	Knows	Lecture/ Demonstration	Written / viva-voce	F & S	III	
CO 6	Describe the blood supply, nerve Supply & lymphatic drainage of Thyroid gland	Cognitive /comprehensi on	MK	Knows	Lecture/ Demonstration	Written / viva-voce	F & S	III	

CO 6	List the Hormones secreted by Thyroid gland and & histology, and discuss its clinical application	Cognitive - Application	MK	Knows	Lecture/ GD/ CBL	Written / viva-voce/ Open book test	F & S	III	
CO 6	Describe the location, Shape, Dimensions and structure of Parathyroid gland	Cognitive /comprehension	MK	Knows	Lecture/ Demonstration	Written / viva-voce	F & S	III	
CO 6	Describe the Blood Supply, Nerve Supply & Lymphatic drainage of Parathyroid gland	Cognitive /comprehension	DK	Knows	Lecture Demonstration	Written / viva-voce	F & S	III	
CO 6	List the hormones secreted by parathyroid, & histology and discuss its Clinical anatomy	Cognitive /Application	DK	Knows	Lecture/ GD/ CBL	Written / viva-voce/ Open book test	F & S	III	Kayachik itsa
CO 6	State the location, Shape & dimension of Suprarenal gland	Cognitive / Recall	MK	Knows	Lecture/ Demonstration	Written / viva-voce	F & S	III	
CO 6	Describe the Surface, Borders of Suprarenal gland along with its relation.	Cognitive/comprehension	MK	Knows	Lecture/ Demonstration	Written / viva-voce	F & S	III	
CO 6	List the Functions and Secretions of Suprarenal gland	Cognitive /Recall	MK	Knows	Lecture	Written / viva-voce	F & S	III	Sharir Kriya
CO 6	Describe the Blood Supply, Nerve Supply & Lymphatic drainage of Suprarenal gland	Cognitive /comprehension	DK	Knows	Lecture/ Demonstration	Written / viva-voce	F & S	III	
CO 6	Describe the Internal structure of suprarenal gland	Cognitive /comprehension	DK	Knows	Lecture/ Demonstration	Written / viva-voce	F & S	III	
CO 6	Write the Clinical & applied anatomy & histology of Suprarenal gland	Cognitive /application	DK	Knows	Lecture/ CBL	Written / viva-voce/ Open book test	F & S	III	Kayachik itsa
Topic 7- Lymphatic System [Time: Lecture: 02 hours, non-lecture 02 hours]									

CO 6	Define Lymphatic System	Cognitive / Recall	MK	Knows	Lecture	Written / viva-voce	F & S	III	
CO 6	Describe components of Lymphatic System	Cognitive / comprehension	MK	Knows	Lecture	Written / viva-voce	F & S	III	
CO 6	Describe the anatomical structure of Various Lymph Vessels i.e. Lymphatic Trunks, Thoracic Duct etc and explain its clinical importance	Cognitive / comprehension, Application	MK	Knows how	Lecture/ Demonstration/ CBL	Written / viva-voce	F & S	III	
CO 6	Describe the anatomical structure of Lymph Glands i.e. Lymph Nodes, Spleen, Thymus, Tonsils etc and explain its clinical importance	Cognitive / comprehension, Application	MK	Knows how	Lecture/ Demonstration/ ECE/ CBL	Written / viva-voce/ Open book test	F & S	III	Rognidan Evum Vikriti Vigyan

Paper II

Topic 1- Praman sharir [Time: Lecture: 02 hours, non-lecture 01 hours]

CO1	Describe Anguli and Anjali praman with its significance.	Cognitive Comprehension	MK	Knows	Lecture/ Demonstration/ GD	Written/ Viva-voce/ Open book test	F & S	II	
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Topic 2- Koshtha Evam Ashaya Shaarira [Time: Lecture: 02 hours, non-lecture 01 hours]

CO1	Define of Koshtha and Ashaya	Cognitive/ knowledge	MK	Knows	Lecture	Written/ viva-voce/ Open book test	F&S	I	
CO1	Describe the concept of various numbers of Koshthanga as per Samhitas	Cognitive/ Comprehension	MK	Knows	Lecture	Written/ viva-voce/ Open book test	F&S	I	
CO1	Describe the concept of various Numbers of Ashaya as per Samhitas	Cognitive/ Comprehension	MK	Knows	Lecture/ TT/ GD	Written/ viva-voce/	F&S	I	

						Open book test			
CO1	Describe and explain applied aspects of Koshtha and Ashaya.	Cognitive/ Comprehensiv e application	NK	Knows How	Lecture/ GD/ ECE	Written/ viva-voce/ Assignments/ Open book test	F&S	I	Kayacki tsa
Topic 3- Sira sharir [Time: Lecture: 03 hours, non-lecture 01 hours]									
CO 4	Define Sira, Enumerate the sira & state its Nirukti	Cognitive /Recall	MK	Knows	Lecture/ Seminar	Written / viva-voce/ Open book test	F & S	II	
CO 4	Explain the classification of Sira	Cognitive / Comprehensi on	MK	Knows how	Lecture	Written / viva-voce/ Open book test	F & S	II	
CO 4	Define Vedhya Sira and Enumerate Vedhya Sira	Cognitive /Recall	MK	Knows	Lecture/ GD	viva-voce/ Open book test	F & S	II	
CO 4	Define Avedhya sira and Enumerate the Avedhya Sira	Cognitive / Recall	MK	Knows	Lecture	Written / viva-voce/ Open book test	F & S	II	
CO 4	Locate the Vedhya Sira in the body according to region	Cognitive / application Psychomotor	MK	Shows	Lecture/ Demonstration/ IT	viva-voce/ Practical performance	F & S	II	Shalyatan tra
CO 4	Describe the applied aspect of Siravedha	Cognitive - application	DK	Knows how	Lecture/ ECE/ IT/ CBL	Written / viva-voce/ Assignment / Open book test	F & S	II	Shalyatan tra
Topic 4- Dhamani Sharir [Time: Lecture: 02 hours, non-lecture 01 hours]									
CO 4	Define Dhamani, and state its Nirukti	Cognitive/ Recall	MK	Knows	Lecture/ Seminar	Written / viva-voce/ Open book test	F & S	II	

CO 4	Explain the classification of Dhamani	Cognitive/ Comprehension	MK	Knows how	Lecture/ Seminar	Written / viva-voce/ Open book test	F & S	II	
CO 4	Locate the Dhamani in the body according to region	Cognitive / application Psychomotor	DK	Shows	Lecture/ Demonstration	Viva-voce/ Practical performance	F & S	II	
Topic 5- Srotasa Sharir [Time: Lecture: 08 hours, non-lecture 03 hours]									
CO 4	Define Srotasa and state its Nirukti and types	Cognitive/ Recall	MK	Knows	Lecture/ Seminar	Written / viva-voce/ Open book test	F & S	II	
CO 4	Explain the Classification of Srotasa	Cognitive / Comprehension	MK	Knows	Lecture/ Seminar	Written / viva-voce/ Open book test	F & S	II	
CO 4	State the Moolsthana of all Srotasa as per Acharya Sushrut and Charak and its clinical aspect	Cognitive / Recall	MK	Knows how	Lecture/ Seminar/ ECE	Written / viva-voce/ Assignment/ Open book test	F & S	II	Kayachikitsa/ Panchakarma
Topic 6- Kala Sharir [Time: Lecture:02 hours, non-lecture 02 hours] Practical- 03 hours									
CO1	Define Kala and explain the formation & functions of seven Kala	Cognitive –/ comprehension	MK	Knows	Lecture/ Seminar	Written / viva-voce/ Open book test	F&S	III	
CO1	Describe Saptakalas with its applied aspect	Cognitive /comprehension +application	MK	Knows	Lecture/ demonstration/ ECE	Written / viva-voce/ Open book test	F&S	III	Agadtantra
CO1	Relate the Sapta Kala with Sapta Dhatu	Cognitive – application + affective - awareness	NK	Knows how	Lecture/ Seminar/ IT	Written / viva-voce	F&S	III	
Topic 7- Indriya Sharir [Time: Lecture: 03 hours, non-lecture 01 hours]									

CO 7	Define Indriya. Interpret derivation of Indriya and explain its importance.	Cognitive / comprehension	MK	Knows	Lecture/ Seminar	Written / viva-voce/ Open book test	F & S	III	
CO 7	State the meaning of Indriya-artha and Indriya- adhishtan	Cognitive / knowledge	MK	Knows	Lecture/ Seminar	Written / viva-voce/ Open book test	F & S	III	
CO 7	Enlist Dnyanendriyas, Karmendriyas and Ubhayendriya	Cognitive / knowledge	MK	Knows	Lecture/ Seminar	Written / viva-voce/ Open book test	F & S	III	
CO 7	Illustrate classical description of Dnyanendriya Adhishtan – Karna, Twak, Netra, Jivha, Nasa with its clinical perspective	Cognitive / application	MK	Knows how	Lecture/ IT/ ECE/ PBL	Written / viva-voce/ Open book test/ Assignment	F & S	III	Dept. of Shalakyatantra
Topic 8- Twacha Sharir [Time: Lecture: 02 hours, non-lecture 02 hours]									
CO 7	Define Twacha, its types and characteristics with its clinical importance, significance of twacha adhishtana in disease manifestation, its relation with dhatu	Cognitive / comprehension	MK	Knows how	Lecture with demonstration with 3D animated video/ ECE/ SDL	Written/ Viva -voce/ Open book test	F&S	III	
Topic 9- Marma Sharir [Time: Lecture: 13 hours, non-lecture 04 hours] Practical- 12 hours									
CO 5	Define Marma and enumerate the Marmas	Cognitive – Recall	MK	Knows	Lecture/ Seminar	Written / viva-voce/ Open book test	F&S	II	
CO 5	Describe the Marma and Prana tatva with its Significance	Cognitive – Comprehension	MK	Knows	Lecture	Written / viva-voce/ Open book test	F&S	II	

CO 5	Discuss the classification of Marma	Cognitive – Comprehension	MK	Knows	Lecture/ ECE/ PBL	Written / viva-voce/ Open book test	F&S	II	
CO 5	Narrate the importance of marma in Sharir and Shalya vigyan	Cognitive – application	MK	Knows how	Lecture/ ECE/ PBL	Written/ Open book test	F&S	II	Shalyat antra
CO 5	Illustrate the specific location of Marma as per Sushruta Samhita	Cognitive – Comprehension	MK	Knows + Shows	Lecture/ Demonstration/ Workshop	Written / viva-voce/ Open book test	F&S	II	
CO 5	Demonstrate the Marma location as per modern anatomy	Cognitive – Application Psychomotor	MK	Knows + Shows	Lecture with 3D animated demonstration/ Seminar/ Workshop	Viva-voce/ Practical performance	F&S	II	Panchakarma
Topic 10- Respiratory system [Time: Lecture: 06 hours, non-lecture 04 hours] Practical- 10 hours									
CO6	Enlist the parts of the Bronchial tree	Cognitive / Recall	MK	Knows	Lecture/ Demonstration	Written / viva-voce	F & S	II	
CO6	State the location and dimension of Lungs	Cognitive - Knowledge	MK	Knows	Lecture/ Demonstration	Written / viva-voce	F & S	II	
CO6	Differentiate between Right and left Lungs	Cognitive -/ comprehension	MK	Knows	Lecture/ Demonstration	Written / viva-voce	F & S	II	
CO6	Describe the Borders, Surfaces and lobes of the Lungs	Cognitive/ comprehension	MK	Knows	Lecture/ Demonstration	Written / viva-voce/ Open book test	F & S	II	
CO6	Explain the root of Lungs	Cognitive /comprehension	MK	Knows	Lecture/ Demonstration	Written / viva-voce	F & S	II	
CO6	Explain the Bronchopulmonary segments of the lungs	Cognitive /comprehension	DK	Knows	Lecture/ Demonstration	Written / viva-voce	F & S	II	
CO6	Describe the Blood supply, Nerve supply, Lymphatics of the Lungs	Cognitive /comprehension	MK	Knows	Lecture/ Demonstration	Written / viva-voce	F & S	II	

CO6	Describe histology and Clinical Anatomy of Lungs	Cognitive / application	MK	Knows how	Lecture/ ECE/ PBL	Written / viva-voce/ Assignment	F & S	II	Kaychik ita
CO6	State the extent and features of Trachea	Cognitive / Recall	MK	Knows	Lecture/ Demonstration	Written / viva-voce	F & S	II	
CO6	Explain the Relations of Trachea	Cognitive – /comprehension	MK	Knows how	Lecture/ Demonstration	Written / viva-voce/ Open book test	F & S	II	
CO6	Describe the Blood supply, Nerve supply and Lymphatics of Trachea	Cognitive /comprehension	MK	Knows how	Lecture/ Demonstration	Written / viva-voce	F & S	II	
CO6	Explain the histology and Clinical anatomy of Trachea	Cognitive /Application	MK	Knows how	Lecture/ ECE/ PBL	Written / viva-voce/ Assignment	F & S	II	Shalaky atantra
CO6	State the extent of Larynx and its external features	Cognitive / Recall	MK	Knows	Lecture/ Demonstration	Written / viva-voce	F & S	II	
CO6	Enlist the paired and unpaired cartilages of Larynx	Cognitive / Recall	MK	Knows	Lecture/ Demonstration	Written / viva-voce	F & S	II	
CO6	Explain the relations of Larynx	Cognitive /comprehension	DK	Knows how	Lecture/ Demonstration	Written / viva-voce/ Open book test	F & S	II	
CO6	Write the blood supply, nerve supply and lymphatics of Larynx	Cognitive /comprehension	DK	Knows	Lecture/ Demonstration	Written / viva-voce	F & S	II	
CO6	Explain the histology and clinical anatomy of Larynx	Cognitive / application	DK	Knows how	Lecture/ Demonstration	Written / viva-voce/ Assignment	F & S	II	
CO6	State the location of Pleura and enlist its parts	Cognitive/ Recall	MK	Knows	Lecture/ Demonstration	Written / viva-voce	F & S	II	
CO6	Describe the parts of parietal Pleura	Cognitive/ comprehension	MK	Knows	Lecture/ Demonstration	Written / viva-voce	F & S	II	
CO6	Explain the Pulmonary ligaments and recesses of Pleura	Cognitive /comprehension	MK	Knows	Lecture/ Demonstration	Written / viva-voce/	F & S	II	

						Open book test			
CO6	Describe the blood supply, nerve supply, lymphatics of Pleura	Cognitive /comprehension	DK	Knows how	Lecture	Written / viva-voce	F & S	II	
CO6	Explain the clinical anatomy of Pleura	Cognitive – Application	DK	Knows how	Lecture/ ECE/ PBL	Written / viva-voce/ Assignment	F & S	II	Kayachikitsa
Topic 11- Digestive system [Time: Lecture: 10 hours, non-lecture 06 hours] Practical- 22 hours									
CO 6	Describe peritoneum and nine parts of abdomen	Cognitive – application	MK	Knows	Lecture/ Demonstration	Written/ Viva-voce/ Open book test/ Assignment	F & S	I	
CO 6	Describe the anatomy of the Oesophagus with relations, histology and clinical anatomy	Cognitive – application	MK	Knows	Lecture/ Demonstration	Written/ Viva-voce/ Open book test/ Assignment	F & S	I	
CO 6	Describe the structure of the Stomach, Stomach bed, the interior, histology, blood supply with relations and clinical anatomy	Cognitive – application	MK	Knows	Lecture/ Demonstration/ PBL/ ECE/ IT	Written/ Viva-voce/ Open book test/ Assignment	F & S	I	
CO 6	Describe the structure of the Duodenum with relations, histology and clinical anatomy.	Cognitive – application	MK	Knows	Lecture/ Demonstration/ ECE/ PBL/ IT	Written/ Viva-voce/ Open book test/ Assignment	F & S	I	
CO 6	Describe the parts, structure, histology and clinical anatomy of Large intestine.	Cognitive – application	MK	Knows how	Lecture/ Demonstration	Written/ Viva-voce/ Open book test/ Assignment	F & S	I	
CO 6	Describe the anatomy of the Rectum, Peritoneal &	Cognitive – application	MK	Knows how	Lecture/	Written/	F & S	I	

	visceral relations and applied anatomy of the Rectum.				Demonstration/ ECE/ PBL/ IT	Viva-voce/ Open book test/ Assignment			
CO 6	Describe the anatomy and musculature of the anal canal, histology with its blood supply, venous drainage and applied anatomy	Cognitive – application	MK	Knows how	Lecture/ Demonstration	Written/ Viva-voce/ Open book test/ Assignment	F & S	I	
CO 6	Describe the structure of the Pancreas, Pancreatic ducts, applied anatomy, along with histology of endocrine & exocrine part.	Cognitive – application	MK	Knows how	Lecture/ Demonstration/ ECE/ PBL/ IT	Written/ Viva-voce/ Open book test/ Assignment	F & S	I	
CO 6	Describe external features, anatomy histology and clinical anatomy of Liver	Cognitive – application	MK	Knows how	Lecture/ Demonstration/ ECE/ PBL/ IT	Written/ Viva-voce/ Open book test/ Assignment	F & S	I	
CO 6	Describe the structure, peritoneal & visceral relations histology and applied anatomy of the Spleen.	Cognitive – application	MK	Knows how	Lecture/ Demonstration/ ECE/ PBL/ IT	Written/ Viva-voce/ Open book test/ Assignment	F & S	I	
CO 6	Enlist the salivary glands and describe the anatomy of Parotid gland, Submandibular gland and Sublingual gland with its & Clinical anatomy	Cognitive – application	DK	Knows how	Lecture/ Demonstration	Written/ Viva-voce/ Open book test/ Assignment	F & S	I	
Topic 12- Cardiovascular System [Time: Lecture: 08 hours, non-lecture 03 hours]									
CO 6	Describe pericardium with its clinical anatomy	Cognitive – application	MK	Knows how	Lecture/ Demonstration	Written/ Viva-voce	F & S	II	
CO 6	Describe external features of the Heart.	Cognitive – recall	MK	Knows	Lecture/ Demonstration	Written/	F & S	II	

						Viva-voce/ Open book test/ Assignment			
CO 6	Describe internal features of the chambers, valve and auscultatory areas of Heart and its applied anatomy	Cognitive – application	MK	Knows how	Lecture/ Demonstration/ ECE/ PBL/ IT	Written/ Viva-voce/ Open book test/ Assignment	F & S	II	
CO 6	Describe the major arteries and veins of Heart.	Cognitive – Recall	MK	Knows	Lecture/ Demonstration	Written/ Viva-voce	F & S	II	
CO 6	Describe the histology and applied anatomy of Heart.	Cognitive – application	MK	Knows how	Lecture/ Demonstration/ ECE/ PBL/ IT	Written/ Viva-voce/ Open book test/ Assignment	F & S	II	
Topic 13- Urinary System [Time: Lecture: 08 hours, non-lecture 03 hours] Practical- 04 hours									
CO 6	Enlist the components of Urinary System	Cognitive / Recall	MK	Knows	Lecture	Written / viva-voce	F & S	II	
CO 6	Describe the anatomical structure of Kidney, Ureter, Urinary bladder, Urethra	Cognitive / Comprehension	MK	Knows	Lecture/ Demonstration	Written / viva-voce/ Open book test/ Assignment	F & S	II	Kayachik itsa /Panchkar ma/Shala ya-Tantra
CO 6	Explain histology and clinical anatomy of Kidney, Ureter, Urinary bladder, Urethra and its importance	Cognitive / Comprehension & Application	MK	Knows how	Lecture/ Demonstration/ ECE/ PBL/ IT	Written / viva-voce/ Open book test/ Assignment	F & S	II	
CO 6	Enlist developmental anomalies of Kidney, Ureter, Urinary bladder, Urethra	Cognitive / Recall	NK	Knows	Lecture	Written / viva-voce/ Open book test/ Assignment	F & S	II	
Topic 14- Reproductive System [Time: Lecture: 07 hours, non-lecture 03 hours] Practical-02 hour									

CO 6	Enlist the anatomical structures of male reproductive system and discuss its Ayurved Sharir	Cognitive / Comprehension	MK	knows how	Lecture	Written / viva-voce/ Open book test	F & S	III	
CO 6	Describe the male reproductive organs – Testes, Scrotum, Epididymis, Ductus deference, Ejaculatory duct, penis, Spermatic cord with histology and applied aspect	Cognitive / application	MK	knows how	Lecture	Written / viva-voce/ Open book test	F & S	III	
CO 6	Enlist the anatomical structures of female reproductive system and discuss its Ayurved Sharir.	Cognitive / Comprehension	MK	knows how	Lecture/ Seminar	Written / viva-voce/ Open book test	F & S	III	
CO 6	Describe external female reproductive organs	Cognitive / Comprehension	MK	knows	Lecture/ Seminar	Written / viva-voce	F & S	III	
CO 6	Explain Internal reproductive organs in detail with histology and its applied anatomy (Uterus, Fallopian tube, Cervix, Vagina, Ovary)	Cognitive / application	MK	knows how	Lecture/ ECE/ PBL/ IT	Written / viva-voce/ Open book test/ Assignment	F & S	III	
CO 6	Explain histology of Uterus, Fallopian tube, Cervix, Vagina, Ovary	Cognitive / application	DK	knows how	Lecture/ Demonstration	Written / viva-voce/ Open book test/ Assignment	F & S	III	
Topic 15- Sensory organ [Time: Lecture: 14 hours, non-lecture 05 hours]									
CO7	Explain five sensory receptors, hierarchy of development of five senses and need of five senses	Cognitive - comprehension	MK	Knows how	Lecture with 3D animated demonstration	Written / viva-voce/ Open book test/ Assignment	F&S	III	
CO7	Describe structural aspect of five sensory organ	Cognitive – comprehension	MK	Knows	Lecture	Written / viva-voce/ Open book	F&S	III	

						test/ Assignment			
CO7	Describe the pathways of each sense in understanding of its functional anatomy	Cognitive - comprehension	NK	Knows how	Lecture with 3D animated demonstration/ ECE/ PBL/ IT	Written / viva-voce/ Open book test/ Assignment	F&S	III	
CO7	Determine Method of examination, tool of examination and Importance of sensory organ in systemic examination	Cognitive - comprehension + Psychomotor	DK	Knows + Shows	Lecture with practical demonstration of tools/ ECE/ PBL/ IT	Written / viva-voce/ Open book test/ Assignment	F&S	III	Shalaky dept. Kaya chikitsa dept

***MK-Must Know, DK- Desirable to Know, NK- Nice to Know, TT- Tutorial, GD- Group Discussion, PBL- Problem Based Learning, IT- Integrated Teaching, ECE- Early Clinical Exposure, SDL- Self Directed Learning, CBL- Case Base Learning (P)- Practical**

List of Practicals AyUG-RS**Marks: 200****Hours: 240**

SN	Name of Practical	Term	Hours
P1	<ul style="list-style-type: none"> • Branches of anatomy. History of Anatomy • Ethics in dissection hall 	I	2
P2	<u>Anatomical Terminologies</u> Anatomical position, Planes, and explanation of anatomical terms related to skin, fasciae, bones, joints and their movements, muscles, ligaments, tendons, blood vessels, nerves.	I	4
P3	Preservation methods of the cadaver, Mrut sharir Samshodhan <ul style="list-style-type: none"> • Different methods of preservation techniques. Brief introduction of chemical composition of preservative fluid.	I	2
P4	Introduction of Anatomy Act and Brief detailing about Bio medical waste management act 1960	I	2
P5	Shava vichhedana – detailed dissection of the whole body <ul style="list-style-type: none"> • Line of incision • Dissection technique • Identification of different tools and its Uses • Identification and characteristics of Different layers and its relation 	I	32
	<u>In Extremities:</u> Dissection of extremities & Identification of related structures	II	40
	<u>In Trunk region:</u> Demonstration of visceral relation of thoracic, abdominal and pelvic organ	II	38
	<u>In Head Region:</u> Dissection of head, Identification of Meninges, Major Sulci and gyri, Superficial origin of Cranial Nerve and and venous Sinus.	III	14
	Dissection of sensory organs	III	22
P6	<ul style="list-style-type: none"> • Practical study of vital organs, Histological slides • Identification of external features of thoracic, abdominal and pelvic viscera 	II	06
P7	Practical study of bones	I	36

	Identification of external features of bones and different attachment		
	<p>Surface and Radiological anatomy</p> <p><u>In Radiology Anatomy:</u> Characteristics of radio imaging film and detailing about its color contrasting</p> <p>Identification of Normal alignment of bodily structure – X ray film</p> <ol style="list-style-type: none"> Chest X Ray – A.P And P.A view Detailing of A.P view of Shoulder joint, Elbow Joint, Wrist joint, Hip joint, knee joint, Ankle joint. Identification of basic clinical finding through X ray film related to long bones and joints 	III	22
P8	<p><u>In Surface Anatomy Section:</u></p> <ul style="list-style-type: none"> Identification of Underlying viscera of Nine region based upon Cadaveric and Living Anatomy Surface marking of thoracic, abdominal and pelvic viscera 	III	6
P9	<p>Practical study of Marma</p> <p>Surface markings of all Marma points and its anatomical demarcation.</p>	III	12
P10	<p>Brief detailing about body donation, organ donation and its awareness</p> <p>(Communication skills)</p>	III	2

***Note: one practical should not be less than 2 hrs.**

Table 4: Learning objectives (Practical) of AyUG- RS

A4 Course outcome	B4 Learning Objective (At the end of the session, the students should be able to)	C4 Domain/s ub	D4 Must to know/ desirabl e to know/N ice to know	E4 Level Does/ Shows how/ Knows how/ Know	F4 T-L method	G4 Assessment	H4 Form ative /sum mative	I4 Te rm	J4 Integration
Practical 1- Definition and branches of anatomy. History of Anatomy [Time: Practical or other activity - 02 hours]									
CO1	Define and describe branches of anatomy and its history	Cognitive / knowledge / recall	MK	Know	Lecture/ Tutorial	Written +viva-voce	F&S	I	
CO9	Practice of ethics in the context of human dissection	Cognitive / knowledge / recall/ Affective/ psychomotor	MK	Knows Shows	Tutorial/ Demonstration	viva-voce	F&S	I	
Practical 2- Anatomical Terminologies [Time: Practical- 2 hours and other activity 2 hours]									
CO1	Demonstrate anatomical position, Planes, and explanation of anatomical terms related to skin, fasciae, bones, joints and their movements, muscles, ligaments, tendons, blood vessels, nerves.	Cognitive / knowledge / recall	MK	Knows	Tutorial/ Demonstration/ Simulation	Written +viva-voce/ Open book test/ Assignments	F&S	I	

Practical 3- Preservation methods of the cadaver, Mrut sharir Samshodhan [Time: Practical or other activity - 02 hours]									
CO9	Describe and demonstrate preservation methods of the cadaver and Mrut sharir Samshodhan	Cognitive / knowledge / recall	MK	Knows, Shows	Tutorial/ Demonstration	Written +viva-voce	F&S	I	
CO9	Describe the different methods of preservation techniques and give brief introduction of chemical composition of preservative fluid.	Cognitive / knowledge / recall	MK	Knows	Tutorial/ Demonstration	Written +viva-voce, spotting, OSPE	F&S	I	
Practical 4- Introduction of Anatomy Act and Brief detailing about Bio medical waste management act 1960 [Time: Practical or other activity - 02 hours]									
CO9	Describe and follow the Anatomy Act and Bio medical waste management act 1960	Cognitive - comprehension, Affective/ psychomotor	NK	Knows, know how, Shows	Lecture/ Tutorial/ Demonstration	Written +viva-voce/ Practical performance/ Public awareness	F&S	I	
Practical 5- Shava vichhedana – detailed dissection of the whole body [Time: Practical- 126 hours and other activity 20 hours]									
CO9	Demonstrate the line of incision, dissection technique, different tools and their uses	Cognitive / knowledge / recall	MK	Knows/ Shows/ Shows How	Tutorial/ Demonstration / Cadaveric dissection	Written +viva-voce, spotting, OSPE	F&S	I	
CO9	Identify and characteristics of Different layers and its relation	Cognitive / knowledge / recall	DK	Knows	Tutorial/ Demonstration / Simulations /	Written +viva-voce, spotting, OSPE	F&S	I	

					Cadaveric dissection				
CO9	Identify and demonstrate muscles of extremities and its related structures	Cognitive / knowledge / recall	DK	Knows, Shows	Tutorial/ Demonstration / Cadaveric dissection	Written +viva-voce	F&S	II	
CO6	Describe and demonstrate the visceral relation of thoracic and abdominal organ	Cognitive - comprehension + psychomotor	DK	Knows, Shows	Demonstration / Simulations / Cadaveric dissection	Written +viva-voce, spotting, OSPE/ Practical performance	F&S	II	
CO6	Describe and demonstrate surface identification of parts of brain, major sulci and gyri, superficial origin of cranial nerve and meninges and venous sinus.	Cognitive - comprehension + psychomotor	MK	Knows, Shows	Demonstration / Simulations/ Cadaveric dissection	Written +viva-voce, spotting, OSPE/ Practical performance	F&S	III	
CO6	Describe, dissect and demonstrate the sensory organs	Cognitive - comprehension + psychomotor	MK	Knows, Shows	Demonstration / Simulations/ Cadaveric dissection	Written +viva-voce, spotting, OSPE/ Practical performance	F&S	III	
Practical 6- Practical study of vital organs, Histological slides and identification of external features of thoracic and abdominal viscera [Time: Practical- 04 hours and other activity 02 hours]									
CO6	Focus the histological slides of identified organs	Cognitive / knowledge / recall	DK	Knows	Tutorial/ Demonstration	Written +viva-voce spotting, OSPE	F&S	II	
CO6	Describe and demonstrate the	Cognitive - comprehension +	MK	Knows Shows	Demonstration	Written +viva-voce, spotting,	F&S	II	

	external features of thoracic and abdominal viscera	psychomotor				OSPE/ Practical performance			
Practical 7- Practical study of bones [Time: Practical- 30 hours or other activity 06 hours]									
CO3	Describe and demonstrate external features of bones and muscle attachments	Cognitive - comprehension + psychomotor	MK	Knows, Shows	Demonstration / Simulations	Written +viva-voce, spotting, OSPE/ Practical performance	F&S	I	
CO10	Describe the characteristics of radio imaging film and difference in color contrasting	Cognitive / knowledge / recall	DK	Knows	Tutorial/ Demonstration / Simulations	Written +viva-voce spotting, OSPE	F&S	I	
Practical 8- Surface and Radiological anatomy [Time: Practical- 20 hours and other activity 08 hours]									
CO10	Describe and demonstrate the normal alignment of chest X Ray – A.P And P.A view	Cognitive - comprehension + psychomotor	MK	Knows, Shows	Tutorial/ Demonstration	Written +viva-voce, spotting, OSPE/ Practical performance	F&S	III	
CO10	Describe and demonstrate the normal alignment of A.P view of Shoulder joint, Elbow Joint, Wrist joint, Hip joint, knee joint, Ankle joint	Cognitive - comprehension + psychomotor	MK	Knows, Shows	Tutorial/ Demonstration	Written +viva-voce, spotting, OSPE/ Practical performance	F&S	III	
CO10	Identify the basic clinical finding through X ray film	Cognitive - comprehension +	NK	Knows, Shows	Tutorial/ Demonstration	Written +viva-voce, spotting, OSPE/	F&S	III	Kaychikitas, Shalyatantra

	related to long bones and joints	Psychomot or				Practical performance			
CO8	Describe and demonstrate underlying viscera of Nine region based upon cadaveric and Living Anatomy	Cognitive - comprehension + psychomot or	DK	Knows, Shows	Tutorial/ Demonstration	Written +viva-voce, spotting, OSPE/ Practical performance	F&S	III	
CO8	Describe and demonstrate surface marking of thoracic and abdominal viscera	Cognitive - comprehension + psychomot or	DK	Knows, Shows	Tutorial/ Demonstration	Written +viva-voce, spotting, OSPE/ Practical performance	F&S	III	
Practical 9- Practical study of Marma [Time: Practical or other activity - 12 hours]									
CO5, CO8	Describe and demonstrate surface markings of Marma points and its anatomical demarcation of all Marma as per Shadang sharir	Cognitive - comprehension + psychomot or	MK	Knows + Shows	Tutorial/ Demonstration / Cadaveric dissection	Written +viva-voce, spotting, OSPE/ Practical performance	F&S	III	Panchakarma
Practical 10- Body donation, organ donation and its awareness [Time: Practical or other activity - 02 hours]									
CO9	Describe body donation and organ donation process with respect to specific organ and its awareness Demonstrate process of communication	Affective/ psychomot or	DK	Knows, know how, Shows	Tutorial/ Demonstration	Written +viva-voce/ Public awareness/ social work	F&S	III	Shalyatantra and Shalakyatan tra
		Psychomot oe	MK		Role Play			III	

	process in awareness speech or counselling for Body donation.								
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Table 5: Non-Lecture Activities Course AyUG-RS

1	List non lecture Teaching-Learning methods	No of Activities (Values in hours)
a	Seminar / Workshop	14
b	Tutorial (TT) / Group Discussion (GD)	14
c	Problem based learning (PBL)	8
d	Integrated teaching (IT)	8
e	Early Clinical Exposure (ECE)/ Case Base Learning (CBL)	18
f	Self-Directed Learning (SDL) / Summary writing	12
g	Field visit	6
		80
2	Practical (refer Table 4)	240
	Total	320

Other Educational Activities(Additional):

- Field visit (community/anatomy museum) - II & III term
- Practical journal – II & III term
- Summary/ Essay writing (Research papers/Samhitas literature review)- II or III term

Table 6: Assessment Summary**6 A - Number of Papers and Marks Distribution**

S.No.	Subject Code	Papers	Theory	Practical/Clinical Assessment					Grand Total
				Practical/ Clinical	Viva	Electives	IA	Sub Total	
1.	AyUG-RS	2	200	100	70	-	30	200	400

6 B - Scheme of Assessment (formative and Summative) AyUG-RS

SR.NO.	PROFESSIONAL COURSE	DURATION OF PROFESSIONAL COURSE		
		First Term (1-6 Months)	Second Term (7-12 Months)	Third Term (13-18 Months)
1	First	3 PA & First TT	3 PA & Second TT	3 PA & UE

PA: Periodical Assessment; TT: Term Test; UE: University Examinations

6 C - Calculation Method for Internal assessment Marks (30 Marks) AyUG-RS

TERM	PERIODICAL ASSESSMENT*					TERM TEST**	TERM ASSESSMENT	
	A	B	C	D	E	F	G	H
	1 (15 Marks)	2 (15 Marks)	3 (15 Marks)	Average (A+B+C/3)	Converted to 30 Marks (D/15*30)	Term Test (Marks converted to 30)	Sub Total _/60 Marks	Term Assessment (..../30)
FIRST							E+F	(E+F)/2
SECOND							E+F	(E+F)/2
THIRD						NIL		E
Final IA	Average of Three Term Assessment Marks as Shown in 'H' Column.							
	Maximum Marks in Parentheses *Select an Evaluation Method which is appropriate for the objectives of Topics from the Table 6 D for Periodic assessment. Conduct 15 marks assessment and enter marks in A, B, and C. ** Conduct Theory (100 Marks) [MCQ (20*1 Marks), SAQ (8*5), LAQ (4*10)] and Practical (100 Marks) Then convert to 30 marks.							

6 D - Evaluation Methods for Periodical Assessment

S. No.	Evaluation Methods for Periodical Assessment
1.	Practical / Clinical Performance
2.	Viva Voce, MCQs, MEQ (Modified Essay Questions/Structured Questions)
3.	Open Book Test (Problem Based)
4.	Summary Writing (Research Papers/ Samhitas)
5.	Class Presentations; Work Book Maintenance
6.	Problem Based Assignment
7.	Objective Structured Clinical Examination (OSCE), Objective Structured Practical Examination (OPSE), Mini Clinical Evaluation Exercise (Mini-CEX), Direct Observation of Procedures (DOP), Case Based Discussion (CBD)
8.	Extra-curricular Activities, (Social Work, Public Awareness, Surveillance Activities, Sports or Other Activities which may be decided by the department).
9.	Small Project
10.	Other activities explained in Table 3 Column G3 as per indicated term and objective of the topic.

6 E - Paper Layout

I PROFESSIONAL BAMS EXAMINATIONS

AyUG-RS

PAPER-1

Time: 3 Hours Maximum Marks: 100

INSTRUCTIONS: All questions compulsory

TOTAL MARKS 100

		Number of Questions	Marks per question	Total Marks
Q 1	Multiple Choice Questions (MCQ)	20	1	20
Q 2	Short answer questions (SAQ)	8	5	40
Q 3	Long answer questions (LAQ)	4	10	40
				100

I PROFESSIONAL BAMS EXAMINATIONS

AyUG-RS

PAPER-1I

Time: 3 Hours Maximum Marks: 100

INSTRUCTIONS: All questions compulsory

TOTAL MARKS 100

		Number of Questions	Marks per question	Total Marks
Q 1	Multiple Choice Questions (MCQ)	20	1	20
Q 2	Short answer questions (SAQ)	8	5	40
Q 3	Long answer questions (LAQ)	4	10	40
				100

6 F – I - Distribution of Theory exam AyUG- RS

	Paper I				D Type of Questions “Yes” can be asked. “No” should not be asked.		
	A List of Topics		B Term	C Marks	MCQ (1 Mark)	SAQ (5 Marks)	LAQ (10 Marks)
1	Sharitropkramaniya Shaarira		I	Refer Next table	Yes	Yes	No
2	Paribhasha Shaarira		I		Yes	Yes	No
3.	Garbha Shaarira		I		Yes	Yes	Yes
4.	Asthi Shaarira		I		Yes	Yes	Yes
5.	Sandhi Shaarira		II		Yes	Yes	Yes
6.	Snayu sharir		II		Yes	Yes	No
7.	Peshi Shaarira		II		Yes	Yes	No
8.	Kesha, Danta, Nakha Sharir		II		Yes	Yes	No
9	Embryology		I		Yes	Yes	Yes
10	Osteology		I		Yes	Yes	Yes
11	Arthrology.		II		Yes	Yes	Yes
12	Myology		II		Yes	Yes	No
13	Nervous System.		III		Yes	Yes	Yes
14	Endocrinology		III		Yes	Yes	Yes
15	Lymphatic system		III		Yes	No	Yes

	Paper II				D Type of Questions “Yes” can be asked. “No” should not be asked.		
	A List of Topics	B Term	C Marks		MCQ (1 Mark)	SAQ (5 Marks)	LAQ (10 Marks)
1	Pramana Shaarira:	II	Refer Next Table		Yes	No	No
2	Koshtha Evam Ashaya Shaarira	I			Yes	Yes	Yes
3.	Sira Sharir	II			Yes	Yes	Yes
4.	Dhamani Sharir	II			Yes	Yes	Yes
5.	Strotas Shaarira	II			Yes	Yes	Yes
6.	Kalaa Shaarira	III			Yes	Yes	Yes
7.	Indriya Shaarira	III			Yes	Yes	Yes
8.	Twacha Sharir	III			Yes	Yes	Yes
9	Marma Shaarira	II			Yes	Yes	Yes
10	Respiratory System	II			Yes	Yes	Yes

11	Digestive system	I		Yes	Yes	Yes
12	Cardiovascular system	II		Yes	Yes	Yes
13	Urinary System	II		Yes	Yes	Yes
14	Reproductive system	III		Yes	Yes	Yes
15	Sensory organs	III		Yes	Yes	Yes

6 F – II - Theme table

Paper-I:

Theme*	Topics	Term	Marks	MCQ	SAQ	LAQ
a	1) Shariropakramaniya 2) Paribhasha Sharir	I	10	YES	YES	NO
b	3) Garbha Sharir 9) Embryology	I	20	YES	YES	YES
c	4) Asthi Sharir 10) Osteology	I	16	YES	YES	YES
d	8) Kesh, Dant, Nakha Sharir 7) Peshi Sharir 12) Myology	II	11	YES	YES	NO
e	5) Sandhi Sharir 6) Shayu Sharir 11) Arthrology	II	17	YES	YES	YES
f	13) Nervous System	III	14	YES	YES	YES
g	14) Endocrinology 15) Lymphatic	III	12	YES	YES	YES
*Theme: is group of similar topics in Ayurved Sharir and Anatomy. Used in 6G question paper blue print						

Paper-II

Theme	Topics	Term	Marks	MCQ	SAQ	LAQ
a	2) Koshta Evam Ashay Sharir 11) Digestive system	I	16	YES	YES	YES
b	1) Praman Sharir 9) Marma Sharir	II	17	YES	YES	YES
c	3) Sira Sharir 4) Dhamani Sharir 5) Strotas Sharir 12) Cardiovascular System	II	21	YES	YES	YES
d	10) Respiratory System	II	10	YES	YES	YES
e	13) Urinary System	II	10	YES	YES	YES
f	14) Reproductive System	III	6	YES	YES	NO
g	6) Kala Shair 7) Indriya Sharir 8) Twacha Sharir 15) Sensory organs	III	20	YES	YES	YES

6 G Question paper Blue print for AyU-RS:
PAPER-I

A Question Sr. No	B Type of Question	C Question Paper Format (Refer table 6 F II Theme table for themes)
Q1	Multiple choice Questions (MCQ) 20 Questions 1 mark each All compulsory Must know part: 15 MCQ Desirable to know: 3 MCQ. Nice to know: 2 MCQ	1. Theme a 2. Theme a 3. Theme a 4. Theme a 5. Theme a 6. Theme b 7. Theme b 8. Theme b 9. Theme b 10. Theme b 11. Theme c 12. Theme d 13. Theme e 14. Theme e 15. Theme f 16. Theme f 17. Theme f 18. Theme f 19. Theme g 20. Theme g
Q2	Short answer Questions (SAQ) Eight Questions 5 Marks Each All compulsory Must know part: 7 SAQ Desirable to know: 1 SAQ Nice to know: Nil	1. Theme a 2. Theme b 3. Theme c 4. Theme d 5. Theme d 6. Theme e 7. Theme g/f 8. Theme g/f
Q3	Long answer Questions (LAQ) Four Questions 10 marks each All compulsory All questions on must know No Questions on Nice to know and Desirable to know	1. Theme b 2. Theme c 3. Theme e 4. Theme f/g

PAPER-II

Question Sr. No		SET
Q1	Multiple choice Questions (MCQ) 20 Questions 1 mark each All compulsory Must know part: 15 MCQ Desirable to know: 3 MCQ. Nice to know: 2 MCQ	1. Theme a 2. Theme b 3. Theme b 4. Theme c 5. Theme c 6. Theme c 7. Theme c 8. Theme c 9. Theme c 10. Theme d/e 11. Theme d/e 12. Theme d/e 13. Theme e/d 14. Theme e/d 15. Theme f 16. Theme g 17. Theme g 18. Theme g 19. Theme g 20. Theme g
Q2	Short answer Questions (SAQ) Eight Questions 5 Marks Each All compulsory Must know part: 7 SAQ Desirable to know: 1 SAQ Nice to know: Nil	1. Theme a 2. Theme b 3. Theme c 4. Theme d/e 5. Theme e/d 6. Theme e/d 7. Theme f 8. Theme g
Q3	Long answer Questions (LAQ) Four Questions 10 marks each All compulsory All questions on Must to know No Questions on Nice to know and Desirable to know	1. Theme a 2. Theme b 3. Theme c 4. Theme g

6 H - I - Distribution of Practical Exam

Practical 100 Marks + (Viva 70 + IA 30) Marks

SN	Heads	Marks
1	Spotting (Refer Table 6 H II below)	20
3	Kostha Ashay Sharir, Dissected organs and histology slides	20
4	Ashti, Sandhi, Peshi, Bones and Joints,	20
5	Marma Sharir, Surface & Radiological anatomy	20
6	Practical record (15 Marks) and Communication Skill (5 Marks)	20
7	Viva-Voce (Objective Structured) (Refer table 6 H – III)	70
8	Internal assessment	30
	Total Marks	200

6 H - II Practical Spot examination Questions – (20 marks)

SN	Question	Mark allotment
Topic- Garbha/Sira/Kala		
1	Identify the structure & give the Drushtant/ Metaphor related with it. e.g.- Gunja Phala- Artava, Spatik-Shukra, etc	Identification- 1 Drushtant- 1
Topic- Marma		
1	Identify the Marma & write its type as per Parinama & Rachana	Identification- 1 Type-1
2	Identify the Marma & write its Pariman & any two anatomical structures related to the Marma	Identification- 0.5 Pariman – 0.5 Anatomical structure - 1
3	Identify the Marma & write its applied aspect	Identification- 1 Viddha-1
Topic- Bones, Muscles		
1	Identify the bone & write its peculiarities (Any 2) e.g.- Atlas vertebra	Identification- 0.5 Peculiarities- 1.5
2	Identify the indicated part on the bone & write its attachment (Any 2) e.g., Scapula spine	Identification- 1 Attachment- 1
3	Identify the side of the given bone & write side determination points	Side identification- 0.5 Points- 1.5
4	Identify the side of the given bone & write its applied anatomy (Any 2 points)	Identification-1 Applied -1
5	Write the type of the given bone as per Ayurved & Modern science e.g., Tibia- Nalakasthi, long bone	Ayu. Type- 1 Modern type- 1
6	Identify the indicated muscle on the bone & write whether it originates or inserts there	Muscle identification- 1 Origin/insertion- 1
7	Identify the indicated muscle & write its action (Any 2)	Identification- 1 Action-1
8	Identify the indicated muscle& write its blood supply/nerve supply	Identification-1

		Supply-1
9	Identify the indicated muscle& write its applied anatomy	Identification-1 Applied -1
10	Identify the bone and write any two processes	Identification-1 Processes -1
11	Identify the bone and write any two angles	Identification-1 Angle -1
12	Identify the bone and write any one peculiarity related to gender e.g., Hip bone, Clavicle, Sacrum	Identification-1 Peculiarities- 1
Topic- Joints		
1	Identify the joint & write its ligaments (Any 3)	Identification- 0.5 Ligaments- 1.5
2	Identify the joint & write names of actions occurring there (Any 3)	Identification- 0.5 Actions- 1.5
3	Identify the joint & write the type of joint as per Ayurved & Modern science	Identification- 1 Ayu. Type- 0.5 Modern type- 0.5
4	Identify the joint & write its clinical anatomy (Any two)	Identification- 1 Clinical anatomy-1
5	Identify the joint & write its relation (Any two)	Identification- 1 Relation -1
6	Identify the joint & write the movements along with the muscle	Identification- 1 Movement -0.5 Muscle – 0.5
Topic- Organs		
1	Identify the organ & write name of the Srotas related to it	Identification- 1 Srotas-1
2	Identify the organ & write name of the kala related to it	Identification- 1 Kala-1
3	Identify the organ & write its Utpatti as per Ayurved	Identification- 1 Utpatti-1
4	Identify the organ & write its visceral impressions (Any 3)	Identification- 0.5 Impressions-1.5
5	Identify the organ & write its blood/nerve supply	Identification- 0.5 Supply-1.5
6	Identify the organ & write it's the borders (Any two)	Identification- 1 Borders -1
7	Identify the organ & write its surfaces (Any two)	Identification- 1 Borders -1
8	Identify the organ& write its applied anatomy (Any 3 points)	Identification-0.5 Applied -1.5
Topic- Radiology		
1	Identify the X-ray & write the structures seen in it (Any 3)	Identification- 0.5 Structures-1.5
2	Identify the view of the X-ray & write the marked structures (Any two)	Identification- 1 Structures-1
Topic- Central Nervous System/ Sense organs		
1	Name the lobes of the given organ e.g., cerebrum	Each lobe – 0.5 Total -2

2	Identify the sense organ & write its nerve supply e.g., tongue	Identification- 1 Supply-1
3	Identify the marked structure and write its applied aspect (Any two)	Identification- 1 Applied aspect-1

6 H - III Viva Voce (70 Marks)

Recall Questions	Comprehension Questions	Application Questions
40 Marks	20 Marks	10 Marks
1. Sira-Dhamani-Shrotas 2. Shariropakramaniya Sharir 3. Paribhasha Shaarir 4. Praman Shaarira 5. Anatomical terminologies 6. Kalaa Sharir 7. Indriya Sharir & Sensory organ 8. Reproductive system	1. Nervous system 2. Endocrine system 3. Lymphatic system 4. Cardiovascular system 5. Urinary system	1. Garbha Sharir, 2. Embryology 3. Respiratory system 4. Digestive system
e.g., Definition, types, numbers, planes, parts, Shlokas, etc.	e.g., Relations, Blood supply, Nerve Supply, Venous & Lymphatic drainage, etc.	e.g., Applied anatomy, Clinical anatomy, Surgical anatomy, Congenital anomalies etc.

7. Reference and Resources

1. Parishadhy Shabdarth Sharir
2. Pratyaksha shaririram
3. Sharisthana of all Samhita
4. Sushrut Samhita Sharirshtana- Dr. Bhaskar Govind Chanekar
5. Brihat Shariram Vaidyaratna- P.S. Varrier
6. Abhinava Shariram- Acharya Damodar Sharma Gaur
7. Manava Sharir (Revised Edition)- Prof. Dinkar Govind Thatte
8. Sharir Rachana Vigyan (English)- Vaidya P.G. Athawale
9. Manual of Practical Anatomy Cunningham Practical Manual Vol-1, Vol-2, Vol-3
10. Clinical Anatomy in Ayurveda - Prof. D.G. Thatte & Prof. Suresh Chandra
11. Ayurvedic Human Anatomy - Prof. Dr. Giridhar M. Kanthi
12. Sharir Rachana Vigyan Vol I & II- Dr. Sunil Kumar Yadav
13. Regional Anatomy - B. D. Chaurasia
14. Rachana Sharir Vigyana - Dr. Mahendra Sing
15. Relevant chapters of Brihtrayee and Laghutrathayee
16. Gray's Anatomy
17. Text Book of Human Anatomy- Inderbir Singh
18. Clinical Anatomy- Richard S Snell
19. Fundamentals of Human Anatomy- Dr. Chakraborty
20. Human Osteology - Poddar
21. A Handbook of Anatomical Terminology- Dr. Nidhi Shrivastava, Dr. Ravi Kumar Shrivastava, Dr. Rakesh Kumar Sharma.



प्राणधिसुरः प्रमायतनानाम्



Kriya

COURSE CURRICULUM FOR FIRST PROFESSIONAL BAMS

(PRESCRIBED BY NCISM)

शास्त्रं ज्योतिः प्रकाशार्थं दशशतं
बुद्धिरात्मनिः।

KRIYA SHARIRA

(SUBJECT CODE- AyUG-KS)

HUMAN PHYSIOLOGY

**(Applicable from 2021-22 batch onwards for 5 years or until further
notification by NCISM, whichever is earlier)**

BOARD OF AYURVEDA

**NATIONAL COMMISSION FOR INDIAN SYSTEM OF MEDICINE
NEW DELHI-110058**

NCISM

I professional Ayurvedacharya(BAMS)

Subject Code: AyUG KS

Kriya Sharir

Summary

AyUG KS Total number of Teaching hours: 400			
Lecture hours (LH) - Theory		150 Hours	150 Hours (LH)
Paper I	75 Hours		
Paper II	75 Hours		
Non-Lecture hours (NLH) – Theory		50 Hours	250 Hours (NLH)
Paper I	25 Hours		
Paper II	25 Hours		
Non-Lecture hours (NLH) - Practical		200 Hours	

AyUG KS Examination (Papers & Mark Distribution)				
Item	Theory Component Marks	Practical Component Marks		
		Practical	Viva	IA
Paper I	100	100	70	30
Paper II	100			
Sub-Total	200	200		
Total marks	400			

Preface

Kriya Sharir (Human Physiology) is an important subject of the BAMS program for the undergraduate students of Ayurveda. The term sharir means 'in the sharir' or 'related to the sharir' thus Sharir Kriya deals with the study of the human body concerning its physiological norms i.e., the functioning of the human body in its normal state. This subject refers to the physiology and biochemistry of contemporary medical science.

The swasthya of an individual is based on 3 pillars of the body i.e., dosha, dhatu & mala. Kriya Sharir subject mainly deals with these 3 pillars. The basic concepts, knowledge, and applicability of Tridosha (Vata, Pitta, Kapha), Sapta Dhatus (Rasa, Rakta, Mamsa, Meda, Asthi, Majja, Shukra), and Trimala (Mutra, Purish, Sweda) are very important in the critical understanding of the disease. Kriya Sharir also deals with Prakriti, Strotas, Kosta, Agni, Oja, Mana, Aahar (Basic principles of food), shatkriyakal, the system-wise study of contemporary science, senses function and dysfunction, etc. All these fundamental topics are essential for the proper understanding of etiopathogenesis, diagnosis of disease, and its management which will be covered in para-clinical and clinical subjects.

New curriculum of Kriya Sharir is designed considering cognitive, affective, and psychomotor domains. There are group discussions, workshops, field visits, and activities beyond the textbook during the practical hours like preparation of charts, models, seminar presentations by students. Kriya Sharir subject also deals with teaching-learning methods like role play, flipped the classroom, etc. Some assessment methods like OSPE, PBL, DOPS, CBD, skill assessment, etc are incorporated. The main aim of the curriculum is to highlight the basic knowledge and to give a new scientific approach to undergraduate students to develop their skills of Ayurveda and make them competent to apply in clinical practice and research.

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Course Code and Name of Course

	Course code	Name of Course
	AyUG KS	Kriya Sharir (Human Physiology)

AyUG KS Course

Table 1- Course learning outcomes and matched PO.

SR1 CO No	A1 Course learning Outcomes (CO) AyUG KS At the end of the course AyUG-KS, the student should be able to-	B1 Course learning Outcomes matched with program learning outcomes.
CO 1	Explain all basic principles & concepts of Kriya Sharir along with essentials of contemporary human physiology and biochemistry related to all organ systems.	PO1, PO2
CO 2	Demonstrate and communicate normal and abnormal variables pertaining to Kriya Sharir such as Sara, Agni, Koshta, Srotas etc.	PO2, PO3
CO 3	Differentiate between Prakriti and Vikriti in the individuals after carrying out relevant clinical examinations.	PO1, PO2, PO3, PO5
CO 4	Carry out clinical examination and experiments using equipments with interpretation of their results	PO4
CO 5	Differentiate the strengths & limitations of Ayurved and contemporary sciences	PO2
CO 6	Present a short project work / research activity covering the role of Kriya Sharir in preventive and promotive healthcare.	PO5, PO6, PO7, PO8, PO9
CO 7	Show a sense of curiosity and questioning attitude towards the life processes and to display compassion and ethical behaviour	PO2, PO5, PO6, PO7, PO9
CO 8	Effectively communicate verbally and in writing preferably using Ayurvedic terminology along with contemporary terminology among peers, teachers and community	PO8, PO9

Table 2 : Contents of Course AyUG KS

Paper I – AyUG-KS					
Sr No	A2 List of Topics AyUG-KS Paper I	B2 Term	C2 Marks	D2 Lecture hours	E2 Non-Lecture hours
PART-A (Marks-60)					
1	Sharir: Definition and synonyms of term Kriya, Sharir & Shaarir. Description of Sharir Dosha and Manasa Dosha. Mutual relationship between Triguna-Tridosha & Panchmahabhuta.	I	08	2	1
2	Basic principles of Ayurveda: Dosha dhatu mala mulam hi shariram. Description of basics of Srotas	I		2	1
3.	Tridosha: General description of Tridosha. Inter relationship between Ritu-Dosha-Rasa- Guna. Biological rhythms of Tridosha on the basis of day-night-age-season and food intake. Role of Dosha in the formation of Prakriti of an individual and in maintaining of health. Prakrita and Vaikrita Dosha.	I		3	0
4.	Vata Dosha: Vyutpatti (derivation), Nirukti (etymology) of the term Vata, general locations, general properties and general functions of Vata, five types of Vata (Prana, Udana, Samana, Vyana, Apana) with their specific locations, specific properties, and specific functions.	I	26	6	2
5.	Pitta Dosha: Vyutpatti, Nirukti of the term Pitta, general locations, general properties and general functions of Pitta, five types of Pitta (Pachaka, Ranjaka, Alochaka, Bhrajaka, Sadhaka) with their specific locations, specific properties, and specific functions. Similarities and differences between Agni and Pitta.	I		5	1
6.	Kapha Dosha: Vyutpatti, Nirukti of the term Kapha, general locations, general properties and general functions of Kapha, five types of Kapha (Bodhaka, Avalambaka, Kledaka, Tarpaka, Śleshaka) with their specific locations, specific properties, and specific functions.	II		4	1
7.	Dosha Vriddhi-Kshaya: Etiological factors responsible for Dosha Vriddhi, Dosha Kshaya and their manifestations.	II		1	1
8.	Kriyakala: Concept of Kriyakala, applied physiology of diseases produced due the vitiation of vata, pitta and kapha.	II		1	1
9	Prakriti: Deha- Prakriti: Vyutpatti, Nirukti, various definitions and synonyms for the term "Prakriti". Intra-uterine and extra-uterine factors influencing Deha-Prakriti, classification and characteristic features of each kind of Deha-Prakriti. Manasa- Prakriti: Introduction and types of Manasa- Prakriti	II		7	3
10.	Ahara: Definition, classification and significance of Ahara,	III		3	1

	Ahara-vidhi-vidhana, Ashta Aharavidhi Viseshayatana, Ahara Parinamkar Bhava.		26		
11.	Agni: Definition and importance, synonyms, classification, location, properties and functions of Agni and functions of Jatharagni, Bhutagni, and Dhatvagni.	III		4	1
12.	Aharapaka (Process of digestion): Description of Annavaha Srotas and their Mula. Description of Avasthapaka (Madhura, Amla and Katu). Description of Nishthapaka (Vipaka) and its classification. Role of Grahani & Pittadhara Kala. Separation of Sara and Kitta. Absorption of Sara. Genesis of Vata-Pitta-Kapha during Aharapaka process. Definition of the term Koshtha. Classification of Koshtha and the characteristics of each type of Koshtha.	III		7	2
PART-B (Marks-40)					
1	Physiology Homeostasis: Definition and mechanisms of maintenance of homeostasis. Cell physiology. Membrane physiology. Transportation of various substances across cell membrane. Resting membrane potential and action potential. Acid-base balance, water and electrolyte balance. Study of basic components of food.	I	23	5	1
2	Physiology of Respiratory system: functional anatomy of respiratory system. Definition of ventilation, mechanism of respiration, exchange and transport of gases, neural and chemical control of respiration, artificial respiration, asphyxia, hypoxia. Introduction to Pulmonary Function Tests.	II		5	2
3	Physiology of Gastrointestinal system: Functional anatomy of gastro-intestinal tract, mechanism of secretion and composition of different digestive juices. Functions of salivary glands, stomach, liver, pancreas, small intestine and large intestine in the process of digestion and absorption. Movements of the gut (deglutition, peristalsis, defecation) and their control. Enteric nervous system. Digestion and metabolism of proteins, fats and carbohydrates. Vitamins & Minerals- sources, daily requirement, functions, manifestations of hypo and hypervitaminosis.	II		7	2
4	Physiology of Nervous System: General introduction to nervous system, neurons, mechanism of propagation of nerve impulse, physiology of CNS, PNS, ANS; physiology of sensory and motor nervous system, Functions of different parts of brain, intelligence, memory, learning and motivation. Physiology of sleep and dreams, EEG. Physiology of speech and articulation. Physiology of temperature regulation.	III	17	7	3
5	Physiology of Endocrine glands: General introduction to endocrine system, classification and characteristics of hormones, physiology of all endocrine glands, their functions and their effects.	III		6	2

Paper II – AyUG-KS					
	A2 List of Topics Paper II	B2 Term	C2 Marks	D2 Lecture hours	E2 Non- Lecture hours
PART-A (Marks-60)					
1	Dhatu: Etymology, derivation, definition, general introduction of term Dhatu, different theories related to Dhatuposhana (Dhatuposhana Nyaya)	I	18	2	1
2	Rasa Dhatu: Etymology, derivation, location, properties, functions and Praman of Rasa-dhatu. Physiology of Rasavaha Srotas, Formation of Rasa Dhatu from Aahara Rasa, circulation of Rasa (Rasa-Samvahana), role of Vyana Vayu and Samana Vayu in Rasa Samvahana. Description of functioning of Hridaya. Ashtavidha Sara, characteristics of Tvakasara Purusha, conceptual study of Aashraya-Aashrayi Bhaava and its relation to Rasa and Kapha. Manifestations of kshaya and Vriddhi of Rasa	I		4	1
3.	Rakta Dhatu: Etymology, derivation, synonyms, location, properties, functions and Praman of Rakta Dhatu. Panchabhautikatva of Rakta Dhatu, physiology of Raktavaha Srotas, formation of Raktadhatu, Ranjana of Rasa by Ranjaka Pitta, features of Shuddha Rakta, specific functions of Rakta, characteristics of Raktasara Purusha, manifestations of Kshaya and Vriddhi of Raktadhatu, mutual interdependence of Rakta and Pitta.	I		3	1
4.	Mamsa Dhatu: Etymology, derivation, synonyms, location, properties and functions of Mamsa Dhatu, physiology of Mamsavaha Srotas, formation of Mamsa Dhatu, characteristics of Mamsasara Purusha, manifestations of Kshaya and Vriddhi of Mamsa Dhatu, Concept of Peshi.	I		2	1
5.	Meda Dhatu: Etymology, derivation, location, properties, functions and Praman of Meda Dhatu, physiology of Medovaha Srotas, formation of Medo Dhatu, characteristics of Medasara Purusha and manifestations of Kshaya and Vriddhi of Meda.	I		3	1
6.	Asthi Dhatu: Etymology, derivation, synonyms, location, properties, functions of Asthi Dhatu. Number of Asthi. Physiology of Asthivaha Srotas and formation of Asthi Dhatu, characteristics of Asthisara Purusha, mutual interdependence of Vata and Asthi Dhatu, manifestations of Kshaya and Vriddhi of Asthi Dhatu.	II	19	2	1
7.	Majja Dhatu : Etymology, derivation, types, location, properties, functions and Praman of Majjaa Dhatu, physiology of Majjavaha Srotas, formation of Majja Dhatu, characteristics of Majja Sara Purusha, relation of Kapha, Pitta, Rakta and Majja, manifestations of Kshaya and Vriddhi of	II		3	1

	Majja Dhatu.				
8.	Shukra Dhatu: Etymology, derivation, location, properties, functions and Praman of Shukra Dhatu, physiology of Shukraravaha Srotas and formation of Shukra Dhatu. Features of Shuddha Shukra, characteristics of Shukra-Sara Purusha, manifestations of Kshaya and Vriddhi of Shukra Dhatu.	II		3	1
9	Concept of Ashraya-Ashrayi bhava i.e. inter-relationship among Dosha, Dhatu Mala and Srotas. Applied physiology of diseases asserting saptadhatu enlisted under dhatu pradoshaj vikar.	II		1	1
10.	Ojas: Etymological derivation, definition, formation, location, properties, Praman, classification and functions of Ojas. Description of Vyadhikshamatva. Bala Vriddhikara Bhava. Classification of Bala. Etiological factors and manifestations of Ojavisramsas, Vyapat and Kshaya.	II		3	1
11.	Upadhatu: General introduction, etymological derivation and definition of the term Upadhatu. Formation, nourishment, properties, location and functions of each Upadhatu. Stanya: Characteristic features and methods of assessing Shuddha and Dushita Stanya, manifestations of Vriddhi and Kshaya of Stanya. Artava: Characteristic features of Shuddha and Dushita Artava. Differences between Raja and Artava, physiology of Artavavaha Srotas. Tvak: classification, thickness of layer and functions.	II		6	1
12.	Mala: Etymological derivation and definition of the term Mala. Aharamala: Enumeration and description of the process of formation of Aharamala. Purisha: Etymological derivation, definition, formation, properties, quantity and functions of Purisha. Physiology of Purishavaha Srotas, manifestations of Vriddhi and Kshaya of Purisha. Mutra: Etymological derivation, definition, formation, properties, quantity and functions of Mutra. Physiology of Mutravaha Srotas, physiology of urine formation in Ayurveda, manifestations of Vriddhi and Kshaya of Mutra. Sveda: Etymological derivation, definition, formation and functions of Sveda. Manifestations of Vriddhi and Kshaya of Sveda. Discription of Svedvaha Srotas Dhatumala: Brief description of each type of Dhatumala.	III	23	6	2
13	Indriya vidnyan: Physiological description of Panchagyaanendriya and physiology of perception of Shabda, Sparsha, Rupa, Rasa and Gandha. Physiological description of Karmendriya.	III		1	1
14	Manas: Properties, functions and objects of Manas. Physiology of Manovaha Srotas.	III		2	1
15	Atma: Properties of Atma. difference between Paramatma and Jivatma; Characteristic features of existence of Atma in living body.	III		2	0
16	Nidra & Swapna: Nidrotpatti, types of Nidra, physiological and clinical significance of Nidra; Svapnotpatti and types of Svapna.	III		2	0

PART-B (Marks-40)					
1	Haemopoietic system: composition, functions of blood and blood cells, Haemopoiesis (stages and development of RBCs, and WBCs and platelets), composition and functions of bone marrow, structure, types and functions of haemoglobin, mechanism of blood clotting, anticoagulants, physiological basis of blood groups, plasma proteins, introduction to anaemia and jaundice.	I	18	5	2
2	Immunity: classification of immunity: Innate, acquired and artificial. Different mechanisms involved in immunity: Humoral (B-cell mediated) and T-Cell mediated immunity. Hypersensitivity.	I		2	0
3	Physiology of cardio-vascular system: Functional anatomy of cardiovascular system. Cardiac cycle. Heart sounds. Regulation of cardiac output and venous return. Physiological basis of ECG. Heart-rate and its regulation. Arterial pulse. Systemic arterial blood pressure and its control.	I		5	2
4	Muscle physiology: comparison of physiology of skeletal muscles, cardiac muscles and smooth muscles. Physiology of muscle contraction.	II	07	2	0
5	Adipose tissue: lipoproteins like VLDL, LDL and HDL triglycerides. Functions of skin, sweat glands and sebaceous glands.	II		2	1
6	Physiology of male and female reproductive systems: Description of ovulation, spermatogenesis, oogenesis, menstrual cycle.	II	15	5	2
7	Physiology of Excretion: functional anatomy of urinary tract, functions of kidney. Mechanism of formation of urine, control of micturition. Formation of faeces and mechanism of defecation.	III		4	2
8	Special Senses, Sleep and Dreams: Physiology of special senses. physiology of sleep and dreams	III		5	1

Table 3: Learning objectives (Theory) of Course AyUG-KS

PAPER I									
A3 Course outcome	B3 Learning Objective (At the end of the session, the Students should be able to)	C3 Domain/sub	D3 Must to know/ desirable to know/Nice to know	E3 Level Does/ Shows how/ Knows how/ Know	F3 T-L method	G3 Assessment	H3 Formative /summative	I3 Term	J3 Integration
	Paper I (Part A) (60 Hours)								
	Topic 1 – Sharir (human body) (3 hr) [Lecture: 2 hours, non-lecture: 1 hour]								
CO 1	Explain the definition and synonyms of the term <i>kriya</i> , <i>sharira</i> and <i>shaarira</i>	Cognitive (recall, comprehension)	Mk	K	Lecture	Written/ (MCQ, MEQ, LAQ, SAQ) Viva voce	F & S	I	
CO 2	Enlist the <i>sharira dosha</i> and <i>manasa dosha</i> and	Cognitive (recall, comprehension)	Mk	K	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Explain mutual relationship between <i>triguna</i> , <i>panchmahabhuta</i> and <i>tridosha</i>	Cognitive (comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
	Topic 2 – Basic Principles of Kriya Sharir (3 hr) [Lecture: 2 hours, non-lecture: 1 hour]								
CO 1	Express critical view of why <i>dosha- dhatu-mala</i> are described in specific numbers.	Cognitive (recall)	Dk	Kh	Discussion	Written	F	I	
CO 1	Explain the principle of “ <i>dosha-dhatu-mala mulam hi shariram</i> ”.	Cognitive (recall)	Mk	Kh	Lecture Discussion	Written	F & S	I	
CO 1	Discuss term homeostasis in <i>dosha-</i>	Cognitive (comprehension)	Dk	Kh	Discussion	Viva voce	F	I	

	<i>dhatu-mala.</i>								
CO 1	Explain role of <i>srotas</i> in the body.	Cognitive (comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Explain the basic concept of <i>srotas</i> and classify different <i>srotas</i> based on Rachana (morphological), <i>kriya</i> (functions) and <i>guna</i> (properties)	Cognitive (comprehension)	Mk	Kh	Lecture Discussion Flipped classroom	Written/ Viva voce	F & S	I	<i>Rachana sharir</i>
CO 1	Describe the significance of the knowledge of <i>srotas</i> in <i>kriya sharira</i>	Cognitive (comprehension)	Mk	Kh	Discussion	Written/ Viva voce	F & S	I	
CO 1	Compare <i>mula sthana</i> of <i>srotas</i> described in <i>samhitas</i> in view of <i>kriya sharir</i> and contemporary medical science	Cognitive (application)	Dk	Kh	Model Discussion Tutorial Assignment	Viva voce	F & S	I	
CO 1	Find out similarities and differences between <i>srotas</i> and system of contemporary science.	Cognitive (application)	Nk	Kh	Discussion Self-learning Think-Pair-Share	Short notes	F	I	
CO 1	Document observations on correlation of anyone environmental global change and physiological variation as per Ayurved, contemporary sciences.	Cognitive (application)	Nk	Kh	Discussion Self-learning Think-Pair-Share	Short notes	F	I	
CO 1	Recognize the contribution of Ayurveda in the formation of four basic principles of Bioethics mentioned in contemporary science.	Cognitive (recall) (comprehension)	Nk	Kh	Lecture Discussion	Written	F	I	
	Topic 3 – Tridosha (Three humors of the body) (3 hr) [Lecture: 3 hours, non-lecture: 0 hours]								
CO 1	Describe <i>utpatti</i>	Cognitive	Mk	K	Lecture	Written/	F & S	I	

Kriya Sharir, I BAMS(Ayurvedacharya),

	(<i>prasad & malabhuta</i>), locations of <i>dosha</i> .	(recall)				Viva voce			
CO 1	State biological rhythms or circadian cycle of <i>tridosha</i> based on day-night-age-season food intake and relation to the environment	Cognitive (comprehension)	Mk	Kh	Lecture discussion Seminar	Written/ Viva voce	F & S	I	
CO 1	Explain the applied role of <i>dosha</i> in maintaining health and State of equilibrium and recognize the role of <i>dosha</i> in the formation of <i>prakriti</i> of an individual	Cognitive (comprehension)	Mk	Kh	Lecture discussion Seminar	Written/ Viva voce	F & S	I	
CO 1	State importance of <i>dosha</i> in lifestyle management and mutual relationship between <i>ritu-kala-dosha-rasa-guna</i>	Cognitive (application)	Nk	Kh	Discussion PBL	Viva voce	S	I	
CO 1	Interpret <i>gurvadi guna</i> of <i>dosha</i> in term of applied physiology and clinical aspect in different chapters of Charak.	Cognitive (application)	Nk	Kh	Discussion PBL/CBD	Written	F	I	<i>Padartha Vijnana. Kayachikitsa</i>
CO 1	Interpret <i>sama & niram</i> lakshana of <i>dosha</i>	Cognitive (comprehension)	Dk	Kh	Discussion	Written	F	I	
CO 1	Discuss the evidences of functional significance of <i>vata</i> , <i>pitta</i> and <i>kapha</i> in perspective of nervous, endocrine, immune or any other system.	Cognitive (application)	Nk	Kh	Discussion Think-Pair-Share	Self-assessment	SA	I	
CO 1	Discuss how to examine <i>vrudhi-kshaya</i> of <i>dosha</i>	Cognitive (comprehension)	Dk	Kh	Discussion PBL	Viva voce	S	I	
CO 1	State materialism and	Cognitive	Mk	Kh	Discussion	Viva voce	F	I	

	immaterialism of tridosha	(comprehension)							
	Topic 4 – Vata dosha (8 hr) [Lecture: 6 hours, non-lecture: 2 hours]								
CO 1	Define the <i>vyutpatti</i> and <i>nirukti</i> of <i>vata</i> .	Cognitive (Recall)	Mk	K	Lecture	Written/ Viva voce	F & S	I	
CO 1	Describe <i>guna</i> and general locations of <i>vata dosha</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe general properties & functions of <i>vata dosha</i> and demonstrate the normal <i>guan, karma of vata dosha</i> in a healthy person.	Cognitive (Comprehension)	Mk	Kh/Sh	Lecture Discussion	Written/ Viva voce	F & S	I	<i>Rognidan Vikriti Vidnyan</i>
CO 1	Enlist five types of <i>vata</i> and describe <i>prana, udana vata</i> with their specific locations, properties and functions.	Cognitive (Recall & Comprehension)	Mk	Kh	Lecture Confusion technique Demonstration Chart, Model	Written/ Viva voce Skill assessment	F & S	I	
CO 1	Explain the term <i>nishwas, ucchwas, shwasan</i> & describe the role of <i>prana vayu</i> & <i>udana vayu</i> in <i>shwasan prakriya</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture	Written/ Viva voce	F & S	I	
CO 1	Describe <i>shwasan prakriya</i> according to <i>sharangadhar</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion Model, Video	Written/ Viva voce	F & S	I	
CO 1	Describe clinical importance of classification of <i>swara</i> and <i>vyanjana</i> according to their <i>uccharana sthan</i> .	Cognitive (Application)	Nk	Sh	Demonstration Discussion Assignment PBL/CBL	Self-assessment	SA	I	Sanskrit
CO 1	Describe the formation and articulation of <i>shabda</i> (words) and explain the bio-physiology of	Cognitive (Comprehension)	Dk	Kh	Lecture A/V aids.	Written/ Viva voce	F & S	I	

	induction of <i>vaak</i> and role of <i>udaan vaayu</i> in it.								
CO 1	Explain role of pranayama, <i>puraka</i> , <i>rechaka</i> and <i>kumbhaka</i> in <i>samyaka shwasana</i> , <i>swara/ ghosha utpatti</i>	Cognitive (Analysis)	Nk	Sh	Demonstration Discussion Assignment PBL/CBL	Self-assessment	SA	I	<i>Swasthavrutta</i>
CO 1	Describe <i>samana</i> with their specific locations, properties and functions.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion Confusion technique Demonstration Chart, Model	Written/ Viva voce	F & S	I	
CO 1	Describe <i>vyana vata</i> with their specific locations, properties and functions.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion Confusion technique Demonstration Chart, Model	Written/ Viva voce	F & S	I	
CO 1	Describe role of <i>vyana vayu</i> & <i>samana vayu</i> in the process of <i>rasa-samvahanana</i>	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion Seminar	Written/ Viva voce	F & S	I	
CO 1	Review the contribution of <i>vyana</i> and <i>saman vayu</i> in the process of cardiac circulation.	Cognitive (Comprehension)	Dk	K	Discussion	Written/ Viva voce	F	I	
CO 1	Interprete microbiota, gut brain axis for understanding enteric nervous system in perspective of <i>vata</i> , <i>saman vayu</i> .	Cognitive (Comprehension)	Nk	K	Discussion	Self-assessment	SA	I	
CO 1	Describe <i>Apana vata</i> with their specific locations, properties and functions.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion Confusion technique Demonstration	Written/ Viva voce	F & S	I	

CO 1	Document & discuss your observations on correlation of functions of <i>apana vayu</i> with which type of nervous system & why?	Cognitive (Comprehension)	Nk	K	Discussion	Self-assessment	SA	I	
CO 1	Illustrate gati (directions) of types of vata by using lebel diagramme.	Cognitive (analysis)	Dk	Kh	Illustration	Self-assessment Peer evaluation.	SA	I	
CO3	Explain difference between <i>kshaya</i> & <i>vridhhi lakshana</i> of <i>vata Dosha</i>	Cognitive (Comprehension)	MK	Kh	Chalk-board Presentation Symposium Discussion	Written/ Viva voce	F & S	I	
CO5	Interpret which type of <i>vata dosha</i> gets vitiated and in which clinical condition the use of proper <i>aahar dravya</i> is prevalent as per <i>kshaya, vridhhi of vata dosha</i> .	Cognitive (Application)	Dk	Sh	Demonstration Discussion PBL	Written/ Viva voce	F & S	I	
CO 1	Recite and to explain the important verses of <i>vata dosha</i> . (ex- <i>sthana, karma, types, vridhhi and kshaya</i>)	Cognitive (Recall)	Dk	Sh	Discussion Recitation	Written/ Viva voce	F & S	I	Sanskrit Samhita
	Topic 5 – Pitta dosha (6 hr) [Lecture: 5 hours, non-lecture: 1 hour]								
CO 1	Define the <i>vyutpatti</i> and <i>nirukti</i> of <i>pitta</i> .	Cognitive (Recall)	Mk	Kh	Lecture	Written/ Viva voce	F & S	II	
CO 1	Describe <i>guna</i> and general locations of <i>pitta dosha</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion Demonstration	Written/ Viva voce Skill assessment	F & S	II	
CO 1	Describe general	Cognitive (Recall)	Mk	Kh	Lecture	Written/	F & S	II	<i>Rognidan</i>

	properties & functions of <i>pitta dosha</i> and explain the normal <i>guna, karma of pitta dosha</i> in a healthy person.	& Comprehension)			Discussion Seminar	Viva voce			<i>Vikriti Vidnyan</i>
CO 1	Enlist five types of <i>pitta dosha</i> and describe <i>pachaka</i> with their specific locations, properties and functions.	Cognitive Recall	Mk	Kh	Lecture Discussion Demonstration	Written/ Viva voce	F & S	II	
CO 1	Record your opinions about functions of pachak pitta and digestive enzymes separately.	Cognitive (Comprehension)	Nk	Kh	Group discussion	Self-assessment	SA	II	
CO 1	Describe <i>ranjaka</i> pitta with their specific locations, properties and functions.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion Demonstration	Written/ Viva voce	F & S	II	
CO 1	Describe role of <i>ranjaka</i> pitta in <i>rasarajan</i> process as per different <i>aacharyas</i> .	Cognitive (Comprehension)	Dk	Kh	Lecture	Written/ Viva voce	F & S	II	
CO 1	Interpret stages of erythropoiesis and role of intrinsic factor, vit. B ₁₂ etc in hemopoiesis.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion Seminar	Written/ Viva voce	F & S	II	
CO 1	Describe <i>alochaka, bhranjaka, sadhaka</i> pitta with their specific locations, properties and functions.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion Demonstration	Written/ Viva voce	F & S	II	
CO 1	Discuss rhodopsin and iodopsin along with <i>alochaka pitta</i> and note down	Cognitive (Recall)	Nk	Kh	Self study	Self-assessment	SA	II	

CO 1	Elaborate the functions of bhranjaka pitta in term physiology.	Cognitive (Comprehension)	Nk	Kh	Self study	Self-assessment	SA	II	
CO 1	Describe the role of <i>sadhaka</i> pitta in <i>sadhana</i> , concentration and observe changes upon heart rate and respiratory rate	Attitude (Imitation)	Nk	Sh	Discussion Demonstration	Self-assessment	SA	II	
CO 1	Find out similarities and differences between functions of <i>sadhaka</i> pitta and neurotransmitter.	Cognitive (Analysis)	Nk	Kh	Self study	Self-assessment	SA	II	
CO 1	Explain difference between <i>kshaya</i> & <i>vridhhi lakshana</i> of <i>pitta Dosha</i>	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 5	Interpret which type of <i>pitta dosha</i> gets vitiated and in which clinical condition the use of proper <i>aahar dravya</i> is prevalent as per <i>kshaya, vridhhi</i> of <i>pitta dosha</i> .	Cognitive (Application)	Dk	Sh	Demonstration Discussion PBL	Written/ Viva voce	F & S	II	<i>Swasthavrutta</i>
CO 1	Distinguish the similarities & differences between <i>agni</i> and <i>pitta</i> in terms of their <i>guna</i> with examples in compendia.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion PBL Seminar	Written/ Viva voce	S	II	
CO 1	Make inferences and find evidences / examples in daily regimen to support generalization of <i>agni</i> & <i>pitta</i> statement.	Cognitive (Analysis)	Nk	Sh	Demonstration Discussion Assignment PBL/CBL	Self-assessment	SA	II	
CO 1	Recite and explain the important verses of <i>pitta dosha</i> . (ex-	Cognitive (Recall)	Dk	Kh	Discussion Recitation	Written/ Viva voce	F & S	II	

	<i>sthana, karma, types, vridhhi and kshaya)</i>								
	Topic 6 – Kapha dosha (5 hr) [Lecture: 4 hours, non-lecture: 1 hour]								
CO 1	Define the <i>vyutpatti</i> and <i>nirukti</i> of <i>kapha dosha</i> .	Cognitive (Recall Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe general properties & functions of <i>kapha dosha</i> and demonstrate the normal <i>guan, karma</i> of <i>kapha dosha</i> in a healthy person.	Cognitive (Recall) (Application)	Mk	Kh	Lecture Discussion Demonstration	Written/ Viva voce Skill assessment	F & S	II	
CO 1	Enlist five types of <i>kapha dosha</i> & describe <i>bodhaka kapha kledaka, tarpaka</i> with their specific locations, properties and functions.	Cognitive (Recall)	Mk	Knows	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Identify the role of saliva in taste perception and also in other way.	Cognitive (Comprehension)	Dk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe role of <i>kledaka kapha</i> in lubricating and protective properties of mucus.	Cognitive (Comprehension)	Dk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe the role of <i>tarpaka kapha</i> in protects the sensory organs.	Cognitive (Comprehension)	Dk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe <i>avalambaka, sleshaka</i> with their specific locations, properties and functions.	Cognitive (Recall)	Mk	Knows	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe the role of	Cognitive	Dk	Kh	Lecture	Written/	F & S	II	

	<i>avalambaka</i> in heart protection and <i>sleshaka kapha</i> in arthritis.	(Comprehension)			Discussion	Viva voce			
CO 1	Explain difference between <i>kshaya</i> & <i>vriddhi lakshana</i> of <i>kapha Dosha</i>	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	State importance of <i>prakrit shleshmik bala</i> / <i>veerya</i> & <i>vikrit shleshmik mala</i> & find out significance of above cognitive in applied aspect	Cognitive (Application)	Nk	Kh	Lecture Discussion	Self-assessment	SA	II	<i>Kayachikitsa</i>
CO 5	Interpret which type of <i>kapha dosha</i> gets vitiated and in which clinical condition the use of proper <i>aahar dravya</i> is prevalent as per <i>kshaya, vriddhi</i> of <i>kapha dosha</i> .	Cognitive (Application)	Nk	Sh	Demonstration Discussion PBL	Viva voce	F & S	II	<i>Swasthavrutta</i>
CO 1	Recite and explain the important verses of <i>kapha dosha</i> . (ex- <i>sthana, karma, vriddhi and kshaya</i>)	Cognitive (Recall & Comprehension)	Dk	Sh	Discussion Recitation	Written/ Viva voce	F & S	II	
CO 1	Describe neural & chemical communication system of body	Cognitive (Comprehension)	Nk	Kh	Self study	Self-assessment	SA	II	
	Topic 7 – Dosha Vriddhi-Kshaya (Hyper and hypo state of dosha) (2 hr) [Lecture: 1 hour, non-lecture: 1 hour]								
CO 1	Describe etiological factors causing <i>tridosha vriddhi</i> & <i>kshaya</i> on the basis of <i>dravya, guna, karma, aahaar & vihara</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	<i>Dravyaguna</i>
CO 1	Describe, observe and interpret individual	Cognitive (Comprehension)	Nk	Sh	Demonstration Discussion	Self-assessment	SA	II	

	causes and symptoms of <i>panchavidha vataprakopa</i> . (<i>Ashtanga Hridaya nidana sthana</i> 16)	Application)			PBL				
CO 1	Describe <i>vridddhi-kshaya lakshana of vata dosha</i>	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe <i>vridddhi & kshaya lakshana of pitta and kapha dosha</i>	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Enumerate the <i>nanatmaj vyadhi of tridosha</i>	Cognitive (Recall)	Nk	K	Lecture	Self-assessment	SA	II	
	Topic 8 – Kriyakala (Treatment as per prevalent kala) (2 hr) [Lecture: 1 hour, non-lecture: 1 hour]								
CO 1	Explain the Concept of <i>kriyakala</i> & enumerate stages of <i>kriyakala</i> .	Cognitive (Recall) (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	<i>Rognidan Vikriti Vidnyan</i>
CO 1	Describe the stages <i>sanchaya, prakopa, prasara</i> of <i>kriyakala</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe the stages <i>sthansanshraya, vyaktavastha & bhedavastha</i> of <i>kriyakala</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe the applied physiology of diseases produced due the vitiation of <i>vata, pitta</i> and <i>kapha</i> .	Cognitive (Comprehension)	Nk	Sh	Lecture Discussion	Self-assessment	SA	II	
CO 1	Describe ideas given in the <i>shat-kriyakala</i> about preventive measures	Cognitive (Comprehension)	Nk	Kh	Group discussion	Self-assessment	SA	II	
	Topic 9 – Prakriti (Deha- Prakriti, Manasa- Prakriti) (Body constitution, personality, temperament of individuals) (10 hr) [Lecture: 7 hours, non-lecture: 3 hours]								
CO 1	Define the term <i>prakriti</i> and describe etymology & different	Cognitive (recall)	Mk	K	Lecture Discussion	Written/ Viva voce	F & S	II	

	meanings of the term <i>prakriti</i> .								
CO 1	Describe the role of different <i>matrijadi bhava</i> (genetic, intra-uterine and extra-uterine factors) influencing <i>prakriti</i> according to <i>Charaka and Sushruta</i>	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion Symposium	Written/ Viva voce	F & S	II	
CO 1	Describe the classification of different <i>prakriti</i> according to various Samhitas	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Enumerate types of <i>deha prakriti</i> and classify <i>deha prakriti</i> into <i>eka-doshaja</i> , <i>dvanvaja</i> , <i>samadoshaja</i> .	Cognitive (Recall)	Mk	Kh	Lecture Discussion Model Demonstration	Written/ Viva voce	F & S	II	
CO 1	Describe the <i>guna</i> (attributes) of <i>vata prakriti</i> according to <i>Charaka Samhita</i>	Cognitive (Comprehension)	Mk	Sh	Lecture Discussion Model Demonstration	Written/ Viva voce	F & S	II	
CO 1	Describe the <i>guna</i> (attributes) of <i>pitta prakriti</i> according to <i>Charaka Samhita</i>	Cognitive (Comprehension)	Mk	Sh	Discussion Role play real life experience	Written/ Viva voce	F & S	II	
CO 1	Describe the <i>guna</i> (attributes) of <i>kapha prakriti</i> according to <i>Charaka Samhita</i>	Cognitive (Comprehension)	Mk	Sh	Lecture Discussion video show Simulation	Written/ Viva voce	F & S	II	
CO 1	Describe <i>guna</i> of <i>vata</i> , <i>pitta</i> & <i>kapha prakriti</i> according to Vagbhata (<i>abhiruchi</i>) & <i>Sushruta samhita (anukatva)</i>	Cognitive (Comprehension)	Mk	Sh	Discussion Model Demonstration Team project work, Tutorial	Written/ Viva voce	F & S	II	
CO 1	Describe the <i>guna</i> (attributes) of <i>vata</i> , <i>pitta</i> & <i>kapha prakriti</i> according to	Cognitive (Comprehension)	Nk	Sh	Discussion	SA	SA	II	

	<i>Sharangadhara Samhita</i>								
CO 1	Describe the relationship between individual <i>prakriti</i> & <i>agni, koshta</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe classification of <i>bhautik prakriti</i> and characteristic features of the individuals belonging to each kind of <i>bhautik prakriti</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe classification of <i>manas prakriti</i> and characteristic features of the <i>satvic prakriti</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe the characteristic features of <i>rajasic & tamasic manas prakriti</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe classification of and characteristic features of the individuals belonging to each kind of <i>jatyadi-prakriti</i>	<i>Cognitive (Comprehension)</i>	<i>Mk</i>	<i>Kh</i>	<i>Lecture Discussion</i>	<i>Written</i>	<i>F & S</i>	II	
CO 1	Similarities and difference between the <i>sharirik & manas prakriti</i> descriptions given in various Samhitas.	Cognitive (Comprehension)	Dk	Kh	Discussion Team project work	Written	F	II	<i>Kayachikitsa</i>
CO 1	Significance of the Cognitive of <i>prakriti</i> in clinical aspect and <i>pathya-apathya kalpana</i> in <i>ahara</i> and <i>vihara</i> of each type of <i>prakriti</i> .	Cognitive (Comprehension)	Mk	Kh	Discussion Self-learning Buzz group	Written Role play	F & S	II	
CO 1	Appreciate the use of various validated tools for assessing	Cognitive (Application)	Mk	Sh	Discussion Tutorial, Demonstration	Written/ Viva voce	F & S	II	

	Ayurvedic concept of human constitution (prakriti) (software/questionnaire) to evaluate <i>prakriti</i> - Ex-CCRAS portal								
CO 1	Describe the relevance of <i>desha-kala-ritu-vaya-ahara-vihara-satmya</i> , <i>aushadha</i> of parents especially of mother on <i>prakriti</i> of individual.	Cognitive (Application/Analysis)	Dk	Kh	Tutorial, Discussion	Viva voce Seli-assessment	SA	II	<i>Kayachikitsa</i>
CO 1	Appreciate the application of recent advances in the domain of research related to <i>prakriti</i> (genetic, physiological basis)	Cognitive (Application/Analysis)	Nk	Kh	Discussion	Seli-assessment	SA	II	
CO 1	Recite and explain the important verses of <i>vata</i> , <i>pitta</i> & <i>kapha doshaja prakriti</i> .	Cognitive (Recall & Comprehension)	Dk	Kh	Discussion Recitation	Written/ Viva voce	F & S	II	
CO 1	Observe distinguish features of individuals of three contrasting <i>prakriti</i> types <i>vata</i> , <i>pitta</i> and <i>kapha</i> by IGIB. Link: https://doi.org/10.1186/1479-5876-6-48	Cognitive (Application)	Nk	Sh	Team project work	Team assessment	TA	II	
CO 1	Observe standardized prakriti assessment tool by CCRAS. Link: doi/10.5005/jp-journals-10064-0019	Cognitive (Application)	Nk	Sh	Team project work	Team assessment	TA	II	
CO 1	Compare human constitution (prakriti) & genomic	Cognitive (Comprehension)	Nk	Kh	Group discussion	Self-assessment	SA	II	
CO 1	Record the known physiological variation	Cognitive (Application)	Dk	Kh	Real life experience	Demonstration	SA	II	

	of your friends in different <i>rutu</i> as per different <i>prakriti</i> .				Role play				
CO 1	Discuss correlation of genotype and phenotype with <i>prakriti</i> .	Cognitive (Comprehension)	Nk	Kh	Group discussion	Self-assessment	SA	II	
CO 1	Trace interrelationship between aging and <i>prakriti</i>	Cognitive (Comprehension)	Nk	Kh	Discussion	Self-assessment	SA	II	
CO 1	Point out hematological difference as per different <i>prakriti</i> .	Cognitive (Analysis)	Nk	Kh	Survey	Self-assessment	SA	II	
CO 1	Discuss <i>manas prakriti</i> and personality.	Cognitive (Comprehension)	Dk	Kh	Role pay	Self-assessment	SA	II	
CO 1	Role of <i>prakriti</i> (Ayurgenomics) in the concept of personalised medicine	Cognitive (Comprehension)	Nk	Kh	Group discussion Seminar	Self-assessment	SA	II	
CO 1	Explore thes Immunophenotyping & human dosha <i>prakriti</i> .	Cognitive (Comprehension)	Nk	Kh	Online material	Self-assessment	SA	II	
Topic 10 – Ahara (Diet and nutrition in Ayurveda) (4 hr) [Lecture: 3 hours, non-lecture: 1 hour]									
CO 1	Describe the <i>Nirukti</i> (etymology)& <i>paribhasa</i> (definition) of <i>ahar</i> .	Cognitive (Recall)	Mk	K	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe the <i>Bheda</i> (classification) and <i>upayogita</i> (importance) of <i>ahara</i> .	Cognitive (Recall)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Define, enlist and describe- the types of <i>ahara</i> in detail with examples	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion Tutorial	Written/ Viva voce	F & S	III	

CO 1	Define, enlist and describe <i>ashta ahara-vidhi-viseshayatana</i> (8 factors to be considered while preparing and processing the food) in detail with examples	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion Seminar	Written/ Viva voce	F & S	III	<i>Swathavritta</i>
CO 1	Describe <i>ahara vidhi vidhana</i> (rules for consuming the food) in detail with examples.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Explains the role of <i>ahara vidhi vidhana</i> in the context of present-day lifestyle, cooking habits and eating behaviour.	Cognitive (Comprehension)	Dk	Kh	Lecture Discussion Real life experience Evidence based learning	Written/ Viva voce	F & S	III	
CO 1	Define, enlist and describe <i>ahara parinamkara bhava</i> (factors responsible for proper digestion) and the importance of each of these factors in the process of digestion	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Explain the concept of <i>viruddha ahara</i> (incompatible diet) and its relevance in present-day food processing methods and dietary consumption behaviour in individuals.	Cognitive (application)	Dk	Sh	Lecture Discussion Observation	Written/ Viva voce	SA	III	<i>Swathavritta</i>
CO 1	Explain the role of <i>ahara</i> in today's aspect related to <i>anupana</i> habits etc.	Cognitive (application)	Nk	Sh	Lecture Discussion	Self assessment	SA	III	
CO 1	Explain the role in today's lifestyle of food, compatible food, the proper time for	Cognitive (application)	Nk	Sh	Lecture Discussion Assignment	Self-notes	SA	III	

	food taking, practice regarding food intake etc. in individual's health.								
CO 1	Explain dietary guidelines, how to eat food in Ayurvedic view.	Cognitive (application)	Nk	Kh	Lecture Discussion	Self assessment	SA	III	
Topic 11 – Agni (The digestive fire of the body) (5 hr) [Lecture: 4 hours, non-lecture: 1 hour]									
CO 1	Describe different meanings of <i>agni</i> in different contexts and define <i>agni</i> in the context of <i>kriya sharir</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	State the importance of <i>agni</i> in maintaining the different aspects of human physiology	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Enumerate and explain the different synonyms of <i>agni</i> regarding <i>kriya sharir</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Enumerate and define various classifications of <i>agni</i> concerning their locations and functions in the body	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe the physiological roles of <i>jatharagni</i> , <i>bhutagni</i> and <i>dhatvagni</i> and explain the differences and similarities between the three.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	<i>Kayachikitsa</i>
CO 1	Classify and explain the features of four functional / abnormal states of <i>jatharagni</i> : <i>samagni</i> , <i>vishamagni</i> , <i>mandagni</i> & <i>tikshnagni</i> and explain evaluation process of <i>jarana-</i>	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	<i>Rognidan</i>

	<i>shakti.</i>								
CO 1	Enumerate the factors affecting the normal functioning of Agni and the symptoms of improper functioning of <i>agni</i> seen in certain clinical conditions	Cognitive (Comprehension)	Dk	Kh	Lecture Discussion	Viva voce	F	III	
CO 1	Enumerate and discuss different entities in the body that can represent different forms of <i>agni</i> from the contemporary physiology and biochemistry (hormones, enzymes etc) point of view	Cognitive (Comprehension)	Nk	Kh	Lecture Discussion	Self assessment Debate	SA	III	
CO 1	Record the opinions among your friends on the concept of free radicals & antioxidant	Cognitive (Application)	Nk	Sh	Team project work	Team assessment	TA	III	
CO 1	Identify digestive and metabolic functions of <i>Agni</i> & its clinical importance.	Cognitive (Application)	Nk	Sh	Group discussion	Self Assessment	SA	III	
CO 1	Distinguish the similarities & differences between <i>agni</i> and <i>pitta</i> in terms of their <i>guna</i> with examples in compendia. (mentioned in <i>pitta</i> also)	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion PBL	Written/ Viva voce	S	III	
Topic-12. Annapachana / Aahara-paka (Digestion and metabolism in Ayurveda) (9 hr) [Lecture: 7 hours, non-lecture: 2 hours]									
CO 1	Describe the <i>annavaha srotas</i> along with its <i>mula sthana</i>	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Enumerate and describe different organs of <i>annavaha</i>	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	

	<i>srotas</i> and their important functions. according to Ayurveda and contemporary physiology								
CO 1	Describe three stages of digestion: <i>madhura</i> , <i>amla</i> and <i>katu avasthapaka</i> in detail	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion Tutorial	Written/ Viva voce	F & S	III	
CO 1	Describe the process of <i>udeerana</i> (increase/ release) of <i>vata</i> , <i>pitta</i> , <i>kapha</i> during <i>avasthapaka</i>	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe the formation of <i>prakrit</i> and <i>vaikrit dosha</i> (<i>prasadbhuta</i> , <i>malabhuta dosha</i>) and their role.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	<i>Rognidan</i>
CO 1	Describe the definition of <i>vipaka</i> (<i>nisthapaka</i>) and classification of <i>vipaka</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe how to identify <i>vipak</i> of <i>aahar</i> as per their effect on the body.	Cognitive (application)	Dk	Sh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe the similarities and differences between <i>avasthapaka</i> and <i>nishthapaka</i>	Cognitive (Comprehension)	Mk	K	Lecture Discussion	Written/ Viva voce	F & S	III	

CO 1	Explain the role of different sub-types of <i>dosha</i> in the process of digestion: <i>bodhaka kapha</i> , <i>prana vayu</i> , <i>kledaka kapha</i> , <i>samana vayu</i> , <i>pachaka pitta</i> , <i>apana vayu</i> etc.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
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CO 1	Describe the process of separation of <i>saara</i> and <i>kitta</i>	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	State the application of the theory of <i>pilu-paka</i> and <i>pithara paka</i> in <i>aharapaka</i>	Cognitive (Comprehension)	Nk	Kh	Lecture Discussion	Self-assessment	SA	III	
CO 1	Explain the role of <i>grahani</i> & <i>pittadhara kala</i> & describe possible relation between <i>pittadhara</i> and <i>majjadhara kala</i> .	Cognitive (Comprehension)	Dk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	State the importance of <i>pachaka pitta</i> and <i>jatharagni</i> in the process of digestion	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Explain the role of <i>bhutagni</i> and <i>dhatvagni</i> in <i>ahara parinaman</i>	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe the process of formation of <i>ahara-rasa</i> and absorption of <i>sara bhaga</i> / <i>anna-veerya</i>	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Draw parallels between the different types of <i>agni</i> and various digestive enzymes and hormones	Cognitive (Comprehension)	Dk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Define <i>ahara gati</i> , <i>abhyavaharana shakti</i> , <i>annagrahana</i> , <i>pachana</i> , <i>vivechana</i> , <i>munchana</i> and <i>jaranashakti</i>	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Discuss applied clinical aspect of <i>annavaha srotas</i> : <i>aroachaka</i> , <i>ajirna</i> , <i>atisara</i> , <i>grahani</i> , <i>chardi</i> , <i>parinama shula</i> etc	Cognitive (Comprehension)	Dk	Kh	Lecture Discussion	Viva voce CBD	F & S	III	

CO 1	Define different meanings of the term <i>koshtha</i> and explain the term in the context of <i>kriya sharira</i>	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Enumerate the different types of <i>koshtha</i> according to the predominance of <i>dosha</i> (<i>krura-mridu and madhya</i>)	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	<i>Panchakarma</i>
CO 1	State clinical significance of <i>koshtha</i> and the process of evaluating <i>koshtha</i> in an individual.	Cognitive (Comprehension)	Dk	Kh	Lecture Discussion	Written/ Viva voce DOPS	F & S	III	
Part B (40 Hours) –									
Topic 1 - Physiology Homeostasis (6 hr) [Lecture: 5 hours, non-lecture: 1 hour]									
CO 1	Define homeostasis and describe mechanisms of maintenance of homeostasis.	Cognitive (Recall/ Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Distinguish between the shell temperature and core temperature	Cognitive (Recall/ Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Define the terms Cell death, Cell degeneration, Cell aging. Describe animal tissue.	Cognitive (Recall/ Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe mechanism of positive and negative feedback system with at least two examples.	Cognitive (Recall/ Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe the structure and function of cell, cell membrane, cytoplasmic	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	

	organelles, genetic material (DNA & RNA.)								
CO 1	Explain the process of DNA replication & inhibitors of replication.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe the acid-base balance, water and electrolyte balance.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe the concept of pH & buffer systems in the body and Na-K pump	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe and discuss transport mechanisms across cell membranes. (Active & facilitated)	Cognitive (Comprehension)	Dk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe and discuss the molecular basis of resting membrane potential and action potential	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
Topic 2 - Physiology of respiratory system: (7 hr) [Lecture: 5 hours, non-lecture: 2 hours]									
CO 1	Describe divisions of the respiratory system based on its functions.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe pulmonary circulation.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe the mechanics of normal respiration, pressure changes during ventilation.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe the lung volume and capacities, compliance, diffusion of lungs	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe and discuss the exchange and transport of gases - Oxygen and Carbon dioxide	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion Seminar	Written/ Viva voce	F & S	I	

CO 1	Describe the neural and chemical control of respiration.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe physiological situations that affect respiration and discuss artificial respiration, dyspnoea, asphyxia, hypoxia, cynosis.	Cognitive (Comprehension)	Dk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe Haldane effect & Kussmaul breathing.	Cognitive (Comprehension)	Nk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe basic of pulmonary function tests.	Cognitive (Comprehension)	Nk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
Topic 3 - Physiology of Gastrointestinal system (9 hr) [Lecture: 7 hours, non-lecture: 2 hours]									
CO 1	Describe enzyme and its fuctions in metabolism	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe functional anatomy and physiology of the digestive system	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe the functions of salivary glands, stomach, liver, gall bladder pancreas, small intestine, large intestine in the process of digestion and absorption.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe the mechanism of secretion,composition, functions, and regulation of saliva, gastric, pancreatic, intestinal juices and bile secretion	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe GIT movements deglutition, peristalsis, defecation and control	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe the major components of food, the process of digestion and	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion Seminar	Written/ Viva voce	F & S	II	

	metabolism of proteins, fats and carbohydrates								
CO 1	Describe the physiological role of vitamins	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe the Gut-Brain Axis and enteric nervous system, and its function	Cognitive (Comprehension)	Dk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Discuss the physiology aspects of gastro-oesophageal reflux disease, vomiting, diarrhoea, constipation	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
Topic 4 - Physiology of Nervous System (10 hr) [Lecture: 7 hours, non-lecture: 3 hours]									
CO 1	Describe organization of nervous system.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe the mechanism of propagation of nerve impulses.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe the functions & properties of synapse, reflex, receptors	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe the functional anatomy of the central nervous system (CNS) and peripheral nervous system (PNS)	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion Seminar	Written/ Viva voce	F & S	III	
CO 1	Describe the physiology of autonomous nervous system (ANS)	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe the physiology of sensory (general sensations) and motor nervous system	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe and discuss spinal cord, its functions, lesion & sensory disturbances	Cognitive (Comprehension)	Dk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe and discuss functions of the cerebral cortex, basal ganglia,	Cognitive (Comprehension)	Nk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	

	thalamus, hypothalamus cerebellum, mid brain, pons and medulla oblongata.								
CO 1	Describe and discuss the physiological basis of intelligence, memory, learning and motivation.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe the physiology of cranial nerves	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe physiology of speech and articulation.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe physiology of temperature regulation.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe the physiology of pain	Cognitive (Comprehension)	Nk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
Topic 5 - Physiology of Endocrine glands (8 hr) [Lecture: 6 hours, non-lecture: 2 hours]									
CO 1	Enlists and describe hormones & endocrine glands based on synthesis, secretion, transport, physiological actions, regulation.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe hormones secreted by anterior & posterior pituitary gland, their functions, disorders of pituitary gland (hyper & hypo activity)	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe hormones secreted by the Thyroid gland, their functions & disorders of Thyroid and parathyroid gland (hyper and hypoactivity)	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion Seminar	Written/ Viva voce	F & S	III	
CO 1	Describe hormones secreted by Pancreas,	Cognitive (Comprehension)	Nk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	

	their functions & disorders of Pancreas (hyper and hypoactivity)								
CO 1	Describe hormones secreted by Adrenal cortex gland, their functions & disorders of Adrenal cortex gland (hyper and hypoactivity)	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe hormones secreted by Adrenal medulla gland, their functions & disorders of Adrenal medulla (hyper and hypoactivity)	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Enlist other Glands and their functions	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe the synthesis and functions of local hormones	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	

PAPER II

A3 Course outcome	B3 Learning Objective (At the end of the session, the students should be able to)	C3 Domain/sub	D3 Must to know/ desirable to know/Nice to know	E3 Level Does/ Shows how/ Knows how/ Know	F3 T-L method	G3 Assessment	H3 Formative /summative	I3 Term	J3 Integration
	AyGU-KS								
	Paper II (60 Hours)								
	Topic-1. Introduction to <i>Dhatu</i> (3 hr) [Lecture: 2 hours, non-lecture: 1 hour]								
CO 1	Explain the etymology, derivation, definition, synonyms and general	Cognitive (Recall)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	<i>Sanskrit Samhita/</i>

	introduction of the term <i>dhatu</i> .								<i>Rognidan Vikriti Vidnyan</i>
CO 1	Explain the difference between <i>dhatu</i> and <i>upadhatu</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Explain different theories related to <i>dhatuposhana Nyaya</i> (nourishment of different <i>dhatu</i> s).	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion Seminar	Written / Viva voce	F & S	I	
CO 1	Explain the applicability of <i>nyaya</i> in the different physiological mechanisms.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion Jigsaw	Written/ Viva voce	F & S	I	
CO 1	Describe <i>utpatti & poshana</i> of <i>dhatu</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Compile various terminologies related to <i>dhatu gati</i> and <i>dhatu poshana</i>	Cognitive (Comprehension)	Dk	Sh	Assignment Tutorial	Self-assessment	SA	I	
CO 1	Mention your opinion about <i>nyaya</i> concept on the basis of different metabolic pathways, transformation, transport of substances through cell membrane.	Cognitive (Application)	Nk	Kh	Group discussion Buzz group	Self-assessment	SA	I	
CO 1	Discuss theory of tissues formation and differentiation in context with physiological changes of aging.	Cognitive Application)	Nk	Kh	Group discussion Homework based assignment	Self-assessment	SA	I	
CO 1	Discuss stem cells along with concepts of regeneration in Ayurveda	Cognitive (Recall/ Comprehension)	Nk	Kh	Lecture Online teaching aids	self assessment	SA	I	
CO 1	Study Ayurvedic aspect of <i>dhatu sarata</i> and its application	Cognitive (Application)	Nk	Kh	Group discussion Seminar	Self-assessment	SA	I	
	Topic-2. Rasa Dhatu (5 hr) [Lecture: 4 hours, non-lecture: 1 hour]								

CO 1	Explain the etymology, derivation, location, properties, functions and <i>pramana</i> of <i>rasa-dhatu</i> . <i>panchabhautikatva</i> of <i>rasa dhatu</i> .	Cognitive (Recall)	Mk	K	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe the functions of <i>rasavaha srotas</i> & <i>mula</i> of <i>rasavaha srotas</i> .	Cognitive (Recall)	Mk	K	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe the process of formation of <i>rasa dhatu</i> from <i>aahara rasa</i> , and circulation of <i>rasa-rakta</i> (<i>rasa-rakta samvahana</i>)	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe <i>kshaya-vriddhi</i> & <i>rasapradoshaja vikara</i>	Cognitive (Comprehension)	Mk	Kh	Lecture Assignment	Written/ Viva voce	F & S	I	
CO 1	Description of functioning of <i>hridaya</i> and physiological significance of <i>hridaya</i> .	Cognitive (Comprehension)	Dk	Kh	Lecture Discussion Flipped classroom	Written/ Viva voce	F & S	I	
CO 1	Description of <i>sira</i> , <i>dhamani</i> and <i>srotas</i>	Cognitive (Comprehension)	Nk	Kh	Discussion Video show	Written/ Viva voce	F & S	I	
CO 1	Enumerate <i>ashtavidha sara</i> (8 types of <i>sara</i>), and describe the features of individuals belonging to <i>tvak-saara purusha</i> .	Cognitive (Recall)	Mk	K	Lecture, Role play, real life experience, Discussion Brainstorming	Written/ Viva voce	F & S	I	
Topic-3. Rakta Dhatu (4 hr) [Lecture: 3 hours, non-lecture: 1 hour]									
CO 1	Explain the etymology, derivation, synonyms, location, properties, functions and <i>pramana</i> of <i>rakta dhatu</i> & explain the <i>panchabhautikatva</i> of <i>rakta dhatu</i> ,	Cognitive (Recall)	Mk	K	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe the physiology of <i>raktavaha srotas</i> , and describe the <i>mula</i> of <i>rakta-vaha srotas</i> and mutual interdependence of <i>rakta</i> and <i>pitta</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	

CO 1	Describe the formation of <i>rakta-dhatu</i> , <i>ranjana of rasa</i> by <i>Ranjaka pitta</i> , features of <i>shuddha rakta</i> , specific functions of <i>rakta</i>	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe the characteristics of <i>raktasaara Purusha</i>	Cognitive (Recall)	Mk	K	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe the manifestations of <i>kshaya and vriddhi</i> and name <i>pradoshaja vikara</i> of <i>raktadhatu</i>	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion Assignment	Written/ Viva voce	F & S	I	<i>Vikriti Vigyana</i>
CO 1	Elaborate the concept about inclusion or exclusion of <i>rakta dhatu</i> as a fourth dosha.	Cognitive (Comprehension)	Nk	Kh	Discussion Brainstorming	Written/ Viva voce	F	I	
Topic-4. Mamsa Dhatu (3 hr) [Lecture: 2 hours, non-lecture: 1 hour]									
CO 1	Describe the etymology, derivation, synonyms, location, properties and functions of <i>mamsa dhatu</i> , physiology of <i>mamsavaha srotas</i> , <i>mula of mamsavaha srotas</i>	Cognitive (Recall)	Mk	K	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe the formation of <i>mamsa dhatu</i> and the definition of <i>peshi</i> characteristics of <i>mamsasaara purusha</i> ,	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe manifestations of <i>kshaya</i> and <i>vriddhi</i> of <i>mamsa Dhatu</i> & describe the physiological basis of these manifestations. Name <i>mamsa pradoshaja vikara</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion Assignment	Written/ Viva voce	F & S	II	<i>Vikriti Vigyana</i>
Topic-5. Meda Dhatu (4 hr) [Lecture: 3 hours, non-lecture: 1 hour]									

CO 1	Describe the etymology, derivation, location, properties, functions and <i>pramana</i> of <i>meda dhatu</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe the <i>medovaha srotas</i> , its <i>mula</i> , the physiology of <i>medovaha srotas</i> , formation of <i>medo dhatu</i>	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe the characteristics of <i>medasaara purusha</i> and manifestations of <i>kshaya</i> and <i>vridddhi</i> of <i>meda</i> . Name <i>meda pradoshaja vikara</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion Assignment	Written/ Viva voce	F & S	II	
CO 1	Describe the clinical features of <i>sthaulya</i> and <i>karshya</i> along with the physiological basis of these clinical conditions	Cognitive (Comprehension)	Dk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	<i>Vikriti Vigyana</i>
CO 1	Record the properties of lipid & mamsa dhatu.	Cognitive (Comprehension)	Nk	Kh	Discussion	Self assessment	F	II	
Topic-6. Asthi Dhatu (3 hr) [Lecture: 2 hours, non-lecture: 1 hour]									
CO 1	Describe the definition, synonyms, classification, properties (<i>guna</i>), and formation of <i>asthi dhatu</i> .	Cognitive (Comprehension)	Mk	K	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe the <i>asthi dhara kala</i> ; relation with <i>purishdharakala</i> and the features of <i>asthi sarata</i> .	Cognitive (Comprehension)	Mk	K	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe the applied physiology of <i>asthi dhatu</i> (<i>asthi vridddhi/ asthi kshaya</i>) and name <i>asthi pradoshaja vikara</i>	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion Assignment	Written/ Viva voce	F & S	II	<i>Vikriti Vigyana</i>

	Topic-7 Majja Dhatu (4 hr) [Lecture: 3 hours, non-lecture: 1 hour]								
CO 1	Describe the definition, synonyms and location (<i>sthana</i>) of <i>majja dhatu</i> .	Cognitive (Recall)	Mk	K	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe the formation of <i>majja dhatu majjavaha srotas</i> and its <i>mula</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe <i>majja dhara kala</i> in relation with <i>pittadhara kala</i> and the features of <i>majja sarata</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe applied physiology of <i>majja dhatu (majja vridhhi and kshaya)</i> and name <i>majja pradoshaja vikara</i>	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion Assignment	Written/ Viva voce	F & S	II	<i>Vikriti Vigyana</i>
CO 1	Comment on concept of <i>majja dhatu</i> and bone marrow	Cognitive (Comprehension)	Dk	Kh	Discussion Online teaching aids	Self assessment	F	II	
	Topic-8. Shukra Dhatu (4 hr) [Lecture: 3 hours, non-lecture: 1 hour]								
CO 1	Describe the etymology and derivation of <i>shukra dhatu</i> , location, properties, <i>pramana</i> functions of <i>shukra dhatu</i> .	Cognitive (Recall)	Mk	K	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe the formation of <i>shukra dhatu, poshana krama</i> and its <i>updathu</i> and <i>mala</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion Puzzle	Written/ Viva voce	F & S	II	
CO 1	Describe the <i>mula</i> of <i>shukravaha srotas</i> and the properties of <i>shuddha shukra</i> along with <i>shukra saara purusha</i> symptoms.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe the features of <i>kshaya & vridhhi</i> of	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	<i>Vikriti Vigyana</i>

	<i>shukra dhatu & shukra pradoshaja vikara</i>				Assignment				
CO 4	Identify histological structure explain structure of different tissue (dhatu)	Cognitive (Comprehension) Psychomotor	Mk	Kh	Demonstration Perform	Practical Skill assessment OSPE	F & S		
	Topic-9. Ashraya- Ashrayi Bhava (2 hr) [Lecture: 1 hour, non-lecture:1 hour]								
CO 1	Describe the concept of <i>ashraya-ashrayi bhava</i> i.e. inter-relationship among <i>dosha, dhatu mala and srotas</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	<i>Vikriti Vigyana</i>
CO 1	Describe the applied physiology of diseases affecting <i>saptadhatu</i> enlisted under dhatu <i>pradoshaja vikara</i> .	Cognitive (Comprehension)	Dk	Kh	Discussion Seminar	Written	F	III	
CO 1	Explain use of <i>Ashraya-Ashrayi Bhava</i> in laghan bruhan.	Cognitive (application)	Nk	Kh	Discussion	Self-assessment	SA	III	
	Topic -10. Oja (4 hr) [Lecture: 3 hours, non-lecture: 1 hour]								
CO 1	Recall etymological derivation, definition, classification, and <i>pramana</i> of <i>oja</i>	Cognitive (Recall)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe the process of formation of <i>ojas</i> along with locations and properties	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe the concept of <i>vyadhikshamatva</i> , explain <i>bala vriddhikara bhava</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Classify <i>bala</i> and describe etiological factors (<i>kshaya karan</i>) for <i>oja visramsas</i> , <i>vyapat</i> and <i>kshaya</i> and elaborate	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	<i>Vikriti Vigyana</i>

	the manifestation of these clinical conditions.								
CO 1	Collect different opinions on oja given by different acharya and try to understand the logic behind it.	Cognitive (Recall)	Nk	Kh	Discussion	Written	F	III	
CO 1	Interpret your opinion about oja-bala-kapha in its normal state.	Cognitive (Recall)	Nk	Kh	Discussion	Self-assessment	SA	III	
	Topic-11. Upadhatu (7 hr) [Lecture:6 hours, non-lecture: 1 hour]								
CO 1	Describe the general introduction, etymological derivation and definition of the term <i>upadhatu</i>	Cognitive (Recall)	Mk	K	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe the formation, nourishment, properties, location and functions of each <i>upadhatu</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe the characteristic features and methods of assessing <i>shuddha</i> and <i>dushita stanya</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	<i>Vikriti Vigyana</i>
CO 1	Describe the characteristic features of <i>vridhhi</i> and <i>kshaya</i> of <i>stanya</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe characteristic features of <i>shuddha</i> and <i>dushita artava</i> along with enumerating the differences between <i>raja</i> and <i>artava</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe <i>artava-vaha srotas</i> and its <i>mula</i> along with the common clinical conditions related to <i>artava-vaha srotas</i>	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	<i>Vikriti Vigyana</i>

	(<i>kashtartava, vandhyata, pradara etc.</i>)								
CO 1	Describe the classification, thickness of each layer and functions of <i>tvak</i>	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Interpret the skin layer as per contemporary science.	Cognitive (Recall)	Nk	Kh	Discussion	Written	F	III	
Topic 12. Mala (8 hr) [Lecture: 6 hours, non-lecture: 2 hours]									
CO 1	Describe the etymological derivation and definition of the term <i>mala</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Enumerate <i>aharamala</i> and describe of the process of formation of <i>aharamala</i> .	Cognitive (Recall)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe the etymological derivation, definition, formation, properties, quantity and functions of <i>purisha</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe the physiology of <i>purishavaha srotas</i> , <i>purish visarjana</i> and manifestations of <i>vridhhi</i> and <i>kshhaya</i> of <i>purisha</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Explain the relation between <i>purishdhara kala</i> and <i>asthidhara kala</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe the etymological derivation, definition, formation, properties, quantity and functions of <i>mutra</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe the physiology of <i>mutravaha srotas</i> and the process of urine formation and <i>mutra visarjana</i> in Ayurveda.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	

CO 1	Explain the manifestations of <i>vridddhi</i> and <i>kshhaya</i> of <i>mutra</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Explain the urge of micturition & defecation in perspective of reflexes	Cognitive (Application)	Nk	Kh	Discussion	Self-assessment	SA	III	
CO 1	Describe and enumerate <i>dhatumala</i> and describe the functions of each type of <i>dhatumala</i>	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Explain the etymological derivation, definition, formation and functions of <i>sveda</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Explain the functions of <i>svedvaha srotas</i> along with describing the manifestations of <i>vridddhi</i> and <i>kshaya</i> of <i>sveda</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Review Ayurveda compendia for several colour of purish and <i>mutra</i> as per their different diseased conditions.	Cognitive (Application)	Nk	Kh	Discussion	Self-assessment	SA	III	
	Topic 13. Indriya vijnyana (2 hr) [Lecture: 1 hour, non-lecture: 1 hour]								
CO 1	Describe the <i>pancha-jnyaanendriya</i> and physiology of perception of <i>shabda</i> , <i>sparsha</i> , <i>rupa</i> , <i>rasa</i> and <i>gandha</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion Tutorial	Written/ Viva voce	F & S	III	<i>Padarth vidnyan</i>
CO 1	Describe the physiology of <i>karmendriya</i>	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
	Topic 14. Manas (3 hr) [Lecture: 2 hours, non-lecture: 1 hour]								
CO 1	Describe location and properties, functions and objects of <i>manas</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	

CO 7	Describe the physiology of <i>dhee, driti, smriti</i> and <i>manovaha srotas</i> along with the applied physiology of <i>unmada</i> and <i>apasmara</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion Real life experience	Written/ Viva voce	F & S	III	<i>Kayachikitsa</i>
CO7	Describe <i>kriyatmak</i> (physiological) importance of <i>manas</i>	Cognitive (Comprehension)	Dk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
	Topic 15. Atma (2 hr) [Lecture: 2 hours, non-lecture: 0 hours]								
CO 1	Describe properties and functions of <i>atma</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S		
CO 7	Enumerate the difference between <i>paramatma</i> and <i>jivatma</i> , characteristic features of <i>atma</i> in living beings.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	<i>Padarth vidnyan</i>
CO 7	Explain characteristic features of <i>atma</i> in living beings.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO7	Describe <i>kriyatmak</i> (physiological) importance of <i>atma</i>	Cognitive (Comprehension)	Dk	Kh	Lecture Discussion tutorials	Written/ Viva voce		III	
	Topic 16. Nidra & Swapna (2 hr) [Lecture: 2 hours, non-lecture: 0 hours]								
CO 1	Describe the process of <i>nidrotipatti</i> , classify <i>nidra</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Explain the physiological and clinical significance of <i>nidra</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe <i>svapnotipatti</i> and types of <i>swapna</i> .	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Discuss about different types of <i>swapna</i> among your friends and try to understand relation of <i>swapna</i> & <i>prakriti</i> .	Cognitive (Comprehension)	Nk	Kh	Group Discussion	Team assessment	TA	III	

	Part B (40 Hours) –								
	Topic 1. Physiology of Hemopoietic System (7 hr) [Lecture: 5 hours, non-lecture: 2 hours]								
CO 1	Describe the composition, functions of blood and blood cells.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Stages and development of RBCs, WBCs, platelets.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe the composition and functions of bone marrow	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe the process of erythropoiesis and explain necessary factors for erythropoiesis.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe the formation & destruction of RBCs	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe the structure, types, synthesis and functions of haemoglobin along with abnormalities of Hb.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe the types of WBCs	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe the mechanism of hemostasis, (coagulation of blood) and blood clotting factors.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion Seminar	Written/ Viva voce	F & S	I	
CO 1	Describe the ABO & Rh system of blood group and explain the physiological basis of blood groups.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	Medical Physiology
CO 1	Explain the concept of erythroblastosis fetalis on the basis of Rh incompatibility.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion Seminar	Written/ Viva voce	F & S	I	
CO 1	Describe the classification and	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	

	functions of plasma proteins.								
CO 1	Describe the properties and hemostasis functions of platelets.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe the physiological basis of manifestations of different blood disorders (anaemia, jaundice etc.)	Cognitive (Comprehension)	Dk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe the functions of spleen.	Cognitive (Comprehension)	Dk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe the functions of lymph.	Cognitive (Comprehension)	Dk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
Topic 2. Immune System (2 hr) [Lecture: 2 hours, non-lecture: 0 hours]									
CO 1	Describe classification of immunity (Innate, acquired and artificial),	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe the different mechanisms involved in immunity: Humoral (B-cell mediated) and T-Cell mediated immunity.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Distinguish between the passive immunization and active immunization	Cognitive (Comprehension)	Dk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe the applied physiology of immunity: Immunodeficiency diseases, Hypersensitivity reactions, Auto-immune diseases etc.	Cognitive (Comprehension)	Dk	Kh	Lecture Discussion Seminar	Written/ Viva voce	F & S	I	
Topic 3. Cardiovascular Physiology (7 hr) [Lecture: 5 hours, non-lecture: 2 hours]									
CO 1	Describe the mechanical and electrical properties	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	

	of heart muscles, describe different phases of the Cardiac cycle.								
CO 1	Describe the physiological and clinical significance of heart sounds.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe the physiology of regulation of cardiac output and venous return.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe the physiological basis of ECG.	Cognitive (Comprehension)	Dk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe the regulation of heart-rate and arterial pulse,	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Define and describe the regulation of systemic arterial blood pressure	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe the physiology of fetal circulation.	Cognitive (Comprehension)	Dk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Define and describe the regulation of systemic arterial blood pressure	Cognitive (Comprehension)	Dk	Kh	Lecture Discussion	Written/ Viva voce	F & S	I	
CO 1	Describe the history of the discovery of blood circulation	Cognitive (Comprehension)	Nk	Kh	Online	Self assessment	SA	I	
Topic 4. Muscle physiology (2 hr) [Lecture: 2 hours, non-lecture: 0 hours]									
CO 1	Compare and contrast the functions and properties of skeletal muscles, cardiac muscles and smooth muscles.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe the physiology of muscle contraction of all types of muscles.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
Topic 5. Skin, Adipose Tissue and circulating Lipids (3 hr) [Lecture: 2 hours, non-lecture: 1 hour]									
CO 1	Describe the functions of the skin, sweat glands, sebaceous glands and subcutaneous tissue	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	

CO 1	Describe the functions of Adipose Tissue including adipokines	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe the process of formation & metabolism of lipoproteins like VLDL, LDL and HDL and that of triglycerides.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe the functional anatomy and physiology of the male reproductive system	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe the physiology of regulation of spermatogenesis, functions of testosterone and male sexual act	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe physiology of the female reproductive system including oogenesis, ovulation and hormonal regulation of the menstrual cycle	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe the functions of placenta	Cognitive (Comprehension)	Dk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe the physiology of lactation	Cognitive (Comprehension)	Dk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
CO 1	Describe the applied physiology of the reproductive system of male and female infertility.	Cognitive (Comprehension)	Nk	Kh	Lecture Discussion	Written/ Viva voce	F & S	II	
Topic 7. Renal Physiology (6 hr) [Lecture: 4 hours, non-lecture: 2 hours]									
CO 1	Describe the functional anatomy of kidney.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe the functions of kidney, ureters and bladder.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe stages of the mechanism of urine formation.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion Semiar	Written/ Viva voce	F & S	III	

CO 1	Describe control of micturition.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe the role of Juxta glomerular apparatus in regulation of blood pressure and pH of body fluids.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	Medical Physiology
CO 1	Describe the applied physiology of the urinary system (urolithiasis, acute and chronic renal failure etc).	Cognitive (Comprehension)	Dk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe the physiology of special senses.	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe the visual process and visual pathway	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe the mechanism of hearing and auditory pathway	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe the taste, smell and skin sensation	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	
CO 1	Describe the physiology of sleep and dreams	Cognitive (Comprehension)	Mk	Kh	Lecture Discussion	Written/ Viva voce	F & S	III	

List of Practicals

PRACTICALS (Marks-100)				
	List of Topics	Term	Lecture	Non-Lecture
1	Dhatu sararata parikshana	I	0	10
2.	Demonstrate laboratory equipment (spotting)	I	0	1
3.	Demonstrate blood collection	I	0	1
4.	Estimate haemoglobin	I	0	2
5.	Estimate bleeding time & clotting time	I	0	2
6.	Estimate blood grouping	I	0	2
7.	Prakriti parikshana	II	0	20
8.	Dosha vridhhi kshaya parikshana	II	0	4
9.	Dhatu vridhhi kshaya parikshana	II	0	5
10.	Nadi parikshana	II	0	3
11.	Pulse examination	II	0	2
12.	WBC estimation	II	0	2
13.	RBC estimation	II	0	2
14.	DLC estimation	II	0	2
15.	Measurement of Blood pressure	II	0	2
16.	Perform the procedure Inspection of respiratory system	II	0	2
17.	Perform the procedure Inspection of heart sound	II	0	3
18.	Agni parikshana	III	0	6
19.	Koshtha parikshana	III	0	2
20.	Urine examination	III	0	2
21.	Demonstrate ESR, PCV	III	0	1
22.	Observe the procedure of ECG	III	0	2
23.	Perform the procedure of examining the cranial nerves and reflexes	III	0	2

Table 4: Learning objectives (Practical) of AyUG- KS

A4 Course outcom e	B4 Learning Objective (At the end of the session, the Students should be able to)	C4 Domain/ sub	D4 Must to know/ desirabl e to know/Ni ce to know	E4 Level Does/ Shows how/ Knows how/ Know	F4 T-L method	G4 Assessment	H4 Formativ e /summati ve	I4 Te rm	J4 Integratio n
	AyUG – KS Practical (100 marks) (Total 200 Hr)								
	Practical (100 marks) =(Kriya Sharir 50 + Physiology 30 + Non Lecture practical activities 20)								
	1. Assessment of prakriti parikshana (20 classes) [Lecture: 0 hours, non-lecture: 20 hours]								
CO 3	Describe the procedure of <i>prakriti parikshan</i> of CCRAS portal.	Cognitive	Mk	Kh	Lecture Demonstration Discussion Observe Tutorial	Practical Viva voce	F & S	II	
CO 3	Demonstrate <i>prakriti parikshan</i> under the supervision of teacher.	Psychomotor	Mk	Sh	Demonstration in practical room & Bed side clinic Discussion	Viva voce	F & S	II	
CO 3	Determines <i>prakriti</i> of a paerson in an individual independently	Psychomotor	Mk	Dose	Demonstration in practical room & Bed side clinic Discussion Perform	Practical Viva voce Skill assessment OSPE, DOPS, CBD, Simulation	F & S	II	
CO 1	Recite verses of <i>vata, pitta & kapha prakriti</i> .	Cognitive (Recall Comprehe nsion)	Dk	Kh	Discussion Recitation	Viva voce	F & S	II	
	2. Assessment of dhatusarata parikshana (10 classes) [Lecture: 0 hours, non-lecture: 10 hours]								
CO 2	Describe the procedure of	Cognitive	Mk	Kh	Lecture Demonstration Discussion Observe	Practical Viva voce	F & S	I	

	<i>dhatu sarata parikshana</i>								
CO 2	Demonstrate <i>dhatu sarata parikshana</i> under the supervision of the teacher.	Psychomotor	Mk	Sh	Demonstration in practical room & Bed side clinic Discussion Assist	Viva voce	F & S	I	
CO 2	Evaluates <i>dhatu sarata</i> in an individual independently	Psychomotor	Mk	Dose	Demonstration Bed side clinic Discussion Perform	Practical Viva voce Skill assessment OSPE, DOPS, CBD, Simulation	F & S	I	
CO 1	Recite verses of <i>ashta dhatu sarata</i> .	Cognitive (Recall & Comprehension)	Dk	Kh	Discussion Recitation	Viva voce	F & S	I	
3. Assessment of agni parikshana (6 classes) [Lecture: 0 hours, non-lecture: 6 hours]									
CO 2	Describe the procedure of <i>agni parikshana</i>	Cognitive/ comprehension	Mk	Kh	Lecture Demonstration Discussion Observe	Practical Viva voce	F & S	III	
CO 2	Demonstrate <i>agni parikshana</i> under the supervision of the teacher.	Psychomotor	Mk	Sh	Demonstration Bed side clinic Discussion Assist	Viva voce	F & S	III	
CO 2	Analyse <i>agni</i> in an individual independently	Psychomotor	Mk	Dose	Demonstration Bed side clinic Discussion Perform	Practical Viva voce Skill assessment OSPE	F & S	III	
CO 1	Recite verses of <i>agni</i> .	Cognitive (Recall & Comprehension)	Dk	Kh	Discussion Recitation	Viva voce	F & S	III	
4. Assessment of koshtha parikshana (2 classes) [Lecture: 0 hours, non-lecture: 2 hours]									
CO 2	Discuss the procedure of <i>koshtha parikshana</i>	Cognitive	Mk	Kh	Lecture Demonstration Discussion Observe	Practical Viva voce	F & S	III	
CO 2	Demonstrate <i>koshtha parikshana</i> under the	Psychomotor	Mk	Sh	Demonstration Bed side clinic Discussion	Viva voce	F & S	III	

	supervision of the teacher.				Assist				
CO 2	Evaluate <i>koshtha</i> of an individual independently	Psychomotor or	Mk	Dose	Demonstration Bed side clinic Discussion rform	Practical Viva voce Skill assessment OSPE	F & S	III	

	5. Assessment of dosha vrddhi kshaya lakshana (4 classes) [Lecture: 0 hours, non-lecture: 4 hours]								
CO 3	Discuss the procedure of <i>dosha vrddhi kshaya lakshana</i>	Cognitive	Mk	Kh	Lecture Demonstration Discussion Observe	Practical Viva voce	F & S	II	
CO 3	Demonstrate <i>dosha vrddhi kshaya parikshana</i> under the supervision of the teacher.	Psychomotor	Mk	Sh	Demonstration Bed side clinic Discussion Assist	Viva voce	F & S	II	
CO 3	Perform <i>dosha vrddhi kshaya parikshana</i> in an individual independently	Psychomotor	Mk	Dose	Demonstration Bed side clinic Discussion Perform	Practical Viva voce Skill assessment OSPE	F & S	II	
CO 1	Recite verses of <i>dosha vrddhi kshaya</i> .	Cognitive (Recall Comprehe nsion)	Dk	Kh	Discussion Recitation	Viva voce	F & S	II	
	6. Assessment of dhatu vrddhi kshaya parikshana (5 classes) [Lecture: 0 hours, non-lecture: 5 hours]								
CO 3	Describe the procedure of <i>dhatu vrddhi kshaya lakshana</i>	Cognitive	Mk	Kh	Lecture Demonstration Discussion Observe	Practical Viva voce	F & S	II	
CO 3	Demonstrate <i>dhatu vrddhi kshaya parikshan</i> under the supervision of the teacher.	Psychomotor	Mk	Sh	Demonstration Bed side clinic Discussion Assist	Viva voce	F & S	II	
CO 3	Perform <i>dhatu vrddhi kshaya parikshan</i> in an individual independently	Psychomotor	Mk	Dose	Demonstration Bed side clinic Discussion Perform	Practical Viva voce Skill assessment OSPE	F & S	II	
CO 1	Recite verses of	Cognitive	Dk	Kh	Discussion	Viva voce	F & S	II	

	<i>dhatu vrddhi kshaya.</i>	(Recall & Comprehension)			Recitation				
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	7. Assessment of nadi parikshana (3 classes) [Lecture: 0 hours, non-lecture: 3 hours]								
CO 5	Describe the procedure of <i>nadi parikshana</i>	Cognitive	Mk	Kh	Lecture Demonstration Discussion Observation Tutorial	Practical Viva voce	F & S	II	
CO 5	Demonstrate <i>nadi parikshana</i> under the supervision of the teacher.	Psychomotor	Mk	Sh	Demonstration Bed side clinic Discussion Assist	Viva voce	F & S	II	
CO 5	Find out recent advances in nadi pariksha	Cognitive	Mk	Kh	Lecture Demonstration Discussion Observe	Practical Viva voce OSPE	F & S	II	
	Part B 30 practical of 2 hr each								
	[Lecture: 0 hours, non-lecture: 30 hours]								
CO 4	Explain the general laboratory etiquette demonstrate the use of laboratory equipment.	Cognitive Psychomotor	Mk	Sh	Lecture Demonstration Discussion Observe	Practical Viva voce Skill assessment OSPE	F & S	I	
CO 4	Discuss procedure of collection of a blood sample – prick, venepuncture method, use of anticoagulants.	Cognitive	Mk	Kh	Lecture Demonstration Discussion Assist	Viva voce	F & S	I	
CO 4	Describe Observe procedure of haemoglobin estimation, bleeding time and clotting time, blood grouping and Rh typing,	Cognitive	Mk	Kh	Lecture Demonstration Discussion Assist	Viva voce	F & S	I	

	differential Leukocyte Counting procedure.								
CO 4	Evaluate Hb, Bleeding time, clotting time, blood grouping & Rh typing, several Leukocyte Count (independently).	Psychomotor	Mk	Sh	Lecture Demonstration Discussion Perform	Practical Viva voce Skill assessment OSPE	F & S	I	
CO 4	Describe the procedure of WBC counting, RBC counting.	Cognitive	Mk	Kh	Lecture Demonstration Discussion Assist	Viva voce	F & S	II	
CO 4	Count WBC, RBC (independently).	Psychomotor	Mk	D	Perform	Practical	F	II	
CO 4	Describe the procedure of ESR, PCV	Cognitive	Mk	Sh	Lecture Demonstration Discussion Assist	Viva voce	F	III	
CO 4	Describe the procedure of physical and chemical examination of urine.	Cognitive	Mk	Kh	Lecture Demonstration Discussion Assist	Viva voce	F & S	III	
CO 4	Identify physical and chemical properties of urine.	Psychomotor	Dk	Sh	Lecture Demonstration Discussion Assist	Practical Viva voce Skill assessment OSPE, DOPS	F & S	III	
CO 4	Discuss the procedure of pulse examination demonstrated.	Cognitive	Mk	Kh	Lecture Demonstration Discussion Assist	Viva voce	F & S	II	
CO 4	Examine pulse independently.	Psychomotor	Mk	Sh	Lecture Demonstration Discussion Perform	Practical Viva voce Skill assessment OSPE	F & S	II	
CO 4	Describe the procedure of measurement of blood pressure	Cognitive	Mk	Kh	Lecture Demonstration Discussion Assist	Viva voce	F & S	II	

CO 4	Measure blood pressure (independently).	Psychomotor	Mk	Sh	Lecture Demonstration Discussion Perform	Practical Viva voce Skill assessment OSPE	F & S	II	
CO 4	Discuss the procedure of inspection of CVS and assessment of heart sounds	Cognitive	Mk	Kh	Lecture Demonstration Discussion Assist	Viva voce	F & S	II	
CO 4	Illustrate inspection of CVS and assessment of heart sounds (independently).	Psychomotor	Mk	Sh	Lecture Demonstration Discussion Perform	Practical Viva voce Skill assessment OSPE	F & S	II	
CO 4	Discuss the procedure of ECG recording demonstrated by the teacher.	Cognitive	Mk	Kh	Lecture Demonstration Discussion Assist	Viva voce Spotting	F & S	II	
CO 4	Discuss procedure of inspection of the respiratory system demonstrated by the teacher.	Cognitive	Mk	Kh	Lecture Demonstration Discussion Assist	Viva voce	F & S	II	
CO 4	Examine of the respiratory system (independently).	Psychomotor	Mk	Sh	Lecture Demonstration Discussion Perform	Practical Viva voce Skill assessment OSPE	F & S	II	
CO 4	Discuss the procedure of examining the cranial nerves and reflexes (superficial/ deep /visceral) demonstrated by the teacher.	Cognitive	Mk	Kh	Lecture Demonstration Discussion Assist	Viva voce Skill assessment OSPE	F & S	III	
CO 4	Perform the procedure of examining the cranial nerves and	Psychomotor	Mk	Sh	Lecture Demonstration Discussion Perform	Practical Viva voce Skill assessment OSPE	F & S	III	

	reflexes (superficial/deep/ visceral) by students independently.								
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Table 5: Non-Lecture Activities Course AyUG- KS

Theory Non Lecture 50 (Paper I -25 & Paper II-25)		No of Activity hours
1.	Assignment - homework based	3
2.	Brainstorming	2
3.	Buzz group	1
4.	Case based learning	1
5.	Confusion technique	1
6.	Debate	1
7.	Demonstration	2
8.	Direct observation skill (DOPS)	1
9.	Flipped classroom	1
10.	Group Discussion	3
11.	Jigsaw or puzzle	1
12.	Mnemonics	2
13.	Model based learning	1
14.	Online teaching aids	1
15.	Panel discussion	1
16.	Problem based learning	2
17.	Real-life experience	1
18.	Recitation	3
19.	Role Play	1
20.	Self directed learning	3
21.	Seminar by students	5
22.	Simulated condition	1
23.	Skill assessment	2
24.	Symposium	2
25.	Team project work	1
26.	Think-Pair-Share	2
27.	Tutorial	3
28.	Video show	2
Practical Non Lecture 100 (200 hours)		
1.	Ayurveda Practicals – 50	100
2.	Modern Practicals – 30	60
3.	Activity based learning – 20	40
	Communication Skills, Small project / Experiment designing, Task-based learning, Teamwork based learning, Team project, Problem Based Learning (PBL)/(CBL), Group Discussion, Workshops, Field visits, Preparation of charts 1, models and computerized simulation models etc. , Seminar presentations by students	
Total Non Lecture hours		250

Additional Suggested topics for tutorials

Point No.	Name of Topic
T – 1 CO 6	<i>Atma lakshana</i>
T – 2 CO3	<i>Characteristics of Prakriti Eka doshaja, dwandwaja and sama prakriti. Clinical importance of deha prakriti, anukatva.</i>
T – 3 CO5	<i>Nadi vigyan</i>
T – 4 CO6	<i>Anukatva</i>
T – 5 CO6	<i>Indriya panch panchak and physiological study of panchajyanendriya and panchakarmendriya.</i>
T – 6 CO6	<i>Meanings of terminologies used for dhatu poshana nyaya related to dhatu poshana</i>
T – 7 CO1	<i>Ahara dravya vargikarana</i>
T – 8 CO1	<i>Avasthapaka & Vipak</i>

Suggested topics for seminar topics

Sr. No.	Content
S – 1 CO8	<i>Tridosha</i>
S – 2 CO8	<i>Agni</i>
S – 3 CO8	<i>Rasa rakta samvahan</i>
S – 4 CO8	<i>Pranavah srotas and shwasana prakriya</i>
S – 5 CO8	<i>Ashtavidh sara</i>
S – 6 CO8	<i>Trividh nyaya</i>
S – 7 CO8	<i>Prakriti</i>
S – 8 CO8	Basic concept of nervous system
S – 9 CO8	Rh Incompatibility
S – 10 CO8	Digestion of Carbohydrates, proteins & fats
S – 11 CO8	Blood clotting mechanism
S – 12 CO8	Immune system
S – 13 CO8	O ₂ -CO ₂ gaseous exchange
S – 14 CO8	Hormones
S – 15 CO8	Renal system

Suggested topics for group discussion

Sr. No.	Content
GD – 1 CO1	<i>Dosha dhatu mala mulam hi shariram</i>
GD – 2 CO1	<i>Concept of agni</i>
GD – 3 CO1	<i>Concept of upadhatu</i>
GD – 4 CO1	<i>Role of ranjak pitta in formation of rakta dhatu</i>
GD – 5 CO1	<i>Concept of srotas</i>
GD – 6 CO1	<i>Physiology of purishadhara kala / asthidhara kala. Pittadhara kala/ majjadhara kala</i>
GD – 7 CO1	<i>Generation of doshas</i>
GD – 8 CO1	<i>Ashraya-ashrayi bhava sambhadha of asthi and vata</i>
GD – 9 CO1	<i>Process of urine formation described in ayurveda compendia</i>
GD – 10 CO1	<i>Avasthapaka</i>
GD – 11 CO1	<i>Concept of shatkriyakala</i>
GD – 12 CO1	<i>Manas Prakriti</i>

Table 6: Assessment Summary**6 A- Number of papers and Marks Distribution**

S.No.	Subject Code	Papers	Theory	Practical/Clinical Assessment					Grand Total
				Practical/ Clinical	Viva	Electives	IA	Sub Total	
1.	AyUG-KS	2	200	100	70	-	30	200	400

6 B - Scheme of Assessment (formative and Summative)

SR.NO.	PROFESSIONAL COURSE	DURATION OF PROFESSIONAL COURSE		
		First Term (1-6 Months)	Second Term (7-12 Months)	Third Term (13-18 Months)
1	First	3 PA & First TT	3 PA & Second TT	3 PA & UE

PA: Periodical Assessment; TT: Term Test; UE: University Examinations

6 C - Calculation Method for Internal assessment Marks (30 Marks)

TERM	PERIODICAL ASSESSMENT*					TERM TEST **	TERM ASSESSMENT	
	A	B	C	D	E	F	G	H
	1 (15 Marks)	2 (15 Marks)	3 (15 Marks)	Average (A+B+C/3)	Converted to 30 Marks (D/15*30)	Term Test (Marks converted to 30)	Sub Total _/60 Marks	Term Assessment (.../30)
FIRST							E+F	(E+F)/2
SECOND							E+F	(E+F)/2
THIRD						NIL		E
Final IA	Average of Three Term Assessment Marks as Shown in 'H' Column.							
	Maximum Marks in Parentheses *Select an Evaluation Method which is appropriate for the objectives of Topics from the Table 6 D for Periodic assessment. Conduct 15 marks assessment and enter marks in A, B, and C. ** Conduct Theory (100 Marks)(MCQ(20*1 Marks), SAQ(8*5), LAQ(4*10)) and Practical (100 Marks) Then convert to 30 marks.							

6 D - Evaluation Methods for Periodical Assessment

S. No.	Evaluation Methods for Periodical Assessment
1.	Practical / Clinical Performance
2.	Viva Voce, MCQs, MEQ (Modified Essay Questions/Structured Questions)
3.	Open Book Test (Problem Based)
4.	Summary Writing (Research Papers/ Samhitas)
5.	Class Presentations; Work Book Maintenance
6.	Problem Based Assignment
7.	Objective Structured Clinical Examination (OSCE), Objective Structured Practical Examination (OPSE), Mini Clinical Evaluation Exercise (Mini-CEX), Direct Observation of Procedures (DOP), Case Based Discussion (CBD)
8.	Extra-curricular Activities, (Social Work, Public Awareness, Surveillance Activities, Sports or Other Activities which may be decided by the department).
9.	Small Project
10.	Other activities explained in Table 3 Column G3 as per indicated term and objective of the topic.

6 E- Paper Layout

I PROFESSIONAL BAMS EXAMINATIONS

AyUG-KS

Paper-I

Time: 3 Hours Maximum Marks: 100

INSTRUCTIONS: All questions compulsory

TOTAL MARKS 100.

		Number of Questions	Marks per question	Total Marks
Q 1	Multiple Choice Questions (MCQ)	20	1	20
Q 2	Short answer questions (SAQ)	8	5	40
Q 3	Long answer questions (LAQ)	4	10	40
				100

AyUG-KS

Paper-II

Time: 3 Hours Maximum Marks: 100

INSTRUCTIONS: All questions compulsory

TOTAL MARKS 100.

		Number of Questions	Marks per question	Total Marks
Q 1	Multiple Choice Questions (MCQ)	20	1	20

Q 2	Short answer questions (SAQ)	8	5	40
Q 3	Long answer questions (LAQ)	4	10	40
				100

6 F- Disribution of Theory Exam

	Paper I Part-A (Marks-60)			D Type of Questions “Yes” can be asked. “No” should not be asked.		
	A List of Topics AyUG-KS	B Term	C Marks	MCQ (1 Mark)	SAQ (5 Marks)	LAQ (10 Marks)
1	Sharir:	I	8	Yes	Yes	No
2	Basic principles of Ayurveda:	I		Yes	Yes	No
3.	Tridosha:	I		Yes	Yes	No
4.	Vata Dosha:	I	26	Yes	Yes	Yes
5.	Pitta Dosha:	I		Yes	Yes	Yes
6.	Kapha Dosha:	II		Yes	Yes	Yes
7.	Dosha Vriddhi-Kshaya:	II		Yes	Yes	No
8.	Kriyakala:	II		Yes	Yes	No
9	Prakriti: Deha- Prakriti: Manasa- Prakriti:	II	26	Yes	Yes	Yes
10.	Ahara:	III		Yes	Yes	Yes
11.	Agni:	III		Yes	Yes	Yes
12.	Aharapaka	III		Yes	Yes	Yes
Part-B (Marks-40)						
1	Physiology Homeostasis:	I	23	Yes	Yes	Yes
2	Physiology of Respiratory system:	II		Yes	Yes	Yes
3	Physiology of Gastrointestinal system:	II		Yes	Yes	Yes
4	Physiology of Nervous System:	III	17	Yes	Yes	Yes
5	Physiology of Endocrine glands:	III		Yes	Yes	Yes

	Paper II PART-A (Marks-60)			D Type of Questions “Yes” can be asked. “No” should not be asked.		
	A List of Topics AyUG-KS	B Term	C Marks	MCQ (1 Mark)	SAQ (5 Marks)	LAQ (10 Marks)
Part-A (Marks-60)						
1	Dhatu:	I	18	Yes	Yes	No
2	Rasa Dhatu:	I		Yes	Yes	Yes
3.	Rakta Dhatu:.	I		Yes	Yes	Yes
4.	Mamsa Dhatu:	I		Yes	Yes	Yes
5.	Meda Dhatu:	I		Yes	Yes	Yes
6.	Asthi Dhatu:	II	19	Yes	Yes	Yes
7.	Majja Dhatu :	II		Yes	Yes	Yes
8.	Shukra Dhatu:	II		Yes	Yes	Yes
9	Concept of Ashraya-Ashrayi bhava	II		Yes	Yes	No
10.	Ojas:	II		Yes	Yes	Yes
11.	Upadhatu: Stanya: Artava: Tvak:	II	23	Yes	Yes	Yes
12.	Mala: Purisha: Mutra: Sveda: Dhatumala:	III		Yes	Yes	Yes
13	Indriya vidnyan:	III		Yes	Yes	Yes
14	Manas:	III		Yes	Yes	Yes
15	Atma:	III		Yes	Yes	No
16	Nidra & Swapna:	III		Yes	Yes	No
Part-B (Marks-40)						
1	Haemopoetic system:	I	18	Yes	Yes	Yes
2	Immunity:	I		Yes	Yes	No
3	Physiology of cardio-vascular system:	I		Yes	Yes	Yes
4	Muscle physiology:	II	07	Yes	Yes	No
5	Adipose tissue:	II		Yes	Yes	No
6	Physiology of male and female reproductive	II	15	Yes	Yes	Yes
7	Physiology of Excretion:	III		Yes	Yes	Yes
8	Special Senses, Sleep and Dreams:	III		Yes	Yes	Yes

6 G- Question paper blue print

Paper I

AyUG-KS		
A Question Sr. No	B Type of Question	C Question Paper Format
.Q1	Multiple choice Questions (MCQ) 20 Questions 1 mark each All compulsory Must know part - 15 MCQ Desirable to know - 3 MCQ Nice to know part - 2 MCQ	MCQ no. Topic No 1. Topic number part A 1 2. Topic number part A 2 3. Topic number part A 3 4. Topic number part A 4 5. Topic number part A 4 6. Topic number part A 5 7. Topic number part A 6 8. Topic number part A 7 9. Topic number part A 8 10. Topic number part A 9 11. Topic number part A 9 12. Topic number part A 10 13. Topic number part A 11 14. Topic number part A 12 15. Topic number part A 12 16. Topic number part B 1 17. Topic number part B 2 18. Topic number part B 3 19. Topic number part B 4 20. Topic number part B 5
Q2	Short answer Questions (SAQ) Eight Questions 5 Marks Each All compulsory Must know - 7 SAQ Desirable to know - 1 SAQ No questions on Kice to know	1. Topic no. Part A 1/ Topic no. Part A 2/ Topic no. Part A 3 2. Topic no. Part A 4/ Topic no. Part A 5/ Topic no. Part A 6 3. Topic no. Part A 7/Topic no. Part A 8 4. Topic no. Part A 9/Topic no. Part A 10 5. Topic no. Part A 11/ Topic no. Part A 12/ 6. Topic no. Part B 1/ Topic no. Part B 2/ 7. Topic no. Part B 3 8. Topic no. Part B 4/ Topic no. Part B 5
Q3	Long answer Questions (LAQ)	1. Topic no. Part A 4/ Topic no. Part A 5/ Topic no. Part A 6 2. Topic no. Part A 9/ Topic no. Part A 10/ Topic no. Part A 11/

	<p>Four Questions 10 marks each All compulsory</p> <p>All questions on must know. No Questions on Nice to know and Desirable to know</p>	<p>Topic no. Part A 12</p> <p>3. Topic no. Part B 1/ Topic no. Part B 2/ Topic no. Part B 3</p> <p>4. Topic no. Part B 4/ Topic no. Part B 5</p>
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Paper II

AyUG-KS		
A Question Sr. No	B Type of Question	C Question Paper Format
Q1	<p>Multiple choice Questions (MCQ)</p> <p>20 Questions</p> <p>1 mark each</p> <p>All compulsory</p> <p>Must know part - 15 MCQ Desirable to know - 3 MCQ Nice to know part - 2 MCQ</p>	<p>MCQ no. Topic no.</p> <ol style="list-style-type: none"> 1. Topic number part A 1/2 2. Topic number part A 3 3. Topic number part A 4/5 4. Topic number part A 6 5. Topic number part A 7 6. Topic number part A 8 7. Topic number part A 9/10 8. Topic number part A 11 9. Topic number part A 12 10. Topic number part A 13/14/15/16 11. Topic number part B 1 12. Topic number part B 2 13. Topic number part B 3 14. Topic number part B 4 15. Topic number part B 5 16. Topic number part B 6 17. Topic number part B 6 18. Topic number part B 7 19. Topic number part B 7 20. Topic number part B 8
Q2	<p>Short answer Questions (SAQ)</p> <p>Eight Questions 5 Marks Each All compulsory</p> <p>Must know - 7</p>	<ol style="list-style-type: none"> 1. Topic no. Part A 1/ Topic no. Part A 2/ Topic no. Part A 3/ Topic no. Part A 4/ Topic no. Part A 5 2. Topic no. Part A 6/ Topic no. Part A 7/ Topic no. Part A 8/ Topic no. Part A 9/ Topic no. Part A 10 3. Topic no. Part A 11/ Topic no. Part A 12 4. Topic no. Part A 13/ Topic no. Part A 14/ Topic no. Part A 15

	Desirable to know - 1 SAQ No questiona on Nice to know	Topic no. Part A 16 5. Topic no. Part B 1/ Topic no. Part B 2/ Topic no. Part B 3/ 6. Topic no. Part B 4/ Topic no. Part B 5 7. Topic no. Part B 6/ Topic no. Part B 8 8. Topic no. Part B 7
Q3	Long answer Questions (LAQ) Four Questions 10 marks each All compulsory All questions on Must know. No Questions on Nice to know and Desirable to know	1. Topic no. Part A 2/ Topic no. Part A 3/ Topic no. Part A 4/ Topic no. Part A 5 2. Topic no. Part A 6/ Topic no. Part A 7/ Topic no. Part A 8/ Topic no. Part A 10 3. Topic no. Part A 11/ Topic no. Part A 12/ Topic no. Part A 13/ Topic no. Part A 14 4. Topic no. Part B 1/ Topic no. Part B 2/ Topic no. Part B 3

6 H Distribution of Practical Exam

(Practical 100 +Viva 70+ IA 30) = (Total 200 Marks)

AyUG-KS			
SN	Heads	Topic	Marks
A	Practical		
1	Spotting	Spotting (including two problem-based test) 1. Histology slide 2. ECG report (counting heart rate etc.) 3. Blood report (normal-abnormal values and significance) 4. Photograph of prakriti character. 5. Problem based sara/agni parikshan. 6. Case of vrudhhi kshay lakshan. 7. Aplicability of one spot used in haematological practical. 8. Identify the difference between two things & use. 9. Model based 10. Human experiment related	10 Marks

2	Ayu. Practical	Performance based components. (Take only one practical separately OR make combination of few components of more than one practical) Ayurveda practical - Prakriti parikshana (Self / volunteer / patients)	40 Marks
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		Sara parikshana Agni & koshta <i>parikshana</i> Dosha vrddhi-kshaya lakshana/ Dhatu vriddhi -kshaya Lakshana	
3	Lab. Practical	Laboratory practical (Hb, BT, CT, Blood group, Urine exam) Human physiology practical (pulse examination, BP, heart sounds, reflexes)	30 Marks
4	Project work	Project work (Activity based)	10 Marks
5	Practical Record	Practical Record	10 Marks
		Total	100 Marks
B	Viva Voce	General viva voce based on Ayurveda (20), Viva on instruments (20), Structured viva on Part B (refer Table 2)(10), Recitation of verses (15), and Communication skill (5)	70 Marks
C	IA	Internal Assessment	30 Marks
		Total Marks	200 Marks

7. References / Resources

- Ayurvediya Kriyasharir - Ranjit Rai Desai
- Kayachikitsa Parichaya - C. Dwarikanath
- Prakrit Agni Vigyan - C. Dwarikanath
- Sharir Kriya Vigyan - Shiv Charan Dhyani
- Abhinava Sharir Kriya Vigyana - Acharya Priyavrata Sharma
- Dosha Dhatu Mala Vigyana - Shankar Gangadhar Vaidya
- Prakrita Dosha Vigyana - Acharya Niranjana Dev
- Tridosha Vigyana - Shri Upendranath Das
- Sharira Tatva Darshana - Hirlekar Shastri
- Prakrita Agni Vigyana - Niranjana Dev
- Deha Dhatvagni Vigyana - Vd. Pt. Haridatt Shastri
- Sharir Kriya Vigyana (Part 1-2) - Acharya Purnchandra Jain
- Abhinava Sharir Kriya Vigyana - Dr. Shiv Kumar Gaur
- Pragyogik Kriya Sharir - Acharya P.C. Jain
- Kaya Chikitsa- Ramraksha Pathak
- Kaya Chikitsa Parichaya - Dr. C. Dwarkanath
- Concept of Agni - Vd. Bhagwan Das
- Purush Vichaya - Acharya V.J. Thakar
- Kriya Sharir - Prof. Yogesh Chandra Mishra
- Sharira Kriya Vijnana (Part 1 and 2) – Nandini Dhargalkar
- Sharir Kriya Vigyana - Prof. Jayaram Yadav & Dr. Sunil Verma.
- Kriya Sharir mcq – Dr. Kiran Tawalore
- Basic Principles of Kriya-Sharir (A treatise on Ayurvedic Physiology) - Dr. Srikant Kumar Panda
- Sharir Kriya – Part I & Part II – Dr. Ranade, Dr. Deshpande & Dr. Chobhe
- Human Physiology in Ayurveda - Dr Kishor Patwardhan
- Textbook of Physiology - Gyton & Hall
- Review of medical physiology – William Ganong
- Essentials of Medical Physiology - Sembulingam, K.
- Concise Medical Physiology - Chaudhari, Sujit. K.
- Fundamental of Anatomy & Physiology - Martini
- Principals of Anatomy & Physiology - Tortora & Grabowski
- Human Physiology - Richards, Pocock
- Samson Wrights Applied Physiology, Keele, Neil, joels
- Ayurveda Kriya Sharira - Yogesh Chandra Mishra
- Textbook of Medical Physiology - Indu Khurana
- Tridosha Theory - Subrahmanya Shastri
- Dosha Dhatu Mala vigyan – S. G. Vartak
- Purush Vichaya – Jayanad Thakar
- All Samhitas.
- Ayurvediya Shabda kosha.
- Vachaspatyam
- Shabdakalpadrum
- Monir Williams Sanskrit dictionary.

**COURSE CURRICULUM FOR FIRST PROFESSIONAL BAMS (PRESCRIBED BY
NCISM)**

शास्त्रं ज्योतिः प्रकाशार्थं दशशतं बुद्धिरात्मनिः।



PADARTHA VIJNANAM

(SUBJECT CODE- AyUG-PV)

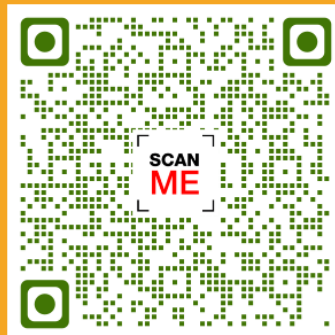
FUNDAMENTAL PRINCIPLES OF AYURVEDA AND QUANTUM MECHANICS

**(Applicable from 2021-22 batch onwards for 5 years or until further notification by
NCISM, whichever is earlier)**



प्राणभित्तुः प्राणायामनाम
BOARD OF AYURVEDA

**NATIONAL COMMISSION FOR INDIAN SYSTEM OF MEDICINE NEW
DELHI-110058**



NCISM

I professional Ayurvedacharya (BAMS)

Subject Code: AyUG-PV

Padartha Vijnanam

FUNDAMENTAL PRINCIPLES OF AYURVEDA AND QUANTUM MECHANICS

Total number of Teaching hours: 230			
Lecture hours (LH) - Theory		90 Hours	90 Hours (LH)
Paper I	45 Hours		
Paper II	45 Hours		
Non-Lecture hours (NLH) – Theory		140 Hours	140 Hours (NLH)
Paper I	70 Hours		
Paper II	70 Hours		
Non-Lecture hours (NLH) - Practical		Hours	

Examination (Papers & Mark Distribution)					
Item	Theory Component Marks	Practical Component Marks			
		Practical	Viva	Elective	IA
Paper I	100	100	60	10	30
Paper II	100			(Set-FB)	
Sub-Total	200	200			
Total marks	400				

PREFACE

All Medical sciences whether ancient or modern, needs frequent updating. Acharya Vagbhata stresses upon reform of Ayurveda according to the present time (yuganurupasandarbhā). The syllabus of Ayurveda also needs reformation for effective dissemination of principles of Ayurveda which is strongly based on Padarthavijnanam. Acharya Vagbhata says one who seeks long life should respect Ayurveda by four strategies that are knowledge (Adhiti), comprehension (Bodha), skill (Acharana) and Attitude (pracharana). These teaching methodologies are evolved from the ancient upanishadic way of teaching (Adhyapanavidhi). The new principles of teaching strategies of blooms taxonomy correlate with the ancient way of teaching and the syllabus of Padarthavijnanam has been revamped according to the need of hour.

Padartha Vijnanam is a unique and mandatory subject needed for learning the stream of Ayurveda. It is the combination of science and philosophy. One can say that the science and philosophy are the two sides of the same coin. The search behind “existence of world/self” when progresses outward it travels the path of science and when this search is inwards it becomes philosophy. Thus, Padartha Vijnanam is an essential base of Ayurveda education. When the foundation becomes strong building also becomes strong.

Padartha Vijnanam not only provides the platform to understand Ayurveda better but it also helps the students to appreciate the moral values benefiting them in developing the personality. As mentioned in graduate attributes this subject helps the student to become eloquent communicator and self-directed learner who constantly endeavors to advance knowledge and skills to improve healthcare and social well-being.

This syllabus reform of Padartha Vijnanam has taken care of adopting the modern teaching-learning methodology well-merging with the ancient one. This will definitely enhance the understanding of the subject in a better way.

Introduction of practicals is the zest for the subject. As we all know- “I hear, and I forget. I see and I remember. I do, and I understand”. The teaching learning process must be joyful along with lecture methods like group discussions, debate, roleplay and PBL. They are also mentioned and the flexibility is kept. Here in this syllabus, the activity book is introduced to induce activity-based learning. This will definitely create the interest in the subject. There are some self-learning activities also which will induce the thirst for the knowledge in the student. This will help the student to understand theoretical concepts in a lucid way and also provides hands on experience

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Course Code and Name of Course

	Course code	Name of Course
	AyUG-PV	Padartha Vijnanam (Fundamental Principles of Ayurveda and Quantum Mechanics)

AyUG-PV Course

Table 1- Course learning outcomes and matched PO.

CO	Course learning Outcomes (CO) AyUG-PV At the end of the course AyUG-PV, the student should be able to-	Course learning Outcome matched with program learning outcomes.
CO 1	Illustrate the scope and utility of Ayurveda	PO1
CO 2	Explain Philosophical foundation of Ayurveda, Principles (Siddhantha) of Darshana along with their similarities and relevance in Ayurveda and contemporary sciences.	PO1, PO2, PO6
CO 3	Analyse and interpret Padartha (Prameya) in Darshana and Ayurveda. Recognize their applications in Ayurveda.	PO1, PO2, PO9
CO 4	Distinguish, analyse and apply concept of Pramana shastra (Epistemology) in Darshana and Ayurveda. Demonstrate their applications in Ayurveda.	PO1, PO2, PO9
CO 5	Analyse and apply concept of Karya Karana Bhava in Ayurveda.	PO1, PO2, PO9

Table 2 : Contents of Course AyUG-PV

Sr No	A2 List of Topics AyUG-PV	B2 Term	C2 Marks	D2 Lecture hours	E2 Non-Lecture hours
	Paper I				
1	Ayurveda Nirupana 1.1 Lakshana of Ayu, composition of Ayu. 1.2 Lakshana of Ayurveda. Swaroopa and Prayojana of Ayurveda 1.3 Lakshana and classification of Siddhanta. 1.4 Introduction to Basic Principles of Ayurveda and their significance.	I	25	5	6
2	Padartha and Darshana Nirupana 2.1 Padartha Lakshana, Enumeration and classification of Padartha, Bhava and Abhava Padartha, Padartha according to Acharya Charaka (Karana-Padartha). 2.2 Etymological derivation of the word “Darshana”. Classification and general introduction to 9 Schools of Indian Philosophy with an emphasis on: Nyaya, Vaisheshika, Sankhya, Yoga, Meemamsa and Vedanta darshana. 2.3 Ayurveda as unique and independent school of thought (philosophical individuality of Ayurveda). 2.4 Principles and examples in contemporary sciences which will enhance understanding concept of Padartha. 2.5 Relevance of Study of Darshana and Padartha Vignana in Ayurveda	I		10	14
3.	Dravya vijñaneeyam 3.1 Dravya: Lakshana, Classification and Enumeration 3.2 Panchabhuta: Various theories regarding the creation (theories of Taittiriyaopanishad, Nyaya-Vaisheshika, Sankhya-Yoga, Sankaracharya, Charaka and Sushruta), Lakshana and qualities of each Mahabhoota. 3.3 Kala: Etymological derivation, Lakshana, division / units and significance. 3.4 Dik: Lakshana, division and significance. 3.5 Atma: Lakshana, classification, seat, Gunas, Linga according to Charaka, the method / process of knowledge formation (atmanah jnasya pravrittih). 3.6 Purusha: According to Ayurveda - Ativahikapurusha/ Sukshmarsharira/ Rashipurusha/ Chikitsapurusha/ Karmapurusha/ Shaddhatvatmakapurusha. 3.7 Manas: Lakshana, Synonyms, Qualities, Objects, Functions, dual nature of mind (ubhayaatmakatvam), as a substratum of diseases, Influence of Panchabhoutika aahara and aushadha (penta-elemental diet) on manas. 3.8 Role of Panchamahabhuta and Triguna in Dehaprakriti and Manasaprakriti respectively. 3.9 Tamas as the tenth Dravya. 3.10 Practical study/Application and Importance of each Kaarana dravya in Ayurveda. 3.11 Principles and examples in contemporary sciences	II	48	14	20

	which will enhance understanding concept of Kaarana dravya.				
4.	Guna vijnaneeyam 4.1 Etymological Derivation, Classification and Enumeration according to various Darshana and Charaka, 4.2 Lakshana and Classification of Sartha Guna, Gurvadiguna, Paradiguna, Adhyatmaguna (41 Guna) 4.3 Gunapradhanyata (Importance of Guna) 4.4 Practical / clinical application of each Guna in Ayurveda 4.5 Principles and examples in contemporary sciences which will enhance understanding concept of Guna.	II		4	6
5.	Karma vijnaneeyam 5.1 – Introduction of concept of Karma According to Darshana and Ayurveda – Classification of Karma 5.3 - Practical application of karma 5.4 - Principles and examples in contemporary sciences which will enhance understanding concept	II		2	4
6.	Samanya vijnaneeyam 6.1 – Introduction of concept of Saamaanya According to Darshana and Ayurveda. – Classification of Saamaanya 6.3 - Practical application of saamaanya 6.4 - Principle and examples in contemporary sciences which will enhance understanding the concept of Saamaanya.	III		3	6
7.	Vishesha vijnaneeyam 7.1 – Introduction of concept of Vishesha according to Darshana and Ayurveda 7.2 - Classification of Vishesha 7.3 - Practical Application of vishesha 7.4- Principles and examples in contemporary sciences which will enhance understanding the concept of Vishesha	III		3	6
8.	Samavaya vijnaneeyam 8.1 – Introduction of concept of Samavaaya According to Darshana and Ayurveda. 8.2 – Practical application of Samavaaya 8.3- Principles and examples in contemporary sciences which will enhance understanding the concept of Samavaya	III		2	4
9	Abhava vijnaneeyam 9.1 – Introduction of concept of Abhaava According to Darshana and Ayurveda. 9.2 – Classification of Abhaava. 9.3 – Practical application of Abhaava 9.4- Principles and examples in contemporary sciences which will enhance understanding the concept of Abhava.	III		2	4
			27		

Paper II					
	A2 List of Topics – AyUG-PV	B2 Term	C2 Marks	D2 Lecture hours	E2 Non-Lecture hours
1	Pariksha 1.1. Definition, Significance, Necessity and Use of Pariksha. 1.2. Definition of Prama, Aprama, Prameya, Pramata, Pramana. 1.3. Significance and importance of Pramana, Enumeration of Pramana according to different schools of Philosophy. 1.4. Four types of methods for examination in Ayurveda (Chaturvidha-Parikshavidhi), Pramana in Ayurveda. 1.5. Subsumption of different Pramanas under three Pariksha. 1.6. Practical application of methods of examination (Parikshavidhi) in Nidan and Chikitsa.	I	26	6	12
2	2. Aptopadesha Pariksha/Pramana 2.1. Lakshana of Aptopadesha, Lakshana of Apta. 2.2. Lakshana of Shabda, and its types. 2.3. Shabdavritti-Abhidha, Lakshana, Vyanjana and Tatparyakhya. Shaktigrahahetu. 2.4. Vaakya: Characteristics, Vaakyarthajnanahetu- Aakanksha, Yogyata, Sannidhi. 2.5. Importance of Aptopadesha in maintaining Health, Prevention of Diseases, Diagnostics, Therapeutics and Research.	I		6	10
3.	3. Pratyaksha Pariksha/Pramana 3.1. Lakshana of Pratyaksha, types of Pratyaksha- Nirvikalpaka- Savikalpaka with description, description of Laukika and Alaukika types and their further classification. 3.2. Indriya-prapyakaritvam, six types of Sannikarsha. 3.3. Indriyanam lakshanam, classification and enumeration of Indriya. Description of Panchapanchaka, Penta-elemental nature of Indriya (<i>Panchabhautikatva</i> of Indriya) and similarity in sources (<i>Tulyayonitva</i>) of Indriya. 3.4. Trayodasha Karana, dominance of Antahkarana. 3.5. Hindrances in direct perception (<i>pratyaksha-anupalabdihikaarana</i>), enhancement of direct perception (Pratyaksha) by various	II	42	8	14

	instruments/ equipments, necessity of other Pramanas in addition to Pratyaksha. 3.6. Practical study/ application of Pratyaksha in Sharir, Nidan (Diagnosis), Chikitsa (Treatment) and Anusandhan (Research).				
4.	4. Anumanapariksha/Pramana 4.1. Lakshana of Anumana. Introduction of Anumiti, Paramarsha, Vyapti, Hetu, Sadhya, Paksha, Drishtanta. Types of Anumana mentioned by Charaka and Nyayadarshana. 4.2. Characteristics and types of Vyapti. 4.3. Lakshana and types of Hetu, Description of Ahetu and Hetwabhasa. 4.4. Characteristics and significance of Tarka (logic). 4.5. Practical study/ application of Anumanapramana in Sharir, Nidan, Chikitsa and Anusandhan.	II		10	15
5.	5. Yuktipariksha/Pramana 5.1. Lakshana and description. 5.2. Importance in Ayurveda. 5.3. Practical study and utility in diagnostics, therapeutics and research.	III		2	2
6.	6. UpamanaPramana 6.1. Lakshana. 6.2. Application in Sharir, diagnostics, therapeutics and research.	III		2	4
7.	Karya- Karana Siddhanta 7.1. Lakshana of Karya and Kaarana. Types of Kaarana. 7.2. Significance of Karya and Kaarana in Ayurveda. 7.3. Different opinions regarding the manifestation of Karya from Kaarana: Satkaryavada, Parinamavada, Vivartavada, Asatkaryavada, Arambhavada, Paramanuvada, Kshanabhanguravada, Pilupaka, Pitharpaka, Anekantavada, Swabhavavada, Swabhavoparamavada. Importance/ Utility of each of these in Ayurveda 7.4 Study of cause effect relationship, causality, causation in Contemporary sciences.	III	32	11	13

Table 3: Learning objectives (Theory) of Course AyUG-PV

Paper I									
A3 Course outcome	B3 Learning Objective (At the end of the session, the students should be able to)	C3 Domain/sub	D3 Must to know/ desirable to know/Nice to know	E3 Level Does/ Shows how/ Knows how/ Know	F3 T-L method	G3 Assessment	H3 Format ive /summ ative	I3 Te rm	J3 Integ ration
Topic 1- Ayurveda Nirupana Time (Lecture: - _5 hours Non lecture 6 hours)									
CO1	Describe the Nirukti (etymology) and Definition of Ayu	Cognitive/ Recall	Must Know	Knows	Lecture Group discussion	Written and Viva	F and S	I	
CO1	Describe the components of Ayu	Cognitive/ Recall	Must Know	Knows	Lecture Group Discussion Enquiry Based learning	Written and Viva	F and S	I	
CO1	Explain Synonyms of Ayu with their meaning and importance	Cognitive Recall	Must Know	Knows	Lecture Group Discussion	Written and Viva	F and S	I	
CO1	Distinguish between 4 types Ayu namely Sukhayu, Dukhayu, Hitayu, Ahitayu	Cognitive Comprehension	Must Know	Knows	Lecture Group Discussion/ Problem Based Learning	Written and Viva, Quiz	F and S	I	
CO1	Realises that the balance between hitayu	Affective	Must know	Knows	Group Discussion/	viva	F	I	

	and Sukhayu will offer better living				Debate				
CO1	Describe Lakshana of Ayurveda and Enlist Synonyms of Ayurveda	Cognitive Recall	Must Know	Knows	Lecture Group Discussion	Written and Viva	F and S	I	
CO1	Explain different Swarupa of Ayurveda and Discuss Ayurveda Prayojana	Cognitive Comprehension	Must Know	Knows	Lecture Group Discussion/Problem Based Learning	Written and Viva Open Book Test	F and S	I	
CO1	Explain Trisutra of Ayurveda and discuss Nityatva (eternity) of Ayurveda	Cognitive Comprehension	Must Know	Knows	Lecture Group Discussion/Debate	Written and Viva	F and S	I	
CO1, CO 2	Define Siddhanta	Cognitive Recall	Must Know	Knows	Lecture Presentation Discussion	Written and Viva	F and S	I	
CO1, CO 2	Distinguish the types of Siddhanta	Cognitive Comprehension	Must Know	Knows	Lecture Group Discussion/Enquiry Based Learning	Written and Viva, Puzzle	F and S	I	
CO1, CO 2	Elaborate the Basic Principles of Ayurveda like Lokapurusha Samya Siddhanta Panchamahabhoota Siddhanta Tridosha Siddhanta Samanya Vishesha Siddhanta Karya Karana Siddhant	Cognitive Comprehension	Must Know	Knows	Lecture/Group Discussion/Problem Based Learning/Flipped Classroom	Written and Viva, quiz PBA CBA	F and S	I	

CO1, CO 2	Justify the Application of Basic Principles in Ayurveda	Affective	Must know	Knows	Lecture Demonstration/ Group Discussion	Written and Viva	F and S	I	
CO1, CO 2	Recite the concern verses from Tarkasangraha and Charak Samhita	Cognitive Recall	Desirable to know	Knows	Audio clips, classroom recitation	Viva, recitation competition	F and S	I	
Topic 2- Padartha and Darshana Nirupana Time (Lecture:- _10__hours Non lecture __14_hours)									
CO1, CO 2	Classify padartha, differentiate bhava, abhava padartha and Appreciate Shat karana of Acharya Charaka.	Cognitive Recall	Must Know	Knows	Lecture/ Discussions PBL	Written and Viva, puzzle	F & S	I	
CO1, CO 2	Discuss similarity and dissimilarity of padartha	Cognitive Comprehension	Desirable to Know	Knows	Lecture/ Discussions/ Activity based learning	Written and Viva	F & S	I	
CO2	Explain nirukti and vyakhya (definition) of darshana	Cognitive Recall	Must Know	Knows	Lecture	Written and Viva	F & S	I	
CO2	Describe Origin of darshana and Explain Importance of darshana (prayojana)	Cognitive Comprehension	Must know	Knows how	Lecture / Group Discussion	Written and Viva, Quiz	F & S	I	
CO1, CO 2	Analyse terms viz - philosophy, metaphysics, aesthetics, epistemology, psychology in relation with darshana	Cognitive Comprehension	Nice to know	Knows	Lecture / Group Discussion/ Activity Based learning	Written and Viva	F & S	I	
CO2	Classify darshana and differentiate between asthika, nasthika, asthikanasthika	Cognitive Recall	Must Know	Knows	Lecture / Enquiry Based Learning	Written and Viva	F & S	I	

	darshana								
CO1, CO 2	Enumerate darshana relevant for Ayurveda study and mention the pioneers of each darshana	Cognitive Recall	Must Know	Knows	Lecture/ Role play/Group Discussion	Written and Viva, Puzzle	F & S	I	
CO1, CO 2	Outline the reason for study of darshana in Ayurveda and Comprehend Philosophical foundation of Ayurveda	Cognitive Comprehension	Must Know	Knows how	Lecture/ Problem Based Learning/ Group discussion/Tutorial	Written and Viva, Open Book Test	F & S	I	
CO2	Explain meaning of nyaya and synonyms of nyayadarshana	Cognitive Recall	Must Know	Knows	Lecture Group discussion	Written and Viva	F & S	I	
CO2	Enumerate nyayoktha 16 padarthas, 12 prameyas	Cognitive Recall	Desirable to Know	Knows	Lecture /Enquiry Based Learning	Written and Viva	F & S	I	
CO2	Recall the content of nyaya sutra	Cognitive Recall	Nice to know	Knows	Lecture	Written and Viva	F & S	I	
CO2	Outline salient features of nyayadarshana viz- chaturvida pramana, pitharapaka, arambhavada.	Cognitive comprehension	Must Know	Knows	Lecture/ Group discussion / Activity Based Learning	Written and Viva , Quiz	F & S	I	
CO2	Explain meanings of vaisheshika and synonyms	Cognitive Recall	Must Know	Knows	Lecture/	Written and Viva	F & S	I	
CO2	Recall the content of vaisheshika sutra	Cognitive Recall	Nice to Know	Knows	Lecture	Written and Viva	F & S	I	

CO2	Identify salient features of vaisheshika darshana viz-shatpadartha, paramanuvada, peelupakavada	Cognitive comprehension	Must Know	Knows	Lecture group discussion/Activity based learning	Written and Viva, quiz, puzzle	F & S	I	
CO2	Explain the meaning of sankhya	Cognitive Recall	Must Know	Knows	Lecture	Written and Viva		I	
CO2	Enumerate, define and categorise 25 tatvas	Cognitive Recall	Must Know	Knows	Lecture discussion	Written and Viva puzzle	F & S	I	
CO2	Recall the trividhadukha, triguna, satkaryavada	Cognitive Recall	Must Know	Knows	Lecture/ Inquiry based learning	Written and Viva	F & S	I	
CO2	Define yoga and explain ashtangayoga	Cognitive comprehension	Must Know	Knows	Lecture Group discussion/demostration	Written and Viva, quiz	F & S	I	
CO2	Recall content of yoga sutra	Cognitive Recall	Nice to know	Knows	Lecture	Written and Viva	F & S	I	
CO2	Enumerate chittavrutti, panchaklesha, ashtasiddhi	Cognitive Recall	Must Know	Knows	Lecture Debate /Group Discussion	Written and Viva, quiz	F & S	I	
CO2	Recall different type of yoga	Cognitive Recall	Nice to know	Knows	Lecture Self-Directed learning/Activity based learning	Written and Viva, open book test	F & S	I	
CO1, CO 2	Outline the salient features of meemamsa darshana and Vedanta darshana Viz. karma siddhanta, atma, maya, vivartavada,	Cognitive comprehension	Must Know	Knows	Lecture Group Discussion/ Debate	Written and Viva, Quiz	F & S	I	

CO1, CO 2	Explain similarity between Nyaya, vaisheshika, Sankhya, yoga, meemamsa and Vedanta darshana with Ayurveda	Cognitive comprehension	Must Know	Knows how	Lecture discussion PBL/ Flip classroom	Written and Viva	F & S	I	
CO1, CO 2	Explain Charvaka, Jaina and Bouddha darshana and their influence in Ayurveda	Cognitive comprehension	Must Know	Knows	Lecture Group Discussion	Written and Viva	F & S	I	
CO1, CO 2	Demonstrate Ayurveda as unique and independent school of thought (philosophical individuality of Ayurveda).	Cognitive Comprehension Affective	Must Know	Knows how/	Lecture/ Group Discussions PBL	Written and Viva	F & S	I	
CO 1 CO 2	Compare the the Srishtiutpatti krama by different darshanas with contemporary theories like- Big Bang, The multiverse, brane world, the hylographic universe, Simulation theory etc	Cognitive Comprehension	Nice to Know	Knows	Lecture with Videos, Group discussion/ self learning	Puzzle, viva	F	I	
CO 1	Respect ancient philosophy and Ayurveda	Affective	Must know	Know	Discussion	Discussion Debate	F	I	
CO1, CO 2	Enumerate padartha according to different schools of thought	Cognitive Recall	Desirable to Know	Knows	Lecture Group Discussion	Written and Viva, Puzzle	F & S	I	
CO1, CO 2	Find principles and examples in contemporary sciences	Cognitive/ Comprehension	Nice to know	knows	Lecture/ Discussions/ Self-learning,	-	F	I	

	which will enhance understanding concept of Padartha. For ex-matter and energy.								
CO1, CO 2	Analyse role of padartha in darshana and in Ayurveda and Demonstrate the role of Padarthavijnana in Ayurveda	Cognitive / Comprehension	Must Know	Knows how	Lecture/ Seminars /PBL	Written and Viva, Open Book Test	F & S	I	
CO2	Recite concern verses	Cognitive Recall	Desirable to know	knows	Edutainment Audio clips, classroom recitation	Viva, recitation competition	F&S	I	
Topic-3 Dravya vijnaneeyam Time (Lecture:- __14__ hours Non lecture _20__hours)									
CO3	Explain Nirukti and Paribhasha (definition) of Dravya	Cognitive Recall	Must Know	Knows	Lecture	Written and Viva	F and S	II	
CO3	Classify Dravya and Differentiate between Karana and Karya dravya	Cognitive Recall	Must Know	Knows	Lecture Group Discussion/ Enquiry Based Learning	Written and Viva, Puzzle	F and S	II	
CO3	Enumerate Darvya as per different schools of thoughts	Cognitive Recall	Must Know	Knows	Lecture Group Discussion	Written and Viva, puzzle	F and S	II	
CO3, CO1	Value Practical application of study of Dravya in Ayurveda	Affective	Desirable to know	Knows how	Lecture Group Discussion	Written and Viva	F and S	II	
CO3	Explain the various theories (theories of Taittiriyaopanishad, Nyaya-Vaisheshika,	Cognitive/ Comprehension	Must Know	Knows	Lecture Group Discussion /Activity Based	Written and Viva, Quiz	F and S	II	

	Sankhya-Yoga, Sankaracharya, Charaka and Sushruta) regarding creation of Panchamahabhoota				Learning				
CO3	Describe Prithvi Mahabhoota Explain qualities of Prithvi Mahabhoota	Cognitive / Comprehension	Must Know	Knows	Lecture Seminar/ Group Discussion	Written and Viva	F and S	II	
CO3	Describe Aap Mahabhoota Explain qualities of Ap Mahabhoota	Cognitive, Comprehension	Must Know	Knows	Lecture Seminar/ Group Discussion	Written and Viva	F and S	II	
CO3	Describe Teja Mahabhoota Explain qualities of Teja Mahabhoota	Cognitive, Comprehension	Must Know	Knows	Lecture Seminar/ Group Discussion	Written and Viva	F and S	II	
CO3	Describe Vayu Mahabhoota Explain qualities of Vayu Mahabhoota	Cognitive, comprehension	Must Know	Knows	Lecture Seminar/ Group Discussion	Written and Viva	F and S	II	
CO3	Describe Aakash Mahabhoota. Explain qualities of Aakash Mahabhoota	Cognitive, Comprehension	Must Know	Knows	Lecture Seminar/ Group Discussion	Written and Viva	F and S	II	
CO3, CO1	Value Practical application of Panchamahabhoota in Ayurveda	Affective	Must know	Knows	Lecture Group Discussion, Demonstration	Written and Viva, Open Book Test	F and S	II	

CO2	Compare elementary particles/subatomic particles with Tanmatra/triguna.	Cognitive/ Recall	NK	Know	Video clips, discussions SDL	Quiz	F	II	
CO3, CO1	Define the term <i>Kala</i> from various <i>darshanas</i> and <i>Ayurveda</i> .	Cognitive/ Recall	Must know	Knows	Lecture	Written and Viva	F & S	II	
CO3	Explain classification/types of <i>Kala</i>	Cognitive/ Recall	Must know	Knows	Lecture	Written and Viva	F & S	II	
CO3, CO1	Find illustrations of kala explained in Ashtang Hridaya.	Cognitive/ Comprehension	Must know	Knows	Lecture /Activity Based Learning	Written and Viva	F & S	II	
CO3, CO2 CO1	Give examples of importance of Kala in Ayurveda and time as per contemporary sciences	Cognitive/ Recall	Must know	Knows how	Problem Based Learning/ Group Discussion	Written and Viva, Quiz	F & S	II	
CO3	Define the term <i>Dik</i> . Explain classification/ division of <i>Dik</i> .	Cognitive/ Recall	Must know	Knows	Lecture /Activity Based Learning	Written and Viva, puzzle	F & S	II	
CO3, CO1	Illustrate significance of <i>Dishas</i> in Ayurveda with examples.	Cognitive/ Comprehension	Must know	Knows how	Lecture /Seminar	Written and Viva	F & S	II	
CO3	Find illustrations of <i>Dik</i> explained in Ashtangahridaya.	Cognitive/ Comprehension	Must know	Knows how	Group Discussion	Written and Viva, Open book test	F & S	II	
CO3	Define the term Atma,	Cognitive/ Recall	Must know	Knows	Lecture	Written and Viva	F & S	II	
CO3	Explain atma at different levels, seat, Gunas of Atma,	Cognitive/ Recall	Must know	Knows	Lecture	Written and Viva	F & S	II	

CO1 CO3	Explain Atma Linga according to Charaka Samhita.	Cognitive/ comprehension	Must know	Knows	Lecture / Flipped Classroom	Written and Viva	F & S	II	
CO3	Describe the method / process of knowledge formation (<i>atmanah jnasya pravrittih</i>).	Cognitive/ Comprehension	Must know	Knows how	Lecture/ Demonstration/	Written and Viva	F & S	II	
CO3	Describe Purusha as mentioned in Ayurveda	Cognitive/ Recall	Must know	Knows	Lecture	Written and Viva	F & S	II	
CO3	Differentiate Ativahikapurusha/ Sukshmasharira/ Rashipurusha/ Chikitsapurusha/ Karmapurusha/ Shad-dhatvatmaka-purusha.	Cognitive/ Comprehension	Must know	Knows how	Lecture / Group discussions	Written and Viva	F & S	II	
CO3	Recognize and state significance of Atmavijnanam	Affective	Desirable to know	Knows	Group Discussions/ Problem Based Learning	viva	F	II	
CO3	Define term Manas, Enlist synonyms, Explain it's Guna. Karma, Vishay. Explain dual nature of mind. (<i>ubhayaatmakatvam</i>),	Cognitive/ Recall and Comprehension	Must know	Knows	Lecture / Activity Based Learning/Debate	Written and Viva. Puzzle	F & S	II	
CO3	Explain influence of Panchabhoutika aahara and aushadha (penta-elemental diet) on manas	Cognitive/ Recall	Must know	Knows how	Lecture/ discussions/ PBL	Written and Viva. Open Book Test	F & S	II	

CO3	Recognizes the utility of Knowledge of Mana	Affective	Must Know	Knows	Case Based learning	viva	F &S	II	
CO3, CO1	Explain Concept of mind in other sciences.	Cognitive/ Recall	Nice to know	Knows	Discussions/ Videos	Written and Viva	F	II	
CO1	Explain Role of Panchamahabhuta and Triguna in Dehaprakriti and Manasaprakriti respectively.	Cognitive/ Comprehension	Must know	Knows how	Lecture / discussions/ C B L	Written and Viva	F & S	II	
CO3	Discuss the role of Tamas as the tenth Dravya	Cognitive/Comprehension	Desirable to know	Know	Lecture Edutainment Role Play	Written and Viva	F & S	II	
CO3	Realize Practical application of study of dravya in Ayurveda	Affective	Desirable to know	Know	Group Discussions/ Case Base Learning/ Demonstration.	Written and Viva, quiz	F & S	II	
CO3	Recite Dravya Granth of Tarka Sangrah& defn from Charak	Cognitive Recall	Desirable to know	knows	Audio clips/ classroom recitation	Viva, Recitation Competetion	F&S		
CO3. CO2	Discuss principles and examples in contemporary sciences which will enhance understanding the concept of Karana dravya. For ex- Quantum Physics	Cognitive/Comprehension	Nice to know	Know	Lecture/ Discussions/ Self-learning activity	Open book testh	F	II	
Topic -4 Guna vijñaneeyam Time (Lecture:-4 hours Non lecture 6 hours)									
CO3	Define Guna and classify Guna according to various Darshanas and Charaka Samhita	Cognitive Recall	Must know	knows how	Lecture /Demonstration	Written and Viva	F&S	II	

CO3	Explain the Lakshana of indriyartha Gunas with examples.	Cognitive Comprehension	Must know	Knows how	Lecture / Group Discussion	Written and Viva	F&S	II	
CO3	Discuss the Lakshana of Gurvadi Guna with examples.	Cognitive Comprehension	Must know	Knows how	Lecture /Seminar/ Group Discussion	Written and Viva, puzzle	F&S	II	
CO3	Explain the Lakshana of Paradi Guna with examples.	Cognitive Comprehension	Must know	Knows how	Lecture /Seminar/ Group Discussion	Written and Viva, Puzzle	F&S	II	
CO3	Describe the Lakshana of Adhyatma Guna with examples.	Cognitive Comprehension	Must know	Knows how	Lecture /Seminar/ Group Discussion	Written And Viva	F&S	II	
CO3	Appreciate the importance of Guna (Gunapradhanyata)	Affective	Must know	Knows	Discussion	Written Discussion viva	F&S	II	
CO3	Describe the practical application of Indriyartha Gunas in diagnosis of disease and Treatment	Cognitive Comprehension	Must know	Knows how	Lecture / Demonstration/ Case based learning	Written And Viva	F&S	II	
CO3	Describe the practical application of Gurvadi Guna in diagnosis of disease and Treatment	Cognitive Comprehension	Must know	Knows how	Lecture / Demonstration/ Case based learning	Written And Viva	F&S	II	
CO3	Describe the practical application of Paraadi Gunas.	Cognitive Comprehension	Must know	Knows how	Lecture / Demonstration/ Activity based learning	Written And Viva	F&S	II	

CO3	Describe the practical application of Adhyatma Guna .	Cognitive Comprehension	Must know	knows how	Lecture / Demonstration/ Problem Based Learning	Written And Viva	F&S	II	
CO3	Recite the concern verses from TarkaSangrah and Charak Samhita	Cognitive Recall	Desirable to know	knows	Audio clip/ classroom recitation	viva	F&S Recitation competition	II	
CO1 CO2	Discuss Principles and examples in contemporary sciences which will enhance understanding the concept of Guna.	Cognitive Comprehension	Nice to know	Knows	Lecture/ Discussions/ Self-learning activity	-	F	II	
Topic - 5. Karma vijñaneeyam Time (Lecture:- __2__ hours Non lecture __4__ hours)									
CO3	Define <i>Karma</i> acco. to various <i>Darshana</i> and <i>Ayurveda</i> .	Cognitive Recall	Must know	Knows	Lecture	Written And Viva	F&S	II	
CO3	Compare the <i>Karma Lakshana</i> (characteristics) from <i>Charaka Samhita</i> and <i>Darshana</i>	Cognitive Comprehension	Must know	Knows	Lecture/ Group discussion/ Flipped Classroom	Written And Viva	F&S	II	
CO3	Explain the types of <i>Karma</i>	Cognitive Comprehension	Must know	Knows	Lecture and discussion, demonstration	Written And Viva	F&S	II	
CO3	Describe the process of production and destruction of <i>Laukika Karma</i> with one	Cognitive Comprehension	Desirable to know	Knows how	Lecture and demonstration	Written And Viva	F&S	II	

	example.								
CO3	Describe the <i>Adhyaatmika</i> karma and its causal relationship with health and disease.	Cognitive Comprehension	Must know	Knows how	Lecture and discussion	Written And Viva	F&S	II	
CO3	Enlist the other types of processes or pharmacological actions which came under the title of <i>Karma</i> in <i>Ayurveda</i> . Viz: <i>Panchakarma</i> , <i>Shastrakarma</i> , <i>Lekhana</i> , <i>Bruhana</i> etc.	Cognitive Recall	Must know	Knows how	Lecture and discussion/ Self Directed Learning	Written And Viva	S	II	
CO3	Recite the concern verses from TarkaSangrah and Charak Samhita	Cognitive Recall	Desirable to know	knows	Audio clip/ classroom recitation/ Edutainment	viva	F&S Recitation competition	II	
CO1 CO2	Discuss principles and examples in contemporary sciences which will enhance understanding the concept of Karma.	Cognitive Recall	Nice to know	Knows	Lecture/ Discussions/ Self-learning	-	F	II	
Topic - 6 . Samanya vijnaneeyam									
Time (Lecture:- _3 hours Non lecture _6 hours)									
CO3	Explain the Samanya(According to <i>Ayurveda & Darshana</i>)	Cognitive Comprehension	Must know	Knows	Lecture	Written And Viva	F&S	III	
CO3	Distinguish the <i>Samanya</i> concept of <i>Ayurveda</i> from	Cognitive Comprehension	Must know	Knows	Lecture and discussion	Written And Viva	F&S	III	

	<i>Darshana.</i>								
CO3	Describe the <i>Anuvrutti Buddhi</i>	Cognitive Recall	Desirable to know	knows	Lecture and discussion	Written	F & S	III	
CO3	Explain the types of <i>Samanya</i> (Acc. To <i>Ayurveda</i> and <i>Darshana</i>)	Cognitive Recall	Must know	Knows	Lecture and discussion/ Flipped Classroom	Written And Viva	F & S	III	
CO3	Explain the importance of <i>samanya</i> in diagnosis and treatment	Cognitive Comprehension	Must know	Knows	Lecture and discussion/Case Based Learning	Written And Viva ,Quiz	S	III	
CO3	Identify the examples of <i>Dravya-guna-karma Samanya</i> with each <i>DOSHA-DHATU-MALA</i>	Cognitive Comprehension	Must know	Knows how	Lecture and Demonstration/ Group Discussion	Written And Viva , Open Book Test	S	III	
CO3	Recite the concern verses from <i>TarkaSangrah</i> and <i>Charak Samhita</i>	Cognitive Recall	Desirable to know	knows	Audio clip/ classroom recitation	viva	F&S Recitation competition		
CO1	Discuss principle and examples in contemporary sciences which will enhance understanding the concept of <i>Samanya</i> . For ex-system biology	Cognitive Comprehension	Nice to know	knows	Self -Directed learning	-	F	III	
Topic - 7 . Vishesh vijñāneeyam									
Time (Lecture:- 3_ hours Non lecture 6_hours)									
CO3	Explain <i>Visheshas</i> According to <i>Ayurveda & Darshana</i>	Cognitive Comprehension	Must know	Knows	Lecture and Group Discussion	Written And Viva	F&S	III	

CO3	Distinguish <i>Vishesha</i> concept of <i>Ayurveda</i> from <i>Darshana</i> .	Cognitive Comprehension	Must know	Knows	Lecture and Group Discussion	Written and Viva	F&S	III	
CO3	Describe the <i>Vyavrutti Buddhi</i>	Cognitive Recall	Desirable to know	knows	Lecture and discussion	Written	F & S	III	
CO3	Explain <i>Vishesha</i> in the context of <i>Mahabhoota Paramanu</i>	Cognitive Recall	Nice to know	knows	Lecture	Written	F & S	III	
CO3	Discuss the <i>Viruddha Vishesha</i> and <i>Aviruddha Vishesha</i> and other types of <i>Vishesha</i>	Cognitive Comprehension	Must know	Knows how	Lecture and discussion, demonstration	Written And Viva	F&S	III	
CO3	Explain the statement “ <i>Pravrutti rubhayasyatu</i> ”	Cognitive Comprehension	Must know	Knows how	Lecture, Problem Based Learning	Written Viva	F&S	III	
CO3	Provide different classifications of <i>vishesha</i> and their utility in Diagnosis and Treatment.	Cognitive recall	Must know	Knows how	Lecture/ Activity Based Learning	Written, Viva, Open Book Test	F&S	III	
CO3	Identify the examples of <i>Dravya-guna-karma Vishesha</i> with each <i>DOSHA-DHATU-MALA</i>	Cognitive Comprehension	Must know	Knows how	Lecture and demonstration/ Game Based Learning	Written And Viva Quiz	S	III	
CO1, CO2	Describe principles and examples in contemporary sciences which will enhance understanding the concept of <i>Vishesha</i> For ex- System Biology	Cognitive Comprehension	Nice to know	knows	Lecture/ Discussions/ Self-learning activity	viva-	F	III	

CO3	Recite the concern verses from TarkaSangrah and Charak Samhita	Cognitive Recall	Desirable to know	knows	Audio clip/ classroom recitation	viva	F&S Recitation on competition	III	
Topic - 8. Samavay vijnaneeyam Time (Lecture:- 2_ hours Non lecture 4_ hours)									
CO3	Explain Samavaya (Acc. To <i>Ayurveda</i> and <i>Darshana</i>)	Cognitive Recall	Must know	Knows	Lecture	Written And Viva	F&S	III	
CO3	Describe the eternal relation between ayutasiddhavritti	Cognitive Comprehension	Must know	Knows how	Lecture and demonstration	Written And Viva	F&S	III	
CO1 CO2	Discuss principles and examples in contemporary sciences which will enhance understanding the concept of Samavaya	Cognitive Recall	Nice to know	knows	Lecture/ Discussions/ Self-learning activity	-	F	III	
CO3	Recite the concern verses from TarkaSangrah and Charak Samhita	Cognitive Recall	Desirable to know	knows	Audio clip/ classroom recitation	Viva, Recitation competition	F&S		
Topic - 9. Abhav vijnaneeyam Time (Lecture:- 2_ hours Non lecture 4_ hours)									
CO3	Define <i>Abhava</i>	Cognitive Recall	Must know	Knows	Lecture and discussion	Written And Viva	F&S	III	
CO3	Discuss the supportive and contradictory views for the acceptance of <i>Abhava</i> as a <i>Padartha</i>	Cognitive comprehension	Must know	Knows How	Lecture Group Discussion/ debate	Written And Viva	F&S	III	
CO3	Explain the view of <i>Ayurveda</i> about <i>Abhava</i>	Cognitive Recall	Must know	Knows	Lecture demonstration	Written And Viva	F&S	III	

CO3	Explain the four types of <i>Abhava</i>	Cognitive Recall	Must know	Knows	Lecture ,Activity Based Learning	Written And Viva , Puzzle	F&S	III	
CO3	Demonstrate the utility of the knowledge of <i>Abhava</i> in Ayurveda	Cognitive Comprehension	Must know	Knows how	Lecture, Group discussions Problem Based Learning	Written And Viva	F&S	III	
CO1 CO2	Discuss principles and examples in contemporary sciences which will enhance understanding the concept of <i>Abhava</i>	Cognitive Recall	Nice to know	knows	Lecture/ Discussions/ Self-learning activity	-	F	III	
CO3	Recite the concern verses from <i>TarkaSangrah</i> and <i>Charak Samhita</i>	Cognitive Recall	Desirable to know	knows	Audio clip/ classroom recitation	viva	F&S Recitation competition		
Paper II									
Topic 1- (Pariksha) Time (Lecture:- 6 hours Non lecture 12 hours)									
CO4	Describe Pariksha	Cognitive/ Recall	Must know	Knows	Lecture/Group Discussion	Written And Viva	F&S	I	
CO4	Explain the necessity & significance of pariksha	Cognitive Comprehension	Must know	Knows how	Lecture/Problem Based Learning/Debate	Written And Viva	F&S	I	
CO4	Describe Buddhi and its classification	Cognitive / Recall	Must know	Knows	Lecture/Activity based learning	Written And Viva	F&S	I	
CO4	Describe Prama, Prameya, Pramata, Pramana and differentiate Prama and Aprama	Cognitive / Recall	Must know	Knows	Lecture/ Activity based learning	Written And Viva, open book test	F&S	I	

CO4	Describe the Significance of Pramana	Cognitive / comprehension	Must know	Knows how	Problem based learning	Written And Viva	F&S	I	
CO4	Enumerate Pramana according to different schools of philosophy.	Cognitive / Recall	Must know	Knows	Lecture	Written And Viva, puzzle	F&S	I	
CO4	Enumerate Pariksha as per Ayurveda.	Cognitive / Recall	Must know	Knows	Lecture/ Enquiry based learning	Written And Viva	F&S	I	
CO4	Describe the Pramana accepted by different schools of Philosophy with one example each.	Cognitive / Recall	Must know	Knows	Lecture/ group discussion	Written And Viva, quiz	F&S	I	
CO4	Describe 4 Pariksha explained by Ayurveda with one example each	Cognitive / Recall	Must know	Knows	Lecture/ activity based learning	Written And Viva, puzzle	F&S	I	
CO4	Justify the inclusion of Pramanas under three Pariksha	Cognitive / Comprehension	Must know	Knows how	Problem based learning and flipped classroom	Written And Viva	F&S	I	
CO4	Describe the practical application of Pariksha Vidhi in Diagnosis and Treatment.	Cognitive / Recall	Must know	Knows	Case based learning/ Group discussion	Written, open book test And Viva	F&S	I	
CO4	Establish that the Pramanas are tool to gain the knowledge	Affective	Must know	knows	Group discussion	Viva	F&S	I	
CO4	Recite the concern Verses from Tarkasangrah & CharakSamhita	Cognitive Recall	Desirable to know	knows	Audio clips, classroom Recitation	Viva, Recitation competetion	F&S	I	

7. Topic 2- (Aptopdesha Pariksha/Pramana) Time (Lecture:- __6_ hours Non lecture _10__hours)I									
CO 4	Describe Apta and Aptopadesha	Cognitive / Recall	Must know	Knows	Lecture	Written And Viva	F&S	I	
CO 4	Describe the significance of Aptopadesha in Chikitsa	Cognitive / Recall	Must know	Knows	Case based learning/ Group discussion	Written And Viva	F&S	I	
CO 4	Define the term Shabda	Cognitive / Recall	Must know	Knows	Lecture	Written And Viva	F&S	I	
CO 4	Describe types of Shabda	Cognitive / Recall	Must know	Knows	Lecture/ Activity based learning	Written And Viva	F&S	I	
CO 4	Define the term Shaba artha bodhaka Vrutti	Cognitive / Recall	Must know	Knows	Lecture/ group discussion	Written And Viva	F&S	I	
CO 4	Enumerate Shabaartha bodhaka vrutti	Cognitive / Recall	Must know	Knows	Lecture/ Activity based learning	Written And Viva, quiz	F&S	I	
CO 4	Define Abhidha Vrutti with illustration	Cognitive / Recall	Must know	Knows	Lecture/ Activity based learning	Written And Viva	F&S	I	
CO 4	Define Lakshana Vrutti with examples	Cognitive / Recall	Must know	Knows	Lecture/ Activity based learning	Written And Viva	F&S	I	
CO 4	Enumerate the types of Lakshanavrutti and define each of them with example	Cognitive / Recall	Must know	Knows	Lecture/ Activity based learning	Written And Viva	F&S	I	
CO 4	Define Vyanjana vrutti with example	Cognitive / Recall	Must know	Knows	Lecture/ Activity based learning	Written And Viva	F&S	I	
CO 4	Define Tatparyakhya vrutti with	Cognitive / Recall	Must know	Knows	Lecture/ Activity based	Written And Viva	F&S	I	

	example				learning				
CO 4	Define the term Pada with specification to Shakti and enumerate the types of Pada	Cognitive / Recall	Must know	Knows	enquiry based learning	Written And Viva	F&S	I	
CO 4	Enumerate Shaktigraha hetu	Cognitive / Recall	Must know	Knows	Lecture/ group discussion/ Problem based learning	Written And Viva, puzzle	F&S	I	
CO 4	Describe Shakti graha hetu	Cognitive / Recall	Must know	Knows	Lecture/ Tutorial/ Problem based learning	Written And Viva	F&S	I	
CO 4	Enumerate Vaakyarthajnana hetu	Cognitive / Recall	Must know	Knows	Lecture/ group discussion/ Problem based learning	Written And Viva, quiz	F&S	I	
CO 4	Define Akanksha with example	Cognitive / Recall	Must know	Knows	Lecture/ Activity based learning/ Problem based learning	Written And Viva	F&S	I	
CO 4	Define Yogyata with example	Cognitive / Recall	Must know	Knows	Lecture/ Activity based learning/ Problem based learning	Written And Viva	F&S	I	
CO 4	Define Sannidhi with example	Cognitive / Recall	Must know	Knows	Lecture/ Activity based learning/ Problem based learning	Written And Viva	F&S	I	

CO 4	Describe importance of Aptopadesha in maintaining Health, Prevention of diseases, diagnostics, therapeutics and research.	Cognitive/ Comprehension	Must know	knows	Lecture/ Activity based learning/ Problem based learning	Written And Viva, open book test	F&S	I	
CO4	Recite the concern Verses from Tarkasangraha & CharakSamhita	Cognitive Recall	Desirable to know	knows	Audio clips, classroom Recitation	Viva, Recitation competetion	F&S	I	

Topic 3- Pratyaksha Pariksha/Pramana Time (Lecture:- __8__ hours Non lecture _14__hours)

CO4	Define Pratyaksha	Cognitive / Recall	Must know	Knows	Lecture/ Tutorial/Activity based learning	Written And Viva	F&S	II	
CO4	Enumerate the types of Pratyaksha	Cognitive / Recall	Must know	Knows	Lecture/ Activity based learning	Written And Viva	F&S	II	
CO4	Describe types of Pratyaksha	Cognitive / Recall	Must know	Knows	Lecture/ Activity based learning/ Problem based learning	Written And Viva, quiz	F&S	II	
CO4	Describe Indriya Prapyakaritva Mechanism of sensory perception)	Cognitive / comprehension	Must know	Knows	Lecture/ Flip classroom/ Problem based learning	Written And Viva,	F&S	II	
CO4	Define Sannikarsha	Cognitive / Recall	Must know	Knows	Lecture/ Activity based learning	Written And Viva	F&S	II	

CO4	Describe the types of Sannikarsha	Cognitive / comprehension	Must know	Knows how	Lecture/ Problem based learning	Written And Viva, puzzle	F&S	II	
CO4	Define Indriya	Cognitive / Recall	Must know	Knows	Lecture/ Activity based learning	Written And Viva	F&S	II	
CO4	Enumerate the types of Indriya	Cognitive / Recall	Must know	Knows	Lecture/ role play	Written And Viva	F&S	II	
CO4	Define Jnanendriya	Cognitive / Recall	Must know	Knows	Lecture/ Activity based learning	Written And Viva	F&S	II	
CO4	Enlist the functions of Karmendriya	Cognitive / Recall	Must know	Knows	Problem based learning	Written And Viva	F&S	II	
CO4	Describe the function of Manas in relation to Jnanotpatti	Cognitive / Recall	Must know	Knows	Lecture/ Problem based learning	Written And Viva	F&S	II	
CO4	Justify the role of Manas as ubhayendriya in relation with Jnanotpatti and Karma.	Cognitive / Comprehension	Must know	Knows how	Problem based learning / Group discussion/Debate	Written And Viva, open book test	F&S	II	
CO4	Enumerate Panchapanchaka and describe its significance with respect to Pratyaksha Jnana	Cognitive / Recall	Must know	Knows	Lecture/ Problem based learning / Group discussion	Written And Viva, quiz	F&S	II	
CO4	Enumerate and describe briefly the various theories of Darshana and Ayurveda, which highlight the relationship of Indriya	Cognitive / Comprehension	Must know	Knows	Group discussion/ role play/debate	Written And Viva, open book test	F&S	II	

	and Panchamahabhuta.								
CO4	Justify the specificity of Indriya for perceiving specific Artha	Cognitive / Comprehension	Must know	Knows how	Activity based learning/ Problem based learning / Group discussion	Written And Viva	F&S	II	
CO4	Enumerate Trayodasha Karana	Cognitive / Recall	Must know	Knows	Lecture/Tutorial / Activity based learning	Written And Viva, puzzle	F&S	II	
CO4	Enumerate Antahkarana	Cognitive / Recall	Must know	Knows	Lecture/ Activity based learning	Written And Viva	F&S	II	
CO4	Enumerate the functions of Antahkarana	Cognitive / Recall	Must know	Knows	Lecture/ Activity based learning	Written And Viva	F&S	II	
CO4	Illustrate the role Antahkarana in Jnanotpatti with example to highlight the significance	Cognitive / Comprehension	Must know	Knows how	Lecture/ Problem based learning / Group discussion	Written And Viva, open book test	F&S	II	
CO4	Describe the factors which create hindrance for perception with an illustration (pratyaksha-anupalabdhi-karana)	Cognitive / Comprehension	Must know	Knows	Activity based learning/ Problem based learning / Group discussion	Written And Viva, puzzle	F&S	II	
CO4	Enumerate a few equipments or aids which help in enhancing the direct perception	Cognitive / Recall	Must know	Knows	demonstrations/ Problem based learning / Group discussion	Written And Viva, quiz	F&S	II	
CO4	Justify the necessity of other pramana with textual references and	Cognitive / Application	Must know	Knows how	Lecture/ Activity based learning/	Written And Viva, open book	F&S	II	

	illustrations				Problem based learning / Group discussion	test			
CO4	Describe the practical application of Pratyaksha in Sharir, Nidan, Chikitsa and Anusandhan (research).	Cognitive / comprehension	Must know	Knows	Lecture/ case-based learning / Group discussion	Written And Viva	F&S	II	
CO4	Justify the role Pratyaksha (Observation and interpretation skills for generalization of results) in research	Cognitive / Application	Must know	Knows how	Lecture/ Activity based learning/ Problem based learning / Group discussion	Written And Viva	F&S	II	
CO4	Realizes importance as well as limitation of Pratyaksha	Affective	Must know	Knows	Group discussion	Viva	F&S	II	
CO4	Recite the concern Verses from Tarkasangrah & CharakSamhita	Cognitive Recall	Desirable to know	knows	Audio clips, classroom Recitation	Viva, Recitation competetion	F&S	II	
Topic 4 - Anumana pariksha/Pramana Time (Lecture:- _10__hours Non lecture _15__hours)									
CO4	Describe Anumana	Cognitive / Recall	Must know	Knows	Lecture	Written And Viva	F&S	II	
CO4	Define the terms with an example (Anumiti, Paramarsha, Vyapti, Hetu, Sadhya, Paksha, Drishtanta)	Cognitive / Recall	Must know	Knows	Lecture/ enquiry based learning	Written And Viva, quiz	F&S	II	
CO4	Describe the types of anumana	Cognitive / Recall	Must know	Knows	Lecture/ Activity based learning/ group discussion	Written And Viva,	F&S	II	

CO4	Describe Pancha Avayava Vakya	Cognitive / Recall	Must know	Knows	Lecture/ gamification/ Problem based learning / Group discussion	Written And Viva	F&S	II	
CO4, CO2	Associate Contemporary method of carrying out research with Pancha Avayava Vakya	Cognitive / Comprehension	Desirable to know	Knows how	Self directed learning, / Problem based learning / Group discussion	Written And Viva, open book test	F&S	II	
CO4	Define vyapti	Cognitive / Recall	Must know	Knows	Lecture/ Activity based learning	Written And Viva	F&S	II	
CO4	Describe the types of vyapti	Cognitive / Recall	Must know	Knows	Lecture/ Problem based learning	Written And Viva	F&S	II	
CO4	Define hetu	Cognitive / Recall	Must know	Knows	Lecture/ Activity based learning	Written And Viva	F&S	II	
CO4	Describe the types of hetu	Cognitive / Recall	Must know	Knows	group discussion	Written And Viva	F&S	II	
CO4	Enlist Sad-hetu Lakshana	Cognitive / Recall	Must know	Knows	Lecture/ Problem based learning	Written And Viva, quiz	F&S	II	
CO4	Define Hetwabhasa	Cognitive / Recall	Must know	Knows	Lecture/ Problem based learning	Written And Viva	F&S	II	
CO4	Explain the types of Hetwabhasa	Cognitive / Comprehension	Must know	Knows	Lecture/Tutorial group discussion	Written And Viva, puzzle, quiz	F&S	II	
CO4	Describe Ahetu	Cognitive / Recall	Must know	Knows	Lecture/ Activity based learning	Written And Viva	F&S	II	

CO4	Describe Tarkaas per Nyaya Sutra and Tarka Sangraha	Cognitive / Recall	Must know	Knows	Lecture Tutorial/ Problem based learning	Written And Viva, quiz	F&S	II	
CO4	Distinguish between Tarka as Aprama and tool in Anumana	Cognitive / Comprehension	Must know	Knows how	Enquiry based learning/ group discussion/debate	Written And Viva	F&S	II	
CO4	Justify the role of Tarka in Anumana	Cognitive / Comprehension	Must know	Knows how	Activity based learning/ Problem based learning / Group discussion	Written And Viva, open book test	F&S	II	
CO4	Demonstrate the practical applications of Anumana Pariksha (with few examples) in Sharir, Nidan, Chikitsa and Anusandhan (research).	Cognitive / Application	Must know	Knows how	Role play/ Game based learning / Group discussion	Written And Viva, open book test	F&S	II	
CO4	Recite the concern Verses from Tarkasangraha & CharakSamhita	Cognitive Recall	Desirable to know	knows	Audio clips, classroom Recitation	Viva, Recitation competetion	F&S	I	
Topic 5 - Yukti pariksha/Pramana Time (Lecture:- _2__hours Non lecture _2__hours)									
CO4	Describe Yukti	Cognitive / Recall	Must know	Knows	Lecture/ Activity based learning/ Group discussion	Written And Viva	F&S	III	
CO4	Compare Yukti as an independent Pariksha and as a part of Anumana	Cognitive / Comprehension	Must know	Knows how	Lecture/ Activity based learning/ Problem based	Written And Viva, open book test	F&S	III	

					learning / Group discussion				
CO4	Describe the Importance of Yukti in Ayurveda	Cognitive / Recall	Must know	Knows how	Lecture / Activity based learning / Problem based learning / Group discussion	Written And Viva	F&S	III	
CO4	Describe the practical application of Yukti in Sharir, Nidan, Chikitsa and Anusandhan (research).	Cognitive Recall	Must know	Knows how	Lecture / Activity based learning / Problem based learning / Group discussion	Written And Viva	F&S	III	
CO4	Recite the concern Verses from CharakSamhita	Cognitive Recall	Desirable to know	knows	Audio clips, classroom Recitation	Viva, Recitation competition	F&S	III	
8. Topic 6 – Upamana Pramana Time (Lecture:- __2_ hours Non lecture _4__ hours)									
CO4	Define Upamana..Enlist the types of Upaman	Cognitive / Recall	Must know	Knows	Lecture / Activity based learning	Written And Viva	F&S	III	
CO4	Describe the Importance of Upamana in Ayurveda	Cognitive / Recall	Must know	Knows	Lecture / Problem based learning / Group discussion	Written And Viva	F&S	III	
CO4	Describe the practical applications of Upamana in Sharir, Nidan, Chikitsa and Anusandhan.	Cognitive / Comprehension	Must know	Knows	Lecture / Game based learning / Problem based learning / Group discussion	Written And Viva, quiz	F&S	III	
CO4	Recite the concern Verses from Tarkasangrah & Charak	Cognitive Recall	Desirable to know	knows	Audio clips, classroom Recitation	Viva, Recitation competition	F&S	III	

Topic 7 - Karya- Karana Siddhanta Time (Lecture:- _11__hours Non lecture _13__hours)									
CO5 CO2	Define Karya and Karana. List types of Karana. Charakokta Dashvidha Parikshya Bhava.	Cognitive/ Recall	Must know	Knows	Lecture Tutorial	Written and Viva	F & S	III	
CO5	Explain Charakokta Dashvidha Parikshya Bhava.	Cognitive/Co mprehension	Must know	Knows	Lecture/Problem Based learning	Written and Viva	F & S	III	
CO5 CO2	Describe the significance of Karya and Kaarana in Ayurveda	Cognitive/ Comprehensi on	Must know	Knows how	Lecture/problem based activity	Written and Viva	F & S	III	
CO5 CO2	Realises the utility of Charakokta Dashvidha Parikshya Bhav in understanding situations and taking decisions	Affective	Must know	Knows	Group discussion/ Role play/ Debate		F	III	
CO5 CO2	Distinguish different opinions regarding the manifestation of Karya from Karana	Cognitive / Application	Must know	Knows how	Edutainment Role play/ Debate group discussion/debat e	Written and Viva, quiz	F & S	III	
CO5 CO2	Analyse Satkaryavada and relate it with Ayurveda Siddhanta	Cognitive / Application	Must know	Knows how	Lecture & Group Discussion/deba te	Written and Viva	F & S	III	
CO5 CO2	Analyse Asatkaryavada & relate it with Ayurveda Siddhanta	Cognitive / Application	Must know	Knows how	Lecture & Group Discussion/deba te	Written and Viva	F & S	III	

CO5 CO2	Analyse Parinamavada & relate it with Ayurveda Siddhanta	Cognitive / Application	Must know	Knows how	Lecture & Group Discussion	Written and Viva	F & S	III	
CO5 CO2	Analyse Arambhavada & relate it with Ayurveda Siddhanta	Cognitive / Application	Must know	Knows how	Lecture & Group Discussion	Written and Viva	F & S	III	
CO5 CO2	Analyse Paramanuvada and relate it with Ayurveda Siddhanta	Cognitive / Application	Must know	Knows how	Lecture & Group Discussion	Written and Viva	F & S	III	
CO5 CO2	Explain Vivartavada and relate it with Ayurveda Siddhanta	Cognitive/ Comprehension	Must know	Knows how	Lecture & Group Discussion	Written and Viva	F & S	III	
CO5 CO2	Explain Kshanabhangurvada and relate it with Ayurveda Siddhanta	Cognitive/ Comprehension	Must know	Knows how	Lecture & Group Discussion	Written and Viva	F & S	III	
CO5 CO2	Explain Swabhavavada and relate it with Ayurveda Siddhanta	Cognitive/ Comprehension	Must know	Knows how	Lecture & Group Discussion	Written and Viva	F & S	III	
CO5 CO2	Explain Peelupakavada and relate it with Ayurveda Siddhanta	Cognitive/ Comprehension	Must know	Knows how	Lecture & Group Discussion/debate	Written and Viva	F & S	III	
CO5	Explain Pitharapakavada and relate it with Ayurveda Siddhanta	Cognitive/ Comprehension	Must know	Knows how	Lecture & Group Discussion/debate	Written and Viva	F & S	III	
CO5	Explain Anekantavada and relate it with Ayurveda Siddhanta	Cognitive/ Comprehension	Must know	Knows how	Lecture & Group Discussion	Written and Viva	F & S	III	
CO5 CO2	Explain Swabhavoparamavada.	Cognitive/ Comprehension	Must know	Knows how	Lecture & Group Discussion	Written and Viva	F & S	III	

CO5 CO2	Recite the concern Verses from Tarkasangrah & CharakSamhita	Cognitive Recall	Desirable to know	knows	Audio clips, classroom Recitation	Viva, Recitation competition	F&S	III	
CO5, CO2	Value cause and effect theory	Affective	Must know	Knows	Debate/Group Discussion	Viva	F	III	
CO 5, CO2	Analyse cause effect relationship, causality, causation in contemporary sciences	Cognitive / Comprehensi on	Nice to know	Knows	Self directed learning , Flipped classroom, Group Discussions.	-	-	III	

List of Practicals

Course AyUG-PV : Practical List

Marks: 100

Hours:- 45 (included in non Lecture hours)

SN	Name of Topic/ Name of Practical	Term	Activity / Practical
P1	Ayurved Nirupan	I	Ayurved Perception identification: Ask the meaning of Ayurveda to your parents, friends and family members (min 10) and write it, give your opinion on it. Introduction to communication skills. Conduct of survey.
P2	Darshana and Padartha	I	<ul style="list-style-type: none">• Darshan concept development: Find and write names of different philosophies?• Discussions: meanings of philosophy, darshana, spirituality, religion. Are they same or different? Write in Activity Book.
P3	Hitayu/ Sukhayu lakshanas	I	<ul style="list-style-type: none">• Identification of characters of Hitayu, & Sukhayu in Healthy individuals.
P4	Dravya	I	<ol style="list-style-type: none">1. Identification of Guna and Karma. Make a list of 10 dravyas surrounding you and identify Guna and Karma in it.2. Panchbhautik nature identification: Demonstrate the Panchamahabhuta in any five ahara dravya and five sharira dravya/ avayava with a neat labeled diagramme. (ex-cell, blood, vata, pitta, kapha etc).3. Determination of Directions: Identify the directions in and enlist the content in each direction in your campus.4. Conceptualize Time : Discussion and understanding of Kala as per Ayurved and contemporary sciences.5. Categorization of Aushadhi dravya by dominance of Mahabhoot e.g. Parthiv / Jaleeya/ Agney/ Vayaveey/ Akasheey dravya with reasons.6. Early Clinical Exposure(ECE): Visit the OPD, find the diseases common for different age groups (balyavastha/ tarunyavastha/ vrudhastha)

P5	Guna	II	<p>Identification:</p> <p>Sartha Guna : Identify concept of Shabda, Sparsha, Rupa, Rasa, Gandha in Dravya.</p> <p>Application and demonstration find the different therapies based on 5 Sartha Gunas. e.g. Gandha. Shabda, Sparsha.</p> <p>Observe /Experience/ Study / Read book or article present on (any one)</p> <p>Aromatherapy- Gandha Chikitsa. Music therapy/ Mamtra Chikitsa -Shabda guna.</p> <p>Sparsha- Touch therapy.</p> <p>Gurvadi Guna: Identify guna in any five ahara dravya : different vargas.</p> <p>in Sharir dravya: dosha, dhatu mala.</p> <p>Comparison Gurvadi gunas and correlate with concepts learned in Physics, Chemistry and Biology.</p> <p>Observation(survey) of the effects of Seasons on Gurvadi gunas in body, nature etc.</p> <p>Paradi Guna and their application in five examples.</p> <p>Atma Guna identification: Making or Framing their real life situations related to Atma Guna(sukha, dukkha etc)</p>
P6	Karma	II	<p>Conceptualization Karma, its application in branch of Ashtanga Ayurveda.(panchakarma/ Shastrakarma etc</p> <p>Illustration: Make a collage of pictures/ photos depicting five types of karma and their similarity with concepts learned in Physics, Chemistry etc.</p>
P7	Pratyaksha Praman	II	Observation: Note down the factors from Prakruti analysis which you can

			<p>understand through pratyaksh (like- colour, dry skin)</p> <p>Identification: Find few identification marks for identification of herbs/ minerals which need Pratyaksha.</p> <p>ECE: Pramans in examination of patient and Diagnosis of disease.</p> <p>Identifies the gunas which can be perceived by one sense (ekendriya) organ and more than one sense organ (Dwiendriya etc).</p> <p>Demonstrate with examples of Shabda,(snigdha/ ruksha etc) Sparsha (snigdha/ ruksha etc), Rupa, Rasa(taste threshold video), Gandha. (5 examples)</p>
P8	Pratyaksha Praman Limitations	II	<p>Observation: Find out how one can overcome limitations of Pratyaksha by advances in equipment. (microscopre, telescope etc)</p> <p>Justification of use of various equipment in examination of patient and Diagnosis of disease. (X ray, USG etc)</p>
P9	Anuman Praman	II	<p>Application in Real life situation</p> <p>Write 3 examples of Vyapti (associations)in real life.</p> <p>Find and explain 5 examples of Anumana pramana as per types.</p> <p>Write 3 examples of panchavayava vakya. Correlate it with practicals that you have conducted.</p> <p>Examples of Hetvabhas.(Any three)</p> <p>Study use of inference in various sciences.</p>
P10	Samanya Vishesh Siddhant	III	<p>Identification: Visit vanaushadhi udyan of your college. Find samanyatva and visheshatva among plants.</p> <p>Illustration : Make a chart of food articles and activities to illustrate the relationship of samanya/vishesha with dosha-dhatu-malas.</p> <p>Application: Make a list/ collection of seasonal vegetables and fruits which are</p>

			Samanya/Vishesha with the dosha.(five examples)
P11	Samvay	III	Conceptualization Mention five real life examples of Nitya and anitya sambandha.
P12	Abhav	III	Application: Write five real life experiences of pragabhava, pradhwamsabhava, atyantabhava and anyonyabhav.
P13	Upman Praman	III	Illustration : Upamana in practical life or with your prior learning. (Examples of upamana from Ashtang Hridaya and Charak samhita)and prior learning (Examples in Physics, chemistry etc)
P14	Yukti Praman	III	Conceptualization: How various factors influence the process of the decision making? Application : Write 5 examples of Yukti in practical life or with your prior learning. ECE: Role of Yukti in Sharir, Nidan, Chikitsa and Anusandhan.
P15	Satkaryavad and other vadas	III	Justification : Parinama vada: Describe 3 real life or with your prior learning examples (Physics, Chemistry etc). Justification of Satkarya vada.: Describe 3 real life or with your prior learning examples. Swabhavoparama vada : Describe 3 real life or with your prior learning examples. Pakajotpatti siddhanta.: Write 3 examples of real life or with your prior learning. Justification of Arambhavada Describe 3 real life or with your prior learning examples
P16	Cause and effect theory	III	Illustration: Karya Karan Bhav: Write Samavayi, asamavayi and Nimitta Karana of a karya in real life examples (5 examples). Examples learned in Physics, Chemistry, Biology. Search Find out use of cause effect theory in other sciences. Schematic representation of cause effect in any examples.

			Application: Assess the 10 factors of Charakokta Karyakarana bhava regarding any task consider the task as karya Remember and write theories of evolution you learned within and other than syllabus.
A1	Other Activities in Journal.	I, II, III.	1. Oral presentation: on allotted topic, PPT slides be made and Copy of slides be pasted in activity book 2. Quiz: Participation of all students in Quiz on some topic of Padartha vijnana. 3. Recitation: Important shloka of padartha vijnana recitation everyday or alternate days by students and written in diary. 4. Each student will do Pick and speak on topics of Padartha Vijnana. 5. e charts / animations etc.

Table 4: Learning objectives (Practical) of AyUG-PV

Practical									
A4 Course outcome	B4 Learning Objective (At the end of the session, the Students should be able to)	C4 Domain/ sub	D4 Must to know/ desirab le to know/ Nice to know	E4 Level Does/ Shows how/ Knows how/ Know	F4 T-L method	G4 Assessmen t	H4 Formativ e /summati ve	I4 Term	J4 Integrati on
	Practical1-Ayurved Nirupan Time (practical- 2 hours)								
CO1	Define Ayurved	Cognitive Recall	MK	knows	discussion	Viva	F & S	I	
CO1	Conduct the survey to identify the perception about Ayurved in the society	Psychom otor	MK	Shows	Demonstration/ discussion	Viva	F&S	I	
	Practical2-Darshan and Padarth (Practical- 1hour)								
CO2	Discuss and compare the meanings of philosophy, darshana, spirituality, religion.	Cognitive / Recall	MK	Knows how	Demonstration/ discussion/ brainstorming	Viva	F &S	I	
CO2	Find and write names of different philosophies?	Cognitiv e/Recall	MK	Knows how	Demonstration/ discussion/ brainstorming	Viva	F&S	I	
Practical - 3(hitayu/Sukhayu) Time (Practical/ Clinical 2 hours) :									

CO 1	Discuss characters of hitayu, & Sukhayu	Cognitive /Recall	MK	Knows how	Demonstration/ discussion/ brainstorming	Viva	F&S	I	
CO 1	Identifies characters of hitayu, & Sukhayu in healthy individuals	Cognitive / Comprehension	MK	Knows How	Demo/Practical	Viva	F& S	I	
Practical 4- Dravya Time (Practical/ Clinical 6 hours)									
CO1,3	Define dravya, discuss nature of dravya	Cognitive Recall	MK	Knows how	Demonstration/ discussion/ brainstorming	Viva	F&S	I	
CO1,3	Identify pentaelemental nature of Ahar Dravya Aushadh Dravya in given examples	Cognitive/ Comprehension	MK	Shows	Practical/Demonstration	Viva/ Practicals	F& S	I	
CO1,3	Identify the Guna and Karma in the given dravya	Cognitive/ Comprehension	MK	Knows how	Practical/Demonstration	Viva/ Practicals	F&S	I	
CO1,3	Categorize the Aushadhi dravya by dominance of Mahabhoot e.g. Parthiv /Jaleeya/ Agney/ Vayaveey/ Akasheey dravya with reasons	Cognitive/ Comprehension	MK	Knows how	Practical/Demonstration	Viva/ Practicals	F&S	I	
CO1,3	Identify the directions in and enlist the content in each direction in your campus.	Cognitive/ Comprehension	MK	Knows how	Practical/Demonstration	Viva/ Practicals	F&S	I	
CO1,3	Discuss the concept of Kala as per Ayurved and	Cognitive/ Recall	MK	Knows	Demonstration/ discussion/	Viva	F&S	I	

	contemporary sciences.				brainstorming				
CO1,3	find the diseases common for different age groups (balyavastha/ tarunyavastha/ vrudhavadastha)	Cognitive/ Comprehe nsion	MK	Knows how	Early Clinical Exposure.	Viva/ Practicals	F&S	I	
Practical - 5(Guna) Time (Practical/ Clinical 5 hours)									
CO 3	Discuss Guna,	Cognitive/ Recall	MK	Knows how	Demonstration/ discussion/ brainstorming	Viva	F&S	II	
CO 3	Identify Gunas in given Ahar dravya.	Cognitive/ Comprehe nsion	MK	Knows How	Demo/Practical	Viva/ Practicals	F&S	II	
CO 3	Identify Gunas in given Sharir dravya.	Cognitive/ Comprehe nsion	MK	Knows how	Practical/Demon stration	Viva/ Practicals	F&S	II	
CO 3	Identify the specification of Shabda, Sparsha, Rupa, Rasa, Gandha in Dravy	Cognitive/ Comprehe nsion	MK	Knows how	Demonstration of Dravyas like- kutki, gojihva, guduchi, yashtimadhu, sariva etc.	Viva/ Practicals	F&S	II	
CO 3	find the different therapies based on 5 Sartha Gunas. e.g.Gandha. Shabda, Sparsha.	Cognitive/ Comprehe nsion	DK	knows	Demonstration/ discussion/ brainstorming	Viva/ Practicals	F&S	II	

CO 3	Observe and record the effects of Seasons on Gurvadi gunas in body and nature	Cognitive/analysis	MK	Knows how	Practical/Demonstration	Viva/Practicals	F&S	II	
CO 3	Correlate Gurvadi gunas with concepts learned in Physics, Chemistry and Biology.	Cognitive/comprehension	MK	Knows how	Demonstration/discussion/brainstorming	Viva/Practicals	F&S	II	
CO 3	Identify the paratva-aparatva in five examples	Cognitive/Comprehension	MK	Knows how	Practical/Demonstration	Viva/Practicals	F&S	II	
CO 3	Perform the Sanskar (toyasannikarsha/vasan/Bhavana)	Psychomotor	MK	Shows	Practical/Demonstration	Viva/Practicals	F&S	II	
CO 3	Frame the real life situations related to Atma Guna(sukha, dukkha etc)	Cognitive/Comprehension	MK	Knows how	Demonstration/discussion/brainstorming	Viva/Practicals	F&S	II	
Practical -6 Karma Time (Practical/ Clinical 3 hours)									
CO 3	Discuss Karma	Cognitive/Recall	MK	Knows how	Demonstration/discussion/brainstorming	Viva	F&S	II	
CO 3	Classify Karma in given	Cognitive/Comprehe	MK	Knows how	Demonstration/Practical	Viva/Practicals	F&S	II	

	examples (panchakarma/Shastrakarma)	nsion							
CO 3	Illustrate five types of Karma in collage of pictures/ photos	Cognitive/ Comprehe nsion	MK	Knows how	Practical/Demon stration	Viva/ Practicals	F&S	II	
CO 3	compare Karma with concepts learned in Physics, Chemistry etc.	Cognitive/ Comprehen sion	MK	Knows	Practical/Demon stration	Viva/ Practicals	F&S	II	
Practical – 7 Pratyaksha Praman Time (Practical/ Clinical 5 hours)									
CO4	Discuss Pratyaksha Praman	Cognitive/ Recall	MK	Knows how	Demonstration/ discussion/ brainstorming	Viva	F&S	II	
CO4	Find identification marks for identification of herbs/ minerals which need Pratyaksha.	Cognitive/ Comprehe nsion	MK	Knows how	Demonstration/ Practical	Viva/ Practicals	F&S	II	
CO4	Note down the factors from Prakruti analysis which need pratyaksh (like- colour, dry skin)	Cognitive/ Comprehe nsion	MK	Knows how	Practical/Demon stration	Viva/ Practicals	F&S	II	
CO4	Discuss the use of pratyaksha in examination of patient and Diagnosis of disease.	Cognitive/ Comprehe nsion	MK	Knows how	ECE/ discussion	Viva/ Practicals	F&S	II	
CO4	identifies with examples of Shabda,(snigdha/ ruksha etc) Sparsha (snigdha/ ruksha etc),	Cognitive/ Comprehe nsion	MK	Knows how	Practical/Demon stration/ Shabd from recordings, (snigdha/	Viva/ Practicals	F&S	II	

	Rupa, Rasa(taste threshold video), Gandha.				ruksha etc) Sparsha by touching or instruments. (snigdha/ruksha etc), Rupa, Rasa(taste threshold video), Gandha.(intensity of Smell)				
CO4	Identifies the gunas which can be perceived by one sense (ekendriya) organ and more than one sense organ (Dwiendriya etc).	Cognitive/Comprehension	MK	Knows how	Demonstration/discussion/brainstorming	Viva/Practicals	F&S	II	
Practical -8 Pratyaksha Badhakar Bhav Time (Practical/ Clinical 2 hours)									
CO4	Discuss Pratyaksha Badhakar Bhav (limitations of pratyaksha.)	Cognitive/recall	MK	Knows	Lecture	Viva	F&S	II	
CO4	Identify and classifies Pratyaksha badhakar Bhav in given examples.	Cognitive/Comprehension	MK	Knows how	Demonstration/Practical. Ask examples or encourage to identify examples.	Viva/Practicals	F&S	II	

CO4	Justify the use of various equipment in examination of patient and Diagnosis of disease.	Cognitive/ Comprehe nsion	MK	Knows how	Demonstration/ discussion/ brainstorming/ Video Clips	Viva/ Practicals	F&S	II	
Practical -9 Anuman praman Time (Practical/ Clinical 5 hours)									
CO4	Discuss Anuman praman	Cognitive/ Recall	MK	Knows	Demonstration/ discussion/ brainstorming	Viva	F&S	II	
CO4	Identify and classify Anuman praman with type in given examples.	Cognitive/ Comprehe nsion	MK	knows	Demonstration/ Practical, Ask examples or encourage to identify examples.	Practical/De monstration	F&S	II	
CO4	Find and discuss examples of Vyapti (associations)in real life.	Cognitive/ Comprehe nsion	MK	Knows how	Practical/Demon stration. Ask examples or encourage to identify examples.	Practical/De monstration	F&S	II	
CO4	Apply panchavayava vakya for drawing inference in practicals conducted	Cognitive/ Comprehe nsion	MK	Knows how	Practical/Demon stration	Practical/De monstration	F&S	II	
CO4	Identify and discuss Hetvabhas in given examples	Cognitive/ Comprehe nsion	MK	Knows how	Practical/Demon stration. Ask examples or encourage to identify	Practical/De monstration	F&S	II	

					examples.				
CO4	Draw inference in various sciences on the basis of Vyapti.	Cognitive/ recall	MK	knows	Demonstration/ discussion/ brainstorming	Practical/ Demonstration	F&S	II	
Practical -10 Samanya Vishesh Siddhant Time (Practical/ Clinical 5 hours)									
CO 3	Discuss Samanya vishesh Siddhant	Cognitive/ Recall	MK	Knows	Demonstration/ discussion/ brainstorming	Viva	F&S	III	
CO 3	Identify and classifies Samanya vishesh Siddhant with type in given examples.	Cognitive/ Comprehension	MK	Knows how	Demonstration/ Practical/ Ask examples or encourage to identify examples.	Viva/ Practical	F&S	III	
CO 3	Identify samanyatva and visheshatva among plants in Vanaushadhi udyan	Cognitive/ Comprehension	MK	Knows how	Practical/Demonstration.	Viva/ Practicals	F&S	III	
CO 3	Make a chart/ eChart of food articles and activities to illustrate the relationship of samanya/vishesha with dosha-dhatu-malas.	Cognitive/ Comprehension	MK	Knows how	Practical/Demonstration	Presentation/ Viva/ Practicals	F&S	III	
CO 3	Make a poster seasonal vegetables and fruits which are Samanya/Vishesha with the dosha.	Cognitive/ Comprehension	MK	Knows how	Practical	Presentation /Viva/ Practicals	F&S	III	
Practical -11 Samavay Time (Practical/ Clinical 1 hour)									

CO 3	Discuss Samavay	Cognitive/ Recall	MK	Knows	Demonstration/ discussion/ brainstorming	Viva	F&S	III	
CO 3	Mention five real life examples of Nitya and anitya sambandha.	Cognitive/ Comprehe nsion	MK	Knows how	Demonstration/ Practical/ Ask examples or encourage to identify examples.	Viva/ Practical	F&S	III	
Practical -12 Abhav Time (Practical/ Clinical 1)									
CO 3	Discuss Abhav	Cognitive/ Recall	MK	Knows how	Demonstration/ discussion/ brainstorming	Viva	F&S	III	
CO 3	Write real life experiences of pragabhava, pradhwamsabhava, atyantabhava and anyonyabhav.	Cognitive/ Comprehe nsion	MK	Shows	Demonstration/ Practical/ Ask examples or encourage to identify examples.	Viva	F&S	III	
Practical - 13 Upman Praman Time (Practical/ (Practical/ Clinical 1 hour)									
CO4	Discuss Upaman Praman	Cognitive/ Recall	MK	Knows how	Demonstration/ discussion/ brainstorming	Viva/ Practical	F&S	III	
CO4	Illustrate Upamana in practical examples and real life situation.	Cognitive/ Comprehe nsion	MK	Knows how	Demonstration/ Practical/ Ask examples or encourage to identify examples.	Viva/ Practicals	F&S	III	
CO4	Identify Examples of upamana from Ashtang	Cognitive/ Comprehe	MK	Knows how	Demonstration/ discussion/	Viva/ Practicals	F&S	III	

	Hridaya and Charak Samhita	nsion			brainstorming.				
CO4	Identify examples in Physics, chemistry biology where Upaman is used	Cognitive/ Comprehension	MK	Knows how	Demonstration/ discussion/ brainstorming/ Ask examples or encourage to identify examples.	Viva/ Practicals	F&S	III	
Practical -14 Yukti Praman Time (Practical/ Clinical 1 hour)									
CO4	Discuss Yukti Praman	Cognitive/ Recall	MK	Knows	Demonstration/ discussion/ brainstorming	Viva	F&S	III	
CO4	Illustrate examples of Yukti in practical life or with your prior learning.	Cognitive/ Comprehension	MK	Knows how	Demonstration/ Practical/ Ask examples or encourage to identify examples.	Viva/ Practicals Quiz	F&S	III	
CO4	Identify Role of Yukti in Nidan, Chikitsa and Anusandhan (research).	Cognitive/ Comprehension	MK	Knows how	ECE/ Demonstration/	Viva/ Practicals/ PBL	F&S	III	
Practical -15 Various Vadas Time (Practical/ Clinical 3 hour)									
CO5 CO2	Discuss Satkaryavad	Cognitive/ Recall	MK	Knows how	Demonstration/ discussion/ brainstorming	Viva	F&S	III	
CO5 CO2	Justify Satkaryavad through real life	Cognitive/ comprehension	MK	Knows how	Demonstration/ Practical/ /Ask examples or	Viva/ Practicals/ PBL	F&S	III	

	examples/ examples from prior learning				encourage to identify examples.				
CO5 CO2	Justify Parinamvad through real life examples/ examples from prior learning	Cognitive/ comprehension	MK	Knows how	Practical/Demonstration/ /Ask examples or encourage to identify examples.	Viva/ Practicals	F&S	III	
CO5 CO2	Justify Pakajotpatti through real life examples/ examples from prior learning	Cognitive/ comprehension	MK	Knows how	Practical/Demonstration/ /Ask examples or encourage to identify examples.	Viva/ Practicals	F&S	III	
CO5 CO2	Justify Swabhavoparamvad through real life examples/ examples from prior learning	Cognitive/ comprehension	MK	Knows how	Demonstration/ discussion/ brainstorming/ /Ask examples or encourage to identify examples.	Viva/ Practicals	F&S	III	
CO5 CO2	Justify Arambhavad through real life examples/ examples from prior learning	Cognitive/ comprehension	MK	Knows how	Demonstration/ Practical//Ask examples or encourage to identify examples.	Viva/ Practicals	F&S	III	
Practical -16 Cause and Effect theory Time (Practical/ Clinical 2 hours)									
CO5, CO2	Discuss Cause and effect theory	Cognitive/ comprehend	MK	Knows	Demonstration/ discussion/ brainstorming	Viva/ Quiz	F&S	III	
CO5 CO2	Identify Samavayi, Asamavayi and Nimitta	Cognitive/ Comprehe	MK	Knows How	Demonstration/ Practical/Ask	Viva/ Practicals	F&S	III	

	karan of a Karya in real life examples/ examples with prior learning	nsion			examples or encourage to identify examples.				
CO5	Find out use of cause effect theory in other sciences.	Cognitive/ comprehension	MK	Knows how	Practical/Demonstration	Viva/ Practicals/ Debate	F&S	III	
CO5	Represent cause and effect schematically in any examples	Cognitive/ comprehension	MK	Knows how	Practical/Demonstration	Viva/ Practicals	F&S	III	
CO5	Assess the 10 factors of Charakokta Karyakarana bhava regarding any task consider the task as karya	Cognitive/ analysis	MK	Knows how	Practical/Demonstration	Viva/ Practicals	F&S	III	
CO5	Write theories of evolution you learned within and other than syllabus.	Cognitive/ comprehension	MK	Knows how	Practical/Demonstration	Viva/ Practicals	F&S	III	

Table 5: Non Lecture Activities Course AyUG-PV

Table 5- Course AyUG-PV Non Lecture Activities- 140

	List non lecture Teaching-Learning methods *	No of Activities
1	GROUP DISCUSSION	20
2	PRACTICALS AND DEMONSTRATIONS	45
3	ACTIVITY BASED LEARNING	10
4	PROBLEM BASED LEARNING	10
5	ENQUIRY BASED LEARNING	8
6	CASE BASED LEARNING	6
7	GAME BASED LEARNING	8
8	FLIPPED CLASSROOMS	6
9	DEBATE	8
10	SEMINARS	6
11	TUTORIALS	5
12	ROLE PLAY	5
13	SELF DIRECTED LEARNING	3
		140

Table 6: Assessment Summary AyUG-PV

6 A - Number of Papers and Marks Distribution

S.No.	Subject Code	Papers	Theory	Practical/Clinical Assessment					Grand Total
				Practical/ Clinical	Viva	Electives	IA	Sub Total	
1.	AyUG-PV	2	200	100	60	10 (Set-FB)	30	200	400

6 B - Scheme of Assessment (formative and Summative)

SR.NO.	PROFESSIONAL COURSE	DURATION OF PROFESSIONAL COURSE		
		First Term (1-6 Months)	Second Term (7-12 Months)	Third Term (13-18 Months)
1	First	3 PA & First TT	3 PA & Second TT	3 PA & UE

PA: Periodical Assessment; TT: Term Test; UE: University Examinations

6 C - Calculation Method for Internal assessment Marks (30 Marks)

TERM	PERIODICAL ASSESSMENT*					TERM TEST**	TERM ASSESSMENT	
	A	B	C	D	E	F	G	H
	1 (15 Marks)	2 (15 Marks)	3 (15 Marks)	Average (A+B+C/3)	Converted to 30 Marks (D/15)*30)	Term Test (Marks converted to 30)	Sub Total _/60 Marks	Term Assessment (..../30)
FIRST							E+F	(E+F)/2
SECOND							E+F	(E+F)/2
THIRD						NIL		E
Final IA	Average of Three Term Assessment Marks as Shown in 'H' Column.							
	Maximum Marks in Parentheses *Select an Evaluation Method which is appropriate for the objectives of Topics from the Table 6 D for Periodic assessment. Conduct 15 marks assessment and enter marks in A, B, and C. ** Conduct Theory (100 Marks)(MCQ(20*1 Marks), SAQ(8*5), LAQ(4*10)) and Practical (100 Marks) Then convert to 30 marks.							

6 D -Evaluation Methods for Periodical Assessment

S. No.	Evaluation Methods
1.	Activities Indicated in Table 3 - Column G3 as per Indicated I, II or III term in column I3.
2.	Practical / Clinical Performance
3.	Viva Voce, MCQs, MEQ (Modified Essay Questions/Structured Questions)
4.	Open Book Test (Problem Based)
5.	Summary Writing (Research Papers/ Samhitas)
6.	Class Presentations; Work Book Maintenance
7.	Problem Based Assignment
8.	Objective Structured Clinical Examination (OSCE), Objective Structured Practical Examination (OPSE), Mini Clinical Evaluation Exercise (Mini-CEX), Direct Observation of Procedures (DOP), Case Based Discussion (CBD)
9.	Extra-curricular Activities, (Social Work, Public Awareness, Surveillance Activities, Sports or Other Activities which may be decided by the department).
10.	Small Project
11.	AyUG-PV Specific Test on Topics in list of practicals.

6 E- Paper Layout

I PROFESSIONAL BAMS EXAMINATIONS

AyUG-PV

Paper-I

Time: 3 Hours Maximum Marks: 100

INSTRUCTIONS: All questions compulsory

TOTAL MARKS 100

		Number of Questions	Marks per question	Total Marks
Q 1	Multiple Choice Questions (MCQ)	20	1	20
Q 2	Short answer questions (SAQ)	8	5	40
Q 3	Long answer questions (LAQ)	4	10	40
				100

I PROFESSIONAL BAMS EXAMINATIONS AyUG

PV

Paper-II

Time: 3 Hours Maximum Marks: 100

INSTRUCTIONS: All questions compulsory

TOTAL MARKS 100

		Number of Questions	Marks per question	Total Marks
Q 1	Multiple Choice Questions (MCQ)	20	1	20
Q 2	Short answer questions (SAQ)	8	5	40
Q 3	Long answer questions (LAQ)	4	10	40
				100

6 F- Disribution of Theory Exam

	Paper I			D Type of Questions “Yes” can be asked. “No” should not be asked.		
	A List of topics	B Term	C Marks	MCQ (1 mark)	SAQ (5 marks)	LAQ (10 marks)
1	Ayurveda nirupana	I	25	Yes	Yes	Yes
2	Padartha and darshana nirupana	I		Yes	Yes	Yes
3.	Dravya vijnaneeyam	II	48	Yes	Yes	Yes
4.	Guna vijnaneeyam	II		Yes	Yes	Yes
5.	Karma vijnaneeyam	II		Yes	Yes	Yes
6.	Samanya vijnaneeyam	III	27	Yes	Yes	Yes
7.	Vishesha vijnaneeyam	III		Yes	Yes	Yes
8.	Samavaya vijnaneeyam	III		Yes	Yes	No
9	Abhava vijnaneeyam	III		Yes	Yes	No

	Paper II			D Type of Questions “Yes” can be asked. “No” should not be asked.		
	A List of Topics	B Term	C Marks	MCQ (1 Mark)	SAQ (5 Marks)	LAQ (10 Marks)
1	Pariksha	I	26	YES	YES	YES
2	Aptopdesha Pariksha/Pramana	I		YES	YES	YES
3.	Pratyaksha Pariksha/Pramana	II	42	YES	YES	YES
4.	Anumanapariksha/Pramana	II		YES	YES	YES
5.	Yuktipariksha/Pramana	III	32	YES	YES	NO
6.	UpamanaPramana	III		YES	YES	NO
7.	Karya- Karana Siddhanta	III		YES	YES	YES

6 G- Question paper blue print Paper

I –

A Question Sr. No	B Type of Question	C Question Paper Format
.Q1	Multiple choice Questions (MCQ) 20 Questions 1 mark each All compulsory (Must Know 15 MCQ Desirable to know 3 MCQ Nice to know 2 MCQ)	1. Topic number 1 2. Topic number 2 3. Topic number 3 4. Topic number 4 5. Topic number 5 6. Topic number 6 7. Topic number 7 8. Topic number 8 9. Topic number 9 10. Topic number 2 11. Topic number 3 12. Topic number 4 13. Topic number 5 14. Topic number 6 15. Topic number 7 16. Topic number 9 17. Topic number 1 18. Topic number 2 19. Topic number 3 20. Topic number 4
Q2	Short answer Questions (SAQ) Eight Questions 5 Marks Each All compulsory (Must know 7 . Desirable to know 1 No Questions on Nice to know.)	1. Topic no.1 2. Topic no.2 3. Topic no.3 4. Topic no.4 5. Topic no.5 6. Topic no.6/ Topic no.7 7. Topic no.8/ Topic no.9 8. Topic no.3/ Topic no.4
Q3	Long answer Questions (LAQ) Four Questions 10 marks each All compulsory (All questions on Must to know. No Questions on Nice to know and Desirable to know.)	1. Topic no.1/ Topic no.2 2. Topic no.3 3. Topic no.4/Topic no.5 4. Topic no.6/ Topic no.7

Paper II

A Question Sr. No	B Type of Question	C Question Paper Format
Q1	Multiple choice Questions (MCQ) 20 Questions 1 mark each All compulsory (Must know 15 MCQ Desirable to know 3 MCQ Nice to know 2 MCQ)	1. Topic number 1 2. Topic number 2 3. Topic number 3 4. Topic number 4 5. Topic number 5 6. Topic number 6 7. Topic number 7 8. Topic number 1 9. Topic number 2 10. Topic number 3 11. Topic number 4 12. Topic number 5 13. Topic number 6 14. Topic number 7 15. Topic number 1 16. Topic number 2 17. Topic number 3 18. Topic number 4 19. Topic number 7 20. Topic number 4
Q2	Short answer Questions (SAQ) Eight Questions 5 Marks Each All compulsory (Must know 7 . Desirable to know 1 No Questions on Nice to know.)	1. Topic no.1 2. Topic no.2 3. Topic no.3 4. Topic no.4 5. Topic no.5 6. Topic no.6 7. Topic no.7 8. Topic no.3/ Topic no.4
Q3	Long answer Questions (LAQ) Four Questions 10 marks each All compulsory (All questions on must know No Questions on Nice to know and Desirable to know)	1. Topic no.1/ Topic no.2 2. Topic no.3 3. Topic no.4 4. Topic no.7

6 H Distribution of Practical Exam

Practical – (Practical 100 + Viva 60 + Elective 10 + IA 30) = (Total 200 Marks)

SN	Heads	Marks
1	Practical (Total Marks 100)	100
a.	Spotting (4 Spots) Problem based on Principles in PV. Topics 1. Pratyaksha praman/Pratyaksha Badhakar Bhav 2. Vada (Any one) 3. Abhav/Samavaya 4. Upaman/Yukti	20
b.	Journal of Activity book/ Projects. (Viva on journal and communication skill)	20
c.	Practical I (10 Marks Each) 1. Identify panchamahabhoot dominance in the given dravya 2. Identify Samanya- Vishesh in the given dravyas 3. Identify the Gunas in the given dravyas (Use different dravyas for different students.)	30
d.	Practical II (Problem based questiones/ Situations)(10 Marks Each)(Any three) 1. Identify and explain the Karya Karan with types in given problem 2. Frame and Write Panchavayav vakya for the given anumana. 3. Identify Vyapti, Paksh, Sadhya, Hetu, Pakshadharmata, Sapaksha, Vipaksha in the give example. 4. Identify and explain Hetvabhas in given example. 5. Identify the vada applicable in given example.(any one vada.) 6. Identify Upama, Sajna- sajni sambhandha in given example.	30
2	Viva Voce	60
	Recitation of Shloka: 10 marks (sutras in Tarka sangraha, Samhitas, other)	
	Questions on Darshan 10 marks	
	Question on Dravya/ Guna/ Karma. 10 marks	
	Question on Samany/vishesh/samavaya/ Abhav 10 Marks	
	Question on one Praman 10 Marks	

	Question on Karya karan bhav 10 Marks.	
3	Internal Assessment	30
4	Electives	10
		200

7. References /Resources



Reference Books

PadarthaVignana books

1. Padarthavigyan
2. AyurvediyaPadarthaVigyana
3. Ayurved Darshana
4. PadarthaVigyana
5. PadarthaVigyana
6. SankhyatantwaKaumadi
7. Psycho Pathology in Indian Medicine
8. CharakEvumSushrutkeDarshanik Vishay
9. AyurvediyaPadarthaVigyana
10. PadarthaVigyana
11. Post graduate text book of Samhitha&Sidhanta
12. Padartha Vigyana
13. AyurvediyaPadarthaVigyana
14. AyurvediyaPadartha Vigyan Parichaya
15. AyurvediyaPadartha Darshan
16. Scientific Exposition of Ayurveda
17. Padarthavignana and Ayurveda itihasa
18. Essentials of padarthavignana
19. Padarthavignanevam Ayurveda Itihasa
20. AyurvediyaPadarthavignana
21. AyurvediyaMoulikaSiddhanta

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COURSE CURRICULUM FOR FIRST PROFESSIONAL BAMS (PRESCRIBED BY NCISM)

शास्त्रं ज्योतिः प्रकाशार्थं दृश्यं बुद्धिरात्मनिः/



SAMSKRITAM EVAM AYURVED ITHIHAS

(SUBJECT CODE-AyUG-SN & AI)

SANSKRIT AND HISTORY OF AYURVEDA

**(Applicable from 2021-22 batch onwards for 5 years or until further notification
by NCISM, whichever is earlier)**

BOARD OF AYURVEDA

**NATIONAL COMMISSION FOR INDIAN SYSTEM OF MEDICINE
NEW DELHI-110058**

NCISM

I professional Ayurvedacharya (BAMS)

SAMSKRITAM EVAM AYURVED ITIHAS

(SUBJECT CODE-AyUG-SN & AI)

SANSKRIT AND HISTORY OF AYURVEDA

(Applicable from 2021-22 batch onwards for 5 years or until further notification by NCISM, whichever is earlier)

Summary

AyUG-SN & AI Total number of Teaching hours: 300			
Lecture hours (LH) – Theory		100 Hours	100 Hours (LH)
Paper I	50 Hours		
Paper II (Sanskrit 40+ AI 10)	50 Hours		
Non-Lecture hours (NLH) – Theory		140 Hours	200 Hours (NLH)
Paper I	74 Hours		
Paper II (Sanskrit 46+ AI 20)	66 Hours		
Non-Lecture hours (NLH) – Practical		60 Hours	

Examination (Papers & Mark Distribution)					
Item	Theory Component Marks AyUG-SN & AI	Practical Component Marks			
		Practical	Viva	Elective	IA
Paper I	100 Sanskrit 100 Marks	--	75*	10 (Set-FA)	15
Paper II	100 Sanskrit 80 Marks and Ayurved Itihas 20 Marks				
Sub-Total	200	100			
Total marks	300				
	*Viva voce examination shall be for Sanskrit and not for Ayurved Itihasa				

Preface

Sanskrit is an ancient still most scientific language of India. The ancient literature created about various subjects in this region is in Sanskrit. The richness of Sanskrit language is accepted by intellectuals across the world. The literature of Ayurveda is also found in Sanskrit. Without understanding the language of the science, it is really hard to read and understand the terminologies, theories, principles of the science given in the Samhitas. Many of the students coming for the course partly introduced or not at all introduced to the Sanskrit language previously. Hence for understanding Ayurveda in its originality, Sanskrit is one of subject in First year BAMS curriculum. Similar to any language Listening, Reading, Writing and Speaking are the four pillars of a Sanskrit. Reading, writing and understanding Samhitas will be emphasized and listening and speaking can give confidence to the student and enhance the study.

Learning a language just by studying the theory is not enough hence curriculum of Sanskrit is designed by combining traditional Sanskrit teaching with new teaching health science education technologies.

This changed curriculum involves many new teaching learning techniques and assessment methods. Based on the course outcomes, curriculum is divided in papers. Important objectives are appropriately planned as per domains of learning. Supported by interactive methods of teaching and learning by using Audio-visual aids. There will be practicals and demonstrations based on Language Lab activities for enhancement of practical use of Sanskrit. Practical can give a chance of acquiring skills by practice of use of Sanskrit in Samhitadhyayan. Application of learned Sanskrit will be practically ensured by reading newly introduced Ashtang Hrudayam. Students can experience of application of Sanskrit Grammar in Samhitadhyayan. Introduction to Niruktis, dictionaries and Shabdakoshas can motivate students to derive and understand meanings from Sanskrit verses on their own. As this is a language, learning to communicate in this language is very much essential. Addition of Sanskrit communication as a part of curriculum is for overcoming the fear of learning a new language.

History of Ayurved is also added in second part of the Sanskrit. As an ancient science, its gradual development. Important milestones, different Schools of thoughts, important traditions, followers in traditions, their contribution etc will be introduced in History. Contribution of Scholars of modern era, Important institutes and globalization are few more points for history. Activity based learning and objective assessment are the most important changes to change perception towards study of history.

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Course Code and Name of Course

	Course code	Name of Course
	AyUG SN & AI	Sanskrit and Ayurved Itihas

AyUG SN & AI Course

Table 1- Course learning outcomes and matched PO.

SR1 CO No	A1 Course learning Outcome (CO) AyUG SN & AI At the end of the course AyUG SN & AI, the student should be able to-	B1 Course learning outcomes matched with program learning outcomes.
Sanskrit		
CO1	Read and recite Prose (गद्यः) and poem (पद्यः) with the appropriate accent (उच्चारणस्थानानन तथा बाह्याभ्यन्तरप्रयत्नानन). उच्चारणस्थानानां बाह्याभ्यन्तरप्रयत्नानां च सहाय्येन पाठने तथा लेखने सामर्थ्यम् ।	PO-5, PO-6, PO-7, PO-8, PO-9
CO 2	Apply various Technical Terms in Ayurveda (पररभाषाशब्दाः), Nouns & Pronouns (नामरूपानन तथा सर्वनामरूपानन), Verbs (धातुरूपानन), suffixes (प्रत्ययाः), Grammatical Terms (सांज्ञा), Syntax (सांधी) and Compounds (समासाः) from Sanskrit Grammar for enhanced interpretation of Ayurveda texts (आयुर्देद सांनहताः). पररभाषाशब्देषु नामरूपेषु सर्वनामरूपेषु नियापदेषु प्रत्ययेषु सांज्ञासु सनन्धेषु समासेषु च ज्ञानां तद्वारा आयुर्देदसांनहतासु अथायर्बोधनम् प्रायोगकनर्ज्ञानञ्च ।	PO-5, PO-7, PO-9
CO 3	Discriminate and interpret the Cases & meanings (नर्भाक्त्यथय) used in various verses of Ayurveda texts (आयुर्देद सांनहता). कारकनर्भाक्त्यथायनदषु पररज्ञानां तथा आयुर्देदसांनहतासु तेषां प्रयोगपररचयञ्च ।	PO-5, PO-7, PO-9
CO 4	Formulate the Prose order (अत्र्यः) of Slokas/Sutras in Ayurveda Textbooks (सांनहता) to derive the meaning (र्ाच्याथय), to determine the Scientific Meaning (शास्त्राथय) and to Translate (Regional or other language). अत्र्यलेखने र्ाच्याथायर्बोधने शास्त्राथायर्बोधने च सामर्थ्यं अनुरादनपाटञ्च ।	PO-5, PO-6, PO-7, PO-8, PO-9
CO 5	Interpret the Synonyms (पयाययाः) and Derivations (ननरुने) of Ayurveda Terms using samskrita dictionaries (सांस्कृ त शब्दकोश). कोशग्रन्थानां सहाय्येन आयुर्देद नर्घमानानां पदानां तेषां पयाययानाञ्च ननरुनक्तिपर्ू कपररज्ञानां तेषां प्रयोगे पररचयञ्च ।	PO-5, PO-7, PO-9
CO 6	Speak, Write and Summarize and Express in Samskrit (सांस्कृ तम्). सांस्कृ तभाषायां भाषणे लेखने सङ्कनिय नलखने अथयप्रकाशने च सामर्थ्ययम् ।	PO-5, PO-6, PO-7, PO-8, PO-9
CO 7	Develop the ethical responsibility towards the profession, society and human being. सामानिक- औद्योनकक-मानुनषक धमयबोधता	PO-6 & PO-8
Ayurved Itihas		
CO 8	Analyse and explain the important milestones in the history of Ayurveda	PO-1
CO 9	Appreciate the status of Ayurveda in different time periods and Contributions made by different Acharyas to Ayurveda.	PO-1

Table 2 : Contents of Course AyUG SN & AI

Sr No	A2 List of Topics AyUG-SN & AI Paper I	B2 Term	C2 Marks	D2 Lecture hours	E2 Non- Lecture hours
Paper I Sanskrit					
1	संस्कृत तर्कानाम् पररचयाः - माहेश्वरसूत्रानुसंधानं, उच्चारणस्थानानुसंधानं, बाह्यप्रत्ययानुसंधानं, अभ्यन्तर प्रत्ययानुसंधानं	I	05	3	10
2	सांज्ञा- 2.1 - सांयोगः, सांनहता, ह्रस्वदीर्घप्लुतः, अनुनासिकः, पदम्, धातुः, उपसर्गाः, गुणः, रूपाः [नस्तरिण पाठनम् - Detailed teaching] 2.2 - इत्, लोपः, प्रत्याहारः, उदात्तः, अनुदात्तः, स्वरतः, सर्गयः, ननपातः, प्रगृह्यम्, [सङ्क्षेप पाठनम् - Brief teaching]	2.1 – I 2.2 – II	05	05	-
3.	उपसर्गाः- उपसर्गाः नियमो प्र, परा, अप, सम्, अनु, अर्, ननस्, ननर्, दुस्, दुर्, नर्, आङ्, नन, अनप, अनध, अनत, सु, उत्, अनभ, प्रनत, परर, उप।	II	05	02	03
4.	अव्ययानुसंधानं 4.1 - च अनप खलु नह तु नकल ननु र्ना च एर् 4.2- पुनः नर्ना उच्चैः ऋते एर्म् सह साधयम् युगपत् यथा -तथा यार्त-तार्त इतत यदा-तदा यनद-तनहय साकम् न कुत्र कनत कुतः नकमथयम् नकयत् इहअत्र तत्र स्यत्र अन्यत्र कुत्र एकत्रसदा अन्यथा एकथा [नस्तरिण पाठनम् - detailed teaching] A) Identify अव्ययानुसंधानं B) Explain the meaning with reference to the context C) Construct the sentences using अव्ययानुसंधानं	I A II B III C	5	I -01 II-01	I-0 II-0 III-03
5.	कारकप्रकरणम् – कृत्यकारकम्, कर्मकारकम्, करणकारकम्, सम्प्रदानकारकम्, अपादान कारकम्, अनधकरणकारकम्, सम्बन्धः, उपपदनभेदाः सूत्रसंहतपाठनां परां परीक्षायां सूत्रव्याख्यानानुसंधानं प्रश्नानुसंधानं न प्रष्टव्यम्। A) Discriminate the नर्भाने and their meaning. B) Identify the karakas from Ayurveda texts like करणम् कारणम् C) Construct sentences D) Translate sentences from English to Sanskrit & from Sanskrit to English.	I A II B III C, D	15	I- 05	II-05 III-05
6.	सनन्धः 6.1 - अच् सनन्धः/स्वरसनन्धः - यण् सनन्ध -इको यणनच्, गुण सनन्धः=आद्गुणः रूपासनन्धः-रूपास्तिरेनच्, अयर्ायार् सनन्धः - एचोऽयर्ायार्/रान्तो नय	II	15	10	10

	<p>प्रत्यये, लोप सनन्धः-लोपः शाकल्यस्य, पररूपसनन्धः-एनङ्क पररूपम्, पू यरूपसनन्धः- एङ्कः पदान्तादनन्त, प्रकृतीभार्- सर्यत्र नर्भाषा गोः , प्लुत प्रमृह्य अनच् ननत्यम् । सूत्रसहितपाठनं परं परीक्षायां सूत्रव्याख्यानहि प्रश्नाहन न प्रष्टव्याहन । 6.2 - हत्सनन्धः/व्यञ्जिनसनन्धः - श्वत्सनन्धः- स्तोः श्वना श्वः, ष्टुत्सनन्धः- ष्टुना ष्टुः, िश्तत्र सनन्धः-झलां िशो/न्ते, अनुनानसकसनन्धः- यरोऽनुनानसके ऽनुनानसको र्ा/प्रत्यये भाषायां ननत्यम्, परसरण्यसनन्धः-तोनलयः/र्ा पदान्तस्य, चत्र्यसनन्धः खरर च, पू यसरण्यसनन्धः-झयोऽहोऽन्यतरस्याम्, छुत्सनन्धः शशत्छोऽनन्त/ छत्रमीनन्त र्ाच्यम्, अनुस्ारसनन्धः- मोऽनुस्ारः, तुगागमसनन्धः- नश तुक् /छे च/पदान्तावा, रुत्रादेशसनन्धः-नश्तलव्यप्रशान् सूत्रसहितपाठनं परं परीक्षायां सूत्रव्याख्यानहि प्रश्नाहन न प्रष्टव्याहन । 6.3 - नर्सगयसनन्धः - रुत्सनन्धः-ससिषो रुः, उत्सनन्धः-अतो रोरप्लुदादप्लुते/हनश च, रो रर, भो भागो अर्ो अपर्ू ष्ययोऽनन्त, रोऽनुप, एतिदोः सुलोपोऽकोरनञ् समासे हनल, सोऽनच लोपे चेत् पादपरू णम् । सूत्रसहितपाठनां परं परीक्षायां सूत्रव्याख्यानद प्रश्नानन न प्रष्टव्यानन । 6.4.- रुत्रप्रकरणसनन्धः- [सङ्क निष्य पाठनम् – Brief teaching] समः सुनट, कानाप्तेनिते च, अत्रानुनानसको पू ष्यतु र्ा, अनुनानसकात्परोऽनुस्ारः, खरर्सानयोर्नर्यसियनीयः, नर्सियनीयस्य सः, सम्पुङ्क कानां सो विर्त्तव्यः ।</p>				
7.	<p>समास 7.1 - अव्ययीभासमासः - 7.1.1 - अव्ययम् नर्भनिसमीपसमन्वित्यर्थयथायभार्ात्ययसम्प्रनतशब्दप्रादुभायभार्पश्चायथानुपक्ू यययौगप द्यसादृशतयसम्प्रनिसाकल्यान्तर्चनेषु । 7.1.2. - प्रथमा नननदयष्टम् उपसियनम्/ उपसियनां पूर्वम् /नाव्ययीभार्दतो/ म् अञ्जम्याः/ तृतीयासप्तम्योर् बहुलम्/अव्ययीभार्े चाकाले । 7.2. - तत्पुरुष समासः - नवतीया नितातीतपनततगतात्यस्तप्राप्तापत्रैः, तृतीया तत्क ताथेन गुणर्चनेन, कृत्यकरणे कृ ता बहुलम्, चतुर्थी तदथायथय बनलनहतसुखरनितैः, पञ्चमीभयेन, षष्ठी, सप्तमीशौण्िः, नर्शेषणां नर्शेष्येणबहुलम्, उपमानानन सामान्यर्चनैः, नञ्, कमयधारय, नवगुः, उपपद तत्पुरुष 7.3 - बहुव्रीह समासः - अनेकमन्यपदाथे 7.4 - वन्समासः - चाथे वन्वः सूत्रसहितपाठनां परं परीक्षायां सूत्रव्याख्यानद प्रश्नानन न प्रष्टव्यानन ।</p>	II	15	09	10
8.	<p>शब्दरूपनण 8.1 - पुनल्लङ्गः शब्दरूपानण अकारान्तः - र्ात, र्ैद्य, रुण, राम आनद इकारान्तः - अनग्र, मुनन आनद उकारान्तः - ऋतु, भानु गुरु आनद ऋकारान्तः - नृ, धातृ, नपत् आनद</p>	I	10	02	14

	<p>ओकारान्तः - गो आनद नकारान्त - श्लेशतमन्, रोमगन्, ज्ञानगन् आनद सकारान्त - चत्रमस् आनद तकारान्त - मरुत् आनद दकारान्त - सुहृद् आनद िकारान्त - नभषि, आनद शकारान्तः - कीदृश्, एतादृश् आनद</p> <p>8.2 - स्तनिलङ्गु गःशब्दरूपानण आकारान्तः - बला, कला, नस्थरा, माला आनद इकारान्तः - सम्प्रानप्त, प्रकृ नत, मनत आनद ईकारान्तः - धमनी, नदी आनद उकारान्तः - रज्जि, धेनु आनद ऊकारान्तः - षयिभू, धू आनद ऋकारान्तः - मातृ आनद चकारान्तः - र्चाच् आनद तकारान्तः - योनषत्, सररत् आनद दकारान्ताः - पररषद् आनद िकारान्तः - सि आनद सकारान्तः - िलौकस्, सुमनस् आनद षकारान्ताः - प्रार्ष्ट् आनद</p> <p>8.3 - नपुंसकनलङ्गु गःशब्दरूपानण अकारान्तः - नपि, र्न् आनद उकारान्तः - भ्रि, मधु आनद इकारान्तः - अनि, अनस्थ, र्ारर, दनध आनद ऋकारान्तः - ज्ञात्, धात् आनद नकारान्तः - त्मयन्, दनण्िन् आनद सकारान्तः - स्रोतस्, मनस् आनद षकारान्तः - सनपयष्, आयुष् आनद तकारान्तः - शकृत्, िगत् आनद अष्टङ्क गृहदयसांनहतायाम् नर्धमानानाम् अन्यानामनप समानानामरूपाणाम् पररचयकरणम् अनभलषणीयम् । प्रश्नपत्रे न प्रष्टव्यम् ।</p> <p>8.4 - सर्यनामपदानन - अस्मद्, युष्मद्, तद्, एतद्, यद्, नकम्, इदम् आनद</p>				
9.	<p>धातुरुपानण - [नस्तिरेण पाठनम्-detailed teaching] 9.1 - परस्मैपद - लट्/लृट्/लङ्/नर्नधनलङ्/लोट् भ्रानद गण - भूसियाम्, नि िये, गमू(गम्) गतौ, पा पाने, िीर्, पच्, त्रि, दृश् (पश्तय) अदानद गण - अद् भिणे, हन् नहम्सागत्योः, र्ा गनतगन्धनयोः पा रिणे, अस्, श्वस्, स्रप्, ब्रू िुहोत्यानद गण- धा धारणपोषणयोः, पृ - पलनपूरणयोः, हा त्यागे, दा (दाञ्) नदरानद गण- नदरु िीििादौ, त्रसी उवेगे, पुष् पुष्टौ, कु प, नश्, तुष्, नस्त्रह, िृ स्नानद गण- नचच् चयने, शक्, िु तुदानद गण- तुद् व्यथने, कृष् नर्लेखने, नलख् लेखने, नदश्, कृ न्त्, निप्, स्पृश्</p>	I	10	05	05

	<p>रुधानद गण- रुनधर् आरणे, नभनदर नदररणे, भुि तनानद गण- तनु नस्तारि, कृ ज् करणे क्रयानद गण- प्रीज् -तपयणे कान्ते च, ग्रह उपादाने, ज्ञा चुरानद गण- गण् सांस्थाने, साध्, ताि, धृ, कथ् रक्तायप्रबन्धे आत्मनेपनद- भ्रानद गण - र्त्तु र्ियने, र्त्थ(र्ध्), लभ्, सेर्, रुच् अदानद गण - शीङ्ग स्त्रे, ब्रू िहोत्यानद गण- धा धारणपोषणयोः, दा (दाज), नदरानद गण- िनी प्रादुभायर, मन्, बुध्, पद, नर्द सानद गण- नचज् चयने, तुदानद गण- तुद् व्यथने, कृ ष् नर्लेखने, नम्र, नर्द, मुच्, नसञ्च, रुधानद गण- रुनधर् आरणे, नभनदर नदररणे, भुि तनानद गण- तनु नस्तारि, कृ ज् करणे क्रयानद गण- प्रीज् -तपयणे कान्ते च, ग्रह उपादाने, ज्ञा चुरानद गण- चुर, िाल्, कथ्, र्ोष, भि आयुर्देसांनहतासु नर्द्यमानानां धतुरूपाणां पररचयीकरणम् अनभकाम्यम् 9.2 - लुिग, आशीनलयिग, नलट, लुिग, लुि [सङ्ग निप्य पाठनम्- Brief teaching] भ्रानद गण, अदानद गण, िहोत्यानद गण, नदरानद गण, सानद गण, तुदानद गण, रुधानद गण, तनानद गण, क्रयानद गण, चुरानद गण पूोिधितुप्रेकस्य पञ्चलकारेषु रूपानण दशययेत्। परां परीायाम् न पृष्टव्यानन।</p>				
10	<p>प्रत्ययाः 10.1 – क्ति - क्तिर्त्, तव्यत् – अनीयर, शतृ – शानच्, ल्युट् - ण्त्तुल्, क्त्त्रा - ल्यप्, नणनः, नक्तिन्, तुमुन् प्रत्ययाणाम् प्रयोगः एर् पृष्टव्याः। 10.2 - भार् ज्, करणे ज्, भार् ष्यज्, कमयनण ण्यत्, कियरर अच् अप् आयुर्देसांनहतायां नर्द्यमानानां भार्/करणे/कियरर/ताच्छील्ये/ आनद प्रत्ययानां पररचयः करणीयः। परां परीायाम् न पृष्टव्याः। परीायाम् र्त्त्य प्रयोगः स्वरूपे पृष्टव्यः।</p>	II	10	05	6
11	नशषण नशष्य	II	05	02	03

Paper II – Part A Sanskrit					
A2 List of Topics (Maximum Marks – 80 (SAQ & LAQ only))	B2 Term	C2 Marks	D2 Lecture hours	E2 Non- Lecture hours	

1	ननरुनाक्त तथा पयायय पदानन- A) आयुः, शरीर, मनः, अनग्रः, िलम्, र्ातः, नपिम्, कफः B) रस, रि, मांस, मेद, अनस्थ, मज्िा, शुि, इनत्रयम्,िोत्रः, चिः, रसना ,, घ्राण C) धी, धृनत, स्मृत,बुिी, मनत, प्रज्ञा, स्म, पुरीषः, स्ेद, आत्मा, रोगः,ननदानम्,	A- I B – II C- III	15	7 (A-1, B-3, C-3)	13 (A- 4, B-4, C-5)
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	रोनगः, भेषिनचनकत्सा, आनद				
2	पररभाषापदानन – A) आयुरेदः, पञ्चमहाभतू ानन, नत्रगुणम्, दोषाः, मलाः, दषू यम्, सम्स्गयः, सनत्रपातः B) रव्य, गुण, क्म, सामान्य, नर्षे, गुरु, लरु, प्रकृ नतः, नर्कृ नतः, चयः, प्रकोपः, प्रसरः, स्थानसम्पुिः, दोषगनतः भेदः, रसः, रीययम्, नर्पाकः, काययकारणभारः C) स्रोतस्, कोष्ठः, आमम्, नर्रुिाहम्, नर्रुिाहारः, नर्दानह, नर्ष्टनम्भ, सात्प्यम्, ओकसात्प्यम्, देशसात्प्यम्, अत्यशनम्, अर्धयशनम्, स्थानी, योगर्ाही, पर्थयम्, अपर्थयम्, कृ तान्नर्गयः, अस्थापाकः, रेगः, शोधन, शमन, लार्न, बृहण, अनुपान आनद	A - I B – II C- III	20	10 (A-2, B-4, C- 4)	15 (A- 5, B-5, C-5)

3.	<p>अत्रयलखनम् -</p> <p>A) अष्टाङ्गगृह्यम् सूत्रस्थानम् - अध्यायतः सर्वाहण सूत्राहण</p> <p>१. आयुष्कामीयम्</p> <p>२. नदनचयाय</p> <p>३. रोगानुत्पादनीयम्</p> <p>B) अष्टाङ्गगृह्यम् सूत्रस्थानम् - अध्यायतः सर्वाहण सूत्राहण</p> <p>दोषानदनर्ज्ञनीयम् दोषभेदीयम्</p> <p>दोषोपिमणीयम्</p> <p>नवनर्धोपिमणीयम्</p> <p>C) रौघकीय सुभानषतसानहत्यम् - shloka numbers - (भास्कर गोनर्द</p> <p>राणैकर नलनखत, चौखम्बा प्रकाशन)</p> <p>प्रथमः 1, 2</p> <p>नवतीयः 1, 7</p> <p>तृतीयः 9</p> <p>चतुर्थः 2, 3</p> <p>पञ्चमः 2, 3</p> <p>षष्ठः 1, 4, 7</p> <p>सप्तमः 2, 5, 17</p> <p>अष्टमः 13, 12</p> <p>नर्मः 12, 13</p> <p>दशमः 1, 19</p> <p>एकादशः 1, 2</p> <p>वादशः 1, 6</p> <p>त्रयोदशः 1, 7, 8, 9</p>	<p>A - I</p> <p>B - II</p> <p>C - III</p>	30	<p>20</p> <p>(A- 4,</p> <p>B- 8, C-</p> <p>8)</p>	<p>14</p> <p>(A- 4,</p> <p>B- 5, C-</p> <p>5)</p>
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	चतुदशः 2, 3, 4 पञ्चदशः 7, 10 षोडशः 5, 6 सप्तदशः 1, 4 अष्टदशः 1, 2, 3 एकोनविंशतः 2, 3, 4 द्वविंशतः 12, 3, 4 श्लोकपरूपां न प्रष्टव्यम् परीक्षायाम्। पदच्छेदां नर्गहर्वाक्तयम् अत्रयः र्वाक्तयाथं भार्थां इत्यादयः एर् प्रष्टव्याः।				
4.	पञ्चतन्त्र-अपरीनितकारकम् ५ अर्धयाय कथा - १ नानपतिपणक कथा कथा-२ नकु लीब्राह्मणी कथा कथा-३ चिधर कथा कथा-४ नसांहरकारक मूख यपनण्ठिकथा कथा-५ मूख यपनण्ठिकथा श्लोकपरूपां तथा अत्रयलेखनां न प्रष्टव्ये।	III	15	03	04

Paper II – Part B – Ayurved Itihas –					
	A2 List of Topics AyUG SN & AI (Maximum Marks – 20 (MCQ only))	B2 Term	C2 Marks	D2 Lecture hours	E2 Non- Lecture hours
1	Derivation (Vyutpatti and Niruktti) and definition of Itihasa. Necessity, Significance and Utility of knowledge of Ayurveda itihasa. Means and method of study of Ayurveda itihasa. Different Time periods relevant for the Study of Ayurveda itihasa (viz, Prevedic, Vedic, Samhita kala, Sangraha kala etc.)	I	5	1	2
2	Origin and lineage of Ayurveda (Ayurvedavatarana) and Introduction of references of Ayurveda in Veda, Upanishat and Puarana.	I		1	2
3	Structure, Specialities, Time period of Ayurveda Samhitas and their commentaries (including Special contributions of authors and commentators): Charaka Samhita, Sushruta Samhita, Ashtanga Sangraha, Ashtanga Hridaya, Bhela Samhita, Hareeta Samhita, Kashyapa Samhita.	I	5	2	2

4	Structure, Contributions and importance of Laghutrayee and Commentaries: Madhava Nidana, Sharngadhara Samhita, Bhavaprakasha.	II		1	3
5	Origin and period of different systems of medicine in the world.	II	5	1	2
6	Introduction to Vrukshayurveda, Hastyayurveda and Ashwayurveda. (Included in Transitional Curriculum)	II		-	1
7	Status of Ayurveda during the period of Ashoka, Mughal and British rule.	II		1	2
8	Contribution of Scholars of modern era: Acharya Gana Nath Sen, Vaidya Yamini Bhushan Rai, Vaidya Shankar Dajishastri Pade, Acharya Swami Lakshmiram, Acharya Yadavji Tikramji, Dr. PM. Mehta, Vaidya B G Ghanekar, Vaidya Damodar Sharma Gaur, Acharya Priyavrat Sharma, Vaidya C Dwarakanath, Vaidya K R Shrikantamurthy, Vaidya VJ Thakkar, Vaidyaratnam PS Varier, Vaidya B V Gokhale.	III	5	1	2
9	Globalization of Ayurveda	III		1	2
10	1) Developmental activities in Ayurveda in the post-independence period: <ul style="list-style-type: none"> • Introduction to various committees and their recommendations • Introduction of activities of the following Organizations : Department of AYUSH, CCIM/ NCISM, CCRAS, 2) National institutions Viz- All India Institute of Ayurved (AIIA), National Institute of Ayurveda, Jaipur. ITRA, Jamnagar. Faculty of Ayurveda, BHU, Varanasi. Rashtriya Ayurveda Vidyapeetha, New Delhi.	III		1	2

Table 3: Learning objectives (Theory) of Course AyUG-SN & AI

Paper I – Sanskrit									
A3 Course outcome	B3 Learning Objective (At the end of the session, the Students should be able to)	C3 Domain/sub	D3 Must to know/ desirable to know/Nic e to know	E3 Level Does/ Shows how/ Knows how/ Know	F3 T-L method	G3 Assessment	H3 Formati ve /summa tive	I3 Te rm	J3 Integrat ion
Topic 1- सांस्कृतं तर्णयिनाम् पररचयाः (5 marks) Time: 13 hrs (Lecture:- 3 hours Non lecture 10 hrs)									
CO 1, CO 6	Read & write Sanskrit words	Cognitive domain - Knowledge	Must know	Knows how	Practical classes Demonstrations Classroom reading	Oral Written	F&S	I	
CO 1, CO 6	Pronounce Sanskrit as per their appropriate articulations	Cognitive domain – Comprehension	Must know	Knows how/ Shows how	1) Practical classes 2) presentation of videos 3) Graphical Representation of Vocal system Class room reading / speaking	Oral / Written Assignment on Identifying the Places of articulation of the words in Ayurveda texts.	F&S	I	
Topic 2- सांज्ञा (10 marks)- Time: 05 Hrs (Lecture:- 5 hours Non lecture 00 hrs)									
CO 2, CO 4, CO	2.1 Explain the terms related to सांज्ञा in Sanskrit grammar	Cognitive domain- Comprehension	Desirable to know	Knows	Lecture with Power point presentation	Oral, Conduction of quiz	F&S	II	
CO 2, CO 4, CO 5	2.2 Identify the सांज्ञा Explain the meaning of the सांज्ञा	Cognitive domain- Comprehension	Must know	Knows how	Lecture with Power point presentation	Oral / written Very short answer Differentiate, identify, fill in the blanks etc	F&S	I	

						Preparation of MSQ (MCQ) Question-answer sessions			
Topic 3 उपसर्गाः - उपसर्गाः हियायोर् (05 marks) Time: 05 Hrs (Lecture:- 02 hours Non lecture 03 hrs)									
CO 2, CO 4, CO 6	Identify the उपसर्गः Explain the meaning of the words with उपसर्गः Identify the difference in meaning according to the उपसर्गः	Cognitive domain - Comprehension problem solving	Must know	Knows how	Lectures with Power point presentation. Problem Based Learning (PBL) Group Discussions	Oral & Written objective type very short answer compare differentiate etc, Assignments open book test	F&S	II	
Topic 4- अव्ययाहन (05 marks) Time: 05 Hrs (Lecture:- 02 hours Non lecture 03 hrs)									
CO 2, CO 4, CO 6	4.1 Identify अव्ययान	Cognitive domain - Comprehension	Must know	Knows	Lectures with Power point presentation. Group Discussions	Oral & Written. objective type very short answer - compare, differentiate Assignments on sentence construction, presentation by the students	F&S	I	
CO 2, CO 4, CO 6	4.2 Explain the meaning with reference to the context	Cognitive domain – Application	Must Know	Knows how	Lectures with Power point presentation. Group Discussions	Oral & Written objective type very short	F&S	II	

						answer / compare differentiate Assignments open book test			
CO 2, CO 4, CO 6	Construct the sentences using अव्ययानन	Cognitive domain - Synthesis	Must Know	Shows how	Lectures with Power point presentation. Group Discussions Conversation Sessions	Oral & Written Construct sentences with proper use of Avyayas. Use appropriate Avyayas. Very short answer Assignments on finding out the अव्ययानन used in the texts and explain their meaning with reference to the context. Open book test.	F&S	III	
Topic 5— कारकप्रकरणम् (15 marks) Time: 15 Hrs (Lecture:- 5 hours Non lecture 10 hrs)									
CO 3, CO 6	A) Discriminate the नर्भनि and their meaning. B) Identify the karakas from Ayurveda texts like करणम् कारणम् C) Construct sentences. D) Translate sentences from English to	Cognitive domain - Synthesis problem solving	Must know	Shows how	Lectures with Power point presentation. Group Discussions	Oral & Written objective type very short answer / compare differentiate /	F&S	A)– I B) – II C) – III D) - III	

	Sanskrit & from Sanskrit to English.					meaning with reference to the context etc Assignments on identification of the karakas used in the Ayurveda basic principle terms like करणम् कारणम्.			
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Topic 6- सनन्धः (15 marks) Time: 20 Hrs (Lecture:- 10 hours Non lecture 10 hrs)

CO 2, CO 6	6.1 Identify सनन्धः Explain the meaning of the context by splitting. Formulate the joined words while writing the sentences	Cognitive domain - Application and problem solving	Must know	Knows how	Lectures with Power point presentation. Group Discussions Classes by the students Ashtang hrudaya with the सहधिः	Oral & Written Objective type, very short answer – compare, differentiate etc. Assignments to find the सहधिः in Ashtangahrudaya Quiz on सनन्धः	F&S	II	
CO 2, CO 6	6.2 Identify सनन्धः Explain the meaning of	Cognitive domain - Application and problem solving	Must know	Knows how	Lectures with Power point presentation. Group Discussions	Oral & Written objective type very short	F&S	II	

	the context by splitting. Formulate the joined words while writing the sentences				Classes by the students Ashtang hrudaya with the सनन्धः	answer compare and differentiate Assignments to find the सहधि: in Ashtangahrudaya Quiz on सनन्धः Preparation of charts, mindmaps etc.			
CO 2, CO 6	6.3 Identify सनन्धः Explain the meaning of the context by splitting. Formulate the joined words while writing the sentences	Cognitive domain - Application and problem solving	Must know	Knows how	Lectures with Power point presentation. Group Discussions Classes by the students Ashtang hrudaya with the सनन्धः	Oral & Written objective type very short answer Assignments to find the सहधि: in Ashtang hrudaya Quiz on सनन्धः Preparation of charts, mindmaps etc.	F&S	II	
CO 2, CO 6	6.4 Identify सनन्धः Explain the meaning of the context by splitting.	Cognitive domain – Comprehension Application	Desirable to know	Knows	Lectures with Power point presentation.	Oral Preparation of charts, mindmaps etc.	F&S	II	

Topic 7- समास (15 marks) Time: 19 Hrs. (Lecture:- 09 hours Non lecture 10 hrs)

CO 2	Identify समास: Discriminate between the समन्वयः and समासः	Cognitive domain - Comprehension	Must know	Knows	Lectures with Power point presentation. Group Discussions Problem Based Learning(PBL) Flipped classroom Peer learning Classes by the students on the sutras in Ashtang hrudaya with the नैग्रहोक्तयम्	Oral & Written objective type very short answer- compare differentiate Assignments to find the समासः in Ashtanga hrudaya Quiz on समासः Puzzles Word cloud Cross words etc.	F&S	II	
CO 2, CO 6	7.1 Identify समासः Explain the meaning of the context by writing the नैग्रहोक्तयम् Construct the समस्तपदम् while writing the sentences	Cognitive domain - Application and problem solving	Must know	Shows how	Lectures with Power point presentation. Group Discussions Problem Based Learning(PBL) Flipped classroom Peer learning Classes by the students on the sutras in Ashtang hrudaya with the नैग्रहोक्तयम्	Oral & Written objective type very short answer Assignments to find the समासः in Ashtangahrdaya a Quiz on समासः Puzzles Word cloud Cross words	F&S	II	

						etc. Preparation of charts, mindmaps etc.			
CO 2, CO 6	<p>7.2</p> <p>Identify समासः: Explaining the meaning of the context by writing the नग्रेहर्क्तयम्</p> <p>Construct the समस्तपदम् while writing the sentences</p>	Cognitive domain - Application and problem solving	Must know	Shows how	<p>Lectures with Power point presentation.</p> <p>Group Discussions Problem Based Learning(PBL) Flipped classroom</p> <p>Peer learning Classes by the students on the sutras in Ashtang hrudaya with the नग्रेहर्क्तयम्</p>	<p>Oral & Written</p> <p>objective type very short answer Assignments to find the समासः in Ashtangahrdaya a</p> <p>Quiz on समासः: Puzzles Word cloud Cross words etc. Preparation of charts, mindmaps etc.</p>	F&S	II	
CO 2, CO 6	<p>7.3</p> <p>Identify समासः: Explaining the meaning of the context by writing the नग्रेहर्क्तयम्</p> <p>Construct the समस्तपदम् while writing the sentences</p>	Cognitive domain - Application and problem solving	Must know	Shows how	<p>Lectures with Power point presentation.</p> <p>Group Discussions Problem Based Learning(PBL) Flipped classroom</p> <p>Peer learning Classes by the students on the sutras in Ashtang hrudaya with the नग्रेहर्क्तयम्</p>	<p>Oral & Written</p> <p>objective type very short answer meaning with reference to the context etc. Assignments to find the समासः in Ashtangahrdaya</p>	F&S	II	

						a Quiz on समासः Puzzles Word cloud Cross words etc. Preparation of charts, mindmaps etc.			
CO 2, CO 6	7.4 Identify समासः Explaining the meaning of the context by writing the नग्नहस्तयम् Construct the समस्तपदम् while writing the sentences	Cognitive domain - Application and problem solving	Must know	Shows how	Lectures with Power point presentation. Group Discussions Flipped classroom Peer learning Classes by the students on the sutras in Ashtang hrudaya with the नग्नहस्तयम् Problem Based Learning(PBL)	Oral & Written objective type very short answer Assignments to find the समासः in Ashtangahrdaya a Quiz on समासः Puzzles Word cloud Cross words etc. Preparation of charts, mindmaps etc.	F&S	II	
Topic 8- शब्दरूपानण (10 marks) Time: 16 Hrs (Lecture:- 2 hours Non lecture 14 hrs)									
CO 2, CO 3, CO 6	Identify & write the अन्तर्लङ्गनभेदविधानं of a noun. Construct sentences	Cognitive domain – Synthesis problem solving	Must know	Shows how	Lectures with Power point presentation. Recitation Peer learning	Oral & Written objective type very short answer	F&S	I	

					Group Discussions	Assignments to find out the अन्तर्गत गन्ध नक्षत्रचर्चानेन of nouns used in various text books and writing all forms of all नभनक्षत्र. Quizzes Puzzles Word cloud Cross words etc.			
Topic 9- िातुरुपाहण (10 marks) Time: 10Hrs. (Lecture:- 5 hours Non lecture 05 hrs)									
CO 2, CO 6	9.1 Identify & write लकारपदपुरुषचर्चानेन of the roots. Interpret the meaning according to the लकारः Use for constructing sentences.	Cognitive domain - Synthesis and problem solving	Must know	Shows how	Lectures with Power point presentation. Recitation Group Discussions Peer learning	Oral & Written objective type very short answer Assignments to find out the verbs used in various text book in the syllabus and completing all the forms. Quizzes Word cloud etc.	F&S	I	
CO 2, CO 6	9.2 Identify & write लकारपदपुरुषचर्चानेन of the roots.	Cognitive domain- Comprehension problem	Nice to know	Knows	Lectures with Power point presentation. Group Discussions	Oral Assignments Quizzes Word cloud etc.	F&S	I	

	Interpret the meaning according to the लकारः	solving							
Topic -10 प्रत्ययाः (10 Marks) Time: 11 Hrs (Lecture:- 5 hours Non lecture 06 hrs)									
CO 2, CO 6	10.1 Identify the प्रत्ययाः Interpret the meaning with reference to the context with the support of the प्रत्ययाः	Cognitive domain - Comprehension and problem solving	Must know	Shows how	Lectures with Power point presentation. Group Discussions	Oral & Written objective type very short answer Assignments Quizzes	F&S	II	
CO 2, CO 6	10.2 Identify the प्रत्ययाः Interpret the meaning with reference to the context with the support of the प्रत्ययाः (परीक्षायाम् र्चाच्य प्रयोगः स्वरूपे पृष्ठव्यः)	Cognitive domain- Application and problem solving	Must to Know	Shows how	Lectures with Power point presentation. Group Discussions	Oral Assignments Quizzes	F&S	II	
Topic 11- नर्शेषण नर्शेष्य (05 Marks) Time: 05 Hrs (Lecture:-02 hours Non lecture 03 hrs)									
CO 2, CO 6	Identify and discriminate different types of Visheshanas. Effectively use visheshanas in sentences.	Cognitive domain - Application and problem solving	Must know	Knows how / Shows how	Lectures with Power point presentation. Flipped classroom	Oral & Written Quizzes Word cloud etc.	F&S	II	



Paper II Part A - Sanskrit Learning Objective

A3 Course outcome	B3 Learning Objective (At the end of the session, the Students should be able to)	C3 Domain/sub	D3 Must to know/ desira ble to know/ Nice to know	E3 Level Does/ Shows how/ Knows how/ Know	F3 T-L method	G3 Assessment	H3 Form ative /sum mative	I3 Te rm	J3 Integr ation
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Topic 1- ननरुनक्ति/ Paryaya padani (15 marks) Time: 18 Hrs. Lecture:- 7 hours (A-2, B-5) Non lecture 13 (A- 4, B-4, C-5 hrs)

CO 2, CO 5	<p>Explain the meaning of the words and their synonyms with the help of their nirukti (निरुक्तिः)</p> <p>A) आयुः, शरीर, मनः, अनमः, िलम्, र्ातः, नपिम्, कफः</p> <p>B) रस, रि, मांस, मेद, अनस्थ, मज्िा, शुि, इनत्रयम्, िोत्र, चि, रसना, घ्राण</p> <p>C) धा, धनत, स्मृत, बुं, मनत प्रज्ञा, पुरीषः, स्ेद, आत्मा, रोगः, ननदानम्, रोग, भेषिनचनकत्सा, आनद</p>	Cognitive domain - comprehension	Must know	Knows how	<p>Lectures with Power point presentation.</p> <p>Flipped classroom</p> <p>Peer learning</p> <p>Ayurveda Samhita Group Discussions</p>	<p>Oral & Written objective type</p> <p>very short answer</p> <p>compare differentiate meanings</p> <p>meaning with reference to the context etc</p> <p>Assignments</p> <p>Open book test</p>	F & S	A- I B – II C- III	Sa mh ita, Kr iya Sh ari r, Ra ch an a Sh ari r.
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Topic 2- पररभाषापदानन (20 marks) Time 25 Hrs (Lecture:- 10 (A-2, B-4, C- 4 hours) Non lecture 15 (A- 5, B-5, C-5 hrs)

<p>CO 2, CO 5</p>	<p>Explain the meaning of the words and their synonyms with the help of their nirukti (निरुक्तिः)</p> <p>Describe the Paribhasapadas (परिभाषापदाः)</p> <p>परिभाषापदानं –</p> <p>A) आयुर्देः, पञ्चमहाभूतानां, नत्रगुणम्, दोषाः, मलाः, दूषयम्, सम्प्रगयः, सनत्रपातः</p> <p>B) रव्य, गुण, कमय, सामान्य, नशेष, गुरु, लघु, प्रकृतः, नर्कृतः, चयः, प्रकोपः, प्रसरः, स्थानसम्प्रियः, दोषगनतः भेदः, रसः, रीययम्, नर्पाकः, काययकारणभारः</p> <p>C) स्रोतस्, कोष्ठः, आमम्, नरुंहाहम्, नरुंहाहारः, नर्दानह, नृनम्भ, सात्म्यम्, आकसात्म्यम्, देशसात्म्यम्, अत्यशनम्, अधयशनम्, स्थानी, यागर्हा, पथयम्, अपथयम्, कृतात्त्रयः, अर्थापाकः, र्गः, शोधन, शमन, लार्न, बृहण, अनुपान आनद</p>	<p>Cognitive domain – Comprehension Application</p>	<p>Must know</p>	<p>Knows how</p>	<p>Lectures with Power point presentation.</p> <p>Flipped classroom</p> <p>Peer learning</p> <p>Group Discussions</p>	<p>Oral & Written objective type</p> <p>very short answer</p> <p>write short notes</p> <p>Assignments from Ayurveda Samhita</p> <p>Open book test</p>	<p>F&S</p>	<p>A- I B – II C- III</p>	<p>Sa mh ita, Kr iya Sh ari r, Ra ch an a Sh ari r.</p>
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Topic 3 - अत्र्यलेखनम् (30 marks) Time 34 Hrs (Lecture:- 20 (A- 4, B- 8, C-8 hours) Non lecture 14 (A-4, B-5, C-5 hrs)

CO 4, CO 6	Identify the subject object Adjective noun verb in a sentence.	Cognitive domain – Comprehension Application	Must know	Shows how	Self-directed learning Flipped classroom Classes by the students	Oral & Written Objective type Very short answer Anvaya writing	F&S	A - I B - II C- III	Sa mh ita
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	<p>Write the पदच्छेदां नग्नहर्क्तायम् अत्रयः र्ाच्याथं and भार्ाथयम् Of shlokas</p> <p>A) अष्टाङ्क गृह्यम् सूत्रस्थानम् - अर्धयायतः सर्ायनण सूत्रानण । १. आयुष्कामीयम् २. नदनचयाय ३. रोगानुत्पादनीयम् B) अष्टाङ्क गृह्यम् सूत्रस्थानम् - अर्धयायतः सर्ायनण सूत्रानण । दोषानदनर्ज्ञनीयम् दोषभेदीयम् दोषोपिमणीयम् नवनर्धोपिमणीयम् C) रैद्यकीय सुभानषतसानहत्यम् - shloka numbers - प्रथमः 1, 2 नवतीयः 1, 7 तृतीयः 9 चतुर्थः 2, 3 पञ्चमः 2, 3 षष्ठः 1, 4, 7 सप्तमः 2, 5, 17 अष्टमः 13, 12 नर्मः 12, 13 दशमः 1, 19 एकादशः 1, 2 वादशः 1, 6</p>				<p>Group Discussions</p>	<p>Short answer Assignments on writing पदच्छेदां नग्नहर्क्तायम् अत्रयः र्ाच्याथं भार्ाथयम्</p>			
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	त्रयोदशः 1, 7, 8, 9 चतुर्दशः 2, 3, 4 पञ्चदशः 7, 10 षोडशः 5, 6 सप्तदशः 1, 4 अष्टादशः 1, 2, 3 एकोनविंशतः 2, 3, 4 विंशतः , 12, 3, 4							
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Topic 4 - पञ्चतन्त्र-अपरीहक्षतकारकम् ५ अध्याय (15 marks) Time 07 Hrs (Lecture:- 03 hours Non lecture 04 hrs)

CO 4, CO 6	Construct Sanskrit sentences and comprehend a passage.	Cognitive Domain-Synthesis	Must know	Shows how	Activity based learning Self-directed learning Flipped classroom Group Discussions	Oral & Written objective type very short answer write summery Assignments on finding out प्रत्यय: and नियामदानन Assignments of changing the voice. Assignments on translation	F&S	III	
	Convert active and passive voice sentences. १. िपणक कथा २. नकु लब्राह्मणी कथा ३. चिधर कथा ४. नसांहकारकब्राह्मणपुत्र कथा ५. मूव यपनण्ति कथा	Problem Solving							

PAPER II Part B Ayurved Itihas

A3 Course outcome	B3 Learning Objective (At the end of the session, the students should be able to)	C3 Domain/sub	D3 Must to know/ desirable to know/Nice to know	E3 Level Does/ Shows how/ Knows how/ Know	F3 T-L method	G3 Assessment	H3 Formative/summative	I3 Term	J3 Integration
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Topic 1- Time (Lecture:- 1 hour, Non lecture 2 hours)									
CO 8	Describe Etymological derivation (Vyutpatti), syntactical derivation (Niruktti) and definition of the word Itihasa.	Cognitive/ Knowledge (K)	Must know	Knows	Lecture & Group Discussion,	Written MCQ	F & S	I	
CO 8	Describe of knowledge of history, its significance and utility, means and method of Ayurveda history	Cognitive/ comprehension	Must know	Knows	Lecture & Group Discussion, Tutorial, Video clips	Written MCQ Discussions or debate	F	I	
CO 8 CO 9	Explain Different Time periods relevant for the Study of Ayurveda itihasa (viz, Prevedic, Vedic, Samhita kala, Sangraha kala etc.)	Cognitive/K	Must know	Knows	Lecture & Group Discussion, Tutorial, Charts, Edutainment.	Written MCQ	F & S	I	
Topic 2- Time (Lecture:- 1 hour, Non lecture 2 hours)									
CO 8 CO 9	Explain different opinions of origin and lineage of Ayurveda available in Samhitas and Samudra manthana and origin of Dhanvantari.	Cognitive/K	Must know	Knows	Lecture, video & Group Discussion	Written MCQ	F & S	I	
CO 8 CO 9	Outline 2-3 references of Ayurveda in Veda, Upanishat and Puarana	Cognitive/K	Desirable to know	Knows	Lecture, charts & Group Discussion, SDL	Written MCQ, Online search of Archiologi cal sites for Ayurved. Presentatio n by Students,	F	I	

CO 8	Describe Ayurveda as Upaveda of Atharvaveda	Cognitive/comprehension	Desirable to know	Knows	Lecture & Group Discussion	Written MCQ	F & S	I	
Topic 3- Time (Lecture:- 2 hour, Non lecture 2 hours)									
CO 8 CO 9	Describe the Structure, Specialities, Time period of Charaka Samhita	Cognitive/K	Must know	Knows	Lecture, charts & Group Discussion Online Visit of Charakaranya, related places.	Written MCQ Chart preparation	F & S	I	
CO 8 CO 9	Briefly explain contribution of Punarvasu Athreya, Agnivesha, Charaka, Drudhabala	Cognitive/K	Must know	Knows	Lecture & Group Discussion	Written MCQ	F & S	I	
CO 8 CO 9	Enumerate the important Commentaries on Charaka Samhita and identify their authors.	Cognitive/K	Must know	Knows	Lecture & Group Discussion, Activity on commentary, Compilation.	Written MCQ Online samhitas, Commentary search	F & S	I	
CO 8 CO 9	Explain the importance of Ayurveda Deepika, Jalpakalpataru.	Cognitive/K	Must know	Knows	Lecture & Group Discussion.	Written MCQ	F & S	I	
CO 8 CO 9	Justify Charakastu Chikitsa in view of Global medical history.	Cognitive/K	Must know	Knows	Lecture & Group Discussion,	Written MCQ Debate Creative writing	F	I	Roganidana, Kayachikitsa
CO 8 CO 9	Describe the Structure, Specialities, Time period of Sushruta Samhita	Cognitive/K	Must know	Knows	Lecture & Group Discussion	Written MCQ Poster making	F & S	I	
CO 8 CO 9	Briefly explain contribution of Dhanvantari, Sushruta,	Cognitive/k	Must know	Knows	Lecture & Group Discussion	Written MCQ	F & S	I	Salya tantra

	Nagarjuna, Chandrata								
CO 8 CO 9	Enumerate the important commentaries on Sushruta Samhita and identify their authors.	Cognitive/K	Must know	Knows	Lecture & Group Discussion	Written MCQ Chart or collage	F & S	I	
CO 8 CO 9	Explain the importance of Nibandha sangraha, Nyaya chandrika,	Cognitive/K	Must know	Knows	Lecture & Group Discussion	Written MCQ	F & S	I	
CO 8 CO 9	Justify Shaareere Sushruta	Cognitive/comprehension	Must know	Knows	Lecture & Group Discussion	Written MCQ Debate/Discussions	F	I	Rachana Sharira, Kriya sharira
CO 8 CO 9	Describe the Contributions of Sushruta Samhita to the field of surgery.	Cognitive/Comprehension	Must know	Knows	Lecture & Group Discussion	Written MCQ	F & S	I	Shalya Tantra
CO 8 CO 9	Identify the acharyas of Atreya and Dhanvantari Sampradaya	Cognitive/K	Must know	Knows	Lecture & Group Discussion Quiz	Written MCQ	F & S	I	
CO 8 CO 9	Describe the Structure, Specialities, Time period of Ahtanga sangraha and Ashtang hridaya.	Cognitive/K	Must know	Knows	Lecture & Group Discussion Video Clips	Written MCQ Chart or collage of events	F & S	I	
CO 8 CO 9	Briefly explain contributions of Vriddha and Laghuvagbhata	Cognitive/K	Must know	Knows	Lecture & Group Discussion	Written MCQ	F & S	I	
CO 8 CO 9	Enumerate commentaries on Ahtanga sangraha and Ashtang hridaya and explain importance of Indu, Hemadri and Arunadatta commentary.	Cognitive/K	Must know	Knows	Lecture & Group Discussion	Written MCQ Quiz	F & S	I	
CO 8	Justify Sutras	Cognitive	Must know	Knows	Lecture & Group	Written	F & S	I	

CO 9	vagbhata	e/K			Discussion	MCQ			
CO 8 CO 9	Enumerate the salient features of Bhela Samhita	Cognitiv e/k	Desirable to know	Knows	Lecture & Group Discussion, SDL	Written MCQ	F	I	
CO 8 CO 9	Enumerate the salient features of Hareeta Samhita	Cognitiv e/k	Desirable to know	Knows	Lecture & Group Discussion, SDL	Written MCQ	F & S	I	
CO 8 CO 9	Describe the Structure, Specialties, Time period of Kashyapa Samhita	Cognitiv e/k	Must know	Knows	Lecture & Group Discussion	Written MCQ Chart or collage of Events	F & S	I	
CO 8 CO 9	Briefly explain contribution of Kashyapa, Jeevaka, Vatsya.	Cognitiv e/k	Must know	Knows	Lecture & Group Discussion	Written MCQ	F & S	I	
CO 8 CO 9	Identify contribution of Kashyapa Samhita to the field of Pediatrics.	Cognitiv e/k	Must know	Knows	Lecture & Group Discussion	Written MCQ	F & S	I	
Topic 4- Time (Lecture:- 1 hour, Non lecture 3 hours)									
CO 8 CO 9	Describe Structure, Contributions and importance of Madhava Nidana.	Cognitiv e/k	Must know	Knows	Lecture & Group Discussion, Library Session for handing of books.	Written MCQ Library Searching online availabe Samhitas. Samhita mobile applications	F & S	II	
CO 8 CO 9	Outline the importance of Madhavakara, Vijayarakshita, Shrikanthadatta and Justify nidane madhava shreshtha.	Cognitiv e/k	Must know	Knows	Lecture & Group Discussion	Written MCQ	F & S	II	Roganidana
CO 8	Describe Structure,	Cognitiv	Must know	Knows	Lecture & Group	Written	F & S	II	

CO 9	Contributions and importance of Sharngadhara Samhita.	e/k			Discussion	MCQ			
CO 8 CO 9	Briefly explain contribution of Sharngadhara, Adhamalla, Kashiram.	Cognitiv e/k	Must know	Knows	Lecture & Group Discussion	Written MCQ	F & S	II	
CO 8 CO 9	Explain about Bhavamishra and Enumerate the salient features of Bhavaprakasha.	Cognitiv e/k	Must know	Knows	Lecture & Group Discussion,	Written MCQ	F & S	II	
Topic 5- Time (Lecture:- 1 hour, Non lecture 2 hours)									
CO 8 CO 9	Enlist origin and period of different systems of medicine in the world.	Cognitiv e/k	Must know	Knows	Lecture & Group Discussion	Written MCQ Assignment s	F & S	II	
Topic 6- Time (Lecture:- 0 hour, Non lecture 1 hours)									
CO 8 CO 9	Explain in brief about Ashwayurveda, Gajayurveda, Gavayurveda and Vrukshayurveda.	Cognitiv e/k	Must know	Knows	Lecture (Included in Transitional Curriculum)& Group Discussion	Written MCQ Serach of Use of Ayurved plats in different cattle food. Poster making	F & S	II	
Topic 7- Time (Lecture:- 1 hour, Non lecture 2 hours)									
CO 8 CO 9	Describe the Status of Ayurveda during the period of Ashoka, Mughal and British rule.	Cognitiv e/K	Desirable to know	Knows	Lecture & Group Discussion, SDL	Written MCQ Collect the photos online and make a documentor	F & S	II	

						y in your voice.			
Topic 8- Time (Lecture:- 1 hour, Non lecture 2 hours)									
CO 8 CO 9	Name the Contributions of Acharya Gana Nath Sen, Vaidya Yamini Bhushan Rai, Vaidya Shankar Dajishastri Pade, Acharya Swami Lakshmiram, Acharya Yadavji Tikramji, Dr. PM. Mehta, Vaidya B G Ghanekar, Vaidya Damodar Sharma Gaur, Acharya Priyavrat Sharma, Vaidya C Dwarakanath, Vaidya K R Shrikantamurthy, Vaidya VJ Thakkar, Vaidyaratnam PS Varier, Vaidya B V Gokhale.	Cognitive/K	Desirable to know	Knows	Lecture & Group Discussion, Tutorial, Self directed learning (SDL)	Written MCQ, Quiz, Match the pair Edutainment t Poster making, Video clip making, Compilation,	F & S	III	
Topic 9- Time (Lecture:- 1 hour, Non lecture 2 hours)									
CO 8 CO 9	Discuss Globalization of Ayurveda – Expansion of Ayurveda in Misra (Egypt), Sri Lanka, Nepal other nations.	Cognitive/K	Desirable to know	Knows	Lecture & Tutorial, Video Edutainment	Written MCQ Collect data and make video clip with your own narration.	F & S	III	
Topic 10- Time (Lecture:- 1 hour, Non lecture 2 hours)									

CO 8 CO 9	Enumerate the various Committees and 2-3 recommendations	Cognitive	Must know	Knows	Lecture	Written MCQ	F & S	III	
CO 8 CO 9	Explain activities of Department of AYUSH, CCIM/ NCISM, CCRAS	Cognitive/K	Must know	Knows	Lecture & Group Discussion, Tutorial	Written MCQ Visit to Website of the Departments and discussion	F & S	III	
CO 8 CO 9	Identify the institutes All India Institute of Ayurved, New Delhi, (AIIA), National Institute of Ayurveda, Jaipur. ITRA, Jamnagar. Faculty of Ayurveda, BHU, Varanasi. Rashtriya Ayurveda Vidyapeetha, New Delhi.	Cognitive/K	Desirable to know	Knows	Lecture & Group Discussion, Video	Written MCQ, Visit to websites of colleges and Discussions .	F & S	III	

List of Practicals

Hours: 180 Hrs

SN	Name of Practical Sanskrit	Term	Hours
P1	Use of Dictionaries and Shabdakoshas अमरकोशः, नौषनधर्गयिः, शब्दकल्पद्रुमः, रचस्पत्यम्	I	15
P2	Translation from Sanskrit to desirable language.	II	15
P3	Translation from desirable language to Sanskrit.	II	15
P4	सम्भाषण भाषा पठनम् Spoken Sanskrit and Communication Skills	III	15
P5	All activity based practicals from above table are enlisted. (In table 2 and Table 3) They are as follows: 1. Presentation of videos about Maheshwar Sutra, Prayatna, Uccharana Sthanani etc. 2. Graphical Representation of Vocal system 3. Reading / Pronunciation 4. Preparing different Shabdarupani and recitation 5. Preparing different Kriyapadani. 6. Practical on Karakani. 7. Practical on Pratyayas 8. Practical on Sandhis 9. Practical on Samasa 10. Practical on Upasargas. 11. Practical on Avyayas 12. Practical on Visheshan – Visheshya 13. Practical on Anvay lekhana 14. Practical on Nirukti 15. Practical on Paribhasha 16. Practical on Panchatantra	I I I I/II I I/II II II II II II I/II/III II/III I/II/II III	120 hours

Table 4: Learning objectives (Practical) of AyUG- SN & AI

Sanskrit Practical									
A4 Course outcome	B4 Learning Objective (At the end of the session, the Students should be able to)	C4 Domain/sub	D4 Must to know/ desirable to know/Nice to know	E4 Level Does/ Shows how/ Knows how/ Know	F4 T-L method	G4 Assessment	H4 Formative /summative	I4 Term	J4 Integration
Practical 1- अमरकोशः - नैषधर्ग्यः, शब्दकल्परुमः, र्वाचस्पत्यम् Dictionaries Time: 15 Hrs (Practical/ Clinical 15 hours)									
CO 5	Refer the dictionaries. Refer the Books on synonyms	Cognitive domain - comprehension	Must to know	knows	Demonstration for identifying the meaning of the words with the support of the shabdakoshas like Amarkosha, Shabda kalpadruma, vachaspatyam etc. Record writing	Oral	F & S	I	
CO 5, 6	Improve the vocabulary. Use in reading and writing.	Cognitive domain - comprehension	Desirable know	knows	Group Discussions Record writing	Oral Recitation Competitions Aksharashloka competitions etc.	F & S	II	
Practical 2 - Translation from Sanskrit to desirable language. Time: 15 Hrs. (Practical/ Clinical 15 hrs)									
CO 3, 4, 5, 6	Translate from Sanskrit to	Cognitive domain -	Must to know	Shows how	Demonstration Group Activity	Oral Written	F & S	II	

8. Practicals on Sandhis
9. Practicals on Samasa
10. Practicals on Upasargas.
11. Practicals on Avyayas
12. Practicals on Visheshan - Visheshya
13. Practicals on Anvay lekhana
14. Practicals on Nirukti
15. Practicals on Paribhasha
16. Practicals on Panchatantra

Table 5: Non Lecture Activities Course AyUG- SN & AI

List non lecture Teaching-Learning methods	No of Activities	Total
Sanskrit		
Presentation of videos	2	120
Graphical Representation of Vocal system	1	
Guided Reading,	5	
Peer learning	4	
PBL	36	
Quizes, puzzles, cross word, word cloud	13	
Group activities	37	
SDL	17	
Recitation	5	
Practical (Refer Table 4	60	60
Ayurved Itihas	20	20
		200

Topic wise details –

List non lecture Teaching-Learning methods	No of Activities
Presentation of videos about Maheshwar Sutra, Prayatna, Uccharana Sthanani etc.	2
Graphical Representation of Vocal system	1
Reading / Pronunciation (Guided Reading, Peer learning)	7
Preparing different Shabdarupani and recitation (PBL, Peer learning, Quizes, word cloud, crosswords, recitation etc.)	14
Preparing different Kriyapadani. (PBL, Group activities)	5
Practicals on Karakani. (PBL, Group Discussions)	10
Practicals on Pratyayas. (PBL, Group Discussions)	6
Practicals on Sandhis (PBL, Quizes, puzzles, Group activities)	10
Practicals on Samasa (PBL, Quizes, puzzles,)	10
Practicals on Upasargas. (PBL, group activities)	3
Practicals on Avyayas (PBL, group activities)	3
Practicals on Visheshan – Visheshya (PBL)	3
Practicals on Anvay lekhana (PBL, SDL, Group Discussions)	14
Practicals on Nirukti (PBL, SDL, Group Discussions)	13
Practicals on Panchatantra - Vachya of sentences, Writing sentences using appropriate Shabdarupani and Kriyapadani etc. (SDL, PBL, group activities)	4
Practicals on Paribhasha (PBL, SDL, Group Discussions)	15
	120

Ayurved Itihas-

List non lecture Teaching-Learning methods	No of Activities
Group Discussion,	10
Video clips	5
Online Search, Prroject	
Tutorial	
Quiz, Collage, Puzzle	5
	20

6 A-Number of Papers and Marks Distribution

6 B - Scheme of Assessment (formative and Summative)

6 C - Calculation Method for Internal assessment Marks (15 Marks)

TERM	PERIODICAL ASSESSMENT*					TERM TEST**	TERM ASSESSMENT	
	A	B	C	D	E	F	G	H
	1 (15 Marks)	2 (15 Marks)	3 (15 Marks)	Average (A+B+C/3)	Converted to 15 Marks (D/15*15)	Term Test (Marks converted to 15) (15 Marks)	Sub Total _/30 Marks	Term Assessment (..../15)
FIRST							E+F	(E+F)/2
SECOND							E+F	(E+F)/2
THIRD						NIL		E
Final IA	Average of Three Term Assessment Marks as Shown in 'H' Column.							
	Maximum Marks in Parentheses *Select an Evaluation Method which is appropriate for the objectives of Topics from the Table 6 D for Periodic assessment. Conduct 15 marks assessment and enter marks in A, B, and C. ** Conduct Theory (100 Marks)(MCQ(20*1 Marks), SAQ(8*5), LAQ(4*10)) and Practical (100 Marks) Then convert total marks to 15 marks.							

6 D- Evaluation Methods for Periodical Assessment

S. No.	Evaluation Methods
1.	Activities Indicated in Table 3 - Column G3 as per Indicated I, II or III term in column I3.
2.	Practical / Clinical Performance
3.	Viva Voce, MCQs, MEQ (Modified Essay Questions/Structured Questions)
4.	Open Book Test (Problem Based)
5.	Summary Writing (Research Papers/ Samhitas)
6.	Class Presentations; Work Book Maintenance
7.	Problem Based Assignment
8.	Objective Structured Clinical Examination (OSCE), Objective Structured Practical Examination (OPSE), Mini Clinical Evaluation Exercise (Mini-CEX), Direct Observation of Procedures (DOP), Case Based Discussion (CBD)
9.	Extra-curricular Activities, (Social Work, Public Awareness, Surveillance Activities, Sports or Other Activities which may be decided by the department).
10.	Small Project
11.	<p>Specific Periodic Assessment AyUG- SN & AI</p> <p>Sanskrit (3 PA / term) Quiz, Puzzles, Word cloud, Cross words, Preparation of charts, mindmaps, Assignments, Open book test, Recitation. Sanskrit Topics 8 and 9 शब्दरूपाणि and धातुरूपाणि from paper 1 can be asked for recitation, word cloud, crossword etc. in all Terms Test and viva or any from above table.</p> <p>Ayurved Itihas (3 PA/term) Quiz, Puzzles, Word cloud, Cross words, Preparation of charts, mindmaps, Assignments, Open book test, Video Clips making.</p> <p>Any of Evaluation Methods for Periodical Assessment</p>

6 E- Paper Layout

I PROFESSIONAL BAMS EXAMINATIONS

AyUG SN & AI

PAPER-I

Time: 3 Hours Maximum Marks: 100

INSTRUCTIONS: All questions compulsory

TOTAL MARKS 100 Sanskrit

		Number of Questions	Marks per question	Total Marks
Q 1	Multiple Choice Questions (MCQ) All Sanskrit	20	1	20
Q 2	Short answer questions (SAQ) All Sanskrit	8	5	40
Q 3	Long answer questions (LAQ) All Sanskrit	4	10	40
				100

I PROFESSIONAL BAMS EXAMINATIONS

AyUG SN & AI

PAPER-II

Time: 3 Hours

INSTRUCTIONS: All questions compulsory

TOTAL MARKS 100 = [Sanskrit, (LAQ and SAQ) 80 marks + Ayurved Itihas, (MCQ) 20 marks]

		Number of Questions	Marks per question	Total Marks
Q 1	Multiple Choice Questions (MCQ) Ayurved Itihas, (all 20)	20	1	20
Q 2	Short answer questions (SAQ) All Sanskrit	8	5	40
Q 3	Long answer questions (LAQ) All SaAnskrit	4	10	40
				100

6 F- Disribution of Theory Exam

Paper I: Sanskrit		D Type of Questions “Yes” can be asked. “No” should not be asked.				
	A List of Topics	B Term	C Marks	MCQ (1 Mark)	SAQ (5 Marks)	LAQ (10 Marks)
1	संस्कृत तर्कानाम् पररचयः - माहेश्वरसूत्रानुसारेण, उच्चारणस्थानानुसारेण, बाह्यप्रयत्नानुसारेण, अभ्यन्तर प्रयत्नानुसारेण	I	05	5	No	No
2	सांज्ञा- 2.1 - सांयोगः, सांनहता, ह्रस्वदीर्घप्लुतः, अनुनासिकः, पदम्, धातुः, उपसर्गः, गुणः, रूपाणि 2.2 - इत्, लोपः, प्रत्याहारः, उदात्तः, अनुदात्तः, स्वरतः, सर्गः, ननपातः, प्रगृह्यम्,	2.1 – I 2.2 – II	05	5	No	No
3.	उपसर्गाः- उपसर्गाः नियमयोगे प्र, परा, अप, सम्, अनु, अर्, ननस्, ननर्, दुस्, दुर्, नर्, आङ्, नन, अनप, अनध, अनत, सु, उत्, अनभ, प्रनत, परर, उप	II	05	No	Yes (1 que of 5 marks)	No
4.	अव्ययानन 4.1 - च अनप खलु नह तु नकल ननु र्ा च एर् 4.2- पुनः नर्ना उच्चैः ऋते एर्म् सह साध्यम् युगपत् यथा -तथा यार्त्-तार्त् इनत यदा-तदा यनद-तनहय साकम् न कुत्र कनत कुतः नकम्थयम् नकयत् इह अत्र तत्र सर्पत्र अन्यत्र कुत्र एकत्र सदा अन्यथा एकथा A) Identify अव्ययानन B) Explain the meaning with reference to the context C) Construct the sentences using अव्ययानन	I A II B III C	5	No	Yes (1 que of 5 marks)	No
5.	कारकप्रकरणम् तथा र्ाच्य प्रयोगः - कर्तृकारकम्, कर्मकारकम्, करणकारकम्, सम्प्रदानकारकम्, अपादान कारकम्, अनधकरणकारकम्, सम्बन्धः, उपपदनर्भनक्तिः A) Discriminate the नर्भनि and their meaning. B) Identify the karakas from Ayurveda texts like करणम् कारणम् C) Construct sentences D) Translate sentences from English to Sanskrit & from Sanskrit to English.	I A II B III C, D	15	5	Yes (1 que of 5 marks)	Yes (1 que of 5 marks)

<p>6.</p>	<p>सनन्धः 6.1 - अच् सनन्धः/स्तरसनन्धः - यण् सनन्ध- इको यणनच, गुण सनन्धः=आद्गुणः रृन्सनन्धः-रृन्निरेनच, अयर्ायार् सनन्धः - एचोऽयर्ायर्/रृन्तो नय प्रत्यये, लोप सनन्धः-लोपः शाकल्यस्य, पररूपसनन्धः-एनङ्क पररूपम्, पूर्यरूपसनन्धः-एङ्कः पदान्तादनत, प्रकृ तीभार्- सर्यत्र नर्भाषा गोः , प्लुत प्रगृह्य अनच ननत्यम् । 6.2 - हल्सनन्धः/व्यञ्जिनसनन्धः - श्वसनन्धः-स्तोः श्वना श्वः, ष्टुसनन्धः-ष्टुना ष्टुः, िश्तृ सनन्धः-झलां िशो/न्ते, अनुनानसकसनन्धः-यरोऽनुनानसके ऽनुनानसको र्ा/प्रत्यये भाषायां ननत्यम्, परसरण्यसनन्धः-तोनलयः/र्ा पदान्तस्य, चत्र्यसनन्धः खरर च, पूर्यसरण्यसनन्धः-झयोऽहोऽन्यतरस्याम्, छुत्रसनन्धः शशतछोऽनत /छत्रमीनत र्ाच्यम्, अनुस्ारसनन्धः - मोऽनुस्ारः, तुगागमसनन्धः- नश तुक् /छे च/पदान्तावा, रुत्रादेशसनन्धः- नशतछव्यप्रशान् 6.3 - नर्सगयसनन्धः - रुत्रसनन्धः-ससिषो रुः, उत्रसनन्धः- अतो रोरप्लुदादप्लुते/हनश च, रो रर, भो भागो अर्ो अपूर्यस्य योऽनश , रोऽसुनप , एतिदोः सुलोपोऽकोरनञ् समासे हनल, सोऽनच लोपे चेत् पादपूरणम् । 6.4- रुत्रप्रकरणसनन्धः- [सङ्क निष्य पाठनम् – Brief teaching] समः सुनट, कानाप्तेनिते च, अत्रानुनानसको पूर्यस्य तु र्ा, अनुनानसकात्परोऽनुस्ारः, खरर्सनयोनर्यसियनीयः, नर्सियनीयस्य सः, सम्पुङ्ग कानां सो क्तिव्यः ।</p>	<p>II</p>	<p>15 (6.1-5marks 6.2/6.4-5marks 6.3 – 5marks)</p>	<p>No</p>	<p>Yes (1 que of 5 marks)</p>	<p>Yes 10 (1 Que. of 10 marks)</p>
<p>7.</p>	<p>समास 7.1 - अव्ययीभार्समासः - 7.1.1 - अव्ययम् नर्भनिसमीपसम्निवर्धयथायभार्ात्ययसम्प्रनतशब्दप्रादुभायभार्प श्रायथानुपूव्यययोगपद्यसादृशतयसम्प्रनिसाकल्यान्तर्चनेषु । 7.1.2 - प्रथमा नननदयष्टम् उपसियनम्/ उपसियनां पूर्यम् /नाव्ययीभार्ादतो/ म् यञ्म्याः/ तृतीयासप्तम्योर् बहुलम्/अव्ययीभार्े चाकाले । 7.2 - तत्पुरुष समासः - नवतीया नितातीतपनतगतात्यस्तप्राप्तापत्रैः, तृतीया तत्कृ ताथेन गुणर्चनेन, कृत्यकरणे कृ ता बहुलम्, चतुर्थी तदथायथय बनलनहतसुखरनितैः, पञ्चमीभयेन, षष्ठी, सप्तमीशौण्िः, नर्शेषणां नर्शेषेणबहुलम् , उपमानानन सामान्यर्चनैः, नञ् , कमयधारय , नवगुः उपपद तत्पुरुष</p>	<p>II</p>	<p>15 (7.1.1 & 7.1.2 -- 5marks 7.1.3 – 5marks 7.14 & 7.15 – 5marks)</p>	<p>No</p>	<p>Yes (1 que of 5 marks)</p>	<p>Yes 10 (1 Que. of 10 marks)</p>

	7.3 - बहुव्रीह समास - : अनेकमन्यपदाथे 7.4 - वन्त्रसमास - : चाथे वन्त्रः					
8.	<p>शब्दरूपानुगुण</p> <p>8.1 - पुनर्लङ्ग शब्दरूपानुगुण अकारान्तः - र्नात्, र्दैद्य, रुग्ण, राम आनद इकारान्तः - अनग्र, मुनन आनद उकारान्तः - ऋतु, भानु गुरु आनद ऋकारान्तः - नृ, धातु, नपतृ आनद ओकारान्तः - गो आनद नकारान्त - श्लेशतमन्, रोमगन्, ज्ञाननन् आनद सकारान्त - चत्रमस् आनद तकारान्त - मरुत् आनद दकारान्त - सुहृद् आनद िकारान्त - नभषि, आनद शकारान्तः - कीदृश्, एतादृश् आनद</p> <p>8.2 - स्तमितङ्गु ग शब्दरूपानुगुण ओकारान्तः - बला, कला, नस्थरा, माला आनद इकारान्तः - सम्प्रानप्त, प्रकृ नत, मनत आनद ईकारान्तः - धमनी, नदी आनद उकारान्तः - रज्जि, धेनु आनद ऊकारान्तः - षयिभू, र्धू आनद ऋकारान्तः - मातृ आनद चकारान्तः - र्नाच् आनद तकारान्तः - योनषत्, सररत् आनद दकारान्तः - पररषद् आनद िकारान्तः - सि आनद सकारान्तः - िलौकस्, सुमनस् आनद षकारान्तः - प्रारृष् आनद</p> <p>8.3 - नपां सनलङ्गु ग शब्दरूपानुगुण अकारान्तः - नपि, र्न आनद उकारान्तः - भि, मधु आनद इकारान्तः - अनि, अनस्थ, र्ारर, दनध आनद ऋकारान्तः - ज्ञातृ, धातृ आनद नकारान्तः - त्रयन्, दनण्िन् आनद सकारान्तः - स्रोतस्, मनस् आनद षकारान्तः - सनपयष्, आयुष् आनद तकारान्तः - शक् त्, िगत् आनद</p> <p>8.4 - सर्यनामपदानन - अस्मद्, युष्मद्, तद्, एतद्, यद्, नकम्, इदम् आनद</p>	I	10	No	Yes (1 que of 5 marks)	Yes (1 que of 5 marks)
9.	<p>धातुरुपानुगुण-</p> <p>9.1 - परस्मैपद - लट्/लृट्/लङ्ग/नर्धनलङ्ग/लोट् भ्रानद गण - भू सियायाम्, नि िये, गम्, गम् (गतौ, पा</p>	I	10	No	Yes (1 que of 5 marks)	Yes (1 que of 5 marks)

<p> पाणे, िीर्, पच्, त्पि, दृश्(पश्तय) अदानद गण - अद् भिणे, हन् नहम्सागत्योः, र्ा गनतगन्धनयोः पा रिणे, अस्, श्वस्स्प, र्, ब्रू, िुहोत्यानद गण- धा धारणपोषणयोः, पृ - पलनपूरणयोः, हा ल्यागे, दा (दाञ्) नदर्ानद गण- नदर्, िीिादौ, त्रसी उवेगे, पुष् पुष्टौ, कु पृ, नश्, तुष्, नस्त्रह, िु स्नानद गण- नचञ् चयने, शक् िु, तुदानद गण- तुद् व्यथने, कृ ष् नर्लेखने, नलख् लेखने, नदश्, कृ न्त, निप्, स्पृश् रुधानद गण- रुनधर् आरणे, नभनदर् नर्दारणे, भुिर् तनानद गण- तनु नस्तरि, कृ ज् करणे क्रयानद गण- प्रीज्- तपयणे कान्ते च, ग्रह उपादाने ज्ञा चुरानद गण- गण् सांस्थाने, साध्, तािर्, धृ, कथ् र्ाक्तयप्रबन्धे आत्मनेपनद - भ्रानद गण - रृतु रियिने, रृध्(र्ध्), लभ्, सेर्, रुच् अदानद गण - शीङ्क् स्रप्रेब्रू, िुहोत्यानद गण- धा धारणपोषणयोः, दा (दाञ्), नदर्ानद गण- िनी प्रादुभायर्, मन्, बुध्, पद्, नर्द् स्नानद गण- नचञ् चयने, तुदानद गण- तुद् व्यथने, कृ ष् नर्लेखने, नम्र, नर्द्, मुच्, नसञ्च, रुधानद गण- रुनधर् आरणे, नभनदर् नर्दारणेभुिर्, र् तनानद गण- तनु नस्तरि, कृ ज् करणे क्रयानद गण- प्रीज्- तपयणे कान्ते च, ग्रह उपादानेज्ञ, र्ा चुरानद गण- चुर, िाल्, कथ्, र्ोष्, भि आयुरेदसांनहतासु नर्द्यमानानां धतुरूपाणां पररचयीकरणम् अनभकाम्यम् 9.2 - लृिग, आशीनलयिग, नलट, लुिग, लुि [सङ्क् निष्प पाठनम्-Brief teaching] भ्रानद गण, अदानद गण, िुहोत्यानद गण, नदर्ानद गण, स्नानद गण, तुदानद गण , रुधानद गण, तनानद गण, क्रयानद गण, चुरानद गण पूरोिधातुप्रेकस्य पञ्चलकारेषु रूपानण दशययेत् । परां परीायाम् न पृष्टव्यानन । </p>					
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10	<p>प्रत्ययाः</p> <p>10.1 – क्ति - क्तिर्त्त, तव्यत् – अनीयर्, शतृ – शानच्, ल्युट् - णृल्, क्त्वा - ल्यप्, नणनन. नक्तिन्, तुमुन् प्रत्ययाणाम् प्रयोगाः एषः पृष्टव्यः।</p> <p>10.2 - भार्गेर्ज्, करणेर्ज्, भार्गेष्यञ्, कमयनण ण्यत्, कियर अच् अप्</p> <p>आयुरेदसानहतायां नर्धमानानां भार्गे/करणे/कियरर/ताच्छील्ये/ आनद प्रत्ययानां पररचयः करणीयः। परां परीक्षायाम् न</p>	I	10	3	Yes (2 Que of 1 mark)	Yes (1 que of 5 marks)
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	पृष्टव्याः। परीक्षायाम् र्वाच्य प्रयोगः स्वरूपे पृष्टव्यः।					
11	नर्शेषण नर्शेष्य	II	05	2	Yes (3 Que of 1 mark)	No

	Paper II Sanskrit and Ayurved Itihas			D Type of Questions “Yes” can be asked. “No” should not be asked.		
	Part A Sanskrit List of Topics	B Term	C Mar ks	MCQ (1 Mar k)	SAQ (5 Marks)	LAQ (10 Marks)
1	<p>ननरुनक्ति तथा पयायय पदानन-</p> <p>A) आयुः, शरीर, मनः, अनग्रः, िलम्, र्ातः, नपिम्, कफः</p> <p>B) रस, रि, मांस, मेद, अनस्थ, मज्िा, शुि, इनत्रयम्, िोत्रः, चिः, रसना, घ्राण</p> <p>C) धी, धनत, स्मृत, बुिी, मनत, प्रज्ञा, मूत्र, पुरीषः, स्ेद, आत्मा, रोगः, ननदानम्, रोगः, भेषिनचनकत्सा, आनद</p>	A - I B – II C- III	15	No	Yes (2 que of 5 marks)	Yes (1 que of 5 marks)
2	<p>पररभाषापदानन –</p> <p>A) आयुरेदः, पञ्चमहाभूत ानन, नत्रगुणम्, दोषाः, मलाः, दषू यम्, सम्पसगयः, सनत्रपातः</p> <p>B) रव्यगुण, कमय, सामान्य, नर्शेष, गुरु, लरु, प्रकृ नतः, नर्कृ नतः, चयः, प्रकोपः, प्रसरः, स्थानसम्प्यिः, दोषगनतः भेदः, रसः, र्ीययम्, नर्पाकः, काययकारणभार्ः</p> <p>C) स्रोतस्, कोष्ठः, आमम्, नर्रिाहम्, नर्रिाहारः, नर्दानह, नर्नम्भ, सात्त्यम्, ओकसात्त्यम्, देशसात्त्यम्, अत्यशनम्, अर्धयशनम्, स्थानी, योगर्ाही, पर्थयम्, अपर्थयम्, कृ तात्रर्गयः, अस्थर्पाकः, र्ेगः, शोधन, शमन, लार्न, बृहण, अनुपान आनद</p>	A - I B – II C- III	20	No	Yes (2 que of 5 marks)	Yes (1 Que. of 10 marks)
3.	<p>अत्रयलेखनम् -</p> <p>A) अष्टाङ्क गहदयम् सूत्रस्थानम् – अधयायतः सर्ायनण सूत्रानण</p> <p>१. आयुष्कामौयम्</p> <p>२. नदनचयाय</p>	A- I B - II C - III	30			

३. रोगानुत्पादनीयम् B) अष्टाङ्क गृह्यसूत्रस्थानम् -अध्यायतः सर्वायनसूत्रानां दोषानुदनीयम् दोषभेदीयम् दोषोपमणीयम् नवनर्थापमणीयम् C) रौद्रिकीय सुभानुषतसानुहृत्यम् - shloka numbers - प्रथमः 1, 2 नवतीयः 1, 7 तृतीयः 9		(A B C 10 mark s each)	No	Yes (3 que of 5 marks)	Yes (1 Que. of 10 marks and 1 Que of 5 marks as part A of Que. 3)
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	चतुर्थः 2, 3 पञ्चमः 2, 3 षष्ठः 1, 4, 7 सप्तमः 2, 5, 17 अष्टमः 13, 12 नवमः 12, 13 दशमः 1, 19 एकादशः 1, 2 वादशः 1, 6 त्रयोदशः 1, 7, 8, 9 चतुर्दशः 2, 3, 4 पञ्चदशः 7, 10 षोडशः 5, 6 सप्तदशः 1, 4 अष्टादशः 1, 2, 3 एकोनविंशतः 2, 3, 4 नवविंशतः, 12, 3, 4					
4.	पञ्चतन्त्र-अपराधनितकारकम् ५ अध्याय	III	15	No	Yes (1 que of 5 marks)	Yes (1 que of 10 marks)
	Part B Ayurved Itihas					
	All Topics			Yes	No	No

6 G- Question paper blue print Paper

I – Sanskrit

A Question Sr. No	B Type of Question	C Question Paper Format
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Q1	Multiple choice Questions (MCQ) 20 Questions 1 mark each All compulsory Must know part 15 MCQ, Desirable to know 3 MCQ. Nice to Know 2 MCQ	1. Topic number 1 2. Topic number 1 3. Topic number 1 4. Topic number 1 5. Topic number 1 6. Topic number 2 7. Topic number 2 8. Topic number 2 9. Topic number 2 10. Topic number 2 11. Topic number 5 12. Topic number 5 13. Topic number 5 14. Topic number 5 15. Topic number 5
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		16. Topic number 10 17. Topic number 10 18. Topic number 10 19. Topic number 11 20. Topic number 11
Q2	Short answer Questions (SAQ) 8 questions 5 marks for each que. All compulsory Must know part 7 questions, 1 question on Desirable to know. No Questions on Nice to know.	Q1 Topic 6 अधोदिनां पदानां सन्धां नछत्रां र्ना योिनयत्रां नलखत (5 Que x 1 marks each) Q2 Topic 7 अधोदिनां पदानां नर्ग्रहर्क्तयां समस्तपदां र्ना नलखत 5 Que x 1 mark each Q3 Topic 4 - अधोदैः अव्ययपदैः ररक्तिस्थानम् पूरयत 5 Que x 1 mark each Q4 Topic 8 - शब्दरूपानण नलखत (5 Que x 1 mark each) Q5 Topic 3 - उपसगायाः (स्)र्क्तयेषु योियत 5 Que x 1 mark each Q6 Topic 10 and 11- (स्)र्क्तयेषु योियत – 5 Que x 1 mark each Q7 Topic 9 - धातुरुपानण नलखत 5 Que x 1 mark each Q8 Topic 5, 6 – अधोदि श्लोके रेखाङ्क नगतानां पदानां कारकसांबांधां नर्शदीकृत्रा / ननश्चयीकृत्रा तदनुसृत्य पदानां अथं नलखतु (shlokas should be taken from the syllabus.) 5 Que x 1 mark each

Q3	<p>Long answer Questions (LAQ) All compulsory 4 questions 10 marks for each que.</p> <p>All questions on must know. No Questions on Nice to know and Desirable to know.</p>	<p>Q1 Topic 8, 5 – उनचर्ता शब्दरूपां ननलख्य र्ाक्तये योयित 5 Que. X 2 mark Q2 Topic 7 - अधोदिषु श्लोके षु रेखाङ्क नगतानां समस्तपदानां नर्ग्रहर्ाक्तयां समस्तपदम् र्ा समासनाम्ना सह नलखत (Underline 5 Samast padas or give 5 Vigrah vakyas from a 5 to 7 line passage or 2 to 3 shlokas from the syllabus.) 5 Que. X 2 marks Q3 Topic 6 - अधोदि पररच्छेदे रेखाङ्क नगतानां सनन्धां नछत्रा र्ा योिनयत्रा सनन्ध सूत्रम् च नलखत (Underline 5 Sandhi padas or Sandhi Vigrahas from a 5 to 7 line passage or 2 to 3 shlokas from the syllabus.) 5 Que. X 2 marks Q4 Topic 5, 9, 10 - अ) अधोदिस्य धातोः तव्यत् तुमुन् ल्यप् िर्त् शतृ/शानच् प्रत्ययरूपानण नलखत 5 Que. X 1 marks आ) र्ाच्य प्रयोगाः 5 Que. X 1 marks (Sentences should be taken from syllabus Panchatantra.)</p>
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AyUG SN & AI :

Paper II – Sanskrit and Ayurved Itihas

A Question Sr. No	B Type of Question	C Question Paper Format
Q1	Multiple choice Questions (MCQ) Ayurved Itihas 20 Questions 1 mark each All compulsory Must know part 15 MCQ, Desirable to know 3 MCQ. Nice to Know 2 MCQ	All Questions From Ayurved Itihas .Paper II Part B 1. Topic number 1/2 2. Topic number 3/4 3. Topic number 5/6 /7 /8 4. Topic number 9/ 10 5. Topic number 1/2 6. Topic number 3/4 7. Topic number 5/6 /7 /8 8. Topic number 9/ 10 9. Topic number 1/2 10. Topic number 3/4 11. Topic number 5/6 /7 /8 12. Topic number 9/ 10 13. Topic number 1/2 14. Topic number 3/4 15. Topic number 5/6 /7 /8 16. Topic number 9/ 10 17. Topic number 1/2 18. Topic number 3/4 19. Topic number 5/6 /7 /8 20. Topic number 9/ 10
Q2	Short answer Questions (SAQ) Sanskrit All compulsory 8 questions 5 marks for each que. Must know part 7 questions, 1 question on Desirable to know. No Questions on Nice to know.	1. Topic number 3 अधोदिस्य श्लोकस्य पदच्छेदा नलनखत्रा रेखाङ्कनगतानां पदानां शब्दरूपानण धातुरूपानण र्ा नलखत । 2. Topic number 3 अधोदिस्य श्लोकस्य अत्रयम् अथयम् च नलखत 3. Topic number 2/3 अधोदिस्य श्लोकस्य अत्रयम् अथयम् च नलखत 4. Topic number 3/ 4 प्रयोगां नर्पररणमयत 5 Que x 1 markeach 5. Topic number 2 अधोदिनाम् नटप्पनणनलयखत । 6. Topic number 1 शब्दस्य ननरुनक्तिं तथा पयाययर्चनानन च नलखत । 7. Topic number 3/4 सांस्कृत भाषायां अनुर्दत । 8. Topic number 3/4 मातृभाषायां अनुर्दत ।
Q3	Long answer Questions (LAQ) Sanskrit All compulsory 4 questions 10 marks for each que.	1. Topic 4 अधोदिकथायाः साराम्शो सम्स्कृत भाषायाम् नलखत or Comprehension. 2. Topic 2 अधोदिनाम् नटप्पनणनलयखत 2x5 (5 marks for each) 3. Topic 1, 3 A) प्रश्नानाम् पूणयर्ाक्तयेन उिरानण नलखत 5 Que.X 1 Mark for each B) ननरुनक्तिं तथा पयाययर्चनानन च नलखत 5 Que. X 1 mark for each

	All questions on must know. No Questions on Nice to know and Desirable to know.	4. Topic 3 अधोदेस्य श्लोकस्य पदच्छेदां नग्रेहर्वाक्तयम् अन्यः र्वाक्तयार्थं शास्त्रार्थं च नलखत । 5 Que. X 2 marks
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6 H - Distribution of Practical Exam

Practical 100 Marks – (Viva 75 + Elective 10 + IA 15) Marks

SN		Heads	Marks
A	VIVA (75)		
	1	Reading (structured approach)	10
	2	Shabdarupani and Karakani	10
	3	Sandhi and Padachcheda, Dhaturupani	10
	4	Samas	5
	5	Paribhasha, Nirukti	5
	6	Anvay	10
	7	Constructing sentences and conversation	10
	8	Compilation/ Record writing [Compilation/ Record writing book should contain 1. Anvay 2. Padachcheda 3. Samas 4. Shabdarupani 5. Dhaturupani 6. Bhavarth Of the 40 shlokas from Sanskrit Paper 2 topic numbers 3 A and B Ashtanga Hridayam and ten verses from Charak Samhita Sutrasthan 5 and 6 from Samhita Adhyayan - 1 subject.]	10
	9	Communication Skill	5
B	Internal Assessment (15)		15
C	Electives (10)		10
		Total Marks	100

7. References/ Resources

Sanskrit

Books

1. सांस्कृतपाठ्यपुस्तकम् प्रथमः तथा नवतीयभागः- Sanskrit for Ayurveda part- I and Part –II Published by CCIM New Delhi
2. आयुर्वेदस्य भाषा-पञ्चभागाः- Ayurvedasya bhaSha part I to part –V samskrita samvardhana prathisthan mumbai
3. लघुसिद्धान्तकौमुदः - रंदि - Laghusiddhantakaumudi of bhattojidikshita
4. नसिन्तकौमुद - भट्टोनिदीनितः siddhantakaumudi
5. रैद्यकीयसुभानषतसानहृत्यम् - Vaidyakiyasubhashitasahityam, भास्कर गोवर्धन रंणेकर, चौखम्बा प्रकाशन
6. पन्तन्त्रम् अपरीनितकारकम् - Pancatantra aparikshitakarakam 1 to 5 stories
7. शब्दकल्पद्रुमः - Sabdakalpadruma:
8. रचस्पत्यम्- Vachaspatyam
9. अमरकोशः- Amarakosha
10. नसिरूपम् - Siddharupam
11. धातुपाठः- Dhatupatha
12. Sanskrit to English and English to Sanskrit Dictionary – Monier Williams
13. Sanskrit to Hindi and Hindi to Sanskrit Dictionary – Va. Shi. Apte
14. Sanskrit to Regional/ Desirable language dictionaries.
15. Ayurvediya Shabdakosha
16. Encyclopedic dictionary of Ayurveda – Dr. Kanjiv Lochan, Dr. P.S. Byadgi (Chaukhambha Publications)

Online Recourses:-

- Crossword Online
<https://crosswordlabs.com/>
- Readymade Sanskrit Puzzles
<http://webapps.samskrutam.com/tools/CrosswordPuzzle.aspx>
- Learning Sanskrit - Pronunciation 1
<https://www.sanskrit-trikashaivism.com/en/learning-sanskrit-pronunciation-1-1/456>
- Pronunciation of all Sanskrit letters.....
sanskritdocuments.org
http://sanskritdocuments.org/learning_tools/sarvanisutrani/allsutrani.htm
sanskrit.jnu.ac.in
<http://www.taralabalu.org/panini/greetings.htm>
- Vyakarana –
<https://sites.google.com/site/samskritavyakaranam/>
- कोशाः / Dictionaries -
- Cologne Digital Sanskrit Lexicon:
<https://www.sanskritlibrary.org/cologne.html>

<https://www.sanskritdictionary.com/>

www.monierwilliams.com

- Sanskrit Computational tools Samsadhani-
<https://sanskrit.uohyd.ac.in/scl/>
- Learning
<https://www.learn Sanskrit.cc/>
- The Sanskrit Heritage Site
<https://sanskrit.inria.fr/>
- Sanskrit Dictionary for Spoken Sanskrit
www.learn Sanskrit.cc
https://spokensanskrit.org/index.php?mode=3&direct=es&script=hk&tran_input=name

Ayurved Itihas

Reference book

1. Upodghata of Kashyapasamhita (Paragraph of acceptance of Indian medicine) Rajguru Hem Raj Sharma
2. Upodghata of Rasa Yogasagar Vaidya Hariprapanna Sharma
3. Ayurveda Ka Itihas KaviraSuram Chand
4. Ayurveda Sutra Rajvaidya Ram Prasad Sharma
5. History of Indian Medicine (1-3 part) Dr. GirindrNath Mukhopadhyaya
6. A Short history of Aryan Medical Science Bhagwat Singh
7. History of Indian Medicine J. Jolly
8. Hindu Medicine Zimer
9. Classical Doctrine of Indian Medicine Filiyosa
10. Indian Medicine in the classical age AcharyaPriyavrata Sharma
11. Indian Medicine (Osteology) Dr. Harnley
12. Ancient Indian Medicine Dr. P. Kutumbia
13. Madhava Nidana and its Chief Commentaries (Chapters highlighting history) Dr. G.J. Mulenbelt
14. Ayurveda Ka BrihatItihasa Vaidya Atridev Vidyalkankara
15. Ayurveda Ka VaigyanikaItihasa Acharya Priyavrata Sharma
16. Ayurveda Ka PramanikaItihasa Prof. Bhagwat Ram Gupta
17. History of Medicine in India Acharya Priyavrata Sharma
18. Vedome Ayurveda Vaidya Ram GopalS hasstri
19. Vedomein Ayurveda Dr. Kapil Dev Dwivedi
20. Science and Philosophy of Indian Medicine Dr. K.N. Udupa
21. History of Indian Medicine from Pre-Mauryan to Kushana Period Dr. Jyotirmitra
22. An Appraisal of Ayurvedic Material in Buddhist literature Dr. Jyotirmitra
23. Mahayana Granthon mein nihita Ayurvediya Samagri Dr. RavindraNathTripathi
24. Jain Ayurveda Sahitya Ka Itihasa Dr. Rajendra Prakash Bhatnagar
25. Ayurveda- Prabhashaka Jainacharya Acharya Raj Kumar Jain
26. CharakaChintana Acharya Priyavrata Sharma
27. Vagbhata Vivechana Acharya Priyavrata Sharma
28. Atharvaveda and Ayurveda Dr. Karambelkara
29. Ayurvedic Medicine Past and Present Pt. Shiv Sharma
30. Ancient Scientist Dr. O.P. Jaggi
31. Luminaries of Indian Medicine Dr. K.R. Shrikanta Murthy
32. Ayurveda Ke Itihasa Ka Parichaya Dr. RaviduttaTripathi
33. Ayurveda Ke Pranacharya Ratnakara Shastri
34. Ayurveda Itihasa Parichaya Prof. Banwari Lal Gaur



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(Established by UP Shobhit University Act No. 3, 2012)

SCHOOL OF AYURVEDA

Ordinances,Regulations & Syllabus

For

BAMS FIVE AND HALF YEARS PROGRAMME

(W.e.f.session2021-2022)

Course curriculum for Second Professional

शास्त्रं ज्योतिः प्रकाशार्थं दर्शनं बुद्धिरात्मनः।
BAMS(PRESCRIBED BY NCISM)

Agad Tantra evam Vidhi Vaidyaka

(SUBJECT CODE : AyUG-AT)

(Applicable from 2021-22 batch, from the academic year 2023-24 onwards for 5 years or until further notification by NCISM, whichever is earlier)



॥ आयुषे सर्वलोकानाम् ॥



BOARD OF AYURVEDA
NATIONAL COMMISSION FOR INDIAN SYSTEM OF MEDICINE
NEW DELHI-110058

NCISM

II Professional Ayurvedacharya (BAMS)

Subject Code : AyUG-AT

Summary

Total number of Teaching hours: 300			
Lecture hours(LH)-Theory		100	100(LH)
Paper I	100		
Non Lecture hours(NLH)-Theory		200	200(NLH)
Paper I	60		
Non Lecture hours(NLH)-Practical			
Paper I	140		

Examination (Papers & Mark Distribution)					
Item	Theory Component Marks	Practical Component Marks			
		Practical	Viva	End Set SA	IA
Paper I	100	100	60	10	30
Sub-Total	100	200			
Total marks	300				

Important Note:-The User Manual II BAMS is a valuable resource that provides comprehensive details about the curriculum file. It will help you understand and implement the curriculum. Please read the User Manual II before reading this curriculum file. The curriculum file has been thoroughly reviewed and verified for accuracy. However, if you find any discrepancies, please note that the contents related to the MSE should be considered authentic.

In case of difficulty and questions regarding curriculum write to cur.imp@ncismindia.org

PREFACE

Agada Tantra, is one of the eight clinical branches (Ashtanga) of Ayurveda. This branch of clinical toxicity was considered as the stalwart of Ayurveda which popularized this science across several civilizations around the world. Many great explorers glorified the snake bite management existed in India and this paved way for the popularization of Ayurveda in several countries with Ayurvedic scriptures being translated to several languages and many scholars came to India to study this science. The subject encompasses the detailed study for several toxicological conditions ranging from animate, inanimate and other disease entities with an inherent toxic pathology that enables to apply the principles of Agada Tantra in several diseases of contemporary significance.

Poisons disrupts the homeostasis created by the three doshas. Agada Tantra details measures to re-establish the proper functioning of the dosha, dhatu, mala, srotas and to reinstate the vital force (Oja). To attain this, a judicious use of Agada formulations is necessary coupled with specific treatment procedures enshrined in the 24-fold treatments (Chaturvimsati Upakrama). A proper assessment of the patient with respect to the level of spread of poison in the body ascertained through the concept of Vega is utmost important as far as any successful management of poisoning is concerned. A thorough knowledge of all these is essential to adopt treatment of any poison or to extend it to any contemporary toxicological conditions like contact dermatitis, food poisoning etc. Current curriculum has been designed to unearth the scope of this subject as a clinical branch which aims at empowering an undergraduate student to understand the current clinical toxicological manifestations under the theoretical and practical/clinical framework of Agada Tantra.

The present curriculum of Agada Tantra equips an undergraduate student to grasp the clinical utility of these concepts through an effective teaching-learning process involving cognitive, psychomotor and affective domains. Students will be guided through effective teaching-learning methods to understand the concepts through state-of-the-art techniques like activity based learning, problem based learning and group activities. Effective evaluation techniques are also been incorporated to make the student community learn this subject in its entirety and utilizes the spectrum of its theoretical, practical and clinical aspects.

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Course Code and Name of Course

Course code	Name of Course
AyUG-AT	Agad Tantra evam Vidhi Vaidyaka

Table 1- Course learning outcomes and matched PO

SR1 CO No	A1 Course learning Outcomes (CO) AyUG-AT At the end of the course AyUG-AT, the students should be able to-	B1 Course learning Outcomes matched with program learning outcomes.
CO1	Demonstrate application of fundamental concepts of Agada Tantra, Vyavahara Ayurveda and Vidhi vaidyaka in real life situations.	PO1,PO2
CO2	Diagnose and manage acute and chronic poisoning due to Sthavara, Jangama and Kritrima visha along with their contemporary relevance.	PO1,PO2,PO3,PO4, PO5
CO3	Demonstrate application of concepts of Dushivisha, Garavisha and Viruddha ahara in prevention, diagnosis and management of diseases.	PO1,PO2,PO3,PO4, PO5
CO4	Demonstrate application of principles of Agada Tantra and therapeutic administration of common Agada yoga and Visha dravya in Clinical practice.	PO2,PO3,PO4,PO5, PO9
CO5	Appreciate research updates in relevance to Agada Tantra and apply for healthcare promotion and social awareness.	PO6,PO7,PO8,PO9
CO6	Demonstrate application of professional skills of Forensic Medicine in handling medico legal issues.	PO2,PO3,PO6
CO7	Demonstrate professional and ethical behavior in discharging the medico-legal duties and responsibilities in abidance to the law.	PO5,PO6,PO8,PO9

Table 2 : Contents of Course

Paper 1					
Sr. No	A2 List of Topics	B2 Term	C2 Marks	D2 Lecture hours	E2 Non- Lecture hours
1	Concepts of Agada Tantra (Clinical Toxicology) 1.1 Agada Tantra and Clinical Toxicology. 1.2 Scope of Agada Tantra. 1.3 Definition of visha and poison, synonyms, visha guna, difference between visha, madya and oja guna, visha gati, classification of visha and poison, sthavara and jangama visha adhishtana. 1.4 Difference between poison, venom and toxin. 1.5 Routes of administration of poison. 1.6 Mode of action of visha (visha gunanusara karma) and poison (Introduction to toxicokinetics) 1.7 Factors modifying the action of poison. 1.8 Visha vardhaka bhava and visha sankata 1.9 Vishavega, vegantara and sthavara visha veganusara lakshana and chikitsa. 1.10 Visha peeta and vishamukta lakshana.	1	13	8	1
2	Visha Chikitsa (Management of Poisoning) 2.1. Diagnosis of poisoning in living & dead 2.2. Chaturvimshati upakrama. 2.3. General principles of management of poisoning. 2.4. Duties of medical officer in case of suspected poisoning.	1		5	4
3	Vishakta aahara pariksha and Viruddha ahara 3.1. Sources of exposure of visha with contemporary relevance. 3.2. Vishakta aahara pariksha. 3.3. Adulteration and tests for its detection. 3.4. Techniques used in the detection of poisons. 3.5. Viruddha-ahara with contemporary relevance. 3.6. Food poisoning and amavisha.	1		3	2
4	Garavisha and Dooshivisha 4.1. Garavisha 4.2. Dooshivisha 4.3. Contemporary aspects of garavisha and dooshivisha. 4.4. Role of garavisha and dooshivisha in the manifestation of diseases 4.5. Research updates in garavisha and dooshivisha	1	12	7	2
5	Visha Upadrava and diseases caused due to exposure to Visha/poisons	1		4	2

	<ul style="list-style-type: none"> ♦ 5.1 Visha upadrava ♦ 5.2 Drug-induced toxicity ♦ 5.3 Occupational hazards. ♦ 5.4 Allergic manifestations ♦ 5.5 Endocrine disrupters 				
6	Environmental Toxicology <ul style="list-style-type: none"> ♦ 6.1 Vishakta vayu, jala and bhumi (air, water and land pollution) ♦ 6.2 Effect of biological, chemical and nuclear warfare. ♦ 6.3 Ecotoxicology & biomagnification. ♦ 6.4 Toxicovigilance. 	2	11	2	5
7	Dermatological manifestations of visha/poisons. 7.1. Contact dermatitis and its management. 7.2. Signs and symptoms and management of abhyanga visha, lepa visha, vastra visha, paduka visha, abharana visha etc. with contemporary relevance. 7.3. Signs and symptoms and management of dermatological manifestations due to cosmetics, chemicals, occupational and other allergens. 7.4. Dermatological manifestation due to dooshivisha and garavisha. 7.5. Dermatological manifestation due to bites and stings.	2		6	2
8	Therapeutic utility of Agada yoga <ul style="list-style-type: none"> ♦ 8.1 Dooshivishari agada ♦ 8.2 Bilwadi agada ♦ 8.3 Dashanga agada ♦ 8.4 Murvadi agada ♦ 8.5 Panchashirisha agada ♦ 8.6 Vishaghna mahakashaya (Charaka Samhita) ♦ 8.7 Ekasara gana (Sushruta Samhita) 	2		1	0
9	Sthavara visha – Poisons of Plant origin 9.1. Cardiac Poisons - Vatsanabha, Karaveera, Digitalis, Tobacco and Cerbera odollam.	2	17	4	2

	9.2. Neurotoxic Poisons- Kupeelu, Ahiphena, Dhattura, Bhanga. 9.3. Irritant Poisons - Jayapala, Gunja, Bhallataka, Arka, Snuhi, Langali.				
10	Sthavara Visha – Poisons of Metallic origin 10.1. Arsenic. 10.2. Mercury. 10.3. Lead. 10.4. Copper	2		4	2
11	Jangama Visha ♦ 11.1. Sarpa visha 11.2. Loota visha 11.3. Vrischika visha 11.4. Mushika visha and its contemporary relevance. ♦ 11.5. Alarka visha and its contemporary relevance. 11.6. Keeta visha 11.7. Vector borne diseases.	2		10	6
12	Kritrima visha ♦ 12.1. Inorganic Acids – Sulphuric acid, Hydrochloric acid, Nitric acid. ♦ 12.2. Organic Acids - Oxalic acid, Carbolic acid, Formic acid. 12.3. Alkalies - Potassium hydroxide and Sodium hydroxide. 12.4. Asphyxiants – Carbon monoxide, Carbon dioxide. 12.5. Non-metallic poisons – Phosphorous, cyanide 12.6. Hydrocarbons – Kerosene. 12.7. Agrochemical Poisoning – Organo-phosphorus compounds, Carbamates, Organo-chlorine compounds, Aluminium phosphide. 12.8. Household poisons.	3	12	2	0
13	Substances of abuse 13.1. Madya and madatyaya, Alcoholism. 13.2. Addiction - Alcohol, Bhang, Opioids, Tobacco and Digital addiction. 13.3. Drugs of abuse- Lysergic acid diethylamide (LSD) and 3,4-Methylenedioxy methamphetamine (MDMA).	3		4	3

	13.4. Narcotic Drugs and Psychotropic Substances (NDPS) Act.				
14	Agada Tantra perspectives on cancer 14.1. Toxic carcinogens. 14.2. Toxicities due to chemo and radiotherapy and its Ayurvedic approach. 14.3. Agada and visha dravya prayoga in the prevention and management of cancer along with its research updates.	3		2	4
15	Forensic medicine (Vyavahara Ayurveda) and Medical jurisprudence (Vidhi vaidyaka): ♦ 15.1 Forensic Medicine and Medical Jurisprudence. 15.2 Introduction to Indian Penal Code, Indian Evidence Act and Criminal Procedure Code.	1	10	1	0
16	Vaidya sadvritta : Duties and Responsibilities of medical practitioner ♦ 16.1 Vaidya sadvritta, medical ethics and code of conduct, Charaka oath and Hippocratic oath. ♦ 16.2 NCISM - constitution, objectives and functions. ♦ 16.3 Duties, rights and privileges of a registered medical practitioner. ♦ 16.4 Consent, professional secrecy and privileged communication. ♦ 16.5 Professional negligence, professional misconduct and unethical practices. ♦ 16.6 Defenses in medical negligence suits. ♦ 16.7 Medical records. ♦ 16.8 Consumer Protection Act.	1		6	4
17	Legal Procedures 17.1. Courts and their powers 17.2. Inquest, evidence and witnesses 17.3. Court procedures: summons, oath, recording of evidence and conduct money. 17.4. Conduct of a medical professional in the court of law.	1		4	4
18	Personal identity	1		2	2

	18.1. Identification data 18.2. Age 18.3. Race, religion, sex. 18.4. Moles, tattoos, scars, occupational marks & hairs. 18.5. Hand writing, dactylography, DNA typing and superimposition				
19	Thanatology 19.1. Death 19.2. Signs of death. 19.3. Medicolegal autopsy and exhumation. 19.4. The Transplantation of Human Organs and Tissues Act (THOTA).	2	12	6	2
20	Asphyxial deaths 20.1. Hanging. 20.2. Strangulation and suffocation 20.3. Drowning.	2		4	2
21	Injury 21.1. Basics of injury 21.2. Mechanical injury 21.3. Firearm injury 21.4. Thermal injury 21.5. Dowry death	2		5	3
22	Pregnancy, delivery and abortion <ul style="list-style-type: none"> ♦ 22.1 Medico-legal aspects of pregnancy, delivery, infanticide and battered baby syndrome. ♦ 22.2 Abortion, Medical Termination of Pregnancy (MTP) Act and Pre-Conception and Pre-Natal Diagnostic Techniques (PCPNDT) Act. ♦ 22.3 Medico-legal aspects of artificial insemination and surrogacy. 	3	6	2	3
23	Sexual offences 23.1. Rape 23.2. Medico-legal aspects of sexual offences 23.3. Protection of Children from Sexual Offences (POCSO) Act	3		2	1
24	Forensic psychiatry. 24.1. Common symptoms associated with psychiatric disorders 24.2. Lucid interval	3	7	2	2

	24.3. Civil and criminal responsibilities of a mentally ill person 24.4. Mental Health Act (MHA)			
25	Forensic science laboratory 25.1. Hierarchy and major divisions of forensic lab services. 25.2. Newer techniques and recent advances - polygraphy, narcoanalysis, DNA profiling.	3	1	0
26	Laws, Acts, Rules and Regulations 26.1 Clinical Establishments Act 26.2 State AYUSH registration board rules and regulations. 26.3 Medicare Service Persons and Medicare Service Institutions (Prevention of violence and damage or loss to property) Act, 2008. 26.4 Drugs and Cosmetics Act and Rules – Schedules related to poison. 26.5 The Occupational Safety, Health and Working Conditions Code, 2020 26.6 Employees State Insurance Act, 1948. 26.7 Rights of Person with Disability Act, 2016.	3	3	2
Total Marks			100	100 hr 60 hr

Table 3: Learning objectives (Theory) of Course

Paper 1									
A3 Course outcome	B3 Learning Objective (At the end of the session, the students should be able to)	C3 Domain/sub	D3 Must to know / desirable to know / Nice to know	E3 Level Does/ Shows how/ Knows how/ Know	F3 T-L method	G3 Assessment (Refer ----- (Refer abbreviations))	H3 Formative/ summative	I3 Term	J3 Integration
Topic 1 Concepts of Agada Tantra (Clinical Toxicology) (Lecture :8 hours, Non lecture: 1 hours)									
CO1	Define Agada Tantra and Toxicology. Describe the scope of Agada Tantra in the present era.	CK	MK	K	L&PPT	T-EMI,T- EW	F&S	I	
CO1	Define visha and poison. Enlist its synonyms.	CK	MK	K	L&PPT	T-EMI	F&S	I	
CO1	Differentiate between poison,venom and toxin.	CK	MK	K	L,L&PPT	P-VIVA	F&S	I	
CO1	Describe classification of visha & poison	CK	MK	K	L&PPT	T-EMI,P-VIVA	F&S	I	
CO1	Describe sthavara and jangama visha adhisthana.	CK	MK	K	L&PPT	T- EW	F&S	I	
CO1	Describe the routes of administration of poison.	CC	MK	K	L&PPT	T- EW,P-VIVA	F&S	I	
CO1	Enlist visha guna and differentiate between visha, madya and oja	CK	MK	K	L&PPT	T-EMI	F&S	I	

	guna.				T				
CO1	Describe the mode of action of visha (visha gunanusar karma) & poison (Introduction to toxicokinetics).	CC	MK	KH	L,L&PPT,L &GD	T-EMI,T- EW	F&S	I	
CO1	Describe the factors modifying the action of poison.	CC	MK	KH	L&PPT	T- EW	F&S	I	
CO1	Describe vishavardhaka bhava and visha sankata.	CC	MK	KH	L&PPT	T-EMI,T- EW,P-VIVA	F&S	I	
CO1	Describe visha vega & vegantara	CK	DK	K	L&PPT	T-EMI,P-VIVA	F&S	I	
CO1	Describe sthavara visha veganusara lakshana and chikitsa	CK	MK	K	L,L&PPT	T-EMI	F&S	I	
CO1	Describe vishapeeta and vishamukta lakshana.	CK	MK	K	L&GD	T-EMI,P-VIVA	F&S	I	
Topic 2 Visha Chikitsa (Management of Poisoning) (Lecture :5 hours, Non lecture: 4 hours)									
CO2	Describe the diagnosis of poisoning in living and dead.	CAP	MK	KH	L&PPT	T-EMI,T- EW,P-VIVA	F&S	I	
CO2	Enumerate and discuss chaturvimshati upakrama	CC	MK	KH	L&PPT	T- EW,P-VIVA	F&S	I	
CO2	Describe the general principles of management of poisoning.	CAP	MK	KH	L&PPT	T-EMI,P-VIVA	F&S	I	V-KC
CO2	Describe the duties of medical officer in case of suspected poisoning.	CK	MK	K	L&PPT	T-EMI,P-VIVA	F&S	I	
Topic 3 Vishakta aahara pariksha and Viruddha ahara (Lecture :3 hours, Non lecture: 2 hours)									

CO1,CO2,CO3	Explain the various sources of exposure of visha like anna, paana, vastra, abhyanga, lepa, paduka, abharana, etc.	CK	DK	K	L&PP T,L& GD	T- EW,CL- PR,M-CHT	F&S	I	
CO1,CO2,CO3	Describe the Ayurvedic methods of detection of food and beverages contaminated with visha.	CC	MK	KH	L&PP T,L_ VC,S DL,D	T- EW,P-VIV A,P-EXAM	F&S	I	
CO1,CO2,CO3	Define adulteration, describe the methods of detection of adulterants and its relevance in Agada Tantra.	CAP	DK	KH	L_ VC ,SDL, PT	T- EW,P-VIV A,P- EXAM,OSPE ,RK	F&S	I	
CO1,CO2,CO3	Describe the modern analytical techniques for the detection of poison (in contaminated articles) like chromatography, spectroscopy, etc.	CC	NK	KH	L&PP T,L& GD,L _VC	T- EW,P- VIVA,CL-PR	F&S	I	
CO1,CO2,CO3	Define viruddha ahara and explain its types.	CC	MK	KH	L&PP T,L& GD,B S	T- EW,P- VIVA,INT	F&S	I	
CO1,CO2,CO3	Discuss and illustrate the contemporary importance of viruddha ahara with examples	CAN	MK	KH	L&G D,BS, SDL	T- EW,QZ ,CL-PR	F&S	I	
CO1,CO2,CO3	Discuss the application of concepts of viruddha ahara in the prevention and management of diseases.	CAP	MK	KH	L&G D,BS, SDL	T- EW,P-VIV A,CR-RED	F&S	I	
CO1,CO2,CO3	Describe food poisoning, its types and management.	CC	MK	KH	L&PP T,L&	T- EW,P-VIV A,CR-RED	F&S	I	

					GD,L _VC, CD				
CO1,CO2,CO 3	Discuss the clinical application of principles of Agada Tantra in the management of food poisoning.	CAP	MK	KH	L&G D,BS, CBL, SDL	T- EW,P- VIVA,CL-PR	F&S	I	
CO1,CO2,CO 3	Describe the concept of amavisha.	CC	MK	KH	L&PP T,L& GD,L _VC	T- EW,P- VIVA	F&S	I	
Topic 4 Garavisha and Dooshivisha (Lecture :7 hours, Non lecture: 2 hours)									
CO1,CO3	Describe the various definitions of garavisha.	CK	MK	K	L&PP T	T- EW	F&S	I	
CO1,CO3	Describe the clinical presentations of garavisha.	CC	MK	KH	L&PP T	T- EW	F&S	I	
CO1,CO3	Understand and explain the management principles of garavisha.	CC	MK	KH	L&PP T	T- EW	F&S	I	
CO1,CO3	Describe the various definitions of dooshivisha.	CC	MK	KH	L&PP T	T- EW	F&S	I	
CO3	Describe the clinical presentations of dooshivisha.	CC	MK	KH	L&PP T	T- EW	F&S	I	
CO3,CO4	Describe the principles of management of dooshivisha.	CC	MK	KH	L&PP T,DIS	T- EW,P-REC	F&S	I	
CO3,CO4	Discuss the application of the concept of dooshivisha and	CAP	MK	KH	L&G	P-VIVA	F&S	I	

	garavisha and its management in day to day clinical practice.				D				
CO3,CO5	Discuss the recent research updates in the concept of garavisha and dooshivisha.	CAN	MK	KH	L&G D,PE R	P-VIVA,CL- PR	F&S	I	
CO1,CO3,CO 4	Describe garavisha and dooshivisha as an etiology for the diseases of present era.	CAP	MK	KH	DIS,B S,FC	P-VIVA,CL- PR	F&S	I	
Topic 5 Visha Upadrava and diseases caused due to exposure to Visha/poisons (Lecture :4 hours, Non lecture: 2 hours)									
CO1,CO3	Describe visha upadrava.	CK	MK	K	L&PP T	T- EW,P- VIVA	F&S	I	
CO2,CO3,CO 4	Define drug induced toxicity and discuss its Agada Tantra perspective.	CC	MK	KH	L&G D,L_ VC,B S	T- EW,T- OBT,P-VIVA	F&S	I	
CO2,CO3,CO 4	Discuss the application of principles of Agada Tantra in drug induced hepatotoxicity, nephrotoxicity and neurotoxicity.	CAP	MK	KH	L&PP T,CB L	T- EW,P- VIVA,CL-PR	F&S	I	
CO2,CO3,CO 4	Discuss various occupational poisons and their health hazards.	CC	MK	KH	L&PP T,PB L,SD L	T-OBT,P-VIV A,M-CHT,M- POS	F&S	I	H-SW
CO2,CO3,CO 4	Discuss the application of principles of Agada Tantra in occupational diseases caused due to pollution, paints, pesticides, fertilizer and other chemicals.	CC	DK	KH	L&PP T,ML	QZ ,CL-PR,M- CHT,M-POS	F&S	I	
CO2,CO3,CO 4	Define and discuss allergy, types of allergens and its understanding as per Ayurveda.	CC	MK	KH	L&PP T,DIS ,BS,C	INT,CR-RED	F&S	I	

					BL				
CO2,CO3,CO4	Discuss the application of the treatment principles of Agada Tantra in various allergic manifestations.	CAP	MK	KH	L&G D,BS, CBL	T-EMI,P-VIV A,PRN,CL-PR	F&S	I	
CO2,CO3,CO4	Define and enlist endocrine disruptors and discuss its Agada Tantra perspectives.	CAP	DK	KH	L&PP T,DIS ,BS,C BL	CL-PR,M- CHT,COM	F&S	I	
Topic 6 Environmental Toxicology (Lecture :2 hours, Non lecture: 5 hours)									
CO4,CO5	Define environmental toxicology.	CK	DK	K	L&PP T,DIS	PRN,M-POS	F&S	II	
CO3,CO4,CO5	Describe the lakshanas and chikitsa of vishakta bhoomi, vishakta jala, and vishakta vayu.	CK	DK	K	L&PP T	P-VIVA,P- MOD	F&S	II	
CO4,CO5	Define pollution. Describe various pollutants and explain water pollution, soil pollution, air pollution,along with their health hazards.	CK	DK	KH	L&PP T,BS	T- EW,T-CS,P RN,P-MOD	F&S	II	
CO4,CO5	Describe the health effects of biological, chemical and nuclear warfare.	CK	NK	K	L&G D,SD L	PRN,QZ	F&S	II	
CO4,CO5	Define ecotoxicology & biomagnification.	CK	NK	KH	L&G D,SD L	PRN,CL-PR	F&S	II	
CO4,CO5	Explain the concept of toxicovigilance	CC	DK	K	FC,S DL	P-POS,CL- PR,CR-RED	F	II	
Topic 7 Dermatological manifestations of visha/poisons. (Lecture :6 hours, Non lecture: 2 hours)									

CO3,CO4	Describe the clinical presentations and diagnosis of paduka visha, abharana visha, vastra visha, lepa visha, abhyanga visha, etc.	CAP	MK	KH	L&PP T,DIS ,CBL, CD	T- EW,P- CASE,CL-PR	F&S	II	
CO3,CO4	Discuss the management of paduka visha, abharana visha, vastra visha, lepa visha, abhyanga visha, etc.	CAN	MK	KH	L&PP T,DIS ,CBL, PER	T- EW,P-EXA M,P- CASE,CL-PR	F&S	II	
CO3,CO4	Describe contact dermatitis and its types.	CK	MK	K	L&PP T	T- EW,P- VIVA	F&S	II	
CO3,CO4	Discuss the application of treatment principles of Agada Tantra in the contact dermatitis.	CAP	MK	KH	L&PP T,CB L	P-VIVA,P- CASE,CL-PR	F&S	II	
CO3,CO4	Discuss the dermatological conditions caused due to garavisha and dooshivisha.	CAP	MK	KH	L&PP T,DIS ,CBL, CD	T- EW,P-VIV A,P-CASE	F&S	II	
CO3,CO4	Discuss the application of principles of treatment of garavisha and dooshivisha in the management of dermatological manifestations.	CAP	MK	KH	L&PP T,DIS ,CBL	P-VIVA,P- CASE,CL-PR	F&S	II	
CO3,CO4	Discuss the daignosis and application of the treatment principles of Keeta visha in dermatological manifestations due to bites & stings.	CAP	MK	KH	L&PP T,DIS ,CBL, SDL	T- EW,P-VIV A,P-CASE,CL- PR	F&S	II	
Topic 8 Therapeutic utility of Agada yoga (Lecture :1 hours, Non lecture: 0 hours)									
CO1,CO2,CO	Enlist ingredients and discuss the therapeutic utility of	CAP	MK	KH	L&PP	T- EW,P-	F&S	II	

3,CO4	Doohivishari Agada, Bilwadi Agada, Dashanga Agada, Murvadi agada and Panchashririsha Agada.				T,DIS ,CBL	CASE			
CO1,CO2,CO 3,CO4	Enlist and discuss the ingredients of vishaghna mahakashaya (Charaka Samhita) and ekasara gana (Sushruta Samhita).	CAP	MK	KH	L&PP T,BS, CBL, FC	T- EW,P- VIVA	F&S	II	
Topic 9 Sthavara visha – Poisons of Plant origin (Lecture :4 hours, Non lecture: 2 hours)									
CO2,CO4,CO 6	Describe the active principles, mode of action, fatal dose, fatal period, signs and symptoms, management, post-mortem appearance and medicolegal aspects of vatsanabha.	CAP	MK	KH	L&PP T	T- EW,P- VIVA,P-ID	F&S	II	
CO2,CO4	Mention therapeutic dose and enlist two important formulations of vatsanabha.	CK	NK	K	L	T-EMI,P-VIV A,P-EXAM	F&S	II	
CO2,CO4,CO 6	Describe the active principles, mode of action, fatal dose, fatal period, signs and symptoms, management, post-mortem appearance and medicolegal aspects of karaveera.	CAP	MK	K	L&PP T	T- EW,P- VIVA,P-ID	F&S	II	
CO2,CO4	Mention therapeutic dose and enlist two important formulations of karaveera.	CK	NK	K	L	T- EW,T- ME Qs,P-VIVA,P- EXAM	F&S	II	
CO2,CO6	Describe mode of action, fatal dose, fatal period, signs and symptoms, management, post-mortem appearance and medicolegal aspects of digitalis.	CAP	NK	K	L&PP T	T- EW,P- VIVA	F&S	II	
CO2,CO6	Describe mode of action, fatal dose, fatal period, signs and symptoms, management, post-mortem appearance and medicolegal aspects of tobacco.	CK	MK	K	L&PP T	T- EW,P-ID	F&S	II	
CO2,CO6	Describe mode of action, fatal dose, fatal period, signs and symptoms, management, post-mortem appearance and	CK	DK	K	L&PP T	T- EW	F&S	II	

	medicolegal aspects of Cerbera odollam.								
CO2,CO4,CO6	Describe the active principles, mode of action, fatal dose, fatal period, signs and symptoms, management, post-mortem appearance and medicolegal aspects of Kupeelu.	CK	MK	KH	L&PP T	T- EW,P- VIVA,P-ID	F&S	II	
CO2,CO6	Mention therapeutic dose and enlist two important formulations of kupeelu.	CK	NK	K	L	T-EMI	F&S	II	
CO2,CO4,CO6	Describe the active principles, mode of action, fatal dose, fatal period, signs and symptoms, management, post-mortem appearance and medicolegal aspects of ahiphena.	CK	MK	KH	L&PP T	T- EW,P- VIVA,P-ID	F&S	II	
CO2,CO6	Mention therapeutic dose and enlist two important formulations of ahiphena.	CK	NK	K	L	T-EMI	F&S	II	
CO2,CO4,CO6	Describe the active principles, mode of action, fatal dose, fatal period, signs and symptoms, management, post-mortem appearance and medicolegal aspects of dhatura.	CK	MK	KH	L&PP T	T- EW,P- VIVA,P-ID	F&S	II	
CO2,CO6	Mention therapeutic dose and enlist two important formulations of dhatura.	CK	NK	K	L	T-EMI	F&S	II	
CO2,CO4,CO6	Describe the active principles, mode of action, fatal dose, fatal period, signs and symptoms, management, post-mortem appearance and medicolegal aspects of Bhanga.	CK	MK	K	L&PP T	T- EW,P-VIV A,P-EXAM,P- ID	F&S	II	
CO2,CO6	Mention therapeutic dose and enlist two important formulations of bhanga.	CK	NK	K	L	T-EMI	F&S	II	
CO2,CO4,CO6	Describe the active principles, mode of action, fatal dose, fatal period, signs and symptoms, management, post-mortem appearance and medicolegal aspects of jayapala.	CK	MK	K	L&PP T	T- EW,P- VIVA,P-ID	F&S	II	
CO4	Mention therapeutic dose and enlist two important formulations	CK	NK	K	L	T-EMI,P-	F&S	II	

	of jayapala.					EXAM			
CO2,CO4,CO6	Describe the active principles, mode of action, fatal dose, fatal period, signs and symptoms, management, post-mortem appearance and medicolegal aspects of gunja.	CAP	DK	KH	L&PP T	T- EW,P-VIVA,P-ID	F&S	II	
CO4	Mention therapeutic dose and enlist two important formulations of gunja.	CK	NK	KH	L	T- EW,P-VIVA,P-EXAM	F&S	II	
CO2,CO4,CO6	Describe the active principles, mode of action, fatal dose, fatal period, signs and symptoms, management, post-mortem appearance and medicolegal aspects of bhallataka.	CAP	MK	KH	L&PP T	T- EW,P-VIVA,P-ID	F&S	II	
CO4	Mention therapeutic dose and enlist two important formulations of bhallataka.	CK	NK	K	L	T-EMI,P-VIVA,P-EXAM	F&S	II	
CO2	Describe the active principles, mode of action, fatal dose, fatal period, signs and symptoms, management, post-mortem appearance and medicolegal aspects of arka and snuhi.	CK	DK	K	L&PP T	T- EW,P-VIVA	F&S	II	
CO2,CO4,CO6	Describe the active principles, mode of action, fatal dose, fatal period, signs and symptoms, management, post-mortem appearance and medicolegal aspects of langali.	CK	NK	K	L&PP T	T- EW,P-VIVA,P-ID	F&S	II	
Topic 10 Sthavara Visha – Poisons of Metallic origin (Lecture :4 hours, Non lecture: 2 hours)									
CO2	Describe the mode of action, fatal dose, fatal period, signs and symptoms, management, post-mortem appearance, medicolegal aspects of acute poisoning of 1. Arsenic 2. Mercury 3. Lead 4. Copper	CK	MK	K	L&PP T,PB L	T-EMI,T-MEQs,P-VIVA	F&S	II	

	Write its therapeutic dose and enlist any four important formulations.								
CO1,CO2	Discuss the Ayurvedic concepts for the diagnosis and management of chronic heavy metal toxicity.	CC	DK	K	L&PP T,L& GD	T-EMI,T- MEQs,P- VIVA	F&S	II	
CO2,CO3,CO 4	Discuss the toxicological implications of improperly prepared medicines with special reference to those containing metals, minerals and poisonous substances.	CAP	NK	KH	L&PP T,CB L,FC	P-VIVA	F&S	II	
Topic 11 Jangama Visha (Lecture :10 hours, Non lecture: 6 hours)									
CO2,CO5	Describe sarpa bheda and enumerate the identification features of darvikara, mandali and rajimantha sarpa.	CAP	MK	KH	L&PP T,BS, CBL	T- EW,P-VIV A,P-EXAM	F&S	II	
CO2,CO5	Classify snakes and describe the features of venomous and non venomous snakes and identify their bites.	CAN	MK	K	L&PP T	T- EW,P-VIV A,P-EXAM	F&S	II	
CO2,CO5	Describe the fatal dose, fatal period, signs and symptoms of common cobra, king cobra, russel's viper, saw scaled viper, pit vipers and common krait.	CAN	MK	KH	L&PP T,DIS ,BS,C BL	T- EW,T-CS,P -VIVA,P- EXAM	F&S	II	
	Describe the samanya lakshana and samanya chikitsa of darvikara, mandali and rajimanth sarpa damsha.	CK	MK	K	L	T-EMI	F&S	II	
CO2,CO5	Describe the management of snake bites according to recent WHO snake bite management guidelines.	CAN	MK	KH	L&PP T,CB L,PE R,CD	T- EW,P-VIV A,P-EXAM	F&S	II	
CO2,CO5	Describe the classification, diagnosis, samanya lakshana and chikitsa of lootavisha with its contemporary aspects.	CAN	MK	KH	L&PP T,CB	T- EW,P- VIVA	F&S	II	

					L				
CO2,CO5	Describe the classification, diagnosis, samanya lakshana and chikitsa of vrischika damsha (Scorpion Sting) along with its contemporary aspects.	CK	MK	K	L&PP T,CB L,CD	T- EW,P-VIV A,P-EXAM	F&S	II	
CO2,CO4	Describe leptospirosis and rat bite fever with special reference to mushika visha.	CK	NK	K	L,CB L	T- EW	F&S	II	
CO2,CO5	Describe rabies and its management with special reference to alarka visha.	CK	DK	KH	L&G D,CB L	T- EW,P- VIVA	F&S	II	
CO2,CO5	Describe the classification of keeta, samanya sakshana and chikitsa of keeta damsha with special importance to regional prevalence.	CAN	DK	KH	L&PP T,CB L	T- EW	F&S	II	
CO2,CO5	Discuss the application of visha chikitsa in vector borne diseases like chikungunya, dengue and malaria.	CAP	DK	KH	L&PP T,DIS	P-VIVA	F&S	II	
Topic 12 Kritrima visha (Lecture :2 hours, Non lecture: 0 hours)									
CO2	Describe the action of poison, fatal dose, fatal period, signs and symptoms, management, post mortem appearance and medico legal aspects of Inorganic acids - Sulphuric acid, Hydrochloric acid and Nitric Acid Organic acids - Oxalic acids, Carbolic acids and Formic acid Alkalies	CK	MK	KH	L&PP T,PE R	T- EW,P-VIV A,P-EXAM	F&S	III	
CO2	Describe the action of poison, fatal dose, fatal period, signs and	CK	DK	KH	L&PP T,PE	T- EW,P- VIVA	F&S	III	

	<p>symptoms, management, post mortem appearance and medico legal aspects of</p> <p>Asphyxiants - CO and CO₂</p> <p>Non Metal - Phosphorous</p> <p>Hydrocarbon - Kerosene</p>				R				
CO ₂	Describe the action of poison, fatal dose, fatal period, signs and symptoms, management, post mortem appearance and medico legal aspects of agrochemical poisons- organophosphorous compounds, carbamates, organochlorine compounds and aluminium phosphide and enlist the household poisons.	CAP	MK	SH	L&PP T,PB L	T- EW,P-VIV A,P-EXAM	F&S	III	
Topic 13 Substances of abuse (Lecture :4 hours, Non lecture: 3 hours)									
CO ₁ ,CO ₂	Define Mada and describe its stages.	CK	MK	K	L&PP T	T-EMI,T- MEQs,P- VIVA	F&S	III	
CO ₁ ,CO ₂	Describe the types of madatyaya along with its management.	CK	MK	K	L&PP T	T-EMI,T- MEQs,P- VIVA	F&S	III	
CO ₁ ,CO ₂ ,CO 6	Describe mode of action, fatal dose, fatal period, signs and symptoms, management, post mortem appearance and medicolegal importance of acute ethanol poisoning.	CC	MK	KH	L&PP T	T-EMI,T-CS, T-OBT,P- VIVA	F&S	III	
CO ₁ ,CO ₂ ,CO 6	Describe mode of action, fatal dose, fatal period, signs and symptoms, management, post mortem appearance and medicolegal importance of acute methanol poisoning.	CC	MK	K	L&PP T	T-EMI,T- MEQs,P- VIVA	F&S	III	
CO ₂ ,CO ₄	Discuss the application of principles of Ayurveda in the	CC	MK	KH	L&G	T- EW,P-	F&S	III	

	management of chronic alcoholism.				D,BS	VIVA			
CO2,CO4	Discuss the signs & symptoms of alcohol withdrawal with its Ayurvedic approach.	CC	MK	KH	L&G D,BS, IBL	T- EW,P- VIVA	F&S	III	
CO2,CO4	Discuss the signs & symptoms of withdrawal of bhang (cannabis), ahiphena/opium and its derivatives, tobacco, LSD and MDMA with its Ayurvedic approach.	CC	MK	KH	L&G D,BS, TUT	T- EW,P- VIVA	F&S	III	
CO2,CO4	Discuss the reseach updates in Ayurveda in the management of conditions due to substances of abuse.	CC	MK	KH	L&G D	T-EMI,T- ME Qs,T-CRQs,P- VIVA	F&S	III	
CO7	Describe the NDPS Act.	CK	DK	K	L&PP T	T- EW	F&S	III	
Topic 14 Agada Tantra perspectives on cancer (Lecture :2 hours, Non lecture: 4 hours)									
CO2,CO4	Discuss the concepts of Agada Tantra in oncology.	CC	MK	KH	L&G D,BS, PBL	T-EMI,T- MEQs,P- VIVA	F&S	III	
CO1,CO2	Enlist the cancer causing toxic chemicals / substances (toxic carcinogens) and describe the process of mutation in genes and carcinogenesis.	CC	MK	K	L&G D	T-EMI,T- ME Qs,T-CRQs,P- VIVA,SA	F&S	III	
CO2,CO4	Describe the chemotherapy induced common toxicities and Ayurvedic approach for its management.	CC	MK	KH	L&PP T,PB L	T-EMI,T- ME Qs,T-CRQs,P- VIVA,SA	F&S	III	
CO2,CO4	Describe the radiotherapy induced common toxicity and Ayurvedic approach for its management.	CC	MK	KH	L&G D,PB L,SD L	T-EMI,T- ME Qs,T-CRQs,P- VIVA	F&S	III	

CO2,CO4	Discuss the role of visha and vishaghna dravya in the management of cancer along with its research updates.	CC	DK	KH	L&G D,BS	T-EMI,T- ME Qs,T-CRQs,P- VIVA	F&S	III	
Topic 15 Forensic medicine (Vyavahara Ayurveda) and Medical jurisprudence (Vidhi vaidyaka): (Lecture :1 hours, Non lecture: 0 hours)									
CO1,CO6,CO 7	Define Forensic Medicine & Medical Jurisprudence. Give an introduction to Indian Penal Code (IPC), Criminal Procedure Code (CrPC) and Indian Evidence Act (IEA).	CC	MK	KH	L&G D	T- EW,P- VIVA,QZ	F&S	I	
Topic 16 Vaidya sadvritta : Duties and Responsibilities of medical practitioner (Lecture :6 hours, Non lecture: 4 hours)									
CO1,CO6,CO 7	Describe vaidya sadvritta, medical ethics, code of conduct, Charaka oath and Hippocratic oath.	CK	MK	K	L&PP T,L& GD,B S,PER	T- EW,P- VIVA	F&S	I	
CO1,CO6,CO 7	Describe the constitution, objectives and functions of NCISM.	CK	MK	K	L&PP T,DIS	T- EW,P- VIVA	F&S	I	
CO6,CO7	Describe the duties and rights and privileges of a registered medical practitioner.	CK	MK	K	L&PP T,DIS	T- EW,P- VIVA	F&S	I	
CO1,CO6,CO 7	Describe consent, professional secrecy and privileged communication.	CC	MK	K	L&PP T,BS	T- EW	F&S	I	
CO1,CO6,CO 7	Describe professional negligence, professional misconduct and unethical practices.	CC	MK	K	L&G D,CB L,PE R	T- EW,P- VIVA	F&S	I	
CO6,CO7	Explain the defenses in medical negligence suits with appropriate case laws.	CAP	MK	K	L&PP T,L& GD,B	T- EW,P- VIVA	F&S	I	

					S,CB L				
CO6,CO7	Describe the maintainance of medical records and explain its significance.	CC	MK	K	L,FV	T- EW,P- VIVA	F&S	I	
CO7	Describe the Consumer Protection Act.	CK	MK	K	L&PP T	T- EW,P- VIVA	F&S	I	
Topic 17 Legal Procedures (Lecture :4 hours, Non lecture: 4 hours)									
CO1,CO6,CO 7	Describe the types of courts along with their powers. Describe - Inquest, Evidence, Witness, Summons, Conduct money and procedure of recording of evidence in a court of law. Describe the conduct of a medical professional in the court of law.	CC	MK	KH	L&PP T,DIS ,SDL	T- EW,P- VIVA,CL-PR	F&S	I	
Topic 18 Personal identity (Lecture :2 hours, Non lecture: 2 hours)									
CO1,CO6	Define identification and enlist the identification data. Describe the method of estimation of age based on Teeth, ossification of bones, secondary sexual characteristics and general development.	CC	DK	KH	L&PP T,L_ VC,D IS	T- EW,P- VIVA	F&S	I	
CO1,CO6	Describe the medico-legal importance of age, tattoo marks and occupational marks.	CK	DK	K	L&PP T	T- EW	F&S	I	
CO1,CO6	Describe the medico-legal importance of race, religion, sex, moles and hair.	CC	DK	KH	L_VC ,DIS, EDU	P-VIVA	F	I	
CO1,CO6	Describe the medico-legal importance of handwriting, dactylography, DNA typing and superimposition as an identification data.	CK	NK	K	L,ED U	T- EW	F	I	
Topic 19 Thanatology (Lecture :6 hours, Non lecture: 2 hours)									

CO6	Define death and describe the stages and modes of death. Explain the immediate changes following death.	CC	MK	KH	L&PP T,L& GD,L _VC	T- EW,P- VIVA	F&S	II	
CO6	Enlist and explain the early changes following death. Describe Algor mortis, rigor mortis and livor mortis with regards to their definition, mechanism, modifying factors and medico legal importance. Enable GingerCannot connect to G' iger Check your internet connection or reload the browserDisable in this text fieldRephraseRephrase current sentenceEdit in Ginger×	CC	MK	KH	L&PP T,L_ VC,D IS,SI M	T- EW,P- VIVA	F&S	II	
CO6	Enlist the late changes following death and describe the definition, modifying factors and medico legal importance of putrefaction, mummification and adipocere formation. Enable GingerCannot connect to Ginger Check your internet connection or reload the browserDisable in this text fieldRephraseRephrase current sentenceEdit in Ginger×	CC	MK	KH	L&PP T,L_ VC,D IS	T- EW,P- VIVA	F&S	II	
CO6	Define Autopsy and describe its types, its objectives, rules and procedure along with exhumation.	CC	MK	KH	L&PP T,L_ VC	T- EW,P- VIVA	F&S	II	
CO6	Describe the Transplantation of Human Organs and Tissues Act.	CC	NK	KH	BS,S DL,P ER	T- EW,P- VIVA	F	II	
Topic 20 Asphyxial deaths (Lecture :4 hours, Non lecture: 2 hours)									
CO6	Define hanging. Describe its classification, causes of death, post-mortem appearances and medico-legal aspects.	CK	MK	KH	L&PP T,DIS	T- EW,T- ME Qs,T-CS,P-	F&S	II	

						VIVA,P-MOD			
CO6	Define strangulation and suffocation. Enlist their classification, post-mortem appearances and medico-legal aspects.	CK	MK	K	L&PP T,D- M	T- EW,T- ME Qs,PRN,M- MOD	F&S	II	
CO6	Define Drowning, explain its classification, post-mortem appearances and medico-legal aspects.	CK	MK	K	L&PP T,L_ VC	T- EW,P-VIV A,PRN,P- CASE	F&S	II	
Topic 21 Injury (Lecture :5 hours, Non lecture: 3 hours)									
CO6	Define and classify Injuries. Describe the medico-legal aspects of injuries.	CK	MK	K	L&G D	T- EW	F&S	II	
CO6	Describe the characteristics, age and medico-legal aspects of mechanical injuries.	CK	MK	K	L&PP T	T- EW	F&S	II	
CO6	Describe firearm injuries, its characteristics and medico-legal aspects. Differentiate between entry and exit wound	CK	DK	K	L&PP T	T- EW	F&S	II	
CO6	Define and classify thermal injury. Describe charecterstics and degrees of burns, rule of nine, post-mortem appearances, and medico-legal aspects.	CK	DK	K	L&G D	T- EW	F&S	II	
CO6	Explain medico-legal aspects of dowry death.	CK	NK	K	L&G D	T- EW	F&S	II	
Topic 22 Pregnancy, delivery and abortion (Lecture :2 hours, Non lecture: 3 hours)									
CO6,CO7	Define pregnancy, delivery, infanticide and battered baby syndrome along with their medico legal aspects.	CK	MK	K	L,L& PPT,L &GD	T- EW,T-CS,P -VIVA,P- EXAM	F&S	III	
CO6,CO7	Define and classify abortion, MTP Act and PCPNDT Act.	CK	MK	K	L&PP T,D-	T- EW,T- ME Qs,T-CS,P-	F&S	III	

					M,D	VIVA,PRN			
CO6,CO7	Describe Surrogacy (Regulation) Act 2021 and the Assisted Reproductive Technology (Regulation) Act 2021.	CK	NK	KH	L,L&PPT	P-VIVA,O-QZ	F&S	III	
Topic 23 Sexual offences (Lecture :2 hours, Non lecture: 1 hours)									
CO6	Describe classification of sexual offences.	CK	NK	KH	L&PPT	P-VIVA,PRN,QZ	F&S	III	
CO6	Define rape. Describe the examination of rape victim and accused and its medico legal aspects.	CK	MK	KH	L&PPT,CBL	T- EW,P-VIVA,P-EXAM,PRN	F&S	III	
CO6	Define the un-natural sexual offences and sexual perversion with their medico-legal aspects and give introduction to POCSO Act.	CK	NK	K	L&PPT,CBL	P-VIVA,QZ	F&S	III	
Topic 24 Forensic psychiatry. (Lecture :2 hours, Non lecture: 2 hours)									
CO6	Describe the symptoms commonly associated with psychiatric disorders & the significance of lucid interval.	CK	DK	K	L&PPT,TUT	T-EMI,T-EW,P-VIVA	F&S	III	
CO6,CO7	Describe the civil and criminal responsibilities of a mentally ill person.	CK	DK	K	L&PPT	T- EW,P-VIVA	F&S	III	
CO6	Describe Mental Health Act	CK	NK	K	SDL,PER	T- EW,P-VIVA	F&S	III	
Topic 25 Forensic science laboratory (Lecture :1 hours, Non lecture: 0 hours)									
CO6	25.1. Hierarchy and major divisions of forensic lab services. 25.2. Newer techniques and recent advances - polygraphy,	CK	DK	K	L&PPT,ML	T-OBT,P-VIVA	F&S	III	

	narcoanalysis, DNA profiling.								
Topic 26 Laws, Acts, Rules and Regulations (Lecture :3 hours, Non lecture: 2 hours)									
CO6,CO7	Describe the 1. NCISM Rules and Regulations in force. 2. Clinical Establishments Act. 3. Medicare Service Persons and Medicare Service Institutions (Prevention of violence and damage or loss to property) Act, 2008. 4. The Drug and Cosmetic Act - schedules related to poison. 5. Rules and Regulations related to AYUSH State Registration Boards of concern state.	CK	DK	K	L&PP T,DIS ,SDL	T- EW,P- VIVA,CL-PR	F&S	III	

List of Practicals [Term and Hours]

PRACTICALS (Marks-100)			
S.No	List of Topics	Term	Hours
1	Visha Chikitsa	1	6
2	Vishakta Ahara Pariksha	1	6
3	Dooshivisha, Garavisha, Visha Upadrava	1	20
4	Dermatological manifestation of visha	2	20
5	Environmental toxicology	2	2
6	Jangama Visha	2	10
7	Sthavara visha	2	6
8	Substance abuse	3	8
9	Legal Procedures	1	2
10	Vaidya Sadvritta	1	2
11	Personal Identity	1	4
12	Thanatology	2	6
13	Injury	2	6
14	Sexual offences	3	2
15	Field Visits (Field visits should be integrated along with the educational tour conducted by Dravyagunavijnan, Rasasatra and Swasthavrutha Departments)	2	30
16	Topics related to regional preference	3	10

Table 4: Learning objectives (Practical)

A4 Course outcome	B4 Learning Objective (At the end of the session, the students should be able to)	C4 Domain/sub	D4 Must to know / desirable to know / Nice to know	E4 Level Does/ Shows how/ Knows how/ Know	F4 T-L method	G4 Assessment (Refer abbreviations)	H4 Formative/ summative	I4 Term	K4 Integration
Topic 1 Visha Chikitsa									
CO2	Demonstrate the procedure of gastric lavage on mannequin.	CAP	MK	SH	D-M,D	P-EXAM,P-PRF,OSPE	F&S	I	
CO2	Demonstrate the procedure of CPR on mannequin.	PSY-MEC	MK	D	D-M,D	P-EXAM,P-PRF,OSPE	F&S	I	
CO2	Observe the different procedures for removal of absorbed poison.	CC	MK	KH	L_VC,D	P-VIVA	F&S	I	
Topic 2 Vishakta Ahara Pariksha									
CO2	Demonstrate adulteration detection test for urea in milk, boric acid in milk, artificial colour in turmeric, pulses and vegetables as per recent Food Safety and Standards Authority of India (FSSAI) guidelines.	PSY-SET	MK	D	D_L	P-PRF,RK	F&S	I	
CO2	Demonstrate adulteration detection test for argemone oil in mustard oil and adulterants in Honey as per recent FSSAI guidelines.	PSY-SET	MK	D	D_L	P-PRF,RK	F&S	I	
Topic 3 Dooshivisha, Garavisha, Visha Upadrava									

CO3,CO4	Diagnosis and management of diseases due to garavisha, dooshivisha and visha upadrava - drug induced toxicities.	CAP	MK	SH	L_VC ,CBL, SIM, CD	SP,OSCE ,RK	F&S	I	
CO3,CO4	Diagnosis and management of diseases due to garavisha, dooshivisha and visha upadrava - occupational hazards.	CAP	MK	KH	L_VC ,PBL, CBL, SIM, CD	OSCE ,RK	F&S	II	
CO3,CO4	Diagnosis and management of diseases due to garavisha, dooshivisha and visha upadrava - allergic manifestations.	CAP	MK	KH	L_VC ,PBL, CBL, SIM, CD	OSCE ,RK	F&S	I	
CO3,CO4	Diagnosis and management of diseases due to garavisha, dooshivisha and visha upadrava - autoimmune diseases	CAP	MK	KH	L_VC ,CBL, CD	OSCE ,RK	F&S	I	
CO3,CO4	Diagnosis and management of diseases due to garavisha, dooshivisha and visha upadrava - endocrine disruptors induced diseases.	CAP	MK	KH	L_VC ,CBL, CD	OSCE ,RK	F&S	I	
Topic 4 Dermatological manifestation of visha									
CO3,CO4	Diagnosis and Management of Dermatological manifestations due to visha ex: contact poisoning (paduka visha, abharana visha etc.)	CAN	MK	SH	L_VC ,CBL, CD	OSCE ,RK	F&S	II	
CO3,CO4	Diagnosis and management of dermatological manifestations due to visha - bites and stings.	CAP	MK	KH	L_VC ,CBL, CD	OSCE ,RK	F&S	II	

CO3,CO4	Diagnosis and Management of contact dermatitis based on the principles of Agada Tantra.	CAP	MK	KH	L_VC ,CBL, CD	OSCE ,RK	F&S	II	
Topic 5 Environmental toxicology									
CO5	Social Awareness program related to environmental toxicology – Rally, street play, skit etc	AFT- VAL	DK	SH	RP	P-VIVA,M- CHT	F	II	
Topic 6 Jangama Visha									
CO2,CO4	Demonstrate identification of poisonous and non poisonous snakes.	CAN	MK	KH	L&G D,L_ VC,D- M,FV	P-VIVA,P- EXAM,OSCE	F&S	II	
CO2,CO4	Demonstration of the diagnosis of poisonous snake bite cases based on local and systemic clinical presentations.	CAP	MK	KH	L&G D,L_ VC,C BL,C D	P-VIVA,P- EXAM,RK	F&S	II	
CO2,CO4	Demonstration of identification of vrishchika, loota and keeta based on regional prevalence and their diagnosis based on clinical presentations.	CAP	MK	KH	L&G D,L_ VC,C BL,C D	P-VIVA,P- EXAM,RK	F&S	II	
Topic 7 Sthavara visha									
CO2	Demonstration of Identification of vatsanabha, karaveera and tobacco with their respective toxic parts.	CAN	MK	KH	D- M,D	P-VIVA,P- EXAM,OSPE ,RK	F&S	II	
CO2	Demonstration of Identification of kupeelu, dhattura and bhanga	CAN	MK	KH	D	P-VIVA,P-	F&S	II	

	and their respective toxic part.					EXAM,OSPE ,RK			
CO2	Demonstration of Identification of jayapala, gunja, bhallataka, langali with their respective toxic parts.	CAN	MK	KH	D	P-VIVA,P-EXAM,OSPE ,RK	F&S	II	
CO2	Demonstration of identification of arsenic, copper, mercury and lead.	CAN	MK	K	D-M	P-VIVA,P-EXAM	F&S	III	
CO2	Demonstration of Identification of non metal and mineral compounds, acids, alkalis, agrochemicals, hydrocarbons and household poisons.	CK	MK	K	D	P-VIVA,P-EXAM,RK	F&S	III	
Topic 8 Substance abuse									
CO2,CO4	Create public awareness on substance abuse and its ill effects.	AFT-VAL	MK	SH	RP,D	P-POS,QZ ,M-CHT	F	III	
Topic 9 Legal Procedures									
CO6,CO7	Demonstartion on issuing of fitness certificate, sickness certificate, birth and death certificate, and other relevant medical and medico legal certificates.	CAN	MK	D	PBL, W,PT	P-EXAM,OSPE ,RK	F&S	I	
CO6,CO7	Demonstartion of reporting of Leave against medical advice (LAMA), discharge against medical advice (DAMA) and doscharge on patient request (DOPR)	CAP	MK	D	SDL	P-VIVA,RK	F	I	
Topic 10 Vaidya Sadvritta									
CO6,CO7	Exposure to medical records department for understanding storage, maintainance and disposal of Medical records.	CK	DK	K	D,FV	P-VIVA	F&S	I	
Topic 11 Personal Identity									

CO6	Demonstrate the method of sex determination based on pelvis.	CAP	MK	SH	EDU, SIM, D	P-PRF,OSPE	F&S	I	
Topic 12 Thanatology									
CO6	Observe the procedure of medico-legal autopsy and preparation autopsy report.	CAP	MK	SH	L_VC ,D,FV	RK	S	II	
Topic 13 Injury									
CO6,CO7	Demonstrate the difference between homicidal, suicidal and accidental injuries.	CAP	MK	SH	L&PP T,L_ VC,SI M,D- M	P-VIVA,P- EXAM	F&S	II	
CO6,CO7	Demonstration of drafting of an injury report.	CAP	MK	D	D- M,D	P-EXAM,P- PRF	F&S	II	
Topic 14 Sexual offences									
CO5,CO6,CO 7	Discuss the essentials of Protection of Women from Domestic Violence Act (PWDV Act) 2005 and The Sexual Harassment of Women at Workplace (Prevention, Prohibition & Redressal) Act and Rules (PoSH Act) 2013.	AFT- VAL	DK	D	L&G D,BS, RP	C-INT,INT	F&S	III	
Topic 15 Field Visits (Field visits should be integrated along with the educational tour conducted by Dravyagunavijnan, Rasasatra and Swasthavrutha Departments)									
CO6,CO7	(Visit to Forensic Science Laboratory) - (Mandatory) Appraise the functioning of a forensic science laboratory	CC	MK	KH	FV	P-VIVA,RK	F	III	
CO4,CO5	(Visit to Food testing laboratory) Observe the instrumentation and procedure of food testing	CC	DK	KH	FV	RK,COM	F	I	

CO4,CO5	(Visit to Pollution Control Board) - (Mandatory) Perceive the functioning of Pollution Control Board	CC	DK	KH	FV	P-VIVA,RK	F	II	
CO4,CO5	(Visit to De-addiction centre)Observe the management of de-addiction cases	PSY-GUD	DK	KH	FV	RK	F	III	
CO7	(Visit to the Court) - (Mandatory) Observe the procedure of court procedure and conduct of a medical practitioner as an expert witness	PSY-GUD	MK	KH	FV	RK	F	I	
CO6	(Visit to mortuary for observation of autopsy)Observe the procedure of medico-legal autopsy	PSY-GUD	MK	KH	FV	P-VIVA,RK	F	II	
CO2	(Visit to snake park) - (Mandatory)Observe live specimens of snake	CC	DK	KH	FV	P-VIVA,RK	F	II	
CO2,CO7	(Visit to casualty) -(Mandatory) Watch the procedure of resuscitation and emergency management	CK	MK	KH	FV	RK	F	I	
CO4,CO5	(Visit to occupational hazards centre)Observe the types and management of cases of occupational hazard	CK	DK	KH	FV	RK	F	II	
CO2	(Visit to ASV manufacturing centre)Observe the steps and procedures involved in ASV manufacturing	CK	DK	K	FV	RK	F	II	
CO4,CO5	Visit Cancer treatment centre.	CK	NK	K	FV	RK	F	III	
CO2,CO4	Visit to department of entomology.	CC	NK	K	FV	RK	F	II	
CO2,CO5	Visit to folklore vaidya using Agada tantra concepts in visha chikitsa.	CAP	DK	SH	FV	RK	F&S	II	
Topic 16 Topics related to regional preference									
CO2,CO3	Discuss the topics related to regional preference like bites and stings, substance abuse, texts of regional importance, regional	CAP	NK	K	L&G D	P-VIVA,M- POS	F	III	

visha chikitsa practices, regional medico-legal issues etc.								
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Table 4a: List of Practical

S.No	Name of practical	Term	Activity	Practical hrs
1	Visha Chikitsa	1	1.1 Gastric lavage 1.2 Cardiopulmonary resuscitation (CPR) 1.3 Video demonstration or visit to the emergency care unit for procedures used for removal of absorbed poison.	6
2	Vishakta Ahara Pariksha	1	2.1 Adulteration detection Tests 2.1.1 Urea in milk 2.1.2 Boric acid in milk 2.1.3 Artificial color in turmeric. 2.1.4 Artificial color in pulses and Vegetables. 2.1.5 Argemone Oil in Mustard oil 2.1.6 Adulteration in Honey	6
3	Dooshivisha, Garavisha, Visha Upadrava	1	3.1 Case based teaching on diseases due to dooshivisha and garavisha - drug induced toxicity, occupational hazards, allergic manifestations, autoimmune diseases and endocrine disruptors. 3.2 Recording 10 cases based on case based teaching or OPD and IPD exposure.	20
4	Dermatological manifestation of visha	2	4.1 Dermatological manifestations due to visha ex: contact poisoning (paduka visha, abharana visha etc.) and bites and stings. 4.2 Contact Dermatitis 4.3 Recording 10 cases based on case based teaching or OPD and IPD Exposure.	20
5	Environmental toxicology	2	5.1 Social Awareness program – Rally, street play, skit etc.	2
6	JangamaVisha	2	6.1 Identification of Poisonous and non poisonous snakes 6.2 Diagnosis based on bite marks of snakes 6.3 Diagnosis and Management of snake bite cases through audio/video case presentations or OPD/IPD exposure 6.4 Diagnosis and management of vrishchika, loota and keeta damsha cases through audio/video case presentations or	10

			OPD/IPD exposure.	
7	Sthavara visha	2	7.1 Identification of various plant poisons, metal and mineral compounds, acids, alkalis, agrochemicals, hydrocarbons and household poisons.	6
8	Substance abuse	3	8.1 Community Awareness programmes by students like rallies, street play etc. 8.1.1. Observation of international day against drug abuse and illicit trafficking. 8.1.2. World No tobacco day.	8
9	Legal Procedures	1	9.1 Hands on training on Preparation of Medical & Medico legal reports. 9.1.1 Fitness & Sickness certificate. 9.1.2 Birth & Death Certificate and other relevant medical and medico legal certificates. 9.1.3 Leaving against medical advice (LAMA), Discharge against medical advice (DAMA), Discharge on patient request (DOPR)	2
10	Vaidya Sadvritta	1	10.1 Exposure to the medical records department for understanding the storage, maintenance and disposal of medical records.	2
11	Personal Identity	1	11.1. Sex determination based on pelvis.	4
12	Thanatology	2	12.1 Procedure of autopsy: visit to mortuary or audio-visual demonstrations.	6
13	Injury	2	13.1. Hands on training on assessment of accidental, suicidal, and homicidal injuries. 13.2. Preparation of injury report.	6
14	Sexual offences	3	14.1 Introduction to Protection of Women from Domestic Violence Act (PWDV Act) 2005 and The Sexual Harassment of	2

			Women at Workplace (Prevention, Prohibition & Redressal) Act and Rules (PoSH Act) 2013.	
15	Field Visits (Field visits should be integrated along with the educational tour conducted by Dravyagunavijnan, Rasasatra and Swasthavrutha Departments)	2	(It is mandatory to have 5 field visits)	30
16	Topics related to regional preference	3	Exposure to topics related to regional preference like bites and stings, substance abuse, texts of regional importance, regional visha chikitsa practices, regional medico-legal issues etc.	10
Total Hr				140

Activity

CO	Topic name	Activity Details	Hours [#]
CO3,CO4	Survey of personal care products.	Students shall be divided into small groups and are asked to collect the information about common personal care products like soaps, shampoos, deodorants, cosmetics etc. Then they should be asked to enlist the chemicals used in them and discuss about the health hazards associated with their use. Then students can be asked to present their findings in the form of class seminar or Charts or Posters or small videos.	4
CO5	Community teaching by students - awareness among adolescent about Protection of Women from Domestic Violence Act (PWDV Act) 2005 and The Sexual Harassment of Women at Workplace (Prevention, Prohibition & Redressal) Act and Rules	After undergoing orientation/sensitization regarding Protection of Women from Domestic Violence Act (PWDV Act) 2005 and The Sexual Harassment of Women at Workplace (Prevention, Prohibition & Redressal) Act and Rules (PoSH Act) 2013, the students will have to visit nearby schools/colleges in small teams/groups and create awareness amongst them. This can be done as part of NSS activity or exclusive visits to schools/colleges.	2

	(PoSH Act) 2013.		
CO2,CO4	Observation of international day against drug abuse and illicit trafficking	Community awareness programmes by students like rallies, street play etc.	3
CO2,CO4	No Tobacco Day	Community Awareness programmes by students like rallies, street play, skit, flash mob etc.	3
CO5	Environmental toxicology	Poster presentation competition related to environment, rallies, skit, flash mob on World Environment Day.	2
CO6,CO7	Vaidya sadvritta	Exposure to Medical records department for maintainance, storage and disposal of medical record, finding out errors in medical case records.	2
CO6	Forensic psychiatry	Seminar/ guest lecture on how to deal with adolescent psychiatric issue	2
CO2,CO4	Chronic toxicity of heavy metals.	Group discusion and case based learning by taking example of published case reports.	1
CO2,CO4	World Cancer Day to raise awareness of cancer risk and cancer prevention	Poster Competition / Quiz Competition / Gruop Discusion	4
CO6,CO7	Legal procedure- Recording of evidence and duties of a physician in the court of Law.	Mock court / role play	4
CO2	Sarpa Visha	<p>1. Identification of poisonous and non poisononus snakes -</p> <p>Group Discussion/ Brainstorming - Specimens (Photos) of poisonous and non poisonous snakes with their features shall be given to small group of students and asked to identify the sankes.</p> <p>2. Clinical diagnosis of snake bites</p>	2

		<p>Group Discussion - Specimens (Photos) showcasing local and systemic signs and symptoms of poisonous (Hemotoxic and Nuerotoxic) snake bite shall be given to small group of students and asked to diagnose the case.</p> <p>CBL - Presentation of recorded cases or the Case reports or studies published in reputed journals.</p> <p>Brainstorming/Quiz - The same pictures may be shown with MCQ's and Quiz session can be conducted among the groups of students</p>	
CO2	Vrischika visha, luta visha and keeta visha.	<p>Group Discussion - Specimens (Photos) showcasing local and systemic signs and symptoms of Vrischika Visha (Scorpion Sting), Loota Visha (Spider Bite) and Keetavisha (Insect bite) and differentiating with snake bites shall be given to small group of students and asked to diagnose the case.</p> <p>CBL - Presentation of recorded cases or the Case reports or studies published in reputed journals.</p> <p>Brainstorming/Quiz - The same pictures may be shown with MCQ's and Quiz session can be conducted among the groups of students.</p>	2
CO3,CO4	Dooshivisha, garavisha and visha upadrava	<p>Group Discussion - Photographs/case reports/ simulated cases showcasing various drug induced toxicities, occupational hazards, allergic manifestations, autoimmune diseases and diseases due to endocrine disruptors shall be given to small group of students and asked to assess the dosha, diagnose and discuss the plan of treatment.</p>	4

		<p>CBL - Presentation of recorded cases or the Case reports or studies published in reputed journals.</p> <p>Brainstorming/Quiz - The same pictures may be shown with MCQ's and Quiz session can be conducted among the groups of students.</p>	
CO3,CO4	Dermatological manifestation of visha.	<p>Group Discussion - Photographs/case reports/ simulated cases showcasing various dermatological presentations of poison, bites and stings and contact dermatitis shall be given to small group of students and asked to assess the dosha, diagnose and discuss the plan of treatment.</p> <p>CBL - Presentation of recorded cases or the Case reports or studies published in reputed journals.</p> <p>Brainstorming/Quiz - The same pictures may be shown with MCQ's and Quiz session can be conducted among the groups of students.</p>	4

Hours indicated are included in calculations of Table 3 and 4

Table 5- Teaching learning method

Sr No	Teaching learning methods in the course	No of Activities
1	Lecture	18
2	Lecture with Power point presentation	106
3	Lecture & Group Discussion	32
4	Lecture with Video clips	13
5	Discussions	22
6	Brainstorming	22
7	Inquiry-Based Learning	1

8	PBL	6
9	CBL	26
10	Flipped classroom	4
11	Edutainment	2
12	Mobile learning	2
13	Simulation	1
14	Self-directed learning	15
15	Demo on Model	2
16	Tutorial	2
17	Presentations	9
18	Practical	1
19	Case diagnosis	5
20	Demonstration	2
21	Field visit	1

These are overall teaching learning methods listed in Table 3 and 4. Teachers can select the best possible method amongst the given methods as per objective, available time etc.

Table 6: Assessment Summary: Assessment is subdivided in A to H points

6 A-Number of Papers and Marks Distribution

Subject Code	Papers	Theory	Practical/Clinical Assessment					Grand Total
			Practical	Viva	Set SA	IA	Sub Total	
AyUG-AT	1	100	100	60	10	30	200	300

6 B - Scheme of Assessment (formative and Summative)

PROFESSIONAL COURSE	DURATION OF PROFESSIONAL COURSE		
	First Term (1-6 Months)	Second Term (7-12 Months)	Third Term (13-18 Months)
Second	3 PA & First TT	3 PA & Second TT	3 PA & UE

PA: Periodical Assessment; **TT:** Term Test; **UE:** University Examinations.

****** University Examination shall be on entire syllabus.

6 C - Calculation Method for Internal assessment Marks

TERM	PERIODICAL ASSESSMENT*					TERM TEST**	TERM ASSESSMENT	
	A 4	B	C	D	E	F	G	H
	1 (15 Marks)	2 (15 Marks)	3 (15 Marks)	Average (A+B+C/3)	Converted to 30 Marks (D/15*30)	Term Test (Marks converted to 30)	Sub Total _/60 Marks	Term Assessment (.../30)
FIRST							E+F	(E+F)/2
SECOND							E+F	(E+F)/2
THIRD						NIL		E
Final IA	Average of Three Term Assessment Marks as Shown in 'H' Column.							
	Maximum Marks in Parentheses *Select an Evaluation Method which is appropriate for the objectives of Topics from the Table 6 D for Periodic assessment. Conduct 15 marks assessment and enter marks in A, B, and C. ** Conduct Theory (100 Marks)(MCQ(20*1 Marks), SAQ(8*5), LAQ(4*10)) and Practical (100 Marks) Then convert to 30 marks.							

6 D - Evaluation Methods for Periodical Assessment

S. No	Evaluation Methods
1	Activities Indicated in Table 3 - Column G3 as per Indicated I, II or III term in column I3

Evaluation Methods in MSE

1. Practical / Clinical Performance
2. Viva Voce, MCQs, MEQ (Modified Essay Questions/Structured Questions)
3. Open Book Test (Problem Based)
4. Summary Writing (Research Papers/ Samhitas)
5. Class Presentations; Work Book Maintenance
6. Problem Based Assignment
7. Objective Structured Clinical Examination (OSCE), Objective Structured Practical Examination (OPSE), Mini Clinical Evaluation Exercise (Mini-CEX), Direct Observation of Procedures (DOP), Case Based Discussion (CBD)
8. Extra-curricular Activities, (Social Work, Public Awareness, Surveillance Activities, Sports or Other Activities which may be decided by the department).
9. Small Project etc.

6 E Question Paper Pattern

II PROFESSIONAL BAMS EXAMINATIONS AyUG-AT

PAPER-1

Time: 3 Hours Maximum Marks: 100

INSTRUCTIONS: All questions compulsory

		Number of Questions	Marks per question	Total Marks
Q 1	MULTIPLE CHOICE QUESTIONS (MCQ)	20	1	20
Q 2	SHORT ANSWER QUESTIONS (SAQ)	8	5	40
Q 3	LONG ANSWER QUESTIONS (LAQ)	4	10	40
				100

Similar for P

6 F Distribution of theory examination

Paper 1						
Sr. No	A List of Topics	B Term	C Marks	MCQ (1 Mark)	SAQ (5 Marks)	LAQ (10 Marks)
1	Concepts of Agada Tantra (Clinical Toxicology)	1	13	Yes	Yes	Yes
2	Visha Chikitsa (Management of Poisoning)	1		Yes	Yes	Yes
3	Vishakta aahara pariksha and Viruddha ahara	1		Yes	Yes	No
4	Garavisha and Dooshivisha	1	12	Yes	Yes	Yes
5	Visha Upadrava and diseases caused due to exposure to Visha/poisons	1		Yes	Yes	No
6	Environmental Toxicology	2	11	Yes	Yes	No
7	Dermatological manifestations of visha/poisons.	2		Yes	Yes	No
8	Therapeutic utility of Agada yoga	2		Yes	Yes	No
9	Sthavara visha – Poisons of Plant origin	2	17	Yes	Yes	Yes
10	Sthavara Visha – Poisons of Metallic origin	2		Yes	Yes	Yes
11	Jangama Visha	2		Yes	Yes	Yes
12	Kritrima visha	3	12	Yes	Yes	Yes
13	Substances of abuse	3		Yes	Yes	Yes
14	Agada Tantra perspectives on cancer	3		Yes	Yes	No
15	Forensic medicine (Vyavahara Ayurveda) and Medical jurisprudence (Vidhi vaidyaka):	1	10	Yes	No	No

16	Vaidya sadvritta : Duties and Responsibilities of medical practitioner	1		Yes	Yes	No
17	Legal Procedures	1		Yes	Yes	No
18	Personal identity	1		Yes	Yes	Yes
19	Thanatology	2	12	Yes	Yes	Yes
20	Asphyxial deaths	2		Yes	Yes	Yes
21	Injury	2		Yes	Yes	Yes
22	Pregnancy, delivery and abortion	3	6	Yes	Yes	No
23	Sexual offences	3		Yes	Yes	No
24	Forensic psychiatry.	3	7	Yes	Yes	No
25	Forensic science laboratory	3		Yes	Yes	No
26	Laws, Acts, Rules and Regulations	3		Yes	Yes	No
Total Marks			100			

Paper No:1		
Question No	Type of Question	Question Paper Format
Q1	<p>Multiple choice Questions 20 Questions 1 mark each All compulsory</p> <p>Must know part - 15 MCQ Desirable to know - 3 MCQ Nice to know part - 2 MCQ</p>	<ol style="list-style-type: none"> 1. Concepts of Agada Tantra (Clinical Toxicology) 2. Visha Chikitsa (Management of Poisoning) 3. Vishakta aahara pariksha and Viruddha ahara 4. Garavisha and Dooshivisha 5. Visha Upadrava and diseases caused due to exposure to Visha/poisons 6. Asphyxial deaths 7. Dermatological manifestations of visha/poisons. 8. Therapeutic utility of Agada yoga 9. Kritrima visha / Sthavara Visha – Poisons of Metallic origin 10. Jangama Visha 11. Substances of abuse 12. Agada Tantra perspectives on cancer 13. Vaidya sadvritta : Duties and Responsibilities of medical practitioner / Forensic medicine (Vyavahara Ayurveda) and Medical jurisprudence (Vidhi vaidyaka): 14. Legal Procedures / Injury 15. Pregnancy, delivery and abortion / Thanatology 16. Environmental Toxicology / Personal identity 17. Forensic psychiatry. / Forensic science laboratory 18. Laws, Acts, Rules and Regulations 19. Sthavara visha – Poisons of Plant origin 20. Sexual offences
Q2	<p>Short answer Questions Eight Questions 5 Marks Each All compulsory</p> <p>Must know - 7 SAQ Desirable to know - 1 SAQ No questions on Nice to know</p>	<ol style="list-style-type: none"> 1. Vishakta aahara pariksha and Viruddha ahara / Visha Upadrava and diseases caused due to exposure to Visha/poisons / Garavisha and Dooshivisha 2. Visha Chikitsa (Management of Poisoning) / Therapeutic utility of Agada yoga / Dermatological manifestations of visha/poisons. 3. Kritrima visha / Sthavara visha – Poisons of Plant origin / Environmental Toxicology / Sthavara Visha – Poisons of Metallic origin 4. Jangama Visha / Concepts of Agada Tantra (Clinical Toxicology) / Vaidya sadvritta : Duties and Responsibilities of medical

		<p>practitioner</p> <p>5. Environmental Toxicology / Agada Tantra perspectives on cancer / Substances of abuse</p> <p>6. Asphyxial deaths / Personal identity / Injury</p> <p>7. Pregnancy, delivery and abortion / Sexual offences / Personal identity</p> <p>8. Forensic psychiatry. / Forensic science laboratory / Laws, Acts, Rules and Regulations</p>
Q3	<p>Long answer Questions Four Questions 10 marks each All compulsory</p> <p>All questions on must know. No Questions on Nice to know and Desirable to know</p>	<p>1. Visha Chikitsa (Management of Poisoning) / Concepts of Agada Tantra (Clinical Toxicology)</p> <p>2. Jangama Visha / Garavisha and Dooshivisha</p> <p>3. Kritrima visha / Sthavara visha – Poisons of Plant origin / Sthavara Visha – Poisons of Metallic origin / Substances of abuse</p> <p>4. Thanatology / Asphyxial deaths / Personal identity / Injury</p>

6 H Distribution of Practical Exam

S.No	Heads	Marks
1	<p>Spotting (15 specimens of 4 marks each) 1.1. Snake – 2 specimens</p> <p>1.1.1 Identification - 1 mark</p> <p>1.1.2 Differentiating features of poisonous/ non-poisonous snake – 1 mark</p> <p>1.1.3 Important clinical signs - 1 mark</p> <p>1.1.4 Ayurvedic management - 1 mark</p> <p>1.2. Mineral poisons/ Kritrima visha (1 specimen each)-2 specimens</p> <p>1.2.1. Identification - 1 mark</p> <p>1.2.2 Identification of symptom clusters mimicking other diseases and their differential diagnosis - 2 marks</p> <p>1.2.3 Method of detoxification and Antidotes - 1 mark</p> <p>1.3. Toxic plants– 2 specimens</p> <p>1.3.1 Identification with scientific, family and sanskrit names 1 mark</p> <p>1.3.2 Mode of use in Visha cases – 1 mark</p> <p>1.3.3 detoxification method, Class of poison and Active principles present in the plant - 1 mark</p> <p>1.3.4 Antidotes used against the specimen - 1 mark</p> <p>1.4. Antitoxic plants – 3 specimens</p> <p>1.4.1 Identification with scientific, family and sankrit names - 1 mark</p> <p>1.4.2 Mode of use in visha - 1 mark</p> <p>1.4.3 Active principles - 1 mark</p> <p>1.4.4 Important formulations - 1 mark</p> <p>1.5. Injuries – 2 specimens</p> <p>1.5.1. Identify the injury - 1 mark</p> <p>1.5.2. Identify the weapon/criminal act causing such injury - 2 mark</p> <p>1.5.3. Medico-legal importance - 1 marks</p> <p>1.6. News item – paper cuttings or other medico-legal case scenarios – 2 specimens</p> <p>1.6.1. Identify the crime – 1 mark</p>	60

	<p>1.6.2. Relevant IPC/CrPC sections associated with the crime – 1 mark</p> <p>1.6.3. Relevant Act related to the crime – with sub-questions related to its sub- sections, punishment etc. - 2 marks</p> <p>7. Jangama visha – other poisonous creatures – 2 specimens</p> <p>1.7.1. Identification – 1 mark</p> <p>1.7.2. Adhishtana/samanya lakshana/ chikitsa – 2 marks</p> <p>1.7.3. specific formulations/doses – 1 mark (Sub-questions mentioned against each item is for a purpose of example only. Different questions may be framed on the various aspects of the guidelines provided)</p>	
2	Practical Records	10
3	Medical and Medico-legal Certificate Writing Students will be provided with a case-scenario based on which they are asked to write a medical certificate for a specific purpose. Evaluation guidelines should be based on the essential criteria in the format of a valid medical certificate.	10
4	Short Case Case scenarios with pictures to diagnose a specific case of poisoning and specific questions asked regarding its clinical examination, investigations, treatment, prognosis etc.	10
5	<p>Clinical Applications of Agada</p> <ul style="list-style-type: none"> Identification of Agada for a case scenario detailed – 2 marks Select the ingredients of the formulation from a group of drugs and identify using scientific names and answer sub-questions based on its preparation, anupana, dose etc. – 8 marks 	10
6	<p>Viva Questions will be asked on the following topics</p> <ul style="list-style-type: none"> Agada Tantra (2 questions 5 marks each) - 10 marks Forensic Science (Vyavaharayurveda) (2 questions 5 marks) - 10 marks Jurisprudence (Vidhivaidyaka) (2 questions 5 marks) - 10 marks Toxicology (2 questions 5 marks each) - 10 marks Concepts of Agada Tantra in cancer and substance abuse (one question from each) (2 questions 5 marks each) - 10 marks Viva on Compilation and Communication skills (2 questions 5 marks each) - 10 marks 	60

7	Electives (Set SA)	10
8	IA	30
Total Marks		200

References Books/ Resources

S.No	Book	Author(s)/Resources
1	Concise Forensic Medicine & Toxicology	KS Narayana Reddy, Jaypee Medical Publisher
2	Essentials of Forensic Medicine & Toxicology	K S Narayana Reddy, Jaypee Medical Publisher
3	Principles of Forensic Medicine & Toxicology	Rajesh Bardale, Jaypee Medical Publisher
4	Modern Medical Toxicology	VV Pillay, Jaypee Medical Publisher
5	Recent Advances in Forensic Medicine and Toxicology (Volume 1 & 2)	Gautam Biswas, Jaypee Medical Publisher
6	Textbook on Medicolegal Issues: Related to Various Medical Specialties by Satish Tiwari Mahesh Baldwa Mukul Tiwari Alka Kuthe	Jaypee Medical Publisher
7	Manual on Doctor and Law	RN Goel Narendra, Malhotra Shashi Goel, Jaypee Medical Publisher
8	Jaypee's Video Atlas of Medicolegal Autopsy	Sujith Sreenivas C Prasannan K Thomas Mathew, Jaypee Medical Publisher
9	Jaypee Gold Standard Mini Atlas Series Forensic Medicine by Ashesh Gunwantrao Wankhede	Jaypee Medical Publisher
10	MODI's Textbook of Medical Jurisprudence and Toxicology	K Kannan, Jaypee Medical Publisher
11	A Text book of Agada Tantra	Dr Shobha Bhat, Chaukamba Orientalia
12	Agada Tantra	Dr Ramesh Chandra Tiwari, Chaukamba Orientalia
13	Text Book of Agad Tantra Evam Vyavaharayurveda	Dr Sandeep Charak Dr.Piyush Gupta Dr Divya Tiwari, Ayurveda Sanskrit Hindi Pustak Bhandar.
14	Ayodhyaprasad Achal's Agada Tantra	Dr Jina Patnaik, Chaukamba Surbharati Prakashan
15	Illustrated Agada Tantra	Dr PVNR Prasad, Chaukamba Sanskrit Series Varanasi
16	Textbook on Agada Tantra	<u>DR V P JOGLEKAR, RASHTRIYA SHIKSHAN MANDAL, PUNE</u>
17	Review of Forensic Medicine and Toxicology by Dr Gautam Biswas	Jaypee Medical Publisher
18	Toxicology - An Ayurvedic Perspective	Department of Agadtantra, Vaidyaratnam PS Varier Ayurveda College, Kottakkal

Abbreviations

Assessment

S.No	Short form	Discription
1	T-EMI	Theory extended matching item
2	T- EW	Theory Essay writing
3	T- MEQs	Theory MEQs
4	T-CRQs	Theory CRQs
5	T-CS	Theory case study
6	T-OBT	Theory open book test
7	P-VIVA	Practical Viva
8	P-REC	Practical Recitation
9	P-EXAM	Practical exam
10	PRN	Presentation
11	P-PRF	Practical Performance
12	P-SUR	Practical Survey
13	P-EN	Practical enact
14	P-RP	Practical Role play
15	P-MOD	Practical Model
16	P-POS	Practical Poster
17	P-CASE	Practical Case taking
18	P-ID	Practical identification
19	P-PS	Practical Problem solving
20	QZ	Quiz
21	PUZ	Puzzles
22	CL-PR	Class Presentation,
23	DEB	Debate
24	WP	Word puzzle
25	O-QZ	Online quiz

26	O-GAME	Online game-based assessment
27	M-MOD	Making of Model
28	M-CHT	Making of Charts
29	M-POS	Making of Posters
30	C-INT	Conducting interview
31	INT	Interactions
32	CR-RED	Critical reading papers
33	CR-W	Creativity Writing
34	C-VC	Clinical video cases,
35	SP	Simulated patients
36	PM	Patient management problems
37	CHK	Checklists
38	OSCE	OSCE
39	OSPE	OSPE,
40	Mini-CEX	Mini-CEX
41	DOPS	DOPS
42	CWS	CWS
43	RS	Rating scales
44	RK	Record keeping
45	COM	Compilations
46	Portfolios	Portfolios
47	Log book	Log book
48	TR	Trainers report
49	SA	Self-assessment
50	PA	Peer assessment
51	360D	360-degree evaluation
52	TT-Theory	Theory
53	PP-Practical	Practical
54	VV-Viva	Viva

Domain

S.No	Short form	Discription
1	CK	Cognitive/Knowledge
2	CC	Cognitive/Comprehension
3	CAP	Cognitive/Application
4	CAN	Cognitive/Analysis
5	CS	Cognitive/Synthesis
6	CE	Cognitive/Evaluation
7	PSY-SET	Psychomotor/Set
8	PSY-GUD	Psychomotor/Guided response
9	PSY-MEC	Psychomotor/Mechanism
10	PSY-ADT	Psychomotor Adaptation
11	PSY-ORG	Psychomotor/Origination
12	AFT-REC	Affective/ Receiving
13	AFT-RES	Affective/Responding
14	AFT-VAL	Affective/Valuing
15	AFT-SET	Affective/Organization
16	AFT-CHR	Affective/ characterization

T L method

S.No	Short form	Discription
1	L	Lecture
2	L&PPT	Lecture with Power point presentation
3	L&GD	Lecture & Group Discussion
4	L_VC	Lecture with Video clips
5	DIS	Discussions
6	BS	Brainstorming
7	IBL	Inquiry-Based Learning
8	PBL	PBL
9	CBL	CBL
10	PrBL	Project-Based Learning
11	TBL	TBL
12	TPW	Team project work
13	FC	Flipped classroom
14	BL	Blended Learning
15	EDU	Edutainment
16	ML	Mobile learning
17	ECE	ECE
18	SIM	Simulation
19	RP	Role plays
20	SDL	Self-directed learning
21	PSM	Problem solving method
22	KL	Kinesthetic Learning
23	W	Workshops
24	GBL	Game-Based Learning
25	D-M	Demo on Model

26	LS	Library Session
27	PL	Peer learning
28	RLE	Real life experience
29	REC	Recitation
30	SY	Symposium
31	TUT	Tutorial
32	PER	Presentations
33	PT	Practical
34	XRy	X ray identification
35	CD	Case diagnosis
36	LRI	Lab report interpretation
37	DA	Drug analysis
38	D	Demonstration
39	D_BED	Demonstration bedside
40	D_L	Demonstration Lab
41	DG	Demonstration Garden
42	FV	Field visit
43	PRA	Practical
44	VIVA	Viva
45	TH	Theory

॥ आयुषे सर्वलोकानाम् ॥



**Course curriculum for Second Professional BAMS (PRESCRIBED BY
NCISM)**

Dravyaguna Vigyan

(SUBJECT CODE : AyUG-DG)

(Applicable from 2021-22 batch, from the academic year 2023-24 onwards for 5 years or until further notification by NCISM, whichever is earlier)

BOARD OF AYURVEDA

**NATIONAL COMMISSION FOR INDIAN SYSTEM OF MEDICINE NEW DELHI-
110058**

II Professional Ayurvedacharya (BAMS)**Subject Code : AyUG-DG****Summary**

Total number of Teaching hours: 400			
Lecture hours(LH)-Theory		150	150(LH)
Paper I	75		
Paper II	75		
Non Lecture hours(NLH)-Theory		250	250(NLH)
Paper I & II	75		
Non Lecture hours(NLH)-Practical			
Paper I & II	175		

Examination (Papers & Mark Distribution)					
Item	Theory Component Marks	Practical Component Marks			
		Practical	Viva	Elective	IA
Paper I	100	100	70	-	30
Paper II	100				
Sub-Total	200	200			
Total marks	400				

Important Note:-The User Manual II BAMS is a valuable resource that provides comprehensive details about the curriculum file. It will help you understand and implement the curriculum. Please read the User Manual II before reading this curriculum file. The curriculum file has been thoroughly reviewed and verified for accuracy. However, if you find any discrepancies, please note that the contents related to the MSE should be considered authentic.

In case of difficulty and questions regarding curriculum write to cur.imp@ncismindia.org

PREFACE

The Bachelor of Ayurveda education shall produce graduates having profound knowledge of Ashtanga Ayurveda. One of the chatushpada has been mentioned is Dravya. The revised syllabus of Dravyaguna along with the contemporary advances supplemented with knowledge of scientific and technological advances in Dravyaguna along with extensive practical training

Fundamentals of Dravyaguna involves a thorough knowledge of various principles and concepts of Rasapanchaka (fivefold analysis of medicinal substances) and Karma (pharmacological action). It refers to classical Ayurvedic texts, provides suitable examples, and includes contemporary interpretations to facilitate better understanding. Most commonly used dravyas by clinicians are included in curriculum.

The current syllabus focuses greater emphasis on understanding the fundamentals with a scientific interpretation and clinical application. The repetitive topics such as Ahara varga, Nighantu, and Jangama dravyas is avoided since they are covered in Samhita adhyayana (study of classical texts), Itihasa (history), and ethical considerations related to the clinical use of animal-origin drugs.

Additionally, newer areas in Ayurveda related to medicinal plants, such as cultivation techniques, collection methods, and various regulatory guidelines from organizations like NMPB (National Medicinal Plants Board), CCRAS (Central Council for Research in Ayurvedic Sciences), API (Ayurvedic Pharmacopoeia of India), GCTM (Global Centre for Traditional Medicine), PCIMH (Pharmacopoeia Commission for Indian Medicine & Homoeopathy), pharmacovigilance, Vrikshayurveda (science of plant life), Ethno medicine, Network pharmacology, and Bioinformatics, have been incorporated. This information is crucial for the sustainable use of medicinal plants and a better understanding of their properties.

Practical sessions in Dravyaguna focus on understanding fundamental concepts such as Mahabhuta (five elements), Guna (properties), Rasa (taste), and Virya (potency) with Parameters commonly used in physicochemical analysis. The curriculum also addresses challenges faced by the herbal drug industry, including the issue of adulteration, by incorporating quality check parameters. Furthermore, the students gain practical experience in plant identification through visits to various natural and cultivated plant habitats.

The revised curriculum for Dravyaguna reflects commitment to equipping students with the knowledge and skills necessary to excel in the field of Ayurvedic pharmacology. Hope that this curriculum will inspire and empower students to become proficient Ayurvedic practitioners who can contribute to the holistic well-being of individuals and society as a whole.

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Course Code and Name of Course

Course code	Name of Course
AyUG-DG	Dravyaguna Vigyan

Table 1- Course learning outcomes and matched PO

SR1 CO No	A1 Course learning Outcomes (CO) AyUG-DG At the end of the course AyUG-DG, the students should be able to-	B1 Course learning Outcomes matched with program learning outcomes.
CO1	Demonstrate the application of principles of <i>Dravyaguna</i> in clinical practice.	PO1,PO2,PO8
CO2	Analyze and justify the fundamental principles of <i>Dravyaguna</i> in relevance to contemporary sciences.	PO1
CO3	Analyze and interpret <i>Rasa Panchaka</i> of <i>Dravya</i> with their application in clinical practice.	PO5,PO9
CO4	Interrelate the knowledge on Karma (pharmacological actions) with <i>Rasa panchaka</i> and basic contemporary clinical pharmacology.	PO2
CO5	Demonstrate and Justify the ability to select the specific <i>Dravyas</i> , Prashata Bhesaja with different dosage forms in different clinical conditions.	PO3,PO7,PO9
CO6	Demonstrate knowledge of quality control methods of drug.	PO3
CO7	Demonstrate knowledge and skills about <i>Apamishrana</i> (adulterants), <i>Abhava pratinidhidravya</i> (substitutes), <i>Prashastabhesaja</i> (ideal drug) and plant extracts.	PO5,PO6
CO8	Identify the medicinal plants and orient about conservation, cultivation, sustainable utilization & Pharmacovigilance	PO4,PO6
CO9	Demonstrate fundamental principles of applied Pharmacology.	PO2

Table 2 : Contents of Course

Paper 1 Fundamental Dravyaguna					
Sr. No	A2 List of Topics	B2 Term	C2 Marks	D2 Lecture hours	E2 Non- Lecture hours
1	1.Dravyaguna Vigyana	1	1	1	1
2	2.Dravya <ul style="list-style-type: none"> ♦ 2.1 Panchabhoutikatwa of Dravya ♦ 2.2 Classification of Dravya based on Utpattibheda, Yonibheda, Prayogabheda, Prabhavbheda, Doshaghnabheda, Rasabheda and Karmbheda 	1	6	5	4
3	3. Guna <ul style="list-style-type: none"> ♦ 3.1 Panchabhoutikatva, characteristics and classification ♦ 3.2 Gurvadiguna and its karma on Dosha, Dhātu and Mala, clinical application and research updates ♦ 3.3 Paradiguna with examples, clinical applications and research updates 	1	11	4	2
4	4. Rasa <ul style="list-style-type: none"> ♦ 4.1 Meaning of “Rasa” in various contexts ♦ 4.2 Shadrasa in relative correlation with taste of chemical constituents ♦ 4.3 Rasotpatti and Panchabhoutika constitution of Shadrasa ♦ 4.4 Rasopalabdhi and pathway of taste perception & sites of taste receptors in the body ♦ 4.5 Rasa -Lakshana, Guna & Karmas of each Rasa on Dosha, Dhātu and Mala ♦ 4.6 Atiyogalakshana, ♦ 4.7 Clinical application and Research updates of Shadrasa ♦ 4.8 Anurasa ♦ 4.9 Rasa Sevanakrama of Aushadha 	1	11	7	4

5	5. Vipaka <ul style="list-style-type: none"> ♦ 5.1 Trividha Vipaka ♦ 5.2 Vipak karma on Dosha, Dhatu and Mala ♦ 5.3 Clinical application and Research updates ♦ 5.4 Vipakopalabdhi (Determination of Vipaka) & Taratamya (Degree of variation) 	1	6	3	1
6	6. Virya <ul style="list-style-type: none"> ♦ 6.1 Difference between Guna and Virya ♦ 6.2 Karmas of Virya on Dosha, Dhatu and Mala ♦ 6.3 Clinical application and Research updates ♦ 6.4 Viryaopalabdhi (Determination of Virya) and understanding of Virya with respect to actions of active constituents 	1	6	2	2
7	7. Prabhava <ul style="list-style-type: none"> ♦ 7.1 Samanapratyayarabdha and Vichitrapratyayarabdha ♦ 7.2 Clinical application of Prabhava and Research updates 	1	5	2	1
8	8. Interrelation of Rasa-Guna-Virya-Vipaka-Prabhava <ul style="list-style-type: none"> ♦ Interrelation of Rasa-Guna-Virya-Vipaka-Prabhava with respect to their strength- Pharmacodynamics 	1	1	1	2
9	9. Karma <ul style="list-style-type: none"> ♦ 9. Individual Karma, correlation with contemporary pharmacological action, examples, clinical application and research updates ♦ 9.1 Deepana ♦ 9.2 Pachana 	1	11	9	5

	<ul style="list-style-type: none"> ♦ 9.3 Samshodhana ♦ 9.4 Samshamana ♦ 9.5 Anulomana ♦ 9.6 Sransana ♦ 9.7 Bhedana ♦ 9.8 Rechana ♦ 9.9 Chhedana ♦ 9.10 Lekhana ♦ 9.11 Grahi ♦ 9.12 Sthambhana ♦ 9.13 Madakari ♦ 9.14 Pramathi ♦ 9.15 Abhishyandi ♦ 9.16 Vyavayi ♦ 9.17 Vikashi ♦ 9.18 Rasayana ♦ 9.19 Vajeeekarana ♦ 9.20 Medhya 				
10	10. Karmas of Dashemani Gana	1	5	12	3
11	11. Principles of General Pharmacology <ul style="list-style-type: none"> ♦ 11 Drug definition, drug dosage forms, route of drug administration, pharmacokinetics (ADME), pharmacodynamics, Drug dose, principles of drug action, mechanism of drug action & bio-availability ♦ 11.1 Drugs Acting on Central Nervous System: Anaesthetics, Sedative Hypnotics, Antiepileptics, Antiparkinsonian, Antidepressants, Antianxiety Drugs, Opioid - Analgesics Drugs ♦ 11.2 Drugs Acting on Peripheral (somatic) Nervous System: Skeletal Muscle Relaxants, Local Anaesthetics ♦ 11.3 Autacoids and Related Drugs: Nonsteroidal, Anti-inflammatory (NSAIDs)/Antipyretic and Analgesics Drugs ♦ 11.4 Drugs for Respiratory Disorders: Bronchodilators, Aerosols/ Inhalants Expectorants, Antitussive Drugs ♦ 11.5 Cardiovascular Drugs: Antihypertensive, Antianginal Drugs ♦ 11.6 Drugs Acting on Kidney: Diuretics ♦ 11.7 Drugs Affecting Blood: Haematinics, Coagulants, Anticoagulants, Hypolipidaemic Drugs 	3	20	15	1

	<ul style="list-style-type: none"> ♦ 11.8 Gastrointestinal Drugs: Antacid, Carminatives, Digestants, Antiemetics, Laxatives, Antidiarrhoeal, Hepatoprotective Drugs ♦ 11.9 Antibacterial Drugs: Antibiotics, Antitubercular Drugs ♦ 11.10 Antifungal, Antiviral, Antimalarial and Anthelmintic Drugs ♦ 11.11 Hormones and Related Drugs: Thyroid Hormone, Thyroid Inhibitors, Insulin, Oral Anti-diabetic, Hormonal Contraceptives, Uterine Stimulants, Uterine Relaxants Drugs ♦ 11.12 Miscellaneous Drugs: Antiseptics and Disinfectants, Vaccines, Vitamins, Water imbalance and IV fluids 				
12	12. Mishraka Gana <ul style="list-style-type: none"> ♦ 12. Mishrakagana: its composition, guna karma and therapeutic uses. ♦ 12.1 Brihatpanchamoola. ♦ 12.2 Laghupanchamoola. ♦ 12.3 Vallipanchamoola. ♦ 12.4 Kantakapanchamoola. ♦ 12.5 Trinapanchamoola. ♦ 12.6 Panchavalkala. ♦ 12.7 Triphala. ♦ 12.8 Trikatu. ♦ 12.9 Trimada. ♦ 12.10 Chaturusana. ♦ 12.11 Panchakola. ♦ 12.12 Shadusana ♦ 12.13 Chaturbeeja. ♦ 12.14 Trijataka. ♦ 12.15 Chaturajataka. ♦ 12.16 Panchatikta. ♦ 12.17 Chaturbhadra. ♦ 12.18 Trikarshika. 	3	6	6	2
13	13. Nomenclature of dravya as per Nighantu, Vedic taxonomy and Botany	3	1	0	2
14	14. Prashasta Bhesaja, Bhesaja Pariksha and drug evaluation method with correlation as per Pharmacognosy	3	1	1	2

15	15. Dravyasangrahana and Drug collection methods as per GFCP (Good Field collection practices)	3	1	1	0
16	16. GCP (Good cultivation practices), seed bank, conservation of medicinal plants, knowledge about RET (Rear, Endangered & Threatened) medicinal plants.	3	1	1	0
17	17. Abhava Pratinidhi Dravya (substitutes)	3	1	1	1
18	18. Classifications and techniques of aqueous and alcoholic extracts	3	1	0	2
19	19. Adverse drug reaction and Pharmacovigilance with recent updates	3	1	1	2
20	20. NMPB (National Medicinal Plant Board), CCRAS (Central Council of Research in Ayurveda Sciences), API (Ayurvedic Pharmacopeia of India), GCTM (Global Centre for Traditional Medicine), PCIMH (Pharmacopeia Commission of Indian Medicine and Homeopathy)	3	1	1	0
21	21. Vrikshayurveda and Ethno-medicine	3	1	1	1
22	22. Network pharmacology and Bioinformatics	3	2	1	1
Total Marks			100	75 hr	39 hr

Paper 2 Applied Dravyaguna					
Sr. No	A2 List of Topics	B2 Term	C2 Marks	D2 Lecture hours	E2 Non- Lecture hours
23	1. Bheshajavacharaniya (Criteria's to be considered for selection of drugs in vyadhis)	2	5	1	6
24	2.1 Dravya (Drug) Nama-Guna-Karma Jnana	2	55	45	10

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|---|--|--|--|--|--|
| <ul style="list-style-type: none"> ♦ Amalaki ♦ Aragwadha ♦ Arjuna ♦ Ashoka ♦ Ashwagandha ♦ Ativisha ♦ Bala ♦ Beejaka ♦ Bhallataka ♦ Bharangi ♦ Bhrungaraja ♦ Bhumyamalaki ♦ Bilva ♦ Brahmi ♦ Chandana ♦ Chitraka ♦ Dadima ♦ Dhataki ♦ Dhamasa ♦ Eranda ♦ Gokshura ♦ Guduchi ♦ Guggulu ♦ Haridra ♦ Haritaki ♦ Hingu ♦ Jambu ♦ Jatamansi ♦ Jyotishmati ♦ Kanchanara ♦ Kantakari ♦ Kapikachhu ♦ Karkatshrungi ♦ Katuki ♦ Khadira ♦ Kumari ♦ Kutaja ♦ Latakaranja ♦ Lodhra ♦ Agnimanth ♦ Ahiphena (NK) ♦ Ajamoda (DK) ♦ Apamarga (DK) ♦ Asthishrunkhala ♦ Bakuchi ♦ Bruhati ♦ Chakramarda ♦ Dhanyaka ♦ Ela ♦ Gambhari | | | | | |
|---|--|--|--|--|--|

	<ul style="list-style-type: none"> ♦ Japa ♦ Jatiphala ♦ Jeeraka (DK) ♦ Kalamegha ♦ Kampillaka ♦ Kulatha (NK) ♦ Kumkum ♦ Lajjalu ♦ Lavanga 				
25	2.2 Dravya (Drugs) Nama -Guna-Karma-Jnana <ul style="list-style-type: none"> ♦ Madanphala ♦ Mandukaparni ♦ Manjishta ♦ Maricha ♦ Meshashrungi ♦ Methika ♦ Musta ♦ Nagkeshar ♦ Nimba ♦ Nirgundi ♦ Palasha ♦ Pashanabheda ♦ Patha ♦ Pippali ♦ Punarnava ♦ Rasna ♦ Rasona ♦ Sarapagandha ♦ Sairayak ♦ Sariva ♦ Shallaki ♦ Shalmali(Mocharasa) ♦ Shankhapushpi ♦ Shatavari ♦ Shigru ♦ Shunthi ♦ Talisapatra (NK) ♦ Trivrut ♦ Tulasi ♦ Twak ♦ Usheera ♦ Vacha ♦ Varuna ♦ Vasa ♦ Vatsanabha 	3	40	29	20

	<ul style="list-style-type: none"> ♦ Vibhitaki ♦ Vidanga ♦ Yashtimadhu 				
Total Marks			100	75 hr	36 hr

Table 3: Learning objectives (Theory) of Course

[illegible]

CO1,CO2,CO3	Define Guna and describe its Panchabhoutikatva.	CK	MK	K	L&PP T,DIS ,LS	T- EW,P-VIV A,PRN,QZ	F&S	I	
CO1	State characteristics of Gurvadi Guna.	CK	MK	K	L&PP T,SD L	P-VIVA,PRN, QZ	F&S	I	
CO1,CO2,CO3	Discuss Gurvadiguna in context to its Karma on Dosha, Dhatu and Mala with examples.	CC	MK	KH	L&PP T,L& GD,F C	T- EW,P-VIV A,PRN,OSPE	F&S	I	
CO1,CO2,CO3	Enumerate & Summarize, clinical application of Gurvadi Guna with research updates.	CC	MK	KH	L&G D,BL, LS	T- EW,P- VIVA,PRN	F&S	I	
CO1,CO2,CO3	Enlist Paradiguna with examples.	CK	MK	K	L&G D,PE R	T-EMI,P-VIV A,PRN,P-POS	F&S	I	
CO1,CO2,CO3	Interpret clinical applications of Paradiguna.	CAP	MK	KH	L&PP T,DIS	T-EMI,P-VIV A,PRN,QZ	F&S	I	
CO1,CO2,CO3	Discuss research updates of Paradiguna.	CC	MK	KH	L,TP W,LS	T-EMI,P-VIV A,PRN,CR- RED	F&S	I	
Topic 4 4. Rasa (Lecture :7 hours, Non lecture: 4 hours)									
CO1,CO2,CO3	Define Rasa and interpret Meaning of “Rasa” in various contexts.	CK	MK	K	L&G D	P-VIVA,PUZ, M-CHT,INT	F&S	I	
CO1,CO2	Classify and compare shadarasa in relative correlation with taste of chemical constituents.	CK	MK	K	L&PP T,ED	P-VIVA,PUZ, M-CHT,INT	F&S	I	

					U				
CO1,CO2	State Rasa Utpatti and Panchabhoutika constitution of Shadrasa.	CK	MK	K	L&G D,PE R	P-VIVA,PUZ, M-CHT,INT	F&S	I	
CO1,CO2	Discuss Rasopalabdh.	CC	MK	KH	L&G D,SD L	P-VIVA,PUZ, M-CHT,INT	F&S	I	
CO1,CO2,CO 3	Interpret pathway of taste perception & sites of taste receptors in the body	CC	MK	KH	L&PP T,L_ VC	T- EW,T-OBT ,P-VIVA,PRN ,PUZ,INT	F&S	I	
CO1,CO2	Describe Guna and Lakshana of each Rasa.	CC	MK	KH	L&PP T	T-EMI,T- EW, P-VIVA,PRN, INT	F&S	I	
CO1,CO2	Explain karma of each rasa on Dosha, Dhatu and Mala with examples.	CC	MK	KH	L&PP T,BS	T-EMI,T- EW, P-VIVA,PUZ, M-CHT,INT	F&S	I	
CO1,CO2	Discuss Atiyoga of each rasa.	CC	MK	KH	L&PP T,PB L,PE R	T-EMI,P-VIV A,PRN,PUZ,I NT	F&S	I	
CO1,CO2,CO 3	Interpret Clinical application of each rasa.	CAP	MK	KH	L&PP T,DIS ,SDL, LS	T-EMI,T- EW, T-OBT,P- VIVA,INT	F&S	I	
CO1,CO2	Discuss research updates of Shadrasa.	CC	MK	KH	DIS,S DL,L S	T- EW,P-VIV A,PUZ,INT,C R-RED	F&S	I	

CO1,CO2	Define Anurasa.	CK	MK	K	L,LS	T-EMI,P-VIVA,INT	F&S	I	
CO1,CO2	Interpret relevance of Anurasa in clinical practice.	CAP	MK	KH	L&G D,FC	T-EMI,P-VIVA,PUZ,INT	F&S	I	
CO1,CO2	Describe with justification Rasa sevanakrama as Aushadha.	CC	MK	KH	L&PP T,DIS	T-EMI,T- EW, P-VIVA,PRN, M-CHT,M- POS	F&S	I	
Topic 5 5. Vipaka (Lecture :3 hours, Non lecture: 1 hours)									
CO1	Define Vipaka.	CK	MK	K	L	P-VIVA	F&S	I	
CO1	State Vipaka lakshana.	CK	MK	K	L&G D	P-VIVA,INT	F&S	I	
CO1	Describe the action of Trividha Vipaka on Dosha, Dhatu and Mala with examples.	CC	MK	KH	L&PP T,TP W,FC	T- EW,P-VIVA,PRN	F&S	I	
CO1,CO3	Interpret clinical application of Vipaka.	CAP	MK	KH	L&PP T,DIS ,SDL, LS	P-VIVA,QZ	F&S	I	
CO2	State Research updates of Vipaka.	CK	MK	K	L&PP T	P-VIVA,CR- RED	F&S	I	
CO1	Explain Vipakopalabdh (Determination of Vipaka) and Taratamya (Degree of variation).	CC	MK	KH	L&PP T,FC	P-VIVA,PUZ, M-CHT	F&S	I	
Topic 6 6. Virya (Lecture :2 hours, Non lecture: 2 hours)									
CO1	Define the lakshanas of Virya.	CK	MK	K	L,SD	P-VIVA,INT	F&S	I	

[illegible]

CO1,CO2	Discuss research updates of Prabhava.	CC	MK	KH	L&G D,SD L	T- EW,P-VIV A,CR-RED	F&S	I	
Topic 8 8. Interrelation of Rasa-Guna-Virya-Vipaka-Prabhava (Lecture :1 hours, Non lecture: 2 hours)									
CO1	Interpret the interrelation of Rasa-Guna-Virya-Vipaka-Prabhava with respect to their strength- Pharmacodynamics.	CAP	MK	KH	L&PP T,TP W,PL	P-VIVA,CL- PR	F&S	I	
Topic 9 9. Karma (Lecture :9 hours, Non lecture: 5 hours)									
CO1	Define Karma.	CK	MK	K	L	T-OBT,P- VIVA,QZ	F&S	I	
CO1	Discuss Karma lakshana.	CC	MK	KH	L&G D	T-OBT,P- VIVA,QZ	F&S	I	
CO1,CO2,CO 4,CO5	Explain Deepan karma in relation with Appetizers.	CC	MK	KH	L&G D,BL	T- EW,T-OBT ,P-VIVA,QZ	F&S	I	
CO1,CO2,CO 3,CO4	Critically analyze Deepan dravyas with its gunas and application in various clinical conditions.	CAP	MK	KH	L&PP T,PB L,GB L	T-OBT,P- VIVA,QZ ,DEB	F&S	I	
CO1,CO2,CO 3,CO4	Explain Pachan karma in relation with Digestives.	CC	MK	KH	L&PP T	T-OBT,P- VIVA,QZ	F&S	I	
CO1,CO2,CO 3,CO4	Critically analyze Pachan dravyas with gunas and discuss its application in various clinical conditions.	CAN	MK	KH	L&PP T,PB L,PE R	T-EMI,T- OBT,P-VIVA	F&S	I	
CO1,CO2,CO	Explain Samshodhan karma in relation with contemporary	CC	MK	KH	L_VC	T-OBT,P-	F&S	I	

4	pharmacological action.				,PL	VIVA,QZ			
CO1,CO3,CO4	Discuss Samshohan karma and its clinical application.	CC	MK	KH	PBL,RP,PE R	T- EW,T-CS,T- OBT,P-VIVA	F&S	I	
CO1,CO2,CO3,CO4	Explain Samshamana karma in relation with contemporary pharmacological action.	CC	MK	KH	L&G D,BL	T-EMI,T- OBT,P-VIVA	F&S	I	
CO1,CO2,CO3,CO4	Describe Samshamana karma and its clinical application.	CC	MK	KH	L&PP T,CB L,PL	T-EMI,T-CS,P- VIVA,QZ	F&S	I	
CO1,CO2,CO3	Explain Anuloman karma in relation with Carminative.	CC	MK	KH	L_VC ,DIS	T-EMI,T-OBT ,P-VIVA,DEB	F&S	I	
CO1,CO3	Describe Anuloman karma and its clinical application.	CC	MK	KH	L&PP T,PB L,LS	T-OBT,P- VIVA,QZ	F&S	I	
CO1,CO2,CO3,CO4	Explain Sransana karma in relation with contemporary pharmacological action.	CC	MK	KH	L&PP T	T-EMI,T-OBT ,P-VIVA,DEB	F&S	I	
CO1,CO3	Discuss Sransan karma and its clinical application.	CC	MK	KH	L&PP T,PB L,LS	T-OBT,P- VIVA,QZ ,DEB	F&S	I	
CO1,CO2,CO3,CO4	Explain Bhedana karma in relation with strong laxative action	CC	MK	KH	L_VC ,FC	T-EMI,T-OBT ,P-VIVA,DEB	F&S	I	
CO1,CO3	Discuss Bhedan karma and its clinical application.	CC	MK	KH	L&PP T,DIS	T-OBT,P- VIVA,QZ	F&S	I	
CO1,CO2,CO3,CO4	Explain Rechan karma in relation with Purgative.	CC	MK	KH	L&PP T	T-EMI,T- OBT,P-VIVA	F&S	I	

CO1,CO3	Discuss Rechan karma and its clinical application.	CC	MK	KH	L&PP T,DIS	T-OBT,P- VIVA,QZ	F&S	I	
CO1,CO3	Discuss Chhedan karma and its clinical application.	CC	MK	KH	L&PP T,CB L,LS	T-EMI,T- OBT,P-VIVA	F&S	I	
CO1,CO2,CO 3,CO4	Explain Lekhan karma in relation with contemporary pharmacological action.	CC	MK	KH	L&G D,BL	T-EMI,T- OBT,P-VIVA	F&S	I	
CO1,CO3	Discuss Lekhan karma and its clinical application.	CC	MK	KH	L&PP T,DIS ,PL	T-OBT,P- VIVA,QZ ,DEB	F&S	I	
CO1,CO2,CO 3,CO4	Explain Grahi karma in relation with contemporary pharmacological action bowel binding.	CC	MK	KH	L_VC	T-EMI,T- OBT,P-VIVA	F&S	I	
CO1,CO3	Discuss of Grahi karma and its clinical application.	CC	MK	KH	L&G D,TB L	T-OBT,P- VIVA,QZ	F&S	I	
CO1,CO2,CO 3,CO4	Explain Stambhan karma in relation with contemporary pharmacological action.	CC	MK	KH	L&PP T,FC	T-EMI,T-OBT ,P-VIVA,DEB	F&S	I	
CO1,CO3	Discuss Stambhan karma and its clinical application.	CC	MK	KH	L&G D,PB L	T-EMI,T-OBT ,P-VIVA,DEB	F&S	I	
CO1	Discuss Madakari karma with examples.	CC	MK	KH	L,DIS	T-OBT,P- VIVA,QZ	F&S	I	
CO1,CO3	Discuss Pramathi karma and its clinical application.	CC	MK	KH	L&PP T,DIS	T-EMI,T- OBT,P-VIVA	F&S	I	
CO1	Discuss Abhishyandi karma with examples.	CK	MK	K	L,DIS	T-EMI,T-OBT	F&S	I	

						,P-VIVA,DEB			
CO1	Discuss Vyavayi karma with examples.	CC	MK	KH	L,PE R	T-EMI,T-OBT ,P-VIVA,DEB	F&S	I	
CO1	Discuss Vikashi karma with examples.	CC	MK	KH	L,DIS	T-OBT,P- VIVA,QZ	F&S	I	
CO1,CO2	Explain Rasayan karma in relation with Rejuvenators.	CC	MK	KH	L&PP T,DIS ,BL	T-EMI,P- VIVA,QZ	F&S	I	
CO1,CO3	Analyze types of Rasayan dravyas with its gunas and discuss its clinical application with research updates.	CAN	MK	KH	L&G D	T-EMI,T-OBT ,P-VIVA,DEB ,CR-RED	F&S	I	
CO1,CO2	Explain Vajeeakaran karma in relation with Aphrodisiacs.	CC	MK	KH	L&G D,PL	T-OBT,P- VIVA,QZ	F&S	I	
CO1,CO2,CO 3	Critically Analyze the types of Vajeeakaran dravyas with their guna karmas and discuss its clinical application with research updates	CAN	MK	KH	L&PP T,PB L,ML, LS	T-OBT,P- VIVA,QZ ,DEB,CR- RED	F&S	I	
CO1,CO2	Explain Medhya karma in relation with contemporary pharmacological actions.	CC	MK	KH	L&PP T	T-EMI,T-OBT ,P-VIVA,DEB	F&S	I	
CO1,CO2,CO 3	Critically analyze Medhya dravya and discuss its clinical application with research updates.	CAN	MK	KH	L&PP T,PL, PER	T-OBT,P- VIVA,QZ ,WP,CR-RED	F&S	I	
Topic 10 10. Karmas of Dashemani Gana (Lecture :12 hours, Non lecture: 3 hours)									
CO1,CO8	Discuss Charakokta Dashemani karmas with their rasa, guna, vipak, virya, dhosha karma, botanical identity & pharmaco-	CC	MK	KH	L&PP T,DIS	P-VIVA,P- REC,QZ ,M-	F&S	I	

	therapeutic action of individual drugs.				,FC,RE	CHT,M-POS			
Topic 11 11. Principles of General Pharmacology (Lecture :15 hours, Non lecture: 1 hours)									
CO4,CO9	Define Pharmacology and discuss Principles of general Pharmacology.	CK	MK	K	L&PPT	PRN,QZ	F&S	I	
CO4,CO9	Discuss drug definition, drug dosage forms and route of drug administration.	CC	MK	KH	L_VC	T- EW,P-VIVA,QZ	F&S	I	
CO4,CO9	Explain pharmacokinetics (ADME) drug and pharmacodynamics.	CC	MK	KH	L_VC,DIS	P-VIVA,PRN	F&S	I	
CO4,CO9	Discuss Drug dose, Principles of drug action, Mechanism of drug action & Bioavailability	CC	MK	KH	L_VC,PER	P-VIVA,QZ	F&S	I	
CO9	Define, Describe mode of action & Discuss types with examples of following drugs acting on CNS with examples of Anaesthetics, Sedative-Hypnotic, Antiepileptic, Antiparkinsonian, Antidepressants, Antianxiety and Opioid Analgesics Drugs	CC	MK	KH	L&PPT,PBL,PrBL,FC	T- EW,T-OBT,P-VIVA,QZ,C-INT	F&S	III	
CO9	Define, Describe mode of action & Discuss types with examples of following drugs acting on Peripheral (somatic) Nervous System with examples of Skeletal Muscle Relaxants and Local Anaesthetics Drugs.	CC	MK	KH	L&PPT,PBL,FC	T- EW,T-OBT,P-VIVA,QZ	F&S	III	
CO9	Define, Describe mode of action & Discuss types with examples of following drugs acting on Autacoids and Related of Nonsteroidal Antiinflammatory (NSAIDs), Antipyretic and Analgesics Drug	CC	MK	KH	L&PPT,PBL,FC	T- EW,T-OBT,P-VIVA,PRN	F&S	III	
CO9	Define, Describe mode of action & Discuss types with examples of following drugs acting on Respiratory Disorders -	CC	MK	KH	L&PPT,PB	T-OBT,P-VIVA,PRN	F&S	III	

	Bronchodilators, Aerosols/ Inhalants, Expectorants and Anti tussives Drugs				L,BL				
CO9	Define, Describe mode of action & Discuss types with examples of following drugs acting on Cardiovascular Drugs as Antihypertensive and Antianginal Drugs	CC	MK	KH	L_VC ,FC	T-OBT,P- VIVA,PRN	F&S	III	
CO9	Define, Describe mode of action & Discuss types with examples of following drugs acting on Kidney as Diuretics	CC	MK	KH	L&PP T,TP W,BL	T-OBT,P- VIVA,QZ	F&S	III	
CO9	Define, Describe mode of action & Discuss types with examples of following drugs acting as Haematinics, Coagulants, Anticoagulants and Hypolipidaemic Drugs	CC	MK	KH	L&PP T,PB L,BL	T- EW,T- OBT,P-VIVA	F&S	III	
CO9	Define, Describe mode of action & Discuss types with examples of following drugs acting on Gastrointestinal tract as Antacid, Carminatives, Digestants, Antiemetics, Laxatives, Antidiarrhoeal and Hepatoprotective Drugs	CC	MK	KH	L&PP T,L& GD,L _VC	T- EW,T-OBT ,P-VIVA,QZ	F&S	III	
CO9	Define, Describe mode of action & Discuss types with examples of following drugs acting as Antibiotics and Antitubercular.	CC	MK	KH	L&PP T,FC, GBL	T- EW,P- VIVA,QZ	F&S	III	
CO9	Define, Describe mode of action & Discuss types with examples of following drugs acting as Antifungal, Antiviral, Antimalarial and Anthelmintic Drugs	CC	MK	KH	L&PP T,PB L,GB L	T- EW,T-OBT ,P-VIVA,QZ	F&S	III	
CO9	Define, Describe mode of action & Discuss types with examples of following drugs acting on Hormones and Related Drugs as Thyroid Hormone, Thyroid Inhibitors, Insulins, Oral Antidiabetic, Hormonal Contraceptives, Uterine Stimulants and Uterine Relaxants Drugs.	CC	MK	KH	L&PP T,BL, PER	T- EW,T-OBT ,P-VIVA,PRN	F&S	III	

CO9	Define, Describe mode of action & Discuss types with examples of following drugs acting on as Antiseptics , Disinfectants, Vaccines, Vitamins, Water imbalance and IV	CC	MK	KH	L&PP T,BL, PER	T- EW,T- OBT,P-VIVA	F&S	III	
Topic 12 12. Mishraka Gana (Lecture :6 hours, Non lecture: 2 hours)									
CO1,CO3	Explain Brihatpanchamoola composition.	CC	MK	KH	L&PP T,ED U	T- EW,P-VIV A,P-POS,QZ ,M-CHT	F&S	III	
CO1,CO3	Describe Guna karma and combined therapeutic effect of Brihatpanchamoola.	CC	MK	KH	L&PP T,DIS ,TBL	T- EW,P-VIV A,P-POS,QZ ,M-CHT	F&S	III	
CO1,CO3	Explain Laghupanchamoola composition.	CC	MK	KH	L&G D	T- EW,P-VIV A,P-POS,QZ ,M-CHT	F&S	III	
CO1,CO3	Describe Guna karma and combined therapeutic effect of Laghupanchamoola.	CC	MK	KH	L&PP T,DIS ,PL	T- EW,P-VIV A,P-POS,QZ	F&S	III	
CO1,CO3	Explain Vallipanchamoola composition.	CC	MK	KH	L&PP T	T- EW,P-VIV A,P-POS,QZ ,M-CHT	F&S	III	
CO1,CO3	Describe Guna karma and combined therapeutic effect of Vallipanchamoola.	CC	MK	KH	L&G D,PE R	T- EW,P- VIVA,QZ	F&S	III	
CO1,CO3	Explain Kantakapanchamoola composition.	CC	MK	KH	L&PP T,BS,	T- EW,P- VIVA,QZ	F&S	III	

					TPW				
CO1,CO3	Describe Guna karma and combined therapeutic effect of Kantakapanchamoola.	CC	MK	KH	L&PP T,LS, PER	P-POS,QZ ,M- CHT	F&S	III	
CO1,CO3	Explain Trinapanchamoola composition.	CC	MK	KH	L_VC ,PER	P-VIVA,P- EXAM,QZ	F&S	III	
CO1,CO3	Describe Guna karma and combined therapeutic effect of Trinapanchamoola.	CC	MK	KH	L&PP T,CB L,PL	T- EW,P- VIVA,M-CHT	F&S	III	
CO1,CO3	Explain Panchavalkala composition.	CC	MK	KH	L&PP T,BL, GBL	P-VIVA,P- POS,QZ	F&S	III	
CO1,CO3	Describe Guna karma and combined therapeutic effect of Panchavalkala.	CC	MK	KH	L&PP T,FC	T-CS,T-OBT, P-VIVA,QZ	F&S	III	
CO1,CO3	Explain Triphala composition	CC	MK	KH	L,DIS	T- EW,P- VIVA,P-POS	F&S	III	
CO1,CO3	Describe Guna karma and combined therapeutic effect of Triphala.	CC	MK	KH	L&PP T,PE R	T-OBT,P-VIV A,P- EXAM,QZ	F&S	III	
CO1,CO3	Explain Trikatu composition.	CC	MK	KH	L&PP T,PL	T-EMI,P- VIVA,QZ	F&S	III	
CO1,CO3	Describe Guna karma and combined therapeutic effect of Trikatu	CC	MK	KH	L&PP T,PL	T-OBT,P- VIVA,P-POS	F&S	III	
CO1,CO3	Explain Trimada composition	CC	MK	KH	L,DIS	T- EW,P- VIVA,QZ	F&S	III	

CO1,CO3	Describe Guna karma and combined therapeutic effect of Trimada.	CC	MK	KH	L&PP T,DIS ,TUT	T- EW,P- VIVA,QZ	F&S	III	
CO1,CO3	Explain Chaturusana composition.	CC	MK	KH	L&PP T	T-OBT,P- VIVA,P-POS	F&S	III	
CO1,CO3	Describe Guna karma and combined therapeutic effect of Chaturusana.	CC	MK	KH	L&PP T,FC	P-VIVA,P- POS,QZ	F&S	III	
CO1,CO3	Explain Panchakola composition.	CC	MK	KH	L&PP T,L_ VC	P-VIVA,QZ	F&S	III	
CO1,CO3	Describe Guna karma and combined therapeutic effect of Panchakola.	CC	MK	KH	L&PP T,DIS	T- EW,T-CS,P- VIVA,QZ	F&S	III	
CO1,CO3	Explain Shadusana composition.	CC	MK	KH	L&PP T,PL	T-OBT,P- VIVA,P-POS	F&S	III	
CO1,CO3	Describe Guna karma and combined therapeutic effect of Shadusana	CC	MK	KH	L&PP T,FC	T- EW,P- VIVA,QZ	F&S	III	
CO1,CO3	Explain Chaturbeeja composition.	CC	MK	KH	L&PP T,L_ VC	T-OBT,P-VIV A,P-EXAM	F&S	III	
CO1,CO3	Describe Guna karma and combined therapeutic effect of Chaturbeeja	CC	MK	KH	L&PP T,PE R	T- EW,P- VIVA,QZ	F&S	III	
CO1,CO3	Explain Trijataka composition.	CC	MK	KH	L_ VC ,DIS, SDL	T-OBT,P-VIV A,P-EXAM,P- POS	F&S	III	

CO1,CO3	Describe Guna karma and combined therapeutic effect of Trijataka	CC	MK	KH	L&PP T,PL	T- EW,P- VIVA,P-POS	F&S	III	
CO1,CO3	Explain Chaturajataka composition.	CC	MK	KH	L_VC ,PER	T-OBT,P- VIVA,QZ	F&S	III	
CO1,CO3	Describe Guna karma and combined therapeutic effect of Chaturajataka.	CC	MK	KH	L&PP T,DIS	T- EW,P- VIVA,P-POS	F&S	III	
CO1,CO3	Explain Panchatikta composition.	CC	MK	KH	L&PP T,FC	T-OBT,P-VIV A,P-REC,QZ	F&S	III	
CO1,CO3	Describe Guna karma and combined therapeutic effect of Panchatikta.	CC	MK	KH	L&PP T,PL	T- EW,P- VIVA,P-POS	F&S	III	
CO1,CO3	Explain Chaturbhadra composition.	CK	MK	K	L,DIS	T-OBT,P- VIVA,QZ	F&S	III	
CO1,CO3	Describe Guna karma and combined therapeutic effect of Chaturbhadra.	CC	MK	KH	L&PP T,FC	T-EMI,P- VIVA,QZ	F&S	III	
CO1,CO3	Explain Trikarshika composition.	CC	MK	KH	L,DIS	T-OBT,P-VIV A,P-EXAM	F&S	III	
CO1,CO3	Describe Guna karma and combined therapeutic effect of Trikarshika.	CC	MK	KH	L&PP T,DIS ,PL	T-OBT,P- VIVA,QZ	F&S	III	
Topic 13 13. Nomenclature of dravya as per Nighantu, Vedic taxonomy and Botany (Lecture :0 hours, Non lecture: 2 hours)									
CO1	Describe the Nomenclature of dravya as per Raj Nighantu.	CC	MK	KH	L&PP T,FC, RP	P-VIVA,PRN, P-ID,QZ	F&S	III	
CO1	Explain the Nomenclature of dravya as per Vedic taxonomy.	CC	MK	KH	L&PP T	P-VIVA,P- ID,QZ	F&S	III	

CO1	Discuss the Nomenclature of dravya as per botany.	CC	MK	KH	L&PP T,BL, PER	P-VIVA,P- ID,QZ	F&S	III	
Topic 14 14. Prashasta Bhashaja, Bhashaja Pariksha and drug evaluation method with correlation as per Pharmacognosy (Lecture :1 hours, Non lecture: 2 hours)									
CO1,CO5	Describe Prashasta Bhashaja.	CC	MK	KH	L&G D,PL	P-VIVA,QZ	F&S	III	
CO1,CO5	Explain Bhashaja Pariksha of Charaka samhita vimana sthana.	CC	MK	KH	L&G D,SD L,LS	P-VIVA,QZ ,M-CHT	F&S	III	
CO1,CO5	Discuss drug evaluation method in correlation with Pharmacognosy.	CC	MK	KH	L&PP T,DIS	P-VIVA,QZ	F&S	III	
Topic 15 15. Dravyasangrahana and Drug collection methods as per GFCP (Good Field collection practices) (Lecture :1 hours, Non lecture: 0 hours)									
CO1,CO2	Discuss Dravyasangrahana and Drug collection methods as per GFCP (Good Field collection practices).	CC	DK	KH	L&PP T,PE R	P-VIVA,PUZ, CHK	F&S	III	
CO1,CO2	Discuss Drug collection methods as per GFCP (Good Field collection practices).	CC	DK	KH	L&PP T,DIS ,PrBL	P-VIVA,PUZ, CHK	F&S	III	
Topic 16 16. GCP (Good cultivation practices), seed bank, conservation of medicinal plants, knowledge about RET (Rear, Endangered & Threatened) medicinal plants. (Lecture :1 hours, Non lecture: 0 hours)									
CO2	Discuss good cultivation practices, seed bank, conservation of medicinal plants, knowledge about RET (Rear, Endangered & Threatened) medicinal plants.	CC	DK	KH	L&PP T,L_ VC,F C	P-VIVA,M- POS	F&S	III	

Topic 17 17. Abhava Pratinidhi Dravya (substitutes) (Lecture :1 hours, Non lecture: 1 hours)									
CO1,CO7	Discuss the concept of Abhava pratinidhi dravya (substitutes) as per Bhavaprakasha.	CC	MK	KH	L&G D,BS, EDU	P-VIVA,QZ	F&S	III	
Topic 18 18. Classifications and techniques of aqueous and alcoholic extracts (Lecture :0 hours, Non lecture: 2 hours)									
CO2,CO6	Appraise the techniques of aqueous and alcoholic extracts of medicinal plants.	CC	DK	KH	L_V C ,D	P- VIVA,DOPS	F&S	III	
Topic 19 19. Adverse drug reaction and Pharmacovigilance with recent updates (Lecture :1 hours, Non lecture: 2 hours)									
CO2,CO8	Explain adverse drug reaction and pharmacovigilance in ayurveda with recent updates.	CC	MK	KH	L&PP T,L& GD,L S	P-VIVA,PRN, QZ ,M-CHT	F&S	III	V-RS
Topic 20 20. NMPB (National Medicinal Plant Board), CCRAS (Central Council of Research in Ayurveda Sciences), API (Ayurvedic Pharmacopeia of India), GCTM (Global Centre for Traditional Medicine), PCIMH (Pharmacopeia Commission of Indian Medicine and Homeopathy) (Lecture :1 hours, Non lecture: 0 hours)									
CO2	State NMPB (National Medicinal Plant Board), CCRAS (Central Council of Research in Ayurveda Sciences), API (Ayurvedic Pharmacopeia of India), GCTM (Global Centre for Traditional Medicine) and PCIMH (Pharmacopeia Commission of Indian Medicine and Homeopathy).	CK	NK	K	SDL	P-VIVA,QZ ,INT	F&S	III	
Topic 21 21. Vrikshayurveda and Ethno-medicine (Lecture :1 hours, Non lecture: 1 hours)									
CO2	Explain concept of Vrikshayurveda and Ethno medicine.	CC	NK	KH	L&G D,ML ,PER	P-VIVA,CR- RED	F&S	III	
Topic 22 22. Network pharmacology and Bioinformatics (Lecture :1 hours, Non lecture: 1 hours)									

CO2	Describe Network Pharmacology and Bioinformatics.	CC	NK	KH	L&G D,SD L,LS	P-VIVA,CR- RED	F&S	III	
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Paper 2 Applied Dravyaguna

A3 Course outcome	B3 Learning Objective (At the end of the session, the students should be able to)	C3 Doma in/sub	D3 Must to know / desirable to know / Nice to know	E3 Level Does/ Show s how/ Know s how/ Know	F3 T-L meth od	G3 Assessment (Refer abbreviations)	H3 Form ative/ summ ative	I3 Term	J3 Integr ation
Topic 1 1. Bhesajavacharaniya (Criteria's to be considered for selection of drugs in vyadhis) (Lecture :1 hours, Non lecture: 6 hours)									
CO5	Interpret the selection of appropriate drugs in different vyadhis as per criteria's mentioned in Bhesajavacharaniya (as per As. Sa. Su 23)	CAP	MK	KH	L&PP T,CB L,PrB L,SD L	T- EW,P- VIVA,QZ	F&S	II	H-RN ,H- SW
Topic 2 2.1 Dravya (Drug) Nama-Guna-Karma Jnana (Lecture :45 hours, Non lecture: 10 hours)									
CO3	Specify useful parts with its Rasapanchaka of following drugs.	CK	MK	K	L&G D,CB L,FC	T-OBT,P- VIVA	F&S	II	
CO4	Describe karma,agryakarma and dosha karma of following drugs.	CC	MK	KH	L&PP	T-EMI,T-OBT	F&S	II	

					T,DIS ,ML	,P-VIVA,QZ			
CO5	Explain Amayikaprayoga used in Vyadhi (Disease) pertaining to various Srotas and Vyadhiavastha (Stage).	CC	MK	KH	L&G D,BS, CBL	T-EMI,T- OBT,P-VIVA	F&S	II	
CO5	Indicate the Kalpana (dosage form), Matra (Dose), Anupana (Vehicle), Marga(Route), Sevana kala (Time of administration), Kalavadhi (Duration) and Pathya-pathya) of following drugs.	CAP	MK	KH	L&PP T,DIS ,GBL	T-EMI,T-OBT ,P-VIVA,PRN	F&S	II	V-RS, H-SW
CO2	Enlist active phyto-constituents & important formulations Discuss research updates of following drugs.	CK	MK	K	L&PP T,ML	T-OBT,P-VIV A,CR-RED	F&S	II	
CO8	Enlist botanical name & family. Explain main synonyms as per Bruhatryees and Bhavaprakasha. Vernacular name (Hindi,English and local name) of following drugs.	CK	MK	KH	L&PP T,DIS	T-OBT,P- VIVA,QZ ,O- QZ	F&S	II	
CO8	Demonstrate external morphology-habit, root, leaf, stem, flower, inflorescence, fruit, seed and officinal useful parts of following drugs.	CC	MK	KH	L_V C ,DIS, BS	T-OBT,P- VIVA,O-QZ	F&S	II	
CO7	Describe varieties, grahyagrahyatwa Adulterants, substitute and toxic effects of following drugs wherever applicable	CC	MK	KH	L&G D	T- EW,T-OBT ,P-VIVA,QZ	F&S	II	H-AT
Topic 3 2.2 Dravya (Drugs) Nama -Guna-Karma-Jnana (Lecture :29 hours, Non lecture: 20 hours)									
CO3	Specify useful parts with its Rasapanchaka of following drugs	CK	MK	K	L&PP T,DIS	T-EMI,T-OBT ,P-VIVA,QZ	F&S	III	
CO4	Describe karma, agryakarma and dosha karma of following drugs.	CC	MK	KH	L&PP T,DIS ,BS	T-OBT,P- VIVA,QZ	F&S	III	
CO5	Explain Amayikaprayoga used in Vyadhi (Disease) pertaining to	CC	MK	KH	L&PP	T-OBT,P-	F&S	III	

	various Srotas and vyadhiavastha (Stage).				T,DIS ,CBL	VIVA,QZ			
CO5	Indicate the Kalpana(dosage form), Matra (Dose), Anupana (Vehicle), Marga (Route), Sevana kala (Time of administration), Kalavadhi (Duration) and Pathya-pathya) of following drugs.	CAP	MK	KH	L&PP T,DIS ,ML	T-EMI,P- VIVA	F&S	III	V-RS, H-SW
CO2	Enlist active phyto-constituents & important formulations. Discuss research updates of following drugs.	CK	MK	K	L&G D,BS	T-EMI,T-OBT ,P-VIVA,QZ	F&S	III	
CO8	Enlist botanical name & family. Explain main Synonyms as per Bruhatryees and Bhavaprakasha. Vernacular name (Hindi, English and local name) of following drugs.	CK	MK	K	L&G D,FC, ML	T-OBT,P- VIVA,QZ	F&S	III	
CO8	Demonstrate external morphology-habit, root, leaf, stem, flower, inflorescence, fruit, seed and officinal useful parts of following drugs.	CC	MK	KH	L_VC ,ML	T-OBT,P- VIVA,QZ	F&S	III	
CO7	Describe varieties, grhyahrahyatwa, adulterants, substitute and toxic effects of following drugs wherever applicable.	CC	MK	KH	L&PP T,DIS ,EDU	T-EMI,T-OBT ,P-VIVA,PUZ	F&S	III	H-AT

List of Practicals (Term and Hours)

PRACTICALS (Marks-100)			
S.No	List of Topics	Term	Hours
1	1. Assessment and Understanding the relation between Parthivatwa & subjective/ objective parametric tests	1	10
2	2. Assessment of objective parametric measures of Guna	1	12
3	3. Assessment of Rasa	1	6
4	4.Comparative organoleptic and macroscopic examination	1	23
5	5. Microscopic Identification of genuine and adulterated drug	1	4
6	6. Demonstration of skills to identify the medicinal plants in the college garden.	1	10
7	7. Out campus visit (Cultivated gardens, Tissue culture lab, Herbaria, Pharmacognosy lab, Quality control lab and Forest plant demonstration)	1	10
8	8. Dravya prayoga	1	12
9	9. Physico-chemical study	2	8
10	10. Phytochemical	2	4
11	11. Thin Layer Chromatography (TLC) technique	2	2
12	12. Demonstration of skills to identify the medicinal plants in the college garden	2	10
13	13. Out campus visit (cultivated gardens & In-situ plant demonstration)	2	10
14	14. Ekala dravya prayoga	2	10
15	15. Different Cultivation technique including methods mentioned in Vrikshayurveda	2	6
16	16. Exercise on Network pharmacology	3	6
17	17. Preparations of digital herbarium	3	2
18	18. Demonstration of skills to identify the medicinal plants in the college garden	3	10
19	19. Out campus visit (cultivated gardens & In-situ plant demonstration)	3	10
20	20. Ekala dravya prayoga	3	10

Table 4: Learning objectives (Practical)

A4 Course outcome	B4 Learning Objective (At the end of the session, the students should be able to)	C4 Doma in/sub	D4 Must to know / desirable to know / Nice to know	E4 Level Does/ Show s how/ Know s how/ Know	F4 T-L meth od	G4 Assessment (Refer abbreviations)	H4 Form ative/ summ ative	I4 Term	K4 Integr ation
Topic 1 1. Assessment and Understanding the relation between Parthivatwa & subjective/ objective parametric tests									
CO1,CO6	Observe the objective parametric measures to understand the relation between Parthivatwa by Density (bulk) of Asthishrnkhala, Sariva, Vidari, Maricha, Shatavari, Jambu, Godhuma & Ushira.	PSY-GUD	MK	KH	PT	P-VIVA	F&S	I	
CO1,CO6	Observe the objective parametric measures to understand the relation between Jaliyatwa by Viscosity, Moisture content of Kumari, Vidari, Sariva, Shunthi, Ikshu, Usheera, Kamala & Apamarga.	PSY-GUD	MK	KH	PT	P-VIVA	F&S	I	
CO1,CO6	Observe the objective parametric measures to understand the relation between Aagneyatwa by Moisture content of Shunthi, Shatavari, Maricha, Dhataki, Chitraka, Gokshura, Hingu & Chandana.	PSY-GUD	MK	KH	PT	P-VIVA	F&S	I	
CO1,CO6	Observe the objective parametric measures to understand the relation between Vayaviyatwa by Fat content & Bulk density of Usheera, Ashwagandha, Nimba, Vidari, Khadira, Tila, Jambu & Kapikacchu.	PSY-GUD	MK	KH	PT,D_ L	P-VIVA	F&S	I	

CO1,CO6	Observe the objective parametric measures to understand the relation between Aakashiyatwa by Bulk density of Usheera, Kumari, Apamarga, Jeeraka & Jatamansi.	PSY-GUD	MK	KH	PT,D_ L	P-VIVA	F&S	I	
CO1,CO6	Participate in the methods of specific gravity (Solid) and bulk density of Asthishrukhal, Sariva, Vidari, Maricha, Shatavari, Jambu, Godhum & Ushir by objective parameters measures to understand the relation between Parthivatwa.	AFT-RES	MK	KH	PT,D_ L	P-VIVA	F&S	I	
CO1,CO6	Follow the methods of Viscosity, Moisture content & Specific gravity (Liquid) of Kumari, Vidari, Sariva, Shunthi, Ikshu, Usheera, Kamala & Apamarga by objective parameters measures to understand the relation between Jaliyatwa.	AFT-REC	MK	KH	PT,D_ L	P-VIVA	F&S	I	
CO1,CO6	Describe the methods of pH and Moisture content of Shunthi, Shatavari, Maricha, Dhataki, Chitraka, Gokshura, Hingu & Chandan by objective parameters measures to understand the relation between Agneeyatwa.	AFT-REC	MK	KH	PT,D_ L	P-VIVA	F&S	I	
CO1,CO6	Answer to the methods of Fat content, Specific gravity (liquid) & Bulk density of Usheera, Ashwagandha, Nimba, Vidari, Tila, Jambu & Kapikachhu by objective parameters measures to understand the relation between Vayaviyatwa.	AFT-RES	MK	KH	PT,D_ L	P-VIVA	F&S	I	
CO1,CO6	Follow the methods of Bulk density of Ushira, Kumari, Apamarga, Jeeraka & Jatamansi by objective parameters measures to understand the relation between Akashiyatwa	AFT-REC	MK	KH	PT,D_ L	P-VIVA	F&S	I	
CO1,CO6	Perform the objective parametric measures to understand the relation between Parthivatwa by Specific gravity (solid) of Asthishrnkhala, Sariva, Vidari, Maricha, Shatavari, Jambu, Godhuma & Ushira.	PSY-ADT	MK	SH	PRA	P-EXAM,P-PRF	F&S	I	

CO1,CO6	Perform the objective parametric measures to understand the relation between Jaliyatwa Specific gravity (Liquid) of Kumari, Vidari, Sariva, Shunthi, Ikshu, Usheera, Kamala & Apamarga.	PSY-ADT	MK	SH	PT	P-EXAM,P-PRF	F&S	I	
CO1,CO6	Perform the objective parametric measures to understand the relation between Aagneyatwa by pH of Shunthi, Shatavari, Maricha, Dhataki, Chitraka, Gokshura, Hingu & Chandana.	PSY-ADT	MK	SH	PT	P-EXAM,P-PRF	F&S	I	
CO1,CO6	Perform the objective parametric measures to understand the relation between Vayaviyatwa by Specific gravity (Liquid) of Usheera, Ashwagandha, Nimba, Vidari, Khadira, Tila, Jambu & Kapikacchu.	PSY-ADT	MK	SH	PT	P-EXAM,P-PRF	F&S	I	
Topic 2 2. Assessment of objective parametric measures of Guna									
CO1,CO6	Observe the assessment of objective parametric measures of Shatavari and Bala for its guru guna by Density (bulk).	PSY-GUD	MK	KH	PT,D_ L	P-VIVA	F&S	I	
CO1,CO6	Observe the Specific gravity (Liquid and solid) of Shatavari and Bala for its guru guna.	PSY-GUD	MK	KH	PT,D_ L	P-VIVA	F&S	I	
CO1,CO6	Observe the assessment of objective parametric measures of Yava and Dhanyaka for its Laghu guna by Density (bulk)	PSY-GUD	MK	KH	PT,D_ L	P-VIVA	F&S	I	
CO1,CO6	Demonstrate the Specific gravity (Liquid and solid) Yava and Dhanyaka for its Laghu guna.	PSY-GUD	MK	KH	PT,D_ L	P-VIVA	F&S	I	
CO1,CO6	Observe the assessment of objective parametric measures of Snigdha guna drugs by total fat content, moisture content of Tila and Eranda	PSY-GUD	MK	KH	PT,D_ L	P-VIVA	F&S	I	
CO1,CO6	Demonstrate Swelling index of Snigdha guna drugs of Tila, and Eranda.	PSY-GUD	MK	KH	D_L,P RA	P-VIVA	F&S	I	
CO1,CO6	Observe the assessment of objective parametric measures of	PSY-	MK	KH	PT,D_ L	P-VIVA	F&S	I	

	Ruksha guna drugs by total fat content and moisture content of Kulattha & Vidanga	GUD			L				
CO1,CO6	Demonstrate Swelling index of Ruksha guna drugs of Kulattha & Vidanga	PSY-GUD	MK	KH	PT,D_L	P-VIVA	F&S	I	
Topic 3 3. Assessment of Rasa									
CO2,CO6	Perform the assessment of Rasa based on classical symptoms for each rasa dravyas.	PSY-ADT	MK	SH	PT,D_L	P-EXAM,P-PRF,INT	F&S	I	
Topic 4 4.Comparative organoleptic and macroscopic examination									
CO6	Perform the comparative organoleptic characters (Taste, Colour, Smell, Sound, Touch) and macroscopic examination (Size, Shape, Fracture, External markings like lenticels, ridges, nodes, furrows, cracks etc) of root of Ashwagandha, Chitraka, Manjistha, Musta, Shatavari, Vatsanabha and Yashtimadhu.	PSY-ADT	MK	SH	L_VC,PT,D_L	P-EXAM,P-PRF	F&S	I	
CO6	Perform the comparative organoleptic characters (Taste, Colour, Smell, Sound, Touch) and macroscopic examination (Size, Shape, Fracture, External markings like lenticels, ridges, nodes, furrows, cracks etc) of Rhizome/Stolon of Haridra, Katuki, Shunthi and Vacha.	PSY-ADT	MK	SH	PT,D_L	P-EXAM,P-PRF	F&S	I	
CO6	Perform the comparative organoleptic characters (Taste, Colour, Smell, Sound, Touch) and macroscopic examination (Size, Shape, Fracture, External markings like lenticels, ridges, nodes, furrows, cracks etc) of Stem of Asthishrinkhala and Guduchi.	PSY-ADT	MK	SH	PT,D_L	P-EXAM,P-PRF	F&S	I	
CO6	Perform the comparative organoleptic characters (Taste, Colour, Smell, Sound, Touch) and macroscopic examination (Size, Shape, Fracture, External markings like lenticels, ridges, nodes, furrows, cracks etc) of Bark of Arjuna, Ashoka, Kutaja, Nimba and Twak.	PSY-ADT	MK	SH	BS,PT,D_L	P-EXAM,P-PRF	F&S	I	

CO6	Perform the comparative organoleptic characters (Taste, Colour, Smell, Sound, Touch) and macroscopic examination (Size, Shape, Fracture, External markings like lenticels, ridges, nodes, furrows, cracks etc) of Heart wood of Beejaka, Chandana and Khadira	PSY-ADT	MK	SH	BS,PT ,D_L	P-EXAM,P-PRF	F&S	I	
CO6	Perform the comparative organoleptic characters (Taste, Colour, Smell, Sound, Touch) and macroscopic examination (Size, Shape, Fracture, External markings like lenticels, ridges, nodes, furrows, cracks etc) of Leaf of Kumari, Meshashringi and Vasa.	PSY-ADT	MK	SH	BS,PT ,D_L	P-EXAM,P-PRF	F&S	I	
CO6	Perform the comparative organoleptic characters (Taste, Colour, Smell, Sound, Touch) and macroscopic examination (Size, Shape, Fracture, External markings like lenticels, ridges, nodes, furrows, cracks etc) of Flower of Dhataki, Kunkum (kesara) and Lavanga.	PSY-ADT	MK	SH	PT,D_ L	P-EXAM,P-PRF	F&S	I	
CO6	Perform the comparative organoleptic characters (Taste, Colour, Smell, Sound, Touch) and macroscopic examination (Size, Shape, Fracture, External markings like lenticels, ridges, nodes, furrows, cracks etc) of Fruit of Amalaki, Aragavadha, Bhallataka, Bibhitaki, Gokshura, Haritaki, Madanphala, Maricha, Pippali and Vidanga.	PSY-ADT	MK	SH	D_L,P RA	P-EXAM,P-PRF	F&S	I	
CO6	Perform the comparative organoleptic characters (Taste, Colour, Smell, Sound, Touch) and macroscopic examination (Size, Shape, Fracture, External markings like lenticels, ridges, nodes, furrows, cracks etc) of Phalaraja of Kampillaka.	PSY-ADT	MK	SH	PT,D_ L	P-EXAM,P-PRF	F&S	I	
CO6	Perform the comparative organoleptic characters (Taste, Colour, Smell, Sound, Touch) and macroscopic examination (Size, Shape, Fracture, External markings like lenticels, ridges, nodes, furrows, cracks etc) of Seed of Bakuchi,Ela, Eranda, Jyotishmati	PSY-ADT	MK	SH	PT,D_ L	P-EXAM,P-PRF	F&S	I	

	and Kapikacchu.								
CO6	Perform the comparative organoleptic characters (Taste, Colour, Smell, Sound, Touch) and macroscopic examination (Size, Shape, Fracture, External markings like lenticels, ridges, nodes, furrows, cracks etc) of Unorganized drugs of Guggulu, Hingu and Mocharasa.	PSY-ADT	MK	SH	PT,D_L	P-EXAM,P-PRF	F&S	I	
CO6	Perform the comparative organoleptic characters (Taste, Colour, Smell, Sound, Touch) and macroscopic examination (Size, Shape, Fracture, External markings like lenticels, ridges, nodes, furrows, cracks etc) of Whole plant of Apamarga, Bhrungaraja, Bhumyamalaki, Brahmi, Kalmeghaand and Mandukaparni.	PSY-ADT	MK	SH	PT,D_L	P-EXAM,P-PRF	F&S	I	
CO6	Perform the comparative organoleptic characters (Taste, Colour, Smell, Sound, Touch) and macroscopic examination (Size, Shape, Fracture, External markings like lenticels, ridges, nodes, furrows, cracks etc) of Galls of Karkatshrungi.	PSY-ADT	MK	SH	PT,D_L	P-EXAM,P-PRF	F&S	I	
Topic 5 5. Microscopic Identification of genuine and adulterated drug									
CO6	Perform the comparative microscopic examination of genuine and adulterated any two samples of Root / stem / leaf /bark / fruits (E.g. like Sariva / Manjishta / Vidanga / Maricha / Ashoka).	PSY-ADT	MK	SH	TUT,PT,D_L	P-EXAM,P-PRF	F&S	I	
Topic 6 6. Demonstration of skills to identify the medicinal plants in the college garden.									
CO8	Demonstrate identification features of college garden medicinal plants for their morphology, taxonomical keys, regional flora with therapeutic uses.	PSY-GUD	MK	KH	L_VC,ML,SDL,DG,FV	P-VIVA,P-EXAM,P-ID	F&S	I	
CO8	Participate actively in Identification of Medicinal plants.	AFT-RES	MK	SH	DG	P-VIVA,P-EXAM	F&S	I	

Topic 7 7. Out campus visit (Cultivated gardens, Tissue culture lab, Herbaria, Pharmacognosy lab, Quality control lab and Forest plant demonstration)

CO8	Visit to observe the identification features of medicinal plants which are from cultivated or natural habitat / forest plant.	PSY-GUD	MK	KH	ML,S DL,D G	P-VIVA,P- EXAM	F&S	I	
CO8	Visit to observe the Tissue culture techniques of medicinal plants in local / nearby Tissue culture lab.	PSY-GUD	MK	KH	PT,D_ L	P-VIVA	F&S	I	
CO8	Visit to observe the herbaria of medicinal plants in nearby institute.	PSY-GUD	MK	KH	PT,D	P-VIVA	F&S	I	
CO6	Visit to observe the nearby AYUSH approved Quality control lab for quality control techniques.	PSY-GUD	MK	KH	L_VC ,PT,D _L	P-VIVA	F&S	I	

Topic 8 8. Dravya prayoga

CO5	Observe the selection of Ekala Dravya (single drug) in various clinical conditions	PSY-GUD	MK	KH	DIS,C BL,S DL,T UT	P-VIVA,QZ	F&S	I	
CO5	Perform the selection of Ekala dravya prayoga in various clinical conditions by masked case sheets.	PSY-ADT	MK	SH	CBL, ECE	P-VIVA,P- EXAM	F&S	I	H-RN

Topic 9 9. Physico-chemical study

CO6	Perform the foreign matter study of minimum 2 useful parts of medicinal plants.	PSY-ADT	MK	SH	PT,D_ L	P-VIVA	F&S	II	
CO6	Observe the Loss on drying (LoD) study of minimum 2 useful parts of medicinal plants.	PSY-GUD	MK	KH	TUT, PT,D_ L	P-VIVA	F&S	II	

CO6	Observe the Ash value and Extractive value of minimum 2 useful parts of medicinal plants.	PSY-GUD	MK	KH	PT,D_L	P-VIVA	F&S	II	
Topic 10 10. Phytochemical									
CO6	Perform Preliminary phytochemical study of minimum 2 medicinal plant extracts.	PSY-ADT	MK	SH	PT,D_L	P-VIVA,P-EXAM,P-PRF	F&S	II	
Topic 11 11. Thin Layer Chromatography (TLC) technique									
CO6	Observe the TLC (Thin layer chromatography) technique of one medicinal plant extract.	PSY-GUD	MK	KH	TUT,PT,D_L	P-VIVA,INT	F&S	II	
Topic 12 12. Demonstration of skills to identify the medicinal plants in the college garden									
CO8	Demonstrate identification features of college garden medicinal plants for their morphology, taxonomical keys, regional flora with therapeutic uses.	PSY-GUD	MK	KH	L_VC,DG	P-VIVA,P-EXAM,P-PRF	F&S	II	
CO8	Participate actively in Identification of Medicinal plants.	AFT-RES	MK	SH	DG	P-VIVA	F&S	II	
Topic 13 13. Out campus visit (cultivated gardens & In-situ plant demonstration)									
CO8	Visit to observe the identification features of medicinal plants which are from cultivated or natural habitat / forest plant.	PSY-GUD	MK	KH	DG	P-VIVA	F&S	II	
Topic 14 14. Ekala dravya prayoga									
CO5	Perform the selection of Ekala dravya prayoga in various clinical conditions by masked case sheets.	PSY-ADT	MK	SH	DIS,CBL,ECE,D_BED	P-VIVA,P-EXAM	F&S	II	H-RN
CO5	Appraise the value of selection of Ekala Dravya Prayog in	AFT-	MK	SH	PBL,	P-VIVA,P-	F&S	II	H-RN

	various clinical conditions by providing masked case sheets.	VAL			CBL, CD	EXAM			
Topic 15 15. Different Cultivation technique including methods mentioned in Vrikshayurveda									
CO8	Demonstrate different cultivation technique of medicinal plants in garden.	PSY-GUD	MK	KH	L_VC ,DG	P-VIVA,INT	F&S	II	
CO8	Demonstrate different cultivation methods mentioned in Vrikshayurveda in garden.	PSY-GUD	MK	KH	DG	P-VIVA	F&S	II	
Topic 16 16. Exercise on Network pharmacology									
CO2	Conduct the Identification (Data mining) active constituents by Pubmed, IMPPAT or PubChem in digital library.	PSY-SET	MK	KH	DIS,D	P-VIVA,PA	F&S	III	
CO2	Conduct Target identification by Binding DB.	PSY-SET	MK	KH	D	P-VIVA	F&S	III	
CO2	Conduct Identification of disease gene by DisGeNET.	PSY-SET	MK	KH	TUT, D	P-VIVA	F&S	III	
CO2	Conduct GO (Gene ontology) enhancement analysis by KEGG Pathway, R ratio.	PSY-SET	MK	KH	D	P-VIVA	F&S	III	
CO2	Conduct Network construction by STRING, PPI network, sytoscope.	PSY-SET	MK	KH	D	P-VIVA	F&S	III	
Topic 17 17. Preparations of digital herbarium									
CO8	Prepare digital herbarium of minimum 10 medicinal plants during field visit with all parts of the plant with geo-tag photos.	PSY-ADT	MK	SH	L_VC ,W,T UT,D	P-SUR,RK	F&S	III	
Topic 18 18. Demonstration of skills to identify the medicinal plants in the college garden									
CO8	Demonstrate identification features of college garden medicinal	PSY-	MK	KH	L_VC	P-VIVA,P-	F&S	III	

	plants for their morphology, taxonomical keys, regional flora with therapeutic uses.	GUD			,DG	EXAM			
CO8	Participate actively in Identification of Medicinal plants.	AFT-RES	MK	SH	DG	P-VIVA,P-EXAM	F&S	III	
Topic 19 19. Out campus visit (cultivated gardens & In-situ plant demonstration)									
CO8	Visit to observe the identification features of medicinal plants which are from cultivated or natural habitat / forest plant.	PSY-GUD	MK	KH	DG	P-VIVA	F&S	III	
Topic 20 20. Ekala dravya prayoga									
CO5	Perform the selection of Ekala dravya prayoga in various clinical conditions by masked case sheets.	PSY-ADT	MK	SH	CBL, ECE, D_BE D,PR A	P-VIVA,P-EXAM,RK	F&S	III	H-RN
CO5	Appraise the value of selection of Ekala Dravya Prayoga in various clinical conditions by providing masked case sheets.	AFT-VAL	MK	SH	PBL, CBL, CD	P-VIVA,P-EXAM	F&S	III	H-RN

Table 4a: List of Practical

S.No	Name of practical	Term	Activity	Practical hrs
1	1. Assessment and Understanding the relation between Parthivatwa & subjective/ objective parametric tests	1	<ul style="list-style-type: none"> ♦ 1.1 Assessment and Understanding the relation between Parthivatwa & subjective/ objective parametric tests ♦ Density (bulk) ♦ Specific gravity (solid) ♦ Drugs to study for e.g.- Asthishrnkhala, Sariva, Vidari, Maricha, Shatavari, Jambu, Godhuma & Ushira ♦ 1.2 Assessment and Understanding the relation between Jaliyatwa & subjective/ objective parametric tests ♦ Viscosity ♦ Specific gravity ♦ Moisture content ♦ Drugs to study for e.g.- Kumari, Vidari, Sariva, Shunthi, Ikshu, Usheera, Kamala & Apamarga ♦ 1.3 Assessment and Understanding the relation between Aagneyatwa & subjective/ objective parametric tests ♦ pH ♦ Moisture content ♦ Drugs to study for e.g.: Shunthi, Shatavari, Maricha, Dhataki, Chitraka, Gokhura, Hingu & Chandana ♦ 1.4 Assessment and Understanding the relation between Vayaviytwā & subjective/ objective parametric tests ♦ Fat content ♦ Specific gravity ♦ Density (bulk) ♦ Drugs to study for e.g. : Usheera, Ashwagandha, Nimba, Vidari, Khadira, Tila, Jambu & Kapikacchu ♦ 1.5 Assessment and 	10

			Understanding the relation between Aakashiyatwa & subjective/ objective parametric tests <ul style="list-style-type: none"> ◆ Density (Bulk) ◆ Drugs to study for e.g.: Usheera, Kumari, Apamarga, Jeeraka & Jatamansi 	
2	2. Assessment of objective parametric measures of Guna	1	<ul style="list-style-type: none"> ◆ 2.1 Assessment of objective parametric measures Guru & Laghu Guna <ul style="list-style-type: none"> ◆ Density (bulk) ◆ Specific gravity (Liquid and solid) ◆ Drugs to study for e.g. : Guru: Shatavari, Bala ; Laghu: Yava, Dhanyaka ◆ 2.2 Assessment of objective parametric measures of Snigdha and Ruksha guna drugs <ul style="list-style-type: none"> ◆ Total fat content ◆ Moisture content ◆ Swelling index ◆ Drugs to study for e.g. : Snigdha: Tila, Eranda ; Ruksha: Kullatha, Vidanga 	12
3	3. Assessment of Rasa	1	Assessment of Rasa based on classical symptoms for each rasa dravyas. One Example For each rasa	6
4	4. Comparative organoleptic and macroscopic examination	1	<ul style="list-style-type: none"> ◆ Comparative organoleptic (Taste, Color, Smell, Sound, Touch) and macroscopic examination (Size, Shape, Fracture, External markings like lenticels, ridges, nodes, furrows, cracks, etc) of the following group of drugs. ◆ a. Root: Aswagandha, Chitraka, 	23

			<p>Manjistha, Musta, Shatavari, Vatsanabha, Yashtimadhu.</p> <ul style="list-style-type: none"> ♦ b. Rhizome/Stolon: Haridra, Katuki, Shunthi, Vacha. ♦ c. Stem: Asthishrinkhala, Guduchi. ♦ d. Bark: Arjuna, Ashoka, Kutaja, Nimba, Twak. ♦ e. Heart wood: Beejaka, Chandana, Khadira. ♦ f. Leaf: Kumari, Meshashringi, Vasa. ♦ g. Flower: Dhataki, Kunkum (kesara), Lavanga. ♦ h. Fruit: Amalaki, Aragavadha, Bhallataka, Bibhitaki, Gokshura, Haritaki, Madanphala, Maricha, Pippali, Vidanga. ♦ i. Phalaraja: Kampillaka ♦ j. Seed: Bakuchi, Ela, Eranda, Jyotishmati, Kapikacchu ♦ k. Unorganized drugs: Guggulu, Hingu, Mocharasa ♦ l. Whole plant: Apamarga, Bhrungaraja, Bhumyamalaki, Brahmi, Kalmegha, Mandukaparni. ♦ m. Galls: Karkatshrungi 	
5	5. Microscopic Identification of genuine and adulterated drug	1	<ul style="list-style-type: none"> ♦ Microscopic identification of genuine and adulterated drug, minimum 2 samples from Root/stem/leaf /bark/fruits. ♦ (E.g. Sariva/Manjishta/Vidanga/Maricha/Ashoka) 	4
6	6. Demonstration of skills to identify the medicinal plants in the college garden.	1		10
7	7. Out campus visit (Cultivated gardens, Tissue culture lab, Herbaria, Pharmacognosy)	1	<ul style="list-style-type: none"> ♦ General instructions regarding combined educational visit 	10

lab, Quality control lab and Forest plant demonstration)

- ♦ Combined educational visit can be planned wherever feasible as, for **Dravyaguna**- Cultivated gardens, Tissue culture lab, Herbaria, Pharmacognosy lab, Forest plant demonstration ; for **Agadatantra**- forensic lab, snake park, pollution control board and snake venom unit; for **Swasthvrutta** -Yoga and naturopathy center , Milk dairy plant, Water Purification plant, Sewage treatment plant, Leprosy rehabilitation Centre & for **Rasashastra**- GMP certified Lab , Drug Analysis Lab
- ♦ **SOP for Out campus Field Visits**
- ♦ **Theme-Based Visits:** Plan visits based on specific educational themes (Deshemani Ganas, Family wise), selecting locations relevant to the theme and collaborating with local experts.
- ♦ **Dress Code:** Participants must wear jean paints and T shirts, closed-toe shoes, a hat or cap for sun protection, and weather-appropriate gear such as jackets or raincoats.
- ♦ **Essential Materials:** Each participant should carry a water bottle, a stick (optional), materials for sample storage (newspaper, blotting paper, secateurs, plastic bags), a cap, goggles, and a packed lunch or snacks in a suitable container.
- ♦ **Safety Precautions:** Conduct a safety briefing before the visit, outlining emergency procedures, collecting medical information, and emphasizing expected behaviors' during the trip.
- ♦ **Itinerary:** Develop a detailed itinerary with activities and a timeline, considering the chosen theme and objectives of the visit.
- ♦ **Public Address System (PA System):** If necessary, provide a portable PA system with a

			<p>microphone, amplifier, and power source for effective communication with larger groups.</p> <ul style="list-style-type: none"> ♦ Test the PA System: Prior to the visit, ensure the PA system is in working order and audible, conducting necessary tests to guarantee functionality. ♦ Responsible Usage: Use the PA system judiciously, speaking clearly and at an appropriate volume, while encouraging participants to utilize the system for questions or clarifications. ♦ Follow-up Activities: Organize post-visit discussions and assignments to reinforce learning, encourage knowledge sharing, and facilitate deeper exploration of the theme. ♦ Review and Revise: Regularly update and adapt this SOP to comply with safety standards, educational objectives, and local regulations. 	
8	8. Dravya prayoga	1	<ul style="list-style-type: none"> ♦ 8.1 (Part I) Demonstration of selecting appropriate Ekala dravya as per clinical conditions. ♦ 8.2 (Part II) Selection of Ekala dravya prayoga in various clinical conditions by providing masked case sheets per srotasa (5 cases in each term) 	12
9	9. Physico-chemical study	2	<ul style="list-style-type: none"> ♦ Physicochemical study of medicinal plant. (minimum 2 drugs) ♦ a. Foreign matter ♦ b. Loss on drying ♦ c. Ash value ♦ d. Extracts 	8

			♦ Note: The same plant should be used for all the tests	
10	10. Phytochemical	2	♦ Preliminary phytochemical study of medicinal plant. (minimum 2 drugs)	4
11	11. Thin Layer Chromatography (TLC) technique	2	♦ TLC technique of medicinal plant (any one)	2
12	12. Demonstration of skills to identify the medicinal plants in the college garden	2		10
13	13. Out campus visit (cultivated gardens & In-situ plant demonstration)	2		10
14	14. Ekala dravya prayoga	2	♦ Selection of Ekala dravya prayoga in various clinical conditions by providing masked case sheets. (5 cases in each term)	10
15	15. Different Cultivation technique including methods mentioned in Vrikshayurveda	2		6
16	16. Exercise on Network pharmacology	3	♦ Exercise on Network Pharmacology ♦ 1st activity: Identification (Data mining) active constituents by Pubmed, IMPPAT or PubChem. ♦ 2nd activity: Target identification by BindingDB.	6

			<ul style="list-style-type: none"> ♦ 3rd activity: Identification of disease gene by DisGeNET. ♦ 4th activity: GO enhancement analysis by KEGG Pathway, R ratio. ♦ 5th step: Network construction by STRING, PPI network, sytoscope. 	
17	17. Preparations of digital herbarium	3	<ul style="list-style-type: none"> ♦ Preparations of digital herbarium of minimum 10 drugs with all parts of the plant (with geo-tag photos) by compulsory field visit 	2
18	18. Demonstration of skills to identify the medicinal plants in the college garden	3		10
19	19. Out campus visit (cultivated gardens & In-situ plant demonstration)	3		10
20	20. Ekala dravya prayoga	3	Selection of Ekala dravya prayoga in various clinical conditions by providing masked case sheets.(5 cases in each term)	10
Total Hr				175

Activity

CO	Topic name	Activity Details	Hours#
CO1,CO3	Dravyaguna Vigyana.	<ul style="list-style-type: none"> ♦ Group activity – Assignments are to be given to the students to prepare 2-3 flash cards on importance of Dravyaguna Vigyana in clinical practice. 	1

CO1,CO5,CO8	Dravya	<ul style="list-style-type: none"> ♦ Segregation of dry drugs based on Panchabhoutika characteristics. Various Dravyas are given to the students for segregation of dravyas according to Panchabhoutik constitution ♦ Classify live plants based on Panchabhoutika characteristics in garden. (Details mentioned in Rasavaisheshik Sutra 2 chapter 101-111) ♦ Quiz – based on classifications of dravyas ♦ Brain storming - Activity should be assigned to the students to search in samhitas related to classification of dravyas as Prayogabheda, Doshagnabheda and Karmbheda. Prepare the list of specific assigned classification for group of students. 	4
CO1,CO2,CO3	Guna Panchabhoutikatva, characteristics and classification.	<ul style="list-style-type: none"> ♦ Matching of Gurvadi guna with its karma ♦ Animated Power point Presentation on Guna. ♦ Brain storming - To search in Chikitsasthana of samhitas regarding clinical application of Gurvadi guna and Paradi guna 	2
CO1,CO2,CO3	Rasa	<ul style="list-style-type: none"> ♦ Game based activity by closing the eyes they should ask to identify the taste ♦ Activity based learning enlisting the dravyas of specific taste ♦ Matching activity -Matching of specific Rasas with their Guna & Karma ♦ Making of Flash cards- Cards with information regarding different concepts of Rasas 	4

CO1,CO2,CO3	Vipak	<ul style="list-style-type: none"> ♦ Flash cards - Preparing flash cards containing pictures of dravya to identify dravya and its vipaka ♦ Preparing charts of 20 dravyas with ayathartha vipaka and yatharth vipaka 	1
CO1,CO2,CO3	Virya	<ul style="list-style-type: none"> ♦ Talk and chalk activity by students on Dwividha virya and ashtavidha virya. ♦ Making charts of dravyas from Bhavaprakash nighantu regarding Dwividha virya- 25 Sheeta Virya dravyas & 25 Ushna Virya Dravyas. 	2
CO1,CO2,CO3	Prabhav	<ul style="list-style-type: none"> ♦ Puzzle – Segregating the dravyas based on Samanpratyayarabdha, Vichtrapratyayarabdha and Prabhava. 	1
CO1	Interrelation of Rasa-Guna-Virya-Vipaka-Prabhava with respect to their strength - Pharmacodynamics	<ul style="list-style-type: none"> ♦ Making flow charts regarding the rules explained in relation with concepts of dravyaguna ♦ Group Discussion - Interrelation of Rasa-Guna-Virya-Vipaka-Prabhava with respect to their strength - Pharmacodynamics 	2
CO1,CO2,CO3,CO4,CO5	karma	<ul style="list-style-type: none"> ♦ Case base learning-Taking different clinical conditions & selecting appropriate karma ♦ Think, Pair and share based activity- Sepecific problem has to be given, 	5

		<p>student should be allowed to think and discuss about appropriate karmas</p> <ul style="list-style-type: none"> ♦ Gamification-Pairing Karma with the drugs. ♦ Role play for identification of specific karma- Asking one student to enact & others to find out Karma ♦ Presentation- On concept of Karma, types of karma & Individual Karma. ♦ Enlisting specific karma-In relation to dravyas from Bruhatrayee & Sharangdhara samhita 	
CO1,CO8	Karmas of Dashemani	<ul style="list-style-type: none"> ♦ Cramming –Memorizing the dravyas from specific ganas ♦ Fish bowl activity written chits of drugs picked by students and should say the name of the Gana ♦ Shloka recitation- Shlokas of Dashemani Gana (Ch. Su. 4) ♦ Symposia- Short discussion on various clinical applications of Dashemani Gana 	3
CO4,CO9	Principles of General Pharmacology	<ul style="list-style-type: none"> ♦ Video: Showing relevant videos regarding principles of pharmacology and mode of action ♦ Mobile based learning –Searching about pharmacology in enlisted websites 	1
CO1,CO3	Mishrak Gana	<ul style="list-style-type: none"> ♦ GBL-Identification of mishrak gana by using clues of utility of specific mishrak gana from samhita and chikitsa grantha ♦ Matching of dravyas with specific mishraka Gana ♦ Role play –enacting individual and combined actions of composition for e.g. Triphala - Individually they should enact 	2

		<p>as Haritaki, Bibhitaki and Aamalaki explaining their karmas, then they should come together depicting Triphala.</p> <ul style="list-style-type: none"> ♦ Self-directed learning- Mobile based learning on Mishraka Gana 	
CO1	Nomenclature of dravya as per Nighantu, Vedic taxonomy and botany	<ul style="list-style-type: none"> ♦ Bulletin boards : Highlighting significant points of nomenclature ♦ Demo in garden : Demonstration of the dravyas on the basis of various criteria's of nomenclature ♦ Symposium by making groups of specific criteria for nomenclature and asked to present synonyms based on that particular criteria allotted to the group e.g. Upama , Rudhi, Prabhav, Deshokti, Swabhavatha, Lanchana & Guna 	2
CO1,CO5	Prashasta Bhesaja, BhesajaPariksha and drug evaluation method with correlation as per Pharmacognosy	<ul style="list-style-type: none"> ♦ Read aloud : Student come on the Dias and read with loud voice ♦ Self -directed learning - Charak Samhita Vimansthana Chapter 8 	2
CO1,CO7	Abhavapratidinidhavya (substitutes)	<ul style="list-style-type: none"> ♦ Self-directed learning: Self study on Abhavapratidinidhavya (substitutes) from Bhavaprakasha 	1
CO2,CO6	Classifications and techniques of aqueous and alcoholic extracts	<ul style="list-style-type: none"> ♦ Demo in lab ♦ Video 	2
CO2	Adverse drug reaction and Pharmacovigilance with recent updates	<ul style="list-style-type: none"> ♦ PBL: Story telling about reported cases 	2

		<ul style="list-style-type: none"> ♦ Survey : visit to pharmacovigilance cell at institution ♦ Guest lecture : Activities of pharmacovigilance cell 	
CO8	Vrikshayurveda and ethnomedicine	<ul style="list-style-type: none"> ♦ Videos- Showing videos on cultivation practices and Ethnomedicine 	1
CO2	Network Pharmacology & Bioinformatics	<ul style="list-style-type: none"> ♦ Video ♦ Presentation 	1
CO5	Bheshajavacharaniya	<ul style="list-style-type: none"> ♦ Making charts on Various Rasa dravya indicated in specific vyadhis for eg. ♦ Tikta rasa in Jvara & Kushtha, ♦ Katu rasa in Amavata, ♦ Kashaya rasa in Pakwatisara, and Raktastambhana, ♦ Madhur rasa in Dhatu kshya janya vyadhi , ♦ Amla & Lavana rasa in Udavarta, Udara, Gulma,also used as Agnideepana, Mudhavanulomana, Pachana 	6
CO2,CO3,CO4,CO5,CO7,CO8	2.Dravya (Drug) Nama-Guna-Karma Jnana	<ul style="list-style-type: none"> ♦ Game base activity- Activity based learning as the chits are prepared of different karmas , those are circulated among the students, once the circulation stops then the student with the chit will be asked to read the karma mentioned in the chit and to explain with examples. ♦ CBL (Case based learning) and PBL (Problem based learning) activities taken for understanding of Karma in specific clinical scenario 	08

		<ul style="list-style-type: none"> ♦ Segregation of dravyas mentioned in syllabus according to Dashemani Gana ♦ Searching of Mishrak gana from samhita and chikitsa granths for its utility ♦ Collecting information about Grahya and Agahya dravyas mentioned in the syllabus with their characteristics 	
CO2,CO3,CO4,CO5,CO7,CO8	3.Dravya (Drug) Nama-Guna-Karma Jnana	<ul style="list-style-type: none"> ♦ Matching Rasapanchak, Rogaghnata, Agryakarma of dravya ♦ Making of charts regarding Aamayika Prayogas, Agrya Karma & Specific Kalpana ♦ Case based activity- one particular disease & suitable plants in order ♦ Critical reading with the help of different indexed research articles ♦ Quiz 	17
CO2,CO3,CO4,CO5,CO7,CO8	3.Dravya (Drug) Nama-Guna-Karma Jnana	<ul style="list-style-type: none"> ♦ Moc practical - ♦ 1) 15 dry & 15 wet sample dravya spotting test ♦ Test should include at least one each from Leaf, Stem, Root, Rhizome, Gall, Flower, Fruit, Seed, Bark & Resin. ♦ Each spot should be solved in 1 minute so 30 minutes activity should be conducted. ♦ 2) Skill based assessment -There shall be three components in skill assessment ♦ A. Identify and separate Grahya & Agrahya of given sample ♦ B. Identifying and grouping of drugs of given Mishraka Gana ♦ C. Understand the clinical scenario and identify five suitable single drug ♦ Instructions: ♦ Spotting stations are to be numbered as per the batch. Each spotting station contain: A. Mixture of Grahya & Agrahya B. Name of Misraka Gana and 	05

		<p>C. Clinical Scenario. Students are allotted with the spotting station by lottery method.</p> <p>♦ Arrangement of Spotting Stations:</p> <p>♦ A. Identify and separate Grahya & Agrahya of Given Sample: Sufficient quantity (approximately 20 gm of Vidanga & Maricha) of mixture of Grahya and Agrahya dravya to be provided. There shall be two empty bowels each one labelled as 'Grahya' and 'Agrahya'. Students are asked to separate the given sample into Grahya and Agrahya. There shall be different drugs for each station.</p> <p>♦ B. Identifying and grouping of drugs of given Misraka Gana: Each station shall contain one label containing name of the Misraka Gana with question 'Recollect the drugs belonging to the given Misraka Gana, identify those drugs, collect and make a group. There shall be empty bowl of sufficient size as per the given Gana for collection of drugs.</p> <p>♦ C. Understand the clinical scenario and identify five suitable 5 single drugs: Provide the clinical scenario in not less than 100 words and not more than 200 words with or without investigation reports shall be provided at each spotting station (preferably separate cases for each station). Students are asked to go through the scenario and understand the clinical conditions , select 1 single drug, identify, collect and place it in the bowl given for the same. Select five suitable drugs and write as per preference base.</p>	
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Hours indicated are included in calculations of Table 3 and 4

Table 5- Teaching learning method

Sr No	Teaching learning methods in the course	No of Activities
1	Lecture	13

2	Lecture with Power point presentation	100
3	Lecture & Group Discussion	35
4	Lecture with Video clips	19
5	Discussions	42
6	Brainstorming	7
7	PBL	14
8	CBL	7
9	Project-Based Learning	3
10	TBL	3
11	Team project work	5
12	Flipped classroom	22
13	Blended Learning	13
14	Edutainment	4
15	Mobile learning	7
16	Role plays	3
17	Self-directed learning	14
18	Game-Based Learning	6
19	Library Session	18
20	Peer learning	16
21	Recitation	1
22	Tutorial	2
23	Presentations	20
24	Demonstration	1

These are overall teaching learning methods listed in Table 3 and 4. Teachers can select the best possible method amongst the given methods as per objective, available time etc.

Table 6: Assessment Summary: Assessment is subdivided in A to H points

6 A-Number of Papers and Marks Distribution

Subject Code	Papers	Theory	Practical/Clinical Assessment					Grand Total
			Practical	Viva	Elective	IA	Sub Total	

AyUG-DG	2	200	100	70	-	30	200	400
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6 B - Scheme of Assessment (formative and Summative)

PROFESSIONAL COURSE	DURATION OF PROFESSIONAL COURSE		
	First Term (1-6 Months)	Second Term (7-12 Months)	Third Term (13-18 Months)
Second	3 PA & First TT	3 PA & Second TT	3 PA & UE **

PA: Periodical Assessment; **TT:** Term Test; **UE:** University Examinations.

** University Examination shall be on entire syllabus

6 C - Calculation Method for Internal assessment Marks

TERM	PERIODICAL ASSESSMENT*					TERM TEST**	TERM ASSESSMENT	
	A 1	B	C	D	E	F	G	H
	1 (15 Marks)	2 (15 Marks)	3 (15 Marks)	Average (A+B+C/3)	Converted to 30 Marks (D/15*30)	Term Test (Marks converted to 30)	Sub Total _/60 Marks	Term Assessment (.../30)
FIRST							E+F	(E+F)/2
SECOND							E+F	(E+F)/2
THIRD						NIL		E
Final IA	Average of Three Term Assessment Marks as Shown in 'H' Column.							
	Maximum Marks in Parentheses *Select an Evaluation Method which is appropriate for the objectives of Topics from the Table 6 D for Periodic assessment. Conduct 15 marks assessment and enter marks in A, B, and C. ** Conduct Theory (100 Marks)(MCQ(20*1 Marks), SAQ(8*5), LAQ(4*10)) and Practical (100 Marks) Then convert to 30 marks.							

6 D - Evaluation Methods for Periodical Assessment

S. No	Evaluation Methods
1	Activities Indicated in Table 3 - Column G3 as per Indicated I, II or III term in column I3

Evaluation Methods in MSE

1. Practical / Clinical Performance
2. Viva Voce, MCQs, MEQ (Modified Essay Questions/Structured Questions)
3. Open Book Test (Problem Based)
4. Summary Writing (Research Papers/ Samhitas)
5. Class Presentations; Work Book Maintenance
6. Problem Based Assignment
7. Objective Structured Clinical Examination (OSCE), Objective Structured Practical Examination (OPSE), Mini Clinical Evaluation Exercise (Mini-CEX), Direct Observation of Procedures (DOP), Case Based Discussion (CBD)

6 E Question Paper Pattern

II PROFESSIONAL BAMS EXAMINATIONS AyUG-DG

PAPER-1

Time: 3 Hours Maximum Marks: 100

INSTRUCTIONS: All questions compulsory

		Number of Questions	Marks per question	Total Marks
Q 1	MULTIPLE CHOICE QUESTIONS (MCQ)	20	1	20
Q 2	SHORT ANSWER QUESTIONS (SAQ)	8	5	40
Q 3	LONG ANSWER QUESTIONS (LAQ)	4	10	40
				100

Similar for Paper II (If ,

6 F Distribution of theory examination

Paper 1 Fundamental Dravyaguna						
Sr. No	A List of Topics	B Term	C Marks	MCQ (1 Mark)	SAQ (5 Marks)	LAQ (10 Marks)
1	1.Dravyaguna Vigyana	1	1	Yes	No	No
2	2.Dravya	1	6	Yes	Yes	No
3	3. Guna	1	11	Yes	No	Yes
4	4. Rasa	1	11	Yes	No	Yes
5	5. Vipaka	1	6	Yes	Yes	No
6	6. Virya	1	6	Yes	Yes	No
7	7. Prabhava	1	5	No	Yes	No
8	8. Interrelation of Rasa-Guna-Virya-Vipaka-Prabhava	1	1	Yes	No	No
9	9. Karma	1	11	Yes	No	Yes
10	10. Karmas of Dashemani Gana	1	5	No	Yes	No
11	11. Principles of General Pharmacology	3	20	Yes	Yes	Yes
12	12. Mishraka Gana	3	6	Yes	Yes	No
13	13. Nomenclature of dravya as per Nighantu, Vedic taxonomy and Botany	3	1	Yes	No	No
14	14. Prashasta Bhesaja, Bhesaja Pariksha and drug evaluation method with correlation as per Pharmacognosy	3	1	Yes	No	No
15	15. Dravyasangrahana and Drug collection methods as per GFCP (Good Field collection	3	1	Yes	No	No

	practices)					
16	16. GCP (Good cultivation practices), seed bank, conservation of medicinal plants, knowledge about RET (Rear, Endangered & Threatened) medicinal plants.	3	1	Yes	No	No
17	17. Abhava Pratinidhi Dravya (substitutes)	3	1	Yes	No	No
18	18. Classifications and techniques of aqueous and alcoholic extracts	3	1	Yes	No	No
19	19. Adverse drug reaction and Pharmacovigilance with recent updates	3	1	Yes	No	No
20	20. NMPB (National Medicinal Plant Board), CCRAS (Central Council of Research in Ayurveda Sciences), API (Ayurvedic Pharmacopeia of India), GCTM (Global Centre for Traditional Medicine), PCIMH (Pharmacopeia Commission of Indian Medicine and Homeopathy)	3	1	Yes	No	No
21	21. Vrikshayurveda and Ethno-medicine	3	1	Yes	No	No
22	22. Network pharmacology and Bioinformatics	3	2	Yes	No	No
Total Marks			100			

Paper 2 Applied Dravyaguna						
Sr. No	A List of Topics	B Term	C Marks	MCQ (1 Mark)	SAQ (5 Marks)	LAQ (10 Marks)
23	1. Bheshajavacharaniya (Criteria's to be considered for selection of drugs in vyadhis)	2	5	Yes	No	No
24	2.1 Dravya (Drug) Nama-Guna-Karma Jnana	2	55	Yes	Yes	Yes

25	2.2 Dravya (Drugs) Nama -Guna-Karma-Jnana	3	40	Yes	Yes	Yes
Total Marks			100			

Paper No:1		
Question No	Type of Question	Question Paper Format
Q1	<p>Multiple choice Questions 20 Questions 1 mark each All compulsory</p> <p>Must know part - 15 MCQ Desirable to know - 3 MCQ Nice to know part - 2 MCQ</p>	<ol style="list-style-type: none"> 1. 1.Dravyaguna Vigyana 2. 2.Dravya 3. 3. Guna 4. 4. Rasa 5. 5. Vipaka 6. 6. Virya 7. 8. Interrelation of Rasa-Guna-Virya-Vipaka-Prabhava 8. 12. Mishraka Gana / 9. Karma 9. 11. Principles of General Pharmacology 10. 12. Mishraka Gana 11. 13. Nomenclature of dravya as per Nighantu, Vedic taxonomy and Botany 12. 14. Prashasta Bhesaja, Bhesaja Pariksha and drug evaluation method with correlation as per Pharmacognosy 13. 15. Dravyasangrahana and Drug collection methods as per GFCP (Good Field collection practices) 14. 16. GCP (Good cultivation practices), seed bank, conservation of medicinal plants, knowledge about RET (Rear, Endangered & Threatened) medicinal plants. 15. 17. Abhava Pratinidhi Dravya (substitutes) 16. 18. Classifications and techniques of aqueous and alcoholic extracts 17. 19. Adverse drug reaction and Pharmacovigilance with recent updates 18. 20. NMPB (National Medicinal Plant Board), CCRAS (Central Council of Research in Ayurveda Sciences), API (Ayurvedic Pharmacopeia of India), GCTM (Global Centre for Traditional Medicine), PCIMH (Pharmacopeia Commission of Indian Medicine and Homeopathy) 19. 21. Vrikshayurveda and Ethno-medicine 20. 22. Network pharmacology and Bioinformatics
Q2	<p>Short answer Questions Eight Questions 5 Marks Each</p>	<ol style="list-style-type: none"> 1. 2.Dravya 2. 5. Vipaka 3. 6. Virya 4. 7. Prabhava 5. 10. Karmas of Dashemani Gana

	All compulsory Must know - 7 SAQ Desirable to know - 1 SAQ No questions on Nice to know	6. 11. Principles of General Pharmacology 7. 11. Principles of General Pharmacology 8. 12. Mishraka Gana
Q3	Long answer Questions Four Questions 10 marks each All compulsory All questions on must know. No Questions on Nice to know and Desirable to know	1. 3. Guna 2. 4. Rasa 3. 9. Karma 4. 9. Karma
Paper No:2		
Question No	Type of Question	Question Paper Format
Q1	Multiple choice Questions 20 Questions 1 mark each All compulsory Must know part - 15 MCQ Desirable to know - 3 MCQ Nice to know part - 2 MCQ	1. 2.2 Dravya (Drugs) Nama -Guna-Karma-Jnana 2. 2.2 Dravya (Drugs) Nama -Guna-Karma-Jnana 3. 2.2 Dravya (Drugs) Nama -Guna-Karma-Jnana 4. 2.2 Dravya (Drugs) Nama -Guna-Karma-Jnana 5. 2.2 Dravya (Drugs) Nama -Guna-Karma-Jnana 6. 2.2 Dravya (Drugs) Nama -Guna-Karma-Jnana 7. 2.2 Dravya (Drugs) Nama -Guna-Karma-Jnana 8. 2.2 Dravya (Drugs) Nama -Guna-Karma-Jnana 9. 2.2 Dravya (Drugs) Nama -Guna-Karma-Jnana 10. 2.2 Dravya (Drugs) Nama -Guna-Karma-Jnana 11. 2.2 Dravya (Drugs) Nama -Guna-Karma-Jnana 12. 2.2 Dravya (Drugs) Nama -Guna-Karma-Jnana 13. 2.2 Dravya (Drugs) Nama -Guna-Karma-Jnana

		<p>14. 2.2 Dravya (Drugs) Nama -Guna-Karma-Jnana</p> <p>15. 2.2 Dravya (Drugs) Nama -Guna-Karma-Jnana</p> <p>16. 2.2 Dravya (Drugs) Nama -Guna-Karma-Jnana</p> <p>17. 2.2 Dravya (Drugs) Nama -Guna-Karma-Jnana</p> <p>18. 2.2 Dravya (Drugs) Nama -Guna-Karma-Jnana</p> <p>19. 2.2 Dravya (Drugs) Nama -Guna-Karma-Jnana</p> <p>20. 2.2 Dravya (Drugs) Nama -Guna-Karma-Jnana</p>
Q2	<p>Short answer Questions Eight Questions 5 Marks Each All compulsory</p> <p>Must know - 7 SAQ Desirable to know - 1 SAQ No questions on Nice to know</p>	<p>1. 2.2 Dravya (Drugs) Nama -Guna-Karma-Jnana</p> <p>2. 2.1 Dravya (Drug) Nama-Guna-Karma Jnana</p> <p>3. 2.2 Dravya (Drugs) Nama -Guna-Karma-Jnana</p> <p>4. 2.1 Dravya (Drug) Nama-Guna-Karma Jnana</p> <p>5. 2.2 Dravya (Drugs) Nama -Guna-Karma-Jnana</p> <p>6. 2.1 Dravya (Drug) Nama-Guna-Karma Jnana</p> <p>7. 2.2 Dravya (Drugs) Nama -Guna-Karma-Jnana</p> <p>8. 2.1 Dravya (Drug) Nama-Guna-Karma Jnana</p>
Q3	<p>Long answer Questions Four Questions 10 marks each All compulsory</p> <p>All questions on must know. No Questions on Nice to know and Desirable to know</p>	<p>1. 2.2 Dravya (Drugs) Nama -Guna-Karma-Jnana</p> <p>2. 2.1 Dravya (Drug) Nama-Guna-Karma Jnana</p> <p>3. 2.2 Dravya (Drugs) Nama -Guna-Karma-Jnana</p> <p>4. 2.1 Dravya (Drug) Nama-Guna-Karma Jnana</p>

6 H Distribution of Practical Exam

S.No	Heads	Marks
1	1) 15 dry & 15 wet sample dravya spotting test- 30 minutes Test should include at least one each from Leaf, Stem, Root, Rhizome, Gall, Flower, Fruit , Seed, Bark & Resin.	30
2	<p>2) Skill based assessment -There shall be three components in skill assessment</p> <p>A. Identify and separate Grahya & Agrahya of given sample- 10 minutes</p> <p>B. Identifying and grouping of drugs of given Mishraka Gana- 10 minutes</p> <p>C. Understand the clinical scenario and identify five suitable single drug- 10 minutes</p> <p>Instructions:</p> <ul style="list-style-type: none"> ♦ Spotting stations are to be numbered as per the batch. Each spotting station contain: A. Mixture of Grahya & Agrahya B. Name of Misraka Gana and C. Clinical Scenario. Students are allotted with the spotting station by lottery method. <p>Arrangement of Spotting Stations:</p> <p>A. Identify and separate Grahya & Agrahya of Given Sample: Sufficient quantity (approximately 20 gm of Vidanga & Maricha) of mixture of Grahya and Agrahya dravya to be provided. There shall be two empty bowels each one labelled as 'Grahya' and 'Agrahya'. Students are asked to separate the given sample into Grahya and Agrahya. There shall be different drugs for each station.</p> <p>B. Identifying and grouping of drugs of given Misraka Gana: Each station shall contain one label containing name of the Misraka Gana with question 'Recollect the drugs belonging to the given Misraka Gana, identify those drugs, collect and make a group. There shall be empty bowl of sufficient size as per the given Gana for collection of drugs.</p> <p>C. Understand the clinical scenario and identify five suitable 5 single drugs: Provide the clinical scenario in not less than 100 words and not more than 200 words with or without investigation reports shall be provided at each spotting station (preferably separate cases for each station). Students are asked to go through the scenario and understand the clinical conditions , select 1 single drug, identify, collect and place it in the bowl given for the same. Select five suitable drugs and write as per preference base.</p>	30
3	<p>3. QC practical (30 minutes)-Performance based components</p> <ul style="list-style-type: none"> ♦ 3.1. Comparison Macroscopic evaluation of one genuine and one 	40

	<p>adulterant sample -10 marks- 15 minutes</p> <ul style="list-style-type: none"> ♦ 3.2. Panchamahabhoutikatwa assessment by parametric measures by pH of a given sample phant/ Kwatha - (Concern drug Phant / Kwatha should be prepared by college for pH analysis)- 10 marks - 15 minutes ♦ 3.3. Panchabhaoutikatwa assessment by parametric measures by Specific Gravity of a given sample Phat/ Kwatha (Concern drug Phant/ Kwatha should be prepared by college for Specific Gravity)- 20 marks- 30 minutes 	
4	<p>4. Viva voce (10 minutes per student)Questions should be asked on following topics -</p> <ul style="list-style-type: none"> ♦ 1. Fundamentals (Dravya, Guna, Rasa, Vipaka, Veerya & Prabhav)- 3 questions- 15 marks ♦ 2. Karmas, Dashemani, Mishrak Gana- 3 questions- 15 marks ♦ 3. Pharmacology & Network pharmacology- 3 questions- 15 marks ♦ 4. Clinical application of drugs- 3 questions - 15 marks ♦ 5. Viva on practical records -06 marks ♦ 6. Communication skill (4 marks) 	70
5	5. Internal Assessment	30
Total Marks		200

References Books/ Resources

S.No	Book	Resources
1	Dravya Guna Shastram	Vaidya G.A. Phadke, Pradnya Mudranalaya, Vaidya Vamanrao Deenanath Shuddhaayurved Pathyakrama Samitee, Dadabhai Navroji Path, Mumbai
2	Bhavaprakasha	Sri Brahmasankara Mishra and Sri Rupalalaji vaishya, Chaukhamba Sanskrit Series office, Varanasi,
3	Aushadhi Vigyna Shastra (Ayurvedic Pharmacology)	Sri. Vishvanatha Dwidevi ,Shri Baidyanath Ayurved Bhavan Pvt Ltd; Nagpur
4	Ayurvediya Aushadkarma Vigyana	Acharya V.J. Thakar, Gujarat Ayurveda University, Jamnagar
5	Bhava Prakash Nighantu	Vd. Krishna Chandra Chuneekar Commentary, Chaukhambha Sanskrit Sansthan, Varanasi
6	Classical Uses of Medicinal Plants	Acharya Priyavrata Sharma ,Chaukhamba Visvabharati, Varanasi
7	Some Controversial Drugs in Indian Medicine	Dr. Bapalal, Vaidya,Chaukhambha Orientalia, Varanasi
8	Dravyaguna Kosha	Acharya Priyavrata Sharma, Chaukhambha Orientalia, Delhi
9	Dravyaguna Vigyana (Vol.1-3)	Dr. Gyanendra Pandey, Chaukhambha Krishnadas Academy, Varanasi
10	Dravyaguna Vigyana (Vol. 1-2)	Acharya Yadavji Tikramji,Baidyanath Ayurved Bhavan Ltd
11	Dravyaguna Vigyana (Vol. 1-5)	Acharya Priyavrata Sharma, Chaukhambha Bharti Academy, Varanasi
12	Nighantu Adarsh (Vol. 1-2)	Vd.G.Bapa Lal, Chaukhambha Bharti Academy, Varanasi
13	Ayurvedic Pharmacology & Therapeutic Uses of Medicinal Plants Dravyagunavignyan	Vaidya V M Gogte, Chaukhambha Publications, New Delhi
14	Dravyagunavijnana(Part I and II)	Prof.D.S.Lucas, Chaukhamba Visvabharati, Varanasi
15	Glossary of Vegetable Drugs in Brihatrayi	Thakur Balwant Singh & Vd. Krishna Chandra Chuneekar,Chaukhamba Amarbharti Prakashakan, Varanasi
16	Introduction to Dravyaguna(English)	Acharya Priyavrata Sharma ,Chaukhambha Orientalia, Varanasi
17	A Text Book of Dravyaguna Vijnana (Vol 1,2 & 3)	Dr. Prakash L.Hegde and Dr. Harini A.,Chaukhambha Publications, New Delhi
18	Raspanchaka	Prof. Shiv Charan Dhyani,Chaukhambha Krishnadas Academy, Varanasi

19	Dravyaguna Siddhanta	Prof. Shiv Charan Dhyani,Chaukhambha Krishnadas Academy, Varanasi
20	The Ayurvedic Pharmacopoeia of India, Part I Vol. 1-VII	Ministry of AYUSH. India, New Delhi
21	Medicinal Plants used in Ayurveda (2nd Edition)	Rashtriya Ayurveda Vidyapeeth, New Delhi
22	Plants of Bhavaprakash (English)	Prof.K.C.Chunekar & Dr. N.P. Hota,Rashtriya Ayurveda Vidyapeeth, New Delhi.
23	Database of Medicinal Plants used in Ayurveda Vol. 1 to 8	CCRAS New Delhi
24	A Text Book of Dravyaguna Vijnana (Vol.1 to 2)	Dr. J. L. N Sastry and Dr. Tanuja M Nesari.
25	Dravyaguna Vigyana (Vol.1to 2)	Dr. Manasi Deshpande and Dr Arvind Deshpande, <i>Chaukhamba Sanskrit</i> Pratisthan. New Delhi
26	Essentials of Medical Pharmacology	K.D.Tripathi. Jaypee Brothers Medical Publishers (P) Ltd
27	Pharmacological basis of Medical Practice	Goodman & Gillman,McGraw-Hill Education
28	Pharmacology and Pharmacotherapeutics	Satoskar Bhandarkar & Ainapure,Popular Prakashan Mumbai
29	Textbook of Pharmacognosy	Trease & Evans, Elsevier publication
30	Textbook of Pharmacognosy	Tyler, Brady & Robber,Lea & Febiger, USA
31	Quality Control of Herbal Drugs: An Approach to Evaluation of Botanicals	Pulok K Mukharjee, Elsevier
32	Ausadhinamarupa vijnanam (Vol. 1 and 2)	Dr Sanjeev Kumar Lale.,Mr. Hemraj Lale, Indore
33	Practical Pharmacognosy	Dr. K. R.. Khandelwal and Dr. Vrunda Sethi , Nirali Prakashan Pune
34	Pharmacognosy	S.B. Gokhale, C.K. Kokate and A.P. Purohit
35	Botany of commonly used medicinal Plants with Diagnostic keys	Dr. Hema Sane and Dr. Yogini Kulkarni. Vision Publication Pune
36	Basic Bioinformatics	S Gladis Hepsyba Helen,MJP Publishers
37	Pharmacovigilance in Ayurveda	Manjunath Ajanal, B S Prasad, Shreddha U Nayak, Chaukhambha Prakashak, Varanasi
38	Cultivation Of Medicinal And Aromatic Crops	Azhar Ali Farooqi, B. S. Sreeramu, Universities Press (India) Pvt. Ltd. Hyderabad

39	WHO Guidelines on Good Agricultural and Collection Practices (GACP) for Medicinal Plants	World Health Organization, World Health Organization, Geneva
40	Medicinal Plants: Biodiversity, Sustainable Utilization and Conservation	K. Thammasiri, Chunlin Long, Henrik Lutken, Shaik Mahammad Khasim, Springer Link
41	Network Pharmacology	Shao Li, Springer Link
42	Vrikshayurveda - Ancient Science of Plant Life and Plant Care	S. Rajasekharan, G.S. Unnikrishnan Nair, Kerala State Biodiversity Board, Kerala
43	Evidence-Based Validation of Herbal Medicine - Translational Research on Botanicals	Pulok K. Mukherjee, Elsevier Science
44	Research updates of Gurvadiguna	<ul style="list-style-type: none"> ♦ 1. Vaidyabhushanam K. Raghavan Tirumulpad. Rasavaisheshika. (Text with commentary). Arya Vaidya Sala, Kottakkal Malappuram Dist., Kerala. ♦ 2. Interactive workshop on Ayurveda (Dravyaguna), Published by Rashtriya Ayurveda Vidyapeetha, New Delhi. ♦ 3. Mishra S, Dwivedi RR, Ravishankar B. Conceptual and applied study of Snigdha and Ruksa Guna with special reference to Rasa-raktagata Sneha (hyperlipidemia). Ayu. 2011 Apr;32(2):200-6. ♦ 4. Nair JU, Vyas HA, Nariya MB. An experimental study to evaluate <i>Gunasankarya</i> (combination of properties). Ayu. 2021 Oct-Dec;42(4):169-174. ♦ 5. Gupta, Monika & Gudipudi, Sarvabhouma & Pujar, Rashmi & Gopikrishna, S. (2019). Clinical aspect of Guna Siddhanta with special reference to Trisutra Ayurveda. 6. 2407-2414.
45	Research updates of Paradiguna	<ul style="list-style-type: none"> ♦ 1. Vaidyabhushanam K. Raghavan Tirumulpad. Rasavaisheshika. (Text with commentary). Arya Vaidya Sala, Kottakkal Malappuram Dist., Kerala. ♦ 2. Interactive workshop on Ayurveda (Dravyaguna), Published by Rashtriya Ayurveda Vidyapeetha, New Delhi. ♦ 3. Gupta, Monika & Gudipudi, Sarvabhouma & Pujar, Rashmi & Gopikrishna, S. (2019). Clinical aspect of Guna Siddhanta with special reference to Trisutra Ayurveda. 6. 2407-2414.

46	Research updates of Shadrasa	<ul style="list-style-type: none"> ♦ 1. Vaidyabhushanam K. Raghavan Tirumulpad. Rasavaisheshika. (Text with commentary). Arya Vaidya Sala, Kottakkal Malappuram Dist., Kerala. ♦ 2. Interactive workshop on Ayurveda (Dravyaguna), Published by Rashtriya Ayurveda Vidyapeetha, New Delhi. ♦ 3. Standard Protocol for quality assessment of Raw medicinal plants materials on the basis of Rasa. ♦ Ref: https://aiia.gov.in/wp-content/uploads/2021/12/RASA.pdf ♦ 4. Rath SK, Panja AK, Nagar L, Shinde A. The scientific basis of rasa (taste) of a substance as a tool to explore its pharmacological behavior. Anc Sci Life. 2014 Apr-Jun;33(4):198-202. ♦ 5. Gilca M, Dragos D. Extraoral Taste Receptor Discovery: New Light on Ayurvedic Pharmacology
47	Research updates of Vipaka	<ul style="list-style-type: none"> ♦ 1. Vaidyabhushanam K. Raghavan Tirumulpad. Rasavaisheshika. (Text with commentary). Arya Vaidya Sala, Kottakkal Malappuram Dist., Kerala. ♦ 2. Interactive workshop on Ayurveda (Dravyaguna), Published by Rashtriya Ayurveda Vidyapeetha, New Delhi. ♦ 3. Ranade AV, Shirolkar A, Pawar SD. Gut microbiota: One of the new frontiers for elucidating fundamentals of <i>Vipaka</i> in Ayurveda. Ayu. 2019 Apr-Jun;40(2):75-78.
48	Research updates of Virya	<ul style="list-style-type: none"> ♦ 1. Vaidyabhushanam K. Raghavan Tirumulpad. Rasavaisheshika. (Text with commentary). Arya Vaidya Sala, Kottakkal Malappuram Dist., Kerala. ♦ 2. Interactive workshop on Ayurveda (Dravyaguna), Published by Rashtriya Ayurveda Vidyapeetha, New Delhi.

49	Research updates of Prabhava	<ul style="list-style-type: none"> ♦ 1. Vaidyabhushanam K. Raghavan Tirumulpad. Rasavaisheshika. (Text with commentary). Arya Vaidya Sala, Kottakkal Malappuram Dist., Kerala. ♦ 2. Interactive workshop on Ayurveda (Dravyaguna), Published by Rashtriya Ayurveda Vidyapeetha, New Delhi.
50	Research updates of Karma	<ul style="list-style-type: none"> ♦ 1. Vaidyabhushanam K. Raghavan Tirumulpad. Rasavaisheshika. (Text with commentary). Arya Vaidya Sala, Kottakkal Malappuram Dist., Kerala. ♦ 2. Interactive workshop on Ayurveda (Dravyaguna), Published by Rashtriya Ayurveda Vidyapeetha, New Delhi.

Abbreviations

Assessment

S.No	Short form	Discription
1	T-EMI	Theory extended matching item
2	T- EW	Theory Essay writing
3	T- MEQs	Theory MEQs
4	T-CRQs	Theory CRQs
5	T-CS	Theory case study
6	T-OBT	Theory open book test
7	P-VIVA	Practical Viva
8	P-REC	Practical Recitation
9	P-EXAM	Practical exam
10	PRN	Presentation
11	P-PRF	Practical Performance
12	P-SUR	Practical Survey
13	P-EN	Practical enact
14	P-RP	Practical Role play
15	P-MOD	Practical Model
16	P-POS	Practical Poster
17	P-CASE	Practical Case taking
18	P-ID	Practical identification
19	P-PS	Practical Problem solving
20	QZ	Quiz
21	PUZ	Puzzles
22	CL-PR	Class Presentation,
23	DEB	Debate
24	WP	Word puzzle
25	O-QZ	Online quiz

26	O-GAME	Online game-based assessment
27	M-MOD	Making of Model
28	M-CHT	Making of Charts
29	M-POS	Making of Posters
30	C-INT	Conducting interview
31	INT	Interactions
32	CR-RED	Critical reading papers
33	CR-W	Creativity Writing
34	C-VC	Clinical video cases,
35	SP	Simulated patients
36	PM	Patient management problems
37	CHK	Checklists
38	OSCE	OSCE
39	OSPE	OSPE,
40	Mini-CEX	Mini-CEX
41	DOPS	DOPS
42	CWS	CWS
43	RS	Rating scales
44	RK	Record keeping
45	COM	Compilations
46	Portfolios	Portfolios
47	Log book	Log book
48	TR	Trainers report
49	SA	Self-assessment
50	PA	Peer assessment
51	360D	360-degree evaluation
52	TT-Theory	Theory
53	PP-Practical	Practical
54	VV-Viva	Viva

Domain

S.No	Short form	Discription
1	CK	Cognitive/Knowledge
2	CC	Cognitive/Comprehension
3	CAP	Cognitive/Application
4	CAN	Cognitive/Analysis
5	CS	Cognitive/Synthesis
6	CE	Cognitive/Evaluation
7	PSY-SET	Psychomotor/Set
8	PSY-GUD	Psychomotor/Guided response
9	PSY-MEC	Psychomotor/Mechanism
10	PSY-ADT	Psychomotor Adaptation
11	PSY-ORG	Psychomotor/Origination
12	AFT-REC	Affective/ Receiving
13	AFT-RES	Affective/Responding
14	AFT-VAL	Affective/Valuing
15	AFT-SET	Affective/Organization
16	AFT-CHR	Affective/ characterization

T L method

S.No	Short form	Discription
1	L	Lecture
2	L&PPT	Lecture with Power point presentation
3	L&GD	Lecture & Group Discussion
4	L_VC	Lecture with Video clips
5	DIS	Discussions
6	BS	Brainstorming
7	IBL	Inquiry-Based Learning
8	PBL	PBL
9	CBL	CBL
10	PrBL	Project-Based Learning
11	TBL	TBL
12	TPW	Team project work
13	FC	Flipped classroom
14	BL	Blended Learning
15	EDU	Edutainment
16	ML	Mobile learning
17	ECE	ECE
18	SIM	Simulation
19	RP	Role plays
20	SDL	Self-directed learning
21	PSM	Problem solving method
22	KL	Kinesthetic Learning
23	W	Workshops
24	GBL	Game-Based Learning
25	D-M	Demo on Model

26	LS	Library Session
27	PL	Peer learning
28	RLE	Real life experience
29	REC	Recitation
30	SY	Symposium
31	TUT	Tutorial
32	PER	Presentations
33	PT	Practical
34	XRy	X ray identification
35	CD	Case diagnosis
36	LRI	Lab report interpretation
37	DA	Drug analysis
38	D	Demonstration
39	D_BED	Demonstration bedside
40	D_L	Demonstration Lab
41	DG	Demonstration Garden
42	FV	Field visit
43	PRA	Practical

॥ आयुषे सर्वलोकानाम् ॥



Course curriculum for Second Professional BAMS
(PRESCRIBED BY NCISM)

Rasashastra evam Bhaishajyakalpana

(SUBJECT CODE : AyUG-RB)

(Applicable from 2021-22 batch, from the academic year 2023-24 onwards for 5 years or until further notification by NCISM, whichever is earlier)

BOARD OF AYURVEDA

**NATIONAL COMMISSION FOR INDIAN SYSTEM OF MEDICINE NEW DELHI-
110058**

NCISM

II Professional Ayurvedacharya (BAMS)

Subject Code : AyUG-RB

Summary

Total number of Teaching hours: 450			
Lecture hours(LH)-Theory		150	150(LH)
Paper I	75		
Paper II	75		
Non Lecture hours(NLH)-Theory		300	300(NLH)
Paper I & II	90		
Non Lecture hours(NLH)-Practical			
Paper I & II	210		

Examination (Papers & Mark Distribution)					
Item	Theory Component Marks	Practical Component Marks			
		Practical	Viva	Elective	IA
Paper I	100	100	70	-	30
Paper II	100				
Sub-Total	200	200			
Total marks	400				

Important Note:-The User Manual II BAMS is a valuable resource that provides comprehensive details about the curriculum file. It will help you understand and implement the curriculum. Please read the User Manual II before reading this curriculum file. The curriculum file has been thoroughly reviewed and verified for accuracy. However, if you find any discrepancies, please note that the contents related to the MSE should be considered authentic.

In case of difficulty and questions regarding curriculum write to cur.imp@ncismindia.org

PREFACE

Ayurvedic physician, Pranabhisara Vaidya, makes efforts for his task of management of diseases and maintenance of health. For this role his tool is Potent medicine and tactful techniques acquired from profound knowledge of classics.

Bheshaja is important in chikitsa chatuspada. Prepared personally or purchased or prescribed, the medicines must be potent. Identity, Purity, Quality, Stability, Safety and Efficacy all factors must be assessed carefully so that extensive therapeutic utility without any adverse drug reaction can be achieved. Education of Ayurvedic Pharmaceutics i. e. Ayurvediya Aushadhi Nirmana Shastra must provide foundation through guidance for academicians, Researchers, entrepreneurs and clinicians. Yogavijyana and prayogavijnyana isthat expected foundation. Ayurvedic classics expect yuktijna, siddhahasta, sarva bhaishajya kovid (carak su. 20/22) physician as an outcome of studying Ayurveda.

To achieve the programme outcome of the Professional BAMS course of NCISM , this particular subject contributes a lot by providing thorough multidimensional knowledge in cognitive domain, hands on training of pharmaceutical processing in Psychomotor domain and ethical attitudes towards drug development in affective domain.

. The thought process by which Rasa Bheshaja Yogas reaches yojana- administration is very much important. Dose, Duration, Time and Route of administration, anupana all such factors are unique features of holistic Ayurvedic Practice. Acquiring details of these topics along with practical application with understanding its significance is the course objective of the subject RS& BK. The main Goal is to cater professional Competency in Ayurvedic Pharmaceutics and make them capable to select proper / effective yoga and administer it safely.

It is the need of time to make some addition in the current teaching and learning process of Rasashastra & Bhaishajya Kalpana to make it more relevant, practical and contemporary. New teaching technology tools will certainly be helpful in the effective delivery of knowledge of Rasashastra & Bhaishajya Kalpana. As per the revised regulation, the nomenclature of the subject is Ayurvediya Aushadhi Nirmana Vigyana as paper I and Ayurvediya Aushadhi Prayoga Vigyana as paper II for Second Professional BAMS course.

In this revision, NCISM has tried its best to take Rasashastra & Bhaishajya Kalpana teaching beyond the four walls of the classroom and get it connected with present global needs. For effective content delivery create interest in the subject it becomes evident to teach Rasashastra & Bhaishajya Kalpana with practical demonstrations. In order to facilitate proficiency in pharmaceutical preparation and its application in clinical practice, more non-lecture classes are allotted . Teaching methodology guidelines are provided which shall be followed while teaching, to make baseline uniformity in the process of learning. Activity-based learning will enable the internalization of the concepts and will build a strong platform while learning other subjects of Ayurved.

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Course Code and Name of Course

Course code	Name of Course
AyUG-RB	Rasashastra evam Bhaishajyakalpana

Table 1- Course learning outcomes and matched PO

SR1 CO No	A1 Course learning Outcomes (CO) AyUG-RB At the end of the course AyUG-RB, the students should be able to-	B1 Course learning Outcomes matched with program learning outcomes.
CO1	Demonstrate application of principles of Ayurvediya Aushadhi Nirmana (Ayurvedic Pharmaceutics)	PO1,PO5,PO7
CO2	Demonstrate application of principles of Ayurvediya Aushadhi Prayoga Vigyana (Clinical Pharmacology)	PO1,PO5,PO7
CO3	Prepare Ayurvedic formulations in adherence to quality control parameters for raw materials, in-process and finished products	PO1,PO3,PO4,PO5, PO6,PO7,PO8
CO4	Justify rationality of selection and administration of Ayurvedic formulations	PO3,PO5,PO6,PO7, PO8,PO9
CO5	Demonstrate application of ethical, legal and regulatory aspects of manufacturing and sale of Ayurvedic formulations.	PO2,PO8,PO9
CO6	Appraise research in current and emerging trend in Ayurvedic pharmaceuticals and allied sciences.	PO7,PO9

Table 2 : Contents of Course

Paper 1 Ayurvediya Aushadhi Nirmana Vigyana					
Sr. No	A2 List of Topics	B2 Term	C2 Marks	D2 Lecture hours	E2 Non- Lecture hours
1	1.Chronological development of Ayurvediya Aushadhi Nirmana Definition, chronological development, significance and scope of Rasashastra and Bhaishajya Kalpana. Concept of Rasashala , Rasa-mandapa and Bheshajagara Concept of Rasa-Rasayana Briefing on Indians are first to prepare metal based medicines and Recent development in Ayurvedic Pharmaceuticals.	1	05	2	1
2	2.Paribhasha (Terminology) 1. Definition and Importance of Paribhasha 2. Word Derivation- Aushadha, Bhesaja, Kalpana, Kashaya, Pancha kashaya Yoni, Samskara 3.Dravya/Varga Paribhasha- (Classical Names, English names,Chemical Composition/ Formula) A) Rasa, Maharasa, Uparasa, Dhatuvarga, Upadhatu, Ratna, Uparatna, Sudhavarga, Sikatavarga, Lavanavarga, Visha, Upavisha, Kajjali, Mitrapanchaka, Dravaka Gana, B) Sandigdha(Contraversial): Vaikranta, Chapala, Rasanjana, Pushpanjana, Vahnijara, Girisindura, Kankushtha. C) Anupalabdha (Not Available): Rasaka, Sauviranjana D) Krutrima (Artificial): Sasyaka, Gandhaka, Kasisa, Rasanjana, Hingula E) Pratinidhi (Substitute) : Vajrabhave Vaikranta, Suvarna-Suvarna Makshika 4. Prakriya Paribhasha- A) Shodhana: Types of Shodhana, Samanya Shodhana, Vishesha Shodhana, Different techniques used for Shodhana, Swedana, Mardana, Dhalana, Nirvapa, Nirjaleekarana, Nimajjana, Bhavana,Bharjana B) Marana,: Definition, Importance of Marana, Types of Marana- Agnipaka Method, Putapaka Method, Kupipakwa Method, Bhanupaka Method, Swanga Sheeta C) Amrutikarana, Lohitikarana D) Sattvapataana, Shuddhavarta, Beejavarta E) Druti: Definition, Druti lakshana F) Parada Samskara: Definition, Importance, Ashtasamskara Parada Jaranaa, Murchchhana, Names of Parad-Bandhas 5) Pramanikarana Paribhasha (Terms for Standardization)- A) Grahy-Agrahyattva, Siddhilakshana B) Bhasma pariksha: Varitara, Rekhapurnata, Unama,	1	10	8	4

	<p>Slakshnattva, Sukshma, Anjana Sannibha, Dantagre na Kachakacha Bhavati, Varna, Avami, Apunarbhava, Niruttha, Gata Rasattva, Nischandrattva, Niramlattva, Nirdhumattva, Jihvagre adahyamanattva, Dadhi/ Nimbu Pariksha,</p> <p>6) Puraka Paribhasha (Supplementary)- Rudra Bhaga, Dhanvantari Bhaga7) Mana-Paribhasha-</p> <p>A) Definition, Classical Types</p> <p>B) Classical and Modern- Conversion chart as per AFI, Scientific Metrology</p> <p>C) Essential Kala- mana.</p>				
3	<p>3.Adharbhuta Siddhanta (Application of fundamental principles)</p> <p>Dravya Sangrha and Samrakshana</p> <ul style="list-style-type: none"> • Time of drug Collection • General Rules • Specific time for specific plant part collection • Time of the day for drug collection • Collection of Praniya Dravya • Place of Drug collection Bhumi mahabhuta predominance <ul style="list-style-type: none"> • Places from where drugs should not be collected • Stage of drug collection • Rule of Duplication(Dwiguna Mana Ganana) • Ardra and Shushka Dravya mana • Dravya Sangraha Vidhi and Dravya samrakshana • Rasa, Guna, Virya ,Vipaka, Prabhava <p>Anukta Visheshokta grahana: Considering Anukta Dravya</p> <p>Aushadha Namakarana: Naming a Preparation</p> <p>Aushadha Sevana Kala: Time of Drug Administration</p> <p>Saveeryata Avadhi (Shelf life of different kalpana)</p> <p>Aushadha Matra:Dosage / Posology</p> <p>Anupana & Sahapana (Adjuvant)</p> <p>Yougika Dravya Siddhanta(Drug Combination)</p>	1	05	4	2
4	<p>4.Yantropakaranani- I (Equipments and machineries)</p> <p>Principles involved, currently used yantras, their correlation, utility, and Instruments used in Large scale Production</p> <p>Dola Yantra</p> <p>Valuka Yantra</p> <p>Putra Yantra</p> <p>Khalwa Yantra</p> <p>Patana Yantra</p> <p>Darvika Yantra</p> <p>Ulukhala Yantra</p> <p>Patala Yantra</p> <p>Kupi Yantra</p> <p>Arkapatana Yantra</p> <p>Pithara Yantra</p>	1	05	6	4

	Sharava Yantra Palika Yantra Sthali Yantra Swedana Yantra Vidyadhara Yantra Modern Machinery-Grinder Disintegrator Pulverizer Powder Mixer Mechanical sifter Ball mill Granulator Dryer Tablet compressing machine Pills making machine Coating pan Polishing pan End runner machine Edge runner machine Capsule filling machine Ointment mixer Tube filling machine Sieves & Meshes Liquid filling machine Distillation plant Strip packing machine Pouch filling machine Pyrometer				
5	5.Yantropakaranani -II (Equipments, fuel and Heating Devices) Principle involved, importance of temperature, currently used heating devices utility, quantum of heat and Instruments used in Large scale Production Puta- Chandra Puta Surya Puta Maha Puta Gaja Puta Varaha Puta Kukkuta Puta Kapota Puta Lavak Puta Budhar Puta Gorvara Puta Valuka Puta Kumbha / Bhanda Puta Musha Samanya Musha Crucibles- Silica Mudra	1	05	5	4

	<p>Sandhi Bandhan Material</p> <p>Koshthi- Chullika Angar Koshtthi Satwapatan Bhrashtri Gas Stove Hot Plate Heating Mantle Induction Stove Hot Air Oven Muffle Furnace- Horizontal and Vertical</p> <p>Heating Material- Solid- Kashtha, coal(wooden / stone), Kshara, Lavana, Valuka, Shakrit, Dhanya Drava- Jala/ steam, Taila Indirect heating- Dhanya Rashi, Bhugarbha sthapana</p>				
6	<p>6.Kalpana Nirmana I (Primary & Secondary dosage forms) Definition, classification with suitable examples, reference ingredients, quantity, method of preparation, principle involved, instruments used in small and large scale production, siddhi lakshana, storage, shelf life, modern aspect of related preparation of the following Panchavidha Kashya Kalpana (Primary dosage forms): Swarasa, Kalka, Kwatha, Hima, Phanta Upaklpana (Secondary dosage forms): Kalka: Churna Kalpana Kwatha: Pramathya Kalpana, Paniya Kalpana, Ushnodaka, Ksheera Paka Kalpana, Laksha Rasa, Mamsa Rasa Hima Kalpana : Mantha Kalpana, Udaka Kalpana, Panaka Kalpana Phanta Kalpana: Arka</p>	1	10	6	4
7	<p>7.Kalpana Nirmana-II (Method of Preparation of different dosage forms& Dietary Supplements)) Avaleha Definition, reference, essential ingredients, general method of preparation, specific rules of avaleha preparation, importance of temperature, siddhi lakshana, shelf life with examples i.e Vasavaleha, Kushmanda avaleha, research updates on Avaleha Kalpana, market survey Sneha Kalpana Aims of Sneha Kalpana, definition,reference, essential ingredients, general method of preparation, specific rules of sneha preparation, importance of temperature, gritha murchana, taila murchana, sneha siddhi lakshana, types of snehapaka, Patra(Gandha Paka), time duration to cook sneha preparation, shef life with examples Phala gritha and</p>	1	10	5	4

	<p>Ksheerabala Bala Taila, Concept of Avartana, Research updates on snehakalpana, market survey</p> <p>Sandhana Kalpana</p> <p>Introduction, significance of sandhana kalpana, classification, difference between Madhya and Shukta Kalpana, general method of preparation, essential ingredients, anukta Mana, sandhana vidhi, observations, Burnig candle test, Lime water Test, important factors in Asava Arishta Preparation like sandhanan patra selection, place for fermentaion, importance of room temperature, sandhana kala, adding of honey, bhasma, prakshepaka dravya, difference between Asava & Arishta, shelf life and alcohol % with examples Draksharista and Usheerasava, Research updates on Sandhana Kalpana, market survey</p> <p>Pathya Kalpana</p> <p>Definition , significance of Pathya, types, general, method of preparation Manda, Peya, Yavagu, Vilepi, Anna or Odana Kalpana, Krashara, Yusha, Takra, Khada, Kambalika, Raga, Shadava, Related Research updates, Market survey of Dietary Supplements</p>				
8	<p>8.Rasa Dravya Parichaya- I</p> <p>Synonyms, minerological identification, sources, types, grahya and agrahyata, doshas, shodhana, marana and other processing techniques, Probable Physico-chemical Changes, importance of temperature while processing , yoga, Research updates of the following</p> <p>Must to know Drugs</p> <p>Parada (mercury)</p> <p>Abhraka (Biotite Mica)</p> <p>Makshika (Chalco-pyrite)</p> <p>Shilajatu(Asphaltum Punjabanum)</p> <p>Gandhaka (Sulfur)</p> <p>Gairika(Red Ochre)</p> <p>Kankshi (Alum)</p> <p>Haratala (Orpiment)</p> <p>Manahshila (Realgar)</p> <p>Kampillaka(Mallotus Philippinensis)</p> <p>Navasadara (Ammonium chloride)</p> <p>Hingula (Red Cinnabar)</p> <p>Swarna (Gold)</p> <p>Rajata (Silver)</p> <p>Tamra (Copper)</p> <p>Loha (Iron)</p> <p>Mandur (rust iron)</p> <p>Vanga (Tin)</p> <p>Naga (Lead)</p> <p>Yashada (Zinc)</p> <p>Mukta (Pearl),</p> <p>Pravala (Coral)</p>	2	10	12	4

	Vajra (Diamond) Kaparda (Cowries) Shukti (Oyster Shell) Shankh (Conch Shell) Godanti (Gypsum) Samudraphena (Cattle Fish bone) Kukkutanda twak (Hen's EggShell) Tanka kshara (Borax)				
9	9.Rasa Dravya Parichaya II Synonyms, mineralogical identification, sources, types, grahya and agrahyata, shodhana, marana and other processing techniques with probable chemical reactions, the importance of temperature, yoga, research updates of the following: Desirable to know drugs: Sasyaka (Peacock ore) Kaseesa (Green Vitriol), Gauri pashana (Arsenic oxide); Trinakanta, Akika(Agate), Sudha (Lime stone), Khatika Ajashthi; Jaharmohara (Serpentine) Dugdhapashana (Talc)	2	5	7	6
10	10.Rasadravaya Parichaya III Synonyms, Minerological Identification, sources, types, Grahya, Agrahyata, Shodhana, Marana, Probable Chemical Changes, Properties,dose, Ashuddha/Apakwa Bhasma Sevanajanya Vydhi and their shantyupaya, yoga, Research updates Nice to know drugs: Vaikrantha, Vimala (Iron Pyrite), Chapala Rasaka Anjana Kankustha Agnijara Giri Sindura (Red oxide of Hg) Mriddara shringa (Litharge) Kamsya (Bronze) Pittala (Brass) Vartaloha. Manikya (Ruby) Tarkshya (Emerald) Pushparaga (Topaz) Nilam (Sapphire) Gomeda (Zircon or Cinnamone stone)	2	5	3	6

	Vaidurya (Cats eye) Mriga shringa (Stag horn) Sikata (Silica) Vyomashma (Sangeyashab - Jade) Kousheyashma (Asbestos) Badarshama (silicate of lime)				
11	11.Kalpana Nirman -III (Method of Preparation of different dosage forms) Sharkara Kalpana <ul style="list-style-type: none"> General method of preparation, difference between sharkara kalpana and syrup, importance of temperature, precautions, confirmatory tests, packing, preservation, shelf life with Example of Tulasi Arka Sharkara Gudapaka <ul style="list-style-type: none"> General Method of Preparation, importance of temperature, precautions, confirmatory tests, packing, preservation, shelf life with Example of ManibhadraGuda, Guda Pippali Lavana Kalpana <ul style="list-style-type: none"> General Method of Preparation, importance of temperature, precautions, confirmatory tests, packing, preservation, shelf life with Example of Narikela Lavana Kshara Kalpana <ul style="list-style-type: none"> General Method of Preparation, importance of temperature, precautions, confirmatory tests, packing, preservation, shelf life with Example of Kadali Kshara, chinch Kshara Ayskriti Kalpana <ul style="list-style-type: none"> General Method of Preparation, importance of temperature, precautions, confirmatory tests, packing, preservation, shelf life with Example Ayaskriti Lepa Kalpana <ul style="list-style-type: none"> General Method of Preparation, importance of temperature, precautions, confirmatory tests, packing, preservation, shelf life with Example of 	2	10	8	6

	Avalgunjadi Lepa, Keshavardhaka Lepa.				
12	12.Chaturvidha Rasayana Introduction, definition, importance, types, Procedure, necessary equipment, Shelf life with following example Kharaliya Rasayana: Shwasakuthara rasa and Vatavidwansana rasa Parpati Rasayana: Loha parpati and sudha parpati Kupipakwa Rasayana: Rasasidhura and Rasa karpura Pottali Rasayana: Tamragarbha pottali and Loha garbha pottali	2	10	4	4
13	13.Current and emerging trend in Ayurvedic pharmaceuticals Cosmetics-Formulation, Regulatory Provisions Brief Introduction to Cosmetics-Formulation, Regulatory Provisions, Plant Layout and other factory requirements, process used in the manufacture of Cosmetics, Most commonly used cosmetic Raw materials , Control of microbial contamination in the manufacture of cosmetics and Quality Control of cosmetics, Skin Sensitization Sensitivity Testing, In vitro-Tests for Skin Irritation, Quality Control of Raw materials, Intermediates and Finished Products, Stability of Cosmetics Introduction to Dosage forms Introduction, Classification of Dosage forms(Solid dosage forms, Liquid dosage forms and Semisolid dosage forms), Need of dosage forms.	3	5	3	4
14	14.GMP(Schedule T) & Regulatory aspects of Ayurvedic drugs Brief overview of following <ul style="list-style-type: none"> ♦ Drug and Cosmetics Act 1940 and Rules 1945 import, manufacture, sale distribution of drugs and cosmetics standards of quality, misbranded, adulterated, spurious drugs and cosmetics as amended from time to time. New Acts related to Drugs and Devices. ♦ Good Manufacturing Practices (GMP) of ASU Drugs in accordance to Schedule- T Food Safety and Standards Authority of India (FSSAI) and FDA Approval Drugs. 	3	5	2	4
Total Marks			100	75 hr	57 hr

Paper 2 Ayurvediya Aushadhi Prayoga Vigyana

Sr. No	A2 List of Topics	B2 Term	C2 Marks	D2 Lecture hours	E2 Non- Lecture hours
15	1.Aushadhi Prayoga Vigyana Introduction, Ethymology, Scope of Aushadhi Prayoga vigyanaprashastha bhasha Lakshana	1	5	1	2
16	2.Single drug (Herbal & Mineral) Single drug its variety of formulations and their different indications• Chemical/phytochemical composition • Pharmacodynamics and pharmacokinetics as per formulation • Therapeutic properties • Awasthanusara Uses(as applicable) • Matra • Anupana • Pathyapathya • Sevana Kala • Kala maryada (duration of medication as applicable) • Side effects of medication (as applicable) • Research updates and clinical evidences for each of the following formulations Guduchi Guduchi Swarasa (Sha.Sam.Ma. Kh. Chp1/7 page 138) Guduchyadi Churna (B.R. Pleehayakrut Rogadhikara) Guduchi Kwatha (B.R. Jwaradhikara) Guduchi Hima (B.R. Chardi Rogadhikara) Guduchi Ghana- Samshamani Vati (AFI Part II Page 183) Guduchi Satva (AFI-Part I, Page 205) Amrutadi Guggulu (AFI-Part III, Page 107) Amritarishta (AFI Part I page 6) Amalaki Amalaki Swarasa (Sha.Sam.Ma.Kha.) Amalakyadi Churna (Sha.Sam.M.Kha. Churna kalpana) Triphala Rasayana (Cha.Chi. Rasayana Adhyaya) Chyavanaprasha (AFI Part I page 37) Dhatri Lauha (AFI Part I Page 284) Amalakyadi Gutika (Sha.Sam.Ma.Kha. Vati Kalpana) Phalatrikadi Kwatha (Sha.Sam.Ma.Kha.Kwatha Kalpana) Triphala Ghrita (Sha.Sam.Ma.Kha. Ghrita Kalpana) Bhallataka Bhallataka Modaka (B.R. Pleeha-Yakrit Rogadhikara) Bhallataka Ghrita (B.R. Gulma Rogadhikara) Bhallataka Guda (B.R. Arsha Rogadhikara) Bhallatakadi Taila (B.R. Nadvirina Rogadhikara) Bhallataka Avaleha (B.R. Arsha Rogadhikara)	1	10	8	2

	<p>Bhallatakadi Lepa (B.R. Kushta Rogadhikara)</p> <p>Bhallatakadi Kwatha (B.R. Urusthabha Rogadhikara)Note: For Bhallataka additional ashuddha, avidhi sevanajanya vyadhi and their shantyupaya</p> <p>Gandhaka</p> <p>Gandhaka churna (SY page 217)</p> <p>Gandhaka Rasayana (AFI-Part II, Page 115)</p> <p>Gandhaka Druti (RRR 3rd Chapter)</p> <p>Gandhaka Taila (R.T. 8th Chapter)</p> <p>Gandhakadya Malahara (AFI-Part II, Page 165)</p> <p>Gandhakadi Lepa (RRS Shiroroga Chikitsa)</p> <p>Gandhaka Vati (B.R. Agnimandya Rogadhikara)</p> <p>Gairika</p> <p>Gairika Pradeha (Cha.Chi. Visarpa Rogadhyaya)</p> <p>Laghusuta shekhara Rasa (AFI Part II Page 282)</p> <p>Gairikadya Malahara (AFI-Part III, Page 224)</p> <p>Gairikadya Gutikanjana (B.R. Netraroga)</p> <p>Gairika rasakriya (Cha.Chi.26/235)</p> <p>Varnakara lepa (Cha.Chi.25/117)</p>				
17	<p>3.Single drug(Bhasma, Shuddha & Pishti)</p> <ul style="list-style-type: none"> • Single drug/ formulation and its mode of action in different indications • Chemical/phytochemical composition • Pharmacodynamics and pharmacokinetics as per formulation • Therapeutic properties • Awasthanusara Uses(as applicable) • Matra • Anupana • Pathyapathya • Sevana Kala • Kala maryada (duration of medication as applicable) • Side effects of medication(as applicable) • Ashuddha apakwa, avidhi sevanajanya vyadhi and their shantyupaya, • Research updates and clinical evidences for each of the following formulations: <p>Abhraka Bhasma</p> <p>Swarna Makshika Bhasma</p> <p>Swarna Bhasma</p> <p>Rajata Bhasma</p> <p>Lauha Bhasma</p> <p>Tamra Bhasma</p> <p>Vanga Bhasma</p> <p>Naga Bhasma</p> <p>Yashada Bhasma</p> <p>Kasisa Bhasma</p> <p>Shuddha Shilajatu</p> <p>Shuddha Gandhaka</p> <p>Shuddha Gairika</p>	2	15	12	6

	Shuddha Kankshi Mukta Pishti & Bhasma Pravala Pishti & Bhasma Vajra Bhasma Kaparda Bhasma Shankh Bhasma Godanti Bhasma Shuddha Tankana Shuddha Kankshi				
18	4.Aushadhi Kalpa -I (Compound formulations) •Chemical/phytochemical composition • Pharmacodynamics and pharmacokinetics as per formulation • Therapeutic properties and its mode of action in different indications, • Awasthanusara Uses(as applicable) • Matra • Anupana • Pathyapathya • Sevana Kala • Kala maryada (duration of medication as applicable) • Side effects of medication(as applicable) • Ashuddha apakwa processed , avidhi sevanajanya vyadhi and their shantyupaya, • Research updates and clinical evidences for each of the following formulations: Kharaliya Rasayana • Arogyavardhini Gutika : A.F.I. - I, Rasayoga, 20:4, R.R.S. Visarpa Chi. 20/106 • Kumara Kalyana Rasa : A.F.I. - I, Rasayoga, 20:9, B.R. Balaroga / 163 • Garbhapala Rasa : A.F.I. - II, Rasayoga, 16:14,R.T.Sa. Part - I, 140 Chandraprabha Vati : A.F.I. - I, Vati Gutika, 12:10,Sha.Sa.M.7/40 • Pravala Panchamrita Rasa : A.F.I. - II, Rasayoga, 16:37,B.R. Gulma / 139 • Anandbhairava Rasa : A.F.I. - I, Rasayoga, 20:3,R.Sa.Sa.Jwara 2/103 • Yogendra Rasa : A.F.I. - I, Rasayoga, 20:31,B.R. Vatavyadhi / 506 • Laxmivilas Rasa : A.F.I. - I, Rasayoga, 20:39, B.R. Rasayana / 55 • Vasantakusumakara Rasa : A.F.I. - I, Rasayoga,20:42,R.Sa.Sa.Rasayana Vajikarana / 80 • Vasantamalti Rasa : A.F.I. - I, Rasayoga, 20:41, Si.Bhai.Ma.Ma.Jwara / 60 • Brihat Vata Chintamani Rasa : A.F.I. - I, Rasayoga, 20:26,	2	15	16	4

	<p>B.R., Vatavyadhi/502</p> <ul style="list-style-type: none"> • Shankha Vati : A.F.I. - I, Vati Gutika, 12:32, B.R. Agnimandya / 182 • Shwaskuthara Rasa : A.F.I. - I, Rasayoga, 20:49, Yo.Ra., Swasa / Page 373 • Kamadudha Rasa : A.F.I. - II, Rasayoga, 16:9, R.Ta.Sa. Kharaliya Rasayana / 80 • Sutashekhar Rasa : A.F.I. - II, Rasayoga, 16:63, Yo.Ra. Amlapita / Page 125 • Navayasa Loha : A.F.I. - II, Lauha, 17:2, Cha.Sa.Chi.16/70 • Ichchhabhedhi Rasa : A.F.I. - I, Rasayoga, 20:5, B.Ra. Udararoga / 84 • Krimikuthara Rasa : A.F.I. - II, Rasayoga, 16:12, R.Ta.Sa. Kharaliya Rasayana / P. 103 <p>Parpati Rasayana</p> <ul style="list-style-type: none"> • Panchamruta Parpati : A.F.I. - I, Parpati, 16:1, B.R. Grahani / 461 • Bola Parpati : A.F.I. - I, Parpati, 16:2, Yo.R., Pradara / P 842 <p>Kupipakwa Rasayana</p> <ul style="list-style-type: none"> • Swarna Vanga : A.F.I. - I, Kupipakwa, 15:9, Rasamruta 3/ 95 • Makaradhwaja : A.F.I. - I, Kupipakwa, 15: 2, B. R. Vajikarana 2/ 237 • Sameerpannaga Rasa : A.F.I. - I, Kupipakwa, 15:8, A.A.G.S. Part - 4 Page 88 <p>Pottali Rasayana</p> <ul style="list-style-type: none"> • Hemagarbha Pottali : A.F.I. - II, Rasayoga, 16:66, Rasamruta Rasavigyaniya 9/218 				
19	<p>5.Aushadhi Kalpa-II (Compound Drugs/Formulations)</p> <ul style="list-style-type: none"> • Chemical/phytochemical composition • Pharmacodynamics and pharmacokinetics as per formulation • Therapeutic properties and its mode of action in different indications, • Awasthanusara Uses(as applicable) • Matra • Anupana • Pathyapathya • Sevana Kala • Kala maryada (duration of medication as applicable) • Side effects of medication(as applicable) • Improperly processed , avidhi sevanajanya vyadhi and their shantyupaya, • Research updates and clinical evidences for each of the following formulations: <p>Dashamoola Kwatha (AFI Part I Page 55) Mahamanjistadi Kwatha (AFI Part I page 59)</p>	3	15	14	2

	Pushyanuga Churna (AFI-Part I, Page 113) Sudarshana Churna (AFI Part I Page 116) Lavana Bhaskara Churna (AFI-Part I, Page 114) Bilvadi Gutika (AFI Part I Page 188) Chitrakadi Gutika (AFI-Part I, Page 186) Sanjivani Vati (B.R. Jwaradhikara) Vyoshadi Vati (AFI Part III Page 253) Bala Chaturbhadra Rasa (B.R. Balarogadhikara) Simhanada Guggulu (AFI-Part I, Page 71) Yogaraja Guggulu (AFI-Part I, Page 69) Chyavanaprashavaleha (AFI Part I page 37) Dadimavaleha (Y.R. Jwaratisaradhyaya) Panchagavya Ghrita (AFI Part I Page 90) Brahmi Ghrita (AFI Part I Page 93) Narayana Taila (AFI Part I Page 138) Neelibhringadi Taila (AFI Part I Page 139) Panchaguna Taila (AFI-Part II, Page 145) Aravindasava (AFI Part I page 7) Ashokarishta (AFI Part I page 8) Kumaryasava (AFI Part I page 10) Kutajarishta (AFI Part I page 10) Gandhakadya Malahara (AFI-Part II, Page 165) Lepa Gutti (AFI Part III page 232)				
20	6.Dosage Forms & Cosmetic Products Definition of dosage form,-Cosmetics Advantages and disadvantages of currently available dosage forms and cosmetics. Route of their administration. Research updates on modification of classical Ayurvedic dosage forms and relevant case studies.	3	5	5	2
21	7.Nutraceuticals Introduction Types, non Indian nutraceuticals and their uses Ayurvedic Perspective of Nutraceuticals with special reference to dietetic preparation, rasayana with one examples for each category , mode of action, nutritional value calculation, research updates and case studies on below mentioned category General Health : Kushmanda avaleha Pediatric Health: Preenana Modaka(Kashyapa) Geriatric Health: Chavanaprasha avaleha Reproductive Health: Phala Grita Women's health: Soubhagya shuntipaka, Shatavari grita Cardio-protective: Arjuna Ksheerapaka & Rasana ksheera paka Sports endeavor: Kharjuradi mantha Mental health: Brahma Rasayana	3	5	6	1
22	8.Anupana Prayoga for Aushadhi Kalpa	3	5	4	1

	<p>Properties of Anupana</p> <p>Factors to be considered for selection of Anupana</p> <ul style="list-style-type: none"> •Dosha •Aushadha •Roga/ Rogi •Ahara <p>Purpose of Anupana</p> <p>Contraindications of Anupana</p> <p>Eka Kalpa Vydi anusara aneka Anupana for following yogas</p> <p>1.Kaishore Guggulu: Sarangadhar Samhita , Madhyam khanda- 7/72-81, P: 1362. Yogaraj, Guggulu: Sarangadhar Samhita Madhyam khanda- 7/56-69, P:1353. Narayana Churna: Sarangadhar Samhita of Pandit Sarangadharacharya, , Madhyam khanda- 7/83-91, P:123-1244.Rasa Sindoor: RasaTarangini Hindi commentary of Sri Sadananda Sarma,Chaukhambha Surbharti, Murcchana vigyaniya Taranga, 6/203-234, P: 125-1275. Rasa Parpati: Rasa Tarangini of Sri Sadananda Sarma,Chaukhambha Surbharti Prakashan, Murcchana vigyaniya Taranga, 6/144-153, P: 116-1176.Kankayan Vati : Sarangadhar Samhita Surbharti Prakashan, Madhyam khanda, 7/50-55, P: 134-135)</p>				
23	<p>9.Aushadhi Prayoga Marga</p> <p>Introduction</p> <p>Types in ayurveda</p> <p>Advantages and disadvantages of each aushadhi prayoga marga and probable mode of action after administration of following dosage forms in below mentioned routes</p> <ol style="list-style-type: none"> 1. Mukha (Oral Cavity): Vati, Gutika, Churna, Asava, Arishta,Kashaya, Avaleha, Khanda, Sneha (Ghrita/Taila), 2. Nasa(Nasal Route)- Dosage form used - Churna, taila, swarasa, arka 3. Karna (Through Ear)- Taila, Ghrita 4. Akshi (Through Eyes)- - Ghrita, Taila, 5. Twak (Through Skin)- Lepa, Alepa, Pralepa, Malahara, upanaha,pradeha, abhyanga, udvartana <ul style="list-style-type: none"> • Shirodhara - Takra • Abhyanga- Sahacharadi Taila • Ashti Bhagna- Murivenna Taila • Vrana- Jatyadi Taila • Smashru – Shankha Bhasma • Kesha Ghanata- Bringaraja Taila • Akala Palita – Hasthi Danta Masi • Indralupta – Icchabhedi Rasa • Lomashatana – Lomashatana Lepa <ol style="list-style-type: none"> 6. Guda (Anal Route)- Dosage forms - Vartis, taila, ghrita, kalka, churna, kashaya 7. Mutra marga (Through urethra)- Uttara Basti with 	3	10	5	1

	Dosage forms- Taila, ghrita 8. Yoni marga (Through vagina)- Yoni Dharana, Yoni Dhavana, Yoni Pichu, Yoni Dhoopana				
24	10.Rational prescription along with safe dispensing of Ayurvedic formulations. Rational prescription along with safe dispensing of Ayurvedic formulations as per NABH guideline	3	5	1	4
25	11.Traditional & Local health Practices Introduction to Traditional & Local health Practices and Government initiatives to preserve it. Brief introduction to TKDL	3	5	2	4
26	12.Pharmacovigilance for Ayurveda drugs Pharmacovigilance and Adverse Drug Reactions (ADR) Pharmacovigilance Programme of Ayurveda, Siddha, Unani and Homeopathy (ASU & H) Drugs Central Sector Scheme and Centres of Pharmacovigilance of ASU & H Drugs	3	5	1	4
Total Marks			100	75 hr	33 hr

Table 3: Learning objectives (Theory) of Course

Paper 1 Ayurvediya Aushadhi Nirmana Vigyana									
A3 Course outcome	B3 Learning Objective (At the end of the session, the students should be able to)	C3 Domain/sub	D3 Must to know / desirable to know / Nice to know	E3 Level Does/ Shows how/ Knows how/ Know	F3 T-L method	G3 Assessment (Refer abbreviations)	H3 Formative/ summative	I3 Term	J3 Integration
Topic 1 1.Chronological development of Ayurvediya Aushadhi Nirmana (Lecture :2 hours, Non lecture: 1 hours)									
CO1	Explain historical evolution of Ayurvediya aushadhi nirman and Rasashastra.	CK	MK	K	L&G D	TT-Theory	F&S	I	
CO1	Describe about contribution of Nagarjuna Acharya to Rasashastra	CK	MK	K	L_VC	TT-Theory	F&S	I	
CO1	Enlist important classical texts of Rasashastra and describe their unique features in short.	CK	DK	K	L&PP T	TT-Theory	F&S	I	
CO1	Describe structure of Pharmacy and enlist formulations prepared in pharmacy, after visiting the unit of teaching pharmacy of own campus	CC	MK	KH	L&G D	CL-PR	F	I	
CO1	Describe Recent development in Ayurvedic Pharmaceuticals viz, new dosage forms, pharmaceutical modification techniques.	CK	DK	K	L&PP T	TT-Theory	F&S	I	
CO1	Define Rasa and Rasayana and describe difference between Rasa and Rasayana	CK	DK	K	L&PP T	T- MEQs	F	I	

CO1	Justify design of ancient Rasashala	AFT-VAL	NK	KH	SDL	PRN	F	I	
Topic 2 2.Paribhasha (Terminology) (Lecture :8 hours, Non lecture: 4 hours)									
CO1	Explain the term Paribhasha and its importance in Ayurvediya Aushadhi Nirmana.	CK	MK	K	L	T-CRQs	F	I	
CO1	Discribe the terms Aushadha, Bhesaja, Kalpana, Kashaya, Kashaya yoni, Samskara- based on their word derivations	CC	MK	K	L	T- EW	F&S	I	
CO1	Enlist sequentially - names of all drugs classified in the varga(group). Recite shlokas of Maharasa, Uprasa , Sadharana Rasa Varga from Rasaratnasamuchchaya.	CC	MK	K	EDU, SDL, GBL, REC	P-REC,P-ID,PUZ,O-QZ	F&S	I	
CO1	Enlist and discuss Sandigdha, Krutrima, Pratinidhi and Anupalabdha dravya.	CK	DK	K	L&PP T,SD L,GB L	P-ID,CL-PR	F	I	
CO1,CO2	Discribe the definition of the term Shodhana. Explain with examples different techniques used for the procedures of Shodhana.	CAP	MK	KH	L&G D,L_ VC,P T	T- MEQs,P-E XAM,O-QZ,O-GAME	F&S	I	
CO1	Explain the term Marana and describe its types with examples	CK	MK	K	L&PP T,LS	T-OBT	F&S	I	
CO1	Enlist all relevent prakriya paribhasha of Amrutikarana, Lohitikarana,Sattvapataana, druti and discuss with examples	CK	DK	K	DIS,L S	PRN	F	I	
CO1,CO2	Recite sequentially names of Parada Ashta samskara. Explain the terms Jarana Murchchhana and cite types with examples. Compare Jarana and Murchchhana.	CC	MK	KH	L_ VC ,PrBL	T-EMI,T- ME Qs,PRN,M-CHT	F&S	I	

CO1	Identify names of Parada Bandhas	CK	NK	K	LS	T-OBT	F	I	
CO1,CO2,CO5	Describe Grahyagrahya parameters used for selection of Rasadravyas.	CK	MK	SH	L&PP T,PrB L	T- EW	F&S	I	
CO1,CO2,CO5,CO6	Illustrate all Bhasma pariksha as per classical description.	CC	MK	KH	L_VC ,IBL, DA,D	T- MEQs,P- EXAM,CHK	S	III	
CO1,CO2,CO5	Define the word Siddhilakshani.Recite examples of classical siddhilakshani. Interpret its rationality	CE	MK	KH	L&PP T,SD L,RE C,D_ L	T- MEQs,P- EXAM	F&S	I	
CO1	Recognise and discuss Dhanvantari Bhaga and Rudra bhaga	CC	NK	K	RLE	C-INT	F	I	
CO1	Explain importance of Mana-paribhasha and classical types of Mana. Recall Charts of Mana .	CK	DK	KH	L&PP T,PS M	T-CRQs,P- SUR	F	I	
CO1,CO2	Categorize parameters of Drug Standardization and develop a checklist for assessment of quality of rasadravyas	CE	DK	KH	BS,IB L,TP W,SD L	CL- PR,WP,CHK	F&S	I	
CO2	Explain Value of selection of genuine raw material	AFT- VAL	MK	KH	DIS	DEB	F	II	
CO2,CO3	Explain importance of ethical practices for drug processing(Shodhan, Marana)	AFT- VAL	MK	K	PrBL	P-POS	F	II	
CO2,CO3	Discuss and justify importance of Bhasma Pariksha	AFT- RES	MK	KH	BS	T- EW	F&S	III	

CO2,CO3	Explain value of keen and accurate application of weights and measures in Ayurvediya Aushadhi nirmana	AFT-VAL	DK	K	L&G D	PRN	F	II	
Topic 3 3.Adharbhuta Siddhanta (Application of fundamental principles) (Lecture :4 hours, Non lecture: 2 hours)									
CO1,CO2	Elaborate fundamental principles of Ayurvediya Aushadhi Nirmana alongwith their classical references and discuss their application with classical examples of various kalpas.	CC	MK	KH	L&PP T,BS	T- EW,M-POS	F&S	I	
CO1,CO2	Explain Dravya Samgraha vidhi. Explain types of Bhumi desha and types of drugs to be collected from particular place & places from where Dravya should not be collected.	CC	MK	KH	L&PP T,DIS ,BS	T- EW	F&S	I	H-DG
CO1,CO2	Describe time of Dravya collection and explain rationality behind it.	CC	MK	KH	L&PP T,BS	T- EW	F&S	I	H-DG
CO1,CO2	Enlist parts of Sthavara & Jangama Dravyas used for Ayurvediya Aushadhi nirmana.	CC	MK	KH	L&G D,BS	T- EW	F&S	I	H-DG
CO1,CO2	Define Samskara. Discuss role of Samskara in Ayurvediya Aushadhi Nirmana alongwith various examples.	CC	MK	KH	L&PP T,BS	T- EW	F&S	I	H-Sa mhita
CO1,CO2	Discribe Ardra - Shushka Dravya & Anukta – Visheshokta Dravya collection principles.	CC	MK	KH	L&PP T,DIS	T- EW	F&S	I	H-DG
CO1,CO2	Describe importance of kalpa sevan matra. Explain factors considered for deciding dosage of any drug (Ayurvedic as well as modern medicine principles). Describe Posology	CC	MK	KH	L&PP T,BS	T- EW	F&S	I	
CO1,CO2	Explain Saveeryata Avadhi(Shelf life) of Ayurvedic dosage forms.	CK	DK	K	L&PP T,DIS	T- MEQs,P-VIVA	F&S	I	
CO1,CO2	Discuss Yogika Dravya Sidhdhanta(Drug combination)	CC	MK	KH	L&PP T,BS	T- EW	F&S	I	
CO1	Explain importance of Kala (Time) Samskara in Ayurvediya	CK	MK	K	L&PP	TT-Theory	F&S	I	

	Aushadhi Nirmana. Elaborate Aushadhi sevana kala mentioned in Sharangdhara samhita. Discribe chrono- Therapeutics.				T				
CO1	Justify Aushadhi kalpa namakarana siddhanta with examples	CC	DK	KH	IBL	CL-PR	F	I	
Topic 4 4.Yantropakaranani- I (Equipments and machineries) (Lecture :6 hours, Non lecture: 4 hours)									
CO1,CO5	Choose and record contemporary machines used in Ayurvedic drug preparation.	CC	DK	K	L&PP T,DIS	T- EW	F&S	I	
CO1,CO5	Discuss the pharmaceutical use of Distillation apparatus, Ball Mill, Pulveriser, End Runner, Edge Runner, Tablet compression machine, Capsule filling machine, Pouch filling machine, Liquid filling machine in Ayurvediya Aushadhi Nirmana	CC	DK	K	L&PP T,DIS	T- EW	F	I	
CO1,CO5	Describe the principles behind construction and working of the classical Yantras used for Ayurvediya Aushadhi nirmana.	CAP	MK	KH	L&PP T,DIS	T- MEQs,P- VIVA	F&S	I	
CO1,CO5	Enlist categorical information about the following Yantras in the charts- Ulukhal Yantra, Patan Yantra, Jarana Yantra, Patala Yantra and Swedana Yantra.	CK	DK	K	L&PP T,DIS	T- EW	F	I	

CO1,CO5	Interpret the mechanism and effect of Yantras / machines on the Physical and Chemical properties of the drug material.	CC	DK	KH	DIS,I BL	M-POS	F	I	
CO1	Enlist Ayurvediya aushadhi kalpana and equipments/yantras/ machines used for preparation of each kalpana.	CK	DK	K	L&PP T	T- EW	F	I	
Topic 5 5.Yantropakaranani -II (Equipments, fuel and Heating Devices) (Lecture :5 hours, Non lecture: 4 hours)									
CO1,CO5	Describe the term Yantra and enlist yantras described in classics useful for aushadhi nirmana. -	CK	DK	K	L&PP T	TT-Theory	F	I	
CO1,CO5	Define the term Puta and recite its classical explanation.	CK	MK	K	L_VC ,RLE	T- EW,M- POS	F&S	I	
CO1,CO5	Produce categorical information(Size of Pit, Number of cowdunkcakes, use etc.) about following Putas viz. Mahaputa, Gajaputa, Varahputa, Kukkutaputa, Kapotputa, Lavakputa, Kumbhaputa, Bhandaputa, Valukaputa and Bhudharputa.	CK	MK	K	L&PP T,DIS ,TPW	T- EW,M- POS,COM	F&S	I	
CO1,CO5	Recognise the principles behind construction and working of the classical Putas.	CC	MK	KH	L&PP T,DIS ,IBL	T- EW,M- POS	F&S	I	
CO1,CO5	Identify and enlist contemporary devices used in the preparation	CC	DK	K	L&PP	T- MEQs,QZ	F&S	I	

	of Bhasma.				T,DIS ,IBL	,M-POS			
CO1,CO5	Review the temperature pattern of various Putas by referring research articles.	CC	DK	K	TPW, SDL	QZ ,M-POS	F&S	I	
CO1,CO5	Compile names and significance of temperature measuring devices with reference to Puta.	CK	DK	K	DIS, ML	CL-PR,M- POS	F	I	
CO1,CO5	Enlist the specific Puta used for a particular Bhasma Nirmana.	CC	DK	KH	L&PP T	CL-PR,M- POS	F	I	
CO1,CO5	Enlist various devices used for heating during Ayurvediya Aushadhi nirmana.	CK	DK	K	L,DIS ,RLE, FV	T- EW,P-SUR	F&S	I	
CO1,CO5	Enlist constituents needed for Samanya Musha Nirmana.	CK	DK	K	L&PP T,IBL	T- MEQs	F&S	I	
CO1,CO5	Define the term Musha and describe uses of various types of Musha.	CK	DK	D	L_ VC ,D-M	T-OBT	F&S	I	
CO1,CO5	Enlist and discuss the material used for Sandhi Bandhan (while using Sharava and Kachakupi)	CK	NK	K	DIS,R LE	T-OBT	F	I	
CO1,CO5	Identify and record the types of Crucibles .	CK	NK	K	L&PP T	M-POS	F	I	

CO1,CO5	Interpret the effect of heat transformation in the material subjected to heating through Musha.	CAP	DK	KH	L&PP T,DIS ,D-M	PRN,CL-PR	F	I	
CO1,CO5	Recall Pakaj Utpatti Siddhant and interpret it for Agni Sannikarsha Sanskara.	CC	DK	KH	L&PP T,DIS	T- EW,CR- RED	F&S	I	
CO1,CO5	Explain the Pharmaceutical use of the Hot plate, heating mantle, induction stove, hot air oven, muffle furnace (horizontal and vertical type)	CC	NK	KH	DIS,S DL	P-SUR,M- POS	F	I	
CO1	Describe types of Koshthi and their uses	CK	DK	K	L	COM	F	I	
CO1,CO5	Describe the Current trends in heat transfer device e.g. steam jacketed heating device, programmed muffle furnace, programmed furnace for Parpati / Pottali preparation.	CC	DK	K	L&PP T,IBL ,SDL	M-POS,COM	F	I	
CO1,CO5	Assess and interpret the effect of fuel in quantum of heat given (time and temperature)	CC	DK	KH	DIS,P rBL	M-POS,CR- RED	F	I	
CO1,CO5	Enlist various fuels used for heating for estimation of their heat value.	CK	NK	K	IBL,S DL	M-POS	F	I	
CO2,CO3	Analyse and appraise use of proper heating device and fuels used for Ayurvediya Aushadhi Nirmana.	AFT- SET	DK	KH	BS	DEB	F	II	
Topic 6 6.Kalpana Nirmana I (Primary & Secondary dosage forms) (Lecture :6 hours, Non lecture: 4 hours)									
CO1,CO2	1. Explain Kashaya kalpana 2. Enlist the dosage form come under Panchavidha Kashaya	CC	MK	KH	L	T- EW,P- VIVA	F&S	II	

	Kalpana and their Upakalpana								
	3. Justify Primary , secondary and tertiary dosage form under Panchavidha kashaya Kalpana and their Upakalpana								
CO1	Define with synonyms and classify different varieties of the dosage form in Ayurvediya Aushadhi nirmana	CK	MK	K	L	T- EW,P-VIVA	F&S	II	
CO1	Describe methods of preparation of the dosage form along with the principles of extraction, concentration and dilution etc.	CC	MK	KH	L&PP T	T- EW,P-VIVA	F&S	II	
CO1,CO2	Explain in details about Standard Operating Procedure (SOP) of each kalpana.	CC	MK	KH	L&PP T,DIS	T- EW,P-VIVA	F&S	II	
CO1,CO3	Enlist details of the applications/administration (samanya Matra, Anupana or sahapana, indications and contraindications) of the dosage form with various examples	CC	MK	K	L&PP T	T- EW,P-VIVA	F&S	II	
CO1,CO6	Assess and discuss modern day development and market trend of the dosage form	CC	DK	K	L&G D,IBL ,LS	T- MEQs,P-SUR	F&S	II	
CO1	Determine the advantages and disadvantages of the dosage form	CC	DK	K	L	T- EW,P-VIVA	F&S	II	
CO2	Describe method of preparation of dosage form along with the principle involved	CK	MK	K	L&PP T,DIS	T- EW,P-VIVA	F&S	II	
CO1	Describe meaning of the term Upakalpana. Enlist panchavidha kashaya kalpana and their respective Upakalpana	CK	DK	K	L	T- MEQs,P-VIVA	F&S	II	
CO1	Explain various kalpas belonging to Various dosage forms	CK	MK	K	L_VC	P-EXAM	S	II	

	-Ingredients, proportion, matra, sevan vidhi if any, therapeutic uses				,PT				
CO2	Critically evaluate rationality behind different proportion of water used in various formulations	AFT-VAL	DK	KH	BS	P-VIVA	F&S	III	
Topic 7 7.Kalpana Nirmana-II (Method of Preparation of different dosage forms& Dietary Supplements)) (Lecture :5 hours, Non lecture: 4 hours)									
CO1,CO5	Explain the basic principles involved , processing techniques,quality control parameters used/ involved in the preparation of Avaleha, Kalpana with examples ,instruments used in small and Large scale production,Research updates	CAP	MK	K	L&PP T,TP W,BL	T- EW,T-OBT	F&S	II	
CO1,CO5	Explain the basic principles involved , processing techniques,quality control parameters used/ involved in the preparation of Sneha Kalpana, Kalpana with examples ,instruments used in small and Large scale production,Concept of Avartana, Research updates on Snehakalpana, Market survey	CK	MK	K	L_VC ,TUT	T- EW,P-VIVA	F&S	II	
CO1,CO4	Describe the Significance of sandhana kalpana, classification, Difference between Madya and Shukta Kalpana, general method of preparation, essential ingredients, Anukta Mana, Sandhana Vidhi, observations, Burnig candle test, Lime water Test, difference between Asava and Arishta, essential knowlege of sale and clinical practice , Research updates	CAP	MK	K	L_VC ,PrBL	T- EW,T-OBT	F&S	II	
CO1,CO3,CO5	Explain Definition , significance of Pathya, types, general, method of preparation Manda, Peya, Yavagu, Vilepi, Anna or Odana Kalpana, Krushara, Yusha, Takra, Khada, Kambalika, Raga, Shadava, Related Research updates, Market survey of Dietary Supplements and Nutraceuticals	CAP	MK	KH	L_VC ,RLE	T- EW,P-VIV A,P-EXAM	F&S	II	
Topic 8 8.Rasa Dravya Parichaya- I (Lecture :12 hours, Non lecture: 4 hours)									
CO1		CC	MK	K	L&PP	T- MEQs,P-	S	I	

	Enlist synonyms of Rasadravya and explain significance of that				T,D_ L	VIVA			
CO1,CO2,CO 6	Explain classical & Mineralogical identification and Sources of Rasadravyas	CC	MK	SH	L&PP T,PT	T- EW,P- EXAM	F&S	I	
CO1,CO2	Discriminate types, Grahya-Agrahyata and Dosha of Rasadravya	CC	MK	KH	L&PP T,PT	P-VIVA,TT- Theory	F&S	I	
CO1,CO2	Explain Shodhan and Marana and other processing techniques of the Rasa- Dravya.	CC	MK	KH	L_V C ,IBL, D	T- EW,P- VIVA,INT	F&S	I	
CO1,CO2,CO 6	Discuss probable physical, chemical changes occurring during process & after Shodhana and Marana of Parada, Haratala, Tamra and Shankha.	CC	MK	KH	L&PP T,BS, SDL	T- EW,P-VIV A,P-EXAM	F&S	I	
CO6		CC	DK	KH	DIS,B	P-VIVA	F&S	I	

	Explain research updates about Shilajatu,Naga,Mukta and Kapardika.?				S				
CO1,CO2,CO6	Discuss probable physical, chemical changes occurring after Bhavana, Puta & whole process of Bhasma nirmana from Rasadravyas	CC	MK	KH	DIS,B S	T-OBT	F&S	I	
CO1,CO4	Enlist Kalpas prepared from these Rasdravyas and therapeutic importance of that Rasadravya	CK	DK	K	IBL,S DL	PRN	F	II	
CO2,CO3	Develop checklist for identification of genuine rasadravyas	AFT- CHR	MK	K	IBL	P-PS	F&S	III	
Topic 9 9.Rasa Dravya Parichaya II (Lecture :7 hours, Non lecture: 6 hours)									
CO1	Enlist the important synonyms of Rasadravyas	CC	DK	KH	L&PP T,DIS	P-VIVA	F&S	II	
CO1,CO6	Explain classical & Minerological identification and their Sources.	CK	DK	K	L&PP T,D_ L	P-VIVA	F&S	II	

CO1	Elaborate types, Grahya-Agrahyata and Dosha of Rasadravyas	CK	DK	K	L&PP T	P-VIVA	F	II	
CO1,CO2	Explain Shodhana, Marana & and other processing techniques with probable chemical reactions.	CC	MK	KH	L&PP T,DIS ,LS	T- EW,P- VIVA	F&S	II	
CO1,CO2	Explain Shodhana, Marana & and other processing techniques with probable chemical reactions.	CE	DK	K	L&G D,PT	P-VIVA	F&S	I	
CO6	Explain research updates of Kasisa,Gauripashana and Akika.	CC	DK	KH	DIS, ML	PRN	F	I	
CO1,CO5	Enlist names of rasadravyas and important kalpas prepared from respective dravya. Describe therapeutic importance of that Rasadravya.	CK	DK	K	DIS,S DL	CL-PR,M- CHT	F	II	
Topic 10 10.Rasadravya Parichaya III (Lecture :3 hours, Non lecture: 6 hours)									
CO1	Enlist Synonyms and sources.	CK	NK	K	PrBL, TPW, PER	T-OBT,M- CHT	F&S	II	

CO1,CO6	Determine types, Grahya-Agrahya, properties & classical as well as Mineralogical Identification of Rasadravyas	CC	NK	K	L&PP T,DIS ,SDL	P-VIVA,CHK	F&S	II	
CO1,CO2	Explain Shodhana, Marana and Probable Chemical Changes.	CC	DK	K	L&PP T,IBL	PRN	F&S	II	
CO6	Explain research update of Badarashma.	CK	NK	K	DIS,L S	P-VIVA	F	II	
CO1,CO5	Enlist Rasadravyas from this group and describe important kalpas with their therapeutic utility	CK	DK	K	TPW	PRN	F	II	
Topic 11 11.Kalpana Nirman -III (Method of Preparation of different dosage forms) (Lecture :8 hours, Non lecture: 6 hours)									
CO1,CO2,CO 3	Describe sharkara kalpana along with preparation method of Syrup.Explain therapeutic importance of prepared sharkara kalpana along with its shelf life.	CC	NK	K	L&PP T,SD L	P-VIVA	F&S	II	
CO1,CO2,CO 3	Describe Gudapaka preparation method with its confirmatory tests and precautionsExplain therapeutic importance of prepared Gudapaka along with its shelf life.	CC	NK	K	L&PP T	P-VIVA	F&S	II	
CO1,CO2,CO 3	Describe Lavana kalpana preparation method with its confirmatory tests and precautionsExplain therapeutic	CC	DK	K	L&PP T	T-CRQs,P- VIVA	F&S	II	

	importance of prepared Lavana kalpana along with its shelf life and packaging techniques.								
CO1,CO2,CO3	Describe Kshara kalpana preparation method with its confirmatory tests and precautionsExplain therapeutic importance of prepared Kshara kalpana and Ksharasutra integration with Shalya tantra department along with its shelf life and packaging techniques.	CAP	MK	KH	L&PPT	P-VIVA,TT-Theory	F&S	II	V-SHL
CO1,CO2,CO3	Describe Ayaskriti kalpana preparation method with its confirmatory tests and precautionsExplain therapeutic importance of prepared Ayaskriti kalpana along with its shelf life and packaging techniques.	CC	NK	KH	L&PPT	P-VIVA	S	II	
CO1,CO2,CO3	Describe Lepa kalpana preparation method with its confirmatory tests and precautionsExplain therapeutic importance of prepared Lepa kalpana, integration with Kayachikitsa and Panchakarma department along with its shelf life and packaging techniques.	CC	MK	K	L&PPT	T- EW,P-VIVA	F&S	II	V-KC ,V-PC
Topic 12 12.Chaturvidha Rasayana (Lecture :4 hours, Non lecture: 4 hours)									
CO1,CO2	Describe importance and unoque features of Chaturvidha Rasayana - Kharaliya Rasayana, Parpati Rasayana, Kupipakwa Rasayana & Pottali Rasayana.	CC	MK	KH	L&PPT,IBL	T- EW,P-VIVA	F&S	II	
CO1,CO2	Explain definition, types and method of preparation of Chaturvidha Rasayana.	CAP	MK	D	L&PPT,PT	T- EW	F&S	II	

CO1,CO2	Determine role of Yantra, Agni & Kala for pharmaceutical process of chaturvidha rasayana	CAN	DK	KH	PT	T- EW,P-VIVA	F&S	II	
CO6	Explain shelf-life of Chaturvidha Rasayana.	CAN	DK	SH	L,DIS	P-VIVA	F&S	II	
CO5	Describe chemical changes occurring during the preparation of chaturvidha rasayana and its impact on Pharmacological action of Chaturvidha Rasayana	CAN	DK	KH	L&G D,BS, SDL	CR-RED,CR-W	F	II	
CO5	Explain law of Definite proportion and proportion of Mercury and sulphur needed for preparation of sulphide of Mercury. in Chaturvidha rasayana	CAP	DK	KH	BS,IB L	CL-PR	F	II	
Topic 13 13.Current and emerging trend in Ayurvedic pharmaceuticals (Lecture :3 hours, Non lecture: 4 hours)									
CO1,CO5,CO6	Discuss the classification of different dosage forms.	CK	DK	K	L&PP T,DIS	P-VIVA,M-POS	F&S	III	
CO1,CO5,CO6	Explain the need of different dosage forms.	CK	DK	K	L&PP T,DIS ,SDL	P-VIVA,M-POS	F&S	III	
CO1,CO5,CO	Enlist categorical information about the cosmetics used in daily	CK	DK	K	L_VC	PRN,M-POS	F	III	

6	routine. Appreciate Ayurvedic cosmetic products.				,DIS, FV				
CO1,CO5	Appreciate Ayurvedic cosmetic products.	AFT- VAL	DK	KH	BS,Pr BL	PRN,P-SUR	F	III	
CO1,CO5,CO 6	Choose and record the contemporary machineries used in the manufacture of cosmetics.	CK	NK	K	L_VC ,DIS, SDL	M-POS	F	III	
CO1,CO5,CO 6	Enlist Quality Control parameters of cosmetics preparations.	CK	DK	K	L&PP T,DIS	P-VIVA,M- POS	F&S	III	
Topic 14 14.GMP(Schedule T) & Regulatory aspects of Ayurvedic drugs (Lecture :2 hours, Non lecture: 4 hours)									
CO5	Explain the legal and regulatory aspects of manufacturing, and sale of Ayurvedic drugs.	CC	MK	K	L&PP T,IBL	CL-PR	F&S	III	
CO5	Describe acts and rules mentioned in Drug & Cosmetic Act 1940 & Rule 1945 and their relevance to Ayurvedic, Siddha, Unani (ASU) drugs.	CC	MK	K	L&G D,BS	QZ	F&S	III	H-DG
CO5	Discuss the guidelines of Food Safety and Standards Authority of India (FSSAI) and FDA.	CK	DK	K	L&G D,SD L	CL-PR	F	III	
CO3,CO5	Determine the principles and practice of establishment of Ayurvedic pharmacy.	CK	DK	K	L&G D,TP W	P-EN,CL-PR	F	III	
CO5	Discuss the NABL guidelines for testing laboratory (Chemical).	CK	NK	K	L&PP T,D_	CL-PR,CHK	F&S	III	

					L				
CO1,CO5	Explain long forms of these - (FSSAI) and (FDA),(CCRAS),(DCGI), (CDSCO)	CK	DK	K	L	T-EMI	S	III	
CO4	Discuss ethical aspect of large scale drug preparation in Ayurvedic Pharmacies	AFT-VAL	DK	K	DIS	CL-PR	F	III	

Paper 2 Ayurvediya Aushadhi Prayoga Vigyana

A3 Course outcome	B3 Learning Objective (At the end of the session, the students should be able to)	C3 Domain/sub	D3 Must to know / desirable to know / Nice to know	E3 Level Does/ Shows how/ Knows how/ Know	F3 T-L method	G3 Assessment	H3 Formative/ summative	I3 Term	J3 Integration
Topic 1 1.Aushadhi Prayoga Vigyana (Lecture :1 hours, Non lecture: 2 hours)									
CO1	Define Aushadhi Prayoga Vigyana and its scope and enlist prashasta bhesaja laxana	CK	MK	K	L	TT-Theory	F&S	I	
Topic 2 2.Single drug (Herbal & Mineral) (Lecture :8 hours, Non lecture: 2 hours)									
CO1,CO2,CO4,CO5,CO6	Describe different dosage forms prepared out of a single herb or mineral	CK	MK	KH	L_VC	P-VIVA,COM,TT-Theory	F&S	I	
CO1,CO2,CO4,CO5,CO6	Appreciate how the therapeutic efficacy varies depending on the dosage form	AFT-VAL	MK	K	L&PPT	T- EW,DEB	F&S	I	

CO1,CO2,CO4,CO5,CO6	Describe therapeutic efficacy of different formulations of Vishadravya (Bhallataka), with its toxic effects and remedy.	CK	NK	K	L&G D	P-VIVA	F	I	
CO1,CO5	Describe therapeutic efficacy of different formulations of Guduchi, Gairika, Gandhaka	CC	MK	K	L&G D,PE R	P-VIVA,TT- Theory	F&S	III	
CO3,CO4	Aappraise multiple factors considered for preparation of various dosage forms from a single drug and creat list of more such examples.	AFT- CHR	DK	KH	BS,IB L	COM	F	III	
Topic 3 3.Single drug(Bhasma, Shuddha & Pishti) (Lecture :12 hours, Non lecture: 6 hours)									
CO2,CO6	Explain chemical form/composition, Pharmacodynamics and pharmacokinetics of Abhraka, Loha and Godanti Bhasma.	CC	DK	KH	L&PP T,DIS ,IBL	P-VIVA	S	III	
CO1,CO2	Explain therapeutic properties, dosage, Anupana, Pathyapathya, duration of treatment, Sevana Kala, shelf life, important Yogas of each Bhasma.	CC	MK	KH	L&PP T,TP W	T- EW,P- VIVA	F&S	III	
CO1,CO2	Describe Apakwa Ashuddha Avidhi Bhasma Sevanajanya Vyadhi and their Shanti-upaya.	CK	DK	KH	DIS,B S	P-VIVA,TT- Theory	F	III	
CO1,CO2	Describe in detail Amayika Prayoga (Therapeutic uses) of each Bhasma/Pishti with given references.	CAP	MK	SH	L&G D,W	T- EW,P- VIVA	F&S	III	

CO2,CO6	Explain research updates and clinical evidences of Swarna Bhasma, Makshika Bhasma and Shankha Bhasma.	CE	DK	K	PrBL, SDL	PRN	F&S	III	
Topic 4 4.Aushadhi Kalpa -I (Compound formulations) (Lecture :16 hours, Non lecture: 4 hours)									
CO1,CO2	Describe reference, ingredients, therapeutic properties, dosage and all administration details alongwith Anupana of each formulation.	CK	MK	KH	L&PP T,BS, SDL	T- EW,P-VIVA	F&S	III	
CO1,CO2	Explain Pathya Apathya, Sevana Avadhi (duration of treatment) and shelf-life of each formulation.	CC	MK	KH	L&PP T,DIS ,BS	T- EW	F&S	III	
CO1,CO2	Interpret probable mode of action of each formulation as per Ayurveda.	CC	DK	KH	L&G D,BS	T- EW,P-VIVA	F&S	III	
CO2,CO3,CO 6	Explain research updates and clinical evidences of Arogyavardhini Gutika and Gandhaka Rasayana	CE	DK	K	PrBL	P-VIVA	F&S	III	

CO3,CO4	Critically analyse compound drugs for their therapeutic actions mentioned in the classics.	AFT-VAL	DK	KH	IBL	PRN	F	III	
Topic 5 5.Aushadhi Kalpa-II (Compound Drugs/Formulations) (Lecture :14 hours, Non lecture: 2 hours)									
CO1,CO2,CO3,CO4	Describe Ingredients, therapeutic importance, dose, anupana, pathya-pathya, duration of treatment, sevana kala, shelf life, research updates and clinical evidences of Dashamoola Kwatha, Pushyanuga Churna, Sanjivani Vati, Chitrakadi Gutika, Simhanada Guggulu, Yogaraja Guggulu, Chyavanaprashavaleha, Gandhakadya Malahara, Ashokarishta, Kutajarishta, Panchagavya Ghrita, Bilvadi Gutika.	CAP	MK	KH	L&PP T	T- EW,P- VIVA	F&S	III	
CO1,CO2,CO3,CO4	Describe Ingredients, indications, dose, anupana, pathyapathya, duration of treatment, sevana kala, shelf life, and clinical evidences of Mahamanjistadi kwatha, Sudarshana Churna, Vyoshadi Vati, Bala Chaturbhadra Rasa, Lavana Bhaskara Churna, Narayana Taila,, Neeliringadi Taila Aravindasava, Kumaryasava.	CAP	NK	KH	L&PP T,DIS	P-VIVA	S	III	
CO1,CO2,CO4,CO5	Describe Ingredients, indications, dose, anupana, pathyapathya, duration of treatment, sevana kala, shelf life, and clinical evidences of Panchaguna Taila, Dadimavaleha, Bramhi Ghrita	CK	DK	K	L&PP T	P-VIVA,TT- Theory	S	III	
CO1,CO2,CO3	Undersand & Recite following classical kalpas.Describe Amayika prayoga of each formulation.Understand probable mode of action as per AyurvedaSearch and Record relevant reaserch articles.Create charts describing details of these drugs.Review market avaibility & poplularities of these drugs among practicing vaidyas & near by population.	CAP	MK	KH	L&PP T,DIS ,BS,I BL,P BL	P-EXAM,CO M,TT-Theory	F&S	III	V-KC ,V-SH ,V-PC ,V-SH L,V-S P,V- BL

CO3,CO4	Explain ethical aspect of administration of compound drugs mainly regarding duration of the treatment given.	AFT-VAL	DK	K	PBL	CL-PR	F	III	
CO1,CO2,CO4,CO6	Describe ingredients, with its dose, therapeutic importance, anupana and pathya-apathya along with its clinical evidences and Research updates	CK	MK	KH	L&PP T	T- EW,P-VIVA	F&S	III	
CO1,CO2,CO4,CO6	Enlist the formulations with its dose, anupana and indications	CK	NK	K	L	T-EMI	S	III	
Topic 6 6.Dosage Forms & Cosmetic Products (Lecture :5 hours, Non lecture: 2 hours)									
CO2,CO3,CO7	Define the term- Dosage forms.	CK	MK	K	L&PP T	TT-Theory	F&S	III	
CO2,CO3,CO7	Discuss the need of different dosage forms.	CK	MK	K	L&PP T	TT-Theory	F&S	III	
CO2,CO3,CO7	Explain the classification of different dosage forms.	CK	DK	K	L&PP T	TT-Theory	F&S	III	
CO2,CO3,CO7	Enlist the solid / liquid / semisolid dosage forms.	CK	MK	K	L&PP T	T-EMI	F&S	III	
CO2,CO3,CO7	Discuss the routes of administration of different dosage forms.	CK	MK	K	L&PP T	T- EW	F&S	III	
CO2,CO3,CO7	Describe the advantages and disadvantages of currently available dosage forms.	CK	MK	K	L&PP T	TT-Theory	F&S	III	
CO2,CO3,CO7	Discuss the research updates about modification of classical Ayurvedic dosage forms.	CK	DK	K	L&PP T	CL-PR	F	III	
CO2,CO3,CO7	Discuss the relevant case studies of different dosage forms.	CK	NK	K	L&PP T	P-SUR	F	III	

CO2,CO3,CO7	Define the term Cosmetics.	CK	DK	K	L	TT-Theory	F&S	III	
CO2,CO3,CO7	Explain the classification of cosmetics based on their application on the specific body parts.	CK	DK	K	L&PPT	CL-PR	F&S	III	
CO2,CO3,CO7	Differentiate between the ancient cosmetics and modern day cosmetics.	CK	DK	K	L&PPT	TT-Theory	F&S	II	
CO5	compare and appraise herbal cosmetics vs synthetic products	AFT-VAL	DK	KH	PBL	PRN	F	III	
Topic 7 7.Nutraceuticals (Lecture :6 hours, Non lecture: 1 hours)									
CO1	Describe importance of combination of aahara and aushadha	CK	MK	K	L&PPT	T- EW	F&S	III	H-SW
CO2,CO6	Explain Nutraceuticals with its types	CK	MK	K	L&PPT	TT-Theory	F&S	III	H-SW
CO2,CO6	Corelate rasayana and nutraceutical with examples	CAN	DK	KH	DIS,PrBL	T-OBT	F	III	H-SW
CO2	Describe with examples mode of action of Ayurvedic nutraceuticals	CAP	MK	KH	SDL,LS	PRN	F	III	H-Sa mhita, H-SW
CO2,CO6,CO7	Enlist at least two dietary preparations from Ayurvedic classics which can serve as rasayana/ nutraceutical in-1) General Health2) Pediatric Health3) Geriatric Health4) Women(Garbhini/ Sutika) Health5) Cardio-protection6) Chronic illness-recovery stage	CAP	MK	K	DIS,B S,SY	CL-PR	F	III	H-SW
CO1,CO2,CO6,CO7	Describe potential of Ayurvedic diet and Rasayana in sports endeavor	CAP	DK	KH	BS,Pr BL,PS	DEB	F	III	H-SW

					M				
CO7	Explain research updates about nutraceuticals	CK	NK	K	SDL, PL	M-POS	F	III	
CO2	Enlist atleast two examples of Aushadhi siddha aahara with its indications for each category-->(Aharadravya belonging to following category and kalpa prepared from that aahara dravya and other aushadhi ingredients)1) Jala varga2) Dugdha varga3) Ikshu varga4) Suka-dhanya varga5) Shimbi Dhanya Varga6) Shaka Varga7) Phala Varga8) Lavana Varga9) Spices	CC	DK	K	L&G D,PrB L	CL-PR	F	III	H-Sa mhita, H-SW
CO3,CO4	creat list of unique features of Ayurvedic nutraceuticals and appraise their current need	AFT- VAL	DK	KH	DIS	PRN	F	III	
Topic 8 8.Anupana Prayoga for Aushadhi Kalpa (Lecture :4 hours, Non lecture: 1 hours)									
CO1	Define and classify Anupana and Sahapana	CK	MK	K	L	T- EW	F&S	III	
CO1,CO2	Expalin different factors to be considered for selection of Anupana as per Disease and Patients	CC	MK	KH	L	T- EW	F&S	III	
CO1,CO2	Enlist different anupana for a single drug based on the condtion of patient and disease. Elaborate with the help of examples of kalpas.	CC	MK	KH	L	T- EW	S	III	
CO4	Describe value of proper selection of Anupanas with examples	AFT- VAL	DK	K	SDL	M-CHT	F	III	
Topic 9 9.Aushadhi Prayoga Marga (Lecture :5 hours, Non lecture: 1 hours)									
CO2,CO4	Discuss the various types of Aushadhi Prayog Marga (route of drug administration).	CK	MK	K	L&PP T	T- EW	F&S	II	
CO2,CO4	Describe the advantages and disadvantages of each Aushadhi Prayog Marga.	CK	DK	K	L&PP T,BS	P-SUR,PM,TT- Theory	F&S	II	

CO2,CO4	Enlist the dosage forms used in the specific Aushadhi Prayog Marga.	CK	DK	K	L&P T	T-EMI	F&S	II	
CO2	Discuss the nature of drug (s) administered in various routes of drug administration.	CAP	NK	KH	L&G D	CL-PR	F	II	
CO4,CO5	Appraise administration of drugs through various routes mentioned in Ayurvedic treatment	AFT- VAL	MK	K	L&G D	T- EW	F&S	III	
Topic 10 10.Rational prescription along with safe dispensing of Ayurvedic formulations. (Lecture :1 hours, Non lecture: 4 hours)									
CO2,CO4	Describe and write demo ideal prescription.	CAP	MK	SH	L&G D,CB L	CR-W,CHK	F&S	III	V-KC ,V-SP ,V-BL
CO1,CO3,CO 4	Explain the safe dispensing and efficacious use of Ayurvedic drugs.	CAP	MK	KH	L&G D,BS, TPW	T-CS,PM	F&S	III	V-KC ,V-BL
CO2,CO4	Explain the importance of rational prescribing of drugs and the concept of essential drugs.	CK	DK	K	L&G D,IBL	QZ ,CHK	F	III	V-KC
CO2,CO4,CO 5	Describe the standard protocol for safe dispensing of Ayurvedic drugs.	CK	DK	KH	L&G D	T-OBT	F	III	
CO2,CO4	Demonstrate and educate home remedies to small group of population.	CAP	DK	SH	PrBL, TPW	TR	F	III	H-SW
CO5	explain ethical aspects related to prescription writing	AFT- RES	MK	KH	TPW	INT	F	III	
Topic 11 11.Traditional & Local health Practices (Lecture :2 hours, Non lecture: 4 hours)									
CO1	Identify Local Health Traditions and Healing Knowledge,	CC	DK	K	DIS,P rBL	P-SUR,INT	F	III	

CO1,CO5	Recognise the possible potential of product development and research based on Traditional knowledge	CK	DK	KH	IBL	INT	F	III	
CO1,CO4	Identify the factors responsible for grant of patent and erroneous grant of patent on indian traditional knowledge.?	CK	DK	K	BS	INT	F&S	III	
CO5	Appraise traditional knowlege of Ayurvedic medicines	AFT-VAL	DK	K	TPW	CR-W	F	III	
Topic 12 12.Pharmacovigilance for Ayurveda drugs (Lecture :1 hours, Non lecture: 4 hours)									
CO2,CO4,CO5	Describe the term Pharmacovigilance and explain importance of Pharmacovigilance for Ayurvedic drugs.	CK	DK	K	L&PP T,IBL	M-POS,C-INT,RK	F	III	V-KC ,V-BL ,H-D G,H-AT
CO4,CO5	Explain the status and central sector scheme of Pharmacovigilance for Ayurveda, Siddha, Unani, and Homeopathy (ASU & H) drugs.	CK	MK	K	L&PP T,DIS	INT,TT-Theory	F	III	V-KC ,H-D G,H-AT
CO4,CO5	Define Adverse Drug Reactions (ADR) and its types.	CE	DK	K	L&G D,IBL	QZ ,TT-Theor y,VV-Viva	S	III	V-KC ,V-BL ,H-D G,H-AT
CO2,CO4,CO5	Identify and monitor ADRs.	AFT-VAL	DK	KH	L&G D,BS, IBL	PRN,RK	F	III	V-KC ,V-BL ,H-D G,H-AT

CO2,CO4	Discuss and make critical comments on the safe and efficacious use of Ayurvedic drugs.	CAP	DK	KH	L&G D,PrB L,TU T	QZ ,CL- PR,INT	F	III	V-KC ,H-D G,H- AT
CO4,CO5	Debate on ADR of ASU drugs	AFT- RES	DK	K	DIS	DEB	F	III	

List of Practicals (Term and Hours)

PRACTICALS (Marks-100)			
S.No	List of Topics	Term	Hours
1	1.Paribhasha concept based Practicals	1	20
2	2.Panchavidha Kashaya Kalpana & their Upakalpana Practicals	1	24
3	3.Rasa Dravya Aushadhi Nirmana Practicals	1	20
4	4.Bheshaja Kalpana Practicals -I	2	24
5	5.Bheshaja Kalpana Practicals -II	2	22
6	6.Dosage Forms & Self-care Products Practicals	2	22
7	7.Field Visit/ Study Tour	3	24
8	8.Hospital IPD Practical	3	10
9	9. Drug Dispensing Practical	3	6
10	10.Quality Control Practicals	2	38

Table 4: Learning objectives (Practical)

A4 Course outcome	B4 Learning Objective (At the end of the session, the students should be able to)	C4 Domain/sub	D4 Must to know / desirable to know / Nice to know	E4 Level Does/ Shows how/ Knows how/ Know	F4 T-L method	G4 Assessment (Refer abbreviations)	H4 Formative/ summative	I4 Term	K4 Integration
Topic 1 1.Paribhasha concept based Practicals									
CO1	Identify the drugs and recite classical name, English name and chemical composition and varga(class) Recite Maharasa , uparasa, Sadharana rasa shlokas from Rasaratna samuchchaya.	PSY-SET	MK	KH	GBL, REC	P-VIVA,P-ID	F&S	I	
CO1,CO2	Demonstrate the correct procedure / SOP and assess the changes observed after the procedure.Discuss the relevant samskara and its role in that procedure.Interpret the Physical, Chemical and Biological alterations.	PSY-MEC	MK	D	GBL, PT	P-PRF,CHK,O SPE	S	I	
CO1,CO2	Observe and describe the pharmaceutical preparation of Gandhaka druti. Explain the term allotropism.Recite melting, boiling and evaporating temperature of Gandhaka.	PSY-MEC	DK	KH	DIS,D _L	P-VIVA	S	II	
CO1,CO2	Observe the procedure of Vanga Jarana. Explain the difference between Jarana and Jaranaa. Discuss chemical process of oxidation and reduction. Recall the information about melting points of all the metals.	CAP	DK	KH	PT,D	P-VIVA	S	III	
CO1,CO2	Demonstrate preparation of Kajjali. Recite its classical shloka. Prepare a checklist of parameters for its siddhilakshana. Interpret	PSY-MEC	MK	D	PBL, TPW,	P-REC,P- EXAM,P-PS	F&S	I	

	law of definite proportion to explain and calculate amount of free sulfur in the prepared amount of kajjali. Calculate the expected weight of rasasindura from the given amount of kajjali.				D_L				
CO1,CO2	Identify relevant Bhasmapariksha and demonstrate samanya and vishesha Bhasma pariksha. Interpret physical/ chemical laws relevant to classical bhasma pariksha.	PSY-MEC	MK	D	DIS,G BL,L RI,D A,D_ L	P-VIVA,CHK	F&S	I	
CO1	Identify various weights and recite essential measures from conversion chart of AFI. Recognise weighing machines and their weighing capacity.	CAP	DK	KH	BS,Pr BL,T PW,P L	PRN,P-SUR	F	I	
CO3,CO4	Identify and value SOP of each procedure of the practical conducted.	AFT-VAL	MK	KH	D_L	P-EXAM	S	II	
CO2	Appraise ancient indications mentioned in classics for confirmation of end point of the pharmaceutical process(Siddhi lakshana)	AFT-RES	MK	K	PrBL	P-VIVA	S	III	
Topic 2 2.Panchavidha Kashaya Kalpana & their Upakalpana Practicals									
CO1,CO2	Recall, Identify and authenticate the raw materials required as per the dosage form/ formulations	PSY-SET	MK	KH	DIS,D	P-VIVA	F&S	II	
CO1,CO2	Demonstrate the method of preparation to get the desired dosage form following SOP	PSY-MEC	MK	SH	DIS,P T	P-VIVA,P-EXAM	F&S	II	
CO1,CO2,CO 5	Assess and explain different parameters to achieve desired characters/ end points (siddhi lakshana) as per classical and contemporary parameters	PSY-MEC	MK	KH	DIS,D	P-VIVA,P-EXAM	F&S	II	
CO1,CO2	Describe ethical responsibility expected during Pharmaceutical	AFT-	MK	K	SDL	P-PRF	F&S	III	

	preparation of Ayurvedic Formulations	REC							
Topic 3 3.Rasa Dravya Aushadhi Nirmana Practicals									
CO1,CO2,CO3	Explain reference Shloka of kalpas & write with interpretation -list of ingredients, their proportion, principles of yoga - yoga samyojana dravya	CC	MK	KH	L	P-VIVA,P-EXAM	F&S	I	
CO1,CO2,CO3	Identify raw Dravya ,used part with classical Mana and interpret in metric system....	CAP	MK	D	DIS,B S	P-EXAM	F&S	I	
CO2,CO3	Identify, Utilize & know mechanism of Yantra used for drug preparation	CAP	MK	KH	DIS,B S	VV-Viva	F&S	I	
CO2,CO3	Observe & Record various parameters responsible for good manufacturing which are done during process of phamaceutical preparation	CE	MK	SH	DIS,B S,PT	P-EXAM	F	I	
CO2	Demonstrate Sidhdhi Lakshna	CAP	MK	SH	D	P-VIVA	S	III	
CO2,CO3	Assess finished product as per classics.	CE	MK	SH	DIS,P T	P-VIVA,P-EXAM	S	I	
CO1,CO2,CO	Appraise peculiarities of chaturvidha rasayana preparation	AFT-	DK	KH	PER	M-POS	F	III	

4		VAL							
Topic 4 4.Bheshaja Kalpana Practicals -I									
CO1,CO3	Demonstrate Arka preparation method, along with its packaging technique and therapeutic importance.	PSY-SET	MK	SH	DIS,D-M	P-VIVA,P-EXAM	F&S	II	
CO1,CO3	Demonstrate preparation of Vati along with drying techniques	PSY-MEC	MK	KH	DIS,D	P-VIVA,P-EXAM	F&S	II	
CO1,CO3	Identify the genuine sample of Guggulu and demonstrate preparation of different types of Guggulu along with drying techniques	PSY-SET	MK	K	DIS,P T	P-VIVA,P-EXAM	F&S	II	
CO1,CO3	Identify the useful part of the raw material and demonstrate Sattva preparation method.	PSY-SET	MK	K	DIS,D	P-VIVA,P-EXAM	F	II	
CO1,CO3	Demonstrate preparation of Varti along with drying and packaging techniques.	PSY-SET	MK	KH	PT	P-VIVA,P-EXAM	F	II	
CO1,CO3	Demonstrate Lavana preparation methods, along with its packaging techniques.	PSY-SET	DK	SH	PT	P-VIVA,P-EXAM	F	II	
CO1,CO3	Identify the internal and external applications of different kshara kalpana along with importance of ksharasutra through surgical aspects.	PSY-ADT	MK	K	PT	P-VIVA,P-EXAM	F	II	V-SHL
CO1,CO3	Demonstrate and Explain preparation methods of Masi kalpana for its internal or external application in clinical practice.	PSY-ADT	DK	K	DIS,P T	P-VIVA,P-EXAM	F	II	
CO1,CO3	Demonstrate preparation and application aspects of Upanaha kalpana .	PSY-MEC	DK	K	DIS,P T	P-EXAM	F&S	II	V-KC
CO1,CO3	Demonstrate preparations of Sikta taila along with identify the genuine sample of Sikta.Perform and Describe Malahara kalpana preparation method with its confirmatory tests of end point. .	PSY-SET	DK	K	DIS,P T	P-VIVA,P-EXAM	F&S	II	

CO2,CO3	Demonstrate preparation of different types of Malahara with its applied aspect.	PSY-SET	NK	K	PT	P-SUR	F	II	V-KC
CO2,CO3	Demonstrate preparation of different types of Lepa and preparation of Shatadhouta ghrita .	PSY-SET	NK	KH	DIS,P T	PRN	F	II	V-KC ,V-PC
CO2,CO3	Perform and Describe Lepa kalpana preparation method with its confirmatory tests and precautions Explain therapeutic importance of prepared Lepa kalpana, integration with Kayachikitsa and Panchakarma department along with its shelf life and packaging techniques.	PSY-MEC	DK	SH	L&G D	P-VIVA,P- EXAM	F&S	II	V-KC
CO2,CO3	Observe demonstration of formulation of Danta manjana	CAP	NK	KH	L&G D	PRN	F	II	
Topic 5 5.Bheshaja Kalpana Practicals -II									
CO1,CO2	Demonstrae the SoP involved in the drug selection, measuring the appropriate quantity of ingredients, preparation, observe the Physical Changes, Siddhi lakshana, enlisting the results, packing and storage of Ghrita Murchana and Taila Murchana	PSY-MEC	MK	D	PT,D	P-REC,P- EXAM,OSPE	F&S	II	
CO1,CO2	Demonstrae the SoP involved in the drug selection, measuring the appropriate quantity of ingredients, preparation, observe the Physical Changes, Siddhi lakshana, enlisting the results, packing and storage of Jatyadi Gritha/ Triphala Gritha/ Ksheera Shatphala Gritha/Phala Gritha,	PSY-MEC	MK	D	PT,D	P- EXAM,OSPE	F&S	II	
CO1,CO2	Demonstrae the SoP involved in the drug selection, measuring the appropriate quantity of ingredients, preparation, observe the Physical Changes, Siddhi lakshana, enlisting the results, packing and storage Ksheera Bala Taila/Kasisadi Taila/ Panchaguna Taila/ Arka Taila/Kutajasuryapaki taila	PSY-MEC	MK	SH	D	P- EXAM,OSPE	F&S	II	

CO1,CO2	Demonstrae the SoP involved in the drug selection, measuring the appropriate quantity of ingredients, preparation, observe the Physical Changes, Siddhi lakshana, enlisting the results, packing and storage Bhallataka Taila Patana/ Jayapala Taila Patana/Vishvamisra Kalpa Sneha	PSY-MEC	DK	KH	D	P-VIVA,P-EXAM,OSPE	F	II	
CO2	Demonstrae the SoP involved in the drug selection, measuring the appropriate quantity of ingredients, preparation, observe the Physical Changes, Siddhi lakshana, enlisting the results, packing and storage of Vasavaleha/ Chavana Prasha Avaleha/ Kushmanda Avaleha	PSY-MEC	MK	KH	D	P-VIVA,P-REC,P-EXAM	F&S	II	
CO2	Demonstrae the SoP involved in the drug selection, measuring the appropriate quantity of ingredients, preparation, observe the Physical Changes, Siddhi lakshana, enlisting the results, packing and storage of Nimbu Sharkara	PSY-MEC	NK	SH	D	P-EXAM,OSPE	F	II	
CO2	Demonstrae the SoP involved in the drug selection, measuring the appropriate quantity of ingredients, preparation, observe the Physical Changes, Siddhi lakshana, enlisting the results, packing and storage of Daruharidra Rasakriya	PSY-MEC	NK	SH	D	PRN	F	II	
CO2	Demonstrae the SoP involved in the drug selection, measuring the appropriate quantity of ingredients, preparation, observe the Physical Changes, Siddhi lakshana, enlisting the results, packing and storage of Haridra Khanda/ Narikela Khanada	PSY-MEC	MK	D	D	P-VIVA,P-EXAM,OSPE	F&S	II	
CO1	Demonstrae the SoP involved in the drug selection, measuring the appropriate quantity of ingredients, preparation, observe the	PSY-MEC	MK	KH	D	T- EW,P-VIVA	F&S	II	

	Physical Changes, Siddhi lakshana, enlisting the results, packing and storage of Kumaryasava/Drakshasava								
CO1,CO2	Demonstrate the SoP involved in the drug selection, measuring the appropriate quantity of ingredients, preparation, observe the Physical Changes, Siddhi lakshana, enlisting the results, packing and storage of Kutajarista/Ashokarishta/Takrarishta	PSY-MEC	MK	KH	D	P-VIVA	F&S	II	
CO2	. Demonstrate the SoP involved in the drug selection, measuring the appropriate quantity of ingredients, preparation, observe the Physical Changes, Siddhi lakshana, enlist the results, packing techniques and storage of unique formulations for e.g.Kanji/Madushukta	CC	DK	KH	D	P-VIVA,COM	F&S	II	
Topic 6 6.Dosage Forms & Self-care Products Practicals									
CO1,CO2,CO 6	Observe instruments used to prepare solid dosage form, liquid dosage form and Semisolid Dosage Form with one example for each , their method of preparation, ingredients used with their quantity and Quality control Parameters.	AFT-RES	DK	KH	W,PT, D	P-VIVA,CHK	F&S	III	
CO1,CO2,CO 6	Observe instruments used to prepare with one example for each , their method of preparation, ingredients used with their quantity and Quality control Parameters.of following self care products Hair care: Shampoo Body care :Soap, Perfume Face care : Face Pack/Talcum Powder Lip Care : Lip Balm, Lipstick Oral care: Tooth Paste/ Mouth Wash Foot Care: Foot Cream Hand Disinfectant : Hand Sanitizer Skin Care: Moisturizer, Sunscreen Lotion following self care products	PSY-ADT	DK	KH	L_VC ,PT,D	P-VIVA,P-EXAM,CHK	F&S	III	
Topic 7 7.Field Visit/ Study Tour									
CO1,CO3,CO 4,CO5,CO6	Field Visit - Record the storage condition of the raw / in-process	CK	DK	K	DIS,F V	M-POS,COM	F	III	

	/ finished goods prepared in the approved sections.								
CO1,CO3,CO4,CO5,CO6	Determine the role of various Yantras / machineries used in the approved sections of the Pharmacy	CK	DK	KH	DIS,R LE	INT	F	III	
CO1,CO3,CO4,CO5,CO6	Differentiate between the ancient and contemporary methods of drug preparation.	CC	DK	K	DIS,F V	PRN	F	III	
CO1,CO3,CO4,CO5,CO6	Enlist the documents required in Batch Manufacturing of Ayurvedic medicines.	CK	NK	K	DIS	P-SUR	F	III	
CO1,CO3,CO4,CO5,CO6	Identify the role of Quality Control instruments and equipments in ensuring a quality Ayurvedic product.	CK	DK	K	L&PP T,DIS	DEB	F	III	
CO1,CO3,CO4,CO5,CO6	Appreciate the importance of Good Manufacturing Practices and Good Packaging Practices required in Ayurvedic Drug manufacturing.	AFT- VAL	DK	K	DIS	PRN,DEB	F	III	
CO1,CO3,CO4,CO5,CO6	Prepare own products as per prevalent FDA guidelines.	PSY- GUD	DK	D	L_VC ,DIS	P-EXAM	F	III	
Topic 8 8.Hospital IPD Practical									
CO1,CO2,CO3,CO4	Review & Observe the case Sheets.	CC	NK	KH	DIS	P-SUR	F	III	V-KC ,V-SH ,V-PC ,V-SH L,V-S

									P,V- BL
CO1,CO2	Discuss for formulation prescription manner.	CC	DK	KH	L&G D	T-CS	F&S	III	V-KC
CO1,CO2,CO 3	Demonstrate & Explain prescription method.	CAP	DK	SH	CD	P-PS	F&S	III	V-KC
CO1,CO2,CO 4	Measure dose of prescribed drug.	CAP	MK	KH	PrBL	SP	F	III	
CO1,CO2,CO 3	Enlist Time, Duration, Pathya, Apathya while prescribing drugs.	CAP	DK	KH	L&G D	P-PRF	F	III	
CO4,CO5	value details and methodical writting of case records of hospital IPD patients	AFT- VAL	MK	KH	RLE	P-CASE	F	III	
Topic 9 9. Drug Dispensing Practical									
CO1,CO3	Assess the arrangement of Ayurvedic drugs according to nature and type in dispensing room or pharmacy.	CAP	NK	D	RLE	P-PRF	F	III	V-KC ,V-PC ,V-BL
CO1,CO3,CO 4	Assess practice of prescription processing and labelling of the drugs.	CE	DK	KH	PrBL	INT	F	III	
CO3,CO4	Determine and identify the cause of common errors occurred	CC	DK	KH	RLE	CL-PR	F	III	

	during dispensing of Ayurvedic drugs.								
CO2,CO4	Explain use of correct drug supply to the right patients, in the required dosage, quantities and clear drug information.	CAP	DK	SH	L&G D	PRN	F	III	V-KC ,V-BL
Topic 10 10.Quality Control Practicals									
CO2	Develop analytical skills for understanding Identity, Purity and Strength of raw materials and finished products as per the standard guideines of the Ayurvedic Pharmacopoeia of India.	CK	MK	KH	L&G D,BS, W,PT, D_L	P-VIVA	F	II	
CO2,CO5	Identify the geological description of minerals: physical parameters.	CK	DK	K	L_VC ,W,D _L,FV	P-ID	F&S	II	
CO2	Describe ayurvedic perspectives of quality control parameters applying for solid, semisolid and liquid dosage forms.	CAP	MK	SH	L&G D,TU T,DA	P-VIVA,Log book	F&S	II	
CO2,CO5	Demonstrate the calibration techniques used for Weighing Balance (chemical and physical), pH Meter, Hot Air Oven and Electric Muffle Furnace to ensure the accuracy of the instrument what it is intended to measure.	CC	DK	KH	D_L	P-VIVA,PRN	F	II	
CO2		CAP	MK	SH	PT,D	P-EXAM,Log	F	II	

	Demonstrate bulk density, loss on drying, total ash, pH and water soluble extractives of Churna.				A	book			
CO2	Perform the analytical tests of tablets/ vati/ gutika for hardness, uniformity of weight and friability.	AFT-CHR	MK	SH	PT,D A	P-EXAM,Log book	F&S	II	
CO2	Estimate specific gravity, alcohol content and total solids of Asava & Arishta.	AFT-CHR	MK	SH	PT	P-EXAM,P- PRF	F	II	
CO2,CO5	Determine iodine value, acid value and saponification value of oils / ghee.	CAP	MK	KH	D_L	P-VIVA	F&S	II	
CO2,CO3	Calculate the dose of various dosage forms and their dispensing methods.	CE	MK	SH	L&G D,PrB L,BL, RLE, D_L	P-SUR,P- CASE	F&S	II	
CO4,CO5	Appraise quality control procedures done for Ayurvedic formulations	AFT-VAL	DK	K	DIS	CL-PR	F	III	

Table 4a: List of Practical

S.No	Name of practical	Term	Activity	Practical hrs
1	1.Paribhasha concept basedPracticals	1	<p>A) Dravya Paribhasha- Identification of drugs and their respective class (varga)</p> <p>B) Prakriya Paribhasha-</p> <p>1.Swedana: Godanti Shodhana (A.F.I.-1,18:4 (Rasatarangini 11/238) Shankha Shodhana (A.F.I.-1,18:18(Rasatarangini 12/12/2) Kapardika shodhana (Rasatarangini 12/89) Guggulu Shodhana (Rasendra Sara Sangraha 1/386, Pg. 117</p> <p>2. Mardana:Parada Samanya Shodhana (Ayurveda Prakasha 1/165)</p> <p>3. Dhalana : Gandhaka Shodhana (A.F.I. 2 Parishishta - 2,9 Shodhana(Rasamrita 2, 3) Vanga Shodhana (A.F.I.-1,18:15 (Sharangadhara M.11/2) Yashada shodhana (Rasatarangini 19/99)</p> <p>4. Nirvapa: Abhraka Shodhana (A.F.I.-1,18:1 (Rasatarangini 10/20) Tamra Shodhana (A.F.I.-1,18:5 (Ayurveda Prakasha 3/118)</p> <p>5. Nirjaleekarana : Tankana Shodhana (A.F.I. 2 Parishishta -2,15 Shodhana (Ayurveda Prakasha 2/244) Kankshi shodhana (A.F.I.-2, 14:3 (Ayurveda Prakasha 2 /258)</p> <p>6. Bhavana: Hingula Shodhana (A.F.I. 2 Parishishta - 2 Shodhana (Rasamruta 1/54)</p> <p>7. Bharjana: Gairika Shodhana (A.F.I. 2 Parishishta - 2,11 Shodhana (Rasaratna Samuchchaya 3/49) Hingu Shodhana (Bhavprakash Nighantu, Haritakyadi Varga, 1/101, Pg. 42)</p> <p>8. Nimajjana/Sthapana: Vatsanabha shodhana (A.F.I. 2 Parishishta - 2,25 Shodhana (Rasamrita parishishta 8:145)</p> <p>9. Jarana : Vanga Jaran (Ayurved Prakash 3/159) Vanga Bhasma (A.F.I.-1,18:15 (Rasamruta 3/94)</p> <p>10. Murchana: Mugdha Rasa (Rasatarangini 6/9) Kajjali (A.F.I.- 1 Parishishta-1, Paribhasha 21 (Rasatarangini 2/27)</p> <p>11. Druti- Gandhaka Druti(Rasa Ratna Samuchchaya 3/29)</p> <p>C) Pramanikarana Paribhasha-</p>	20

			1) Bhasma Samanya Pareeksha - Abhraka Bhasma (Ayurved Prakash 2/104) Shankha Bhasma (Rasaratnasamucchaya 8/26-30) 2) Bhasma Vishesha Pareeksha: Tamra Bhasma (Dadhi/ Nimbu Pariksha)- (Bhaishajya Kalpana Vigyan, Vd. Siddhinandan Mishra, Pg. 78) D) Namburi Phased Spot Test (NPST)	
2	2.Panchavidha Kashaya Kalpana & their Upakalpana Practicals	1	1.Swarasa Kalpana: Tulasi swarasa (Sharangdhar Samhita Madhyam Khanda 1/2),Ardraka Swarasa (Sharangdhar Samhita Madhyam Khanda 1/2), Vasaputapaka Swarasa (Sharangdhar Samhita Madhyam Khanda 1/22-23 & 34) 2. Kalka Kalpana: Nimba kalka (Sharangdhar Samhita Madhyam Khanda 5/1),Rasona Kalka (Sharangdhar Samhita Madhyam Khanda 5/1) 3. Kwatha Kalpana: Punarnavashtaka kwatha (Sharangdhar Samhita Madhyam Khanda 2/1-2, 78-79), Rasna Saptaka Kwatha (Sharangdhar Samhita Madhyam Khanda 2/1-2, 88-89) 4. Hima Kalpana: Dhanyaka Hima (Sharangdhar Samhita Madhyam Khanda 4/1, 7-8),Sarivadi Hima 5. Phanta Kalpana: Panchakola phanta (Sharangdhar Samhita Madhyam Khanda 3/1-2),Yashtimadhu phanta (AFI 1 Parishishta – 1,2/5 Paribhasha) 6. Churna Kalpana: Sitopaladi churna (AFI Part 1, Vol. 1 A, Pg. 348), Hingwastaka Churna (AFI Part 1, Vol. 1 A, Pg. 353) 7. Pramathya: Mustadi Pramathya (Sharangdhar Samhita Madhyam Khanda 2/ 152-153) 8. Paneeya Kalpana: Shadanga Paneeya (Sharangdhar Samhita Madhyam Khanda 2/ 159-160) 9. Mantha Kalpana: Kharjuradi Mantha (Sharangdhar Samhita Madhyam Khanda 3/9-10) 10. Panaka Kalpana: Chinchā Panaka (Bhaishajya Ratnavali Arochaka 18/34-35), Chandana Panaka 11. Ksheerapaka Kalpana: (Sharangdhar	24

			<p>Samhita Madhyam Khanda 2/175-176), Arjuna Ksheera Paka - Chakradatta, Lashuna Ksheerapaka - Charaka Chikitsasthana 5/95</p> <p>12. Udaka Kalpana : Tandulodaka (Sharangdhar Samhita Madhyam Khanda 1/28)</p> <p>Note: In each category if more than 1 practical are there any one or all may be performed.</p>	
3	3.Rasa Dravya Aushadhi Nirmana Practicals	1	<p>1. Marana : Vanga Bhasma (A.F.I. - I, Bhasma, 18:15, Rasatarangini Taranga) / Sankha Bhasma: A.F.I. - I, Bhasma, 18:18, Rasatarangini taranga 12/2)</p> <p>2. Kharaliyarasayana : Ananda Bhairava Rasa (A.F.I. - I, Rasayoga, 20:3, Rasendrasarasangraha Jwaradhikara 2/103-105) /, Tribhuvana Keerti rasa (A.F.I. - I, Rasayoga, 20:20, rasamrita 9/80-81)</p> <p>3. Parpati : Rasa Parpati (A.F.I. - I, Parpati, 16:3, Bhaishajyaratnavali grahanirogadhikara 414-416&436-440), Sweta Parpati (A.F.I. - II, Parpati, 12:2, siddhyogsangraha ashmarimutrakruchhaadhikara)</p> <p>4. Kupipakwarasayana : Rasasindhura (A.F.I. - I, Kupipakwa Rasayana, 15:6, rasatarangini taranga 6/162-176)</p> <p>5. Pottalirasayana : Rasagarbhapottali (Rasayogsagar dwitiyabhaga pottali rahasya page 582)</p> <p>6. Rasa : Laghusutsekhararasa (Rasatantrasara avum siddhaprayogsangraha part-1, kharaliya rasayana page 274)</p> <p>7. Loha: Navayasa loha (A.F.I. - II, lauha, 17:2, Charaka samhita chi.16/70-71)/, Saptamrita loha (A.F.I. - I, lauha, 21:11, Bhaishajyaratnavali shoolrogadhikara 83-84)</p>	20
4	4.Bheshaja Kalpana Practicals -I	2	<p>1. Arka Kalpana: Yavani Arka (API, Part 2, Vol. 3, Pg. 24) Gulab Arka (API, Part 2, Vol. 3, Pg. 4) Misreya Arka (AFI, Part 1, Vol. 1 A, Pg. 106)</p>	24

2. Vati Kalpana:

Agni Tundi Vati (AFI, Part 1, Vol. 1 A, Pg. 497)

Chitrakadi Vati (API, Part 2, Vol. 3, Pg. 107)

Lavangadi Vati (API, Part 2, Vol. 3, Pg. 116)

3. Guggulu Kalpana:

Triphala Guggulu (API, Part 2, Vol. 2, Pg. 134)

Kaishor Guggulu (API, Part 2, Vol. 1, Pg. 94)

4. Satva Kalpana:

Amruta Satva (AFI, Part 1, Vol. 1 A, Pg. 560)

Ardraka Satwa

5. Varti Kalpana:

Phala Varti - (Bhaishajya Ratnavali 31/10)

Chandrodaya Varti (AFI, Part 1, Vol. 1 A, Pg. 553)

6. Lavana Kalpana:

Arka Lavana (API, Part 2, Vol. 1, Pg. 103)

Narikela Lavana (AFI, Part 1, Vol. 1 A, Pg. 473)

7. Kshara Kalpana:

Apamarga Kshara (AFI, Part 1, Vol. 1 A, Pg. 466)

Kshara Sutra Preparation (AFI Part 3, Pg. 213)

8. Masi Kalpana:

Triphala Masi (Rasendra Sara Sangraha Upadamsha Chikitsa)

Mayura Piccha Masi (Yogratnakar , Chhardiroga, Pg. 453)

9. Upanaha:

Atasi Upanaha

10. Manjana:

Dashanasamskara churna (Bhaishajya Ratnavali Mukharog, 61/97-98)

11. Malahara Kalpana:

Siktha Taila (Rasatarangini 4/59)

Sarjarasa Malahara (Rasatantrasar & Siddha Prayog Sangrah Part 1, Pg. 849)

Gandhaka Malahara (Rastarangini 8/63-85)

12. Lepa Kalpana:

Dashanga Lepa (AFI, Part 1, Vol. 1 A, Pg.

			487) Shatadhouta Ghrita (Sushrut Samhita Uttartantra 39/283)	
5	5.BheshajaKalpana Practicals -II	2	<p>1. Sneha Kalpana: Ghrita Murchana (Bhaishajya Ratnavali, Jwaradhikar, 1285), Taila Murchana (Bhaishajya Ratnavali, Jwaradhikar, 1286-1287)</p> <p>2. Ghrita Kalpana: Triphala Ghrita (API, Part 2, Vol. 1, Pg. 90), Amruta Ghrita (Bhaishajya Ratnavali Vatarakta 27/126)</p> <p>3. Taila Kalpana: Ksheera Bala Taila (API, Part 2, Vol. 1, Pg. 124), Arka Taila (Sharangdhar Samhita Madhyam Khanda 9/148)</p> <p>4. Taila Patana: Bhallataka Taila Patana (Sushrut Samhita Chikitsa Sthana 1/92)</p> <p>5. Avaleha Kalpana: Vasavaleha (API, Part 2, Vol. 1, Pg. 32), Kushmanda Avaleha (AFI, Part 1, Vol. 1 A, Pg. 35)</p> <p>6. Sharkara Kalpana: Nimbu Sharkara (Rasatantrasara & Siddhaprayog Sangraha I / Paka Avaleha)</p> <p>7. Ghana: Kutaja Ghana (AFI Part 2, Pg 175), Guduchi Ghana (Ayurved Prakash 3)</p> <p>8. Khanda Kalpana: Haridra Khanda (Bhaishajya Ratnavali Udarda, Shitapitta), Narikela Khanda (AFI, Part 1, Vol. 1 A, Pg. 41)</p> <p>9. Asava : Lohasava (Sharangdhar Samhita, Madhyam Khanda 10/ 34-38), Drakshasava (AFI Part 2, 1:1)</p> <p>10. Arishta: Arjunarishta (Bhaishajya Ratnavali Hridrog). Takrarishta (Charak Samhita Chikitsa 15 / 120)</p> <p>11. Shukta Kalpana: Kanji (Sharangdhar Samhita, Madhyam Khanda 10/ 12), Madushukta (Bhaishajya Ratnavali Karnaroga 62 /23-24)</p>	22
6	6.Dosage Forms & Self-care Products Practical	2	<p>1. Solid dosage forms:</p> <ul style="list-style-type: none"> ♦ Granules/ Lozenges (Pharmaceutics by R.M. Mehta) 	22

2. Liquid Dosage forms:

- ♦ Syrup/Suspension/Emulsion/Liniment (Pharmaceutics by R.M. Mehta)

3. Semisolid Dosage:

- ♦ Cream/Gel/Ointment/Pain Balm (Pharmaceutics by R.M. Mehta)

4. Hair Care:

- ♦ Shampoo (A Handbook of Cosmetics by B M Mithal & R N Saha 8th chapter)

5. Body Care:

- ♦ Soap/Perfume (Pharmaceutics by R.M. Mehta)

6. Face Care:

- ♦ Face pack / Talcum Powder (A Handbook of Cosmetics by B M Mithal & R N Saha 3rd chapter)

7. Lip Care:

- ♦ Lip Balm, Lipstick (A Handbook of Cosmetics by B M Mithal & R N Saha 4th chapter)

8. Oral Care:

- ♦ Tooth Paste/ Mouth Wash (A Handbook of Cosmetics by B M Mithal & R N Saha 19th & 20th chapter)

9. Foot Care:

			<ul style="list-style-type: none"> ♦ Foot Cream (A Handbook of Cosmetics by B M Mithal & R N Saha 5th chapter) <p>10. Hand Disinfectant:</p> <ul style="list-style-type: none"> ♦ Hand Sanitizer ((Pharmaceutics by R.M. Mehta) <p>11. Skin Care:</p> <ul style="list-style-type: none"> ♦ Moisturizer/Sunscreen Lotion (A Handbook of Cosmetics by B M Mithal & R N Saha 6th chapter) <p>Note: In each category if more than 1 practical are there any one or all may be performed.</p>	
7	7.Field Visit/ Study Tour	3	GMP Certified Pharmacy Visit X 2 Pharmacy (1 classical formulations and 1 Proprietary formulations/Having both Manufacturing facility) NABL Accredited drug Testing Laboratory/Research and Development Unit Combined out campus/ Field visit may be planned wherever feasible	24
8	8.Hospital IPD Practical	3	Hospital IPD Practical: Formulation prescription, method administration, dose, time, duration, Pathya, Apathya advised - Minimum 10 case sheet record of different dosage forms prescribed for particular case/ disease	10
9	9. DrugDispensing Practical	3	Drug Dispensing practical for method of Dispensing different dosage forms, their packing for OPD and IPD patients	6
10	10.Quality Control Practicals	2	<ul style="list-style-type: none"> ♦ 1 Minerals & Metals Mineral Identification <ul style="list-style-type: none"> • Physical form – Crystal and 	38

Amorphous

- Hardness on Moh's scale
- Brittleness test
- Fracture and Cleavage
- Streak Test
- Luster

2 Plant Material

- Estimation of Foreign matter
- Specific Gravity
- Refractive Index

3. Prepared Dosage forms

A. Solid Dosage Forms

Rasaushadhi

- Bhasma and Pishti Pariksha
- Determination of Moisture content

4. Kashtoushadhi

a. Churna

- Particle Size
 - Bulk Density
 - Determination of Ash Value – Total Water Soluble/Acid Insoluble ash
- b. Tablets
- Uniformity in Weight and Size
 - Tablet Hardness

B. Semisolid Dosage forms

- Moisture Content
- Microbial Load

C. Liquid Dosage Forms

- PH Value
- Refractive Index
- Specific Gravity
- Saponification Value
- Iodine Value
- Acid Value
- Viscosity

Note :

- All Practical should be performed in Accordance of Methods published in protocol for testing of ASU Medicines and

			Laboratory Guide for Analysis of Ayurveda & Siddha formulations published by Dept of AYUSH, GOI • Minimum 5 Analytical Practicals are to be written in Practical Record or In Journal	
Total Hr				210

Activity

CO	Topic name	Activity Details	Hours
CO1,CO2	Paper I -1. Chronological development of Ayurvediya Aushadhi Nirmana	<p>Objective - To orient the students regarding chronological development of Rasashastra & Bhaishajya Kalpana</p> <p>After completing this activity, students will be able to:</p> <ul style="list-style-type: none"> • Describe the history of Rasashastra & Bhaishajya Kalpana. • Identify the different types of metal-based medicines. • Explain the benefits of metal-based medicines. • Discuss the safety of metal-based medicines. <p>Methodology</p> <p>1) All students are to be assigned to collect and compile information on chronological</p>	1

		<p>development of Rasashastra & Bhaishajya Kalpana from different books, including Indians are the first, who introduced metal based medicines.</p> <p>2) Ask to Submit the assignment for signature</p>	
CO1,CO2	Paper I - 2. a) Paribhasha(Terminology)	<p>Rasadravya</p> <p>Objective - To encourage the students to remember rasadravyas and their classification through games</p> <p>Activity</p> <p>Group I -In one big tray all Rasa - Dravyas are to be kept together.</p> <p>Timer to be started.</p> <p>In a stipulated time, student has to collect drugs belonging to the particular class (rasadravya varga) allotted to him /her and create a heap in order This can be given in a group.</p> <p>Group 2.-Word puzzle</p> <p>Various word puzzles can be created for making the students to remember names of rasadravyas along with their class.</p>	1
CO1,CO3	Paper I -2. b)Paribhasha	<p>Mana Paribhasha Objective -</p> <p>After completing this activity, students will be able to:</p>	2

		<ul style="list-style-type: none"> • weigh dry & wet drugs • Understand the % of weight loss after drying different variety of the wet drugs • Enjoy (game based) learning about rasadravyas and their classification. <p>Methodology-</p> <p>whole batch need to be divided into various groups. (4-5 students in each group).</p> <p>Each group need to make a chart/ task as per the instructions written on the paper they pick up.</p> <p>1) Collect seeds mentioned in the classical mana paribhasha and prepare chart describing details of mana</p> <p>2) Measure by weight the given drug. (Guduchi Bharad, Amalaki Bharad, Haritaki Churna, Nimbapatra churna, whole maricha all will be kept having same weight) Now observe how much volume these drugs have.</p> <p>3) Collect fresh Guduchi.500gm or any fresh drugs leaf, bark, flower etc. Keep on observing the reduction in the weight of the sample till it dries completely. Record weight every day. Discussion about observation will be done.</p> <p>Do this same for Vasa, Shatavari, Amalaki also. Compare and assess the results. Every year drugs need to be changed</p>	
CO1,CO2	Paper I -2. c)Paribhasha Terminology	Shodhana	1

Objective - To enhance ability of the students to recall their knowledge about rasadravyas and their procedures

At the end of Activity, the students should be able to

Recall the different shodhana methods that are used for rasadravyas.

- Identify the different yantras that are used for shodhana.
- Understand the different procedures that are used for shodhana.
- Correctly answer questions about shodhana methods, yantras, and procedures.
- Explain the different steps involved in the shodhana process.
- Discuss the benefits of shodhana for rasadravyas.

Activity-

Rapid Fire quiz online

Questions will be framed based on the knowledge of Yantra, Dravya, Method used for that drug etc and rapid fire round will be carried out. This can be done online

Questions for example-

- 1) Vanga Shodhan is done by which method?
- 2) Which yantra is used for Shankha Shodhan?

		3) LashunaSvarasa bhavana is used for shodhana of which drug?	
CO1,CO2	Paper I- 3.Adharabhuta Siddhanta (Fundamental Principles)	<p>Objective : To understand the concept with the help of classical shloka & application of fundamental principles of Ayurvediya aushadhi nirmana.</p> <p>After completing this activity, students will be able to:</p> <ul style="list-style-type: none"> ◆ Identify the different fundamental principles of Ayurvediya Aushadhi Nirmana. ◆ Illustrate how these principles are applied in the preparation of Ayurvedic formulations. ◆ Interpret classical shlokas related to the application of fundamental principles using Panchavayavavakya. ◆ Demonstrate the skill of interpreting classical shlokas using Panchavayavavakya. ◆ Students are to be divided into 5 groups ◆ Each group need to be given 2 Shlokas from particular classical text book <p>Method of Activity:</p> <ol style="list-style-type: none"> 1. The students are divided into groups & each group need to be allotted 1 to 2 shlokas from classics related to application of fundamental principles. 2. To develop skill of interpretation of shloka by applying Panchavayava vakya i.e Pratignya, 	2

Hetu, Udaharana, Upanaya and nigamana

3. They will understand application of basic fundamentals.

4. Every year different sets of shlokas are to be given. Repetition of shlokas is not acceptable

Discussion:

After completion of task, discussion need to be held with teacher and students.

Teacher in charge will finally conclude the discussion on application of fundamental principles and understanding the shloka by applying Panchavayavakya.

Optional Activity Activity - 1 Title : Search references from classical text

Group : Students should be divided in to 10 groups.

Reference Text : 1.Chakradatta 2.Yogaratanakara
3.Bhavaprakasha 4.Sarangadhara

1GP : DravyaSamgraha method

2 GP : Collection Time

3 Gp :Collection Part

4 GP : Examples of Samskara

5 GP :Collection Nakshatra

6 GP :Pranija dravya partcollection

7 GP :Duplication Yoga

8 GP : Namakarana on Mana/Number of Dravya

9 GP : Saveeryata Avadhi

10 GP : Anupana in classical Yoga

CO1,CO5	Paper I -4.Yantropakaranani - I (Equipments and machineries)	Objectives:- After completing this activity, students will be able to: <ul style="list-style-type: none"> • Identify the different yantras that are used in the preparation of Ayurvedic formulations. • interpret the different procedures of drug preparation that use yantras. • Collect information on different yantras from classical text books. • Present their findings in a clear and concise way. Activity <ul style="list-style-type: none"> ♦ Students need to be divided into 4 groups (15 to 25 students in each group) ♦ Each group need to be given one reference book ♦ They have to collect information on different yantras explained /used for different procedures of drug preparation from that book. ♦ Books like Ananda kanda, Rasa Tarangini, Rasa Ratna Samuchyaya, Rasendra Sara Sangraha, Parada Samhita etc can be given ♦ Every year digfferent books are to be given. ♦ Each Group has to present/ Submit assignment on total no of Yantras mentioned, their different uses, Structure/ Picture etc Discussion: In charge teacher will comment on particular group performance and study matter	4
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		collected.	
CO1,CO5	Paper I -5.Yantropakaranani - II (Equipments and machineries)	Objective:- After completing this activity, students will be able to: <ul style="list-style-type: none"> • Prepare a video/ppt demonstration on Musha, Koshthi and Puta. • Model the preparation of Musha, Koshti and Puta. • Collect literature on Musha, Koshti and Puta from classical text books as per different authors. • Identify modern/presently available Yantras based on the classical concept of Musha, Koshti and Puta. Activity Students are to be divided into 4 groups Group I- is allotted to prepare video/ppt demonstration Group II- Model preparation of Musha, Koshthi and Puta Group III- Literature collection from classical text books as per different authors on Musha, Koshthi and Puta Group IV - Modern / Presently available Yantras based on the classical concept of our yantra, Musha, Koshthi and Puta Note: Every year different yantras/ instruments need to be given	4

		<p>Discussion and Conclusion: Each group has to present their activity followed by teacher's remark</p>	
CO1,CO2	<p>Paper I- 6. Kalpana Nirmana I(Primary & Secondary dosage forms)</p>	<p>Objective:-</p> <p>After completing this activity, students will be able to:</p> <ul style="list-style-type: none"> • Identify the different dosage forms that are commonly used in Ayurveda. • Appraise the different methods that are used to prepare these dosage forms. • Document the different activities that are performed at home and in communities/societies related to the preparation of these dosage forms. • Prepare two dosage forms in the laboratory from their observation of home preparations. <p>Methodology:</p> <p>1. Every student will document different activities performed at home and in societies/communities related to the preparation of different dosage forms which come under Panchavidha kashaya kalpana , Upakalpana and their household applications.(for example-fruit juices belong to svarasa kalpana, chutney to kalka etc.)</p> <p>Discussion:</p> <p>1.The students will be assessed based on their documentation</p> <p>2. A group containing 10 number of students will be asked to collect the raw materials and prepare</p>	4

		<p>minimum two numbers of dosage forms in the laboratory from their observation of home preparations.</p> <p>3. Finally an interactive session will be held to discuss the learning experiences and to clear doubts</p>	
CO5	Paper I- 7 & 11. Kalpana Nirmana II & III (Method of preparation of different dosage forms & dietary supplements)	<p>objective: -</p> <p>After completing this activity, students will be able to:</p> <ul style="list-style-type: none"> • Identify the different dosage forms that are commonly used in Ayurveda. • Appraise the different methods that are used to prepare these dosage forms. • Document the different activities researches related to the preparation of these dosage forms. <p>Methodology: -</p> <p>1. Students need to be divided into 4 different groups.</p> <p>2. Group 1 - Directed to collect information on different varieties of proprietary Ayurvedic and contemporary solid dosage forms available in the market through e-resources (e.g. tablets, capsules, lozenges etc)</p> <p>3. Group 2- Directed to collect information on different varieties of proprietary Ayurvedic and contemporary Liquid dosage forms available in the market through e-resources (e.g. Oils, syrups, suspensions etc)</p> <p>4. Group 3 - Directed to collect information on</p>	10

		<p>different varieties of proprietary Ayurvedic and contemporary semisolid dosage forms available in the market through e-resources (e.g. ointments, gels, jellies etc)</p> <p>5.Group 4 - Directed to collect research articles published on modification of classical Ayurvedic dosage forms through e-resources on solid, liquid and semisolid dosage forms.</p> <p>Discussion: -Finally Students have to present the collected information in the form of power point presentation and submit the assignment.</p> <p>In charge teacher has to conclude by stressing upon scope for research and development in modification of classical dosage forms.</p> <p>The mentioned activity is an example.</p> <p>Note: Every year different formulations/ dosage forms/ activity need to be given.</p>	
CO1,CO2,CO3	Paper I- 8.Rasa Dravya Parichaya - I MK	<p>Objectives:-</p> <p>After completing this activity, students will be able to:</p> <ul style="list-style-type: none"> • Justify the importance of identifying genuine Rasa Dravyas. • Learn to interpret classical and mineralogical criteria for identifying Rasa Dravyas. • Communicate findings effectively <p>Method of Activity:</p> <ol style="list-style-type: none"> 1. Students are to be divided into 4 to 5 groups 2. Each group is to be given 5 Rasadravyas (from 	4

		<p>must to know dravya list).</p> <p>3. Students will be instructed to collect raw samples/ Pictures / Photos of assigned Rasa Dravya</p> <p>4. Students have to interpret classical as well as mineralogical criteria for identifying that Rasa Dravya.</p> <p>5. Encourage them to develop the skill of identification of various Rasa Dravyas and to understand its necessity.</p> <p>Discussion & Conclusion</p> <p>Each Group has to share the presentation.</p> <p>Finally, teacher has to give concluding remarks.</p> <p>Note: The mentioned activity is an example.</p> <p>Every year different sets of drugs/ activity need to be given.</p>	
CO1,CO2,CO3	Paper I-9.Rasa Dravya Parichaya II - DK	<p>Objectives :-</p> <p>After completing this activity, students will be able to:</p> <ul style="list-style-type: none"> • Document the different rasa dravyas that are considered to be desirable to know. • Gather information about each rasa dravya, such as its Sanskrit name, English name, synonyms, botanical name, physical appearance, taste, and medicinal properties. • Present the findings in a clear and concise way. 	6

		<ul style="list-style-type: none"> • Debate and justify that their drug is more superior than other drugs in the same group. <p>Method of Activity:</p> <ol style="list-style-type: none"> 1. Students are to be divided into 4 groups 2. The students will be instructed to refer and collect photos, general information, medicinal uses from classical text books and e resources. 3. Each group is to be given 2 drugs. 4. The mentioned activity is an example. Every year different rasadravya / activity need to be given. <p>Discussion:</p> <p>After the completion of compilation of desirable to know Rasa Dravya, each group will present short review of their work in front of the class and they have to debate and justify that their drug is more superior than other drugs in the same group. Finally, teacher have to give concluding remark on debate.</p>	
CO3	Paper I- 10.Rasa Dravya Parichaya - III NK	<p>Objectives :-</p> <p>After completing this activity, students will be able to:</p> <ul style="list-style-type: none"> • Document the different rasa dravyas that are considered to be desirable to know. • Gather information about each rasa dravya, such as its Sanskrit name, English name, synonyms, botanical name, physical appearance, 	6

		<p>taste, and medicinal properties.</p> <ul style="list-style-type: none"> • Present the findings in a clear and concise way. • Debate and justify that their drug is more superior than other drugs in the same group. To compile, understand and document basic information about certain Rasa Dravyas. (this activity is for nice to know dravyas) <p>Methodology:</p> <ol style="list-style-type: none"> 1. Students are to be divided into 4 groups 2. The students will be instructed to refer and collect photos, general information, medicinal uses of given dravyas from classical text books and e resources. 3. Each group is to be given 4 drugs. 4. The mentioned activity is an example. Every year different drugs/ activity need to be given. <p>Discussion:</p> <p>After the completion of compilation of nice to know Rasa Dravya, each group will present short review of their findings, in front of class and they have to debate and justify that their drugs are more superior than other drugs. Finally, teacher have to give concluding remark on debate.</p> <p>Note: Every year different drugs are to be given.</p>	
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CO1,CO2,CO3,CO5	Paper I - 12.Chaturvidha Rasayana -MK	<p>Objectives:- • Collect information on different Chaturvidha Rasa formulations.</p> <ul style="list-style-type: none"> • Identify the different manufacturing companies that produce Chaturvidha Rasa formulations. • appraise the different classical references that are used to manufacture Chaturvidha Rasa formulations. • Compare the MRP (prices) of different Chaturvidha Rasa formulations. • Identify the indications for different Chaturvidha Rasa formulations. • Analyze the different Chaturvidha Rasa formulations and develop critical thinking skills. • Communicate their findings effectively to the class. <p>Method of Activity: (Survey)</p> <p>Students are to be divided into 5 groups</p> <p>1. Group 1- Need to be assigned to collect information on Swarna Bhasma manufacturing companies, classical references they follow to manufacture it, MRP (prices) and indications</p> <p>2. Group 2- Need to be assigned to collect varieties of parpati containing suvarna bhasma as one ingredient in it, their manufacturing companies, classical references they follow to manufacture it, MRP (prices) and indications</p> <p>3. Group 3- Need to be assigned to collect varieties of kupipakwa rasayanas containing suvarna bhasma as one ingredient in it,</p>	4
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		<p>manufacturing companies, classical references they follow to manufacture it, MRP (prices) and indications</p> <p>4. Group 4 - Need to be assigned to collect varieties of pottali rasayanas containing suvarna bhasma as one ingredient in it, manufacturing companies, classical references they follow to manufacture it, MRP (prices) and indications</p> <p>5. Group 5 - Need to be assigned to collect varieties of kharaliya rasayanas containing suvarna bhasma as one ingredient in it, manufacturing companies, classical references they follow to manufacture it, MRP (prices) and indications</p> <p>6. The mentioned activity is an example. Every year different formulations/ activity need to be given.</p> <p>Discussion: All groups have to present their assignment and finally in charge teacher has to give conclusion of importance of swarnakalpa. rationality behind following different references and probable variation in their cost.</p>	
CO1	Paper I- 13.Current and Emerging Trends in Ayurvedic pharmaceuticals	<p>Objectives: -</p> <ul style="list-style-type: none"> • Identify the current and emerging trends in Ayurvedic Pharmaceuticals. • Analyze the potential impact of these trends on the future of Ayurvedic Pharmaceuticals. • Review and record the commonly used modified dosage forms of Ayurvedic 	4

		<p>formulations.</p> <ul style="list-style-type: none"> • Evaluate the potential of these modified dosage forms to improve the efficacy and safety of Ayurvedic formulations. <p>Method of Activity</p> <p>Students need to be divided into 3 groups</p> <p>Group 1. List the current and emerging trends in Ayurvedic Pharmaceuticals viz. cosmetics, Nutraceuticals, Herbaceuticals</p> <p>Group 2. Review and record the commonly used modified dosage forms of Ayurvedic formulations</p> <p>Group 3. Generate a folder on computer about relevant research articles on modified Ayurvedic dosage forms</p> <p>Discussion : All the above groups will present their assignment with their team and Exchange of Knowledge will take place followed by conclusion by faculty in charge</p>	
CO4	Paper I - 14. GMP & Drug and Cosmetic act 1940 and rules 1945	<p>Objective:</p> <p>After completing this activity, students will be able to:</p> <ul style="list-style-type: none"> • Identify misleading advertisements under the Drug & Magic Remedies objectionable advertisements Act, 1954. • Analyze misleading advertisements and identify the specific provisions of the Act that are being violated. 	4

		<ul style="list-style-type: none"> • Communicate their findings in a clear and concise way. <p>Methodology: -</p> <p>Students are to be divided into 5 students in each group</p> <p>1. Each group need to report two misleading advertisements under Drug & Magic Remedies - objectionable advertisements Act, 1954 advertising through TV channels, print media or electronic media etc.</p> <p>2. The students will ask to submit details of objectionable advertisements in the prescribed format.</p> <p>Discussion: -</p> <p>After the submission of reports, the students will be asked to present and an interaction will be held between students and the concerned teacher (s) to understand the act & rules of objectionable advertisements as a learning experience.</p>	
CO1	Paper II -1. Aushadhi Prayoga Vigyana	<p>Objective:</p> <p>After completing this activity, students will be able to:</p> <ul style="list-style-type: none"> • Understand the concept of Prashasta Bhesaja lakshana. • Identify the different aspects of Prashasta Bhesaja lakshana, such as bahu kalpam, bahugunam, and sampannam. 	2

		<ul style="list-style-type: none"> • Gather information about a given drug/formulation and justify whether it is a Prashasta Bhesaja. • Communicate their findings in a clear and concise way. <p>Method of Activity</p> <p>Students will be divided in Groups consisting of 10 Students in each group</p> <p>each group will be given one drug/Formulation</p> <p>They have to search information about Prashasta bhesaja on following aspects-</p> <ol style="list-style-type: none"> 1.Bahu Kalpam 2.Bahugunam 3.Sampannam <p>justify that the drug which they are allotted drug/formulation</p> <p>Each team will present their Justification followed by conclusion by designated faculty.</p>	
CO1,CO3	Paper II- 2.Single drug (Herbal & Mineral)	<p>Objective:</p> <p>After completing this activity, students will be able to demonstrate their knowledge of herbal and mineral drugs by:</p> <ul style="list-style-type: none"> • Identifying and differentiating between 	2

		<p>different types of herbal and mineral drugs, with at least 5 examples of each.</p> <ul style="list-style-type: none"> • Understanding the different formulations of herbal and mineral drugs, with at least 3 examples of each formulation. • Learning about the different indications for herbal and mineral drugs, with at least 3 examples of each indication. • Learning about the different anupanas that can be used with herbal and mineral drugs, with at least 3 examples of each anupana. • Understanding the importance of pathyaapatya, sevana kala, and saveeryatavadhi in the administration of herbal and mineral drugs. • Communicating their findings in a clear and concise way, including a presentation to the class that is clear, concise, and answers questions about the drugs. <p>Method of Activity</p> <ol style="list-style-type: none"> 1. Students need to divided into groups as per convenience 2. Each group need to be assigned with one herbal or one mineral drug or from both categories 3. Advised to collect information on assigned single drug/drugs variety of formulations, different indications when given in different form, with different anupana, Pathyaapatya, sevana kala, saveeryatavadhi and research updates and clinical evidences for each of the formulations 4. Every year different drugs are to be allotted to avoid repetition. 	
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CO1,CO2,CO3	Paper II -3.Single Drug (Bhasma, Shuudha & Pishti)- Mk	<p>Objective</p> <p>After completing this activity, students will be able to demonstrate their knowledge of market research by:</p> <ul style="list-style-type: none"> • Conducting a market survey of one or two bhasmas in a particular city. • Collecting and documenting information about the market demand for the bhasma, such as the price, the dosage, and the frequency of use. • Analyzing the data collected to determine the market trends for the bhasma. • Communicating their findings in a clear and concise way, including a presentation to the class. <p>Method of Activity:</p> <ol style="list-style-type: none"> 1.The students instructed to visit Ayurvedic drug store and collect information as given in the format. 2.Students need to be divided into 4 to 5 groups. Each group need to be given 1 to 2 drugs. (Every year different drugs are to be allotted to avoid repetition.) 3.Each group has to visit one to two Ayurvedic drug stores. Number of stores can be increased based on number of drug stores in the city or around the city.(based on information of online survey) <p>After collecting information students have to submit survey forms to department</p>	6
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CO1,CO2	Paper II- 4. Aushadhi Kalpa-I(Compound Formulations)	<p>Horizontal Integration Activity with Department of Agada Tantra Objective</p> <p>After completing this activity,</p> <ul style="list-style-type: none"> • Students will be able to demonstrate their knowledge of the preparation and uses of agadas by: • Preparing five different agadas under the guidance of Rasashastra & Bk Dept faculty.. • Presenting their findings on the ingredients, method of preparation, uses, dosage, anupana, and mode of action of the agadas. • Communicating the utility of the agadas in different conditions, research updates with case studies, and dosage, anupana, and duration of agada kalpa prayoga. <p>Method of Activity</p> <p>Students will be divided into 5 groups</p> <p>Each group will get hands on training to prepare one peculiar agada (mentioned in following list) and faculty from Agada Tantra department will give information about its utility in different Visha Laxana/or Stages of visha dushta.All details about agada kalpa prayoga viz.Dosage, Anupana, Duration will be discussed -2hrs</p> <p>Team 1: Bilavdi Agada</p> <p>Team 2: Dooshivishari Agada</p> <p>Team 3: Dashanga Agada</p> <p>Team 4: Murvadi Agada</p> <p>Team 5: Pancha Shireesha Agada</p> <p>Presentation will be done by all Teams on</p>	4
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		<p>Ingredients, Method of Preparation, Video/ Photos of ingredients, preparation, uses, dosage, Anupana</p> <p>Every year different topics are to be selected for integrated activity. Repetition should be avoided.</p> <p>Discussion will be done on mode of action, utility of above prepared Agadas in different conditions, Research updates with Case studies by Agada Tantra Faculty</p>	
CO3	Paper II - 5. Aushadhi Kalpa - II(Compound drugs/ formulations)	<p>Objective</p> <p>After completing this activity, students will be able to:</p> <ul style="list-style-type: none"> • Identify the different types of research updates and clinical evidences that are available for the formulations listed in the syllabus Aushadhi Kalpa - II(Compound drugs/ formulations). • Collect and compile research updates and clinical evidences for the formulations assigned to them. • Review the research updates and clinical evidences to determine their relevance and significance. • Communicate their findings in a clear and concise way. <p>Methodology of Activity :</p> <ol style="list-style-type: none"> 1.Students are to be divided into 5 to 6 groups 2.Each group is to be assigned 2 to 3 formulations in the syllabus. 	2

		<p>3. Groups are instructed to collect Research updates and clinical evidences for formulations assigned to them</p> <p>4. Every year different formulations are to be allotted to avoid repetition.</p> <p>Submission of Assignment:</p> <p>After the completion of compilation groups have to submit the assignment for correction.</p>	
CO4	<p>Paper II - 6 Dosage forms & cosmetic products</p> <p>Paper II- 7. Nutraceuticals</p>	<p>objective</p> <p>After completing this activity, students will be able to:</p> <ul style="list-style-type: none"> • Identify the different types of cosmetic and nutraceutical products. • Understand the legal and regulatory requirements for these products. • Research the market for these products. • Analyze the quality control tests that are recommended for these products. • Prepare a report/assignment on the selected products. • Communicate their findings in a clear and concise way. • Answer questions about their findings. • Communicate the significance of various guidelines used for testing of food products and cosmetics in brief. 	3

Methodology: -

1. Students are to be divided into 5-6 groups
2. Each group need to be given one to two cosmetic or nutraceutical products for eg. Lipstick, lip balm, Energy drink, Nutritional supplement for children, working women, pregnant women etc.
3. The students will be asked to prepare a report/assignment on number of companies selling such products. Information should be compiled about their major ingredients, preservatives, price, market value, quality control tests recommended etc.
4. For that Nutritional Product, the students will be asked to go through the quality parameters and nutritional values displayed on packages of food products as per the guidelines of Food Safety and Standards Authority of India (FSSAI).
5. Every year different products are to be allotted to avoid repetition

Discussion: - After the submission of reports, a discussion will be held among the students and the teacher(s) to understand the significance of various guidelines used for testing of food products and cosmetics in brief.

Optional Activity**Objectives-**

after completion of the course students should be able to prepare dosage forms and self care products in the syllabus.

Short term course/ Module

		<p>Online/offline mode in collaboration with Pharmacy college</p> <p>Dosage Forms & Self-care Products</p> <p>Assessment through MCQ's</p> <p>Duration of the course may be 22hrs including online assessment</p>	
CO1,CO3,CO6	<p>Paper II- 8 Anupana Prayoga for Aushadhi Kalpa</p> <p>Paper II- 9. Aushadhi Prayoga Marga</p>	<p>Objective</p> <p>After the completion of this activity</p> <ul style="list-style-type: none"> Students should be able to explain/present the probable pharmacokinetic and pharmacodynamic principles of assigned Ayurvedic drugs & Anupana in different condition or indication <p>Method of Activity: -</p> <ol style="list-style-type: none"> Students will be divided into 5 to 6 groups Each group need to be allotted formulations/ single drug/Bhasma/Pishti etc Students are asked to explain the therapeutic importance of five formulations with respect to different Anupana, Aushadhiprayoga marga and their utility in different disorders with the probable pharmacokinetic and pharmacodynamic principles involved in the use of assigned Ayurvedic drugs. students have to submit assignment / sharing ppt presentation in the activity group <p>Discussion: -</p> <p>After the completion of this task, students should be able to explain/present the probable pharmacokinetic and pharmacodynamic principles of assigned Ayurvedic drugs. In charge teacher has to conclude on collection of compiled matter and drugs action.</p>	2

CO3	Paper II 10. Rational prescription along with safe dispensing of Ayurvedic formulations.	<p>Objective</p> <p>After completing this activity, students will be able to:</p> <ul style="list-style-type: none"> • Identify the different components of a prescription. • Analyse the prescriptions to determine whether they are rational. • Discuss the significance of ideal prescription and rationality of use of drugs in Ayurveda. <p>Methodology: -</p> <ol style="list-style-type: none"> 1.Students are to be divided into 4 to 5 groups 2.Each group is advised to collect 4 to 5 prescriptions from different departments of the hospital. 3.The students are asked to visit hospital to go through the randomly selected five prescriptions for promoting them to know the ideal prescription and rational use of drugs. 4.The students will be asked to present their review of this activity during the non-lecture hours. 5.Strictly instructions should be given to maintain confidentiality about patient's name and consultant's name. <p>Discussion: -</p> <p>After the completion of the task, an interaction will be held among the students and the concerned teacher (s) to understand the</p>	4
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		significance of ideal prescription and rationality of use of drugs in Ayurvedic practices.	
CO1,CO5	Paper II 11. Traditional and local health practices	<p>Objective</p> <p>After completing this activity, students will be able to:</p> <ul style="list-style-type: none"> • Identify different types of traditional healers in their local area/region. • Interview traditional healers to understand their practices. • Document the practices of traditional healers in a way that is respectful and preserves their knowledge. • Communicate the findings of their research to others. <p>Methodology :</p> <p>1. To understand the practices of traditional healers/ Folklore healers- the students are instructed to visit and meet some of the folk healers / traditional healers who have been practicing since ages in their local area/region. During their holiday/vacation students can complete this survey in and around the institute or near their residential place.</p> <p>2. The students may act as a bridge between Ayurveda and traditional/local healers by making them understand the beneficial effect of technology and how this can help the healers to expand their treatment to a larger mass. Because many a times it has been observed that the healers are reluctant or they don't entertain the students who come to meet them for fear of exploitation or theft of their knowledge.</p>	4

		<p>3. By doing this practice, the healers will develop confidence on students which helps in collecting /documenting practices, through which a new horizon may open in the field of medicinal research.</p> <p>Discussion: After the completion of the visit, an interaction need to be held among the concerned teachers and students to discuss the learning experiences, and try to find out difficulties so that in future those things can be managed or avoided to make things easier.</p>	
CO4	Paper II 12. Pharmacovigilance for Ayurveda drugs	<p>Objective</p> <p>After completing this activity, students will be able to:</p> <ul style="list-style-type: none"> • Identify the different types of adverse drug reactions (ADRs). • Describe the detection criteria for ADRs. • Explain the assessment techniques for ADRs. • Discuss the prevention criteria for ADRs. • Able to fill out an ADR reporting format <p>Methodology: -</p> <p>The students will be asked to visit hospital or go through the previously reported cases to discuss for detection criteria, assessment techniques, understanding and prevention criteria of ADRs.</p> <p>Every student is assigned to fill up the ADR reporting format by allotting imaginary situation/ real case</p>	4

		Discussion: - After the visit, an interaction will be held among the concerned teacher(s) and the students to discuss the learning experiences, and the importance of ADRs, their assessment and reporting techniques.	
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Hours indicated are included in calculations of Table 3 and 4 !

Table 5- Teaching learning method

Sr No	Teaching learning methods in the course	No of Activities
1	Lecture	15
2	Lecture with Power point presentation	82
3	Lecture & Group Discussion	25
4	Lecture with Video clips	14
5	Discussions	46
6	Brainstorming	29
7	Inquiry-Based Learning	25
8	PBL	1
9	CBL	1
10	Project-Based Learning	15
11	Team project work	12
12	Blended Learning	1
13	Edutainment	1
14	Mobile learning	2
15	Self-directed learning	23
16	Problem solving method	2
17	Workshops	1
18	Game-Based Learning	2
19	Demo on Model	2
20	Library Session	7

21	Peer learning	1
22	Real life experience	5
23	Recitation	2
24	Symposium	1
25	Tutorial	2
26	Presentations	2
27	Practical	7
28	Drug analysis	1
29	Demonstration	2
30	Demonstration Lab	4
31	Field visit	2

These are overall teaching learning methods listed in Table 3 and 4. Teachers can select the best possible method amongst the given methods as per objective, available time etc.

Table 6: Assessment Summary: Assessment is subdivided in A to H points

6 A-Number of Papers and Marks Distribution

Subject Code	Papers	Theory	Practical/Clinical Assessment					Grand Total
			Practical	Viva	Elective	IA	Sub Total	
AyUG-RB	2	200	100	70	-	30	200	400

6 B - Scheme of Assessment (formative and Summative)

PROFESSIONAL COURSE	DURATION OF PROFESSIONAL COURSE		
	First Term (1-6 Months)	Second Term (7-12 Months)	Third Term (13-18 Months)
Second	3 PA & First TT	3 PA & Second TT	3 PA & UE

PA: Periodical Assessment; **TT:** Term Test; **UE:** University Examinations.

**** University Examination shall be on entire syllabus**

6 C - Calculation Method for Internal assessment Marks

TERM	PERIODICAL ASSESSMENT*					TERM TEST**	TERM ASSESSMENT	
	A 2	B	C	D	E	F	G	H
	1 (15 Marks)	2 (15 Marks)	3 (15 Marks)	Average (A+B+C/3)	Converted to 30 Marks (D/15*30)	Term Test (Marks converted to 30)	Sub Total _/60 Marks	Term Assessment (.../30)
FIRST							E+F	(E+F)/2
SECOND							E+F	(E+F)/2
THIRD						NIL		E
Final IA	Average of Three Term Assessment Marks as Shown in 'H' Column.							
	Maximum Marks in Parentheses *Select an Evaluation Method which is appropriate for the objectives of Topics from the Table 6 D for Periodic assessment. Conduct 15 marks assessment and enter marks in A, B, and C. ** Conduct Theory (100 Marks)(MCQ(20*1 Marks), SAQ(8*5), LAQ(4*10)) and Practical (100 Marks) Then convert to 30 marks.							

6 D - Evaluation Methods for Periodical Assessment

S. No	Evaluation Methods
1	Activities Indicated in Table 3 - Column G3 as per Indicated I, II or III term in column I3

Evaluation Methods in MSE

1. Practical / Clinical Performance
2. Viva Voce, MCQs, MEQ (Modified Essay Questions/Structured Questions)
3. Open Book Test (Problem Based)
4. Summary Writing (Research Papers/ Samhitas)
5. Class Presentations; Work Book Maintenance
6. Problem Based Assignment
7. Objective Structured Clinical Examination (OSCE), Objective Structured Practical Examination (OPSE), Mini Clinical Evaluation Exercise (Mini-CEX), Direct Observation of Procedures (DOP), Case Based Discussion (CBD)
8. Extra-curricular Activities, (Social Work, Public Awareness, Surveillance Activities, Sports or Other Activities which may be decided by the department).
9. Small Project etc.

6 E Question Paper Pattern

II PROFESSIONAL BAMS EXAMINATIONS AyUG-RB

PAPER-1

Time: 3 Hours Maximum Marks: 100

INSTRUCTIONS: All questions compulsory

		Number of Questions	Marks per question	Total Marks
Q 1	MULTIPLE CHOICE QUESTIONS (MCQ)	20	1	20
Q 2	SHORT ANSWER QUESTIONS (SAQ)	8	5	40
Q 3	LONG ANSWER QUESTIONS (LAQ)	4	10	40
				100

Similar for Paper II (If applicable).

6 F Distribution of theory examination

Paper 1 Ayurvediya Aushadhi Nirmana Vigyana						
Sr. No	A List of Topics	B Term	C Marks	MCQ (1 Mark)	SAQ (5 Marks)	LAQ (10 Marks)
1	1.Chronological development of Ayurvediya Aushadhi Nirmana	1	05	No	Yes	No
2	2.Paribhasha (Terminology)	1	10	Yes	Yes	No
3	3.Adharbhuta Siddhanta (Application of fundamental principles)	1	05	Yes	Yes	No
4	4.Yantropakaranani- I (Equipments and machineries)	1	05	Yes	Yes	No
5	5.Yantropakaranani -II (Equipments, fuel and Heating Devices)	1	05	Yes	Yes	No
6	6.Kalpana Nirmana I (Primary & Secondary dosage forms)	1	10	Yes	Yes	Yes
7	7.Kalpana Nirmana-II (Method of Preparation of different dosage forms& Dietary Supplements))	1	10	Yes	Yes	Yes
8	8.Rasa Dravya Parichaya- I	2	10	Yes	Yes	Yes
9	9.Rasa Dravya Parichaya II	2	5	Yes	Yes	No
10	10.Rasadravaya Parichaya III	2	5	Yes	No	No
11	11.Kalpana Nirman -III (Method of Preparation of different dosage forms)	2	10	Yes	Yes	Yes
12	12.Chaturvidha Rasayana	2	10	Yes	Yes	Yes
13	13.Current and emerging trend in Ayurvedic pharmaceuticals	3	5	No	Yes	No

14	14.GMP(Schedule T) & Regulatory aspects of Ayurvedic drugs	3	5	Yes	Yes	No
Total Marks			100			

Paper 2 Ayurvediya Aushadhi Prayoga Vigyana						
Sr. No	A List of Topics	B Term	C Marks	MCQ (1 Mark)	SAQ (5 Marks)	LAQ (10 Marks)
15	1.Aushadhi Prayoga Vigyana	1	5	Yes	Yes	No
16	2.Single drug (Herbal & Mineral)	1	10	Yes	Yes	Yes
17	3.Single drug(Bhasma, Shuddha & Pishti)	2	15	Yes	Yes	Yes
18	4.Aushadhi Kalpa -I (Compound formulations)	2	15	Yes	Yes	Yes
19	5.Aushadhi Kalpa-II (Compound Drugs/Formulations)	3	15	Yes	Yes	Yes
20	6.Dosage Forms & Cosmetic Products	3	5	Yes	Yes	No
21	7.Nutraceuticals	3	5	Yes	Yes	No
22	8.Anupana Prayoga for Aushadhi Kalpa	3	5	Yes	Yes	No
23	9.Aushadhi Prayoga Marga	3	10	Yes	Yes	Yes
24	10.Rational prescription along with safe dispensing of Ayurvedic formulations.	3	5	No	Yes	No
25	11.Traditional & Local health Practices	3	5	No	Yes	No
26	12.Pharmacovigilance for Ayurveda drugs	3	5	Yes	Yes	No
Total Marks			100			

Paper No:1		
Question No	Type of Question	Question Paper Format
Q1	<p>Multiple choice Questions 20 Questions 1 mark each All compulsory</p> <p>Must know part - 15 MCQ Desirable to know - 3 MCQ Nice to know part - 2 MCQ</p>	<ol style="list-style-type: none"> 1. 2.Paribhasha (Terminology) 2. 2.Paribhasha (Terminology) 3. 2.Paribhasha (Terminology) 4. 4.Yantropakaranani- I (Equipments and machineries) 5. 5.Yantropakaranani -II (Equipments, fuel and Heating Devices) 6. 6.Kalpana Nirmana I (Primary & Secondary dosage forms) 7. 6.Kalpana Nirmana I (Primary & Secondary dosage forms) 8. 6.Kalpana Nirmana I (Primary & Secondary dosage forms) 9. 7.Kalpana Nirmana-II (Method of Preparation of different dosage forms& Dietary Supplements)) 10. 7.Kalpana Nirmana-II (Method of Preparation of different dosage forms& Dietary Supplements)) 11. 8.Rasa Dravya Parichaya- I 12. 8.Rasa Dravya Parichaya- I 13. 8.Rasa Dravya Parichaya- I 14. 8.Rasa Dravya Parichaya- I 15. 9.Rasa Dravya Parichaya II 16. 10.Rasadravya Parichaya III 17. 11.Kalpana Nirman -III (Method of Preparation of different dosage forms) 18. 12.Chaturvidha Rasayana 19. 12.Chaturvidha Rasayana 20. 14.GMP(Schedule T) & Regulatory aspects of Ayurvedic drugs
Q2	<p>Short answer Questions Eight Questions 5 Marks Each All compulsory</p> <p>Must know - 7 SAQ Desirable to know - 1 SAQ No questions on Nice to know</p>	<ol style="list-style-type: none"> 1. 1.Chronological development of Ayurvediya Aushadhi Nirmana 2. 3.Adharbhuta Siddhanta (Application of fundamental principles) / 2.Paribhasha (Terminology) 3. 9.Rasa Dravya Parichaya II / 4. Yantropakaranani- I (Equipments and machineries) / 5.Yantropakaranani -II (Equipments, fuel and Heating Devices) 4. 6.Kalpana Nirmana I (Primary & Secondary dosage forms) 5. 7.Kalpana Nirmana-II (Method of Preparation

		<p>of different dosage forms& Dietary Supplements))</p> <p>6. 9.Rasa Dravya Parichaya II / 8.Rasa Dravya Parichaya- I</p> <p>7. 12.Chaturvidha Rasayana</p> <p>8. 14.GMP(Schedule T) & Regulatory aspects of Ayurvedic drugs / 13.Current and emerging trend in Ayurvedic pharmaceuticals</p>
Q3	<p>Long answer Questions Four Questions 10 marks each All compulsory</p> <p>All questions on must know. No Questions on Nice to know and Desirable to know</p>	<p>1. 6.Kalpana Nirmana I (Primary & Secondary dosage forms)</p> <p>2. 7.Kalpana Nirmana-II (Method of Preparation of different dosage forms& Dietary Supplements))</p> <p>3. 8.Rasa Dravya Parichaya- I</p> <p>4. 11.Kalpana Nirman -III (Method of Preparation of different dosage forms) / 12.Chaturvidha Rasayana</p>
Paper No:2		
Question No	Type of Question	Question Paper Format
Q1	<p>Multiple choice Questions 20 Questions 1 mark each All compulsory</p> <p>Must know part - 15 MCQ Desirable to know - 3 MCQ Nice to know part - 2 MCQ</p>	<p>1. 1.Aushadhi Prayoga Vigyana</p> <p>2. 2.Single drug (Herbal & Mineral)</p> <p>3. 2.Single drug (Herbal & Mineral)</p> <p>4. 3.Single drug(Bhasma, Shuddha & Pishti)</p> <p>5. 3.Single drug(Bhasma, Shuddha & Pishti)</p> <p>6. 3.Single drug(Bhasma, Shuddha & Pishti)</p> <p>7. 3.Single drug(Bhasma, Shuddha & Pishti)</p> <p>8. 4.Aushadhi Kalpa -I (Compound formulations)</p> <p>9. 4.Aushadhi Kalpa -I (Compound formulations)</p> <p>10. 4.Aushadhi Kalpa -I (Compound formulations)</p> <p>11. 4.Aushadhi Kalpa -I (Compound formulations)</p> <p>12. 5.Aushadhi Kalpa-II (Compound Drugs/Formulations)</p> <p>13. 5.Aushadhi Kalpa-II (Compound Drugs/Formulations)</p> <p>14. 5.Aushadhi Kalpa-II (Compound Drugs/Formulations)</p> <p>15. 5.Aushadhi Kalpa-II (Compound Drugs/Formulations)</p> <p>16. 6.Dosage Forms & Cosmetic Products</p>

		17. 7.Nutraceuticals 18. 8.Anupana Prayoga for Aushadhi Kalpa 19. 9.Aushadhi Prayoga Marga 20. 12.Pharmacovigilance for Ayurveda drugs
Q2	Short answer Questions Eight Questions 5 Marks Each All compulsory Must know - 7 SAQ Desirable to know - 1 SAQ No questions on Nice to know	1. 8.Anupana Prayoga for Aushadhi Kalpa / 1.Aushadhi Prayoga Vigyana 2. 2.Single drug (Herbal & Mineral) 3. 3.Single drug(Bhasma, Shuddha & Pishti) 4. 4.Aushadhi Kalpa -I (Compound formulations) 5. 5.Aushadhi Kalpa-II (Compound Drugs/Formulations) 6. 7.Nutraceuticals 7. 9.Aushadhi Prayoga Marga 8. 12.Pharmacovigilance for Ayurveda drugs / 10.Rational prescription along with safe dispensing of Ayurvedic formulations. / 6.Dosage Forms & Cosmetic Products / 11.Traditional & Local health Practices
Q3	Long answer Questions Four Questions 10 marks each All compulsory All questions on must know. No Questions on Nice to know and Desirable to know	1. 2.Single drug (Herbal & Mineral) / 9.Aushadhi Prayoga Marga 2. 3.Single drug(Bhasma, Shuddha & Pishti) 3. 4.Aushadhi Kalpa -I (Compound formulations) 4. 5.Aushadhi Kalpa-II (Compound Drugs/Formulations)

6 H Distribution of Practical Exam

S.No	Heads	Marks
1	<p>1.Spotting (10 sample + 5 Instruments/ equipments)</p> <p>Identification (1 mark) answering sub question related to spotter(1 mark) 15x2=30 marks</p> <p>Choose spotter from below mentioned list</p> <ol style="list-style-type: none"> 1. Parada (mercury), 2. Abhraka (Biotite Mica), 3. Makshika (Chalco-pyrite), 4. Shilajatu(Asphaltum Punjabianum) 5. Gandhaka (Sulfur) 6. Gairika(Red Ochre) 7. Kankshi (Alum) 8. Haratala (Orpiment) 9. Manahshila (Realgar) 10. Kampillaka(Mallotus Philippinensis) 11. Navasadara (Ammonium chloride) 12. Hingula (Red Cinnabar) 13. Tamra (Copper) 14. Loha (Iron) 15. Mandur (rust iron) 16. Vanga (Tin) 17. Naga (Lead) 18. Yashada (Zinc) 19. Pravala (Coral) 20. Kaparda (Cowries) 21. Shukti (Oyster Shell) 22. Shankh (Conch Shell) 23. Godanti (Gypsum) 24. Samudraphena (Cattle Fish bone) 25. Kukkutanda twak (Hen's EggShell), 26. Tankana kshara (Borax) 27. Sasyaka (Peacock ore) 28. Kasisa (Green Vitriol), 29. Gauri pashana (Arsenic oxide) 30. Akika(Agate), 31. Sudha (Lime stone) 32. Khatika 33. Dugdhapashana (Talc) 34. Vimala 35. Rasaka 36. Yantra 	30

	37. Dola Yantra 38. Damaru Yantra 39. Valuka Yantra 40. Puta Yantra 41. Khalwa Yantra 42. Patana Yantra 43. Darvika Yantra 44. Ulukhala Yantra 45. Patala Yantra 46. Kupa Yantra 47. Arkapatana Yantra 48. Pithara Yantra 49. Sharava Yantra 50. Palika Yantra 51. Sthali Yantra 52. Swedana Yantra 53. Moh's scale 54. Tablet Hardness tester 55. Ph Meter 56. Muffle Furnace 57. Electronic Weighing machine 58. Pycnometer 59. Large scale manufacturing instruments & equipments in the syllabus Photos /Pictures may be used for spotting	
2	2. Long Practical <ul style="list-style-type: none"> ♦ Selection of Ingredients with proportion(10Marks) ♦ Preparation following SOP (15 marks) ♦ Demonstration of Siddhi lakshana(05Marks) ♦ on site viva (10 Marks) List of Long Practicals <ol style="list-style-type: none"> 1. Sitopaladi churna 2. Hingwastaka Churn 3. Agni Tundi Vati 4. Chitrakadi Vati 5. Lavangadi Vati 6. Triphala Guggulu 7. Kaishor Guggulu 8. Phala Varti 9. Chandrodaya Varti 	40

	10. Arka Lavana 11. Narikela Lavana 12. Atasi Upanaha 13. Dashanasamskara churna 14. Gandhaka Malahara 15. Dashanga Lepa 16. Mustadi Pramathya 17. Shadanga Paneeya 18. Kharjuradi Mantha 19. Chinch Panaka 20. Chandana Panaka 21. Ghrita Murchana 22. Taila Murchana 23. Triphala Ghrita 24. Amruta Ghrita 25. Ksheera Bala Taila 26. Arka Taila 27. Vasavaleha 28. Nimbu Sharkara 29. Kutaja Ghana 30. Guduchi Ghana 31. Haridra Khanda 32. Narikela Khanda 33. Ananda Bhairava Rasa 34. Tribhuvana Keerti rasa 35. Rasa Parpati 36. Sweta Parpati 37. Laghusutsekhara rasa 38. Navayasa loha 39. Saptamrita loha Note: for preparation shuddha dravya, decoction, murchita gritha, murchita taila etc are to be provided for long practical	
3	3.Short Practical <ul style="list-style-type: none"> ♦ Selection of Ingredients with proportion(5Marks) ♦ Preparation following SOP (5 marks) ♦ Demonstration of Siddhi lakshana(5Marks) ♦ on site viva (5 Marks) List of Short Practicals 1. Godanti Shodhana 2. Shankha Shodhana	20

	<ol style="list-style-type: none"> 3. Kapardika shodhana 4. Guggulu Shodhana 5. Gandhaka Shodhana 6. Vanga Shodhana 7. Yashada shodhana 8. Abhraka Shodhana 9. Tamra Shodhana 10. Tankana Shodhana 11. Kankshi shodhana 12. Hingula Shodhana 13. Gairika Shodhana 14. Hingu Shodhana 15. Mugdha Rasa 16. Tamra Bhasma (Dadhi/ Nimbu Pariksha) 17. Triphala Masi 18. Mayura Piccha Masi 19. Vasaputapaka Swarasa 20. Amruta Satva 21. Arjuna Ksheera Paka 22. Lashuna Ksheerapaka 23. Punarnavashtaka kwatha 24. Rasna Saptaka Kwatha 25. Specific Gravity 26. Refractive Index 27. PH 	
4	<p>4. Practical Record</p> <p>Four Record books- for each record book 2.5 Marks</p>	10
5	<p>5. Viva-Voce</p> <p>Structure of Viva</p> <ol style="list-style-type: none"> 1. Paribhasha – (2 questions 3 marks each) - 6 Marks 2. Shodhana, marana –(1 question from each 5 marks each) -10 Marks 3. Yantropakarana –(2questions 3 marks each) - 6 Marks 4. Chemical composition Raasadravaya –(1 questions 2 marks each)-2 Marks 5. Therapeutic application of single drugs – (2 question 3 marks each) -6 marks 6. Yoga - (Shloka-3 marks; ingredients-5 marks: indications -5 marks 	70

	<p>dose & anupana-2Marks)-15Marks (Select the yoga having at least 5 ingredients)</p> <p>7. Siddhi lakshana & quality control tests –(2 questions 5 marks each)-10 Marks</p> <p>8. D& C act, GMP, FSSAI- 2 Marks</p> <p>9. Viva on Non Lecture hour activity book-8 Marks</p> <p>10. Communication skills -5 Marks</p>	
6	6. Internal assessment	30
Total Marks		200

References Books/ Resources

S.No	Book	Resources
1	1. Adyatan Rasa Shastra	R.K. Goyal Chaukhamba Surbharati Prakashan, Varanasi
2	2.Ayurvediya Aushadhi gunadharma shastra	Vol I, II, III, IV, V, Gune Gangadharashastri, Gune Bandhu Prakashan
3	3. Asava Arishta Vigyanam	Dr. Pakshdhar Jha, Chaukhambha Sanskrit Sansthan, Varanasi
4	4. Ayurvediya Rasa Shastra	(Sachitra) Chandrabhusan Jha by Chaukhamba Surbharati Prakashan Varanasi, Reprint 2012
5	5.Ayurvediya Rasa Shastra	Prof. Siddhi Nandan Mishra, Chaukhamba Orientalia, Varanasi
6	6.Ayurved Prakash	Vaidya Gulraj Mishra. Chaukhambha Bharati Academy, Varanasi
7	7.Drugs and Cosmetic Act - 1940	Vijay Malik, Eastern Book Company Delhi
8	8. Pratyaksha Aushadh Nirmanam	Acharya Vishwanath Dwivedi
9	9.Rasa Tarangini	Sadanand Sharma,Motilal Banarasidas, Varanasi
10	10.Rasa Bhaishajya Kalpana Vigyan	Vaidya Santosh Kumar Khandal, Choukhamba Publishers, New Delhi
11	11.Rasa Ratna Samuchchaya (Hindi)	Dattatreya Ananta Kulkarni, Meharchand Lachamdas Publications,New Delhi
12	12.Rasendra Sara Sangraha	Vaidya Gopal Krishna, Chaukhambha Sanskrit Series of Varanasi
13	13.Ayurvediya Paribhasha	Indradev Tripathi Chaukhamba Orientalia, Varanasi
14	14.Sharangadhara Samhita	Radhakrishna Parashar Vaidyanath Ayurved Bhavan Pvt
15	15.Bharatiya Bhaishajya Kalpana Vigyana	Gananath Vishwanath Dwivedi Krishnadas Academy, Varanasi
16	16.Ayurvedic formulary of India	Govt. of India Ministry of Health & Family welfare New Delhi
17	17.Ayurvedic Pharmacopiea of India	CCRAS Govt. of India Ministry of Health & Family welfare New Delhi
18	18.Abhinava Bhaishajya Kalpana	Siddhi Nandan Mishra, Chaukhamba Surbharati Prakasha , Varanasi
19	19.Bhaishjya Ratnawali	Prof S N Mishra Choukhamba Publishers, Varanasi
20	20.Ayurvediya Rasashastra Ka Udbhava Evam Vikas	Satyendrakumar Arya, Krishnadas Academy, 1984

21	21.Yoga Ratnakar	Shri Laxmipathi Shastri, Chaukhambha Prakashana Varanasi, Reprint 2018
22	22.A Text book of Rasashastra	Prof. Parimi Suresh Chaukhambha Prakashak, Varanasi
23	23.Siddhoushadi Sangraha	Vaidyaratna G. A. Phadke, Ayurvedacharya, Satara, N. H Kolhatkar, Maharashtra mitra Mudranalaya, Shukravara peth, Satara
24	24.Application on standardised Namburi phased spot test in identification of Bhasma and Sindura preparations of Ayurveda published	Namburi Hanumantha Rao, CCRAS., New Delhi
25	25. Evidence based safety of Ayurvedic herbo-mineral formulations	Kumar Anhimanyu published by CCRAS, New Delhi
26	26. Introduction to Ayurvedic Pharmaceutics	Dr Devendra Joshi & Dr Geeta Joshi Chaukhambha Orientalia
27	27. A Handbook of Cosmetics	B. M. Mithal & R.N. Saha Published by Delhi Vallabh Prakashana
28	28. Sahasrayoga (Sanskrit and Hindi)	Reprint by CCRAS, New Delhi
29	29. Manual on Quality Parameters for Ayurveda & Siddha drugs	CCRAS, New Delhi
30	30.Safety and Prescription Trends of Rasaushadhis	Critical appraisal of Reported Medical Practices of Ayurveda Herbomineral formulations from CCRAS experience.
31	31. General Guidelines for Drug Development of Ayurvedic Formulations	CCRAS New Delhi, Volume I 1 st Edn. 2018
32	32. General Guidelines for Safety/Toxicity Evaluation of Ayurvedic Formulations	CCRAS New Delhi, Volume II 1 st Edn. 2018
33	33.General Guidelines for Clinical Evaluation of Ayurvedic Interventions	CCRAS New Delhi, Volume III 1 st Edn. 2018
34	34. WHO internationalstandard terminologies on Ayurveda	WHO International Standard Terminology on Ayurveda, WHO 2022
35	35,Inorganic Pharmaceutical Chemistry	Gundu Rao P, Vallabha Prakashana
36	36, Organic Pharmaceutical Chemistry	Singh Harkishan;Kapoor V K, Vallabha Prakashana

37	37 Shlokavali of Rasashastra Bhaishajya Kalpana	Ninad Sathye;Shivaji Wavhal, Shantanu Prakashan Pune, 2009
38	38. Ansel's Pharmaceutical Dosage Forms and Drug Delivery Systems	Loyd V Allen : Others, 9th volume, Lippincott Williams & Willkins Wolters Kluwer Co.2011
39	39. Laboratory Guide for the Analysis of Ayurveda and Siddha Formulations	Lavekar G S,Central Council For Research in Ayurveda & Siddha,2010
40	40. Pharmaceutics I & II	Mehta R M, Vallabha Prakashana, 2014
41	41.Central Drugs Standard Control Organization Directorate General of Health Services Ministry of Health & Family Welfare Government of India	https://cdsco.gov.in/opencms/opencms/en/Home/
42	42. FSSAI official website	https://www.fssai.gov.in/
43	43.PHARMACOPOEIA COMMISSION FOR INDIAN MEDICINE & HOMOEOPATHY OFFICIAL WEBSITE	https://pcimh.gov.in/

Abbreviations

Assessment

S.No	Short form	Discription
1	T-EMI	Theory extended matching item
2	T- EW	Theory Essay writing
3	T- MEQs	Theory MEQs
4	T-CRQs	Theory CRQs
5	T-CS	Theory case study
6	T-OBT	Theory open book test
7	P-VIVA	Practical Viva
8	P-REC	Practical Recitation
9	P-EXAM	Practical exam
10	PRN	Presentation
11	P-PRF	Practical Performance
12	P-SUR	Practical Survey
13	P-EN	Practical enact
14	P-RP	Practical Role play
15	P-MOD	Practical Model
16	P-POS	Practical Poster
17	P-CASE	Practical Case taking
18	P-ID	Practical identification
19	P-PS	Practical Problem solving
20	QZ	Quiz
21	PUZ	Puzzles
22	CL-PR	Class Presentation,
23	DEB	Debate
24	WP	Word puzzle
25	O-QZ	Online quiz

26	O-GAME	Online game-based assessment
27	M-MOD	Making of Model
28	M-CHT	Making of Charts
29	M-POS	Making of Posters
30	C-INT	Conducting interview
31	INT	Interactions
32	CR-RED	Critical reading papers
33	CR-W	Creativity Writing
34	C-VC	Clinical video cases,
35	SP	Simulated patients
36	PM	Patient management problems
37	CHK	Checklists
38	OSCE	OSCE
39	OSPE	OSPE,
40	Mini-CEX	Mini-CEX
41	DOPS	DOPS
42	CWS	CWS
43	RS	Rating scales
44	RK	Record keeping
45	COM	Compilations
46	Portfolios	Portfolios
47	Log book	Log book
48	TR	Trainers report
49	SA	Self-assessment
50	PA	Peer assessment
51	360D	360-degree evaluation
52	TT-Theory	Theory
53	PP-Practical	Practical
54	VV-Viva	Viva

Domain

S.No	Short form	Discription
1	CK	Cognitive/Knowledge
2	CC	Cognitive/Comprehension
3	CAP	Cognitive/Application
4	CAN	Cognitive/Analysis
5	CS	Cognitive/Synthesis
6	CE	Cognitive/Evaluation
7	PSY-SET	Psychomotor/Set
8	PSY-GUD	Psychomotor/Guided response
9	PSY-MEC	Psychomotor/Mechanism
10	PSY-ADT	Psychomotor Adaptation
11	PSY-ORG	Psychomotor/Origination
12	AFT-REC	Affective/ Receiving
13	AFT-RES	Affective/Responding
14	AFT-VAL	Affective/Valuing
15	AFT-SET	Affective/Organization
16	AFT-CHR	Affective/ characterization

T L method

S.No	Short form	Discription
1	L	Lecture
2	L&PPT	Lecture with Power point presentation
3	L&GD	Lecture & Group Discussion
4	L_VC	Lecture with Video clips
5	DIS	Discussions
6	BS	Brainstorming
7	IBL	Inquiry-Based Learning
8	PBL	PBL
9	CBL	CBL
10	PrBL	Project-Based Learning
11	TBL	TBL
12	TPW	Team project work
13	FC	Flipped classroom
14	BL	Blended Learning
15	EDU	Edutainment
16	ML	Mobile learning
17	ECE	ECE
18	SIM	Simulation
19	RP	Role plays
20	SDL	Self-directed learning
21	PSM	Problem solving method
22	KL	Kinesthetic Learning
23	W	Workshops
24	GBL	Game-Based Learning
25	D-M	Demo on Model

26	LS	Library Session
27	PL	Peer learning
28	RLE	Real life experience
29	REC	Recitation
30	SY	Symposium
31	TUT	Tutorial
32	PER	Presentations
33	PT	Practical
34	XRy	X ray identification
35	CD	Case diagnosis
36	LRI	Lab report interpretation
37	DA	Drug analysis
38	D	Demonstration
39	D_BED	Demonstration bedside
40	D_L	Demonstration Lab
41	DG	Demonstration Garden
42	FV	Field visit
43	PRA	Practical
44	VIVA	Viva
45	TH	Theory

॥ आयुषे सर्वलोकानाम् ॥



Course curriculum for Second Professional BAMS

(PRESCRIBED BY NCISM)

Roga Nidan evam Vikriti Vigyan

(SUBJECT CODE : AyUG-RN)

(Applicable from 2021-22 batch, from the academic year 2023-24 onwards for 5 years or until further notification by NCISM, whichever is earlier)

BOARD OF AYURVEDA

**NATIONAL COMMISSION FOR INDIAN SYSTEM OF MEDICINE NEW
DELHI-110058**

II Professional Ayurvedacharya (BAMS)**Subject Code : AyUG-RN****Summary**

Total number of Teaching hours: 450			
Lecture hours(LH)-Theory		150	150(LH)
Paper I	60		
Paper II	90		
Non Lecture hours(NLH)-Theory		300	300(NLH)
Paper I & II	90		
Non Lecture hours(NLH)-Practical			
Paper I & II	210		

Examination (Papers & Mark Distribution)					
Item	Theory Component Marks	Practical Component Marks			
		Practical	Viva	Elective	IA
Paper I	100	100	70	-	30
Paper II	100				
Sub-Total	200	200			
Total marks	400				

Important Note:-The User Manual II BAMS is a valuable resource that provides comprehensive details about the curriculum file. It will help you understand and implement the curriculum. Please read the User Manual II before reading this curriculum file. The curriculum file has been thoroughly reviewed and verified for accuracy. However, if you find any discrepancies, please note that the contents related to the MSE should be considered authentic.

In case of difficulty and questions regarding curriculum write to cur.imp@ncismindia.org

PREFACE

Roganidan Evum Vikriti Vigyan is a subject that gives emphasis on Ayurveda and contemporary Diagnostics and Pathology. It is a key subject that trains the students to apply knowledge of fundamental principles of Ayurveda to practice by understanding diseases, patient interaction, drawing diagnosis, and prognosis. This is a strong base to frame an appropriate treatment protocol.

The curriculum is framed with a vision for developing the diagnostic knowledge and skills of a student abiding by a patient-centric education. Activity-based training has been inculcated throughout the curriculum to improve the dexterity of a student in handling real-life scenarios in the journey of reaching a diagnosis. The anatomy and physiology learned in an apparently healthy individual from the first professional year is continued in the second professional year with knowledge regarding morbid reflections in the mind and body through this subject.

The sequence of knitting the points in theory and practical are carefully executed to maintain rationality and continuity in learning from a clinical perspective. The basic principles of Vikriti vigyan and their application in Roga nidana, Vyadhi vigyana and clinical diagnostics supported by contemporary diagnostics are the core areas of the curriculum. The essential areas from contemporary pathology and diagnostics are included with the objective to receive interdisciplinary integrated teaching. Some of the topics are defined for horizontal & vertical integration for better understanding.

Innovative teaching learning and assessment methods are introduced. These will develop an interest in students, making the curriculum student and patient-centric and will help to develop competencies, skills, attitudes, and communication as these are indispensable components of the learning process in Health care/ Medicine.

In addition to classroom teaching-learning, the dedicated time has been allotted to clinical activities, self-directed learning, group learning, survey to identify specific illnesses, CBL, and PBL, which are aligned with traditional and innovative formative assessments and scientific writings; ultimately expecting the improved performance of the students in summative assessments and as a successful practitioner in future by implementing Competency-Based Medical Education. The subject will be definitely helpful to the students to create a justifiable diagnosis for future treatment plans which is the basic need for successful practice.

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Course Code and Name of Course

Course code	Name of Course
AyUG-RN	Roga Nidan evam Vikriti Vigyan

Table 1- Course learning outcomes and matched PO

SR1 CO No	A1 Course learning Outcomes (CO) AyUG-RN At the end of the course AyUG-RN, the students should be able to-	B1 Course learning Outcomes matched with program learning outcomes.
CO1	Identify the morbidities in accordance with principles of Ayurveda pathology (vikriti vigyan siddhanta)	PO1
CO2	Describe the basic, general, and systemic pathological process thereby applying it in reaching a diagnosis	PO2,PO3
CO3	Perform appropriate clinical examination (pareeksha) utilizing Ayurveda and contemporary principles (samakalina siddhanta)	PO2,PO3,PO4
CO4	Order and interpret various diagnostic laboratory investigations and imaging	PO2,PO3
CO5	Diagnose and present the case with clinical reasoning (naidanika tarka)	PO5
CO6	Follow and advise advancements in diagnosis (vyadhi vinischaya) and prognosis (sadhya asadhyata) in clinical practice (naidanika adhyayana)	PO7
CO7	Communicate effectively with the patient (rugna), relatives (bandhujan) and other stakeholders (anya hita dhaarakas)	PO8
CO8	Demonstrate ethics (sadvritta), compassion (karuna) and possess qualities of a clinician (vaidya guna)	PO6,PO9

Table 2 : Contents of Course

Paper 1 Fundamental Principles of Vikriti Vigyan					
Sr. No	A2 List of Topics	B2 Term	C2 Marks	D2 Lecture hours	E2 Non- Lecture hours
1	1. Roga nidana – Pathophysiology and clinical diagnosis	1	43	1	0
2	2. Pareeksha Roga and Rogi Pareeksha	1		1	0
3	3. Methods of Rogi pareeksha	1		4	3
4	4. Sapeksha nidana - Vyavacchedaka nidana Sapeksha nidana - Vyavacchedaka nidana of Ukta/Anukta vyadhi: Methods of differential diagnosis	1		1	0
5	5. Upashaya/ Anupashaya	1		1	0
6	6. Dosha Vikriti A. Nidana (Vyadhi janaka hetu) B. Agni bheda and Vikriti C. Dosha Vriddhi, Kshaya and Dushta Karma, Ashyapakarsha, Avarana, Samsargaja, Sannipataja. D. Dosha swabhava - Nityasamshleshita (Leena) dosha and Paricchedita dosha E. Paridhavamana dosha	1		3	2
7	7. Doshagati and Rogamarga	1		1	0
8	8. Srotodushti Samanya sroto dusti nidana and lakshana	1		1	0
9	9. Concept of Ama A. Samanya nidana, and Samanya lakshana B. Bheda (Anna rasa. Mala sanchaya (Dhatwagni mandya janit). Dosha dushti)	1		2	0
10	10. Assessment of Ama Sama and nirama dosha lakshana, Pureesha lakshana	1		0	1
11	11. Sthana samshraya – Poorvaroop	1	49	1	0
12	12. Dushya dushti A. Dhatu and mala vriddhi kshaya lakshana B. Specific Sroto dusti lakshana in relation to Dosha, Upadhatu, Mala, Indriya, Avayava, and Mana dushti lakshana	1		9	9
13	13. Samprapti A. Samprapti bheda B. Vyadhi janma and Vyadhi janya	1		1	0

14	14. Rupa Pratyatma/ Samanya/ Vishishta Rupa	1		1	0
15	15. Vyadhinamakarana	1		1	1
16	16. Vyadhi A. Definition, B. Classification – Dwividha/ Trividha/ Chaturvidha/ Saptavidha (Adibala/ Sahaja - Genetic, Janmabala/ Garbhaja - Congenital, Dosha bala/ Jataja - Acquired, Sanghatabala/ Peedaja - Traumatic, Daivabala/ Prabhavaja - Iatrogenic, Kalabala/ Kalaja – Environmental and Geriatric, Swabhava balapravruttha), etc.	1		4	0
17	17. Ashtanindita (Endocrine disorders)	1		1	0
18	18. Janapadodhwamsa vikara (Pandemic disorders)	1		1	0
19	19. Nidanarthakara Vyadhi, Vyadhisankara	1		1	0
20	20. Vyadhiikshamatva A. Vikaravighata Bhava & Abhava, SatmyaB. Ojus - Bheda – Two types and Four types C. Dosha Paka D. ImmunityE. Healing/repair	1		2	0
21	21. Rogi bala Pareeksha	1		2	1
22	22. Dhatu Paka A. Dhatu pakaB. Ojodusti lakshana C. Asatmya - Immune pathologyD. Cell Injury and Cellular adaptations E. Inflammation F. Haemodynamic disorders G. Neoplasia	1		12	1
23	23. Infection and Nutritional disorders	1	8	4	1
24	24. Upadrava	2		1	0
25	25. Arishta	2		1	0
26	26. Vyadhi bala pareeksha	2		1	0
27	27. Sadhyasadyatva – Prognosis	2		1	0
28	28. Digital health and Artificial intelligence in the context of Roganidana	2		1	1

Total Marks	100	60 hr	20 hr
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Paper 2 Vyadhi Vigyan, contemporary understanding and updates					
Sr. No	A2 List of Topics	B2 Term	C2 Marks	D2 Lecture hours	E2 Non- Lecture hours
29	1. Agnimandya – Ajeerna, Anaha, Adhmana, Atopa	2	43	1	0
30	2. Chhardi	2		1	0
31	3. Amlapitta	2		2	0
32	4. Shoola Parinama Shoola, Annadrava Shoola	2		1	0
33	5. Atisara, and Pravahika	2		3	1
34	6. Grahani	2		2	1
35	7. Visuchika, Alasaka, Vilambika	2		1	0
36	8. Common GIT diseases Ulcerative dyspepsia and Non-ulcerative dyspepsia, Irritable Bowel Syndrome, Inflammatory Bowel Diseases	2		1	4
37	9. Mutrakrichhra	2		2	1
38	10. Mutraghata	2		3	1
39	11. Common Urinary diseases Urinary Tract Infection, Prostatomegaly, Nephrotic syndrome, Nephritic syndrome, Acute Kidney Injury and Chronic Kidney Disease	2		1	6
40	12. Hikka	2		1	0
41	13. Shwasa	2		2	1
42	14. Kasa	2		2	0

43	15. Rajayakshma & Shosha	2	25	3	0
44	16. Common lung disorders Pneumonia, Chronic Obstructive Pulmonary Disease, Pleural effusion, Bronchiectasis	2		1	4
45	17. Jwara Jwarabheda - Doshaja and Agantuja (Abhishanga jwara), Vishama Jwara, Punaravartaka Jwara, Jwara avastha - Ama, Pachyamana and Nirama Jwara	2		4	1
46	18. Masurika – Romantika	2		1	0
47	19. Fever A. General mechanism of Fever. B. Introduction to Eruptive fevers - Measles, Chicken pox, Rubella, Hand foot mouth disease, Herpes zoster C. Parasitic fevers – Filariasis, Malaria, D. Detailed description of Common infective fevers – Typhoid, Dengue, Influenza, Chikungunya, E. Common regional disorders presenting with fever	2		1	6
48	20. Pandu	2		2	0
49	21. Raktapitta	2		1	1
50	22. Hematopoietic diseases Anaemia, Nutritional anaemia, Thalassemia, Sickle cell Anaemia, Leukaemia, Thrombocytopenia	2		1	6
51	23. Hridroga	2		1	1
52	24. Shotha	2		2	0
53	25. Cardiovascular disorders Coronary Artery Disease (Ischemic Heart Disease, and Myocardial Infarction) and Congestive cardiac failure	2	25	1	5
54	26. Kamala	2		2	0
55	27. Udara Roga	2		2	1
56	28. Hepatobiliary diseases Liver cirrhosis, Alcoholic and Non - Alcoholic Liver Disease, Hepatitis, Jaundice and Ascites	2		1	2
57	29. Kushtha - Maha Kushtha & Kshudra Kushtha	3		3	1

	(According to Charaka)				
58	30. Sheetapitta	3		1	0
59	31. Shwitra	3		1	0
60	32. Visarpa	3		2	0
61	33. Skin diseases Allergic disorders - Eczema, Urticaria; Squamous lesions - Psoriasis, Lichen planus; Bullous lesion – Pemphigus and Pemphigoid; Mycotic skin diseases; Leprosy; Vitiligo; Cellulitis	3		1	6
62	34. Galaganda	3		1	0
63	35. Thyroid disorders Hypothyroidism and hyperthyroidism	3		1	1
64	36. Sthoulya – Karshya	3	32	1	0
65	37. Obesity	3		1	1
66	38. Prameha	3		2	1
67	39. Diabetes Mellitus and Pancreatitis	3		1	1
68	40. Vatavyadhi Samanya nidana, Samanya purvarupa, Samanya lakshana	3		1	0
69	41. Snayugata vata Snayugata vata, Akshepaka – Apatanaka; Ardita, Pakshaghata, Kampavata, Gridhrasi, Vishwachi, Pangutwa	3		4	2
70	42. Common neurologic and spine disorders Common neurologic diseases: Parkinson's disease, Stroke, Bell's Palsy, Motor Neuron Disease, Transverse myelitis, Epilepsy (Organic). Common Spine disorders: Lumbago-Sciatica syndrome, Brachial neuralgia, Cervical and Lumbar Spondylosis	3		2	4
71	43. Sandhigatavata and Asthi majja gata vata Sandhigatavata, Katigraha, Manyasthambha, Vatakantaka, Avabahuka, Amsashosha	3		1	0
72	44. Diseases of bone, joints, and muscles	3		1	2

	Diseases of bone and Joints - Osteoarthritis, Osteoporosis. Frozen Shoulder, Calcaneal spur/ Plantar fasciitis, Tennis elbow, Carpel tunnel syndrome; Muscular diseases - Muscular Dystrophy				
73	45. Amavata	3		2	0
74	46. Vatarakta	3		2	1
75	47. Immunological & Metabolic disorders Rheumatic fever, Rheumatoid arthritis, SLE, Ankylosing spondylitis, Gout	3		1	2
76	48. Klaibya & Vandhyatva	3		1	0
77	49. Sexual dysfunction and Infertility	3		1	1
78	50. Unmada & Apasmara	3		3	0
79	51. Vishada	3		1	0
80	52. Murchha, and Sanyasa	3		1	0
81	53. Common Psychiatric diseases Depression, Anxiety neurosis and Epilepsy (Non-organic)	3		1	0
82	54. Phiranga and Upadamsha	3		1	0
83	55. Syphilis & Gonorrhoea	3		1	1
84	56. Krimiroga	3		1	0
85	57. Clinical presentation of common parasitic disorders Hook worm, Round worm, Thread worm, Pin worm	3		1	2
86	58. Khalitya & Palitya	3		1	0
87	59. Shleepada	3		1	0
88	60. Tuberculosis	3			
Total Marks			100	90 hr	70 hr

Table 3: Learning objectives (Theory) of Course

Paper 1 Fundamental Principles of Vikriti Vigyan									
A3 Course outcome	B3 Learning Objective (At the end of the session, the students should be able to)	C3 Domain/sub	D3 Must to know / desirable to know / Nice to know	E3 Level Does/ Shows how/ Knows how/ Know	F3 T-L method	G3 Assessment (Refer abbreviations)	H3 Formative/ summative	I3 Term	J3 Integration
Topic 1 1. Roga nidana – Pathophysiology and clinical diagnosis (Lecture :1 hours, Non lecture: 0 hours)									
CO1	Explain the concept of Roganidana	CC	MK	KH	L&PPT	INT	F&S	I	
CO1	Explain the concept of pathophysiology and clinical diagnosis	CC	MK	KH	L&PPT	O-QZ	F&S	I	
Topic 2 2. Pareeksha (Lecture :1 hours, Non lecture: 0 hours)									
CO1	Define and enlist types of pareeksha	CK	MK	K	L&PPT	INT,TT-Theory	F&S	I	
CO1	Describe importance of pareeksha	CC	MK	KH	L&PPT	DEB	F&S	I	
CO1	Explain the concept of rogi pareeksha	CC	MK	KH	L&PPT	INT	F&S	I	
CO1	Enlist rogi pareeksha	CK	MK	K	L&PPT	O-QZ,INT	F&S	I	

CO1	Describe importance of rogi pareeksha	CC	MK	KH	L&G D	DEB	F&S	I	
CO1	Explain the concept of roga pareeksha	CC	MK	KH	L&PP T	INT,TT- Theory	F&S	I	
CO1	Enlist roga pareeksha	CK	MK	K	L&PP T	INT	F&S	I	
CO1	Describe importance of roga pareeksha	CC	MK	KH	L&G D	T-OBT,DEB	F&S	I	
CO1	Differentiate between rogi pareeksha and roga pareeksha	CC	MK	KH	L&G D	T-OBT,M- CHT	F&S	I	
Topic 3 3. Methods of Rogi pareeksha (Lecture :4 hours, Non lecture: 3 hours)									
CO1,CO3,CO 7,CO8	Describe Prashna Pareeksha, Chakshu indriyataha Pareeksha, Srotrendriyataha Pareeksha, Sparshanendriyataha Pareeksha, Ghranendriyataha Pareeksha, and Rasanendriyataha Pareeksha with its clinical interpretation	CC	MK	SH	L_VC	COM	F&S	I	
CO1,CO3	Describe the importance, clinical interpretation and methods of eliciting Nadi Pareeksha	CAN	MK	KH	L&G D,D_ BED	COM	F&S	I	
CO1	Describe the importance and clinical interpretation of Mutra Pareeksha	CC	MK	KH	L&G D	COM	F&S	I	
CO1	Describe the methods of performing Tailabindu Pareeksha	CC	MK	KH	L_VC	WP,COM	F&S	I	
CO1,CO3	Describe the importance & clinical interpretation of Mala Pareeksha, Jihwa Pareeksha, Shabda Pareeksha, Sparsha Pareeksha, Druk Pareeksha, Akriti Pareeksha	CAN	MK	KH	L&G D,SD L,D_ BED	COM	F&S	I	

Topic 4 4. Sapeksha nidana - Vyavacchedaka nidana (Lecture :1 hours, Non lecture: 0 hours)									
CO1,CO2,CO3,CO5	Describe the steps of Vyavacchedaka nidana of Ukta Vyadhi and Anukta vyadhi with suitable examples (Ayurveda and contemporary science incorporating clinical findings and investigations)	CE	MK	KH	L&G D,CB L	T-OBT,M- CHT	F&S	I	V-KC ,V-SH ,V-SH L,V- SP
CO5	Describe scope of developing screening, triage, confirmation, monitoring and prognostic tools in Ayurveda for Emerging diseases along with recent advancements	CC	DK	KH	L&PP T,IBL	INT	F&S	I	
Topic 5 5. Upashaya/ Anupashaya (Lecture :1 hours, Non lecture: 0 hours)									
CO1	Define Upashaya and enlist synonyms of Upashaya	CK	MK	K	L&PP T	INT	F&S	I	
CO1	Define Anupashaya and enlist synonyms of Anupashaya	CK	MK	K	L&PP T	INT,TT- Theory	F&S	I	
CO1	Enumerate and explain the eighteen types of Upashaya with relevant examples	CC	MK	KH	L&PP T	WP,INT	F&S	I	
Topic 6 6. Dosha Vikriti (Lecture :3 hours, Non lecture: 2 hours)									
CO1	Define Hetu	CK	MK	K	L&PP T	INT,TT- Theory	F&S	I	
CO1	Enlist and define synonyms of Hetu	CK	MK	K	L&PP T	QZ	F&S	I	
CO1	Enumerate and enlist classification of Nidana (Vyadhi janaka and Vyadhi bodhaka)	CK	MK	K	L&PP T	M-CHT	F&S	I	
CO1	Enumerate and describe types of Vyadhi Janaka Hetu	CC	MK	KH	L&PP	INT	F&S	I	

					T,RE C				
CO1,CO5	Correlate Vyadhi Janaka Hetu with contemporary examples	CE	MK	KH	CBL, PrBL	CL-PR	F&S	I	
CO1	Describe the Nidana of Agnidushti	CC	MK	KH	L&PP T,RE C	T-OBT	F&S	I	
CO1	Enumerate and explain the types and features of Agnidushti	CC	MK	KH	L&PP T	INT	F&S	I	
CO1	Correlate the Nidana of Agnidushti with contemporary examples	CE	MK	KH	L&G D	P-SUR	F&S	I	
CO3,CO8	Perform assessment of Agnidushti in patient	PSY- GUD	MK	SH	D_BE D	P-PRF	F&S	I	
CO1	Recite etiologies of Vata, Pitta and Kapha dushta karma	CK	MK	K	REC	P-REC	F&S	I	
CO1,CO5	Apply the knowledge of aetiologies of Vata, Pitta and Kapha dushta karma in correlating with contemporary etiologies	CAP	MK	KH	L&G D,PrB L,TP W	P-SUR	F&S	I	
CO1	Recite dushta karma, kshaya and vriddhi lakshana of Vata, Pitta and Kapha Dosha	CK	MK	K	REC	P-REC	F&S	I	
CO1	Explain Ashayapakarsha of Dosha with suitable examples	CC	MK	KH	L&G D	INT	F&S	I	
CO1	Define Avarana	CK	MK	K	L&PP T	QZ	F&S	I	
CO1	Enlist types of Avarana	CK	MK	K	L&PP	O-GAME	F&S	I	

					T				
CO1	Enlist the 63 combination of Dosha	CC	MK	KH	L&PP T	O-GAME	F&S	I	
CO1	Describe Samsargaja Dosha Dushti	CC	MK	KH	L&PP T	INT	F&S	I	
CO1	Describe Sama Sannipata and Vishama Sannipata dosha	CC	MK	KH	L&PP T	INT	F&S	I	
CO1	Enlist the different stages of Paridhavamana Dosha	CK	MK	K	L&PP T	INT	F&S	I	
CO1	Explain Paridhavamana dosha with types and examples	CC	MK	KH	L&PP T	COM	F&S	I	
CO1	Explain Nityasamshleshita (Leena) dosha and Paricchedita dosha with examples	CC	MK	KH	L&PP T	INT	F&S	I	
Topic 7 7. Doshagati and Rogamarga (Lecture :1 hours, Non lecture: 0 hours)									
CO1	Enumerate and describe Doshagati and its utility in prognosis with relevant examples	CC	MK	KH	L&G D	INT	F&S	I	
CO1	Describe Urdhwa gati, Adho gati, Tiryaga gati, Vriddhi, Kshaya, Sthana, Koshta, Shakha, Sandhi asthi marma with illustrations and examples	CC	MK	KH	L&G D	COM	F&S	I	
CO1	Describe Koshta to Shakhagati of dosha and Shakha to Koshtagati of dosha with illustration	CC	MK	KH	L&G D	COM	F&S	I	
CO1	Enumerate and describe Rogamarga and its utility in prognosis with relevant examples	CC	MK	KH	L&G D	O-QZ	F&S	I	
Topic 8 8. Srotodushti (Lecture :1 hours, Non lecture: 0 hours)									

CO1	Define and enlist Srotas	CK	MK	K	L&PP T	O-QZ	F&S	I	
CO1	Describe the common aetiology for Sroto dushti	CC	MK	KH	L&G D	INT	F&S	I	
CO1	Explain features of Samanya Srotodushti with examples	CC	MK	KH	L&PP T	CL-PR	F&S	I	
Topic 9 9. Concept of Ama (Lecture :2 hours, Non lecture: 0 hours)									
CO1	Describe the different definitions of Ama	CC	MK	KH	L&PP T,RE C	P-REC,INT	F&S	I	
CO1	Enlist different types of Ama	CK	MK	K	L&PP T	INT	F&S	I	
CO1	Correlate the different types of Ama with the current science	CE	MK	KH	BS,IB L	COM	F&S	I	
CO1	Describe samanya lakshana of Ama	CC	MK	KH	L&PP T	O-QZ	F&S	I	
CO1	Explain the concept of Ama with reference to Anna rasa, Mala sanchaya and Dosha dushti	CC	MK	KH	L&PP T	T-OBT,COM	F&S	I	
Topic 10 10. Assessment of Ama (Lecture :0 hours, Non lecture: 1 hours)									
CO1	Explain concept of Sama	CC	MK	KH	L&PP T	INT	F&S	I	
CO1	Describe specific features of Sama and Nirama Dosha and Pureesha	CC	MK	KH	L&PP T	O-GAME	F&S	I	
CO5	Identify specific features of Sama dosha, Sama pureesha, Nirama	PSY-	MK	SH	L,D_	P-PRF	F&S	I	

	dosha and Nirama pureesha in patient	GUD			BED				
Topic 11 11. Sthana samshraya – Poorvaroop (Lecture :1 hours, Non lecture: 0 hours)									
CO1	Define Sthansamshraya	CK	MK	K	L&PP T	INT	F&S	I	
CO1	Define Poorvaroop and enlist its types	CK	MK	K	L&PP T	QZ	F&S	I	
CO1	Describe the importance of Poorvaroop	CC	MK	KH	L&G D	DEB	F&S	I	
CO1	Relate Sthanasamshraya with Poorvaroop	CAP	MK	KH	L&G D	INT	F&S	I	
Topic 12 12. Dushya dushti (Lecture :9 hours, Non lecture: 9 hours)									
CO1	Enlist Dushya	CK	MK	K	L&PP T	QZ	F&S	I	
CO1	Describe specific features of Dhatu and Mala Vriddhi and Kshaya	CC	MK	KH	DIS	T-OBT	F&S	I	
CO1	Describe the specific etiologies of Pranavaha Sroto dushti and identify contemporary etiologies	CS	MK	SH	L&G D,RE C	P-REC,INT	F&S	I	
CO1	Describe features of Pranavaha Sroto Dushti in relation to Dosha Kopa	CC	MK	KH	L&PP T,RE C	P-REC,INT	F&S	I	
CO1	Describe Pranavaha Sroto Viddha Lakshana	CC	MK	KH	L&PP T	QZ	F&S	I	
CO1	Describe the specific etiologies of Udakavaha Sroto dushti and	CC	MK	KH	L&G	P-SUR	F&S	I	

	identify contemporary etiologies				D,PrB L				
CO1	Describe features of Udakavaha Sroto Dushti in relation to Dosha Kopa	CC	MK	KH	L&PP T	INT	F&S	I	
CO1	Describe Udakavaha Sroto Viddha Lakshana	CC	MK	KH	L&PP T	INT	F&S	I	
CO1	Describe the specific etiologies of Annavaha Sroto dushti and identify contemporary etiologies	CC	MK	KH	L&G D,RE C	P-REC,INT	F&S	I	
CO1	Describe features of Annavaha Sroto Dushti in relation to Dosha Kopa	CC	MK	KH	L&G D,RE C	P-REC,INT	F&S	I	
CO1	Describe Annavaha Sroto Viddha Lakshana	CC	MK	KH	L&PP T	WP	F&S	I	
CO1	Describe the specific etiologies of Rasavaha Sroto dushti and identify contemporary etiologies	CC	MK	KH	L&G D,PrB L,RE C	P-REC,INT	F&S	I	
CO1	Describe features of Rasavaha Sroto Dushti in relation to Dosha Kopa	CC	MK	KH	L&PP T,RE C	P-REC,INT	F&S	I	
CO1	Describe Rasavaha Sroto Viddha Lakshana	CC	MK	KH	L&PP T	QZ	F&S	I	
CO1	Describe the specific etiologies of Raktavaha Sroto dushti and identify contemporary etiologies	CC	MK	KH	L&G D,PrB L,RE	P-REC,INT	F&S	I	

					C				
CO1	Describe features of Raktavaha Sroto Dushti in relation to Dosha Kopa	CC	MK	KH	L&G D,RE C	P-REC,INT	F&S	I	
CO1	Describe Raktavaha Sroto Viddha Lakshana	CC	MK	KH	L&PP T	INT	F&S	I	
CO1	Describe the specific etiologies of Mamsavaha Sroto dushti and identify contemporary etiologies	CC	MK	KH	L&G D,PrB L,RE C	P-REC,INT	F&S	I	
CO1	Describe features of Mamsavaha Sroto Dusti in relation to Dosha Kopa	CC	MK	KH	L&G D,RE C	P-REC,INT	F&S	I	
CO1	Describe Mamsavaha Sroto Viddha Lakshana	CC	MK	KH	L&PP T	QZ	F&S	I	
CO1	Describe the specific etiologies of Medovaha Sroto dushti and identify contemporary etiologies	CC	MK	KH	L&G D,PrB L,RE C	P-REC,INT	F&S	I	
CO1	Describe features of Medovaha Sroto Dushti in relation to Dosha Kopa	CC	MK	KH	L&G D,RE C	P-REC,INT	F&S	I	
CO1	Describe Medovaha Sroto Viddha Lakshana	CC	MK	KH	L&PP T	QZ	F&S	I	
CO1	Describe the specific etiologies of Asthivaha Sroto dushti and identify contemporary etiologies	CC	MK	KH	L&G D,PrB	P-REC,P-SUR	F&S	I	

					L,RE C				
CO1	Describe features of Asthivaha Sroto Dushti in relation to Dosha Kopa	CC	MK	KH	L&G D,RE C	P-REC,INT	F&S	I	
CO1	Describe the specific etiologies of Majjavaha Sroto dushti and identify contemporary etiologies	CC	MK	KH	L&G D,PrB L,RE C	P-REC,INT	F&S	I	
CO1	Describe features of Majjavaha Sroto Dushti in relation to Dosha Kopa	CC	MK	KH	L&G D,RE C	P-REC,INT	F&S	I	
CO1	Describe the specific etiologies of Shukravaha Sroto dushti and identify contemporary etiologies	CC	MK	KH	L&G D,PrB L,RE C	P-REC,INT	F&S	I	
CO1	Describe features of Shukravaha Sroto Dushti in relation to Dosha Kopa	CC	MK	KH	L&PP T,RE C	P-REC,INT	F&S	I	
CO1	Describe Shukravaha Sroto Viddha Lakshana	CC	MK	KH	L&PP T	QZ	F&S	I	
CO1	Describe the specific etiologies of Mutravaha Sroto dushti and identify contemporary etiologies	CC	MK	KH	L&G D,PrB L,RE C	P-REC,P-SUR	F&S	I	
CO1	Describe features of Mutravaha Sroto Dushti in relation to Dosha Kopa	CC	MK	KH	L&G D,RE	P-REC,INT	F&S	I	

					C				
CO1	Describe Mutravaha Sroto Viddha Lakshana	CC	MK	KH	L&PP T	QZ	F&S	I	
CO1	Describe the specific etiologies of Pureeshavaha Sroto dushti and identify contemporary etiologies	CC	MK	KH	L&G D,PrB L,RE C	P-REC,P-SUR	F&S	I	
CO1	Describe features of Pureeshavaha Sroto Dushti in relation to Dosha Kopa	CC	MK	KH	L&G D,RE C	P-REC,INT	F&S	I	
CO1	Describe Pureeshavaha Sroto Viddha Lakshana	CC	MK	KH	L&PP T	QZ	F&S	I	
CO1	Describe the specific etiologies of Swedavaha Sroto dushti and identify contemporary etiologies	CC	MK	KH	L&G D,PrB L,RE C	P-REC,P-SUR	F&S	I	
CO1	Describe features of Swedavaha Sroto Dushti in relation to Dosha Kopa	CC	MK	KH	L&G D,RE C	P-REC,INT	F&S	I	
CO1	Describe the specific etiologies of Artavavaha Sroto dushti and identify contemporary etiologies	CC	MK	KH	L&G D,PrB L,RE C	P-REC,P-SUR	F&S	I	
CO1	Describe features of Artavavaha Sroto Dushti in relation to Dosha Kopa	CC	MK	KH	L&PP T,RE C	P-REC,INT	F&S	I	

CO1	Describe Artavavaha Sroto Viddha Lakshana	CC	MK	KH	L&PP T	QZ	F&S	I	
CO1	Describe features of Upadhatu dushti, Mala dushti, Indriya dushti, and Manas dushti	CC	MK	KH	L&G D	INT	F&S	I	
CO1	Describe features of Avayava dusti with relevant examples	CC	MK	KH	L&PP T	INT	F&S	I	
CO5	Identify and interpret the specific Sroto Dushti in the patients	PSY- GUD	MK	SH	SDL	T-CS	F&S	I	
Topic 13 13. Samprapti (Lecture :1 hours, Non lecture: 0 hours)									
CO1	Define Samprapti and enumerate synonyms	CK	MK	K	L&PP T	WP	F&S	I	
CO1	Enlist and describe types of Samprapti with examples	CK	MK	K	L&PP T	INT	F&S	I	
CO1	Describe Vyadhi Janma and Vyadhi Janya Samprapti with examples	CC	MK	KH	L&PP T	INT	F&S	I	
Topic 14 14. Rupa (Lecture :1 hours, Non lecture: 0 hours)									
CO1	Define, enlist and describe different types of Roopa	CC	MK	KH	L&PP T	INT	F&S	I	
CO1	Describe the importance of Roopa	CC	MK	KH	L&G D	DEB	F&S	I	
CO1	Define Pratyatma Lakshana with suitable examples	CK	MK	K	L&PP T	INT	F&S	I	
CO1	Differentiate between Vyadhi and Lakshana.	CC	MK	KH	L&G D	INT	F&S	I	

Topic 15 15. Vyadhinamakarana (Lecture :1 hours, Non lecture: 1 hours)									
CO1	Describe the basis of Vyadhi Namakarana with suitable examples	CK	MK	K	L	QZ	F&S	I	
CO6	Describe the importance of ICD, DSM and NAMASTE (National AYUSH Morbidity and Standardized Terminologies Electronic Portal) portal classification and terminology of diseases	CC	DK	KH	L&G D,D	INT	F&S	I	
CO6	Operate NAMASTE (National AYUSH Morbidity and Standardized Terminologies Electronic Portal) portal	PSY- GUD	DK	SH	D	P-PRF	F&S	I	
Topic 16 16. Vyadhi (Lecture :4 hours, Non lecture: 0 hours)									
CO1	Define & enlist synonyms of Vyadhi	CK	MK	K	L&PP T	INT	F&S	I	
CO1	Enlist types of Vyadhi	CK	MK	K	L&PP T	INT	F&S	I	
CO1,CO2	Explain Adibala/ Sahaja and Hereditary disorders, Janmabala/ Garbhaja and Congenital disorders, Dosha bala/ Jataja and Acquired disorders, Sanghatabala/ Peedaja and Traumatic disorders, Daivabala/ Prabhavaja and Iatrogenic disorders, Kalabala/ Kalaja and Environmental and Geriatric disorders, Swabhava bhava vyadhi with suitable examples	CC	MK	KH	L&PP T	CL-PR	F&S	I	
Topic 17 17. Ashtanindita (Endocrine disorders) (Lecture :1 hours, Non lecture: 0 hours)									
CO1	Enlist and explain the Ashtanindita	CC	DK	KH	L&PP T	INT	F&S	I	
CO1	Describe the importance of Ashtanindita	CC	DK	KH	L&G D	DEB	F&S	I	
CO1,CO2	Correlate and describe the features of Hormonal/ Endocrinal	CE	DK	KH	L&G	COM	F&S	I	V-BL

	diseases (Pituitary disorders, Parathyroid disorders, Adrenal disorders etc.) with Ashtanindita				D,TP W				
Topic 18 18. Janapadodhwamsa vikara (Pandemic disorders) (Lecture :1 hours, Non lecture: 0 hours)									
CO1	Describe sadharana and asadharana hetu for Janapadodhwamsa Vikara and correlate with contemporary etiologies	CC	DK	KH	L&G D	DEB	F&S	I	V-KC ,H- SW
Topic 19 19. Nidanarthakara Vyadhi, Vyadhisankara (Lecture :1 hours, Non lecture: 0 hours)									
CO1	Define and enlist types of Nidanarthakara Vyadhi with examples along with its concept	CC	DK	KH	L&G D	INT	F&S	I	
CO1	Explain the concept of Vyadhi Sankara with specific Nidana and relevant examples	CC	DK	KH	L&PP T	INT	F&S	I	
Topic 20 20. Vyadhikshamatva (Lecture :2 hours, Non lecture: 0 hours)									
CO1	Define Vyadhikshamatva	CK	MK	K	L&PP T	INT	F&S	I	
CO1	Describe Trividha bala and relate to Balavruddhikara Bhava and Shareeravruddhikara Bhava	CC	MK	K	L&PP T	M-CHT	F&S	I	
CO1	Describe Vikara Vighata Bhava and Abhava along with its relation to Vyadhikshamatva	CC	MK	KH	DIS	INT	F&S	I	
CO1	Analyze Satmya in relation with health and disease	CAN	MK	KH	L&G D	INT	F&S	I	
CO1	Define and explain Dwividha and Chaturvidha Ojas	CK	MK	K	L&PP T	INT	F&S	I	
CO1	Describe Dosha Paka features with examples	CC	MK	KH	L&PP T	INT	F&S	I	

CO2	Describe pathophysiology of Healing with primary and secondary intention and Repair mechanism.	CC	MK	KH	L_VC	CL-PR	F&S	I	
CO1	Define Satmya and explain its types	CC	MK	KH	L&PP T	INT	F&S	I	
CO2	Define Immunity and describe classification of Immunity	CC	MK	KH	SDL	CL-PR	F&S	I	
CO2	Explain different mechanisms involved in Immunity	CC	MK	KH	SDL	CL-PR	F&S	I	
Topic 21 21. Rogi bala Pareeksha (Lecture :2 hours, Non lecture: 1 hours)									
CO1	Describe the importance of Rogi bala Pareeksha	CC	MK	KH	L&G D	DEB	F&S	I	
CO1,CO8	Describe the parameters of Rogi bala Pareeksha - Prakruti, Sara, Samhanana, Pramana, Satmya, Satwa, Aahara shakti, Vyayama shakti, Vaya and other factors such as Aushadha kshama dehatva, Yuvajatva, Pumjatvam, Vishayanasakta indriyajatva, Padasampad bhavatvam, and Anukoola grahatva, etc.	CC	MK	KH	L&PP T	INT	F&S	I	
Topic 22 22. Dhatu Paka (Lecture :12 hours, Non lecture: 1 hours)									
CO1	Describe Dhatupaka features with examples	CC	MK	KH	L&PP T	INT	F&S	I	
CO1	Describe different stages of Ojo dusti	CK	MK	K	L&PP T	INT	F&S	I	
CO2	Define Asatmya	CK	MK	K	L&PP T	O-QZ	F&S	I	
CO2	Define Hypersensitivity	CK	MK	K	L&PP T	QZ	F&S	I	
CO2	Describe four types of Hypersensitivity with suitable examples	CC	MK	KH	L_VC	CL-PR	F&S	I	

CO2	Define Autoimmunity	CK	MK	K	L&PP T	O-QZ	F&S	I	
CO2	Describe mechanism and classification of Autoimmunity with suitable examples	CC	MK	KH	L_VC	CL-PR	F&S	I	
CO2	Define Immunodeficiency.	CK	MK	K	L&PP T	CL-PR	F&S	I	
CO2	Describe classification of Immunodeficiency with suitable examples.	CC	MK	KH	L&PP T	M-CHT	F&S	I	
CO2	Define Cell Injury	CK	MK	K	L&PP T	QZ	F&S	I	
CO2	Describe causes and mechanism of Reversible and Irreversible Cell Injury with microscopic and macroscopic features.	CC	MK	KH	L_VC	CL-PR	F&S	I	
CO2	Define Cellular Adaptation	CK	MK	K	L&PP T	QZ	F&S	I	
CO2	Describe types and mechanisms of Cellular Adaptations with suitable examples.	CC	MK	KH	L_VC	CL-PR	F&S	I	
CO2	Describe and discuss types of Cell Death (including apoptosis) and the mechanism with suitable examples.	CC	MK	KH	L_VC	CL-PR	F&S	I	
CO2	Define, classify and describe mechanism of Inflammation, Septicaemia, Oedema, Shock, Haemorrhage, Thrombosis, Embolism, Ischemia and Infarction	CC	MK	KH	L_VC	CL-PR	F&S	I	
CO2	Define and describe Tumors	CC	MK	KH	L&PP T	CL-PR	F&S	I	
CO2	Describe nomenclature of Tumors	CC	MK	KH	L&PP T,SD	CL-PR	F&S	I	

					L				
CO2	Differentiate Benign and Malignant Tumours	CC	MK	KH	L&G D	M-CHT	F&S	I	
CO2	Describe mechanism of Metastasis	CC	MK	KH	L&PP T	CL-PR	F&S	I	
Topic 23 23. Infection and Nutritional disorders (Lecture :4 hours, Non lecture: 1 hours)									
CO2	Define and classify Viruses, Bacteria, and Fungi	CC	DK	KH	L&PP T,SD L	COM	F&S	I	
CO2	Describe components of Nutrition, and classify nutritional disorders	CC	DK	KH	PER	QZ	F&S	I	H-SW
CO2	Describe Macro nutritional disorders, Water soluble vitamins deficiency disorders and Fat soluble vitamins deficiency disorders	CC	DK	KH	PER	QZ	F&S	I	V-KC ,H- SW
CO2	Describe Protein Energy Malnutrition in adults and differentiate Kwashiorkor and Marasmus	CC	DK	KH	PER	QZ	F&S	I	V-KC ,V-BL
Topic 24 24. Upadrava (Lecture :1 hours, Non lecture: 0 hours)									
CO1	Define and explain the concept and importance of Upadrava	CC	MK	KH	L&G D	DEB	F&S	II	
Topic 25 25. Arishta (Lecture :1 hours, Non lecture: 0 hours)									
CO1	Define Arishta and Ristaabhasa	CK	NK	K	L&PP T	INT	F&S	II	
CO1	Enumerate and describe types of Arishta with its importance	CC	NK	KH	L&G D	DEB	F&S	II	

Topic 26 26. Vyadhi bala pareeksha (Lecture :1 hours, Non lecture: 0 hours)									
CO1	Describe Vikrititaha Pareeksha with its importance	CC	DK	KH	L&G D	DEB	F&S	II	
CO1	Describe the parameters to be assessed for Vyadhi bala - Exposure to Nidana, Samprapti, Poorvaroop, Roopa, Upadrava, Tulya dosha - dushyatvam, Atulya ritu, Number of dosha involved, Number of Rogamarga involved, Kala, Desha, Prakruti, Involvement of Marma and other factors	CC	DK	KH	L&G D	DEB	F&S	II	
Topic 27 27. Sadhyasadyatva – Prognosis (Lecture :1 hours, Non lecture: 0 hours)									
CO1	Enumerate and describe the features of sadhyasadyatva	CC	MK	KH	L&PP T	INT	F&S	II	
CO1	Analyse the components of Vyadhi from Sadhyasadyatva	CAN	MK	KH	L&G D	INT	F&S	II	
Topic 28 28. Digital health and Artificial intelligence in the context of Roganidana (Lecture :1 hours, Non lecture: 1 hours)									
CO6	Define and describe the scope of Digital health and Artificial intelligence in Ayurveda Diagnosis and Prognosis	CC	NK	KH	BL	COM	F&S	II	
CO6	Explain need of Instrumentation and Biosensors for diagnosis and prognosis in Ayurveda.	CC	NK	KH	BL	INT	F&S	II	
CO6	Justify scope of Diagnostic tool development in Ayurveda and their implementation.	CE	NK	KH	BL	INT	F&S	II	

Paper 2 Vyadhi Vigyan, contemporary understanding and updates									
A3 Course	B3 Learning Objective (At the end of the session, the students	C3 Doma	D3 Must to know	E3 Level	F3 T-L	G3 Assessment	H3 Form	I3 Term	J3 Integr

outcome	should be able to)	in/sub	/ desirable to know / Nice to know	Does/ Show s how/ Know s how/ Know	meth od	(Refer abbreviations)	ative/ summ ative		ation
Topic 1 1. Agnimandya – Ajeerna, Anaha, Adhmana, Atopa (Lecture :1 hours, Non lecture: 0 hours)									
CO1	Define Anaha	CK	MK	K	L&PP T	QZ	F&S	II	
CO1	Enlist types of Anaha	CK	MK	K	L&PP T	QZ	F&S	II	
CO1,CO5	Describe Adhmana and Atopa	CC	MK	KH	L&PP T	INT	F&S	II	
Topic 2 2. Chhardi (Lecture :1 hours, Non lecture: 0 hours)									
CO1	Define Chhardi	CK	DK	K	L&PP T	QZ	F&S	II	
CO1	Describe hetu and samprapti of Chhardi.	CC	DK	KH	L&G D	INT	F&S	II	
CO1	Enlist bheda of Chhardi	CK	DK	K	L&PP T	QZ	F&S	II	
CO1	Describe purvaroop, samanya lakshana, vishishta lakshana, upadrava and sadhya asadhyata of Chhardi	CC	DK	KH	L&PP T	INT	F&S	II	
Topic 3 3. Amlapitta (Lecture :2 hours, Non lecture: 0 hours)									

CO1	Define Amlapitta	CK	MK	K	L&PP T	QZ	F&S	II	
CO1	Describe hetu and samprapti of Amlapitta	CC	MK	KH	L&G D	M-CHT	F&S	II	
CO1	Enlist bheda of Amlapitta	CK	MK	K	L&PP T	QZ	F&S	II	
CO1	Describe purvaroop, samanya lakshana, vishishta lakshana, and sadhya asadhyata of Amlapitta	CC	MK	KH	L&PP T	INT	F&S	II	
Topic 4 4. Shoola (Lecture :1 hours, Non lecture: 0 hours)									
CO1	Define Shoola	CK	MK	K	L&PP T	QZ	F&S	II	
CO1	Enlist Shoola bheda	CK	MK	K	L&PP T	QZ	F&S	II	
CO1,CO5	Describe and differentiate Parinama shoola and Annadrava shoola	CC	MK	KH	L&PP T	INT	F&S	II	
Topic 5 5. Atisara, and Pravahika (Lecture :3 hours, Non lecture: 1 hours)									
CO1	Describe pratyatma lakshana of Atisara	CC	MK	KH	L&PP T	QZ	F&S	II	
CO1	Describe hetu and samprapti of Atisara	CC	MK	KH	L&G D	INT	F&S	II	
CO1	Enlist bheda of Atisara	CK	MK	KH	L&PP T	QZ	F&S	II	
CO1	Describe purvaroop of Atisara	CC	MK	KH	L&PP T,CB	INT	F&S	II	

					L				
CO1	Enlist and describe upadrava of Atisara	CK	MK	K	L&PP T	INT	F&S	II	
CO1	Describe sadhya asadhyata of Atisara	CC	MK	KH	L&PP T	T-CS,INT	F&S	II	
CO1	Describe nivrutta Atisara lakshana or vigata Atisara lakshana	CC	MK	KH	L&PP T	INT	F&S	II	
CO1	Describe samprapti of Pravahika	CC	MK	KH	L&G D	M-CHT	F&S	II	
CO1	Enlist bheda of Pravahika	CK	MK	KH	L&PP T	QZ	F&S	II	
CO1	Describe samanya and vishishta lakshana of Pravahika	CC	MK	KH	L&PP T,CB L	T-CS	F&S	II	
CO1	Differentiate between Atisara and Pravahika	CC	MK	KH	L&G D,PB L	CL-PR	F&S	II	
CO1	Differentiate Doshaja Atisara	CC	MK	KH	L&G D,PB L	CL-PR	F&S	II	
CO1	Explain Bhayaja atisara, Shokaja atisara and Raktaja atisara lakshana	CC	MK	KH	L&G D,PB L	CL-PR	F&S	II	
Topic 6 6. Grahani (Lecture :2 hours, Non lecture: 1 hours)									
CO1	Describe pratyatma lakshana of Grahani	CC	MK	KH	L&PP	PUZ	F&S	II	

					T				
CO1	Describe hetu and samprapti of Grahani	CC	MK	KH	L&G D	M-CHT	F&S	II	
CO1	Enlist bheda of Grahani	CK	MK	KH	L&PP T	QZ	F&S	II	
CO1	Describe purvaroop, and samanya lakshana of Grahani	CC	MK	KH	L&PP T	T-CS,INT	F&S	II	
CO1	Explain Sangraha grahani and Ghati yantra grahani	CC	MK	KH	L&PP T,CB L	INT	F&S	II	
CO1	Explain sadhya asadhyata of Grahani	CC	MK	KH	L&PP T	T-CS,INT	F&S	II	
CO1	Differentiate Atisara and Grahani Roga	CC	MK	KH	L&G D,PB L	T-CS	F&S	II	
CO1	Differentiate Grahani dosha and Grahani roga	CC	MK	KH	L&G D,PB L	T-CS,CL-PR	F&S	II	
CO1	Differentiate Doshaja Grahani	CC	MK	KH	L&G D,PB L	CL-PR	F&S	II	
Topic 7 7. Visuchika, Alasaka, Vilambika (Lecture :1 hours, Non lecture: 0 hours)									
CO1	Define Visuchika	CK	MK	K	L&PP T	QZ	F&S	II	
CO1	Describe lakshana, upadrava, and sadhyasadhyata of Visuchika ,	CC	MK	KH	L&PP	INT	F&S	II	

	Alasaka and Vilambika				T				
Topic 8 8. Common GIT diseases (Lecture :1 hours, Non lecture: 4 hours)									
CO2	Describe the clinical features of Ulcerative dyspepsia and Non-ulcerative dyspepsia, Irritable Bowel Syndrome, and Inflammatory Bowel Diseases	CC	DK	KH	RP,T UT	INT	F&S	II	
CO3	Perform relevant clinical examination of Ulcerative dyspepsia and Non-ulcerative dyspepsia, Irritable Bowel Syndrome, and Inflammatory Bowel Diseases	PSY-GUD	DK	SH	L_VC	OSCE	F&S	II	
CO4	Order and interpret relevant investigations of Ulcerative dyspepsia and Non-ulcerative dyspepsia, Irritable Bowel Syndrome, and Inflammatory Bowel Diseases	CAP	DK	SH	L&G D,LRI ,D_L	T-CS	F&S	II	
Topic 9 9. Mutrakrichhra (Lecture :2 hours, Non lecture: 1 hours)									
CO1	Explain pratyatma lakshana of Mutrakrichhra	CC	MK	KH	L&PP T	PUZ	F&S	II	
CO1	Describe hetu and samprapti of Mutrakrichhra	CC	MK	KH	L&G D	INT	F&S	II	
CO1	Enlist bheda of Mutrakrichhra	CK	MK	KH	L&PP T	QZ	F&S	II	
CO1,CO5	Describe vishishta lakshana of Mutrakrichhra	CC	MK	KH	L&PP T,CB L	INT	F&S	II	
Topic 10 10. Mutraghata (Lecture :3 hours, Non lecture: 1 hours)									
CO1	Define Mutraghata	CK	MK	K	L&PP T	QZ	F&S	II	

CO1	Enlist conditions of Mutra shoshana and Mutra pratihanyate among different types of Mutraghata	CK	MK	K	L&G D	INT	F&S	II	
CO1	Describe different types of Mutraghata	CC	MK	KH	L&PP T,PB L	INT	F&S	II	
CO1	Differentiate Mutrakrichra and Mutraghata	CC	MK	KH	L&G D,PB L	T-CS	F&S	II	
Topic 11 11. Common Urinary diseases (Lecture :1 hours, Non lecture: 6 hours)									
CO2	Describe the clinical features of Urinary Tract Infection, Prostatomegaly, Nephrotic syndrome, Nephritic syndrome, Acute Kidney Injury and Chronic Kidney Disease	CC	DK	KH	L&G D,RP	T-CS	F&S	II	
CO3	Perform relevant clinical examination of Urinary Tract Infection, Prostatomegaly, Nephrotic syndrome, Nephritic syndrome, Acute Kidney Injury and Chronic Kidney Disease	PSY- GUD	DK	SH	L_VC	T-CS	F&S	II	
CO4	Order and interpret relevant investigations of Urinary Tract Infection, Prostatomegaly, Nephrotic syndrome, Nephritic syndrome, Acute Kidney Injury and Chronic Kidney Disease	CAP	DK	SH	L&G D,LRI	T-CS	F&S	II	
Topic 12 12. Hikka (Lecture :1 hours, Non lecture: 0 hours)									
CO1	Describe pratyatma lakshana, hetu, and samprapti of Hikka	CC	NK	KH	L&PP T	PUZ	F&S	II	
CO1	Describe cardinal features of Pancha Hikka	CC	NK	KH	L&PP T	INT	F&S	II	
Topic 13 13. Shwasa (Lecture :2 hours, Non lecture: 1 hours)									

CO1	Define Shwasa	CK	MK	K	L&PP T	QZ	F&S	II	
CO1	Describe hetu and samanya samprapti of Shwasa	CC	MK	KH	L&G D	T-CS	F&S	II	
CO1	Enlist bheda of Shwasa	CK	MK	K	L&PP T	P-VIVA,QZ	F&S	II	
CO1	Describe purvaroop, and sadhya asadhyata of Shwasa	CC	MK	KH	L&PP T	T-CS	F&S	II	
CO1	Describe vishishta lakshana of Tamaka shwasa with its avastha bheda	CC	MK	KH	L&PP T	T-CS	F&S	II	
CO1	Describe dosha predominance in Shwasa	CC	MK	KH	DIS	INT	F&S	II	
CO1	Identify cardinal features of Pancha shwasa and correlate with the current science	CAN	MK	KH	L&PP T	INT	F&S	II	
CO1	Differentiate Pancha shwasa	CC	MK	KH	PBL	CL-PR	F&S	II	
Topic 14 14. Kasa (Lecture :2 hours, Non lecture: 0 hours)									
CO1	Define Kasa	CK	MK	K	L&PP T	QZ	F&S	II	
CO1	Describe hetu and samprapti of Kasa	CC	MK	KH	L&G D	INT	F&S	II	
CO1	Enlist bheda of Kasa	CK	MK	K	L&PP T	QZ	F&S	II	
CO1	Describe purvaroop and sadhya asadhyata of Kasa	CC	MK	KH	L&PP T	T-CS	F&S	II	
CO1	Describe the differential diagnosis of Kasa based on kapha	CC	MK	KH	L&PP	T-CS	F&S	II	

	lakshana				T				
CO1	Describe the differential diagnosis of Kshayaja kasa and Rajayakshma	CC	MK	KH	L&G D	T-CS	F&S	II	
CO1	Describe the differential diagnosis of Kshataja kasa and kshata ksheena	CC	MK	KH	L&G D	T-CS	F&S	II	
CO1	Differentiate Doshaja kasa	CC	MK	KH	DIS	INT	F&S	II	
Topic 15 15. Rajayakshma & Shosha (Lecture :3 hours, Non lecture: 0 hours)									
CO1	Describe Rajayakshma vyadhi swabhava	CC	DK	KH	L&PP T	INT	F&S	II	
CO1	Describe hetu and samprapti of Rajayakshma	CC	DK	KH	L&G D	M-CHT	F&S	II	
CO1	Enlist bheda of Rajayakshma	CK	DK	K	L&PP T	QZ	F&S	II	
CO1	Explain tri roopa, shad roopa, ekadasha roopa, and sadhyasadyata of Rajayakshma	CC	DK	KH	L&PP T	INT	F&S	II	
CO1	Classify and describe Ashta shosha	CC	DK	KH	L&PP T	INT	F&S	II	
Topic 16 16. Common lung disorders (Lecture :1 hours, Non lecture: 4 hours)									
CO2	Describe the clinical features of Pneumonia, Chronic Obstructive Pulmonary Disease, Pleural effusion, and Bronchiectasis	CC	DK	KH	L_VC ,RP,D _BED	INT	F&S	II	
CO3	Perform relevant clinical examination of Pneumonia, Chronic Obstructive Pulmonary Disease, Pleural effusion, and Bronchiectasis	PSY- GUD	DK	SH	L_VC	OSCE	F&S	II	

CO4	Order and interpret relevant investigations of Pneumonia, Chronic Obstructive Pulmonary Disease, Pleural effusion, and Bronchiectasis	CAP	DK	KH	XRy, LRI	T-CS	F&S	II	
Topic 17 17. Jwara (Lecture :4 hours, Non lecture: 1 hours)									
CO1	Define and enlist types of Jwara based on vidhi samprapti	CK	MK	K	L&PP T	QZ	F&S	II	
CO1	Describe nidana, samprapti, samanya poorvaroopta, vishishta poorvaroopta, pratyatma lakshana and samprapti of Doshaja jwara	CC	MK	KH	L&G D	PUZ,INT	F&S	II	
CO1	Describe Doshaja jwara along with sannipataja jwara according to Charaka	CC	MK	KH	L&G D	PUZ,INT	F&S	II	
CO1	Describe Abhishanga jwara, Vishama jwara, and Punaravartaka jwara	CC	MK	KH	L&PP T	T-CS	F&S	II	
CO1	Explain Antarvega, Bhahirvega jwara, Vata balasaka and Pralepaka jwara	CC	MK	KH	L&PP T	INT	F&S	II	
CO1	Differentiate Ama, Pachyamana and Nirama jwara lakshana	CC	MK	KH	L&G D	CL-PR	F&S	II	
CO1	Analyze Agantu and Doshaja jawara with reference to Jwara samprapti	CAN	MK	KH	DIS	INT	F&S	II	
CO1	Describe sadhyasadyata of Jwara	CC	MK	KH	L&PP T	INT	F&S	II	
CO1	Enlist Jwara mukta lakshana	CK	MK	K	L&PP T	QZ	F&S	II	
Topic 18 18. Masurika – Romantika (Lecture :1 hours, Non lecture: 0 hours)									
CO1	Enlist nidana of Masurika	CK	NK	K	L&PP	QZ	F&S	II	

					T				
CO1	Describe samprapti of Masurika	CC	NK	KH	L&G D	INT	F&S	II	
CO1	Enlist bheda of Masurika	CC	NK	KH	L&PP T	QZ	F&S	II	
CO1	Explain the avasthika lakshana of Masurika	CC	NK	KH	L&PP T	INT	F&S	II	
CO1	Enlist features of Romantika	CK	NK	K	L&PP T	QZ	F&S	II	
Topic 19 19. Fever (Lecture :1 hours, Non lecture: 6 hours)									
CO2	Describe the organism, incubation period, and mode of transmission of Measles virus, Varicella-zoster virus and Herpes zoster, Coxsackie virus, Rubella virus, various Malaria parasites, Influenza virus, Dengue virus, Leptospira, Chikungunya virus, Salmonella and causative agents of other common regional disorders presenting with fever	CC	DK	KH	L_VC ,FC	WP,INT	F&S	II	
CO2	Describe the clinical features of Measles, Chicken pox and Herpes zoster, Hand foot mouth disease, Rubella, Malaria, Filariasis, Influenza, Dengue, Leptospirosis, Chikungunya, and Typhoid	CC	DK	KH	L_VC ,RP	T-CS	F&S	II	
CO2	Describe the common regional disorders presenting with fever	CC	DK	KH	L&G D	T-CS	F&S	II	
CO2	Describe the complications of Measles, Chicken pox and Herpes zoster, Hand foot mouth disease, Rubella, Malaria, Filariasis, Influenza, Dengue, Leptospirosis, Chikungunya, Typhoid, and other common regional disorders presenting with fever	CC	DK	KH	TUT	INT	F&S	II	

CO3	Perform relevant clinical examination related to Measles, Chicken pox and Herpes zoster, Hand foot mouth disease, Rubella, Malaria, Filariasis, Influenza, Dengue, Leptospirosis, Chikungunya, Typhoid, and other common regional disorders presenting with fever	PSY-GUD	DK	SH	L_VC	OSCE	F&S	II	
CO4	Order and interpret relevant investigations related to Measles, Chicken pox and Herpes zoster, Hand foot mouth disease, Rubella, Malaria, Filariasis, Influenza, Dengue, Leptospirosis, Chikungunya, Typhoid, and other common regional disorders presenting with fever	CAP	DK	SH	LRI	T-CS	F&S	II	
Topic 20 20. Pandu (Lecture :2 hours, Non lecture: 0 hours)									
CO1	Describe pratyatma lakshana of Pandu	CC	MK	KH	L&PP T	PUZ	F&S	II	
CO1	Describe hetu and samprapti of Pandu	CC	MK	KH	L&PP T	INT	F&S	II	
CO1	Enlist bheda of Pandu	CC	MK	KH	L&PP T	QZ	F&S	II	
CO1	Describe purvaroop of Pandu	CC	MK	KH	L&PP T	INT	F&S	II	
CO1	Enlist upadrava of Pandu	CK	MK	K	L&PP T	QZ	F&S	II	
CO1	Describe sadhya asadhyata of Pandu	CC	MK	KH	L&PP T	INT	F&S	II	
CO1	Explain Pancha pandu	CC	MK	KH	L&PP T	T-CS	F&S	II	

CO1	Differentiate Doshaja pandu	CC	MK	KH	L&G D	CL-PR	F&S	II	
Topic 21 21. Raktapitta (Lecture :1 hours, Non lecture: 1 hours)									
CO1	Define Raktapitta and mention the rakta pravrutti marga	CK	MK	K	L&PP T	QZ	F&S	II	
CO1	Explain the swabhava of Raktapitta	CC	MK	KH	DIS	INT	F&S	II	
CO1	Enlist bheda of Raktapitta	CK	MK	KH	L&PP T	QZ	F&S	II	
CO1	Describe nidana, samprapti, purvaroop, vishishta lakshana of Raktapitta	CC	MK	KH	L&G D	T-CS	F&S	II	
CO1	Enlist upadrava of Raktapitta	CK	MK	KH	L&PP T	PUZ	F&S	II	
CO1	Describe sadhya asadhyata of Raktapitta	CC	MK	KH	DIS	INT	F&S	II	
Topic 22 22. Hematopoietic diseases (Lecture :1 hours, Non lecture: 6 hours)									
CO2	Describe the clinical features of anaemia, nutritional anaemia, thalassemia, sickle cell anaemia, leukaemia, and thrombocytopenia	CC	DK	KH	L_VC ,RP	WP	F&S	II	
CO4	Order and interpret relevant investigations of anaemia, nutritional anaemia, thalassemia, sickle cell anaemia, leukaemia, and thrombocytopenia	CAP	DK	KH	L&G D,LRI	T-CS	F&S	II	
CO2	Describe the differential diagnosis of anaemia, nutritional anaemia, thalassemia, sickle cell anaemia, leukaemia, and thrombocytopenia	CC	DK	KH	L&G D,PB L	PRN	F&S	II	
Topic 23 23. Hridroga (Lecture :1 hours, Non lecture: 1 hours)									

CO1	Describe hetu and samprapti of Hridroga	CC	DK	KH	L&G D	QZ	F&S	II	
CO1	Enlist bheda of Hridroga	CK	DK	KH	L&PP T	PUZ	F&S	II	
CO1	Analyze samanya lakshana of Hridroga	CAN	DK	KH	DIS	T-CS	F&S	II	
CO1	Describe vishishta lakshana of Hridroga	CC	DK	KH	L&PP T	INT	F&S	II	
CO1	Enlist upadrava of Hridroga	CK	DK	KH	L&PP T	WP	F&S	II	
Topic 24 24. Shotha (Lecture :2 hours, Non lecture: 0 hours)									
CO1	Describe hetu of Shotha	CC	MK	KH	L&G D	O-QZ	F&S	II	
CO1	Enlist bheda of Shotha	CK	MK	KH	L&PP T	O-QZ	F&S	II	
CO1	Describe vidhi samprapti of shotha	CC	MK	KH	DIS	O-GAME	F&S	II	
CO1	Describe purvaroopta, vishishta lakshana, samprapti and sadhya asadhyata of Nija shotha	CC	MK	KH	L&G D	INT	F&S	II	
CO1	Differentiate Doshaja shotha	CC	MK	KH	L&G D	INT	F&S	II	
Topic 25 25. Cardiovascular disorders (Lecture :1 hours, Non lecture: 5 hours)									
CO2	Describe the clinical features of Coronary Artery Disease (Ischemic Heart Disease, and Myocardial Infarction) and Congestive cardiac failure	CC	DK	KH	L_VC ,RP	C-VC	F&S	II	V-KC

CO3	Perform relevant clinical examination of Coronary Artery Disease (Ischemic Heart Disease, and Myocardial Infarction) and Congestive cardiac failure	PSY-GUD	DK	SH	L_V C ,SIM	OSCE	F&S	I	
CO4	Order and interpret relevant investigations of Coronary Artery Disease (Ischemic Heart Disease, and Myocardial Infarction) and Congestive cardiac failure	CAP	DK	KH	L&G D,LRI	O-QZ	F&S	II	
Topic 26 26. Kamala (Lecture :2 hours, Non lecture: 0 hours)									
CO1	Define Kamala	CK	MK	K	L&PP T	QZ	F&S	II	
CO1	Describe hetu and samprapti of Kamala	CC	MK	KH	L&G D	INT	F&S	II	
CO1	Classify Kamala on the basis of vidhi samprapti of Kamala	CC	MK	KH	L&PP T	INT	F&S	II	
CO1	Differentiate Koshta shakhashrita and Shakhashrita Kamala	CC	MK	KH	DIS	PRN	F&S	II	
CO1	Enlist upadrava of Kamala	CK	MK	KH	L&PP T	QZ	F&S	II	
CO1	Describe sadhya asadhyata of Kamala	CC	MK	KH	TUT	M-CHT	F&S	II	
CO1,CO5	Describe Swatantra-Paratantra Kamala, Alpapitta-Bahupitta Kamala	CC	MK	KH	L&PP T	INT	F&S	II	
Topic 27 27. Udara Roga (Lecture :2 hours, Non lecture: 1 hours)									
CO1	Explain pratyatma lakshana of Udara	CC	MK	KH	L&PP T	PUZ	F&S	II	
CO1	Describe hetu and samprapti of Udara	CC	MK	KH	L&G D	WP	F&S	II	

CO1	Enlist bheda of Udara	CK	MK	K	L&PP T	QZ	F&S	II	
CO1,CO5	Describe purvaroop, samanya lakshana and sadhya asadhyata of Udara	CC	MK	KH	L&PP T	T-CS	F&S	II	
CO1	Explain avastha bheda of Udara	CC	MK	KH	DIS	PRN	F&S	II	
CO1,CO5	Differentiate Doshaja udara	CC	MK	KH	L&G D	M-CHT	F&S	II	
CO1,CO5	Explain Vishishta lakshana of Baddha gudodara, Pleehodara, Jalodara and Chidrodara	CC	MK	KH	L&PP T	M-CHT	F&S	II	
Topic 28 28. Hepatobiliary diseases (Lecture :1 hours, Non lecture: 2 hours)									
CO2,CO5	Describe the clinical features of Liver cirrhosis, Alcoholic and Non - Alcoholic Liver Disease, Hepatitis, Jaundice and Ascites	CC	DK	KH	L_VC ,RP	C-VC	F&S	II	
CO3	Perform relevant clinical examination of Liver cirrhosis, Alcoholic and Non - Alcoholic Liver Disease, Hepatitis, Jaundice and Ascites	PSY- GUD	DK	SH	L_VC ,D_B ED	OSCE	F&S	II	
CO4	Order and interpret relevant investigations of Liver cirrhosis, Alcoholic and Non - Alcoholic Liver Disease, Hepatitis, Jaundice and Ascites	CAP	DK	SH	L&G D,LRI	PRN	F&S	II	
CO2,CO5	Describe the differential diagnosis of Liver cirrhosis, Alcoholic and Non - Alcoholic Liver Disease, Hepatitis, Jaundice and Ascites	CC	DK	KH	L&G D,PB L	M-CHT	F&S	II	
Topic 29 29. Kushtha - Maha Kushtha & Kshudra Kushtha (According to Charaka) (Lecture :3 hours, Non lecture: 1 hours)									
CO1	Define Kushtha	CK	MK	K	L&PP T	O-QZ	F&S	III	

CO1	Describe hetu and samprapti of Kushtha	CC	MK	KH	L&G D	COM	F&S	III	
CO1	Enlist bheda of Maha Kushtha & Kshudra Kushtha	CK	MK	K	L&PP T	O-QZ	F&S	III	
CO1	Describe purvaroop of Kushtha	CC	MK	KH	L&G D	INT	F&S	III	
CO1,CO5	Describe vishishta lakshana of Maha Kushtha & Kshudra Kushtha	CC	MK	KH	L&PP T,CD	O-GAME	F&S	III	
CO1,CO5	Describe dosha anusara Kushtha lakshana	CC	MK	KH	L&G D	M-POS	F&S	III	
CO1	Describe sadhya asadhyata of Maha Kushtha & Kshudra Kushtha	CC	MK	KH	L&PP T	O-QZ	F&S	III	
CO1,CO5	Differentiate Maha kushtha & Kshudra kushtha	CC	MK	KH	DIS	CL-PR	F&S	III	
Topic 30 30. Sheetapitta (Lecture :1 hours, Non lecture: 0 hours)									
CO1	Describe Sheetapitta samprapti	CC	MK	KH	L&PP T	M-CHT	F&S	III	
CO1,CO5	Describe Sheetapitta and Udarda lakshana	CC	MK	KH	L&PP T	QZ	F&S	III	
CO1	Describe Kotha lakshana	CC	MK	KH	L&PP T	QZ	F&S	III	
CO1,CO5	Differentiate Sheetapitta and Udarda	CC	MK	KH	DIS	QZ	F&S	III	
Topic 31 31. Shwitra (Lecture :1 hours, Non lecture: 0 hours)									
CO1	Enlist types of Shwitra	CK	MK	K	L&PP	O-QZ	F&S	III	

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CO1,CO5	Describe lakshana and sadhya asadhyata of Shwitra	CC	MK	KH	L&PP T	INT	F&S	III	
Topic 32 32. Visarpa (Lecture :2 hours, Non lecture: 0 hours)									
CO1	Define Visarpa	CK	MK	K	L&PP T	O-QZ	F&S	III	
CO1	Describe hetu and samprapti of Visarpa	CC	MK	KH	L&G D	M-CHT	F&S	III	
CO1	Enlist bheda of Visarpa	CK	MK	K	L&PP T	QZ	F&S	III	
CO1,CO5	Describe purvaroop of visarpa, features of Bahya and Abhyantara visarpa and sadhya asadhyata of Visarpa	CC	MK	KH	L&PP T	PRN	F&S	III	
CO1,CO5	Differentiate Doshaja Visarpa	CC	MK	KH	DIS	INT	F&S	III	
CO1,CO5	Explain Agni, Kardama and Granthi visarpa	CC	MK	KH	L&PP T	T-CS	F&S	III	
Topic 33 33. Skin diseases (Lecture :1 hours, Non lecture: 6 hours)									
CO2,CO5	Describe the clinical features of Allergic disorders - Eczema, Urticaria; Squamous lesions - Psoriasis, Lichen planus; Bullous lesion – Pemphigus and Pemphigoid; Mycotic skin diseases; Leprosy; Vitiligo; Cellulitis	CC	DK	KH	L_VC	C-VC	F&S	III	
CO3	Perform relevant clinical examination of Allergic disorders - Eczema, Urticaria; Squamous lesions - Psoriasis, Lichen planus; Bullous lesion – Pemphigus and Pemphigoid; Mycotic skin diseases; Leprosy; Vitiligo; Cellulitis	PSY-GUD	DK	SH	L_VC ,D_B ED	OSCE	F&S	III	

CO4	Order and interpret relevant investigations of Allergic disorders - Eczema, Urticaria; Squamous lesions - Psoriasis, Lichen planus; Bullous lesion – Pemphigus and Pemphigoid; Mycotic skin diseases; Leprosy; Vitiligo; Cellulitis	CAP	DK	SH	L&G D,LRI	INT	F&S	III	
Topic 34 34. Galaganda (Lecture :1 hours, Non lecture: 0 hours)									
CO1	Describe pratyatma lakshana and samprapti of Galaganda	CC	NK	KH	L&PP T	PUZ	F&S	III	
Topic 35 35. Thyroid disorders (Lecture :1 hours, Non lecture: 1 hours)									
CO2,CO5	Describe the clinical features of Hypothyroidism and hyperthyroidism	CC	DK	KH	L_V C ,RP	M-POS	F&S	III	
CO3	Perform relevant clinical examination of Hypothyroidism and hyperthyroidism	PSY- GUD	DK	SH	L_V C ,D_B ED	OSCE	F&S	III	
CO4	Order and interpret relevant investigations of Hypothyroidism and hyperthyroidism	CAP	DK	SH	L&G D,LRI	SP	F&S	III	
Topic 36 36. Sthoulya – Karshya (Lecture :1 hours, Non lecture: 0 hours)									
CO1	Describe nidana of Sthoulya and Karshya	CC	MK	KH	L&PP T	T-OBT	F&S	III	
CO1	Describe samprapti of Sthoulya	CC	MK	KH	L&G D	M-CHT	F&S	III	
CO1,CO5	Describe samanya and vishista lakshana of Sthoulya	CC	MK	KH	L&PP T	QZ	F&S	III	
CO1,CO5	Describe samanya lakshana of Karshya	CC	MK	KH	L&PP T	O-QZ	F&S	III	

CO1	Describe upadrava of Sthoulya	CC	MK	KH	L&PP T	O-QZ	F&S	III	
CO1,CO5	Differential diagnosis of Karshya	CC	MK	KH	DIS	CL-PR	F&S	III	
Topic 37 37. Obesity (Lecture :1 hours, Non lecture: 1 hours)									
CO2,CO5	Describe the clinical features of Obesity	CC	DK	KH	FC	WP	F&S	III	H-SW
CO3	Perform relevant clinical examination of Obesity	PSY- GUD	DK	SH	L_VC ,D_B ED	OSCE	F&S	III	
CO4	Order and interpret relevant investigations of Obesity	CAP	DK	SH	PBL, LRI	INT	F&S	III	
CO2,CO5	Describe the differential diagnosis of Obesity	CC	DK	KH	L&G D,PB L	INT	F&S	III	
Topic 38 38. Prameha (Lecture :2 hours, Non lecture: 1 hours)									
CO1	Describe pratyatma lakshana of Prameha	CC	MK	KH	L&PP T	PUZ	F&S	III	
CO1	Describe hetu and samprapti of Prameha	CC	MK	KH	L&G D	M-CHT	F&S	III	
CO1	Enlist bheda of Prameha	CK	MK	K	L&PP T	QZ	F&S	III	
CO1,CO5	Describe purvaroop, vishishta lakshana, upadrava and sadhya asadhyata of Prameha	CC	MK	KH	L&PP T	PRN	F&S	III	
Topic 39 39. Diabetes Mellitus and Pancreatitis (Lecture :1 hours, Non lecture: 1 hours)									

CO2,CO5	Describe the clinical features of Diabetes Mellitus and Pancreatitis	CC	DK	KH	L&G D,CB L	INT	F&S	III	
CO2	Describe the complications of Diabetes Mellitus and Pancreatitis	CC	DK	KH	L_VC	T-CS	F&S	III	
CO3	Perform relevant clinical examination of Diabetes Mellitus and Pancreatitis	PSY- GUD	DK	SH	L_VC ,D_B ED	OSCE	F&S	III	
CO4	Order and interpret relevant investigations of Diabetes Mellitus and Pancreatitis	CAP	DK	SH	L&G D,LRI	SP	F&S	III	
CO2,CO5	Describe Pancreatitis induced Diabetes mellitus (Fibrocalculous pancreatic Diabetes)	CC	DK	KH	L&G D	INT	F&S	III	
Topic 40 40. Vatavyadhi (Lecture :1 hours, Non lecture: 0 hours)									
CO1,CO5	Describe nidana, samanya purvaroop, and samanya lakshana of Vatavyadhi	CC	MK	KH	L&PP T	QZ	F&S	III	
Topic 41 41. Snayugata vata (Lecture :4 hours, Non lecture: 2 hours)									
CO1	Define Akshepaka	CK	MK	K	L&PP T	QZ	F&S	III	
CO1	Enlist Snayugata vata	CK	MK	K	L&PP T	QZ	F&S	III	
CO1,CO5	Describe Akshepaka	CC	MK	KH	L_VC	C-VC	F&S	III	
CO1	Enlist Akshepaka bheda	CK	MK	K	L&PP T	QZ	F&S	III	
CO1	Explain Akshepaka Samprapti	CC	MK	KH	L&G D	M-CHT	F&S	III	

CO1,CO5	Describe Apatanaka	CC	MK	KH	L&PP T	INT	F&S	III	
CO1	Enlist Apatanaka bheda	CK	MK	K	L&PP T	QZ	F&S	III	
CO1,CO5	Describe Dandapatanaka, Antarayama and Bahirayama	CC	MK	KH	L&PP T,CB L	C-VC	F&S	III	
CO1	Define Ardita	CK	MK	K	L&PP T	O-QZ	F&S	III	
CO1,CO5	Describe Ardita, samprapti of Ardita and lakshana of Ardita	CC	MK	KH	L_VC	INT, C-VC	F&S	III	
CO1	Compare Ardita according to Charaka and Sushruta	CC	MK	KH	DIS	C-VC	F&S	III	
CO1	Enlist Sadyasadyata of Ardita	CK	MK	K	L&PP T	INT	F&S	III	
CO1	Define Pakshaghata	CK	MK	K	L&PP T	QZ	F&S	III	
CO1,CO5	Describe Pakshaghata samprapti, and Pakshaghata lakshana	CC	MK	KH	L&G D,CD	C-VC	F&S	III	
CO1,CO5	Describe Kampavata	CC	MK	KH	L_VC	C-VC	F&S	III	
CO1,CO5	Describe Gridhrasi and Vishwachi with its lakshana	CC	MK	KH	CBL	T-CS	F&S	III	
CO1,CO5	Describe differential diagnosis of Gridhrasi and Viswachi	CC	MK	KH	L&G D	INT	F&S	III	
CO1,CO5	Describe Pangutwa	CC	MK	KH	L_VC	C-VC	F&S	III	
CO1,CO5	Differentiate Khanja with Gridhrasi	CC	MK	KH	L&G	C-VC	F&S	III	

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Topic 42 42. Common neurologic and spine disorders (Lecture :2 hours, Non lecture: 4 hours)									
CO2,CO5	Describe the clinical features of Common neurologic diseases: Parkinson's disease, Stroke, Bell's Palsy, Motor Neuron Disease, Transverse myelitis, Epilepsy (Organic) and Common Spine disorders: Lumbago- Sciatica syndrome, Brachial neuralgia, Cervical and Lumber Spondylosis	CC	DK	KH	L_VC ,RP	C-VC	F&S	III	
CO3	Perform relevant clinical examination of Common neurologic diseases: Parkinson's disease, Stroke, Bell's Palsy, Motor Neuron Disease, Transverse myelitis, Epilepsy (Organic) and Common Spine disorders: Lumbago- Sciatica syndrome, Brachial neuralgia, Cervical and Lumber Spondylosis	PSY-GUD	DK	SH	L_VC ,D_B ED	OSCE	F&S	III	
CO4	Order and interpret relevant investigations of Common neurologic diseases: Parkinson's disease, Stroke, Bell's Palsy, Motor Neuron Disease, Transverse myelitis, Epilepsy (Organic) and Common Spine disorders: Lumbago- Sciatica syndrome, Brachial neuralgia, Cervical and Lumber Spondylosis	CAP	DK	SH	L&G D,LRI	INT	F&S	III	
Topic 43 43. Sandhigatavata and Asthi majja gata vata (Lecture :1 hours, Non lecture: 0 hours)									
CO1,CO5	Describe Sandhigatavata	CC	MK	KH	L_VC	C-VC	F&S	III	
CO1,CO5	Describe Katigraha and Manyastambha	CC	MK	KH	L&PP T	INT	F&S	III	
CO1,CO5	Explain Vatakantaka	CC	MK	KH	L&PP T	T-CS	F&S	III	
CO1,CO5	Describe Avabahuka and Amsashosha	CC	MK	KH	L&PP T	INT	F&S	III	

CO1,CO5	Describe the differential diagnosis of Avabahuka with Vishwachi	CC	MK	KH	L&G D	QZ	F&S	III	
CO1,CO5	Describe Asthi-majjagata vata	CC	MK	KH	L&PP T	INT	F&S	III	
Topic 44 44. Diseases of bone, joints, and muscles (Lecture :1 hours, Non lecture: 2 hours)									
CO2,CO5	Describe the clinical features of Diseases of bone and Joints - Osteoarthritis, Osteoporosis, Frozen Shoulder, Calcaneal spur/ Plantar fasciitis, Tennis elbow, Carpel tunnel syndrome; Muscular diseases - Muscular Dystrophy	CC	DK	KH	L_VC	C-VC	F&S	III	
CO3	Perform relevant clinical examination of Diseases of bone and Joints - Osteoarthritis, Osteoporosis. Frozen Shoulder, Calcaneal spur/ Plantar fasciitis, Tennis elbow, Carpel tunnel syndrome; Muscular diseases - Muscular Dystrophy	PSY- GUD	DK	SH	L_VC ,D_B ED	OSCE	F&S	III	
CO4	Order and interpret relevant investigations of Diseases of bone and Joints - Osteoarthritis, Osteoporosis. Frozen Shoulder, Calcaneal spur/ Plantar fasciitis, Tennis elbow, Carpel tunnel syndrome; Muscular diseases - Muscular Dystrophy	CAP	DK	SH	L&G D,XR ay,LR I	INT	F&S	III	
Topic 45 45. Amavata (Lecture :2 hours, Non lecture: 0 hours)									
CO1	Describe hetu and samprapti of Amavata	CC	MK	KH	L&PP T	M-CHT	F&S	III	
CO1	Enlist bheda of Amavata	CK	MK	K	L&PP T	QZ	F&S	III	
CO1,CO5	Describe samanya lakshana, vishishta lakshana, upadrava and sadhya asadhyata of Amavata	CC	MK	KH	L_VC	C-VC	F&S	III	
Topic 46 46. Vatarakta (Lecture :2 hours, Non lecture: 1 hours)									

CO1	Define Vatarakta with its synonyms	CK	MK	K	L&PP T	O-QZ	F&S	III	
CO1	Describe hetu and samprapti of Vatarakta	CC	MK	KH	L&G D	M-CHT	F&S	III	
CO1	Explain Samprapti of Avasthika Vatarakta	CC	MK	KH	L&G D	INT	F&S	III	
CO1,CO5	Enlist and explain vidhi samprapti of Vatarakta	CC	MK	KH	L&G D	INT	F&S	III	
CO1,CO5	Enlist and explain bheda of doshaja Vatarakta	CC	MK	KH	L&G D	T-CS	F&S	III	
CO1,CO5	Describe purvaroop, upadrava, and sadhya asadhyata of Vatarakta	CC	MK	KH	L&PP T	INT	F&S	III	
CO1,CO5	Describe the differential diagnosis of Sandhigata vata, Amavata and Vata rakta	CC	MK	KH	L&G D	T-CS,INT	F&S	III	
Topic 47 47. Immunological & Metabolic disorders (Lecture :1 hours, Non lecture: 2 hours)									
CO2,CO5	Describe the clinical features of Rheumatic fever, Rheumatoid arthritis, SLE, Ankylosing spondylitis, Gout	CC	DK	KH	L_V C ,RP	C-VC	F&S	III	
CO3	Perform relevant clinical examination of Rheumatic fever, Rheumatoid arthritis, SLE, Ankylosing spondylitis, Gout	PSY- GUD	DK	SH	L_V C ,D_B ED	OSCE	F&S	III	
CO4	Order and interpret relevant investigations of Rheumatic fever, Rheumatoid arthritis, SLE, Ankylosing spondylitis, Gout	CAP	DK	SH	L&G D,LRI	T-CS	F&S	III	
CO2,CO5	Describe the differential diagnosis of Arthritis	CC	DK	KH	L&G D,PB L	T-CS	F&S	III	

Topic 48 48. Klaibya & Vandhyatva (Lecture :1 hours, Non lecture: 0 hours)									
CO1	Describe Klaibya and vandhyatva	CC	NK	KH	L&PP T	QZ	F&S	III	
CO1	Enlist types of Klaibya and Vandhyatva	CK	NK	K	L&PP T	QZ	F&S	III	
Topic 49 49. Sexual dysfunction and Infertility (Lecture :1 hours, Non lecture: 1 hours)									
CO2	Order and interpret relevant investigations of Sexual dysfunction and Infertility	CAP	NK	SH	L&G D,LRI	T-CS	F&S	III	
CO2	Describe differential diagnosis of Sexual dysfunction and Infertility	CC	NK	KH	L&G D	INT	F&S	III	V-SP
Topic 50 50. Unmada & Apasmara (Lecture :3 hours, Non lecture: 0 hours)									
CO1	Explain nirukti of Unmada and Apasmara	CC	NK	KH	L&PP T	O-QZ	F&S	III	
CO1	Explain pratyatmalakshana of Unmada and Apasmara	CC	NK	KH	L&PP T	PUZ	F&S	III	
CO1	Describe hetu and samprapti of Unmada and Apasmara	CC	NK	KH	L&G D	M-CHT	F&S	III	
CO1	Enlist bheda of Unmada and Apasmara	CK	NK	K	L&PP T	QZ	F&S	III	
CO1	Describe samanya lakshana of Unmada and Apasmara	CC	NK	KH	L&G D,L_ VC	QZ , C-VC	F&S	III	
Topic 51 51. Vishada (Lecture :1 hours, Non lecture: 0 hours)									

CO1	Define Vishada	CK	NK	K	L&PP T	QZ	F&S	III	
Topic 52 52. Murchha, and Sanyasa (Lecture :1 hours, Non lecture: 0 hours)									
CO1	Describe the Utpadaka hetu of Murchha, and Sanyasa	CC	NK	KH	L&PP T	INT	F&S	III	
CO1	Describe samprapti of Murchha, and Sanyasa	CC	NK	KH	L&G D	M-CHT	F&S	III	
Topic 53 53. Common Psychiatric diseases (Lecture :1 hours, Non lecture: 0 hours)									
CO2,CO5	Describe clinical manifestation of Depression, Anxiety neurosis and Epilepsy (Non-organic)	CC	NK	KH	L&PP T	QZ	F&S	III	
CO2,CO5	Differentiate Depression, Anxiety neurosis, and Epilepsy (Non-organic)	CC	NK	KH	L&G D	CL-PR	F&S	III	
CO3	Perform mental status examination for Depression, Anxiety neurosis, and Epilepsy (Non-organic)	PSY- GUD	NK	SH	L_VC ,D_B ED	INT	F&S	III	
Topic 54 54. Phiranga and Upadamsha (Lecture :1 hours, Non lecture: 0 hours)									
CO1	Describe nidana of Phiranga and Upadamsha	CC	NK	KH	L&PP T	QZ	F&S	III	
CO1	Explain the Upadamsha samprapti	CC	NK	KH	L&PP T	M-CHT	F&S	III	
CO1	Enlist the types of Phiranga	CK	NK	K	L&PP T	QZ	F&S	III	
Topic 55 55. Syphilis & Gonorrhoea (Lecture :1 hours, Non lecture: 1 hours)									

CO2	Describe causative factors, and clinical features of Syphilis and Gonorrhoea	CC	NK	KH	L&G D	T-CS	F&S	III	
CO2	Describe differential diagnosis of Syphilis and Gonorrhoea	CC	NK	KH	FC	T-CS	F&S	III	
CO4	Order and interpret relevant investigation of Syphilis and Gonorrhoea	CAP	NK	SH	L&G D,LRI	INT	F&S	III	
Topic 56 56. Krimiroga (Lecture :1 hours, Non lecture: 0 hours)									
CO1	Describe hetu of Krimiroga	CC	NK	KH	L&PP T	O-QZ	F&S	III	
CO1	Enlist bheda of Krimiroga	CK	NK	K	L&PP T	O-QZ	F&S	III	
CO1	Describe samanya lakshana of Krimiroga	CC	NK	KH	L&PP T	O-GAME	F&S	III	
Topic 57 57. Clinical presentation of common parasitic disorders (Lecture :1 hours, Non lecture: 2 hours)									
CO2,CO5	Describe the clinical presentation of Hook worm, Round worm, Thread worm, and Pin worm	CC	DK	KH	L_VC	C-VC	F&S	III	
CO3	Perform relevant examination of clinical presentation of Hook worm, Round worm, Thread worm, and Pin worm	PSY- GUD	DK	SH	L&PP T	INT	F&S	III	
CO4	Order and interpret relevant investigations of clinical presentation of Hook worm, Round worm, Thread worm, and Pin worm	CAP	DK	SH	L&G D,LRI	T-CS	F&S	III	
Topic 58 58. Khalitya & Palitya (Lecture :1 hours, Non lecture: 0 hours)									
CO1	Describe Khalitya and Palitya	CC	NK	KH	L&PP T	O-QZ	F&S	III	

Topic 59 59. Shleepada (Lecture :1 hours, Non lecture: 0 hours)									
CO1	Describe nidana and samprapti of Shleepada	CC	NK	KH	L&PP T	M-CHT	F&S	III	
CO1	Enlist bheda of Shleepada	CK	NK	K	L&PP T	QZ	F&S	III	
CO1	Enlist features of Shleepada	CK	NK	K	L&PP T	O-QZ	F&S	III	
Topic 60 60. Tuberculosis (Lecture :1 hours, Non lecture: 2 hours)									
CO2,CO5	Describe the clinical presentation of Tuberculosis	CC	DK	KH	L_VC	INT, C-VC	F&S	III	H-SW
CO3	Perform relevant clinical examination of Tuberculosis	PSY- GUD	DK	SH	L&PP T	INT	F&S	III	
CO4	Order and interpret relevant investigations of clinical presentation of Tuberculosis	CAP	DK	SH	L&G D,LRI	INT	F&S	III	

List of Practicals (Term and Hours)

PRACTICALS (Marks-100)			
S.No	List of Topics	Term	Hours
1	1. Aptopadesha Pareeksha/Prashna Pareeksha	1	10
2	2. Introduction to case sheet. Pratyaksha and Anumana Pareeksha.	1	10
3	3. General clinical and Systemic examination -A	1	20
4	4. General clinical and Systemic examination - B	1	20
5	5. Common Symptomatology of different systems	2	20
6	6. Vyavachedaka nidana/ Differential diagnosis	2	4
7	7. Case presentation	2	40
8	8. Introduction to Diagnostic procedures - Hematology, Biochemistry, Microbiology, Urine, Stool	2	26
9	9. Introduction to Electro Cardio Gram (ECG), Different imaging techniques	2	10
10	10. Introduction to Histopathology	2	4
11	11. Study of Histopathology Specimens	3	4
12	12. Retas pareeksha	3	2
13	13. Pathology practical (Perform/ Observation/ Interpretation)	3	40

Table 4: Learning objectives (Practical)

A4 Course outcome	B4 Learning Objective (At the end of the session, the students should be able to)	C4 Domain/sub	D4 Must to know / desirable to know / Nice to know	E4 Level Does/ Shows how/ Knows how/ Know	F4 T-L method	G4 Assessment (Refer abbreviations)	H4 Formative/ summative	I4 Term	K4 Integration
Topic 1 1. Aptopadesha Pareeksha/Prashna Pareeksha									
CO3,CO5	Perform Aptopadesha pareeksha, Prashna pareeksha or History taking mentioned in Ayurveda and contemporary medical literature for drawing clinical diagnosis and prognosis	PSY-GUD	MK	KH	D_BE D	CHK,RK	F&S	I	
CO7,CO8	Adopt and reflect ward ethics and communication skills while engaging in the process of examination	AFT-RES	MK	SH	SIM	SP,RK	F&S	I	
Topic 2 2. Introduction to case sheet. Pratyaksha and Anumana Pareeksha.									
CO3,CO5	Perform Darshanendriya, Sparshanendriya, Srotrendriya pareeksha mentioned in Ayurveda and contemporary medical literature for drawing clinical diagnosis and prognosis	PSY-GUD	MK	SH	D_BE D	P-CASE	F&S	I	
CO5	Perform Ghranendriya, & infer Rasanendriyataha pareeksha mentioned in Ayurveda and contemporary medical literature for drawing clinical diagnosis and prognosis	CAN	MK	KH	SIM	P-CASE,RK	F&S	I	
CO5,CO7	Report the findings of patient through structured case sheet	CC	MK	KH	CD	P-CASE,RK	F&S	I	
CO3,CO5	Perform Nadi pareeksha as per Ayurveda classics for identifying predominance of dosha.	PSY-GUD	MK	SH	D_BE D	P-PRF	F&S	I	

Topic 3 3. General clinical and Systemic examination -A									
CO3,CO5	Perform general examination and various systemic examination - General physical examination, Nervous system, Musculo skeletal system, Gastro intestinal system, Respiratory system, Integumentary system, Uro-genital system, Cardiovascular system, etc. (Inspection, Palpation, Percussion, Auscultation)	PSY-GUD	MK	SH	SIM, D_BE D	CL-PR,OSCE ,RK	F&S	I	
Topic 4 4. General clinical and Systemic examination - B									
CO3,CO5	Interpret the findings of general examination and various systemic examination - General physical examination, Nervous system, Musculo skeletal system, Gastro intestinal system, Respiratory system, Integumentary system, Uro-genital system, Cardiovascular system, etc. (Inspection, Palpation, Percussion, Auscultation)	CAP	MK	SH	SIM	SP,RK	F&S	I	
Topic 5 5. Common Symptomatology of different systems									
CO2,CO5	Describe the causes and mechanism of manifestation of Pain abdomen, Edema, Diarrhea, Dysentery, Dehydration and Constipation, Hiccough, Breathlessness, Cough, Vomiting, Joint pain with or without swelling Differential Diagnosis, Neck and Low back pain radiating to corresponding limb, Hematuria, Stroke in various case scenarios	CC	DK	KH	L_VC	COM	F&S	II	
CO2,CO5	Investigate the causes and mechanism of manifestation of Pain abdomen, Edema, Diarrhea, Dysentery, Dehydration and Constipation, Hiccough, Breathlessness, Cough, Vomiting, Joint pain with or without swelling, Neck and Low back pain radiating to corresponding limb, Hematuria, Stroke in various case scenarios	AFT-RES	DK	SH	IBL,P BL	INT	F&S	II	
Topic 6 6. Vyavachedaka nidana/ Differential diagnosis									

CO5	Infer diagnosis and prognosis based on a given clinical scenario	CAN	MK	KH	PBL, CD	SP	F&S	II	
CO5	Apply hypothetic-deductive model of clinical reasoning, Pattern recognition model, dual process diagnostic reasoning model, pathway for clinical reasoning model, integrative model of clinical reasoning model, model of diagnostic reasoning strategies in primary care for clinical diagnosis	CAP	DK	SH	SIM, CD	INT,SP	F&S	II	
CO5	Apply intuitive and analytical approach in clinical decision making	CAP	DK	SH	PBL,S IM,C D	SP	F&S	II	
CO5	Perform clinical diagnosis using these clinical reasoning models	PSY- GUD	DK	SH	SIM, CD	SP	F&S	II	
Topic 7 7. Case presentation									
CO5,CO7	Demonstrate case presentation skills	PSY- GUD	MK	SH	L_VC ,D_B ED	P-CASE,CL- PR	F&S	II	
Topic 8 8. Introduction to Diagnostic procedures - Hematology, Biochemistry, Microbiology, Urine, Stool									
CO4,CO5,CO 6	Order and interpret Diagnostic procedures - Haematology, Biochemistry, Microbiology, Urine, and Stool.	CAP	MK	SH	PBL, LRI	T-CS	F&S	II	
CO3	Suggest patient's preparation for Diagnostic procedures - Haematology, Biochemistry, Microbiology, Urine, and Stool	AFT- RES	MK	SH	L&PP T	SP	F&S	II	
CO3	Perform sample collection for Diagnostic procedures - Haematology, Biochemistry, Microbiology, Urine, and Stool	PSY- GUD	MK	SH	SIM	SP,RK	F&S	II	
Topic 9 9. Introduction to Electro Cardio Gram (ECG), Different imaging techniques									
CO4,CO5,CO	Order and interpret given report for Electro Cardio Gram (ECG)	CAP	DK	SH	L&PP	P-ID,CL-PR	F&S	II	

6	and different imaging techniques				T,XRay				
CO3	Suggest patient's preparation for Electro Cardio Gram (ECG) and different imaging techniques	AFT-RES	DK	SH	L&PPT	INT,SP	F&S	II	
Topic 10 10. Introduction to Histopathology									
CO4,CO5,CO6	Order and interpret tests for Histopathology specimens	CAP	NK	SH	LRI	INT	F&S	III	
Topic 11 11. Study of Histopathology Specimens									
CO4,CO5	Distinguish and describe prepared histopathology specimens of Lung and trachea/ Blood, Spleen and lymph/ Heart and vessels/ Glands/ Liver (Provide normal and abnormal slides to distinguish while demonstration and spotting)	AFT-RES	NK	SH	D_L	P-ID	F&S	III	
Topic 12 12. Retas pareeksha									
CO1,CO5	Describe and interpret retas pareeksha	CC	DK	KH	D_L	INT	F&S	III	
Topic 13 13. Pathology practical (Perform/ Observation/ Interpretation)									
CO4,CO5,CO6	Order and interpret Hb, RBC Count, WBC count, Haematocrit, Platelet count, Differential count, RBC indices and ESR* - Haematology Analyser through Flow cytometry technique	CAP	MK	SH	CBL	INT,RK	F&S	III	
CO3	Perform Hb, RBC Count, WBC count, Haematocrit, Platelet count, Differential count, RBC indices procedure through - Haematology Analyser or Cell counter through Flow cytometry technique	PSY-GUD	MK	SH	PT	P-PRF	F&S	III	
CO4,CO5,CO6	Order and interpret Urine physical examination (Appearance, colour, odour)	CAP	MK	SH	LRI	INT	F&S	III	

CO3	Perform Urine physical examination (<u>Appearance, colour, odour</u>) through <u>Visual method</u>	PSY-GUD	MK	SH	CBL, PT	P-PRF	F&S	III	
CO4,CO5,CO6	Order and interpret Urine physical and chemical examination (Urine specific gravity, Urine-ph, Sugar, Albumin, Bile pigment, Bile salt, Occult blood, Ketone, Urobilinogen) - Multistix (Urine test strips)	CAP	MK	SH	CBL, LRI	INT,RK	F&S	III	
CO3	Perform Urine physical and chemical examination (Urine specific gravity, Urine-ph, Sugar, Albumin, Bile pigment, Bile salt, Occult blood, Ketone, Urobilinogen) - Multistix (Urine test strips) (Create or simulate abnormal samples to demonstrate positive results)	PSY-GUD	MK	SH	PRA	P-PRF	F&S	III	
CO4,CO5,CO6	Order and interpret Urine Microscopic Examination (Epithelial cells, RBCs, Leukocytes, Casts, Crystals) - Light microscopy on centrifuged sediment	CAP	MK	SH	CBL, LRI	INT	F&S	III	
CO3	Perform Urine Microscopic Examination (Epithelial cells, RBCs, Leukocytes, Casts, Crystals by Light microscopy on centrifuged sediment)	PSY-GUD	MK	SH	PRA	P-PRF	F&S	III	
CO4,CO5,CO6	Order and interpret Liver Function Test (LFT) (Total Bilirubin, Direct – indirect bilirubin, SGOT, SGPT, ALK Phosphates, T Protein, Albumin, Globulin, A/G Ratio) -Semi-automated/ fully automated biochemical analyser through Photometry	CAP	NK	SH	CBL, LRI	INT	F&S	III	
CO2	Describe Liver Function Test (LFT) (Total Bilirubin, Direct – indirect bilirubin, SGOT, SGPT, ALK Phosphates, T Protein, Albumin, Globulin, A/G Ratio) procedure through demonstration	CC	DK	KH	D_L	INT	F&S	III	

	- Semi-automated/ fully automated biochemical analyser through Photometry								
CO2	Explain the principle and mechanism of functioning of biochemical analyzer	CC	DK	KH	D_L	QZ	F&S	III	
CO4,CO5,CO6	Order and interpret Renal Function Test (RFT) (Urea, Creatinine, Uric acid) - Semi-automated/ fully automated biochemical analyser through Photometry	CAP	MK	SH	CBL, LRI	INT,RK	F&S	III	
CO4,CO5,CO6	Order and interpret Diabetic profile (Blood Glucose-FBS, PPBS, RBS. HbA1C, Insulin, C-peptide) - Semi-automated/ fully automated biochemistry analyser/ ELISA reader through Photometry/ immunoturbidometry/ELISA Technique	CAP	MK	SH	CBL, LRI	INT,RK	F&S	III	
CO4,CO5,CO6	Order and interpret Thyroid profile (TSH, T3, T4, F T3, F T4) - ELISA Reader/ CLIA through ELISA/ CLIA Technique	CAP	MK	KH	CBL, LRI	INT	F&S	III	
CO2	Describe Thyroid profile (TSH, T3, T4, F T3, F T4) procedure through demonstration - ELISA Reader/ CLIA through ELISA/ CLIA Technique	CAP	DK	KH	D_L	QZ	F&S	III	
CO4,CO5,CO6	Order and interpret Lipid profile (Cholesterol, HDL, LDL, TG) - Semi-automated/ fully automated biochemical analyser through Photometry	CAP	MK	SH	CBL, LRI	INT,RK	F&S	III	
CO4,CO5,CO6	Order and interpret Peripheral smear (Malaria, Microfilaria) - Microscopy through Leishmans staining	CAP	MK	SH	CBL, LRI	INT,RK	F&S	III	
CO2	Describe Peripheral smear (Malaria, Microfilaria) procedure through demonstration - Microscopy through Leishmans staining	CC	DK	KH	D_L	QZ	F&S	III	
CO4,CO5,CO6	Order and interpret RA factor (qualitative), WIDAL (qualitative), VDRL (qualitative), ASO (qualitative) and CRP (qualitative) - Microscopy (if required) through Latex agglutination/	CAP	MK	SH	CBL, LRI	INT,RK	F&S	III	

	Turbidometry								
CO3	Perform RA factor (qualitative), WIDAL (qualitative), VDRL (qualitative), ASO (qualitative) and CRP (qualitative) - Microscopy (if required) through Latex agglutination/ Turbidometry	PSY-GUD	MK	SH	PRA	P-PRF	F&S	III	
CO4,CO5,CO6	Order and interpret Stool examination (Colour, Consistency) - Visual method	CAP	NK	SH	CBL, LRI	INT,RK	F&S	III	
CO2	Describe Stool examination (Colour, Consistency) - Visual method	CC	DK	KH	D_L	INT	F&S	III	
CO4,CO5,CO6	Order and interpret Stool examination (Ova , Cyst, Pus cells) - Microscopy through Wet smear (saline and iodine)	CAP	NK	SH	CBL, LRI	INT,RK	F&S	III	
CO2	Describe Stool examination (Ova , Cyst, Pus cells) - Microscopy through Wet smear (saline and iodine)	CC	DK	KH	D_L	INT	F&S	III	
CO4,CO5,CO6	Order and interpret Semen examination (Colour, Liquefaction, Viscosity) - Visual method	CAP	DK	SH	CBL, LRI	INT,RK	F&S	III	
CO2	Describe Semen examination (Colour, Liquefaction, Viscosity) procedure through demonstration - Visual method	CC	DK	KH	D_L	INT	F&S	III	
CO4,CO5,CO6	Order and interpret Semen examination (Sperm count, Motility, Morphology) - Microscopy through Cytometry/ Wet smear/ stained smear	CAP	DK	SH	CBL, LRI	INT,RK	F&S	III	
CO2	Describe Semen examination (Sperm count, Motility, Morphology) procedure through demonstration - Microscopy through Cytometry/ Wet smear/ stained smear	CC	DK	KH	D_L	INT,COM	F&S	III	
CO4,CO5,CO6	Order and interpret BT, CT, Prothrombin Time - Coagulometer	CAP	MK	SH	CBL, LRI	INT,RK	F&S	III	

Table 4a: List of Practical

S.No	Name of practical	Term	Activity	Practical hrs
1	1. Aptopadesha Pareeksha/Prashna Pareeksha	1	History taking/ Ward ethics/ Communication skills	10
2	2. Introduction to case sheet. Pratyaksha and Anumana Pareeksha.	1	Darshanendriya, Sparshanedriya, Srotrendriya & Ghranendriya & Rasanendriyataha pareeksha. General principle of systemic examination – Inspection, Palpation, Percussion, Auscultation	10
3	3. General clinical and Systemic examination -A	1	Demonstration on patients and using simulators, software or applications	20
4	4. General clinical and Systemic examination - B	1	General and Systemic examination	20
5	5. Common Symptomatology of different systems	2	Pain abdomen, Edema, Diarrhea, Dysentery, Dehydration and constipation, Hiccough, Breathlessness, Cough, Vomiting, Joint pain with or without swelling Differential Diagnosis, Neck and Low back pain radiating to corresponding limb, Hematuria, Stroke Differential Diagnosis	20
6	6. Vyavachedaka nidana/ Differential diagnosis	2	Clinical reasoning models	4
7	7. Case presentation	2	Demonstrating and presenting steps of clinical diagnosis	40
8	8. Introduction to Diagnostic procedures - Hematology, Biochemistry, Microbiology, Urine, Stool	2	A. Order an investigation B. Patient's preparation C. Sample collection	26
9	9. Introduction to Electro Cardio Gram (ECG), Different imaging techniques	2	Order and interpret reports related to ECG and Diagnostic imaging	10
10	10. Introduction to Histopathology	2	Order and Interpret	4

11	11. Study of Histopathology Specimens	3	Prepared histopathology specimens to be demonstrated, observed and studied (Lung and trachea/ Blood, Spleen and lymph/ Heart and vessels/ Glands/ Liver)	4
12	12. Retas pareeksha	3	Interpret observations derived from reto pareeksha	2
13	13. Pathology practical (Perform/ Observation/ Interpretation)	3	13.1 Hematology (Discipline) - Hemogram (Profile) 13.2 Clinical pathology (Discipline) - Urine Physical Examination (Profile) 13.3 Clinical pathology (Discipline) - Urine Physical and Chemical Examination (Profile) 13.4 Clinical pathology (Discipline) - Urine Microscopic Examination (Profile) 13.5 Clinical biochemistry (Discipline) - Liver Function Test (LFT) (Profile) 13.6 Clinical biochemistry (Discipline) - Renal Function Test (RFT) (Profile) 13.7 Clinical biochemistry (Discipline) - Diabetic profile (Profile) 13.8 Clinical biochemistry (Discipline) - Thyroid profile (Profile) 13.9 Clinical biochemistry (Discipline) - Lipid profile (Profile) 13.10 Clinical Pathology/ Haematology (Discipline) - Peripheral Smear (Profile) 13.11 Serology (Discipline) - RA Factor/ WIDAL (Profile) 13.12 Clinical Pathology (Discipline) - Stool examination (Profile) 13.13 Clinical Pathology (Discipline) - Stool examination (Profile) 13.14 Clinical Pathology (Discipline) - Semen examination (Profile) 13.15 Serology (Discipline) - Coagulation test (Profile)	40
Total Hr				210

Activity

CO	Topic name	Activity Details	Hours [#]
CO1,CO2,CO3,CO4,CO6,CO7,CO8	<p>1. Assessment of Dosha Vikriti:</p> <p>A. Nidana (Vyadhi janaka hetu)</p> <p>B. Agni bheda and Vikriti</p> <p>C. Dosha Vriddhi, Kshaya and Dushta Karma, Samsargaja, Sannipataja.</p> <p>D. Dosha swabhava - Nityasamshleshita (Leena) dosha and Parichedita dosha</p> <p>E. Paridhavamana dosha</p>	<p>Survey : After the completion of the topic the students are instructed to identify:</p> <p>The contemporary etiologies for the nidana or hetu are mentioned in various contexts as a part of case diagnosis.</p> <p>Identify Dosha Vriddhi, Kshaya and Dushta Karma, Samsargaja, Sannipataja features as a part of Case diagnosis.</p> <p>Minimum - 5 cases</p>	6
CO1,CO2	<p>2. Dhatu PakA. Ojodusti lakshana</p> <p>B. Asatmya - Immune pathology,</p> <p>C. Cell Injury and Cellular Adaptations</p> <p>D. Inflammation</p> <p>E. Hemodynamic disorders</p> <p>F. Neoplasia</p>	<p>Creating video presentations (5 to 7 minutes):</p> <p>After understanding the basic concepts:</p> <p>Group of 5 students together are instructed to prepare one quality educational video with current research updates in the field in a structured format and submit the same to the instructor.</p> <p>Topics of Ayurveda and various contemporary learning objectives defined can be provided for the same.</p> <p>The topics for video presentations should be selected from the subtopics, it can be regarding a specific point or research update or collection</p>	5

		<p>and summary of scientific articles, etc. which will be assisting in clinical practice.</p> <p>The video presentations should be submitted to create a repository and presented to the department.</p>	
CO2	3. Infection and Nutritional disorders	<p>Class presentations:</p> <p>Group activity with self-directed learning:</p> <p>Students are instructed to compile the subtopics given to the group.</p> <p>Prepare a PPT presentation and present it in class with the groups.</p> <p>10 min. for presentation and 5 min for question answers for each group.</p> <p>Topics to be covered in the presentation:</p> <p>A) The detailed knowledge of specific organisms, infectious disease symptomatology, and diagnostic procedures with recent advancements and challenges in diagnosis.</p> <p>B) Nutritional disorders with the thought of understanding the spectrum of signs and symptoms with Ayurveda literature, methods to diagnose in contemporary science, complications, etc.</p> <p>Monitored by instructors or mentors assigned for each group.</p>	2
CO6	4. Digital health and Artificial intelligence in the context of Roganidana	<p>Poster making:</p> <p>After a basic understanding of the topic, the students are instructed to prepare Posters regarding the use of Information and Communication Technology and other recent digital developments in understanding diagnosis, prognosis, and developing repositories related to morbidities or Roganidana Evum Vikriti Vigyan in the current era aiding for academics and</p>	1

		clinical practice. Similarly, the implementation of artificial intelligence in diagnosis and prognosis also can be prepared.	
CO1,CO2,CO3,CO4,CO6,CO7,CO8	5. Methods of Rogi pareeksha	<p>Demonstration bed side:</p> <p>After understanding the core concepts of pareeksha the student will be Demonstrated regarding various pareekshas before performing the same in practical session.</p> <p>The students are supposed to observe the same, receive, understand and imitate the methods demonstrated.</p> <p>Students will be assigned with the mentioned topics as a part of the activity by the instructor in minimum 5 simulated patients or patients.</p>	5
CO6	6. Vyadhinamakarana	<p>Demonstration:</p> <p>The instructor will be demonstrating the operations of the NAMASTE (National AYUSH Morbidity and Standardized Terminologies Electronic Portal) portal.</p> <p>The student should observe and implement the same for reporting terminologies or diagnosis. The instructor can give modified data indicating the disease diagnosis with masked patient details for mentioning the allotted codes of diseases or conditions from NAMASTE portal and WHO international standard terminologies on Ayurveda or A list of common diseases prevailing in the area can be given to the students to search the portal and mention the codes by themselves.</p> <p>Students can be assigned with any of the mentioned topics as a part of the activity by the instructor.</p>	1

CO2,CO3,CO6,CO7,CO8	<p>7. Perform relevant clinical examinations in the following disorders:</p> <p>Gastrointestinal disorders: Ulcerative and Non-ulcerative dyspepsia, Irritable Bowel Syndrome, Inflammatory Bowel Diseases.</p> <p>Urinary disorders: Urinary Tract Infection, Prostatomegaly, Nephrotic syndrome, Nephritic syndrome, Acute Kidney Injury and Chronic Kidney Disease.</p> <p>Respiratory disorders: Pneumonia, Chronic Obstructive Pulmonary Disease, Pleural effusion and Bronchiectasis.</p> <p>Measles, Chickenpox and herpes zoster, Hand foot mouth disease, Rubella, Malaria, Filariasis, Influenza, Dengue, Leptospirosis, Chikungunya, Typhoid, and other common regional disorders presenting with fever.</p> <p>Coronary Artery Disease (Ischemic Heart Disease, and Myocardial Infarction) and Congestive cardiac failure.</p> <p>Hepatobiliary diseases - Liver cirrhosis, Alcoholic and Non - Alcoholic Liver Diseases, Hepatitis, Jaundice, and Ascites.</p>	<p>Demonstration bedside (Simulated patients):</p> <p>The students will be instructed to observe the bedside demonstration activity by the instructor, followed by students imitating or performing the same activity relevant to the condition associated.</p> <p>The case study will be written in the activity book.</p>	8
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Allergic disorders -
Eczema, Urticaria;
Squamous lesions -
Psoriasis, Lichen planus;
Bullous lesion –
Pemphigus and
Pemphigoid. Mycotic skin
diseases. Leprosy.
Vitiligo. Cellulitis.

Hypothyroidism and
hyperthyroidism.

Obesity.

Diabetes Mellitus and
Pancreatitis.

Common neurologic
diseases: Parkinson's
disease, Stroke, Bell's
Palsy, Motor Neuron
Disease, Transverse
myelitis, Epilepsy
(Organic)

Common Spine disorders:
Lumbago- Sciatica
syndrome, Brachial
neuralgia, Cervical and
Lumber Spondylosis.

Diseases of bone and
Joints - Osteoarthritis,
Osteoporosis. Frozen
Shoulder, Calcaneal spur/
Plantar fasciitis, Tennis
elbow, Carpel tunnel
syndrome.

Muscular diseases -
Muscular Dystrophy.
Rheumatic fever,
Rheumatoid arthritis,
SLE, Ankylosing
spondylitis, Gout.

Mental status examination
for Depression, Anxiety
neurosis and Epilepsy

	<p>(Non - organic).</p> <p>Common parasitic infestations: Hookworm, Roundworm, Threadworm, and Pinworm.</p>		
CO4,CO6,CO7,CO8	<p>8. Order and interpret relevant investigations with the clinical correlation of the following disorders:</p> <p>Gastrointestinal disorders: Ulcerative and Non-ulcerative dyspepsia, Irritable Bowel Syndrome, Inflammatory Bowel Diseases.</p> <p>Urinary Tract Infection, Prostatomegaly, Nephrotic syndrome, Nephritic syndrome, Acute Kidney Injury, and Chronic Kidney Disease.</p> <p>Pneumonia, Chronic Obstructive Pulmonary Disease, Pleural effusion, and Bronchiectasis.</p> <p>Measles, Chicken pox and Herpes zoster, Hand foot mouth disease, Rubella, Malaria, Filariasis, Influenza, Dengue, Leptospirosis, Chikungunya, Typhoid, and other common regional disorders presenting with fever.</p> <p>Anaemia, Nutritional anaemia, Thalassemia, Sickle cell anaemia, Leukaemia, and</p>	<p>Lab report interpretation:</p> <p>Students will be given a clinical scenario or a case or report in the respective training hour.</p> <p>Based on the training given the students are expected to draw a provisional diagnosis based on the Lab report interpretation.</p> <p>The same has to be recorded in the activity book</p>	8

Thrombocytopenia.

Coronary Artery Disease
(Ischemic Heart Disease,
and Myocardial
Infarction) and
Congestive cardiac
failure.

Hepatobiliary diseases -
Liver cirrhosis, Alcoholic
and Non - Alcoholic Liver
Diseases, Hepatitis,
Jaundice, and Ascites.

Allergic disorders -
Eczema, Urticaria;
Squamous lesions -
Psoriasis, Lichen planus;
Bullous lesion –
Pemphigus and
Pemphigoid. Mycotic skin
diseases. Leprosy.
Vitiligo. Cellulitis.

Hypothyroidism and
hyperthyroidism.
Obesity. Diabetes
Mellitus and Pancreatitis.
Common neurologic
diseases: Parkinson's
disease, Stroke, Bell's
Palsy, Motor Neuron
Disease, Transverse
myelitis, Epilepsy
(Organic).

Common Spine disorders:
Lumbago - Sciatica
syndrome, Brachial
neuralgia, Cervical and
Lumber Spondylosis.

Diseases of bone and
Joints - Osteoarthritis,
Osteoporosis. Frozen
Shoulder, Calcaneal spur/
Plantar fasciitis, Tennis
elbow, Carpel tunnel
syndrome.

	<p>Muscular diseases - Muscular Dystrophy.</p> <p>Rheumatic fever, Rheumatoid arthritis, SLE, Ankylosing spondylitis, Gout.</p> <p>Sexual dysfunction and Infertility. Syphilis and Gonorrhoea.</p> <p>Parasitic infestations: Hookworm, Roundworm, Threadworm, and Pinworm.</p> <p>Tuberculosis</p>		
CO1,CO2	<p>9. Differential diagnosis:</p> <p>Differentiate between Atisara and Pravahika.</p> <p>Differentiate Atisara and Grahani Roga.</p> <p>Differentiate Grahani dosha and Grahani Roga.</p> <p>Describe the differential diagnosis of Ulcerative and Non-ulcerative dyspepsia, Irritable Bowel Syndrome, and Inflammatory Bowel Diseases.</p> <p>Enlist conditions of Mutra shoshana (Kshaya and Aukasada) and Mutra pratihanyate (Avarodha) among different types of Mutraghata.</p> <p>Describe different types of Mutraghata.</p>	<p>Problem-Based Learning:</p> <p>The students will be grouped for PBL sessions with a specific topic from the topic list given.</p> <p>At the end of the session, the groups will present in class.</p> <p>Peer learning will also be achieved with this activity.</p>	10

Differentiate
Mootrakrichra and
Mootraghata.

Describe the differential
diagnosis of Pneumonia,
Chronic Obstructive
Pulmonary Disease,
Pleural effusion, and
Bronchiectasis.

Describe the differential
diagnosis of Measles,
Chicken pox and Herpes
zoster, Hand foot mouth
disease, Rubella, Malaria,
Filariasis, Influenza,
Dengue, Leptospirosis,
Chikungunya, Typhoid
and other common
regional disorders
presenting with fever.

Describe the differential
diagnosis of Anaemia,
Nutritional anemia,
Thalassemia, Sickle cell
anemia, Leukaemia, and
Thrombocytopenia.

Describe the differential
diagnosis of Coronary
Artery Disease (Ischemic
Heart Disease, and
Myocardial Infarction)
and Congestive cardiac
failure.

Describe the differential
diagnosis of Hepatobiliary
diseases - Liver cirrhosis,
Alcoholic and Non -
Alcoholic Liver Diseases,
Hepatitis, Jaundice, and
Ascites.

Describe the differential
diagnosis of
Hypothyroidism and
hyperthyroidism.

Describe the differential diagnosis of Obesity.

Describe the differential diagnosis of Diabetes Mellitus and Pancreatitis.

Describe the differential diagnosis of Common neurologic diseases: Parkinson's disease, Stroke, Bell's Palsy, Motor Neuron Disease, Transverse myelitis, Epilepsy (Organic), and Common Spine disorders: Lumbago- Sciatica syndrome, Brachial neuralgia, Cervical, and Lumber Spondylosis.

Describe the differential diagnosis of Diseases of bone and Joints - Osteoarthritis, Osteoporosis. Frozen Shoulder, Calcaneal spur/ Plantar fasciitis, Tennis elbow, Carpel tunnel syndrome, and Muscular diseases - Muscular Dystrophy.

Describe the differential diagnosis of Rheumatic fever, Rheumatoid arthritis, SLE, Ankylosing spondylitis, and Gout.

Describe differential diagnosis of Sexual dysfunction and Infertility.

Describe differential diagnosis of Syphilis and Gonorrhoea.

Describe the differential

	<p>diagnosis of clinical presentation of Hookworm, Roundworm, Threadworm, and Pinworm.</p> <p>Describe the differential diagnosis of the clinical presentation of Tuberculosis.</p>		
CO2,CO5	<p>10. Clinical features - Role plays in learning:</p> <p>Describe the clinical features of Ulcerative and Non-ulcerative dyspepsia, Irritable Bowel Syndrome, and Inflammatory Bowel Diseases.</p> <p>Describe the clinical features of Urinary Tract Infection, Prostatomegaly, Nephrotic syndrome, Nephritic syndrome, Acute Kidney Injury, and Chronic Kidney Disease.</p> <p>Describe the clinical features of Pneumonia, Chronic Obstructive Pulmonary Disease, Pleural effusion, and Bronchiectasis.</p> <p>Describe the clinical features of Measles, Chicken pox and Herpes zoster, Hand foot mouth disease, Rubella, Malaria, Filariasis, Influenza, Dengue, Leptospirosis, Chikungunya, typhoid, and other common regional disorders presenting with fever.</p>	<p>Role plays:</p> <p>Role plays are an effective method of teaching to create a real-world scenario in a controlled manner.</p> <p>In this certain group of students will be trained for pre-class preparation regarding a disease or condition to be presented in the class in front of small cluster groups of students.</p> <p>Further, the groups are asked to interact with the performing student to understand more about a condition and use their clinical acumen to diagnose the condition moderated by an instructor.</p>	10

Describe the complications of Measles, Chicken pox and Herpes zoster, Hand foot mouth disease, Rubella, Malaria, Filariasis, Influenza, Dengue, Leptospirosis, Chikungunya, Typhoid, and other common regional disorders presenting with fever.

Describe the clinical features of Anaemia, Nutritional anemia, Thalassemia, Sickle cell anemia, Leukaemia, and Thrombocytopenia.

Describe the clinical features of Coronary Artery Disease (Ischemic Heart Disease, and Myocardial Infarction) and Congestive cardiac failure.

Describe the clinical features of Hepatobiliary diseases - Liver cirrhosis, Alcoholic and Non - Alcoholic Liver Diseases, Hepatitis, Jaundice, and Ascites.

Describe the clinical features of Hypothyroidism and hyperthyroidism.

Describe the clinical features of Diabetes Mellitus and Pancreatitis.

Describe the clinical features of Common neurologic diseases: Parkinson's disease, Stroke, Bell's Palsy,

	<p>Motor Neuron Disease, Transverse myelitis, Epilepsy (Organic), and Common Spine disorders: Lumbago- Sciatica syndrome, Brachial neuralgia, Cervical, and Lumber Spondylosis.</p> <p>Describe the clinical features of Diseases of bone and Joints - Osteoarthritis, Osteoporosis. Frozen Shoulder, Calcaneal spur/ Plantar fasciitis, Tennis elbow, Carpel tunnel syndrome, and Muscular diseases - Muscular Dystrophy.</p> <p>Describe the clinical features of Rheumatic fever, Rheumatoid arthritis, SLE, Ankylosing spondylitis, and Gout.</p>		
CO4,CO6,CO8	<p>11. Field visits:</p> <p>Visit to Pathology laboratory and Diagnostic imaging center.</p>	Visit: Students are instructed to visit at least one pathology laboratory and one imaging center; observe the procedures followed. Record the observations and submit the report to the instructor.	10

Hours indicated are included in calculations of Table 3 and 4

Table 5- Teaching learning method

Sr No	Teaching learning methods in the course	No of Activities
1	Lecture	2
2	Lecture with Power point presentation	222
3	Lecture & Group Discussion	133

4	Lecture with Video clips	45
5	Discussions	16
6	Brainstorming	3
7	Inquiry-Based Learning	4
8	PBL	14
9	CBL	9
10	Project-Based Learning	16
11	Team project work	2
12	Flipped classroom	4
13	Blended Learning	3
14	Edutainment	2
15	Simulation	1
16	Role plays	10
17	Self-directed learning	6
18	Problem solving method	1
19	Recitation	31
20	Tutorial	3
21	Presentations	3
22	X ray identification	2
23	Case diagnosis	3
24	Lab report interpretation	18
25	Demonstration	2
26	Demonstration bedside	15
27	Demonstration Lab	1

These are overall teaching learning methods listed in Table 3 and 4. Teachers can select the best possible method amongst the given methods as per objective, available time etc.

Table 6: Assessment Summary: Assessment is subdivided in A to H points

6 A-Number of Papers and Marks Distribution

Subject Code	Papers	Theory	Practical/Clinical Assessment					Grand
			Practical	Viva	Elective	IA	Sub	

							Total	Total
AyUG-RN	2	200	100	70	-	30	200	400

6 B - Scheme of Assessment (formative and Summative)

PROFESSIONAL COURSE	DURATION OF PROFESSIONAL COURSE		
	First Term (1-6 Months)	Second Term (7-12 Months)	Third Term (13-18 Months)
Second	3 PA & First TT	3 PA & Second TT	3 PA & UE **

PA: Periodical Assessment; **TT:** Term Test; **UE:** University Examinations.

** University Examination shall be on entire syllabus

6 C - Calculation Method for Internal assessment Marks

TERM	PERIODICAL ASSESSMENT*					TERM TEST**	TERM ASSESSMENT	
	A 3	B	C	D	E	F	G	H
	1 (15 Marks)	2 (15 Marks)	3 (15 Marks)	Average (A+B+C/3)	Converted to 30 Marks (D/15*30)	Term Test (Marks converted to 30)	Sub Total _/60 Marks	Term Assessment (.../30)
FIRST							E+F	(E+F)/2
SECOND							E+F	(E+F)/2
THIRD						NIL		E
Final IA	Average of Three Term Assessment Marks as Shown in 'H' Column.							
	Maximum Marks in Parentheses *Select an Evaluation Method which is appropriate for the objectives of Topics from the Table 6 D for Periodic assessment. Conduct 15 marks assessment and enter marks in A, B, and C. ** Conduct Theory (100 Marks)(MCQ(20*1 Marks), SAQ(8*5), LAQ(4*10)) and Practical (100 Marks) Then convert to 30 marks.							

6 D - Evaluation Methods for Periodical Assessment

S. No	Evaluation Methods
1	Activities Indicated in Table 3 - Column G3 as per Indicated I, II or III term in column I3

Evaluation Methods in MSE

1. Practical / Clinical Performance
2. Viva Voce, MCQs, MEQ (Modified Essay Questions/Structured Questions)
3. Open Book Test (Problem Based)
4. Summary Writing (Research Papers/ Samhitas)
5. Class Presentations; Work Book Maintenance
6. Problem Based Assignment
7. Objective Structured Clinical Examination (OSCE), Objective Structured Practical Examination (OPSE), Mini Clinical Evaluation Exercise (Mini-CEX), Direct Observation of Procedures (DOP), Case Based Discussion (CBD)

6 E Question Paper Pattern

II PROFESSIONAL BAMS EXAMINATIONS AyUG-RN

PAPER-1

Time: 3 Hours Maximum Marks: 100

INSTRUCTIONS: All questions compulsory

		Number of Questions	Marks per question	Total Marks
Q 1	MULTIPLE CHOICE QUESTIONS (MCQ)	20	1	20
Q 2	SHORT ANSWER QUESTIONS (SAQ)	8	5	40
Q 3	LONG ANSWER QUESTIONS (LAQ)	4	10	40
				100

Similar for Paper II /

6 F Distribution of theory examination

Paper 1 Fundamental Principles of Vikriti Vigyan						
Sr. No	A List of Topics	B Term	C Marks	MCQ (1 Mark)	SAQ (5 Marks)	LAQ (10 Marks)
1	1. Roga nidana – Pathophysiology and clinical diagnosis	1	43	No	Yes	No
2	2. Pareeksha	1		Yes	Yes	Yes
3	3. Methods of Rogi pareeksha	1		No	Yes	Yes
4	4. Sapeksha nidana - Vyavacchedaka nidana	1		No	Yes	Yes
5	5. Upashaya/ Anupashaya	1		Yes	Yes	No
6	6. Dosha Vikriti	1		Yes	Yes	Yes
7	7. Doshagati and Rogamarga	1		Yes	Yes	Yes
8	8. Srotodushti	1		Yes	Yes	Yes
9	9. Concept of Ama	1		Yes	Yes	Yes
10	10. Assessment of Ama	1		Yes	Yes	No
11	11. Sthana samshraya – Poorvaroop	1	49	No	Yes	Yes
12	12. Dushya dushti	1		Yes	Yes	Yes
13	13. Samprapti	1		No	Yes	Yes
14	14. Rupa	1		Yes	Yes	Yes
15	15. Vyadhinamakarana	1		Yes	Yes	No
16	16. Vyadhi	1		Yes	Yes	Yes

17	17. Ashtanindita (Endocrine disorders)	1		Yes	Yes	No
18	18. Janapadodhwamsa vikara (Pandemic disorders)	1		Yes	Yes	No
19	19. Nidanarthakara Vyadhi, Vyadhisankara	1		Yes	Yes	No
20	20. Vyadhikshamatva	1		Yes	Yes	Yes
21	21. Rogi bala Pareeksha	1		Yes	Yes	No
22	22. Dhatu Paka	1		Yes	Yes	Yes
23	23. Infection and Nutritional disorders	1	8	Yes	Yes	No
24	24. Upadrava	2		Yes	Yes	No
25	25. Arishta	2		Yes	No	No
26	26. Vyadhi bala pareeksha	2		Yes	Yes	No
27	27. Sadhyasadhyatva – Prognosis	2		Yes	Yes	No
28	28. Digital health and Artificial intelligence in the context of Roganidana	2		Yes	No	No
Total Marks			100			

Paper 2 Vyadhi Vigyan, contemporary understanding and updates						
Sr. No	A List of Topics	B Term	C Marks	MCQ (1 Mark)	SAQ (5 Marks)	LAQ (10 Marks)
29	1. Agnimandya – Ajeerna, Anaha, Adhmana, Atopa	2	43	Yes	Yes	Yes
30	2. Chhardi	2		Yes	Yes	No

31	3. Amlapitta	2	25	Yes	Yes	No
32	4. Shoola	2		Yes	Yes	Yes
33	5. Atisara, and Pravahika	2		Yes	Yes	Yes
34	6. Grahani	2		No	Yes	Yes
35	7. Visuchika, Alasaka, Vilambika	2		Yes	Yes	No
36	8. Common GIT diseases	2		Yes	Yes	No
37	9. Mutrakrichhra	2		Yes	Yes	No
38	10. Mutraghata	2		Yes	Yes	No
39	11. Common Urinary diseases	2		Yes	Yes	No
40	12. Hikka	2		Yes	Yes	No
41	13. Shwasa	2		Yes	Yes	Yes
42	14. Kasa	2		Yes	Yes	Yes
43	15. Rajayakshma & Shosha	2		Yes	Yes	No
44	16. Common lung disorders	2		Yes	Yes	No
45	17. Jwara	2		Yes	Yes	Yes
46	18. Masurika – Romantika	2		Yes	No	No
47	19. Fever	2		Yes	Yes	No
48	20. Pandu	2		No	Yes	Yes
49	21. Raktapitta	2		Yes	Yes	Yes

50	22. Hematopoietic diseases	2			Yes
51	23. Hridroga	2			Yes
52	24. Shotha	2			No
53	25. Cardiovascular disorders	2			Yes
54	26. Kamala	2			No
55	27. Udara Roga	2			Yes
56	28. Hepatobiliary diseases	2			Yes
57	29. Kushtha - Maha Kushtha & Kshudra Kushtha (According to Charaka)	3			No
58	30. Sheetapitta	3			Yes
59	31. Shwitra	3			Yes
60	32. Visarpa	3			No
61	33. Skin diseases	3			Yes
62	34. Galaganda	3			Yes
63	35. Thyroid disorders	3			No
64	36. Sthoulya – Karshya	3	32	No	Yes
65	37. Obesity	3		Yes	No
66	38. Prameha	3		No	Yes
67	39. Diabetes Mellitus and Pancreatitis	3		Yes	No

68	40. Vatavyadhi	3
69	41. Snayugata vata	3
70	42. Common neurologic and spine disorders	3
71	43. Sandhigata vata and Asthi majja gata vata	3
72	44. Diseases of bone, joints, and muscles	3
73	45. Amavata	3
74	46. Vatarakta	3
75	47. Immunological & Metabolic disorders	3
76	48. Klaibya & Vandhyatva	3
77	49. Sexual dysfunction and Infertility	3
78	50. Unmada & Apasmara	3
79	51. Vishada	3
80	52. Murchha, and Sanyasa	3
81	53. Common Psychiatric diseases	3
82	54. Phiranga and Upadamsha	3
83	55. Syphilis & Gonorrhoea	3
84	56. Krimiroga	3
85	57. Clinical presentation of common parasitic disorders	3

No	Yes	Yes
No	Yes	Yes
Yes	Yes	No
No	Yes	Yes
Yes	Yes	No
No	Yes	Yes
No	Yes	Yes
Yes	Yes	No
Yes	No	No
Yes	No	No
Yes	No	No
Yes	No	No
Yes	No	No
Yes	No	No
Yes	Yes	No

86	58. Khalitya & Palitya	3		Yes	No	No	
87	59. Shleepada	3		Yes	No	No	
88	60. Tuberculosis	3					
Total Marks			100				

Paper No:1		
Question No	Type of Question	Question Paper Format
Q1	<p>Multiple choice Questions 20 Questions 1 mark each All compulsory</p> <p>Must know part - 15 MCQ Desirable to know - 3 MCQ Nice to know part - 2 MCQ</p>	<p>1. 2. Pareeksha 2. 5. Upashaya/ Anupashaya 3. 7. Doshagati and Rogamarga 4. 6. Dosha Vikriti 5. 8. Srotodushti 6. 9. Concept of Ama 7. 12. Dushya dushti 8. 15. Vyadhinamakara 9. 16. Vyadhi 10. 17. Ashtanindita (Endocrine disorders) 11. 18. Janapadodhwamsa vikara (Pandemic disorders) 12. 19. Nidanarthakara Vyadhi, Vyadhisankara 13. 20. Vyadhikshamatva 14. 21. Rogi bala Pareeksha 15. 22. Dhatu Paka 16. 23. Infection and Nutritional disorders 17. 27. Sadhyasadyatva – Prognosis / 24. Upadrava 18. 25. Arishta 19. 26. Vyadhi bala pareeksha 20. 28. Digital health and Artificial intelligence in the context of Roganidana</p>
Q2	<p>Short answer Questions Eight Questions 5 Marks Each All compulsory</p> <p>Must know - 7 SAQ Desirable to know - 1 SAQ No questions on Nice to know</p>	<p>1. 1. Roga nidana – Pathophysiology and clinical diagnosis / 2. Pareeksha 2. 11. Sthana samshraya – Poorvaroop / 8. Srotodushti / 12. Dushya dushti / 7. Doshagati and Rogamarga / 6. Dosha Vikriti 3. 13. Samprapti / 16. Vyadhi / 19. Nidanarthakara Vyadhi, Vyadhisankara / 17. Ashtanindita (Endocrine disorders) / 14. Rupa 4. 20. Vyadhikshamatva / 21. Rogi bala Pareeksha / 18. Janapadodhwamsa vikara (Pandemic disorders) / 19. Nidanarthakara Vyadhi, Vyadhisankara / 22. Dhatu Paka 5. 26. Vyadhi bala pareeksha / 27. Sadhyasadyatva – Prognosis / 24. Upadrava 6. 23. Infection and Nutritional disorders 7. 10. Assessment of Ama / 9. Concept of Ama 8. 5. Upashaya/ Anupashaya</p>

Q3	<p>Long answer Questions Four Questions 10 marks each All compulsory</p> <p>All questions on must know. No Questions on Nice to know and Desirable to know</p>	<p>1. 4. Sapeksha nidana - Vyavacchedaka nidana / 3. Methods of Rogi pareeksha / 12. Dushya dushti / 6. Dosha Vikriti / 2. Pareeksha</p> <p>2. 11. Sthana samshraya – Poorvaroop / 14. Rupa</p> <p>3. 9. Concept of Ama / 22. Dhatu Paka / 8. Srotodushti / 7. Doshagati and Rogamarga</p> <p>4. 20. Vyadhikshamatva / 22. Dhatu Paka</p>
Paper No:2		
Question No	Type of Question	Question Paper Format
Q1	<p>Multiple choice Questions 20 Questions 1 mark each All compulsory</p> <p>Must know part - 15 MCQ Desirable to know - 3 MCQ Nice to know part - 2 MCQ</p>	<p>1. 1. Agnimandya – Ajeerna, Anaha, Adhmana, Atopa / 2. Chhardi</p> <p>2. 3. Amlapitta / 4. Shoola / 7. Visuchika, Alasaka, Vilambika</p> <p>3. 5. Atisara, and Pravahika / 8. Common GIT diseases</p> <p>4. 13. Shwasa / 15. Rajayakshma & Shosha / 12. Hikka / 14. Kasa</p> <p>5. 16. Common lung disorders</p> <p>6. 11. Common Urinary diseases</p> <p>7. 17. Jwara / 19. Fever / 18. Masurika – Romantika</p> <p>8. 25. Cardiovascular disorders / 22. Hematopoietic diseases</p> <p>9. 28. Hepatobiliary diseases</p> <p>10. 33. Skin diseases</p> <p>11. 35. Thyroid disorders / 34. Galaganda</p> <p>12. 37. Obesity</p> <p>13. 39. Diabetes Mellitus and Pancreatitis</p> <p>14. 42. Common neurologic and spine disorders</p> <p>15. 44. Diseases of bone, joints, and muscles / 47. Immunological & Metabolic disorders</p> <p>16. 48. Klaibya & Vandhyatva / 49. Sexual dysfunction and Infertility</p> <p>17. 51. Vishada / 50. Unmada & Apasmara</p> <p>18. 57. Clinical presentation of common parasitic disorders / 52. Murchha, and Sanyasa</p> <p>19. 54. Phiranga and Upadamsha / 55. Syphilis & Gonorrhoea</p> <p>20. 57. Clinical presentation of common parasitic disorders / 59. Shleepada / 56. Krimiroga / 60. Tuberculosis</p>

Q2	<p>Short answer Questions Eight Questions 5 Marks Each All compulsory</p> <p>Must know - 7 SAQ Desirable to know - 1 SAQ No questions on Nice to know</p>	<ol style="list-style-type: none"> 1. 5. Atisara, and Pravahika / 1. Agnimandya – Ajeerna, Anaha, Adhmana, Atopa / 2. Chhardi / 8. Common GIT diseases / 6. Grahani / 3. Amlapitta / 4. Shoola / 7. Visuchika, Alasaka, Vilambika 2. 11. Common Urinary diseases / 9. Mutrakrichhra / 10. Mutraghata 3. 25. Cardiovascular disorders / 23. Hridroga / 20. Pandu / 17. Jwara / 26. Kamala / 28. Hepatobiliary diseases / 19. Fever / 21. Raktapitta / 22. Hematopoietic diseases / 24. Shotha 4. 32. Visarpa / 31. Shwitra / 27. Udara Roga / 29. Kushtha - Maha Kushtha & Kshudra Kushtha (According to Charaka) / 33. Skin diseases / 26. Kamala / 28. Hepatobiliary diseases / 30. Sheetapitta 5. 40. Vatavyadhi / 44. Diseases of bone, joints, and muscles / 43. Sandhigata vata and Asthi majja gata vata / 46. Vatarakta / 42. Common neurologic and spine disorders / 45. Amavata / 41. Snayugata vata / 47. Immunological & Metabolic disorders 6. 57. Clinical presentation of common parasitic disorders / 60. Tuberculosis 7. 13. Shwasa / 15. Rajayakshma & Shosha / 12. Hikka / 16. Common lung disorders / 14. Kasa 8. 39. Diabetes Mellitus and Pancreatitis / 37. Obesity / 38. Prameha
Q3	<p>Long answer Questions Four Questions 10 marks each All compulsory</p> <p>All questions on must know. No Questions on Nice to know and Desirable to know</p>	<ol style="list-style-type: none"> 1. 13. Shwasa / 5. Atisara, and Pravahika / 1. Agnimandya – Ajeerna, Anaha, Adhmana, Atopa / 6. Grahani / 4. Shoola / 14. Kasa 2. 20. Pandu / 17. Jwara / 38. Prameha / 21. Raktapitta / 36. Sthoulya – Karshya / 24. Shotha 3. 32. Visarpa / 31. Shwitra / 27. Udara Roga / 29. Kushtha - Maha Kushtha & Kshudra Kushtha (According to Charaka) / 26. Kamala / 30. Sheetapitta 4. 40. Vatavyadhi / 43. Sandhigata vata and Asthi majja gata vata / 46. Vatarakta / 41. Snayugata vata

6 H Distribution of Practical Exam

S.No	Heads	Marks
1	<p>Spotting/ Identification: (10 Questions X 3 Marks = 30 Marks): (Note: Minimum of one spotting should be kept mandatorily from all the different heads mentioned below)</p> <p>X-Ray/ECG/ Clinical sign picture/ Slide/ Diagnostic report/ Causative factors</p> <p>X-Ray (Assessment format):</p> <p>On a given X-Ray film (Any of the below):</p> <ul style="list-style-type: none"> • Comment on inspiration and rotation (chest), position, penetration or exposure, and artifacts in a given X-Ray film • Find out the abnormal findings or sign that indicates a specific condition (By assessing size, shape, density, and location of structures) – Airway/ Bones and soft tissue/ Cardiac/ Diaphragm/ Effusion/ Gastric bubble/ Hila and mediastinum) <p>ECG (Assessment format):</p> <p>On a given Electro Cardio Gram (Any of the below):</p> <ul style="list-style-type: none"> • Determine and comment on rhythm and rate (Paper and pencil method/ Caliper method/ 10-times method/ 1500 method) • P wave interpretation (Location/ Amplitude/ Duration/ Configuration/ Deflection) • PR interval interpretation (Location and duration) • QRS complex interpretation (Location/ Amplitude/ Duration/ Configuration/ Deflection) • ST segment interpretation (Location and deflection) • T wave interpretation (Location/ Amplitude/ Configuration/ Deflection) <p>Clinical sign/ image or picture (Assessment format):</p> <p>On a given image of a patient with sign (Any of the below):</p> <ul style="list-style-type: none"> • Identify the sign • Possible aetiologies behind the case • Possible investigations for further confirmation of a case • Differential diagnosis • Diagnose the condition or disease associated with the sign <p>Slide (Assessment format):</p> <p>Identify and mention the provisional diagnosis of (Any of the below):</p> <ul style="list-style-type: none"> • Haematology (Peripheral blood smear) • Histopathology (Lung and trachea/ Blood, Spleen and lymph/ Heart and vessels/ Glands/ Liver) • Stool microscopy (Ova, Cyst, Pus cells) 	30

	<ul style="list-style-type: none"> • Urine microscopy (Epithelial cells, RBCs, Leukocytes, Casts, Crystals) • Microbiology (Bacterial identification – Shape, Gram+ve/ Gram –ve) • Parasitology (Slide/ Specimen) <p>Diagnostic report (Assessment format): Interpret the report and mention the provisional diagnosis (Any of the below):</p> <ul style="list-style-type: none"> • Hemogram • Liver Function Test (LFT) • Renal Function Test (RFT) • Diabetic profile • Thyroid profile • Lipid profile <p>Causative factors/ Hetu (Assessment format): Mention the disease or diseases that are associated with the cause or hetu (Shown as an object/ model/ specimen/ picture) with brief justification (Any of the below):</p> <ul style="list-style-type: none"> • Any specific diet • Any specific regimen • Any specific factor mentioned for causing a disease 	
2	<p>Long Case: History taking, Examination, Investigation (Order and interpretation), Differential Diagnosis, Provisional Diagnosis (1 Case X 40 Marks = 40 Marks)</p> <p>a. History taking (Including communication skills) - 10 Marks</p> <p>History taking should cover the following points:</p> <ul style="list-style-type: none"> • AturaVivara (Basic patient details) • Pradhana Vedana with Kala prakarsha (Chief complaints with duration) • Vartamana vyadhi vruttanta (History of present illness) • Poorva vyadhi Vrittanta (Past illness) • Kula vruttanta (Family history) • Chikitsa Vruttanta (Treatment history) • Vayaktika Vruttanta (Personal history) – Ahara, Vihara, Vyasana, Vyayama shakti, Mala pravritti, Mutra pravritti, Raja pravritti, Koshtha, Nature of work and duration of work, Emotional makeup, and Social Relation. <p>b. Examination & Order and interpretation of investigations – 20 Marks</p> <p>The examination should include the following points:</p> <ul style="list-style-type: none"> • General examination including Ashtasthana pareeksha • Systemic examination - Pratyaksha and Anumana Pariksha/ Panchajnanendriyataha Pareeksha (Affected system/ systems), Sroto pareeksha and Mana pareeksha 	40

	<p>Investigations should include the following points: • Ordered investigation to patient</p> <ul style="list-style-type: none"> Any further comment on the previously ordered investigations and any further suggestions Interpretation of ordered investigation to the relevant case <p>c. Differential Diagnosis, Provisional Diagnosis, and Final diagnosis. – 10 Marks</p> <p>Differential diagnosis and diagnosis (Vyavachedaka nidana and vyadhi vinischaya) should include the following:</p> <ul style="list-style-type: none"> Group of suspicious diseases based on your knowledge on Ayurveda and contemporary science against your observation on patient Justification for inclusion and exclusion of diseases based on pratyatma lakshana Arriving at a final diagnosis based on the clinical acumen Drafting the samprapti ghataka (Involvement of dosha, dushya, indriya, manas, agni, koshta, srotas, srotodushti prakara, udbhava sthana, sanchara sthana vyakta sthana, rogamarga, upadrava, arishta, sadhyasadyata) 	
3	<p>Demonstration: Clinical examination on the simulator or a patient or Simulated patient (SP) (1 Demonstration X 30 Marks = 30 Marks):</p> <p>The student will be given a specific case or a scenario (other than the case given for long case taking) and asked to perform the examination of a particular system as a whole or a part of the examination such as inspection or palpation or percussion or auscultation or any specific tests or group of tests or elicit any particular sign for any of the following system (Only steps of examination to be written with observation and interpretation after demonstration):</p> <ul style="list-style-type: none"> Respiratory system examination Cardiovascular System examination Oral cavity and per abdominal examination Nervous system examination Locomotor system examination Integumentary system examination 	30
4	<p>Viva mark distribution and basic instructions</p> <p>Conceptual and theoretical questions:</p> <p>MK:</p>	70

Pareeksha, Dosha Vkr̥ti, Dhatu and Sroto vaigunya, Ama, Nidana Panchaka, Kriyakala, Vyadhi, Vyadhikshamatwa, Dhatu Paka etc. Annavaha, Pureeshavaha, Pranavaha, Mutravaha, Rasavaha, Raktavaha, Medovaha, Vatavyadhi, Snayugata, Sandhigata vikara etc. **(20 Marks)**

DK:

Rogi and Roga Bala pareeksha, Doshagata and Rogamarga, Nidanarthakara roga, Vyadhi namakarana, Sadyasadyata, Upadrava etc. Common GIT diseases, Common Urinary diseases, Common lung disorders, Fever, Hematopoietic diseases, Cardiovascular disorders, Hepato-biliary disorders, Skin diseases, Thyroid disorders, Obesity, Metabolic diseases, Common neurologic and spine disorders, Diseases of bone, joints, and muscles, Immunological & Metabolic disorders, Common parasitic disorders, Tuberculosis etc. **(10 Marks)**

Link to existing literature and critical thinking:

MK:

Pareeksha, Dosha Vkr̥ti, Dhatu and Sroto vaigunya, Ama, Nidana Panchaka, Kriyakala, Vyadhi, Vyadhikshamatwa, Dhatu Paka etc. Annavaha, Pureeshavaha, Pranavaha, Mutravaha, Rasavaha, Raktavaha, Medovaha, Vatavyadhi, Snayugata, Sandhigata vikara etc. **(20 Marks)**

DK:

Rogi and Roga Bala pareeksha, Doshagata and Rogamarga, Nidanarthakara roga, Vyadhi namakarana, Sadyasadyata, Upadrava etc. **(10 Marks)**

Viva on activity book:

Questions to be asked as per the heads provided in the activity book (10 Marks)

Basic instructions:

Number of questions: There must be a total minimum of 10 questions and a maximum of 15 questions from both examiners.

1. The questions asked during a viva should be relevant, thought-provoking, and designed to assess the candidate's understanding, knowledge, and critical thinking skills.
2. Breadth and depth: The questions should cover a wide range of topics related to both the papers as well as activity and practical with equal importance, ensuring that they have a comprehensive understanding, critical thinking, and analysis.
3. Open-ended: Questions should be open-ended rather than requiring simple yes/no answers. This allows the candidate to demonstrate their understanding and ability to provide detailed explanations and justifications.

	<p>4. Conceptual and theoretical: Some questions should focus on the candidate's understanding of key concepts, theories, and methodologies within their syllabus. This helps evaluate their grasp of foundational knowledge and their ability to apply it.</p> <p>5. Critical thinking: The questions should encourage the candidate to think critically, analyze the subject, and findings, and identify limitations or alternative perspectives.</p> <p>6. Link to existing literature: Some questions can explore the candidate's knowledge and understanding of relevant literature in contemporary science.</p> <p>7. Follow-up questions: It can be effective to ask follow-up questions to probe deeper into the candidate's responses. This helps assess their ability to defend, respond to challenges, and think on their feet.</p> <p>8. Avoid leading questions: It is important to avoid leading questions that provide the candidate with clues or guide them towards a specific answer. The goal is to assess their independent thinking and understanding.</p> <p>9. Balance: The questions should strike a balance between being challenging and fair. It should push the candidate's limits without being excessively difficult or intimidating.</p> <p>10. No questions will be asked from Nice to know category. However, 70% of the questions are to be asked from Must Know category and 30% from the Desirable to Know category by the examiner.</p>	
5	Internal assessments	30
Total Marks		200

References Books/ Resources

S.No	Book	Resources
1	1. Madhava Nidana	Srikanta Murthy KR. Madhava Nidanam (Rogaviniscaya) of Madhavakara. Varanasi: Chaukhambha Orientalia; 2013
2	2. Charaka Samhita	Agnivesh, Charaka, Dridhbala . Reprint. Varanasi: Chowkhamba Sanskrit Series Office; 2009. Charaka Samhita
3	3. Susruta Samhita	Acharya YT, editor. Sushruta Samhita of Sushruta. Reprint ed. Varanasi: Chaukhambha Orientalia; 2017
4	4. Ashtanga Hrudaya	Sadashiva HS, editor. 1st ed. Varanasi: Chaukhambha Sanskrit Sansthan; 2011. Astanga Hrudaya of Vagbhata
5	5. Ashtanga Sangraha	Vagbhata. Ashtanga Sangraha. Edited by Shivprasad Sharma. Chowkhambha Sanskrit series office, Varanasi
6	6. Roga vigyan evum vikruti vigyan	Yashwant Govind Joshi
7	7. Roganidan evum vikruti vigyan	Prof. Ajay Kumar Sharma; Chaukhambha Bharati Academy
8	8. Textbook of Ayurvediya vikrti-vijnana & Roga Vijnana	Dr. Parameswarappa S. Byadgi; Chaukhambha publications, New Delhi
9	9. Textbook of Pathology with Pathology Quick Review and MCQs	2018; Jaypee Brothers Medical Publishers; Harsh Mohan
10	10. A guide to pathology	Jaypee Brothers Medical Publishers; Eighth edition (2005); K Chaudhary
11	11. Robbins & Cotran Pathologic Basis of Disease	10th Edition - May 11, 2020; Kumar, Abbas, Aster; Elsevier publishers
12	12. Davidson's Principles and Practice of Medicine	24 th Edition 2022 by Ian Penman (Editor), Stuart H. Ralston (Editor), Mark Strachan (Editor), Richard Hobson (Editor); Elsevier publishers
13	13. A textbook of pathology	N.C Dey & T. K Dey; NCBA publisher 2009
14	14. Boyds Textbook of Pathology	10th Edition by J R Bhardwaj, Prabal Deb (Author), Wolters Kluwer India (Publisher)
15	15. Kundu's Bedside Clinics in Medicine	2020; KSP Udyog Publisher; Arup Kumar Kundu
16	16. P. J. Mehta's Practical Medicine	21st Edition – 2021; The National Book Depot; Nihar P Mehta, SP Mehta, SR Joshi
17	17. Macleod's Clinical Examination	13 th Edition, 2013 by J. Alastair Innes, Anna R. Dover, Karen Fairhurst
18	18. Clinical Methods in Medicine : Clinical Skills and Practices	2015; Jaypee Brothers Medical Publishers; S. N. Chugh, Eshan Gupta

19	19. Chamberlain's Symptoms and Signs in Clinical Medicine	2010; CRC Press; Andrew R. Houghton & David Gray
20	20. Hutchison's Clinical Methods: An Integrated Approach to Clinical Practice	2012; Elsevier publishers Michael Glynn, William M. Drake
21	21. Bates' Guide to Physical Examination and History Taking	Lippincott Williams & Wilkins; 2016 by M.D. Bickley, Lynn S. (Author), M.D. Szilagy, Peter G. (Author), M.D. Hoffman, Richard M. (Editor)
22	22. French's Index of Differential Diagnosis An A-Z 1	2016; CRC Press; by Mark T. Kinirons (Editor)
23	23. Savills System Of Clinical Medicine	14 th Edition 2005; CBS Publishers; by E C Warner (Author)
24	24. Todd-Sanford-Davidsohn clinical diagnosis and management by laboratory methods	2016; Saunders publishers; by Campbell James Todd (Author)
25	25. Clinical Methods In Ayurveda	2013; Chaukhamba Orientalia; by Prof. K.R. Srikantha Murthy (Author)
26	26. Clinical Diagnosis in Ayurveda (A Practical book of Ayurvedic Diagnosis in the Light of Modern Medical Science)	2015; Chaukhamba Sanskrit Pratishthan; by M. Srinivasulu (Author)
27	27. Medical Laboratory Technology	2009; Jaypee Brothers Medical Publishers; by Ramnik Sood (Author)
28	28. Textbook of Medical Laboratory Technology	Revised Reprint 2021; B. Godkar, Darshan P. Godkar; Bhalani publishing house
29	29. Practical biochemistry for medical, dental and allied courses	3 rd Edition; by Bd Toora G Rajagopal (Author)
30	30. Essential of clinical pathology	2010; First edition; Jaypee Brothers Medical Publishers; by Shirish M Kawthalkar (Author)
31	31. Textbook of human parasitology protozoology and helminthology	2020; CBS Publishers by Sood R. (Author)
32	32. Clinical Pathology & Clinical Bacteriology (For Medical Students and Practitioners)	Jaypee Brothers Medical Publishers; 9 th Edition; 2000 by Sachdev (Author)
33	33. Practical Pathology	Arya Publications; by K. Uma Chaturvedi (Author), Tejindar Singh (Author)
34	34. Text book on clinical biochemistry and hematology	Naveen Chandra, Anmol Publisher ; First edition, 2015

35	35. Medical Laboratory Technology	Third Edition, 2019; NCBA publishers by C R Maiti
36	36. Diagnosis and Treatment of Common Skin Diseases	2016; Jaypee Brothers Medical Publishers; by Virendra N Sehgal (Author)
37	37. Ananthanarayan and Paniker's Textbook of Microbiology	Eleventh Edition; 2020; Universities Press (India) Pvt. Ltd; by R Ananthanarayan and CK Jayaram Paniker (Author), Reba Kanungo (Editor)
38	38. Learning Radiology: Recognizing the Basics	2015; Saunders publishers; by William Herring MD FACR (Author)
39	39. Radiology in Medical Practice	2015; Elsevier India; by A B M Abdullah (Author)
40	40. Clark's Positioning in Radiography	13 th Edition; 2015; CRC Press; by A. Stewart Whitley (Author), Gail Jefferson (Author), Ken Holmes (Author), Charles Sloane (Author), Craig Anderson (Author), Graham Hoadley (Author)
41	41. Textbook Of Radiology For Residents And Technicians	2018; CBS Publishers; by Bhargava S. K (Author)
42	42. Essentials Of ECG	2017; Avichal Publishing Company; by Vipin Gupta (Author)
43	43. Nidana chikitsa hastamalaka	2016; Baidyanath Ayurved publication; by Vaidya Ranjit Rai Desai
44	44. Rasavaisheshikam	Kottakal Ayurveda Series:120; 3 rd Edition; 2014; by K. Raghavan Tirumulpad
45	45. Taber's Cyclopedic Medical Dictionary	23 rd Edition; 2017; F.A. Davis Company; by Venes (Author)
46	46. Doshakaranatwa Mimamsa	Chowkhamba Bharati Academy ; 2013; by Acharya P.V. Sharma
47	47. Nadi Darshan	Motilal Banarsidass publishers; by Vaidya Tara Shankar Mishra
48	48. Ayurvediya shabdakosha	Laxmanshastri Joshi, Maharashtra Rajya Sahitya Mandal; 1968; by Veni Madhava Shastri
49	49. Kayachikitsa	Indrayani Sahitya Prakashan; 2015; by Vd Yashwant Govind Joshi
50	50. Dermatological Diseases A Practical Approach	3rd Edition – 2023; TreeLife Media (A division of Kothari Medical); by - (Author), Venkataram Mysore, K H Satyanarayana Rao, Sacchidanand S, M Deepthi, (Editor)
51	51. Introduction to Kayachikitsa	Chaukhamba Orientalia Varanasi; 3 rd Edition; 1996; C. Dwarakanath

52	52. Digestion and metabolism in Ayurveda	Chowkhambha Krishnadas Academy; 1997; 2 nd Edition; by C. Dwarakanath
53	53. Ayurvedic Nadi Pariksha Vijnana	Chaukhamba Surbharati Prakashan; 2015; by Dr. Govind Prasad Upadhyay
54	54. NAMASTE portal	http://namstp.ayush.gov.in/#/index
55	55. AYUR PRAKRITI WEB PORTAL	http://www.ccras.res.in/ccras_pas/
56	56. AYUSH research portal	https://ayushportal.nic.in/
57	57. Dharaonline	http://www.dharaonline.org/Forms/Home.aspx
58	58. Stanford Medicine25	https://stanfordmedicine25.stanford.edu/
59	59. Medscape Clinical Reference	www.medscape.com
60	60. UpToDate	www.uptodate.com
61	61. Merck Manual Professional Edition	www.merckmanuals.com/professional
62	62. DynaMed	www.dynamed.com
63	63. ClinicalKey	www.clinicalkey.com
64	64. Taber's Medical Dictionary	www.tabers.com/tabersonline
65	65. MedlinePlus Medical Dictionary	https://medlineplus.gov/
66	66. WebMD Symptom Checker	https://symptoms.webmd.com/ .
67	67. Mayo Clinic Symptom Checker	https://www.mayoclinic.org/symptom-checker/select-symptom/itt-20009075 .
68	68. Simulated cases EM SIM CASES	https://emsimcases.com/
69	69. Daily rounds	https://dailyrounds.org/
70	70. Prognosis	https://play.google.com/store/apps/details?id=com.medicalj oyworks.prognosis&hl=en&gl=US&pli=1
71	71. PubMed Central	https://www.ncbi.nlm.nih.gov/pmc/
72	72. Radiopaedia	https://radiopaedia.org/

Abbreviations

Assessment

S.No	Short form	Discription
1	T-EMI	Theory extended matching item
2	T- EW	Theory Essay writing
3	T- MEQs	Theory MEQs
4	T-CRQs	Theory CRQs
5	T-CS	Theory case study
6	T-OBT	Theory open book test
7	P-VIVA	Practical Viva
8	P-REC	Practical Recitation
9	P-EXAM	Practical exam
10	PRN	Presentation
11	P-PRF	Practical Performance
12	P-SUR	Practical Survey
13	P-EN	Practical enact
14	P-RP	Practical Role play
15	P-MOD	Practical Model
16	P-POS	Practical Poster
17	P-CASE	Practical Case taking
18	P-ID	Practical identification
19	P-PS	Practical Problem solving
20	QZ	Quiz
21	PUZ	Puzzles
22	CL-PR	Class Presentation,
23	DEB	Debate
24	WP	Word puzzle
25	O-QZ	Online quiz

26	O-GAME	Online game-based assessment
27	M-MOD	Making of Model
28	M-CHT	Making of Charts
29	M-POS	Making of Posters
30	C-INT	Conducting interview
31	INT	Interactions
32	CR-RED	Critical reading papers
33	CR-W	Creativity Writing
34	C-VC	Clinical video cases,
35	SP	Simulated patients
36	PM	Patient management problems
37	CHK	Checklists
38	OSCE	OSCE
39	OSPE	OSPE,
40	Mini-CEX	Mini-CEX
41	DOPS	DOPS
42	CWS	CWS
43	RS	Rating scales
44	RK	Record keeping
45	COM	Compilations
46	Portfolios	Portfolios
47	Log book	Log book
48	TR	Trainers report
49	SA	Self-assessment
50	PA	Peer assessment
51	360D	360-degree evaluation
52	TT-Theory	Theory
53	PP-Practical	Practical
54	VV-Viva	Viva

Domain

S.No	Short form	Discription
1	CK	Cognitive/Knowledge
2	CC	Cognitive/Comprehension
3	CAP	Cognitive/Application
4	CAN	Cognitive/Analysis
5	CS	Cognitive/Synthesis
6	CE	Cognitive/Evaluation
7	PSY-SET	Psychomotor/Set
8	PSY-GUD	Psychomotor/Guided response
9	PSY-MEC	Psychomotor/Mechanism
10	PSY-ADT	Psychomotor Adaptation
11	PSY-ORG	Psychomotor/Origination
12	AFT-REC	Affective/ Receiving
13	AFT-RES	Affective/Responding
14	AFT-VAL	Affective/Valuing
15	AFT-SET	Affective/Organization
16	AFT-CHR	Affective/ characterization

T L method

S.No	Short form	Discription
1	L	Lecture
2	L&PPT	Lecture with Power point presentation
3	L&GD	Lecture & Group Discussion
4	L_VC	Lecture with Video clips
5	DIS	Discussions
6	BS	Brainstorming
7	IBL	Inquiry-Based Learning
8	PBL	PBL
9	CBL	CBL
10	PrBL	Project-Based Learning
11	TBL	TBL
12	TPW	Team project work
13	FC	Flipped classroom
14	BL	Blended Learning
15	EDU	Edutainment
16	ML	Mobile learning
17	ECE	ECE
18	SIM	Simulation
19	RP	Role plays
20	SDL	Self-directed learning
21	PSM	Problem solving method
22	KL	Kinesthetic Learning
23	W	Workshops
24	GBL	Game-Based Learning
25	D-M	Demo on Model

26	LS	Library Session
27	PL	Peer learning
28	RLE	Real life experience
29	REC	Recitation
30	SY	Symposium
31	TUT	Tutorial
32	PER	Presentations
33	PT	Practical
34	XRy	X ray identification
35	CD	Case diagnosis
36	LRI	Lab report interpretation
37	DA	Drug analysis
38	D	Demonstration
39	D_BED	Demonstration bedside
40	D_L	Demonstration Lab
41	DG	Demonstration Garden
42	FV	Field visit
43	PRA	Practical

॥ आयुषे सर्वलोकानाम् ॥



Course curriculum for Second Professional BAMS
(PRESCRIBED BY NCISM)

Samhita Adhyayan-2

(SUBJECT CODE : AyUG-SA2)

(Applicable from 2021-22 batch, from the academic year 2023-24 onwards for 5 years or until further notification by NCISM, whichever is earlier)

BOARD OF AYURVEDA

**NATIONAL COMMISSION FOR INDIAN SYSTEM OF MEDICINE NEW DELHI-
110058**

II Professional Ayurvedacharya (BAMS)

Subject Code : AyUG-SA2

Summary

Total number of Teaching hours: 240			
Lecture hours(LH)-Theory		100	100(LH)
Paper I	100		
Non Lecture hours(NLH)-Theory		140	140(NLH)
Paper I	100		
Non Lecture hours(NLH)-Practical			
Paper I	NA		

Examination (Papers & Mark Distribution)					
Item	Theory Component Marks	Practical Component Marks			
		Practical	Viva	(Set SB)	IA
Paper I	100	-	75	10	15
Sub-Total	100	100			
Total marks	200				

Important Note:-The User Manual II BAMS is a valuable resource that provides comprehensive details about the curriculum file. It will help you understand and implement the curriculum. Please read the User Manual II before reading this curriculum file. The curriculum file has been thoroughly reviewed and verified for accuracy. However, if you find any discrepancies, please note that the details in Practical list, Table 4 and Table 4a, considered authentic.

In case of difficulty and questions regarding curriculum write to cur.imp@ncismindia.org

PREFACE

In continuation with the curriculum reforms started previous year, **Samhita Adhyayan-2** focuses on learning Samhita with due significance to the methodology of textual structuring and interpretation. Charakasamhita is taken as a model text here considering its vast contributions to Ayurveda. Students who learn Ayurveda will benefit by Samhita Adhyayan to comprehend sense of importance of its traditional classical literature. SA2 tries to justify the methodology of structuring samhita and appraise the importance of tools of decoding samhita such as tantrayukti and vyakhyana. Relating and interpreting the various references, explaining and interpreting important sidhantas, applying sidhantas in clinical practice, making use of specific diagnostic and assessment guidelines mentioned in Carakasamhita, demonstrating principles of management of various clinical conditions etc. are some of the thrust areas addressed. Importance of by hearting important slokas also is highlighted. The content of SA2 belongs to 54 chapters of Carakasamhita viz. Sutrasthana (18 chapters 13-30, initial 12 chapters already dealt in SA1), Nidanasthana (8 chapters), Vimanasthana (8 chapters), Shareerasthana (8 chapters) and Indriyasthana (12 chapters). Each chapter is taken as a unit in the syllabus. A chapter starts with short introduction (**adhyaya parichaya**) through justifying the position of the chapter and introducing key terms in the chapter. This is followed by explaining important sidhantas (**sidhanta-vivarana**) in the chapter. At the end summary of the chapter (**adhyayasangraha**) is done with the help of summarizing slokas at the end of the chapter. This will help students to map the whole content of the chapter, even though some of them are not dealt in detail during sidhanta-vivarana. **Sloka sangraha** (compilation of sloka) compiles the most important slokas in the chapter. Application of **Tantrayukti** and **Vyakhyana** in proper understanding of Samhita also is envisaged as a separate section while planning practicals. Efforts have been taken to design some interesting and innovative activities and practical as a part of developing this syllabus. They have been added to respective tables here. It does not restrict our teachers from designing and implementing more attractive and effective activities or customizing those ones which are enlisted, as and when needed, without losing spirit of the new outlook.

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Course Code and Name of Course

Course code	Name of Course
AyUG-SA2	Samhita Adhyayan-2

Table 1- Course learning outcomes and matched PO

SR1 CO No	A1 Course learning Outcomes (CO) AyUG-SA2 At the end of the course AyUG-SA2, the students should be able to-	B1 Course learning Outcomes matched with program learning outcomes.
CO1	Justify the Methodology of structuring samhitas and appraise the importance of tools of decoding Charakasamhita (Tantrayukti and vyakhyana)	PO1
CO2	Relate and interpret various references of concepts in Charakasamhita	PO1
CO3	Explain and interpret biological factors and their measurements in the manifestation of diseases.	PO1,PO3
CO4	Explain and utilize various siddhantas in different dimensions of clinical practice.	PO1,PO3,PO5
CO5	Demonstrate the knowledge of dravya and adravya based therapeutics.	PO1,PO3,PO5
CO6	Apply diagnostic guidelines regarding diseases including arishta lakshana based on the principles mentioned in Charakasamhita	PO1,PO3,PO7
CO7	Explore the determinants of health in the background of Charakasamhita.	PO1
CO8	Develop ethical professional and moral codes and conducts as a physician.	PO6,PO8,PO9

Table 2 : Contents of Course

Paper 1					
Sr. No	A2 List of Topics	B2 Term	C2 Marks	D2 Lecture hours	E2 Non- Lecture hours
1	Cha.Su.13- Sneha Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Sneha yoni 2. Chaturvidha sneha and its qualities 3. Sneha kaala and its anupana 4. Pravicharana sneha 5. Acchapeya 6. Sneha matra and its indications 7. Introduction to sneha yogya and ayogya purusha 8. Introduction to ayoga, samyak yoga and atiyoga of snehapana 9. Koshta pariksha 10. Introduction to snehapana vidhi 11. Introduction to sadyasneha 12. Sneha vyapat kaarana, lakshana and chikitsa III. Adhyaya sangraha	1	37	3	1
2	Cha.Su.14- Sveda Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Benefits of swedana 2. Swedana bheda 3. Swedana vidhi 4. Samyak swinna lakshana 5. Atiswinna lakshana and chikitsa 6. Swedana yogya and ayogya 7. Trayodasha agni sweda vivarana 8. Dasha vidha niragni sweda III. Adhyaya sangraha	1		2	1
3	Cha.Su.15- Upakalpaneeya Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Samshodhana upayogi dravya sangraha 2. Aturalaya nirmana 3. Introduction to vamaana vidhi 4. Samsarjana krama 5. Introduction to virechana vidhi 6. Benefits of samshodhana III. Adhyaya sangraha	1		2	3
4	Cha.Su.16- Chikitsaprabhritiya Adhyaya I. Adhyaya parichaya	1		2	2

	II. Siddhanta vivarana 1. Samyak virikta – avirikta - ativirikta lakshana 2. Bahudosha lakshana 3. Benefits of samshodhan 4. Importance of samshodhan 5. Samshodhana atiyoga and ayoga chikitsa 6. Swabhavoparama vada 7. Chikitsa paribhasha 8. Qualities of chikitsa-prabhrita vaidya III. Adhyaya sangraha			
5	Cha.Su.17- Kiyantashiraseeya Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Importance of shiras 2. Introduction to shiroroga, hridroga, vidradhi, madhumeha and madhumeha pidaka 3. 62 types of permutation and combination of doshas 4. Trayodasa sannipata (13 types of combination of doshas) 5. 12 types of vishama sannipata (Doshavikalpa) 6. Types of kshaya 7. Ojus 8. Doshagati III. Adhyaya sangraha	1	3	0
6	Cha.Su.18-Trisotheeya Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Types of shotha 2. Trividha bodhya (three types of assessment of diseases) 3. Ekadeshaja shotha 4. Aparisankhyeyatwa of roga 5. Anukta roga (unnamed diseases) and its management 6. Karmas of prakrita doshas III. Adhyaya sangraha	1	1	3
7	Cha.Su.19-Ashtodareeya Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Sankhya samprapti of samanyaja vyadhi 2. Tridosha pradhanyata 3. Nija-agantu sambandha III. Adhyaya sangraha	1	1	3
8	Cha.Su.20- Maharoga adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Vyadhibheda (classification of disease) 2. Agantu-mukha (causes of agantu diseases) 3. Trividha-prerana (three etiological factors) 4. Samanyaja-nanatmaja-vikara – classification	1	2	2

	5. Vataja-nanatmaja vikaras, atmarupa and prakupitakarma 6. Pittaja- nanatmaja vikaras, atmarupa and prakupitakarma 7. Kaphaja- nanatmaja vikaras, atmarupa and prakupitakarma III. Adhyaya sangraha			
9	Cha.Su.21- Ashtauninditeeya adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Ashta nindita purusha 2. Ati sthula and ati karshya 3. Ashta dosha of sthaulya 4. Dosha-lakshana-hetu of karsya and sthaulya 5. Prasasta purusha lakshana 6. Chikitsa sutra of sthaulya and karsya 7. Nidra paribhasha 8. Arha and varjya for divaswapna 9. Effects of ratri jagarana and divaswapna 10. Types of Nidra III. Adhyaya sangraha	1	3	3
10	Cha.Su.22- Langhanabrimhaneeya Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Shadupakrama 2. Swaroopa and lakshana of shadupakrama 3. Dasavidhalanghana 4. Dasavidhalanghana-prayoga-niyama 5. Properties of dravyas used in shadupakrama 6. Samyaklakshana of langhana, brimhana and sthambhana 7. Atiyoga and ayoga of shadupakrama III. Adhyaya sangraha	1	3	2
11	Cha.Su.23- Santarpaneeya Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Santarpana dravya 2. Santarpanajanya vyadhi 3. Chikitsasutra of santarpanajanya vyadhi 4. Apatarpanajanya vyadhi 5. Chikitsasutra of apatarpanajanya vyadhi III. Adhyaya sangraha	1	2	0
12	Cha.Su.24- Vidhishoniteeya Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Shonita-pradhanyata 2. Shonita-dushti-karana 3. Shonitajanya roga 4. Shonita-dushti-chikitsa 5. Raktadushtilakshana in relation to dosha	1	3	2

	6. Vishuddharaktalakshana 7. Vishuddharakta-purusha-lakshana 8. Pathya in raktamoksha 9. Introduction to mada-murchaya-sanyasa III. Adhyaya sangraha			
13	Cha.Su.25- Yajjapurusheeya Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Factors responsible for generation of purusha and diseases 2. Concept of hita ahara and its importance 3. Different factors related with ahara like aharayoni, prabhava, udarka, upayoga, rasa, gurvadi guna etc 4. Agryasangraha- (Aushadha- Anna-Vihara) 5. Terminology of pathya and apathya 6. Enumeration of aasavayoni III. Adhyaya sangraha	1	2	4
14	Cha.Su.26- Atreyabhadraakaapeeya Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Sambhasha parishat on number of rasa 2. Gunas of parthivadi dravyas 3. Dravya prabhava and guna prabhava 4. Dravya karmukata siddhanta (pharmacodynamics) with respect to adhikarana, kala, karma, veerya, upaya and phala 5. Paradi guna 6. Rasadi-panchaka – Additional knowledge 7. Examples of samanapratyabdhya and vichitra pratyabdhya dravyas 8. Properties of vipaka 9. Perception of rasa, vipaka and veerya 10. Examples of prabhava 11. Types of viruddha and management of complications 12. Principles of treatment of diseases caused by viruddha ahara III. Adhyaya sangraha	1	3	3
15	Cha.Su.27- Annapaana vidhi Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Benefits of hita ahara 2. Examples of hita ahara and ahita ahaara 3. Ahara Vargas 4. Importance of anna III. Adhyaya sangraha	1	4	2
16	Cha.Su.28- Vividhashitapeeteeya Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana	1	4	14

	1. Caturvidha-ahara 2. Difference between hita aahara and ahita aahara 3. Susceptibility to diseases (with respect to pathya and apathya) 4. Vyadhi-saha shareera 5. Dhatupradoshaj, upadhatupradoshaj, indriyapradoshaja, malapradoshaja vikaras and treatment principles 6. Shakhagati and koshtagati of doshas 7. Causes of health and diseases 8. Importance of prajnaaparadha III. Adhyaya sangraha				
17	Cha.Su.29- Dashapraanaayataneeya Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Enumeration of dasa pranaayatana 2. Terminology of praanaabhisara vaidya and rogaabhisara vaidya, chadmachara, yogya bhishak and karmakovida III. Adhyaya sangraha	2		2	2
18	Cha.Su.30- Arthedashamahamooleeya Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Importance of hridaya 2. Best factors for life (shreshtatama bhava) 3. Four types of Ayu 4. Shashwatatwa of Ayurveda 5. Quality of Learner of Ayurveda 6. Ashtaprashna 7. Dashaprakaran 8. Synonyms of tantra III. Adhyaya sangraha	2		2	0
19	Cha.Ni.01-Jwara nidana Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Description of nidanapanchaka 2. Nidanaparyaya 3. Vyadhiparyaya 4. Ashtavidha jwaranidana , samprapti and lakshana. 5. Jwarapurvarupa 6. Jwara mahaprabhava vivarana 7. Jwara samkshipta chikitsa sutra. 8. Importance of ghrutapaan in jeerna jwara. III. Adhyaya sangraha	2	19	2	2
20	Cha.Ni.02-Raktapitta nidana Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Raktapitta paryaya and nirukti. 2. Raktapitta nidana, purvarupa, upadrava	2		2	2

	3. Raktapitta marga, dosha anubhandha and sadhyaasadyata. 4. Raktapitta chikitsa sutra III. Adhyaya sangraha			
21	Cha.Ni.03-Gulma nidana Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Sankhya samprapti 2. Gulma sthanas 3. Nidana, lakshana and samprapti of vata-pitta-kahpaja gulma 4. Shonita gulma 5. Gulma purvarupa 6. Sadhya asadyata 7. Chikitsa sutra III. Adhyaya sangraha	2	2	2
22	Cha.Ni.04-Prameha nidana adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Sankhyasamprapti (vimsatiprameha) 2. Sampraptighataka (doshavishesha and dushyavishesha) 3. Nidanapanchaka of doshaja prameha (vata, pitta and kapha) 4. Sadhyasadyata 5. Poorvarupa 6. Upadrava 7. Chikitsasutra III. Adhyaya sangraha	2	2	3
23	Cha.Ni.05-Kushta nidana Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Saptadravya of kushta 2. Aneka rupa of kushta 3. Samanya nidana and samanya purvarupa 4. Sadhyasadyata 5. Sapta kushta lakshana 6. Upadrava III. Adhyaya sangraha	2	2	4
24	Cha.Ni.06-Shosha nidana Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Vishesha nidana, samprapti and lakshana of shosha 2. Purvarupa 3. Ekadasa rupa 4. Sadhyasadyata III. Adhyaya sangraha	2	2	2

25	Cha.Ni.07-Unmada nidana Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Sankhya samprapti 2. Unmadaabhimukha karana (predisposing factors of unmada) 3. Unmada nirvacana (ashta vibhrama) 4. Purvarupa 5. Vata-pitta-kapha-sannipataj unmada lakshna 6. Role of prajnaparadha 7. Chikitsasutra of unmada 8. Agantuja unmada- nidana, purvarupa, lakshana, chikitsa sutra III. Adhyaya sangraha	2		2	4
26	Cha.Ni.08-Apasmara nidana adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Definition of apasmara 2. Apasmaraabhimukakarana (predisposing factors of unmada) 3. Vishesha lakshana of apasmara 4. Cikitsasutra 5. Nidanarthakara roga 6. Vyadhisankara 7. Suddha-asuddha cikitsa 8. Sadhyasadyata – nirvacana 9. Tiryaggatadosha - cikitsasutra III. Adhyaya sangraha	2		2	4
27	Cha.Vi.01- Rasa vimana Adhyayam I. Adhyaya parichaya II. Siddhanta vivarana 1. Importance and objective of vimanasthana 2. Prakrutisamasamaveta and vikrutivishamasamaveta siddhanta 3. Chaturvidha Prabhava (rasa-dravya-dosh-vikara prabhava) 4. Examples of dravyaprabhava- taila, ghruta and madhu. 5. Dravyas which are avoided for regular consumption 6. Satmyaparibhasha and types 7. Aharavidhi visheshayatana 8. Ahara vidhi vidhana and bhojyasaadgunyam III. Adhyaya sangraha	3	24	2	3
28	Cha.Vi.02-Trividha kuksheeya Adhyayam I. Adhyaya parichaya II. Siddhanta vivarana 1. Three divisions of amashaya for deciding aharamatraa 2. Matraavat ahaara lakshan	3		2	0

	3. Amatravatva of ahara 4. Effects of heenamaatra and atimatra of ahara 5. Mental factors which affect the digestion of food 6. Two types of amadosha 7. Hetu-linga and aushasdhya of amadosha 8. Demarcation of amasaya III. Adhyaya sangraha			
29	Cha.Vi.03-Janapadodhwansaneeya Vimanam Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Importance of timely collection of medicines. 2. Janapadodhwamsakara samanya bhavas (four causes of epidemic diseases) 3. Lakshanas of vikrut vayu, jala, desha and kala. 4. Chikitsa siddhanta of janapadodhwamsakara vikaras 5. Role of adharma in janapadodhwamsa 6. Niyata and aniyata ayu 7. Daiva and purushakara 8. Examples of hetuviparita chikitsa in jwara 9. Apatarpana and its types 10. Description of desha III. Adhyaya sangraha	3	2	2
30	Cha.Vi.04-Trividha roga vishesha vijnyaneeya adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Three methods of diagnosing diseases 2. Characteristics of aptopadesha, pratyaksha and anumana 3. Application of aptopadesha, pratyaksha and anumana in clinical examination III. Adhyaya sangraha	3	2	3
31	Cha.Vi. 05- Srota vimana Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Srotas paribhasha 2. Types of srotas 3. Types of srotodushti 4. Hetu, lakshan and chikitsa of srotodushti III. Adhyaya sangraha	3	2	2
32	Cha.Vi. 06-Roganika vimana adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Dvididha vyadhi bhedha based on prabhava, bala, adhishtana, nimitta, ashaya bheda. 2. Vyadhi aparisamkheyatva 3. Relation between shareerika and manasika dosha. 4. Anubhandhy-anubandha roga 5. Agni bheda, prakruti bheda.	3	2	2

	6. Vatala prakrutigata roga, their hetu and chikitsa, pitta prakrutigata roga, their hetu and chikitsa-kapha-prakrutigata roga, their hetu and chikitsa 7. Raja vaidya gunas III. Adhyaya sangraha				
33	Cha.Vi. 07- Vyadhita rupeeeya vimana Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Dvididha vydhita purusha based on severity of disease and clinical presentation 2. Krimi bheda 3. Trividha chikitsa III. Adhyaya sangraha	3		2	2
34	Cha.Vi. 08-Rogabhishagjiteeyam Adhyaayam. I. Adhyaya parichaya II. Siddhanta vivarana 1. Shastra pareeksha 2. Means of learning shastra 3. Adhyayana and adhyapana vidhi 4. Sambhasaha vidhi- Types 5. Three types of parishat 6. Vadamarga padani 7. Methodology of Vada and its benefits 8. Dashavidha pareeksya bhava 9. Dashavidha atura pareeksha III. Adhyaya sangraha	3		5	11
35	Cha.Sha.01-Katithapurushheeya Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Sareera and sareerasthana 2. Purusha and its types 3. Manonirupanam 4. Atmalinga 5. Ashtaprakriti and shodasavikara 6. Srishtyutpatti and pralaya 7. Trividha dukhahetu 8. Prajnaparadha 9. Daiva 10. Naishtikichikitsa 11. Vedana and vedana adhishtana 12. Vedananasahetu 13. Moksha 14. Smriti hetus III. Adhyaya sangraha	2	13	2	3
36	Cha.Sha.02-Atulyagothreeyam Adhyaaya I. Adhyaya parichaya II. Siddhanta vivarana	2		1	0

	1. Prerequisites of conception 2. Shodashadhatu in shareera 3. Sexual abnormalities 4. Sadyogriheeta garbhinee lakshana 5. Ativahikapurussha 6. Daiva & paurusha 7. Roganutpatti III. Adhyaya sangraha			
37	Cha.Sha.03-Khuddika garbhavakranti Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Matrujadi bhavas in garbha 2. Beeja & beejabhaga III. Adhyaya sangraha	2	1	0
38	Cha.Sha.04-Mahatee garbhavakranti Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Garbha & garbhaposhana 2. Garbhopaghatakara bhava 3. Congenital abnormalities 4. Trividhasatva bheda (manasaprakriti) III. Adhyaya sangraha	2	1	2
39	Cha.Sha.05-Purushavichaya Shareera Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Lokapurushasamya 2. Hetwadi panchaka 3. Satya buddhi III. Adhyaya sangraha	2	1	4
40	Cha.Sha.06-Sareeravichaya adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Definition of sareera 2. Samanyavishesha sidhanta – applied aspect 3. Shareera dhatuguna 4. Shareeravriddhikarabhava 5. Balavriddhikarabhava 6. Aharaparinamakarabhava 7. Sareeraguna bheda 8. Kala-akala mrityu 9. Param ayu karanam III. Adhyaya sangraha	2	1	2
41	Cha.Sha.07- Sareerasankhya sareera Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Paramanu bheda of shareera	2	1	2

	III. Adhyaya sangraha				
42	Cha.Sha.08-Jathisutreeya Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Sutikagara 2. Garbhopaghatakara bhava III. Adhyaya sangraha	2		1	12
43	Cha.In.1-Varnasvariya Indriya Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Factors for assessing rishta 2. Six types of prakruti bhedha 3. Rishtaadhikara kruta vikruti bhedha 4. Prakruta and vaikarika varna 5. Varnavishayak arishta 6. Prakruta and vaikarika swara 7. Swara vishayak arishta III. Adhyaya sangraha	3	7	1	1
44	Cha.In.2-Pushpitakam Indriya Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Gandha vishayaka samgrah 2. Rasa vishayaka arishta III. Adhyaya sangraha	3		1	0
45	Cha.In.3-Parimarshaneeyam Indriyam Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Sparshagamy bhava (palpable signs) 2. Sparshavishayak arishta lakshana III. Adhyaya sangraha	3		1	0
46	Cha.In.4-Indriyaneekam Indriya adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Indriya vishayaka arishta samanya niyama (general rule regarding involvement of indriya) III. Adhyaya sangraha	3		1	0
47	Cha.In.5-Purvarupeeyam Indriyam Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Jvara rupa vishayaka poorvaroopiya rishta (rishta based on purvarupa of jvara) 2. Swapna bheda (types of swapna) III. Adhyaya sangraha	3		1	2
48	Cha.In.6-Katamanisharireeyam Indriyam Adhyaya I. Adhyaya parichaya	3		1	0

	II. Sidhanta vivarana 1. Rishta related to pureesha, mutra and swayathu III. Adhyaya sangraha			
49	Cha.In.7-Pannarupiyam Indriyam Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Praticaya vishayaka arishta 2. Chaya vikruti arishtas 3. Five types chaya bheda 4. Seven types prabha bheda III. Adhyaya sangraha	3	1	0
50	Cha.In.8-Avakshiraseeyam Indriyam Adhyaya I. Adhyaya parichaya II. Adhyaya sangraha	3	1	0
51	Cha.In.9-Yasya shyavanimittiya Indriya Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Ashtamaharogas III. Adhyaya sangraha	3	1	0
52	Cha.In.10-Sadyomaraneeyam Indriya Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Sadyo maraneeya arishtas III. Adhyaya sangraha	3	1	0
53	Cha.In.11-Anujyotiyam Indriya Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Definition of Arishta III. Shloka sangraha	3	1	0
54	Cha.In.12-Gomayachurniyam Indriya Adhyaya I. Adhyaya parichaya II. Siddhanta vivarana 1. Mumurshu lakshana, 2. Prashasta doota lakshana and mangalika dravya. 3. Arogya janaka bhava III. Adhyaya sangraha	3	1	17
Total Marks			100	100 hr
				140 hr

Table 3: Learning objectives (Theory) of Course

Paper 1									
A3 Course outcome	B3 Learning Objective (At the end of the session, the students should be able to)	C3 Doma in/sub	D3 Must to know / desirable to know / Nice to know	E3 Level Does/ Show s how/ Know s how/ Know	F3 T-L meth od	G3 Assessment (Refer abbreviations)	H3 Form ative/ summ ative	I3 Term	J3 Integr ation
Topic 1 Cha.Su.13- Sneha Adhyaya (Lecture :3 hours, Non lecture: 1 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	I	
CO2	Explain basic meaning and importance of key terms in the chapter such as sneha, snehayoni, caturvidhasneha, acchasnehapaana, sadyasneha and pravicharana.	CK	MK	K	L&G D,BS	QZ ,COM,TT- Theory,VV- Viva	F&S	I	
CO4,CO5	Enlist sthavara and jangam snehayoni Ch Su 13/9-11	CK	MK	K	L&G D,ML	M-POS,TT- Theory	F&S	I	
CO4,CO5	Justify why tila taila is the best among taila varga. Ch Su 13/12	CK	MK	KH	L,L& PPT, DA	T-EMI	F&S	I	
CO4,CO5	Explain qualities and mode of action of eranda taila Ch. Su 13/12	CK	DK	KH	L,L_ VC,D A	T-EMI	F&S	I	
CO4,CO5	Enlist four types of sneha and justify sarpi as the best (shreshta).	CC	MK	KH	L,DIS	PRN,TT-Theo	F&S	I	

	Ch .Su 13/13				,DA	ry,VV-Viva			
CO4,CO5	Explain snehapaan kaala and anupaan Ch .Su 18-22	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	I	
CO4,CO5	Define and enlist 24 types of pravicharana sneha and other types of sneha pravicharana. Ch Su 13/23, 24, 25, 27, 28	CC	MK	KH	L&G D	CL-PR,TT-Th eory,VV-Viva	F&S	I	
CO4,CO5	Explain acchasnehapaana and its importance Ch Su 13/26	CK	DK	KH	L&G D,RP, PL	TT-Theory,V V-Viva	F&S	I	
CO4,CO5	Enlist types of snehamatra Ch.Su 13/29-30	CC	MK	KH	L&G D,RE C	QZ ,TT-Theor y,VV-Viva	F&S	I	
CO4,CO5	Mention rule for duration of snehapaana Ch. Su 13/51	CC	MK	KH	L&G D,BS	PUZ,TT-Theo ry,VV-Viva	F&S	I	
CO4,CO5	Mention yogya and ayogya for snehana Ca Su 13/52-56.	CC	DK	KH	L,L& PPT,L &GD, CBL	TT-Theory,V V-Viva	F&S	I	V-PC
CO4,CO5	Summarize samyak snigdha lakshana, asnigdha lakshana and atisnigdha lakshana. Ch Su 13/57-59	CC	DK	KH	L&G D,D	P-ID,TT-Theo ry,VV-Viva	F&S	I	
CO2,CO4,CO 5	Summarise snehavyapat karana, lakshana and chikitsa Ch Su 75-79	CAP	NK	KH	L&G D,PL	TT-Theory,V V-Viva	F&S	I	
CO4,CO5	Figure out importance of pathya and apathya in snehapaan.Ch Su 13/60-61-64	CK	DK	KH	L&G D,SD L	M-CHT,TT-T heory,VV- Viva	F&S	I	
CO4,CO5	Explain pathyaapathya to be followed during and after	CC	MK	KH	L&G	CHK,TT-Theo	F&S	I	

	snehapana. Ch Su 62-64				D,ED U	ry,VV-Viva			
CO4,CO5	Explain criteria's for assessing koshta. Ch Su 13/ 65-69.	CC	MK	KH	L&G D,CB L	TT-Theory,V V-Viva	F&S	I	
CO4,CO5,CO 6	Illustrate types of koshta in patients undergoing snehapana	PSY- SET	NK	SH	CBL, CD,D _BED	P-ID,VV-Viva	F&S	I	
CO4,CO5	Mention some examples for recipes of vicharanasneha.Ch Su 13/82-94	CK	DK	K	L,L& PPT	TT-Theory,V V-Viva	F&S	I	
CO4,CO5	Interpret the role of agni in sadyasneha Ca Su 13/96-97	CK	DK	K	L,L& GD,I BL	TT-Theory,V V-Viva	F&S	I	
CO1,CO2	Recite sutra no. Ch Su 13/13-17, 22, 57-59.	CK	MK	K	SDL, REC	P-REC	F&S	I	
CO1,CO2	Summarize the chapter as per Ch Su 13/100.	CK	NK	K	SDL	P-VIVA	F&S	I	
CO4,CO5	Relate dravya classification mentioned in Ch Su 1 (trividha) with snehayoni	CAP	MK	KH	DIS	PRN	F	I	
Topic 2 Cha.Su.14- Sveda Adhyaya (Lecture :2 hours, Non lecture: 1 hours)									
CO1,CO2	Justify the position of the chapter in the samhita and its importance	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	I	
CO2	Explain basic meaning and importance of key terms in the chapter such as agnisweda, niragnisweda, snigdhapurva, ruskhapurva and trayodasasweda	CK	MK	K	L&G D,BS	QZ ,COM,TT- Theory,VV- Viva	F&S	I	
CO4,CO5	Explain the benefits of swedana. Ch Su 14/ 3-5	CC	MK	KH	L&G	TT-Theory,V	F&S	I	

					D,RL E	V-Viva			
CO4,CO5	Explain samyak swedana and ati swedana lakshana Ch Su 14/13-15	CC	MK	KH	L&G D	TT-Theory,V V-Viva	F&S	I	
CO4,CO5	Summarize the indications and contraindications for swedana Ch Su 14/ 16-24.	CC	DK	KH	L&G D,CB L	TT-Theory,V V-Viva	F&S	I	
CO4,CO5	Differentiate pinda sweda, nadi sweda, avagah sweda and upanaha sweda with respect to the drugs used and procedure. Ch Su 14/25-37.	CC	DK	KH	L&G D,L_ VC,C BL	TT-Theory,V V-Viva	F&S	I	
CO4,CO5	Enlist 13 types of agni sweda. Ch Su 14/39-63	CC	MK	KH	L&PP T,L_ VC	QZ ,TT-Theor y,VV-Viva	F&S	I	
CO4,CO5	Enlist 10 types of niragnisweda Ch. Su 14/64.	CC	MK	KH	L,L& GD	O-QZ,TT-The ory,VV-Viva	F&S	I	
CO4,CO5	Enlist three classifications of dvividha sweda. Ch Su 14/66	CK	MK	KH	L&G D	M-CHT,TT-T heory,VV- Viva	F&S	I	
CO1,CO2	Recite sutras Ch Su 14/4,5,39,40,64.	CK	MK	K	SDL, REC	P-REC	F&S	I	
CO1,CO2	Summarize the chapter as per sutra Ch Su 14/68-71	CK	NK	K	SDL	P-VIVA	F&S	I	
Topic 3 Cha.Su.15- Upakalpaneeya Adhyaya (Lecture :2 hours, Non lecture: 3 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CK	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	I	

CO1,CO2	Explain basic meaning and importance of key terms in the chapter such as sambharan, aturaalaya, samsarjan krama.	CK	MK	K	L&G D,BS	QZ ,COM,TT-Theory,VV-Viva	F&S	I	
CO4,CO5	Summarize the guidelines for Vaidyas before commencing chikitsa Ch Su 15/3-5.	CK	DK	KH	L&G D	M-CHT,TT-Theory,VV-Viva	F&S	I	
CO4,CO5	Enlist samshodhana upayogi dravya sangraha Ch Su 15/6	CK	MK	KH	L&G D	QZ ,TT-Theory,VV-Viva	F&S	I	
CO4,CO5	Figure out the procedure of vamana karma. Ch Su 15/9-15	CC	DK	KH	L&G D,RP	CHK,TT-Theory,VV-Viva	F&S	I	
CO4,CO5	Explain samsarjana krama Ch Su 15/16	CC	MK	KH	L,L& GD	CL-PR,TT-Theory,VV-Viva	F&S	I	
CO4,CO5	Identify merits of samsarjanakrama in patients	PSY-SET	NK	SH	BS,IB L,D_ BED	P-CASE,SP	F&S	I	
CO4,CO5	Outline procedure for virechana karma Ch Su 15/17-18	CC	DK	KH	L&G D,RP	CHK,TT-Theory,VV-Viva	F&S	I	
CO4,CO5	Explain benefits of samshodhana. Ch Su 15/22.	CC	MK	KH	L,L& GD	TT-Theory,VV-Viva	F&S	I	
CO5,CO7	Relate the structure of aturalaya (hospital) with the present scenario	CAP	DK	KH	DIS,B S,PrB L	DEB,M-MOD,INT	F	I	
CO1	Recite sutra Ch Su 15/22	CK	MK	K	SDL, REC	P-REC	F&S	I	
CO1	Summarize the chapter as per sutra Ch Su 15/2-25	CK	NK	K	SDL	P-VIVA	F&S	I	

Topic 4 Cha.Su.16- Chikitsaprabhritiya Adhyaya (Lecture :2 hours, Non lecture: 2 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita and its importance.	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	I	
CO2	Explain basic meaning and importance of key terms such as bahudosha lakshana, swabhaavoparamvaada, chikitsaprabhrita.	CK	MK	K	L&G D,BS	QZ ,COM,TT- Theory,VV- Viva	F&S	I	
CO4,CO5	Summarize samyak virikta –avirikta – ativirikta lakshana. Ch Su 16/6-10	CC	DK	KH	L&G D,D	RS,TT-Theory ,VV-Viva	F&S	I	
CO4,CO5	Explain bahudosha lakshana Ch Su 16/13-16	CC	MK	KH	L&G D	PUZ,TT-Theo ry,VV-Viva	F&S	I	
CO3,CO6	Identify bahudoshalakshana in patients	PSY- SET	DK	SH	CBL, D_BE D	P-VIVA	F&S	I	
CO4,CO5	Explain benefits and importance of samshodhana. Ch .Su 16/16-21	CC	MK	KH	L&G D	TT-Theory,V V-Viva	F&S	I	
CO4,CO5	Explain swabhavoparama vada Ch Su 16/ 27-32	CC	MK	KH	L&G D,BS	DEB,TT-Theo ry,VV-Viva	F&S	I	
CO2,CO5	Outline chikitsa of ayoga, atiyoga of samsodhana	CAP	DK	KH	L_VC ,CBL, D	SP,TT-Theory ,VV-Viva	F&S	I	
CO4,CO5	Define chikitsa Ch Su 16/34-36	CC	MK	KH	L&G D	TT-Theory,V V-Viva	F&S	I	
CO4,CO8	Appreciate benefits of chikitsa prabhrita bhishak. Ch Su. 16/37-38	CK	DK	KH	L&G D,D	TT-Theory,V V-Viva	F&S	I	
CO1	Recite sutras Ch Su 16/13-21,27,28,34-36	CK	MK	K	SDL,	P-REC	F&S	I	

					REC				
CO4,CO6,CO7	Relate swabhavoparama with concept of nidana parivarjana	CAP	MK	KH	DIS	PRN	F	I	
CO1	Summarize the chapter as per sutra Ch Su 16/39-41	CK	NK	K	SDL	P-VIVA	F&S	I	
Topic 5 Cha.Su.17- Kiyantashiraseeya Adhyaya (Lecture :3 hours, Non lecture: 0 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	I	
CO2	Explain basic meaning and importance of key terms in the chapter such as doshagati, doshavikalpa, trayodasasannipata	CK	MK	K	L&G D,BS	QZ ,COM,TT-Theory,VV-Viva	F&S	I	
CO2,CO3	Explain importance of shiras. Ch Su 17/12	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	I	
CO3,CO4	Enlist types of siroroga, hridroga and vidradhi	CC	MK	KH	L&G D	SP,TT-Theory	F&S	I	
CO3,CO4	Figure out 62 types of permutation and combination of doshas Ch Su 17/41-44	CK	DK	K	L&G D,GB L	PUZ,TT-Theo ry,VV-Viva	F&S	I	
CO3,CO4	Figure out 12 types of vishama sannipata Ch Su 17/45-61	CK	DK	K	L&G D	M-POS	F&S	I	
CO3,CO4,CO6	Complement knowledge about kshayalaskhana of dosha-dhatu-mala to the existing understanding (additional important features mentioned in CS)	CK	DK	KH	DIS,F C	TT-Theory,V V-Viva	F&S	I	
CO3,CO4	Interpret dosha-vikalpa (combinations of doshas) in different conditions. Ch.Su. 17/45-61	CAP	MK	KH	IBL,C BL	P-PS,TT-Theo ry,VV-Viva	F&S	I	

CO3,CO7	Complement knowledge of Ojus to the existing understanding (additional important features mentioned in CS) Ch Su 17/73-77	CC	MK	K	DIS,F C	TT-Theory	F&S	I	H-RN
CO3,CO4,CO 6	Outline the samprapti of madhumeha and importance of ojus. Ch Su 17/78-81	CAP	MK	KH	L&G D	TT-Theory	F&S	I	
CO2,CO3,CO 4,CO7	Define the term “gati” and Classify and explain various kinds of gati. Ch.Su 17/112 - 118 Cakrapani	CK	MK	K	L&G D,RP	TT-Theory,V V-Viva	F&S	I	
CO2,CO4,CO 6	Interpret asaya apakarsha-gati in relationship with dosha-gati. Ch.Su. 17/45-46	CC	DK	KH	L&G D	TT-Theory	F&S	I	
CO3,CO4,CO 7	Explain kshayahetu Ch.Su. 17/ 76-77	CC	MK	KH	L&G D	TT-Theory,V V-Viva	F&S	I	
CO3,CO4,CO 6	Illustrate dosha-gati in clinical conditions	CAP	MK	KH	CBL, D	P-RP,P-CASE	F&S	I	
CO3,CO4	Explain identification of dosha vridhhi, kshaya, samya Ch.Su. 17/ 62	CC	MK	KH	L	CL-PR,TT-Th eory,VV-Viva	F&S	I	
CO1	Recite sutras Ch Su 17/12, 41-44, 62, 112-118	CK	MK	K	SDL, REC	P-REC	F&S	I	
CO1	Summarize the chapter as per sutra Ch Su 17/120-121	CK	NK	K	SDL	P-VIVA	F&S	I	
Topic 6 Cha.Su.18-Trisotheeya Adhyaya (Lecture :1 hours, Non lecture: 3 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	I	
CO2	Explain basic meaning and importance of key terms in the chapter such as trisotha, trividhabodhya sangraha and anukta roga	CC	MK	K	L&PP T	TT-Theory,V V-Viva	F&S	I	
CO5	Name and explain trividha-bodhya-sangraha (three-fold method	CC	MK	K	L&G	TT-Theory,V	F&S	I	

	for understanding disease – vikara prakriti, samuthana and adhithana) Ca.Su. 18/55, 46-47				D	V-Viva			
CO3,CO6	Illustrate use of trividha-bodhya-sangraha in anuktavyadhi Ch Su 18/44-45	CAP	DK	KH	L&G D,CB L	TT-Theory,V V-Viva	F&S	I	
CO3,CO5	Outline pradesika sotha (local edema) Ch Su 18/19-36	CC	DK	K	L&G D,L_ VC	P-ID,TT-Theo ry,VV-Viva	F&S	I	
CO3,CO6	Explain aparisankhyeyatwa of diseases (innumerability) Ch Su 18/42	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	I	
CO3	Complement tridosha-samanyakarma with additional details mentioned in CS	CC	MK	K	BS,IB L,FC	PRN,TT-Theo ry,VV-Viva	F&S	I	
CO1	Recite sutras Ch Su 42,43,44-47	CK	MK	K	SDL, REC	P-REC	F&S	I	
CO1	Summarize the chapter as per sutra Ch Su 18/54-56	CK	NK	K	SDL	P-VIVA	F&S	I	
Topic 7 Cha.Su.19-Ashtodareeya Adhyaya (Lecture :1 hours, Non lecture: 3 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	I	
CO2	Explain basic meaning and importance of key terms in the chapter such as nijavyadhi (intrinsic diseases), samanyaja-vyadhi (general diseases) and sankhyasamprapti (enumeration of types of diseases)	CK	MK	K	L&G D,BS	QZ ,COM,TT- Theory,VV- Viva	F&S	I	
CO2,CO3	Outline the types of diseases (sankhyasamprapti) mentioned in the chapter	CK	DK	K	L&G D,GB L	QZ ,PUZ,TT- Theory,VV- Viva	F&S	I	

CO3,CO4	Illustrate the importance of tridosha in occurrence of diseases Ch Su 19/5	CC	MK	KH	DIS,S DL	TT-Theory,V V-Viva	F&S	I	
CO3,CO4	Explain the relationship between Nija and Agatu rogas (intrinsic and extrinsic diseases) Ch Su 19/6,7	CK	MK	K	L&G D,PL	TT-Theory,V V-Viva	F&S	I	
CO6,CO8	Classify diseases in Ayurveda using available online resources (Activity, ref: activity table)	CAP	DK	KH	DIS,B L	SA,TT-Theory ,VV-Viva	F	I	
CO1,CO2	Recite sutras Ch Su 19/5, 6	CK	MK	K	SDL, REC	P-REC	F&S	I	
CO1,CO2	Summarize the chapter as per sutra Ch Su 19/8,9	CK	NK	K	SDL	P-VIVA	F&S	I	
CO3,CO6,CO 7	Summarize different classifications of diseases mentioned in deerghanjeeviteeya, tisraishaneeya, ashtodareeya, maharoga and roganeeka	CC	MK	KH	DIS, W	P-POS	F	I	
Topic 8 Cha.Su.20- Maharoga adhyaya (Lecture :2 hours, Non lecture: 2 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	I	
CO2	Explain basic meaning and importance of key terms such as agantumukha, trividhaprerana, samanyaja-vikara, nanatmaja-vikara and atmarupa	CK	MK	K	L&G D,BS	QZ ,COM,TT- Theory,VV- Viva	F&S	I	
CO3,CO5	Explain the basis for the classification of diseases. Ch.Su. 20/3	CK	MK	K	L&G D,ML	M-CHT,TT-T heory,VV- Viva	F&S	I	
CO5	Define nija and agantuja vyadhi. Ch.Su. 20/7	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	I	
CO5	Describe kaarana for nija and agantuja vyadhi. Ch.Su. 20/4-5	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	I	

CO3,CO5	Enlist nanatmajavyadhi of vata and relate guna, atmarupa, vikritakarma of vata and its upakrama. Ch.Su. 20/12,13	CAP	MK	K	L&G D	M-CHT,VV- Viva	F&S	I	
CO3,CO5	Enlist nanatmajavyadhi of pitta and relate guna, atmarupa, vikritakarma of pitta, and its upakrama Ch.Su. 20/14-16	CAP	MK	K	L&G D	M-CHT,VV- Viva	F&S	I	
CO3,CO5	Enlist nanatmajavyadhi of Kapha and Relate guna, atmarupa, vikritakarma of Kapha and its Upakrama. Ch.Su. 20/17-19	CAP	MK	K	L&G D	M-CHT,VV- Viva	F&S	I	
CO4,CO6,CO 8	Make monographs of nanatamaja-vikaras (Activity, see activity list)	CAP	DK	KH	TPW, BL	M-CHT,CR- W	F	I	
CO3,CO6,CO 7	Relate paribhasha of different terms in nanatamajavyadhi with descriptions available in Ashatanga sangraha Su 20/18	CC	DK	KH	DIS	T-OBT	F	I	
CO1,CO2	Recite sutras Ch. Su. 20/ 3, 4, 5, 11,14, 17, 20-22	CK	MK	K	SDL, REC	P-REC	F&S	I	
CO1,CO2	Summarize the chapter as per sutra Ch Su 20/ 23-25	CC	NK	K	SDL	P-VIVA	F&S	I	
Topic 9 Cha.Su.21- Ashtauninditeeya adhyaya (Lecture :3 hours, Non lecture: 3 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	I	
CO2	Explain basic meaning and importance of key terms such as ashtaninditapurusha, ashtadosha of atisthaulya, prasastapurushsalakshana	CK	MK	K	L&G D,BS	QZ ,COM,TT- Theory,VV- Viva	F&S	I	
CO2	Enlist ashtaninditapurusha Ch Su 21/3	CK	MK	K	L&G D,RP	TT-Theory,V V-Viva	F&S	I	
CO4,CO5	Enlist ashtadosha of atisthoola purusha and justify its ashtadosha Ch.Su. 21/4	CAP	MK	K	L&G D,RP	P-SUR,CL- PR,VV-Viva	F&S	I	
CO4,CO5,CO	Outline the diagnostic features of atisthula. Ch.Su.21/9	CC	MK	K	L&G	TT-Theory,V	F&S	I	

7					D	V-Viva			
CO5,CO6,CO7	Outline hetu and samprapti of atisthaulya Ch.Su. 21/4-8	CAP	DK	K	L&PP T	TT-Theory,V V-Viva	F&S	I	
CO4,CO5	Describe chikistasutra for atisthula purusha and mention different formulations. Ch.Su. 21/20- 28	CAP	MK	K	L&G D	TT-Theory,V V-Viva	F&S	I	
CO5,CO6	Describe hetu, dosha and lakshana for atikrusha purusha. Ch.Su. 21/11-15	CC	MK	K	L&PP T	TT-Theory,V V-Viva	F&S	I	
CO4,CO5	Describe chikistasutra for atikrusha purusha and mention different formulations Ch.Su. 21/20, 29-34	CC	MK	KH	L&G D	TT-Theory,V V-Viva	F&S	I	
CO6	Interpret why atisthula purusha is difficult to treat compared to krushapurusha Ch.Su. 21/16-17	CAP	MK	K	L&G D	TT-Theory,V V-Viva	F&S	I	
CO5	Enlist the features of ideal physique in individuals (prashasta purusha lakshana) Ch.Su. 21/18-19	CC	MK	KH	L&G D	TT-Theory,V V-Viva	F&S	I	
CO4,CO7	Define nidra and enlist its types Ch Su 21/35&58	CK	MK	K	L&PP T	TT-Theory,V V-Viva	F&S	I	
CO3,CO7	Determine significance of nidra as an etiological factor of sthaulya and karsya and its role in management of the same Ca.Su. 21/51	CAP	MK	KH	DIS,C BL,F C	CL-PR	F&S	I	
CO1,CO2	Recite sutras Ch Su 21/ 3,4,16, 18, 19, 35, 50, 58	CK	MK	K	SDL, REC	P-REC	F&S	I	
CO1,CO2	Summarize the chapter as per sutra Ch Su 21/60-62	CC	NK	K	SDL	P-VIVA	F&S	I	
Topic 10 Cha.Su.22- Langanabrimhaneeya Adhyaya (Lecture :3 hours, Non lecture: 2 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	I	

CO2	Explain basic meaning and importance of key terms such as shadupakrama and dasavidhalanghana	CK	MK	K	L&G D,BS	QZ ,COM,TT- Theory,VV- Viva	F&S	I	
CO2,CO4,CO 5	Enlist and define shadupakrama. Ch.Su. 22/4, 9-12	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	I	
CO2,CO5,CO 7	Explain properties of dravyas used in shadupakrama with examples. Ch.Su. 22/12-17	CK	MK	K	L&PP T,PB L	TT-Theory,V V-Viva	F&S	I	
CO4,CO5	Enlist dasavidha-langhana and their indications Ch.Su. 22/19-23	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	I	
CO2,CO4,CO 5	Relate gurvadi guna and samanya visesha sidhanta with shadupakrama Ch Su 22/12-17	CK	DK	KH	DIS,F C	T-EMI,VV- Viva	F&S	I	
CO4,CO5	Identify dasavidhalanghana in treatment guidelines mentioned for different diseases	CAP	NK	KH	IBL,C BL	T-OBT,VV- Viva	F&S	I	
CO4,CO5	Explain samyaklakshana of langhana, brimhana and sthambhana Ch Su 22/34,35,38,40	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	I	
CO4,CO5	Outline atiyoga and ayogalakshana of brimhana, langhana and sthambhana Ch Su 22/36-38	CK	DK	K	L&G D,CB L	M-CHT,TT-T heory,VV- Viva	F&S	I	
CO1,CO2	Recite sutras Ch Su 21/9-24	CK	MK	K	SDL, REC	P-REC	F&S	I	
CO1,CO2	Summarize chapter as per sutra Ch Su 22/44	CC	NK	K	SDL	P-VIVA	F&S	I	
Topic 11 Cha.Su.23- Santarpaneeya Adhyaya (Lecture :2 hours, Non lecture: 0 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CC	MK	KH	L&G D	INT,TT-Theor y,VV-Viva	F&S	I	

CO2	Explain basic meaning and importance of key terms such as santarpana and apatarpana	CK	MK	K	L&G D,BS	QZ ,COM,TT- Theory,VV- Viva	F&S	I	
CO3,CO5	Enlist santarpanadravya Ch Su 23/3-5	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	I	
CO3	Enlist santarpanajanyavyadhis Ch Su 23/5-7	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	I	
CO3,CO6	Explain chikitsa-sutra for santarpana-janya-roga. Ch.Su. 23/ 8	CAP	MK	K	L&G D	TT-Theory,V V-Viva	F&S	I	
CO3	Explain apatarpanajanya vyadhis Ch Su 23/26-29	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	I	
CO3,CO6	Outline the management approach to apatarpana janya vyadhi Ch Su 23/30-32	CC	MK	KH	L&G D,CB L	TT-Theory,V V-Viva	F&S	I	
CO1,CO2	Recite sutras Ch Su 23/ 5-7, 26-29	CK	MK	K	SDL, REC	P-REC	F&S	I	
CO2	Summarize chapter as per sutra Ch Su 23/40	CC	NK	K	SDL	P-VIVA	F&S	I	
Topic 12 Cha.Su.24- Vidhishoniteeya Adhyaya (Lecture :3 hours, Non lecture: 2 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	I	
CO2	Explain basic meaning and importance of key terms such as sonitadushti and visuddharakta	CK	MK	K	L&G D,BS	QZ ,COM,TT- Theory,VV- Viva	F&S	I	
CO3,CO4,CO 7	Explain causative factors for raktadushti Ch.Su. 24/ 5-10	CK	MK	K	L&G D	CHK	F&S	I	

CO4,CO6	Explain diagnostic criteria of raktadushti. Ca.Su. 24/17	CC	MK	K	L&G D	TT-Theory,V V-Viva	F&S	I	
CO4,CO6,CO 7	Enlist rakta-dushtijanya-roga. Ch.Su. 24/11-16, 28/11-13	CC	MK	K	L&G D	TT-Theory,V V-Viva	F&S	I	
CO4,CO5	Explain treatment principles of rakta-dushti. Ch.Su. 24/18.	CC	MK	K	L&G D	INT,VV-Viva	F&S	I	
CO3,CO4,CO 7	Explain visudha-rakta lakshana Ch Su 23/22	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	I	
CO3,CO4,CO 5	Explain visuddha-rakta-purusha lakshana Ch Su 23/24	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	I	
CO3,CO6,CO 7	Relate the concept of raktadushti with similar references such as Ch.vi. 5/26	CC	MK	KH	DIS	T-OBT	F	I	
CO4,CO5,CO 7	Explain pathya in raktamoksha Ch Su 24/23	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	I	
CO4,CO5,CO 6	Summarize the samprapti of mada, murchaya and sanyasa Ch Su 24/25-29	CAP	DK	KH	L&G D,IBL ,RP	PUZ,TT-Theo ry,VV-Viva	F&S	I	
CO1,CO2	Recite sutras Ch Su 24/ 14,18,20,21,22,24	CK	MK	K	SDL, REC	P-REC	F&S	I	
CO2	Summarise the chapter as per sutra Ch Su 24/59-60	CC	NK	K	SDL	TT-Theory,V V-Viva	F&S	I	
Topic 13 Cha.Su.25- Yajjapurusheeya Adhyaya (Lecture :2 hours, Non lecture: 4 hours)									
CO1	Justify the position of the Yajjapurusheeya chapter in the Samhita and its importance	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	I	

CO2	Explain basic meaning and importance of key terms in the chapter such as Hita, Ahita, Pathya and Apathya	CK	MK	K	L&G D,BS	QZ ,COM,TT-Theory,VV-Viva	F&S	I	
CO4,CO7	Justify the role of different factors responsible for formation of purusha Ch Su 25/3-29	CC	DK	KH	L&G D,ML	TT-Theory,V V-Viva	F&S	I	
CO1,CO8	Appreciate importance of sambhasha in bringing out scientific conclusions	AFT-REC	NK	KH	L&G D,RP, PL	SA,TT-Theory ,VV-Viva	F&S	I	
CO2,CO3	Differentiate factors related with ahara like Aharayoni, Prabhava, udarka, Upayoga, Rasa, Gurvadi Guna etc Ch Su 25/36	CK	MK	KH	L&G D,LS	T-OBT,TT-Th eory,VV-Viva	F&S	I	
CO3,CO4,CO 5	Enlist important agryas related with aushadha, anna and vihara Ch Su 25/38-40	CK	DK	K	L&G D,FC, GBL	T-OBT,TT-Th eory,VV-Viva	F&S	I	H-DG ,H- RN
CO4,CO5,CO 7	Define pathya and explain its importance Ch Su 25/45-47	CC	MK	K	L&G D	TT-Theory,V V-Viva	F&S	I	
CO4,CO7,CO 8	Justify importance of hitahara and ahitahara (See activity list)	CAP	DK	KH	DIS,F C	INT,TT-Theor y,VV-Viva	F&S	I	
CO5	Mention asavayonis Ch Su 25/49	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	I	
CO1,CO2	Recite sutras Ch Su 25/ 29,31,33,45,46,47,50	CK	MK	K	SDL, REC	P-REC	F&S	I	
CO1	Summarize the chapter with shloka number Ch Su 25/51	CK	NK	K	SDL	TT-Theory,V V-Viva	F&S	I	
Topic 14 Cha.Su.26- Atreyabhadraakaapyeeya Adhyaya (Lecture :3 hours, Non lecture: 3 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita and its	CC	MK	K	L&G	INT,TT-Theor	F&S	I	

	importance				D	y,VV-Viva			
CO2	Explain basic meaning and importance of key terms such as dravyaprabhava, gunaprabhava, rasapanchaka and viruddha	CK	MK	K	L&G D,BS	QZ ,COM,TT- Theory,VV- Viva	F&S	I	
CO2,CO3,CO 5	Enlist gunas of parthivadi dravyas Ch Su 26/11	CK	DK	K	L&G D	TT-Theory,V V-Viva	F&S	I	
CO4,CO5	Differentiate dravyaprabhava and gunaprabhava with examples Ch Su 26/13	CK	MK	KH	L&G D	PUZ,TT-Theo ry,VV-Viva	F&S	I	H-DG
CO4,CO5	Explain dravyakarmukata siddhant with examples Ch Su 26/13	CK	MK	KH	L&G D,DA	TT-Theory,V V-Viva	F&S	I	H-DG
CO4,CO5,CO 6	Explain the importance of paradi gunas as chikitsopayogi gunas (in diagnosis and treatment). Ch Su 26/29-35 (see activity list, activity no.5)	CK	DK	KH	L&G D,FC, SDL	TT-Theory,V V-Viva	F&S	I	
CO2,CO5	Complement the existing knowledge of ‘rasadi panchaka’ with additions from Charakasamhita.	CK	DK	K	FC,S DL	T-OBT,TT-Th eory,VV-Viva	F&S	I	
CO2,CO5	Differentiate the properties of three types of ‘Vipakas’ Ch Su 26/58-63	CK	MK	K	DIS,F C	TT-Theory,V V-Viva	F&S	I	
CO4,CO5	Explain method of perception of rasa,veerya and vipaka of dravyas Ch Su 26/66	CC	MK	KH	L&G D,D	DEB,TT-Theo ry,VV-Viva	F&S	I	H-DG
CO2,CO4,CO 5	Enlist the examples of prabhava Ch Su 26/68-70	CK	MK	K	L&G D,ED U,SD L	TT-Theory,V V-Viva	F&S	I	H-DG
CO4,CO5,CO 7	Enlist the types of viruddhaahara and principles of management of diseases caused by viruddhaahara. Ch Su 26/86, 104-105	CK	MK	K	L&G D,BL,	P-PS,TT-Theo ry,VV-Viva	F&S	II	

					RLE				
CO4,CO5	Illustrate vichitra-pratyayabdhā with examples Ch Su 26/48-52	CAP	MK	KH	DIS,I BL	P-ID,TT-Theo ry,VV-Viva	F&S	II	
CO1,CO2	Recite the shlokas Ch Su 26/13,36,37,61,62,66,81,85	CK	MK	K	SDL, REC	P-REC	F&S	II	
CO4,CO5	Relate different sidhantas on dravya mentioned in Ch.Su1, Ch Su 4, Ch Su 27 and Ch Vi 1	CC	MK	KH	DIS,F C	CL-PR	F	I	
CO1,CO2	Summarize the chapter as per sutra Ch Su 26/107-113	CK	NK	K	SDL	TT-Theory,V V-Viva	F&S	II	
Topic 15 Cha.Su.27- Annapaana vidhi Adhyaya (Lecture :4 hours, Non lecture: 2 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CK	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	I	
CO2,CO5,CO 7	Enlist the characteristics of hitahara and examples of hitaahara and ahitaahara. Ch Vi 27/3	CK	MK	K	SDL	P-VIVA	F&S	I	
CO2,CO5,CO 7	Classify ahara into different vargas Ch Su 27/26	CK	MK	K	FC,S DL	P-VIVA	F&S	I	
CO4,CO5,CO 7	Illustrate ahara-dravya through exhibition (See activity list, activity no.7)	CS	DK	SH	PrBL, RLE	Log book,TR	F	I	
CO1,CO2	Summarise the chapter as per Ch Su 27/351-352	CC	NK	K	SDL	TT-Theory,V V-Viva	F&S	I	
Topic 16 Cha.Su.28- Vividhashitapeeteeya Adhyaya (Lecture :4 hours, Non lecture: 14 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	I	
CO2	Explain basic meaning of key terms in the chapter such as	CK	MK	K	L&G	QZ ,COM,TT-	F&S	I	

	chaturvidha ahara, vyadhisaha sareera, dhatu-upadhatu-mala-indriya-pradoshajavyadhi				D,BS	Theory,VV-Viva			
CO2,CO7	Enlist the four types of aahara Ch Su 28/3	CK	MK	K	L&G D,ML	M-CHT,VV-Viva	F&S	I	
CO2,CO7	Explain factors influencing susceptibility to diseases which modify the effects of pathya and apathya Ch Su 27/7	CK	MK	KH	L&G D,SD L	TT-Theory,V V-Viva	F&S	I	
CO3,CO7	Enlist the vyadhi- asaha shareera Ch Su 27/7	CK	MK	KH	L&G D,IBL	TT-Theory,V V-Viva	F&S	I	
CO3,CO4,CO5,CO7	Outline dhatu-upadhatu-mala-indriya pradoshaja vyadhi (diseases caused by doshas situated in different dhatus, upadhatu, malas and indriyas) explain their treatment principles Ch Su 27/9-30	CC	MK	KH	L&G D,IBL ,LS	T-OBT,M-CH T,TT-Theory, VV-Viva	F&S	I	
CO3,CO4,CO7	Explain mechanism koshtagati and sakhagati Ch Su 27/31-33	CC	MK	KH	L&G D,FC	TT-Theory,V V-Viva	F&S	I	
CO3,CO7	Emphasize the role of Prajnaparadha in causation of diseases Ch Su 27/39-40	CC	MK	KH	L&G D	TT-Theory,V V-Viva	F&S	I	
CO1,CO2	Recite sutras Ch Su 27/9-19,35-39, 45	CK	MK	K	SDL, REC	P-REC	F&S	I	
CO1,CO2	Summarize the chapter as per Ch Su 28/45-48	CK	NK	K	SDL	T-OBT,TT-Theory,VV-Viva	F&S	I	
CO3,CO6	Relate dhatupradoshaja vyadhi with explanations in other contexts such as Ch.vi. 5/ 10-22, Ch.Su. 28/ 09- 19, Ch.Vi. 5/8 and dhatugatha avastha described in Ashtangasangraha Sutasthana	CC	DK	KH	DIS,B S	CL-PR	F	I	

Topic 17 Cha.Su.29- Dashapraanaayataneeya Adhyaya (Lecture :2 hours, Non lecture: 2 hours)

CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	II	
CO2	Explain basic meaning and importance of key terms such as pranaayatan, praanabhisara, rogaabhisara, chadmachara, yogya chikitsak, karma kovidah.	CK	MK	K	L&G D,BS	QZ ,COM,TT- Theory,VV- Viva	F&S	II	
CO2,CO3,CO 7	Enlist dasha praanayatanas. Ch Su 29/3,4	CC	MK	KH	L&G D	TT-Theory,V V-Viva	F&S	II	
CO8	Enlist two types of bhishak. Ch Su 29/5	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO8	Explain the qualities of pranaabhisar, rogabhisara and bhishakchadmacahara Ch Su 29/7	CC	MK	KH	L&G D	TT-Theory,V V-Viva	F&S	II	
CO8	Appreciate the social hazards caused due to quackery	AFT- REC	DK	KH	BS,S DL	CR-W,VV- Viva	F&S	II	
CO8	Enlist qualities of yogya chikitsak Ch Su 29/ 13.	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO8	Illustrate characteristics of different types of vaidya through skit (see activity no.8)	PSY- SET	DK	SH	RP,F V	PRN	F	II	
CO1,CO2	Recite sutras Ch Su 29/3,4,13.	CK	MK	K	SDL, REC	P-REC	F&S	II	
CO1,CO2	Summarize the chapter as per sutra Ch. Su 29/14	CK	MK	K	SDL	T-OBT,TT-Th eory,VV-Viva	F&S	II	
CO8	Relate different references related to good qualities of Vaidya from different chapters Ch Su 11/50-53	CC	MK	KH	FC	CL-PR,DEB	F	II	

Topic 18 Cha.Su.30- Arthedashamahamooleeya Adhyaya (Lecture :2 hours, Non lecture: 0 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CK	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	II	
CO2	Explain basic meaning and importance of key terms such as artha, mahamula, mahaphala, shashwatatva	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO3,CO4,CO 7	Explain the importance of hrudaya. Ch Su 30/3,4,5,6,7	CC	MK	KH	L&G D	TT-Theory,V V-Viva	F&S	II	
CO3,CO7	Relate concept of hridaya with details given in trimarmeeya, sareerasthana etc.	CK	MK	KH	L&G D,FC	T-OBT	F	II	
CO3,CO4,CO 7	Explain the importance of ojas and its sthana Ch Su 30/8-12.	CC	MK	KH	L&G D	TT-Theory,V V-Viva	F&S	II	
CO3,CO4,CO 7	Define terms dhamani, srotas, sira. Ch Su 30/12	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO3,CO4,CO 7	Explain shresthatama bhava Ch Su 30/15	CK	NK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO3,CO5,CO 8	Explain Ayurvedavid lakshana and their method of understanding in the form of vakyashah, vakyarthashah, arthavayavashah Ch Su 30/16	CK	DK	KH	L&G D	TT-Theory,V V-Viva	F&S	II	
CO3,CO4,CO 7	Outline lakshana of sukhayu, asukhayu, hitayu and ahitayu Ch Su 30/24, 25	CK	DK	KH	L&G D,IBL	PUZ,TT-Theo ry,VV-Viva	F&S	II	
CO3,CO4	Define objective (prayojana) of Ayurveda Ch Su 30/26	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO3,CO5,CO 8	Appreciate eternity of Ayurveda Ch Su 30/27	CC	MK	KH	L&G D,BS	TT-Theory,V V-Viva	F&S	II	

CO3,CO4,CO7,CO8	Explain qualities of learner of Ayurveda and their objectives. Ch Su 30/29	CC	DK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO3,CO4,CO7	Enlist dashaprakaran of tantraartha. Ch Su 30/32.	CK	MK	KH	L,L& GD	P-VIVA,TT-T heory,VV- Viva	F&S	II	
CO3,CO4	Outline the ashtasthanas of Charaka Samhita Ch Su 30/32	CK	MK	K	L&G D	TT-Theory,PP -Practical,VV- Viva	F&S	II	
CO3,CO4,CO6	Enlist paryayas of Ayurveda. Ch Su 30/31	CK	MK	K	L&G D	TT-Theory,PP -Practical,VV- Viva	F&S	II	
CO4,CO5	Explain characteristics of pallavagrahi bhishak or consequences of incomplete knowledge with examples Ch Su 30/72-81.	CK	DK	K	L&G D	TT-Theory,PP -Practical,VV- Viva	F&S	II	
CO3,CO5,CO8	Appreciate importance of Shastra jnana Ch Su 30/84-85	AFT- VAL	DK	KH	L&G D,BS	VV-Viva	F&S	II	
CO1,CO2	Explain importance of sangraha adhyayas	CC	DK	K	BL,S DL	VV-Viva	F&S	II	
CO1,CO2	Recite sutras Ch Su 30/3,410,11,12.	CK	MK	K	SDL, REC	P-REC	F&S	II	
CO1,CO2	Summarize the chapter as per sutras Ch Su 30/86-87	CK	NK	K	SDL	T-OBT,VV- Viva	F&S	II	
Topic 19 Cha.Ni.01-Jwara nidana Adhyaya (Lecture :2 hours, Non lecture: 2 hours)									
CO1	Describe the sthana adhikarana (objectives) of Nidanasthana Ch.Ni.1/15	CK	MK	K	L	P-VIVA,TT- Theory	F	II	

CO1	Justify the position of the chapter in the samhita and its importance	CK	MK	K	L	T-EMI	F	II	
CO2	Explain basic meaning and importance of key terms such as nidanapanchaka and jwara	CK	MK	K	L&G D,BS	QZ ,COM,TT- Theory,VV- Viva	F&S	II	
CO4,CO6,CO 7	Explain nidanapanchaka with suitable examples. Ch.Ni.1/6-13	CK	MK	KH	L&G D,FC	P-VIVA,TT- Theory	F&S	II	
CO4,CO6	Differentiate vyadhibodhaka nidana and vyadhi janaka nidana Ch Ni 1/1 Cakrapani commentary	CAN	DK	KH	L&G D,TB L	VV-Viva	F	II	
CO2,CO4,CO 6	Enlist synonyms of nidana (causative factors) and roga (disease) Ch Ni 1/3,5	CK	MK	KH	L	TT-Theory,V V-Viva	F&S	II	
CO4,CO6	Explain the importance of nidanapanchaka Ch.Ni 1/13	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO6	Explain nidanapanchaka and elaborate nidana (causative factor), purvarupa (premonitory symptoms) lakshana/rupa (symptoms)	CK	MK	KH	L&G D	T- EW	F	II	
CO4,CO6,CO 7	Describe upashaya along with its types in detail Ch Ni 1/10	CC	MK	SH	L&G D,BS	TT-Theory,V V-Viva	F&S	II	
CO4,CO6	Interpret the classification of samprapti (pathogenesis) Ch Ni 1/12	CK	MK	KH	L&PP T,CB L	TT-Theory,V V-Viva	F&S	II	
CO4,CO6	Diffrentiate the samanya and vishesha samprapti of disease	CAP	MK	SH	L_ VC ,DIS	TT-Theory,V V-Viva	F&S	II	
CO3,CO4	Describe the vishesha nidana (specific factors of diseases) prakopa karana (causes of aggravation),samprapti (pathogenesis)	CAP	MK	KH	L&G D	TT-Theory,V V-Viva	F	II	

	and lakshana (symptoms) of jwara (fever)								
CO3,CO6	Outline vataja, pittaja, kaphaja, samsarga and sannipataja jwara Ch Ni 1/19-30	CC	MK	KH	L&G D,CB L	TT-Theory,V V-Viva	F&S	II	
CO3,CO4,CO 6	Describe agantuja jwara nidana (causes factor of exogenous fever) Ch Ni 1/30,31	CK	MK	KH	L	TT-Theory,V V-Viva	F&S	II	
CO2,CO4,CO 5	Differentiate nava and jeerna jwara chikitsa sutra (line of treatment) Ch Ni 1/36	CK	MK	K	L,L& GD	TT-Theory,V V-Viva	F&S	II	
CO1,CO2	Recite sutras Ch Ni/3,5,7-11,38-40	CK	MK	K	SDL, REC	P-REC	F	II	
CO1,CO2	Summarize the chapter as per sutras given at the end of the chapter Ch Ni 1/42-44	CK	NK	K	SDL	T-OBT	F&S	II	
Topic 20 Cha.Ni.02-Raktapitta nidana Adhyaya (Lecture :2 hours, Non lecture: 2 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	II	
CO2	Explain basic meaning and importance of key terms such as pratimargaharana, sadhyasadyata, raktapitta	CK	MK	KH	L&G D,BS	QZ ,COM,TT- Theory,VV- Viva	F&S	II	
CO2,CO4,CO 6	Justify raktapitta paryaya and nirukti Ch Ni 2/5	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO2,CO4,CO 6	Outline raktapitta nidana and samprapti (etiology and pathogenesis of raktapitta)	CC	DK	KH	L&G D	TT-Theory,V V-Viva	F&S	II	
CO3,CO4,CO 6	Define raktapitta and outline raktapitta purvarupa (premonitory features of raktapitta) upadrava (complication of raktapitta) Ch Ni 2/6,7	CC	MK	KH	L&G D	TT-Theory,V V-Viva	F&S	II	

CO4,CO6	Relate concept of trividha gati (adha, urdhwa, tiryag) with samprapti of raktapitta Ch Ni 2/8	CAP	DK	KH	L&G D	T-EMI,TT-Theory,VV-Viva	F&S	II	
CO4,CO5,CO7	Explain concept of pratimargaharana in the context of raktapitta Ch Ni 2/9	CAP	MK	KH	L&G D,LS	TT-Theory,V V-Viva	F&S	II	
CO4,CO6	Illustrate sadhyasadyata of raktapitta Ch Ni 2/9,12-20	CAP	MK	KH	L&G D,PL	TT-Theory,V V-Viva	F&S	II	
CO4,CO6	Outline asadhya lakshana of raktapitta (features of incurable disease) Ch Ni 2/23-26	CC	DK	KH	L&G D	TT-Theory,V V-Viva	F&S	II	
CO1,CO2	Recite sutras Ch Ni/19,27	CK	MK	K	SDL, REC	P-REC	F&S	II	
CO2	Summarize the chapter as per sutra Ch Ni 2/28,29	CK	NK	K	SDL	T-OBT	F&S	II	
Topic 21 Cha.Ni.03-Gulma nidana Adhyaya (Lecture :2 hours, Non lecture: 2 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita	CC	MK	K	L&G D	INT,TT-Theory,VV-Viva	F&S	II	
CO2	Explain basic meaning and importance of key terms such as gulma, panchagulma and raktagulma	CK	MK	K	L&G D,BS	QZ ,COM,TT-Theory,VV-Viva	F&S	II	
CO2,CO4,CO6	Demonstrate the prakruti samasamveta and vikruti vishama samaveta siddhanta in the context of gunma Ch.Ni 3/6	CAP	DK	KH	L&G D,IBL	INT,TT-Theory,VV-Viva	F	II	
CO3,CO6	Mention the importance of gulmasthana in samprapti Ch Ni 3/7	CC	MK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO3,CO6	Outline the features of vataja-pittaja-kaphaja and raktaja gulma along with samprapti lakshana (pathogenesis and clinical features) Ch Ni 3/6-11	CC	DK	KH	L&G D	TT-Theory,V V-Viva	F&S	II	

CO3,CO6	Describe raktaja gulma samprapti, lakshana (pathogenesis and clinical features) Ch Ni 3/13-14	CC	MK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO4,CO6	Outline poorvarupa of gulma Ch Ni 3/15	CC	DK	KH	L&G D	TT-Theory,V V-Viva	F&S	II	
CO4,CO5	Outline treatment principle of gulma Ch Ni 2/16,17	CAP	MK	KH	L&G D	TT-Theory,V V-Viva	F&S	II	
CO1,CO2	Summarise the chapter as per sutra Ch Ni 3/18	CK	NK	K	SDL	T-OBT	F&S	II	
Topic 22 Cha.Ni.04-Prameha nidana adhyaya (Lecture :2 hours, Non lecture: 3 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CC	MK	KH	L&G D	INT,TT-Theor y,VV-Viva	F&S	II	
CO2	Explain basic meaning and importance of key terms such as kleda, vikaravighatakar bhava	CK	MK	KH	L&G D,BS	TT-Theory,V V-Viva	F&S	II	
CO3,CO4,CO 6	Describe the concept of kleda and its role in samprapti of prameha Ch Ni 4/6-8	CC	DK	KH	L&G D,CB L	TT-Theory,V V-Viva	F&S	II	H-RN
CO4,CO6,CO 7	Summarise the sankhyasamprapti of prameha Ch Ni 4/11,25,39	CK	MK	K	L	TT-Theory,V V-Viva	F&S	II	
CO2,CO3,CO 6	Enlist causative factors and samprapi ghatakas in prameha Ch Ni 4/7	CK	MK	K	L&G D,CB L	TT-Theory,V V-Viva	F&S	II	
CO2,CO3,CO 6	Explore the sootra ‘eha khalu nidana-dosha-dooshya vishesahebhya.....’ in the manifestation of diseases Ch Ni 4/4	CAP	MK	KH	L&G D,BS, CBL	TT-Theory,V V-Viva	F&S	II	
CO2,CO3,CO 6	Relate nidana, dosha, dushya and samprapti of vataja, pittaja and kaphaja prameha Ch Ni 4/5,8,24,36,37	CC	MK	KH	L&G D,CB	TT-Theory,V V-Viva	F&S	II	

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CO2,CO3,CO6	Justify the role of samprapti ghatakas in diagnosed cases of prameha	PSY-SET	NK	SH	L&G D,CB L,D_ BED	P-PS,TT-Theory,VV-Viva	F&S	II	H-RN
CO2,CO4,CO5	Outline the chikitsas sutra of prameha Ch Ni 4/49	CC	DK	KH	L&G D,CB L	TT-Theory,V V-Viva	F&S	II	H-RN
CO4,CO6	Explain sadhyasadyata of prameha Ch Ni 4/11,27,38	CC	MK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO4,CO6	Describe purvarupa and upadrava of prameha Ch Ni 4/47,48	CC	MK	K	L_VC ,CBL	TT-Theory,V V-Viva	F&S	II	H-RN
CO3,CO7	Relate predisposing factors of prameha with present day lifestyle	CAP	DK	KH	DIS,F C	VV-Viva	F&S	II	
CO1,CO2	Recite sutras Ch Ni 4/3,4,48,49	CK	MK	K	SDL, REC	P-REC	F&S	II	
CO1,CO2	Summarise the chapter as per sutra Ch Ni 4/53-55	CK	NK	K	SDL	T-OBT	F&S	II	
Topic 23 Cha.Ni.05-Kushta nidana Adhyaya (Lecture :2 hours, Non lecture: 4 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CC	MK	K	L&G D	INT,TT-Theory,VV-Viva	F&S	II	
CO2	Explain basic meaning and importance of key terms such as saptadravya, saptakushta	CK	MK	K	L&G D,BS	QZ ,COM,TT-Theory,VV-Viva	F&S	II	
CO4,CO6,CO7	Enlist and explain saptadravya of kushta Ch Ni 5/3	CC	MK	KH	L&G D,CB	TT-Theory,V V-Viva	F&S	II	

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CO2,CO3,CO 6	Explain the role of 'kleda' in the manifestation of kushta Ch Ni 5/3	CC	DK	KH	L&G D,CB L	TT-Theory,V V-Viva	F&S	II	H-RN
CO2,CO3,CO 6	Outline anekarupa of kushta (multiplicity) based on vedana, varna, samsthana and prabhava Ch Ni 5/4	CC	DK	KH	L_VC ,CBL	TT-Theory,V V-Viva	F&S	II	H-RN
CO2,CO3,CO 6	Enlist saptakushta with their dosha predominance Ch Ni 5/5	CK	MK	K	L&G D,BL	TT-Theory,V V-Viva	F&S	II	
CO2,CO4,CO 6	Outline samanyanidana of kushta Ch Ni 5/6	CC	DK	KH	L&G D,CB L	TT-Theory,V V-Viva	F&S	II	
CO4,CO6	Enlist purvarupa of kushta Ch Ni 5/7	CC	MK	KH	L&G D,CB L	TT-Theory,V V-Viva	F&S	II	H-RN
CO4,CO6	Outline upadrava of kushta Ch Ni 5/11	CC	DK	KH	L&G D,CB L	TT-Theory,V V-Viva	F&S	II	
CO2,CO3,CO 6	Explain sadhyasadhyata of kushta Ch Ni 5/9	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO1,CO2	Recite sutras Ch Ni 5/3,5	CK	MK	K	SDL, REC	P-REC	F&S	II	
CO1,CO2	Summarise the chapter as per sutra Ch Ni 5/16	CK	NK	K	SDL	T-OBT	F&S	II	
Topic 24 Cha.Ni.06-Shosha nidana Adhyaya (Lecture :2 hours, Non lecture: 2 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	II	

CO2	Explain basic meaning and importance of key terms such as chaturvidha ayatana and ekadasarupa	CK	MK	K	L&G D,BS	QZ ,COM,TT- Theory,VV- Viva	F&S	II	
CO2,CO3,CO 6	Explain role of four aetiological factors (chaturvidha-ayatana) in samprapti of shosha. Ch Ni 6/4,6,7(1),8,10	CC	MK	KH	L&PP T,CB L	TT-Theory,V V-Viva	F&S	II	
CO2,CO3,CO 6	Enlist ekadasarupa of shosha Ch Ni 6/14	CK	MK	K	L&G D,ML	TT-Theory,V V-Viva	F&S	II	
CO2,CO3,CO 6	Outline the purvarupa of sosha Ch Ni 6/13	CC	DK	KH	L&G D	TT-Theory,V V-Viva	F&S	II	
CO2,CO3,CO 6	Explain sadhyasadyata of shosha Ch Ni 6/15,16	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO4,CO6,CO 7	Relate concept of dharaneeya adharaneeya vega to the context of shosha nidana	CAP	MK	KH	DIS	CL-PR	F	II	
CO3,CO4,CO 7	Justify the importance of ashtaahara vidhi visesha ayatana in the context of prevention of shosha	CAP	MK	KH	DIS,F C	CL-PR	F	II	
CO1,CO2	Recite sutras Ch Ni 6/3,5,7,9,11,14	CK	MK	K	SDL, REC	P-REC	F&S	II	
CO1,CO2	Summarise the chapter as per sutra Ch 6/17	CK	NK	K	SDL	T-OBT	F&S	II	
Topic 25 Cha.Ni.07-Unmada nidana Adhyaya (Lecture :2 hours, Non lecture: 4 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita and its importance`	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	II	
CO2	Explain basic meaning and importance of key terms such as ashtavibhrama, doshonmada and bhutonmada	CK	MK	K	L&G D,BS	QZ ,COM,TT- Theory,VV- Viva	F&S	II	

CO2,CO3,CO6	Define unmada and enlist ashtavibhrama Ch N 7/5	CK	MK	K	L&G D	QZ ,TT-Theor y,VV-Viva	F&S	II	
CO2,CO3,CO6	Illustrate ashtavibhrama in different types of unmada	CAP	NK	KH	L_VC ,CBL	TT-Theory,V V-Viva	F	II	
CO4,CO6,CO7	Explain sankhyasamprapti of unmada Ch Ni 7/3	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO4,CO6,CO7	Interpret unmada abhimukha karana (predisposing factors for unmada) in the contemporary scenario Ch Ni 7/3-4	CC	DK	KH	L_VC ,CBL	TT-Theory,V V-Viva	F&S	II	
CO2,CO3,CO6	Interpret the role of prajnaparadha as an important etiological factor in the background of unmada Ca.Ni. 7/19-22	CC	DK	KH	L&G D,L_ VC	CR-RED,TT- Theory,VV- Viva	F&S	II	
CO4,CO6,CO7	Summarise different descriptions of concept of prajnaparadha as aetiological factor Ch Su 8, 11, Ch Vi Ch Sa 1, Ch Vi 3	CC	MK	KH	DIS,F C	PRN	F	II	
CO2,CO3,CO6	Outline the purvarupa of unmada Ch Ni 7/6	CC	DK	K	L_VC ,CBL	TT-Theory,V V-Viva	F&S	II	
CO2,CO4,CO5	Explain chikitsasutra of unmada Ch Ni 7/8,9	CC	MK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO2,CO3,CO4,CO6	Differentiate doshonamda and bhutonmada Ch Ni 7/10-11	CC	DK	KH	L&PP T	TT-Theory,V V-Viva	F&S	II	
CO2,CO3,CO6	Summarize causes, features purpose (prayojana) and treatment of agantu unmada Ch Ni 7/12-17	CK	DK	K	L&PP T	TT-Theory,V V-Viva	F&S	II	
CO1,CO2	Recite sutras Ch Ni 7/ 3,5,19-22	CK	MK	K	SDL, REC	P-REC	F&S	II	
CO1,CO2	Summarise the chapter based on Sutra Ch Ni 7/24	CK	NK	K	SDL	T-OBT	F&S	II	

Topic 26 Cha.Ni.08-Apasmara nidana adhyaya (Lecture :2 hours, Non lecture: 4 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	II	
CO2	Explain basic meaning and importance of key terms such as nidanarthakara roga, vyadhisankara, tiryaggata dosha	CK	MK	K	L&G D,BS	QZ ,COM,TT- Theory,VV- Viva	F&S	II	
CO2,CO4,CO 6	Define apasmara Ch Ni 8/5	CK	MK	K	L,L& PPT	TT-Theory,V V-Viva	F&S	II	
CO2,CO4,CO 6	Explain apasmaraabhimukhakarana (predisposing factors of apasmara) Ch Ni 8/4	CK	MK	KH	L&G D,CB L	TT-Theory,V V-Viva	F&S	II	
CO2,CO4,CO 6	Outline visesha-lakshana of apasmara Ch Vi 8/8	CC	DK	KH	L&G D	TT-Theory,V V-Viva	F&S	II	
CO2,CO4,CO 6	Explain cikitsasutra of apasmara Ch Ni 8/10	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO2,CO4,CO 6	Explain nidanarthakara roga Ch Ni 8/16-19	CC	MK	KH	L&G D,L_ VC,C BL	TT-Theory,V V-Viva	F&S	II	
CO2,CO4,CO 6	Explain vyadhisankara Ch Ni 8/21-22	CC	MK	KH	L&PP T,L_ VC,C BL	TT-Theory,V V-Viva	F&S	II	H-RN
CO2,CO4,CO 5	Differentiate sudha and asuddha chikitsa Ch Ni 8/23	CC	MK	KH	L&G D,BS, CBL	TT-Theory,V V-Viva	F&S	II	

CO2,CO4,CO6	Define and relate different types of sadhyasadyata Ch Ni 8/33-35	CC	MK	KH	DIS,P BL,C BL,P ER	TT-Theory,V V-Viva	F&S	II	H-RN
CO2,CO4,CO5	Describe tiryagatadosha - cikitsasutra Ch Ni 8/36-39	CK	MK	K	L&G D	TT-Theory	F&S	II	
CO6,CO8	Document experiences of physicians on nidanarthakara roga (Activity no.9)	PSY- SET	DK	KH	DIS,T PW	C-INT	F	II	
CO4,CO6,CO7	Summarise the information gathered from Nidanasthana through Quiz (activity no.10)	CAP	DK	KH	FC,D	QZ	F	II	
CO1,CO2	Recite sutras Ch Ni 8/3, 5, 16-22, 33-35,36-39	CK	MK	K	SDL, REC	P-REC	F&S	II	
CO1,CO2	Summarise the chapter based on sutra 42-44	CK	NK	K	SDL	T-OBT	F&S	II	
Topic 27 Cha.Vi.01- Rasa vimana Adhyayam (Lecture :2 hours, Non lecture: 3 hours)									
CO1,CO2	Explain sthana adhikarana of (objectives) of Vimanasthana Ch Vi 1/3	CK	MK	K	L&G D,LS	CR-W,TT-The ory,VV-Viva	F&S	III	
CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	III	
CO2,CO4	Explain basic meaning and importance of key terms such as prakritisama samaveta, vikirti vishama samaveta, ahara vidhi visesha ayatana, satmya	CK	MK	K	DIS,P rBL	TT-Theory,V V-Viva	F&S	III	
CO2,CO4	Explain the prakrutisamasamavet and vikrutivishamasamavet siddhanta with suitable examples. Ch Vi 1/9,10	CK	MK	KH	L&G D	TT-Theory,V V-Viva	F&S	III	H-DG
CO2,CO4,CO5	Explain chaturvidha prabhava(rasa-dravya-dosh-vikara prabhava) with examples Ch Vi 1/12	CK	MK	KH	L&G D	TT-Theory,V V-Viva	F&S	III	H-DG

CO2,CO4	Describe the dravyaprabhava in taila,ghrita and madhu with the help of 'samanya vishesha siddhanta' Ch Vi 1/14	CC	MK	KH	L&G D,BL	DEB,TT-Theo ry,VV-Viva	F&S	III	
CO2,CO5,CO 7	Explain the dravyas which should be avoided for regular consumption Ch Vi 1/15-19	CC	MK	KH	L&G D,RL E	M-CHT,TT-T heory,VV- Viva	F&S	III	
CO2,CO4,CO 7	Explain satmya and its types Ch Vi 1/20	CC	MK	KH	L&G D,BS	TT-Theory,V V-Viva	F&S	III	
CO2,CO7	Summarize ashta aharavidhivisheshayatana and its role in preservation of health. Ch Vi 1/20-23	CK	MK	K	L&G D,PS M	DEB,TT-Theo ry,VV-Viva	F&S	III	H-SW
CO2,CO4,CO 7	Relate concept of satmya with satmyapareeksha Ch.Vi 8	CC	MK	KH	DIS	CL-PR	F	III	
CO2,CO7	Explain aharavidhi vidhana and bhojya sadgunya Ch Vi 1/24,25	CC	MK	KH	L&G D	TT-Theory,V V-Viva	F&S	III	H-SW
CO3,CO7	Appreciate the importance of popularizing importance of dietary rules (see activity list)	CAP	DK	KH	PrBL	Log book	F	III	
CO4,CO5	Differentiate and apply samanagunadravya and samanagunabhuyishtadravya Ca Vi 1/7	CAP	NK	KH	DIS	CL-PR	F	III	
CO1,CO2	Recite sutras Ch Vi 1/9,10,20,24	CK	MK	K	SDL, REC	P-VIVA,TT- Theory	F&S	III	
CO1,CO2	Summarize the chapter based on sutra Ch Vi 1/27,28	CK	NK	K	SDL	T-OBT,VV- Viva	F&S	III	
Topic 28 Cha.Vi.02-Trividha kuksheeya Adhyayam (Lecture :2 hours, Non lecture: 0 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CC	MK	KH	L&G D	INT,TT-Theor y,VV-Viva	F&S	III	

CO2	Explain basic meaning of key terms such as trividha kukshi, matra-amatra ahara, amadosha, amavisha	CK	MK	K	L&G D,BS	QZ ,COM,TT- Theory,VV- Viva	F&S	III	
CO2,CO4,CO 7	Explain aharamatra based on trividha kukshi Ch Vi 2/3	CC	MK	KH	L&G D,IBL	C-INT,TT-The ory,VV-Viva	F&S	III	
CO2,CO7	Explain the matrvat ahara (ideal quantity of food) and amatravatwa of ahara with its types Ch Vi 2/6	CC	MK	KH	L&G D	TT-Theory,V V-Viva	F&S	III	
CO4,CO7	Justify effects of heenamatra and atimatra ahara Ch Vi 2/7	CAP	MK	KH	L&G D,PB L,FC	TT-Theory,V V-Viva	F&S	III	
CO2,CO7	Enlist and explain the mental factors affecting digestion of food Ch Vi 2/8	CC	MK	KH	L_VC ,EDU	TT-Theory,V V-Viva	F&S	III	
CO4,CO5	Outline hetu, linga and aushadha of two types of amadosha Ch Vi 2/10-13	CC	MK	KH	L&PP T,CB L,PE R	TT-Theory,V V-Viva	F&S	III	
CO2,CO7	Explain the concept of amavisha Ch Vi 2/12	CC	MK	KH	L&G D,CB L	TT-Theory,V V-Viva	F&S	III	
CO2,CO3,CO 4	Define amasaya with reference to its position Ch Vi 2/17	CK	MK	K	L&G D,D- M	TT-Theory,V V-Viva	F&S	III	
CO1,CO2	Recite sutras Ch Vi 2/9	CK	MK	K	SDL, REC	P-REC,TT- Theory	F&S	III	
CO2	Summarize the chapter based on sutra Ch Vi 2/19	CK	NK	K	SDL	T-OBT,VV- Viva	F&S	III	

Topic 29 Cha.Vi.03-Janapadodhwansaneeya Vimanam Adhyaya (Lecture :2 hours, Non lecture: 2 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	III	
CO2	Explain basic meaning and importance of key terms like janapadodhwamsa, daiva and purushakara	CK	MK	K	L&G D,BS	QZ ,COM,TT- Theory,VV- Viva	F&S	III	
CO2,CO5	Justify the importance of timely collection of medicines Ch Vi 3/4	CAP	DK	K	L&G D,BS	TT-Theory,V V-Viva	F&S	III	
CO2,CO7	Enlist the commomn causes of janapadodhwamsa Ch Vi 3/6	CC	MK	KH	L&G D,BS, FC	TT-Theory,V V-Viva	F&S	III	
CO2,CO7	Describe the lakshanas of dushti of vayu, jala, desha and kala. Ch Vi 3/7	CC	MK	KH	L_VC ,PBL, RP	TT-Theory,V V-Viva	F&S	III	
CO4,CO7	Interpret janapadodhwamsa in contemporary epidemiology (see also activity list)	CAP	NK	KH	DIS,B S,PBL ,FV	Log book,VV- Viva	F&S	III	
CO2,CO5	Summarize the treatment principles of janapadodhwamsakara vikaras Ch Vi 3/12-18	CK	MK	KH	L&G D	TT-Theory,V V-Viva	F&S	III	
CO2,CO7	Explain the role of adharma in janapadodhwamsa Ch Vi 3/20	CC	MK	KH	DIS,B S	DEB,TT- Theory	F&S	III	
CO2,CO7	Outline the concept of Niyat and Aniyat Ayu. Ch Vi 3/28-35	CC	DK	KH	L&G D,PB L	DEB,TT-Theo ry,VV-Viva	F&S	III	
CO3,CO4,CO	Relate concept of daiva and purushakara with references Ca Sha	CC	MK	KH	DIS,F	CL-PR	F	III	

7	2/44. Ca Sh 6/27.				C				
CO2,CO4,CO7	Differentiate daiva and purushakara Ch Vi 3/29-30	CC	MK	K	L&G D,BS	CR-W,TT-Theory, VV-Viva	F&S	III	
CO4,CO5	Explain hetuviparit chikitsa in jwara Ch Vi 3/39-40	CC	MK	KH	L&G D,CB L	INT,TT-Theory, VV-Viva	F&S	III	
CO4,CO5	Explain apatarpana and its types. Ch Vi 42-44	CC	MK	KH	L&G D,CB L	TT-Theory,V V-Viva	F&S	III	
CO2,CO7	Explain concept of desha Ch Vi 3/47-48	CC	MK	K	L_VC ,DIS, FV	PA,TT-Theory ,VV-Viva	F&S	III	
CO2,CO4,CO7	Summarise the term karma with reference to different contexts	CC	MK	KH	DIS,F C	PRN	F	III	
CO1,CO2	Recite sutras Ch Vi 3/6,10	CK	MK	K	SDL, REC	P-REC,TT-Theory	F&S	III	
CO1,CO2	Summarize the chapter based on sutra Ch Vi 3/49-52	CK	NK	K	SDL	T-OBT,VV-Viva	F&S	III	
Topic 30 Cha.Vi.04-Trividha roga vishesha vijnyaneeya adhyaya (Lecture :2 hours, Non lecture: 3 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CC	MK	KH	L&G D	INT,TT-Theory, VV-Viva	F&S	III	
CO2	Explain basic meaning and importance of key terms such as trividha roga visesha vijnana	CK	MK	K	L&G D	QZ ,COM,TT-Theory, VV-Viva	F&S	III	
CO2,CO6	Explain the application of aptopadesha, pratyaksha and anumana	CC	MK	KH	L,CB	P-PS,TT-Theo	F&S	III	H-RN

	in clinical examination. Ch Vi 4/3-8				L	ry,VV-Viva			
CO2	Recite sutra Ch Vi 4/4,12	CK	MK	K	SDL, REC	P-VIVA,P-REC	F&S	III	
CO1,CO2	Summarise the chapter as per sutra no. Ch Vi. 4/13-14	CK	NK	K	SDL	T-OBT,VV-Viva	F&S	III	
Topic 31 Cha.Vi. 05- Sroto vimana Adhyaya (Lecture :2 hours, Non lecture: 2 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CC	MK	KH	L&G D	INT,TT-Theor y,VV-Viva	F&S	III	
CO2	Explain basic meaning and importance of key terms such as srotas, srotodushti	CK	MK	K	L	TT-Theory,V V-Viva	F&S	III	
CO1,CO2	Explain importance of srotas Ch Vi 5/3-4	CK	MK	K	L&G D,BS	QZ ,COM,TT-Theory,VV-Viva	F&S	III	
CO2	Enlist the types of srotas Ch Vi 5/7	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	III	
CO2,CO3	Explain types and general causative factors of srotodushti Ch Vi 5/23,24	CK	MK	K	L&G D	T-OBT,TT-Th eory,VV-Viva	F&S	III	H-RN
CO4,CO5	Explain hetu, lakshan and chikitsa of specific srotodushti Ch Vi 5/8, 10-22, 26-28	CK	MK	K	L&G D,CB L	TT-Theory,V V-Viva	F&S	III	H-RN
CO1,CO2	Recite sutras Ch Vi 5/3,4,7,9-27	CK	MK	K	SDL, REC	P-REC,TT-Theory	F&S	III	
CO1,CO2	Summarize the chapter based on Ch Vi5/28-30	CK	NK	K	SDL	T-OBT,VV-Viva	F&S	III	

Topic 32 Cha.Vi. 06-Roganika vimana adhyaya (Lecture :2 hours, Non lecture: 2 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	III	
CO2	Explain basic meaning and importance of key terms such as rogameeka, anubandhya, anubandhy	CK	MK	K	L	TT-Theory,V V-Viva	F&S	III	
CO1,CO3	Enlist the types of diseases based on prabhav, bala, adhishtana, nimmitta, ashay. Ch Vi 6/3	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	III	H-RN
CO2	Explain the rationale behind classification of diseases. Ch Vi 6/4	CC	MK	KH	L&G D,BS	INT,TT-Theor y,VV-Viva	F&S	III	
CO2,CO3	Enlist the diseases caused by shareera and manas doshas.Explain the relation between shareera and manasa doshas. Ch Vi 6/6-9	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	III	
CO2,CO3	Explain anubandhya and anubandha doshas Ch.Vi6/11	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	III	
CO2,CO3,CO 7	Explain four types of agni. Ch Vi 6/12	CK	MK	K	L&G D,PL	TT-Theory,V V-Viva	F&S	III	
CO2,CO7	Enlist types of shareera prakruti Ch Vi 6/13	CK	MK	K	L&G D	P-ID,TT-Theo ry,VV-Viva	F&S	III	
CO2,CO7	Summarize the treatment principles of Prakrutika doshas (Vatala ,Pittal,Shlemal Prakrutis) Ch Vi 6/14-18	CC	MK	KH	L&G D	INT,TT-Theor y,VV-Viva	F&S	III	
CO2	Enlist qualities of Rajavaidya Ch Vi 6/19	CK	MK	K	L,RP	P-RP,VV- Viva	F&S	III	
CO1	Summarize the chapter based on sutras Ch Vi 6/42-44	CK	NK	K	SDL	T-OBT,VV- Viva	F&S	III	
Topic 33 Cha.Vi. 07- Vyadhita rupeeya vimana Adhyaya (Lecture :2 hours, Non lecture: 2 hours)									

CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CC	MK	KH	L&G D	INT,TT-Theor y,VV-Viva	F&S	III	
CO2	Explain basic meaning and importance of key terms such as dvividah vyadhita prurusha	CK	MK	K	L	TT-Theory,V V-Viva	F&S	III	
CO2,CO3	Explain two types of vyadhit purusha (guru vyadhita and laghu vyadhita) Ch Vi 7/3,4	CC	MK	KH	L,RP	TT-Theory,V V-Viva	F&S	III	H-RN
CO2,CO8	Explain two types of vaidya (jnani and ajnani) Ch Vi 7/4	CC	MK	KH	L&G D	TT-Theory,V V-Viva	F&S	III	
CO2,CO3,CO 4,CO5	Enlist the types of krimis (see activity list also) Ch Vi 7/9	CC	MK	KH	L&G D,FC, EDU	QZ ,PUZ,TT- Theory,VV- Viva	F&S	III	H-RN
CO4,CO5	Explain the trividha chikitsa Ch Vi 7/14	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	III	
CO2	Recite sutra Ch Vi 7/28	CK	MK	K	REC	VV-Viva	F&S	III	
CO1,CO2	Summarize the chapter with the help of Slokas 31 and 32	CK	NK	K	SDL	T-OBT,VV- Viva	F&S	III	
Topic 34 Cha.Vi. 08-Rogabhishagjiteeyam Adhyaayam. (Lecture :5 hours, Non lecture: 11 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	III	
CO1,CO2,CO 4	Explain the basic meaning and importance of sastrapareeksha, trividha upaya, tadvidyasambhasha, karya abhiivritti ghataka, dasavidha pareekshyabhava, dasavidha atura pareeksha	CC	MK	K	L	TT-Theory,V V-Viva	F&S	III	
CO1,CO2	Explain shashtapareeksha. Ch Vi 8/3	CC	MK	K	L&G D,BL	DEB,TT-Theo ry,VV-Viva	F&S	III	

CO2	Enlist the three means of knowledge (trividha upaya). Ch Vi 8/6	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	III	
CO2	Explain the adhyayan and adhyapana vidhi. (also see activity list) Ch Vi 8/7,8	CK	MK	K	L,W	SA,VV-Viva	F&S	III	
CO1,CO2	Outline sambhashavidhi C Vi 8/16-18	CK	DK	KH	L&G D,ED U	DEB,TT-Theo ry,VV-Viva	F&S	III	
CO1	Describe three types of parishat Ch Vi 8/19,20	CK	DK	K	L,RP, SDL	P-RP,VV- Viva	F&S	III	
CO1,CO2	Enlist vadamarga padani Ch Vi 8/27	CK	DK	K	L,FC	TT-Theory,V V-Viva	F&S	III	
CO1,CO2	Explain dashavidha pareekshya bhavas. Ch Vi 8/68-77, 84	CK	MK	K	L&G D,BL	QZ ,TT-Theor y,VV-Viva	F&S	III	
CO3,CO4,CO 6,CO7	Explain dhatusamya pareeksha Ch Vi 8/89	CC	MK	KH	L,DIS	CHK,TT-Theo ry,VV-Viva	F&S	III	
CO1,CO2,CO 6	Explain dashavidha aturapareeksha. Ch Vi 8/94 -123	CC	MK	KH	L&G D,CB L	PUZ,TT-Theo ry,VV-Viva	F&S	III	H-RN
CO1,CO2	Recite the sutras Ch Vi. 8/ 3,6 68-78.	CK	MK	K	SDL, REC	P-REC,TT- Theory	F&S	III	
CO1,CO2	Summarize the chapter with the help of shlokas 52-56	CC	NK	K	SDL	T-OBT,VV- Viva	F&S	III	
Topic 35 Cha.Sha.01-Katithapurushheeya Adhyaya (Lecture :2 hours, Non lecture: 3 hours)									
CO1,CO2	Describe the sthana adhikarana (objectives) of sharirasthana Cha.Sha 8/69	CC	MK	K	L&G D	TT-Theory,V V-Viva	F&S	II	

CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CK	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	II	
CO2	Explain basic meaning and importance of key terms purusha, mana, atma, yoga and moksha	CK	MK	K	L&G D,BS	QZ ,COM,TT- Theory,VV- Viva	F&S	II	
CO2,CO4	Define ekadhatupurusha, shaddhatvatmak purush, chaturvimashataika purusha and rashi purusha, Ca Sh 1/16, 17, 35	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO2,CO3,CO 4	Explain lakshana, guna, vishaya and karma of manas and its role in jnanotpatti krama Ca Sha 1/ 18-24	CC	MK	K	L&G D,FC	TT-Theory,V V-Viva	F&S	II	
CO2,CO4	Enlist ashtaprakruti and shodasha vikara. Ca Sha 1/63-64	CC	MK	KH	L&G D	TT-Theory,V V-Viva	F&S	II	
CO2,CO4	Explain srusthiutpatti krama and pralaya Ca Sha 1/ 66-69	CC	MK	KH	L&G D	TT-Theory,V V-Viva	F&S	II	
CO2,CO4,CO 7	Identify atmalinga as basic features of living organism Ca Sha 1/70-74	CC	MK	K	DIS,F C	TT-Theory,V V-Viva	F&S	II	
CO2,CO5	Explain naishtiki chikitsa Ca Sha 1/86-94	CC	MK	KH	L&G D	TT-Theory,V V-Viva	F&S	II	
CO2,CO7	Explain dukhahetavah (causes of misery) Ca Sha 1/98	CC	MK	KH	L&G D	TT-Theory,V V-Viva	F&S	II	
CO2,CO3,CO 4,CO7	Outline asatmyendriyarthasamyoga as a cause of diseases Ca Sha 1/118-128.	CC	MK	KH	L&G D,FC	DEB,TT-Theo ry,VV-Viva	F&S	II	
CO2,CO4,CO	Define and explain prajnaaparadha, with terms dhivibhramsha,	CC	MK	KH	L&G	TT-Theory,V	F&S	II	

7	dhruti vibhramsha, smriti vibhramsha.Ca Sha 1/99-102.				D	V-Viva			
CO2,CO4,CO7	Describe vedana, vedana adhishtana and vedana nivrutti Ca Sha 1/134-137.	CC	MK	KH	L&G D	TT-Theory,V V-Viva	F&S	II	
CO2,CO4,CO7	Define state of Yoga Ca Sha 1/138-141	CK	MK	KH	L&G D	TT-Theory,V V-Viva	F&S	II	
CO2,CO4,CO7	Outline mokshaprapti upaya. Ca Sha 1/142-146	CC	DK	KH	L&G D,BS	P-VIVA,TT- Theory	F&S	II	
CO1,CO4,CO7	Explain lakshana of Prashaanta Bhutaatma. Ca Sha 1/155-156	CK	DK	K	L&G D	VV-Viva	F&S	II	
CO2,CO3,CO4,CO7	Enlist and explain smriti hetu Ch Sha 1/148-149	CC	MK	KH	L&PP T	TT-Theory,V V-Viva	F&S	II	
CO3,CO7	Relate smritihetus with process of learning	CAP	NK	KH	L_VC ,BS	VV-Viva	F	II	
CO3,CO8	Illustrate smritihetus through game (activity no.11)	PSY- SET	DK	SH	EDU, SDL, PSM, GBL	O-GAME	F	II	
CO1,CO2	Recite sutras Cha.Sha.16 -23, 28-30,36, 63, 64,70-74, 98,102,109,137-139, 148,149	CK	MK	K	SDL, REC	P-REC,TT- Theory	F&S	II	
CO2	Summarize the chapter based on sutra Ca. Sha 1/ 156	CK	NK	K	SDL	T-OBT,VV- Viva	F&S	II	
Topic 36 Cha.Sha.02-Atulyagothreeyam Adhyaaya (Lecture :1 hours, Non lecture: 0 hours)									
CO1,CO2	Justify the position of the chapter in the Shareerasthana and its importance	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	II	

CO2	Explain basic meaning and importance of key terms in the chapter atulya-gotra, beeja, dwireta, kliba, prajnaparadha, pratikarma, daiva	CK	DK	K	L&G D,BS	QZ ,COM,TT-Theory,VV-Viva	F&S	II	
CO3,CO7	Enlist prerequisites for conception Ch Sha 2/4	CK	MK	K	L&G D	QZ ,TT-Theor y,VV-Viva	F&S	II	
CO3,CO7	Summarize the factors affecting conception, fetus Cha Sha 2/6-12	CK	DK	K	L&G D	QZ ,TT-Theor y,VV-Viva	F&S	II	
CO2,CO7	Enlist shodasa dhatu (16 factors) in the formation of fetus Ch Sha 2/32,33	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO3,CO7	Outline features of multiple pregnancies, dwireta (hermaphroditism) and other types of sexual abnormalities Ca sh 2/12-14, 18-21	CK	DK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO3,CO7	Explain lakshanas of sadyogruhit garbhini lakshana. Ca Sha 2/23-27	CK	DK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO3,CO7	Explain ativahika purusha (factors carrying from previous birth to next birth). Ca Sha 2/31-32	CK	MK	K	L&G D,IBL	CR-W,TT-The ory,VV-Viva	F&S	II	
CO3,CO7	Differentiate daivakara and purushaakara Ca Sha 2/44.	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO3,CO7,CO 8	Explain niroga lakshana. Ca sha 1/46-47	CK	DK	K	L&G D,CB L	CHK,TT-Theo ry,VV-Viva	F	II	
CO1,CO2	Recite sutras Cha.Sha.2/26, 27, 35,44,45-47	CK	MK	K	SDL, REC	P-REC,TT-Theory	F&S	II	
CO1,CO2	Summarize thechapter based on Ca Sha 2/48	CK	NK	K	SDL	T-OBT,VV-Viva	F&S	II	

Topic 37 Cha.Sha.03-Khuddika garbhavakranti Adhyaya (Lecture :1 hours, Non lecture: 0 hours)									
CO1,CO2	Justify the position of the chapter in the Shareerasthana and its importance	CK	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	II	
CO2	Explain basic meaning and importance of key terms such as matrija, pitrija, sattvaja, satmyaja, rasaja, atmaja bhavas, beeja and beejabhaga	CK	MK	K	L&G D,BS	QZ ,COM,TT- Theory,VV- Viva	F&S	II	
CO3,CO7	Enlist factors responsible for the formation, growth of the embryo Cha Sha 3/3	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO1,CO3,CO 7	Outline the sambhasha parishat on garbha utpatti (formation of embryo) and factors contributed from different agents like satva, satmya etc. Ch Sha 3/4	CK	DK	K	L&G D	PRN,DEB	F&S	II	
CO3,CO7	Explain matruja, pitruja, atmaja, satmyaja, rasaja, satvaja bhavas of garbha Ch Sha 3/6-14	CK	DK	KH	L&G D	TT-Theory,V V-Viva	F&S	II	
CO2,CO3,CO 7	Explain role of beeja-beejabhaga dushti in congenital abnormalities Ch Sha 3/17	CAP	MK	KH	L&G D	TT-Theory,V V-Viva	F&S	II	
CO2	Recite sutras no Ch Sha 3/17	CK	MK	K	SDL, REC	P-REC,TT- Theory	F&S	II	
CO1	Summarize the chapter based on sutra Ch Sha 3/26-27.	CK	NK	K	SDL	T-OBT,VV- Viva	F&S	II	
Topic 38 Cha.Sha.04-Mahatee garbhavakranti Adhyaya (Lecture :1 hours, Non lecture: 2 hours)									
CO1,CO2	Justify the position of the chapter in the Shareerasthana and its importance	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	II	
CO2	Explain basic meaning and importance of key terms such as garbhopaghatakar bhava, manas prakriti.	CK	MK	K	L&G D,BS	QZ ,COM,TT- Theory,VV- Viva	F&S	II	

CO3,CO7	Define garbha Ch. Sha 4/5	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO3,CO7	Enlist components of shad dhatvaatmak purush Ca Sh 4/6	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO3,CO7	Explain functions of atma in the formation of garbha. Ch sha 4/8	CK	MK	KH	L&G D	TT-Theory,V V-Viva	F&S	II	
CO3,CO7	Outline maasanumasik garbha poshana Ch Sha 4/9-11,20-24	CK	DK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO3,CO7	Explain garbhopaghatakara bhavas. Ch Sh 4/18	CC	MK	KH	L&G D	TT-Theory,V V-Viva	F&S	II	
CO3,CO7	Summarize the causes of congenital abnormalities Ch Sha 4/30-32	CK	MK	K	L&G D	P-POS,TT- Theory	F&S	II	
CO3,CO7	Explain qualities of satva-raja-tama. Cha Sh 4/36	CK	MK	KH	L&G D	QZ ,TT-Theor y,VV-Viva	F&S	II	
CO3,CO7	Outline features of shodash manasa prakritis (sixteen types of mental constitution). Ch Sha 4/36-40	CK	DK	KH	L&G D,L_ VC,C BL	PM,TT-Theor y,VV-Viva	F&S	II	
CO3,CO6	Identify some important features of manasaprakriti in individuals (also see activity list)	PSY- SET	NK	SH	CBL, RP,D	P-RP,VV- Viva	F	II	
CO1,CO2	Recite sutras Ch Sha 4/6,36	CK	MK	K	SDL, REC	P-REC,TT- Theory	F&S	II	
CO1,CO2	Summarize the chapter as per sutras given at the end of the chapter Ca Sha 4/42-45.	CK	NK	K	SDL	T-OBT,VV- Viva	F&S	II	

Topic 39 Cha.Sha.05-Purushavichaya Shareera Adhyaya (Lecture :1 hours, Non lecture: 4 hours)

CO1,CO2	Justify the position of the chapter in the Samhita	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	II	
CO2	Explain the basic meaning and importance of key terms in the chapter such as lokapurushasamyata, hetwadi panchaka and satya buddhi	CK	MK	K	L&G D,BS	QZ ,COM,TT- Theory,VV- Viva	F&S	II	
CO2,CO4,CO 7	Define loka purusha samya siddhanta Ch Sh. 4/13; 5/3	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO2,CO4	Illustrate loka -purusha samya siddhanta with examples Ch Sha 5/5	CAP	DK	KH	DIS,B S,PER	TT-Theory,V V-Viva	F&S	II	
CO2,CO7	Define and describe satyabuddhi Ch Sh.5/7,16-19	CC	MK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO2,CO4	Enlist and describe hetvadi panchaka Ch Sh.5/8	CK	DK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO4,CO7	Illustrate pravritti-nivritti upaya (see activity list)	CAP	DK	KH	D	P-PS,TT-Theo ry,VV-Viva	F	II	
CO1,CO2	Recite sutras Ch Sha 5/ 3, 5, 8,16	CK	MK	K	SDL, REC	P-REC,TT- Theory	F&S	II	
CO1,CO2	Summarize the chapter as per sutra Ch Sh 5/25,26	CK	NK	K	SDL	T-OBT,VV- Viva	F&S	II	

Topic 40 Cha.Sha.06-Sareeravichaya adhyaya (Lecture :1 hours, Non lecture: 2 hours)

CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	II	
CO2	Explain the basic meaning and importance of key terms in the	CK	MK	K	L&G	QZ ,COM,TT-	F&S	II	

	chapter such as vriddhikara bhava, kala kaala mrityu and param ayu				D,BS	Theory,VV-Viva			
CO2	Define shareera Ch. Sh.6/4	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO2,CO4	Apply samanya visesha siddhanta in shareera Ch.Sh.6/11	CAP	MK	KH	L&G D	TT-Theory,V V-Viva	F&S	II	
CO2	Describe shareera vruddhikara bhava Ch.Sh.6/12	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO2	Describe bala vruddhikara bhava Ch.Sh.6/13	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO2	Explain ahara parinamakara bhava Ch.Sh.6/14,15	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO2,CO7	Classify shareera-gunas into malarupa and prasadarupa Ch.Sh..6/16,17	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO2	Explain the concept of kala and Akala Mrithyu Ch.Sh 6/28	CK	DK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO2,CO7	Define parama ayu karanam Ch.Sh 6/30	CK	DK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO7	Analyse data related to akala-mrityu (see activity list)	CAP	DK	KH	DIS,I BL,E DU	M-CHT	F	II	
CO1,CO2	Recite the sutra Ch Sha 6/4, 5-11, 12,13, 17, 28, 30	CK	MK	K	SDL, REC	P-REC,TT- Theory	F&S	II	
CO1,CO2	Summarize the chapter as per sutra Ch Sh 6/31-34	CK	NK	K	SDL	T-OBT,VV- Viva	F&S	II	

Topic 41 Cha.Sha.07- Sareerasankhya sareera Adhyaya (Lecture :1 hours, Non lecture: 2 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	II	
CO2	Explain the basic meaning and importance of key terms in the chapter such as chetanaadishtana, pranayathana, koshtanga, pratyanga, anjali pramana etc.	CK	MK	K	L&G D,BS	QZ ,COM,TT- Theory,VV- Viva	F&S	II	
CO2,CO3,CO 7	Explain paramanu bheda shariram Ch Sha 7/17	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO1,CO2	Recite sutra Ch Sha 7/17	CK	MK	K	SDL, REC	P-REC,TT- Theory	F&S	II	
CO1,CO2	Summarize the chapter as per sutra Ch Sha 7/19, 20	CK	NK	K	SDL	T-OBT	F&S	II	
Topic 42 Cha.Sha.08-Jathisutreeya Adhyaya (Lecture :1 hours, Non lecture: 12 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	II	
CO2	Explain basic meaning and importance of key terms in the chapter such as jathi, pumsavana, sutikagara etc	CK	MK	K	L&G D,BS	QZ ,COM,TT- Theory,VV- Viva	F&S	II	
CO2	Enlist garbha upaghatakarabhava Ch.Su 8/21	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	II	
CO2	Describe the infrastructure of a sutikagaram Ch. Su 8/33	CK	NK	K	PrBL, SDL	M-MOD,TT- Theory	F&S	II	V-BL
CO3,CO8	Demonstrate garbhopghatakarabhava through skit (see activity list)	PSY- SET	DK	KH	ML,R P	QZ ,CHK,VV- Viva	F	II	
CO1,CO2	Summarize the chapter as per the sutra Ch Sha 8/68,69	CK	NK	K	SDL	T-OBT,VV-	F&S	II	

						Viva			
Topic 43 Cha.In.1-Varnasvariya Indriya Adhyaya (Lecture :1 hours, Non lecture: 1 hours)									
CO1,CO2	Describe sthana adhikarana (objectives) of Indriyasthana	CK	MK	KH	L&G D	INT,TT-Theor y,VV-Viva	F&S	III	
CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CC	MK	KH	L&G D	INT,TT-Theor y,VV-Viva	F&S	III	
CO2	Explain basic meaning and importance of key terms such as arishta, vikritibheda, varna, swara etc. related to rishta	CK	MK	K	L&G D,BS	QZ ,COM,TT- Theory,VV- Viva	F&S	III	
CO2,CO6	Enlist factors for assessing rishta Ref: Ch. In 1/3	CK	MK	K	L&G D,BL	TT-Theory,V V-Viva	F&S	III	
CO2,CO6	Enlist six types of prakruti bheda. Ch In 1/5	CK	MK	K	L&G D,ED U	TT-Theory,V V-Viva	F&S	III	
CO2,CO6	Enlist vikritibheda (types of vikriti) in the context of rishta Ch In 1/6,7, 17-23	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	III	
CO2,CO6	Explain prakruta and vaikarika varna Ch In 1/8,9	CK	MK	K	L&G D,ML	TT-Theory,V V-Viva	F&S	III	
CO2,CO6	Summarize varnavishayak arishta (rishta related to varna) Ch In 1/9-13	CC	MK	KH	L&G D	TT-Theory,V V-Viva	F&S	III	
CO2,CO6	Explain prakruta and vaikarika swara (normal and abnormal voices) Ch In 1/14	CK	MK	K	L&G D,ED U	QZ ,TT-Theor y,VV-Viva	F&S	III	
CO2,CO6	Summarize swara vishayak arishta (arishta related to voice) Ch In 1/15,24,25	CC	DK	KH	L&G D	TT-Theory,V V-Viva	F&S	III	

CO1,CO2	Summarize the chapter Ch In 1/26	CC	NK	KH	SDL	T-OBT,VV-Viva	F&S	III	
Topic 44 Cha.In.2-Pushpitakam Indriya Adhyaya (Lecture :1 hours, Non lecture: 0 hours)									
CO1,CO2	Justify the position of the chapter in the sequence	CK	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	III	
CO2	Explain basic meaning and importance of key terms such as niyatarishta, aniyatarishta	CK	MK	K	L&G D,BS	QZ ,COM,TT-Theory,VV-Viva	F&S	III	
CO6	Outline gandhavishayak arishta (prognostic signs identified through smell) Ch In 2/7-16	CK	DK	K	L&G D	TT-Theory,V V-Viva	F&S	III	
CO2,CO3,CO 6	Summarize rasavishayak arishta (prognostic signs related to taste) Ch In 2/17-22	CK	DK	K	L&G D	TT-Theory,V V-Viva	F&S	III	
CO1,CO2	Summarise the chapter Ch In 3/23	CK	NK	K	SDL	T-OBT,VV-Viva	F&S	III	
Topic 45 Cha.In.3-Parimarshaneeyam Indriyam Adhyaya (Lecture :1 hours, Non lecture: 0 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	III	
CO2,CO6	Enlist Sparshagamy bhava (palpable signs) in arishta Ch In 3/4	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	III	
CO2,CO6	Explain Sparshavishayak Arishta lakshna (based on palpation)) Ch In 3/5,6	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	III	
CO1,CO2	Summarise the chapter as per the sutras given at the end of the chapter Ch In 3/7	CK	NK	K	SDL	T-OBT,VV-Viva	F&S	III	
Topic 46 Cha.In.4-Indriyaneekam Indriya adhyaya (Lecture :1 hours, Non lecture: 0 hours)									

CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CK	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F	III	
CO2,CO6	Explain indriya vishayaka arishta samanya niyama (general rule regarding involvement of indriya) Ch In 4/3-6	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	III	
CO1,CO2	Summarise the chapter as per the sutras given at the end of the chapter Ch In 4/27	CK	NK	K	SDL	T-OBT,VV- Viva	F&S	III	
Topic 47 Cha.In.5-Purvarupeeyam Indriyam Adhyaya (Lecture :1 hours, Non lecture: 2 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita and its importance	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	III	
CO2,CO6	Enlist jvara rupa vishayaka poorvaroopiya rishta (rishta based on purvarupa of jvara) Ch In 5/3-5	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	III	
CO2,CO3,CO 4	Define swapna Ch In 5/41-42	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	III	
CO2,CO6	Enlist and explain swapna bheda (types of swapna) Ch In 5/43	CC	MK	KH	L&G D	TT-Theory,V V-Viva	F&S	III	
CO1,CO2	Recite sutra Ch In 5/41-43	CK	MK	K	SDL, REC	P-REC,TT- Theory	F&S	III	
CO1,CO2	Summarise the chapter as per sutra Ch In 5/47	CK	NK	K	SDL	T-OBT,VV- Viva	F&S	III	
Topic 48 Cha.In.6-Katamanisharireeyam Indriyam Adhyaya (Lecture :1 hours, Non lecture: 0 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita and explain basic meaning and importance of key terms in the chapter	CK	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	III	
CO2,CO3,CO 6	Outline arishta related to pureesha, mutra and swayathu Ch In 6/11-19	CC	DK	K	L&G D	TT-Theory,V V-Viva	F&S	III	

CO1,CO2	Summarise the chapter as per sutras given at the end of the chapter Ch In 6/25	CK	NK	K	SDL	T-OBT,VV-Viva	F&S	III	
Topic 49 Cha.In.7-Pannarupiyam Indriyam Adhyaya (Lecture :1 hours, Non lecture: 0 hours)									
CO1,CO2	Justify the position of the chapter in the Samhita	CK	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	III	
CO2,CO3,CO 6	Explain basic meaning and importance of chaya, pratichaya and prabha	CC	MK	K	L&G D	TT-Theory,V V-Viva	F&S	III	
CO2,CO6	Explain pratichaya vishayaka arishta. Ch In 7/4-6	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	III	
CO2,CO6	Explain chaya vikruti arishtas. Ch In 7/4-6	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	III	
CO2,CO6	Enlist five types chaya Ch In 7/10-13	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	III	
CO2,CO6	Enlist seven types of prabha Ch In 7/14-15	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	III	
CO2,CO3,CO 6	Differentiate chaya and prabha Ch In 7/16-17	CC	MK	K	L_VC	TT-Theory,V V-Viva	F&S	III	
CO1,CO2	Summarise the chapter Ch In 7/32	CK	NK	K	SDL	T-OBT,VV-Viva	F&S	III	
Topic 50 Cha.In.8-Avakshiraseeyam Indriyam Adhyaya (Lecture :1 hours, Non lecture: 0 hours)									
CO1,CO2	Justify position of the chapter in Samhita	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	III	
CO1,CO2	Summarise the chapter as per sutra given at the end of the chapter	CK	NK	K	SDL	T-OBT,VV-Viva	F&S	III	

Topic 51 Cha.In.9-Yasya shyavanimittiya Indriya Adhyaya (Lecture :1 hours, Non lecture: 0 hours)									
CO1	Justify position of the chapter in Samhita	CK	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	III	
CO2	Explain basic meaning and importance of key terms such as ashtamaharoga	CC	MK	K	L	TT-Theory,V V-Viva	F&S	III	
CO2,CO4,CO 6	Enlist ashtamaharogas Ch In 9/8-9	CC	MK	K	L&G D	TT-Theory,V V-Viva	F&S	III	
CO1,CO2	Summarise the chapter as per the sutra given at the end of the chapter Ch In 9/23,24	CK	NK	K	SDL	T-OBT,VV- Viva	F&S	III	
Topic 52 Cha.In.10-Sadyomaneeyam Indriya Adhyaya (Lecture :1 hours, Non lecture: 0 hours)									
CO1,CO2	Justify position of the chapter and key terms in the chapter	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	III	
CO2,CO6	Explain sadyomaneeya arishtas Ch In 10/3-20	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	III	
CO1,CO2	Summarise the chapter as per the sutras given at the end of the chapter Ch In 10/21	CK	NK	K	SDL	T-OBT,VV- Viva	F&S	III	
Topic 53 Cha.In.11-Anujyotiyam Indriya Adhyaya (Lecture :1 hours, Non lecture: 0 hours)									
CO1,CO2	Justify the position of the chapter and explain key terms such as arishta Ch In 11/29	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	III	
CO2,CO6	Define arishta Ch In 11/29	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	III	
CO1,CO2	Recite sutra Ch In 11/29	CK	MK	K	SDL	P-VIVA,TT- Theory	F&S	III	

Topic 54 Cha.In.12-Gomayachurniyam Indriya Adhyaya (Lecture :1 hours, Non lecture: 17 hours)									
CO1,CO2	Justify the posttion of the chapter and explain key terms such as mumurshu, prasasta duta and mangalika dravya	CC	MK	K	L&G D	INT,TT-Theor y,VV-Viva	F&S	III	
CO2,CO6	Summarize mumurshu lakshana Ch In 12/9-25	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	III	
CO2,CO6	Outline prashasta doota lakshana and mangalika dravya Ch In 12/71-80	CK	MK	K	L&G D	TT-Theory,V V-Viva	F&S	III	
CO2,CO4	Define arogya in the context of arishta Ch In 12/87	CC	MK	K	L&G D	TT-Theory,V V-Viva	F&S	III	
CO1,CO2	Summarise the chapter as per sutra given at the end of the chapter Ch In 12/89	CK	NK	K	SDL	T-OBT,VV- Viva	F&S	III	

List of Practicals (Term and Hours)

PRACTICALS (M (As a part of NLH))			
S.No	List of Topics	Term	Hours
1	SHLOKA PATHANA- 1	1	10
2	LEARNING THROUGH VYAKHYANA-1	1	3
3	OBSERVING THE PRACTICAL UTILITY OF SNEHANA AND SWEDANA	1	2
4	IDENTIFICATION OF BAHUDOSHA LAKSHANA IN PATIENTS	1	2
5	ASSESSMENT OF DISEASES BASED ON TRIVIDHA BODHYA SANGRAHA	1	2
6	IDENTIFICATION OF ASHTA DOSHA IN STHOULYA	1	2
7	CLINICAL OBSERVATIONS ON NIJA AGANTUJA RELATIONSHIP	1	2
8	CLINICAL OBSERVATION ON SHADUPAKRAMA	1	2
9	ASSESSMENT OF RAKTA DUSHTI KARANA IN SPECIFIC CLINICAL CONDITIONS	1	2
10	OBSERVATIONS ON USE OF AGRYA AUSHADHA IN CLINICAL PRACTICE	1	2
11	ASSESSMENT OF DHATU-UPADHATU-MALA PRADOSHAJA VIKARAS IN PATIENTS	1	3
12	SHLOKA PATHANA- 2	2	10
13	LEARNING THROUGH VYAKHYANA-2	2	3
14	CASE TAKING IN RELATION TO NIDANA PANCHAKA	2	12
15	DIFFERENTIAL DIAGNOSIS OF SKIN DISEASES BASED ON GUIDELINES ON KUSHTA	2	2
16	PRAMANA PARIKSHA	2	2
17	IDENTIFICATION OF VIKARAVIGHATA BHAVA ABHAVA IN PATIENTS	2	2
18	EXPLORATION OF LOKA PURUSHA SAMYA VADA IN THE BACK GROUND OF ONE HEALTH	2	2
19	SHLOKA PATHANA-3	3	10
20	LEARNING THROUGH VYAKHYANA-3	3	3
21	LEARNING THROUGH SAMBHASHA PARISHAD	3	6
22	SROTAS PROFORMA	3	2

23	LEARNING THROUGH TANTRA YUKTI	3	5
24	ASSESSMENT OF HEALTH THROUGH DHATU SAMYA PAREEKSHA	3	2
25	AGNI ASSESSMENT BASED ON APACHARA	3	2
26	TRIVIDHA ROGA VISHESHAVIJNANA IN DIAGNOSIS	3	3
27	ASSESSMENT OF UPASAYA AND ANUPASAYA IN PATIENTS	3	2

Table 4: Learning objectives (Practical)

A4 Course outcome	B4 Learning Objective (At the end of the session, the students should be able to)	C4 Domain/sub	D4 Must to know / desirable to know / Nice to know	E4 Level Does/ Shows how/ Knows how/ Know	F4 T-L method	G4 Assessment (Refer abbreviations)	H4 Formative/summative	I4 Term	K4 Integration
Topic 1 SHLOKA PATHANA- 1									
CO1,CO2	Recite the selected slokas in each chapter	CK	MK	K	REC	PP-Practical,V V-Viva	F&S	I	
CO1,CO2	Compile slokas selected for recitation	CK	MK	K	SDL	PP-Practical,V V-Viva	F&S	I	
Topic 2 LEARNING THROUGH VYAKHYANA-1									
CO1,CO2	Interpret selected sutras with the help of Ayurveda Deepika Vyakhyana of Carakasamhita	CC	MK	KH	L&G D,DIS ,TBL	PP-Practical,V V-Viva	F&S	I	
CO1,CO2	Prepare narrative summary of vyakhyana for the specified sutras	CAP	MK	KH	SDL	PP-Practical,V V-Viva	F&S	I	
CO1,CO2	Appreciate importance of Vyakhyana in learning Samhita	AFT- REC	MK	KH	D	P-VIVA	F&S	I	
Topic 3 OBSERVING THE PRACTICAL UTILITY OF SNEHANA AND SWEDANA									
CO4,CO5	Identify and compile experiences of people undergoing sneha-	CAP	MK	KH	SDL,	PP-Practical	F&S	I	V-PC

	sweda				RLE				
Topic 4 IDENTIFICATION OF BAHUDOSHA LAKSHANA IN PATIENTS									
CO3,CO4,CO6,CO7	Assess Bahudoshalakshana in patients	PSY-SET	MK	SH	CBL, PT	PP-Practical,V V-Viva	F&S	I	
CO3,CO4,CO6,CO7	Appreciate the role and importance of assessing bahudosha lakshana in clinical practice	AFT-REC	MK	SH	CBL, PRA	PP-Practical,V V-Viva	F&S	I	
Topic 5 ASSESSMENT OF DISEASES BASED ON TRIVIDHA BODHYA SANGRAHA									
CO3,CO4,CO6,CO7	Assess diseases based on trividha-bodhya-sangraha ie. vikaraprakriti(nature of disease), samuthana (causative factors) and adhishtana (site of disease)	PSY-SET	MK	SH	CBL, PRA	PP-Practical,V V-Viva	F&S	I	
CO3,CO4,CO6,CO7	Appreciate role and importance of trividhabodhyasangraha in clinical practice	AFT-REC	MK	SH	CBL, PRA	PP-Practical,V V-Viva	F&S	I	
Topic 6 IDENTIFICATION OF ASHTA DOSHA IN STHOULYA									
CO3,CO4,CO6,CO7	Assess ashtadosha of atisthoulya in subjects	PSY-SET	MK	SH	CBL, D	TT-Theory,V V-Viva	F&S	I	
CO3,CO4,CO6,CO7	Maintain good communication skills with patients	AFT-RES	MK	SH	CBL, D,PR A	TT-Theory,V V-Viva	F&S	I	
Topic 7 CLINICAL OBSERVATIONS ON NIJA AGANTUJA RELATIONSHIP									
CO3,CO4,CO6,CO8	Identify relationship between nija and agantu in clinical conditions	PSY-SET	MK	SH	CBL, PT,D	PP-Practical,V V-Viva	F&S	I	
CO4,CO8	Develop good rapport with patients	AFT-VAL	MK	SH	CBL, PT,D	P-VIVA,VV-Viva	F&S	I	

Topic 8 CLINICAL OBSERVATION ON SHADUPAKRAMA

CO3,CO4,CO5,CO8	Identify shadupakrama in treatment plans of different diseases	PSY-SET	MK	SH	CBL, PT,D	PP-Practical,V V-Viva	F&S	I	
CO5,CO8	Develop good communications skills in clinics	AFT-REC	MK	SH	CBL, PT,D	PP-Practical,V V-Viva	F&S	I	

Topic 9 ASSESSMENT OF RAKTA DUSHTI KARANA IN SPECIFIC CLINICAL CONDITIONS

CO3,CO4,CO6,CO7	Identify raktadushti karanas in patients affected by raktadushti, especially, skin diseases	PSY-SET	MK	SH	CBL, D,PR A	PP-Practical,V V-Viva	F&S	I	
CO3,CO4,CO6,CO7	Develop good communication skills with patients	AFT-REC	MK	SH	CBL, D,PR A	PP-Practical,V V-Viva	F&S	I	

Topic 10 OBSERVATIONS ON USE OF AGRYA AUSHADHA IN CLINICAL PRACTICE

CO1,CO4,CO5	Justify use of agraushadhas in common clinical conditions	PSY-MEC	MK	SH	PER	P-VIVA	F&S	I	
CO8	Develop good communication skills	AFT-REC	MK	SH	DIS,PER	P-VIVA	F&S	I	

Topic 11 ASSESSMENT OF DHATU-UPADHATU-MALA PRADOSHHAJA VIKARAS IN PATIENTS

CO3,CO4,CO6,CO7	Identify dhatu-mala-upadahtu pradoshaja vikaras in patients	PSY-SET	MK	SH	CBL, PT,D_ BED	P-EXAM,VV-Viva	F&S	I	
CO3,CO4,CO8	Develop rapport with patients	AFT-REC	MK	SH	CBL, D_BE D	P-VIVA,VV-Viva	F&S	I	

Topic 12 SHLOKA PATHANA- 2									
CO2	Recite the selected slokas in each chapter	CK	MK	K	REC	P-VIVA	F&S	II	
CO2	Compile slokas selected for recitation	CK	MK	K	TBL, SDL	P-VIVA	F&S	II	
Topic 13 LEARNING THROUGH VYAKHYANA-2									
CO2	Interpret selected sutras with the help of Ayurveda Deepika Vyakhyana of Carakasamhita	CAP	MK	KH	L&G D,DIS ,TBL	P-VIVA	F&S	II	
CO2	Prepare narrative summary of vyakhyana for the specified sutras	CAP	MK	KH	DIS,S DL	P-VIVA	F&S	II	
CO1,CO2	Appreciate importance of Vyakhyana in learning Samhita	AFT-REC	MK	KH	D	P-VIVA	F&S	II	
Topic 14 CASE TAKING IN RELATION TO NIDANA PANCHAKA									
CO3,CO4,CO 6,CO7	Perform case taking based on nidana-panchaka	PSY-SET	MK	SH	CBL, D_BE D	P-VIVA	F&S	II	
CO8	Develop rapport with patients	AFT-REC	MK	SH	CBL, D_BE D	T-EMI,P-VIVA	F&S	II	
CO6,CO8	Develop clinical skills based on Ayurvedic clinical methods	PSY-SET	MK	SH	CBL, D_BE	PP-Practical	F&S	III	

					D				
Topic 15 DIFFERENTIAL DIAGNOSIS OF SKIN DISEASES BASED ON GUIDELINES ON KUSHTA									
CO4,CO6,CO8	Assess skin diseases based on Ayurvedic parameters	PSY-SET	MK	SH	CBL, D_BE D	PP-Practical	F&S	II	
CO6,CO8	Develop skills based on Ayurvedic clinical methods	AFT-REC	MK	SH	D_BE D	PP-Practical	F&S	II	
Topic 16 PRAMANA PARIKSHA									
CO3,CO4,CO6,CO7	Assess physiometry based on pramana-pareeksha mentioned in Ayurveda	PSY-SET	MK	SH	D	VV-Viva	F&S	II	
CO8	Appreciate importance of Ayurvedic methods of measurements	AFT-REC	MK	SH	D	VV-Viva	F&S	II	
Topic 17 IDENTIFICATION OF VIKARAVIGHATA BHAVA ABHAVA IN PATIENTS									
CO2,CO3,CO4,CO6,CO7	Apply the concept of "vikaravisatabhavabhavapractivisesha" in understanding diseases	CAP	MK	KH	CBL, CD	P-VIVA	F&S	II	
CO6	Perform case taking based on the concept of vikaravighata bhava abhava	PSY-SET	MK	SH	CD,D	P-VIVA	F&S	II	
Topic 18 EXPLORATION OF LOKA PURUSHA SAMYA VADA IN THE BACK GROUND OF ONE HEALTH									
CO4,CO7,CO8	Apply lokapurusha-samya-sidhanta in contemporary life	CAP	MK	KH	DIS,B S,PrB L	VV-Viva	F&S	II	
Topic 19 SHLOKA PATHANA-3									
CO1,CO2	Recite the selected slokas in each chapter	CK	MK	K	REC	VV-Viva	F&S	III	

CO1,CO2	Compile slokas selected for recitation	CK	MK	K	SDL	VV-Viva	F&S	III	
Topic 20 LEARNING THROUGH VYAKHYANA-3									
CO1,CO2	Interpret selected sutras with the help of Ayurveda Deepika Vyakhyana of Carakasamhita	CAP	MK	KH	L,LS	VV-Viva	F&S	III	
CO1,CO2	Prepare narrative summary of vyakhyana for the specified sutras	CC	MK	KH	SDL	VV-Viva	F&S	III	
CO1,CO2	Appreciate importance of Vyakhyana in learning Samhita	AFT-REC	MK	KH	D	P-VIVA	F&S	III	
Topic 21 LEARNING THROUGH SAMBHASHA PARISHAD									
CO1,CO2	Demonstrate Sambhasha parishat to discuss different topics	PSY-ADT	MK	SH	D	P-VIVA	F&S	III	
CO8	Appreciate the importance of collective thinking in learning Ayurveda	AFT-VAL	MK	SH	DIS,D	P-VIVA	F&S	III	
Topic 22 SROTAS PROFORMA									
CO4,CO6,CO8	Assess involvement of srotas in clinical conditions	PSY-SET	MK	SH	D_BE D	VV-Viva	F&S	III	
CO8	Develop clinical skills based on Ayurvedic clinical methods	AFT-REC	MK	SH	D_BE D	VV-Viva	F&S	III	
Topic 23 LEARNING THROUGH TANTRA YUKTI									
CO1,CO2,CO4	Apply tantrayukti and interpret the sutras	CAP	MK	KH	TBL, D	P-VIVA	F&S	III	
CO1	Appreciate the importance of Tantrayukti in interpreting Samhita	CAP	MK	KH	DIS,T BL	P-VIVA,VV-Viva	F&S	III	

Topic 24 ASSESSMENT OF HEALTH THROUGH DHATU SAMYA PAREEKSHA									
CO3,CO4,CO 6	Assess health of a person based through dhatu-samya-pareeksha	PSY- SET	MK	SH	CBL, D_BE D	P-VIVA	F&S	III	
CO8	Appreciate health of a person through interaction	AFT- RES	MK	SH	D_BE D	P-VIVA,VV- Viva	F&S	III	
Topic 25 AGNI ASSESSMENT BASED ON APACHARA									
CO3,CO4,CO 7	Assess agni based on apachara-visesha	PSY- SET	MK	SH	DIS,D _BED	P-VIVA	F&S	III	
CO8	Develop good rapport with patients	AFT- REC	MK	SH	CBL, D_BE D	P-VIVA	F&S	III	
Topic 26 TRIVIDHA ROGA VISHESHAVIJNANA IN DIAGNOSIS									
CO4,CO6,CO 7	Demonstrate trividha roga visesha vijnana in clinical methods	PSY- SET	MK	SH	DIS,C BL,D	P-VIVA	F&S	III	
CO8	Appreciate the importance of Ayurvedic parameters in clinical methods	AFT- VAL	DK	SH	DIS,C BL,D	P-VIVA	F&S	III	
Topic 27 ASSESSMENT OF UPASAYA AND ANUPASAYA IN PATIENTS									
CO3,CO5,CO 6	Identify upasaya-anupasaya in patients	PSY- SET	MK	SH	CBL, D_BE D	P-VIVA	F&S	III	
CO8	Appreciate wellness of patients	AFT- REC	DK	SH	D_BE D	P-VIVA	F&S	III	

Table 4a: List of Practical (As a part of NHL)

S.No	Name of practical	Term	Activity	Practical hrs
1	SHLOKA PATHANA- 1	1	<p>Purpose: To by heart sutras selected from Charakasamhita</p> <p>Teacher's role: Teachers should instruct the students to by heart the slokas when the respective portions are over. A log book may be kept by the teacher to mark the date and signature to note the satisfactory recitation of the slokas by the students. The performance of students can be considered for formative assessment. During summative assessment, sloka recitation will be a part of practical examination.</p> <p>Students role: To by heart the selected slokas given below and to compile minimum 100 sutras (three terms)</p> <p>Sutras suggested:</p> <ol style="list-style-type: none"> 1. Cha.Su.13- Sneha Adhyaya- 13-17, 22, 57-59 2. Cha.Su.14- Sveda Adhyaya- 4,5,39,40,64 3. Cha.Su.15- Upakalpaneeya Adhyaya – 22 4. Cha.Su.16- Chikitsaprabhritiya Adhyaya - 13-21,27,28,34-36 5. Cha.Su.17- Kiyantashiraseeya Adhyaya- 12, 41-44, 62, 112-118 6. Cha.Su.18-Trisotheeya Adhyaya- 42-43, 44-47 7. Cha.Su.19-Ashtodareeya Adhyaya- 5,6 8. Cha.Su.20- Maharoga adhyaya- 3, 4, 5, 11,14, 17, 20-22 9. Cha.Su.21- Ashtauninditeeya adhyaya- 3,4,16, 18, 19, 35, 50, 58 10. Cha.Su.22- Langhanabrimhaneeya Adhyaya- 9-24 11. Cha.Su.23- Santarpaneeya Adhyaya- 5-7, 26-29 12. Cha.Su.24- Vidhisoniteeya Adhyaya- 14,18,20,21,22,24 13. Cha.Su.25- Yajjapurusheeya Adhyaya- 29,,31,33,45,46,47,50 14. Cha.Su.26- Atreyabhadraakaapyeeya Adhyaya- 13,36,37,61,62,66,81,85,86 15. Cha.Su.27- Annapaanvidhi Adhyaya- 351-352 16. Cha.Su.28- Vividhaasheetapeetiya Adhyaya- 9-19,35-39, 45 	10

2	LEARNING THROUGH VYAKHYANA-1	1	<p>Purpose: To familiarize and expose the students to the relevant vyakhyana of Charaka Samhita. The following specific portions in the Vyakhyana are selected for this purpose.</p> <ol style="list-style-type: none"> 1. Cha.Su.20- Maharoga adhyaya - 11,16,19 2. Cha.Su.26- Atreyabhadhrakaapyeya Adhyaya - 13,29 3. Cha.Su.28- Vividhaasheetapeetiya Adhyaya - 7 <p>Teacher's role: Teachers will teach those sutras along with the commentary and explain the importance of vyakhyana in better understanding of sutras.</p> <p>Students' role: Students will prepare a narrative summary of all the proposed vyakhyanas to highlight their importance in interpreting the sutras. During viva students are asked to interpret the respective sutras along with its vyakhyana.</p>	3
3	OBSERVING THE PRACTICAL UTILITY OF SNEHANA AND SWEDANA	1	<p>Purpose: To familiarize commonly available snehayogas and commonly undertaken swedaprayogas. (Ref: Ch Su 13,14)</p> <p>Teacher's role: Make five or six groups and instruct them to enlist available ghruta and taila yoga in hospital pharmacy. Enlist the types of swedana followed in panchakarma theatre in the hospital.</p> <p>Student's role: Student in groups should document the assigned work in a prescribed format and present to all in the class.</p>	2
4	IDENTIFICATION OF BAHUDOSHA LAKSHANA IN PATIENTS	1	<p>Purpose: To assess bahudosha lakshana with the help of proforma in patients posted in hospital wards. (Ref: Ch Su 16/13-16)</p> <p>Teacher's role: Teacher should introduce the proforma in the class and guide the students how to furnish the proforma. Teacher may identify patients exhibiting bahudosha lakshana from the ward, those who are posted for Shodhana. Collect the</p>	2

			<p>proformas duly filled by students and analyze the data and discuss with students.</p> <p>Students' role: Student should interact with given patient and identify the Bahudosha lakshanas available in the patient and document in the proforma (minimum three cases).</p>	
5	ASSESSMENT OF DISEASES BASED ON TRIVIDHA BODHYA SANGRAHA	1	<p>Purpose: To orient students on the use of trividha-bodhya-sangraha (i.e, vikaraprakriti, adhishtana, samuthana) in understanding diseases and thereby enabling them using the unique assessment protocol mentioned in Caraka samhita. (Ref: Ch Su 18/44-47 along with Chakrapani commentary)</p> <p>Teacher's role: Introduce the concept of trividha bodhya sangraha, Introduce the case proforma in the class, demonstrate case taking based on trividha-bodhya-sangraha</p> <p>Students role: Fill up the observations in the proforma during their routine clinical posting (minimum 3 cases).</p>	2
6	IDENTIFICATION OF ASHTA DOSHA IN STHOULYA	1	<p>Purpose: To identify prevalence of ashtadosha of sthauilya in individuals (Ref: Ch Su 21/4)</p> <p>Teacher's role: Explain ashtadosha in the class; Introduce the questionnaire to document ashtadosha in individuals; Demonstrate the questionnaire in obese individuals</p> <p>Students role: Students will furnish the questionnaire among five people of different age groups and prepare a report based on the findings of the questionnaire survey.</p>	2
7	CLINICAL OBSERVATIONS ON NIJA AGANTUJA RELATIONSHIP	1	<p>Purpose: To explore relationship between nija and agantu diseases (Ref: Ch Su 19/7)</p> <p>Teacher's role: Teacher explains nija-agantu relationship with examples in the class; Demonstrate some cases where disease starts as agantu and advance to nija and vice versa.</p> <p>Students' role: Observe minimum three</p>	2

			cases in OP/IP and make reports to establish the relationship between nija and agantu.	
8	CLINICAL OBSERVATION ON SHADUPAKRAMA	1	<p>Purpose: To explore application of shadupakrama in therapeutics (Ref Ch Su 22)</p> <p>Teacher's role: After teaching shadupakrama, teachers shall identify some cases in the hospital to demonstrate any one or more upakramas; Try to include cases with varieties of upakrama; Train students to see patients, explore the case sheets and hospital records to find out upakramas adopted to a particular patient.</p> <p>Students' role: Observe minimum three cases from hospital and go through case sheets to identify types of upakrama adopted; Interact with interns, teachers to map the upakramas adopted in each patient; Make reports on type of upakrama, nature of medicines used and effects of upakramas based on the above observations; Document observations in three cases</p>	2
9	ASSESSMENT OF RAKTA DUSHTI KARANA IN SPECIFIC CLINICAL CONDITIONS	1	<p>Purpose: To identify raktadushtikaranas in cases where raktadushti is suspected (Ref: Ch Su 24/5-10)</p> <p>Teacher's role: Teach raktadushti karana; Select some cases where raktadushti is suspected; Demonstrate presence of raktadushti karanas in one or two cases; Assign cases to students to identify presence of raktadushtikarana</p> <p>Student's role: Identify presence of raktadushti karanas in three cases with the help of questionnaire provided; Document the observations</p>	2
10	OBSERVATIONS ON USE OF AGRYA AUSHADHA IN CLINICAL PRACTICE	1	<p>Purpose: To justify the importance of agryoushadha in clinical practice (Ref: Ch Su 25/38-40)</p> <p>Teacher's role: Identify some important agryoushadhas from the list given in Annapanachatushka; Divide the whole class into five or six groups and assign</p>	2

			<p>each group with two or three agrya aushadhas</p> <p>Students role: Make monographs of agryoushadha; Interact with practitioners and collect details of use of these aushadhas in routine practice; Document the observations in the record book.</p>	
11	ASSESSMENT OF DHATU-UPADHATU-MALA PRADOSHAJA VIKARAS IN PATIENTS	1	<p>Purpose: To identify dhatu-upadhatu-mala pradoshaja vikaras in selected cases. (Ref Ch Su 27/9-22)</p> <p>Teacher's role: Demonstrate the proforma in a few cases.</p> <p>Students' role: Make five case sheets reporting the findings of the assessment.</p>	3
12	SHLOKA PATHANA- 2	2	<p>See Practical.1 for instructions</p> <p>Sutras suggested:</p> <ol style="list-style-type: none"> 1. Cha.Su.30- Arthedashamahamooleeyam Adhyaya - 3,4,10,11,12 2. Cha.Ni.01-Jwara nidana Adhyaya- 3,5,7,8,9,10,11,38-40 3. Cha.Ni.02-Raktapitta nidana Adhyaya- 19,27 4. Cha.Ni.04-Prameha nidana adhyaya- 3, 4, 48-49 5. Cha.Ni.05- Kushta nidana Adhyaya- 3,4,5,8 6. Cha.Ni.06-Shosha nidana Adhyaya- 3, 5,7,9,11,14 7. Cha.Ni.07- Unmada nidana Adhyaya- 5,19-22 8. Cha.Ni.08- Apasmara nidana adhyaya- 3,5,17-22, 33-35,37-39 9. Cha.Sha.1-Katithapurushheeya Adhyaya- 16-23, 28-30,36, 63, 64,70-74, 98,102,109,137-139, 148,149 10. Cha.Sha.02-Atulyagothreeyam Adhyaya- 26, 27, 35,44,45-47 11. Cha.Sha.03-Khuddika garbhavakranti Adhyaya- 17 12. Cha.Sha.04-Mahatee garbhavakranti Adhyaya- 6,36 13. Cha.Sha.05-Purushavichaya Shareera Adhyaya- 3, 5, 8,16 	10

			14. Cha.Sha.06-Sareeravichaya adhyaya-4, 5-11, 12,13, 17, 28, 30 15. Cha.Sha.07- Sareerasankhya sareera Adhyaya	
13	LEARNING THROUGH VYAKHYANA-2	2	See Practical No.2 for instructions Suggested sutras: 1. Cha.Ni. 4-Prameha nidana adhyaya -4 2. Cha.Sha.1-Katithapurushheya Adhyaya-21 3. Cha.Sha. 6- Sareeravichaya adhyaya -9-11	3
14	CASE TAKING IN RELATION TO NIDANA PANCHAKA	2	Purpose: To map the disease process through nidana-panchaka (Ref: Ch Ni 1) Teacher's role: Demonstrate the case proforma in patients; Assign five patients to students for documenting nidanapanchaka Students role: Furnish the case proforma in five patients	12
15	DIFFERENTIAL DIAGNOSIS OF SKIN DISEASES BASED ON GUIDELINES ONKUSHTA	2	Purpose: To familiarize differential diagnosis of kushta through Ayurvedic parameters (Ref: Ch Ni 5) Teacher's role: Demonstrate case taking in a few cases Students role: Furnish the case proforma for minimum three cases of skin diseases	2
16	PRAMANA PARIKSHA	2	Purpose: To familiarize Ayurvedic methods of physiometry (Ref: Ch Sha 7) Teacher's role: Preparing measurement methods based on anguleeprmana and anjaleepramana as explained in Ayurveda; Demonstrating such methods in healthy individuals Students role: Assessing physiometry based on the guidelines given by the teacher in three individuals/peers and document the observations	2
17	IDENTIFICATION OF VIKARAVIGHATA BHAVA ABHAVA IN PATIENTS	2	Purpose: To explore concept of vikaravighata-bhava-abhava in clinical scenario. (Ref: Ch Ni 4/3 along with Chakrapani commentary)	2

			<p>Teachers role: Divide class into four or five groups and assign most commonly seen diseases to each group (Eg. Prameha); Conduct group discussions to identify risk factors / protective factors of respective diseases through literature review, interaction with peers and teachers; Sum up findings of group discussions and prepare check list for each disease</p> <p>Student's role: Conduct group discussions to identify risk/protective factors of disease assigned to them; Prepare check list for each disease regarding probable risk/protective factors; Identify presence/absence of items in the check list in minimum of three cases of the respective disease</p>	
18	EXPLORATION OF LOKA PURUSHA SAMYA VADA IN THE BACK GROUND OF ONE HEALTH	2	<p>Purpose: To explore loka-purusha-samya in the background of one health movement (Ref: Ch Sha 5)</p> <p>Teacher's role: Conduct discussions in the class to identify how nature is related to human being; Explore this relationship in the background of concept of one health; conduct discussions</p> <p>Students role: Conduct the discussions and prepare a summary report</p>	2
19	SHLOKA PATHANA-3	3	<p>Refer Practical No.1 for instructions</p> <p>Sutras suggested:</p> <ol style="list-style-type: none"> 1. Cha.Vi. 01- Rasa vimaana Adhyayam-10,24 2. Cha.Vi. 02-Trividha kuksheeya Adhyayam-15-18 3. Cha.Vi. 04-Trividha roga vishesha vijnyaneeya adhyaya-4,12 4. Cha.Vi. 05- Sroto vimana Adhyaya-3,4,7,9-27 5. Cha.Vi. 06-Roganika vimana adhyaya -19 6. Cha.Vi. 07- Vyadhita rupeeya vimana Adhyaya-28 7. Cha.Vi. 08-Rogabhishagjiteeyam Adhyayam-3,6,68-78 8. Cha.In.5-Purvarupeeyam Indriyam Adhyaya-43 9. Cha.In.11-Anujyotiyam Indriya 	10

			Adhyaya-29	
20	LEARNING THROUGH VYAKHYANA-3	3	Refer Practical No.2 for instructions Sutras suggested: 1. Cha.Vi.01- Rasa vimaana Adhyayam -10 2. Cha.Vi.08- Rogabhishagjiteeyam Adhyaayam-68 -80	3
21	LEARNING THROUGH SAMBHASHA PARISHAD	3	Purpose: To familiarize the method of Sambhasha parishad in bringing out scientific discussions. (Ref: Ch Vi 8) Teacher's role: Prepare guidelines for conducting Sambhasha parishat as per descriptions in Vadamarga; Demonstrate parishat in the class either through a video demonstration or otherwise; Divide the class into four or five groups and assign one topic each for them; Evaluate the group presentations based on the guidelines Student's role: Each group will prepare and demonstrate a parishat in the subject concerned; Prepare summary of the parishat Suggested topics: 1. Relevance of Daivavyapasraya cikitsa 2. Rakta as fourth dosha 3. Relevance of food classification 4. Specific agnya related to vihara (Eg: vishado rogavardhananam) 5. Importance of naming of disease 6. Relevance of viruddha ahara	6
22	SROTAS PROFORMA	3	Purpose: To assess status of srotodushti in different clinical conditions (Ref: Ch Vi 5) Teacher's role: Demonstrate the proforma for assessment of srotas in clinical conditions Students role: Furnish the srotas proforma in at least three cases	2
23	LEARNING THROUGH TANTRA YUKTI	3	Purpose: Demonstrate use of tantrayukti in different sutras Teachers role: Identify and demonstrate application of tantrayukti in different sutras	5

Student's role: Identify tantrayukti and prepare summary on justifying importance of tantrayukti in selected sutras

Suggested Tantrayuktis:

1. Adhikaran - commonly seen in many sutras
2. Yoga - commonly seen in many sutras
3. Padartha - commonly seen in many sutras
4. Vakyasesha - commonly seen in many sutras
5. Upadesha - Ca. Su. 13/18-19, Ca. Su. 13/94
6. Niyoga - Ca. Su. 13/34, Ca. Ni. 3/17
7. Apadesha - Ca. Su. 13/13, Ca. Su. 18/44-46, Ca. Su. 26/41, Ca. Ni. 2/12-17
8. Samuchaya - Ca. Su. 13/23-25, Ca. Su. 20/8, Ca. Su. 23/5-7, Ca. Su. 23/27-30, Ca. Ni. 3/7
9. Nidarshana - Ca. Su. 13/96-97, Ca. Su. 17/75(1), Ca. Su. 14/5, Ca. Su. 19/5, Ca. Su. 30/5
10. Nirvachana - Ca. Su. 16/31-32, Ca. Su. 16/34, Ca. Su. 17/95, Ca. Su. 21/9, Ca. Su. 25/4, 11. Ca. Su. 29/4, Ca. Su. 30/5, Ca. Su. 30/12, Ca. Su. 30/24
12. Vidhana - Ca. Su. 15/11, Ca. Su. 15/16, Ca. Su. 16/27
13. Prasanga - Ca. Su. 17/113, Ca. Su. 20/8, Ca. Su. 25/4, Ca. Ni. 1/3, Ca. Sa. 1/118-126
14. Viparyaya - Ca. Su. 25/31, Ca. Sa. 6/6, Ca. Sa. 6/9, Ca. Ni. 3/7, Ca. Ni. 3/9, Ca. Ni. 3/11
15. Ekantika - Ca. Su. 15/5, Ca. Su. 20/22, Ca. Su. 21/20, Ca. Su. 25/31, Ca. Su. 30/25, Ca. Ni. 1/32
16. Atitaveksha - Ca. Su. 22/31, Ca. Su. 28/25-30
17. Anagataveksha - Ca. Su. 15/5, Ca. Su. 28/30, Ca. Vi. 8/93, Ca. Vi. 8/135, Ca. Vi. 8/136
18. Swasangya - Ca. Su. 30/3
19. Prayojana - Ca. Su. 30/26, Ca. Sa. 5/5
20. Anumata - Ca. Su. 26/64-65, Ca. Su. 16/28, Ca. Sa. 1/16
21. Vikalpa - Ca. Su. 26/105
22. Pradesha - Ca. Su. 27/329, Ca. Vi. 8/137

			23. Sambhava - Ca. Su. 28/45 24. Hetwartha - Ca. Ni. 2/21, Ca. Ni. 4/4, Ca. Ni. 7/28, Ca. Vi. 3/40 25. Atidesha - Ca. Sa. 6/11 26. Apavarga - Ca. Su. 26/106 27. Uddhara - Ca. Su. 25/29 28. Anaikantika - Ca. Su. 15/4 29. Pratyutsara and Uddhara - Ca. Su. 25/10-28 30. Nirnaya - Ca. Su. 25/29 31. Apavarga - Ca. Vi. 1/10	
24	ASSESSMENT OF HEALTH THROUGH DHATU SAMYA PAREEKSHA	3	Purpose: To assess health status of a person based on dhatusamya pareeksha. (Ref: Ch Vi 8/89) Teacher's role: Demonstrate use of proforma in healthy subjects Students role: Assess dhatusamya in ten individuals using the proforma	2
25	AGNI ASSESSMENT BASED ON APACHARA	3	Purpose: To familiarise the assessment of agni based on apacara-visesha (Ref: Ch Vi 6/12) Teacher's role: Explain the concept of agnipareeksha based on apacharavisesha; Demonstrate the questionnaire in a few subjects Students role: Assess agni of ten individuals using the proforma	2
26	TRIVIDHA ROGA VISHESHAVIJNANA IN DIAGNOSIS	3	Purpose: To justify the role of trividha-rogavisesha vijnana (pratyaksha, anumana and aptopadesa) in clinical methods. (Ref: Ch Vi 4) Teacher's role: Demonstrate the use of pratyaksha, anumana and aptopadesa in case taking, stressing on use of sense organs (smell, touch, vision and sound), methods of inference and importance of aptopadesa (writing respective references relevant in a particular case); Assigning cases to demonstrate the above methods Students role: Prepare reports on application of trividha visesha vijnana in three cases	3

27	ASSESSMENT OF UPASAYA AND ANUPASAYA IN PATIENTS	3	Purpose: To justify importance of upasaya and anupasaya clinical examination (Ref: Ch Ni 1 with Chakrapani commentary) Teacher's role: Demonstrate identification of upasaya and anupasaya in selected cases Students role: Identify upasaya and anupasaya in a minimum of three cases and document it	2
Total Hr				100

Activity

CO	Topic name	Activity Details	Hours [-] [#]
CO5,CO7	Cha.Su.15-Upakalpaneeya Adhyaya	Expert Lecture on Aturalaya: This activity will evoke an interest among students about planning for construction of Hospitals and Nursing homes. Topic: Standard guidelines to setup Ayurveda Clinics, Nursing Homes and Hospitals.	1
CO6,CO7,CO8	Cha.Su.19-Ashtodareeya Adhyaya	Activity on Disease classification: Teacher should give an insight to NAMASTE portal published by Ministry of AYUSH. Students should go through with every standardised Ayurveda terminologies related to disease classification and also National Ayurveda Morbidity codes.	2
CO4,CO6,CO8	Cha.Su.20- Maharoga adhyaya	Compilation/ Making monograph on Nanatmaja vikara: Steps (1) Teacher should make teams of 3-5 students.(2) An Editorial team for making monograph has to be made including experts of Roga Nidana. (3) Divide the 140 diseases into available number of teams. (4) Teacher should provide a format to collect data on each diseases which must include pictorial representation of disease and cross references. (5) The Editorial team will collect the data from all teams and edit in the form of a	3

		book. (6) The content should be reviewed by Experts and made as E-Monograph (PDF)/ Book.	
CO4,CO7	Cha.Su.21- Ashtauninditeeya adhyaya	Video making on concept of Nidra: Steps (1) Teacher should explain the content on which students should make video (2) The Minimum duration of Video should be 3 minutes. (3) Video can be in regional languages. (4) Teacher should select the best videos and can publish in social media after rectifying the content of the video.	1
CO4,CO5,CO7	Cha.Su.25- Yajjapurusheeya Adhyaya	Justifying concept of Hita and Ahita ahara: Steps (1) Students should be divided in to groups and assign some of the Hita and Ahita ahara dravya (2) Student should find and discuss the logical explanations on justifying the given dravya as Hita or Ahita	2
CO4,CO5,CO7	Cha.Su.26- Atreyabhadraakaapyeeya Adhyaya	Application of paradi guna: Steps (1) Any probable drug or treatment plan to be selected and assign to various groups (2) Students should view them through paradi guna and document it.	2
CO5,CO8	Cha.Su.27- Annapaanvidhi Adhyaya	Collection of different dravya's: Steps (1) Student should collect different dravya's available in their locality. (2) Student should exhibit the same and discuss with experts. (3) Document opinion given by experts.	2
CO4,CO8	Cha.Su.29- Dashapraanaayataneeya Adhyaya	Skit on different types of vaidya in relation to medical ethics: Steps (1) The class has to be divided into teams and they should be assigned to write a story for skit, considering different qualities of vaidya (2) They should perform the skit after Screening done by concerned teachers	2
CO4,CO6	Cha.Ni. 08- Apasmara nidana adhyaya	Documentation of Nidanarthakara roga: Student should discuss and document the experiences of practising physicians of their	2

		Hospital or outside about Nidanarthakara roga.	
CO3,CO4,CO6,CO7	Cha.Ni. 08- Apasmara nidana adhyaya	Quiz on Nidana sthana: Steps (1) Teacher should give a written test including important multiple choice questions of nidana sthana. (2) The highest scoring students should be selected and made into different teams as per the convenience. (3) The selected students should be conducted quiz with different rounds considering the content of the Nidana sthana.	2
CO3,CO4,CO7	Cha.Sha.1-Katithapurusha eya Adhyaya.	Game on Ashta smruti karana: Steps (1) Plan the Memory check games by using Different materials such as Drugs, Books and instruments.(2) Students should be subjected for memory check sessions. (3) Later their experiences should be interpreted through Ashta smruti karana.	2
CO4,CO6,CO7	Cha.Sha. 04- Mahatee garbhavakranti Adhyaya	Identify film/Tv serial characters having different qualities of Trividha satwa and their varieties: Steps (1) Students has to be divided into teams and each team should be assigned some of the satwa. (2) The team should collect the video clips of those characters and has to present to all after getting scrutinized by teachers.	2
CO4,CO8	Cha.Sha. 05- Purushavichaya Adhyaya	Adopting pravrutti and nivrutti upayas in present era: Steps (1) Teacher should make teams and assign different pravrutti and nivrutti upayas.(2) Team should present the pravrutti and nivrutti upayas considering relevance in present era.	2
CO4,CO7,CO8	Cha.Sha. 06- Sareeravichaya adhyaya	Analysing Data on causes of akala mrutyu: Students should search and collect data from online sources published by Govt or Private Authorities about the causes of Akala mrutyu. Analyse and present the data and discuss on Akala mrutyu in the class.	2

CO4,CO7	Cha.Sha.08- Jathisutreeya Adhyaya	Street play on awareness of garbhopaghatakara bhava: Steps (1) Teacher should make teams and explain about the structure of street play (2) Student should create a narrative story to present the concept in public (3) Minimum duration of the play is 15 minutes	2
CO7,CO8	Cha.Vi.01- Rasa vimaana Adhyayam	Digital Posters for public awareness on Ahara vidhi: Steps (1) Teacher should assign the topic to the students individually or in group. (2) Student should make a digital posters or infographics with the help of various online tools such as CANVA etc.	2
CO4,CO7,CO8	Cha.Vi. 03- Janapadodhwamsaneeya Vimanam Adhyaya	Short Documentary on any of the Janapadodhwamsakara bhava: Steps (1) Teacher should guide the students on Janapadodhwamsakara bhava (2) Students should be taught on what is documentaries and should fix the duration of video. (3) Teams should be made and they have to shoot and edit the videos on any of the janapadodhwamsakara bhava. (4) Present the documentaries and share experience.	2
CO4,CO8	Cha.Vi. 8-Rogabhishagjiteeyam Adhyaayam.	Identifying Adhyayana vidhi: Steps (1) Teacher should guide the students to identify and document different individual and group learning techniques. (2) Students should present and share experience on their learning techniques	2
CO3,CO4,CO7	Cha.In.5-Purvarupeeyam Indriyam Adhyaya	Identifying types of swapna: Steps (1) Teacher should assist to make a Proforma for different types of Swapna. (2) Student should assess the proforma with Healthy individuals or diseased and analyse the Data.	2
CO3,CO4,CO7,CO8	Cha.In.12-Gomayachurni yam Indriya Adhyaya	Discussion on death signs: Steps (1) Teacher should assign set of students to interact with	1

		concerned ICU Doctors/ Nurses or assistants. (2) Students should interact with them based on arishta lakshanas and document it.	
CO3,CO6,CO7	Cha.In.01-Varnaswareeya Adhyaya	Use of various standard tools for assessing factors related to arishta : Students are assigned with some of the standard tools to assess various factors relevant in arishta-vijnana available in the following source: https://www.carakasamhitaonline.com/mediawiki-1.32.1/index.php?title=Varnasvariyaam_Indriyam_Adhyaya#Assessment_of_complexion	2

Hours indicated are included in calculations of Table 3 and 4

Table 5- Teaching learning method

Sr No	Teaching learning methods in the course	No of Activities
1	Lecture	30
2	Lecture with Power point presentation	17
3	Lecture & Group Discussion	364
4	Lecture with Video clips	20
5	Discussions	37
6	Brainstorming	58
7	Inquiry-Based Learning	14
8	PBL	6
9	CBL	48
10	Project-Based Learning	5
11	TBL	1
12	Team project work	2
13	Flipped classroom	29
14	Blended Learning	9
15	Edutainment	9
16	Mobile learning	7

17	Role plays	15
18	Self-directed learning	105
19	Problem solving method	2
20	Workshops	2
21	Game-Based Learning	4
22	Demo on Model	1
23	Library Session	4
24	Peer learning	6
25	Real life experience	4
26	Recitation	40
27	Presentations	3
28	Case diagnosis	1
29	Drug analysis	4
30	Demonstration	9
31	Demonstration bedside	4
32	Field visit	3

These are overall teaching learning methods listed in Table 3 and 4. Teachers can select the best possible method amongst the given methods as per objective, available time etc.

Table 6: Assessment Summary: Assessment is subdivided in A to H points

6 A-Number of Papers and Marks Distribution

Subject Code	Papers	Theory	Practical/Clinical Assessment					Grand Total
			Practical	Viva	Elective	IA	Sub Total	
AyUG-SA2	1	100	-	75	(Set SB)	15	100	200

6 B - Scheme of Assessment (formative and Summative)

PROFESSIONAL COURSE	DURATION OF PROFESSIONAL COURSE		
	First Term (1-6 Months)	Second Term (7-12 Months)	Third Term (13-18 Months)
Second	3 PA & First TT	3 PA & Second TT	3 PA & UE

PA: Periodical Assessment; **TT:** Term Test; **UE:** University Examinations.

*** University Examination shall be on entire syllabus ***

6 C - Calculation Method for Internal assessment Marks

TERM	PERIODICAL ASSESSMENT*					TERM TEST**	TERM ASSESSMENT	
	A	B	C	D	E	F	G	H
	1 (15 Marks)	2 (15 Marks)	3 (15 Marks)	Average (A+B+C/3)	Converted to 15 Marks (D/15*15)	Term Test (Marks converted to 15) (15 Marks)	Sub Total _/30 Marks	Term Assessment (.../15)
FIRST							E+F	(E+F)/2
SECOND							E+F	(E+F)/2
THIRD						NIL		E
Final IA	Average of Three Term Assessment Marks as Shown in 'H' Column.							
	Maximum Marks in Parentheses *Select an Evaluation Method which is appropriate for the objectives of Topics from the Table 6 D for Periodic assessment. Conduct 15 marks assessment and enter marks in A, B, and C. ** Conduct Theory (100 Marks) (MCQ(20*1 Marks), SAQ(8*5), LAQ(4*10)) and Practical (100 Marks) Then convert total to 15 marks.							

6 D - Evaluation Methods for Periodical Assessment

S. No	Evaluation Methods
1	Activities Indicated in Table 3 - Column G3 as per Indicated I, II or III term in column I3

Evaluation Methods in MSE

1. Practical / Clinical Performance
2. Viva Voce, MCQs, MEQ (Modified Essay Questions/Structured Questions)
3. Open Book Test (Problem Based)
4. Summary Writing (Research Papers/ Samhitas)
5. Class Presentations; Work Book Maintenance
6. Problem Based Assignment
7. Objective Structured Clinical Examination (OSCE), Objective Structured Practical Examination (OPSE), Mini Clinical Evaluation Exercise (Mini-CEX), Direct Observation of Procedures (DOP), Case Based Discussion (CBD)
8. Extra-curricular Activities, (Social Work, Public Awareness, Surveillance Activities, Sports or Other Activities which may be decided by the department).
9. Small Project etc.

6 E Question Paper Pattern

II PROFESSIONAL BAMS EXAMINATIONS AyUG-SA2

PAPER-1

Time: 3 Hours Maximum Marks: 100

INSTRUCTIONS: All questions compulsory

		Number of Questions	Marks per question	Total Marks
Q 1	MULTIPLE CHOICE QUESTIONS (MCQ)	20	1	20
Q 2	SHORT ANSWER QUESTIONS (SAQ)	8	5	40
Q 3	LONG ANSWER QUESTIONS (LAQ)	4	10	40
				100

Similar for Paper II (If applicable).

6 F Distribution of theory examination

Paper 1						
Sr. No	A List of Topics	B Term	C Marks	MCQ (1 Mark)	SAQ (5 Marks)	LAQ (10 Marks)
1	Cha.Su.13- Sneha Adhyaya	1	37	Yes	Yes	Yes
2	Cha.Su.14- Sveda Adhyaya	1		Yes	Yes	Yes
3	Cha.Su.15- Upakalpaneeya Adhyaya	1		Yes	Yes	Yes
4	Cha.Su.16- Chikitsaprabhritiya Adhyaya	1		Yes	Yes	Yes
5	Cha.Su.17- Kiyantashiraseeya Adhyaya	1		Yes	Yes	Yes
6	Cha.Su.18-Trisotheeya Adhyaya	1		Yes	Yes	Yes
7	Cha.Su.19-Ashtodareeya Adhyaya	1		Yes	Yes	No
8	Cha.Su.20- Maharoga adhyaya	1		Yes	Yes	No
9	Cha.Su.21- Ashtauninditeeya adhyaya	1		Yes	Yes	Yes
10	Cha.Su.22- Langhanabrimhaneeya Adhyaya	1		Yes	Yes	Yes
11	Cha.Su.23- Santarpaneeya Adhyaya	1		Yes	Yes	Yes
12	Cha.Su.24- Vidhishoniteeya Adhyaya	1		Yes	Yes	Yes
13	Cha.Su.25- Yajjapurusheeya Adhyaya	1		Yes	Yes	Yes
14	Cha.Su.26- Atreyabhadraakaapeeya Adhyaya	1		Yes	Yes	Yes
15	Cha.Su.27- Annapaana vidhi Adhyaya	1		Yes	Yes	No
16	Cha.Su.28- Vividhashitapeeteeya Adhyaya	1		Yes	Yes	Yes

17	Cha.Su.29- Dashapraanaayataneeya Adhyaya	2		Yes	Yes	No
18	Cha.Su.30- Arthedashamahamoolleeya Adhyaya	2		Yes	Yes	Yes
19	Cha.Ni.01-Jwara nidana Adhyaya	2	19	Yes	Yes	Yes
20	Cha.Ni.02-Raktapitta nidana Adhyaya	2		Yes	Yes	Yes
21	Cha.Ni.03-Gulma nidana Adhyaya	2		Yes	Yes	No
22	Cha.Ni.04-Prameha nidana adhyaya	2		Yes	Yes	Yes
23	Cha.Ni.05-Kushta nidana Adhyaya	2		Yes	Yes	Yes
24	Cha.Ni.06-Shosha nidana Adhyaya	2		Yes	Yes	Yes
25	Cha.Ni.07-Unmada nidana Adhyaya	2		Yes	Yes	Yes
26	Cha.Ni.08-Apasmara nidana adhyaya	2		Yes	Yes	Yes
27	Cha.Vi.01- Rasa vimana Adhyayam	3	24	Yes	Yes	Yes
28	Cha.Vi.02-Trividha kuksheeya Adhyayam	3		Yes	Yes	Yes
29	Cha.Vi.03-Janapadodhwansaneeya Vimanam Adhyaya	3		Yes	Yes	Yes
30	Cha.Vi.04-Trividha roga vishesha vijnyaneeya adhyaya	3		Yes	Yes	Yes
31	Cha.Vi. 05- Sroto vimana Adhyaya	3		Yes	Yes	Yes
32	Cha.Vi. 06-Roganika vimana adhyaya	3		Yes	Yes	Yes
33	Cha.Vi. 07- Vyadhita rupeeya vimana Adhyaya	3		Yes	Yes	Yes

34	Cha.Vi. 08-Rogabhishagjiteeyam Adhyaayam.	3		Yes	Yes	Yes
35	Cha.Sha.01-Katithapurushheeya Adhyaya	2	13	Yes	Yes	No
36	Cha.Sha.02-Atulyagothreeyam Adhyaaya	2		Yes	Yes	No
37	Cha.Sha.03-Khuddika garbhavakranti Adhyaya	2		Yes	Yes	No
38	Cha.Sha.04-Mahatee garbhavakranti Adhyaya	2		Yes	Yes	Yes
39	Cha.Sha.05-Purushavichaya Shareera Adhyaya	2		Yes	Yes	No
40	Cha.Sha.06-Sareeravichaya adhyaya	2		Yes	Yes	No
41	Cha.Sha.07- Sareerasankhya sareera Adhyaya	2		Yes	Yes	No
42	Cha.Sha.08-Jathisutreeya Adhyaya	2		Yes	Yes	No
43	Cha.In.1-Varnasvariya Indriya Adhyaya	3	7	Yes	Yes	No
44	Cha.In.2-Pushpitakam Indriya Adhyaya	3		Yes	No	No
45	Cha.In.3-Parimarshaneeyam Indriyam Adhyaya	3		Yes	No	No
46	Cha.In.4-Indriyaneekam Indriya adhyaya	3		Yes	No	No
47	Cha.In.5-Purvarupeeyam Indriyam Adhyaya	3		Yes	Yes	No
48	Cha.In.6-Katamanisharireeyam Indriyam Adhyaya	3		Yes	No	No
49	Cha.In.7-Pannarupiyam Indriyam Adhyaya	3		Yes	Yes	No
50	Cha.In.8-Avakshiraseeyam Indriyam	3		Yes	No	No

	Adhyaya				
51	Cha.In.9-Yasya shyavanimittiya Indriya Adhyaya	3		Yes	No No
52	Cha.In.10-Sadyomaraneeyam Indriya Adhyaya	3		Yes	Yes No
53	Cha.In.11-Anujyotiyam Indriya Adhyaya	3		Yes	Yes No
54	Cha.In.12-Gomayachurniyam Indriya Adhyaya	3		Yes	Yes No
Total Marks			100		

Paper No:1		
Question No	Type of Question	Question Paper Format
Q1	<p>Multiple choice Questions 20 Questions 1 mark each All compulsory</p> <p>Must know part - 15 MCQ Desirable to know - 3 MCQ Nice to know part - 2 MCQ</p>	<ol style="list-style-type: none"> 1. Cha.Su.13- Sneha Adhyaya / Cha.Su.14- Sveda Adhyaya 2. Cha.Su.17- Kiyantashiraseeya Adhyaya / Cha.Su.15- Upakalpaneeya Adhyaya 3. Cha.Su.20- Maharoga adhyaya / Cha.Su.18-Trisotheeya Adhyaya / Cha.Su.19-Ashtodareeya Adhyaya 4. Cha.Su.22- Langhanabrimhaneeya Adhyaya / Cha.Su.21- Ashtauninditeeya adhyaya 5. Cha.Su.23- Santarpaneeya Adhyaya / Cha.Su.24- Vidhishoniteeya Adhyaya 6. Cha.Su.28- Vividhashitapeeteeya Adhyaya / Cha.Su.26- Atreyabhadraakaapeeya Adhyaya / Cha.Su.25- Yajjapurushheeya Adhyaya 7. Cha.Su.30- Arthedashamahamooleeya Adhyaya / Cha.Su.29- Dashapraanaayataneeya Adhyaya 8. Cha.Ni.02-Raktapitta nidana Adhyaya / Cha.Ni.01-Jwara nidana Adhyaya 9. Cha.Ni.04-Prameha nidana adhyaya / Cha.Ni.03-Gulma nidana Adhyaya 10. Cha.Ni.05-Kushta nidana Adhyaya / Cha.Ni.06-Shosha nidana Adhyaya 11. Cha.Ni.08-Apasmara nidana adhyaya / Cha.Ni.07-Unmada nidana Adhyaya 12. Cha.Vi.02-Trividha kuksheeya Adhyayam / Cha.Vi.03-Janapadodhwansaneeya Vimanam Adhyaya / Cha.Vi.01- Rasa vimana Adhyayam 13. Cha.Vi.04-Trividha roga vishesha vijnyaneeya adhyaya / Cha.Vi. 05- Sroto vimana Adhyaya 14. Cha.Vi. 06-Roganika vimana adhyaya / Cha.Vi. 07- Vyadhita rupeeya vimana Adhyaya 15. Cha.Vi. 08-Rogabhishagjiteeyam Adhyaayam. 16. Cha.Sha.02-Atulyagothreeyam Adhyaaya / Cha.Sha.01-Katithapurushheeya Adhyaya 17. Cha.Sha.04-Mahatee garbhavakranti Adhyaya / Cha.Sha.03-Khuddika garbhavakranti Adhyaya / Cha.Sha.05-Purushavichaya Shareera Adhyaya 18. Cha.Sha.07- Sareerasankhya sareera Adhyaya

		<p>/ Cha.Sha.06-Sareeravichaya adhyaya / Cha.Sha.08-Jathisutreeya Adhyaya</p> <p>19. Cha.In.1-Varnasvariya Indriya Adhyaya / Cha.In.2-Pushpitakam Indriya Adhyaya / Cha.In.4-Indriyaneekam Indriya adhyaya / Cha.In.5-Purvarupeeyam Indriyam Adhyaya</p> <p>20. Cha.In.9-Yasya shyavanimitiya Indriya Adhyaya / Cha.In.11-Anujyotiyam Indriya Adhyaya / Cha.In.8-Avakshiraseeyam Indriyam Adhyaya / Cha.In.12-Gomayachurniyam Indriya Adhyaya</p>
Q2	<p>Short answer Questions Eight Questions 5 Marks Each All compulsory</p> <p>Must know - 7 SAQ Desirable to know - 1 SAQ No questions on Nice to know</p>	<p>1. Cha.Su.13- Sneha Adhyaya / Cha.Su.14- Sveda Adhyaya / Cha.Su.16- Chikitsaprabhritiya Adhyaya / Cha.Su.20- Maharoga adhyaya / Cha.Su.18-Trisotheeya Adhyaya / Cha.Su.17- Kiyantashiraseeya Adhyaya / Cha.Su.15- Upakalpaneeya Adhyaya / Cha.Su.19-Ashtodareeya Adhyaya</p> <p>2. Cha.Su.28- Vividhashitapeeteeya Adhyaya / Cha.Su.26- Atreyabhadraakaapeeya Adhyaya / Cha.Su.25- Yajjapurusheeya Adhyaya / Cha.Su.22- Langhanabrimhaneeya Adhyaya / Cha.Su.23- Santarpaneeya Adhyaya / Cha.Su.24- Vidhishoniteeya Adhyaya / Cha.Su.21- Ashtauninditeeya adhyaya / Cha.Su.30- Arthedashamahamooleeya Adhyaya / Cha.Su.29- Dashapraanaayataneeya Adhyaya / Cha.Su.27- Annapaana vidhi Adhyaya</p> <p>3. Cha.Ni.04-Prameha nidana adhyaya / Cha.Ni.05-Kushta nidana Adhyaya / Cha.Ni.03-Gulma nidana Adhyaya / Cha.Ni.08-Apasmara nidana adhyaya / Cha.Ni.02-Raktapitta nidana Adhyaya / Cha.Ni.06-Shosha nidana Adhyaya / Cha.Ni.01-Jwara nidana Adhyaya / Cha.Ni.07-Unmada nidana Adhyaya</p> <p>4. Cha.Vi.04-Trividha roga vishesha vijnyaneeya adhyaya / Cha.Vi.02-Trividha kuksheeya Adhyayam / Cha.Vi.03-Janapadodhwansaneeya Vimanam Adhyaya / Cha.Vi.01- Rasa vimana Adhyayam</p> <p>5. Cha.Vi. 08-Rogabhishagjiteeyam Adhyaayam. / Cha.Vi. 06-Roganika vimana adhyaya / Cha.Vi. 05- Sroto vimana Adhyaya / Cha.Vi. 07- Vyadhita rupeeya vimana Adhyaya</p>

		<p>6. Cha.Sha.02-Atulyagothreeyam Adhyaaya / Cha.Sha.01-Katithapurushheeya Adhyaya / Cha.Sha.04-Mahatee garbhavakranti Adhyaya / Cha.Sha.03-Khuddika garbhavakranti Adhyaya</p> <p>7. Cha.Sha.07- Sareerasankhya sareera Adhyaya / Cha.Sha.06-Sareeravichaya adhyaya / Cha.Sha.08-Jathisutreeya Adhyaya / Cha.Sha.05-Purushavichaya Shareera Adhyaya</p> <p>8. Cha.In.11-Anujyotiyam Indriya Adhyaya / Cha.In.1-Varnasvariya Indriya Adhyaya / Cha.In.7-Pannarupiyam Indriyam Adhyaya / Cha.In.10-Sadyomaraneeyam Indriya Adhyaya / Cha.In.12-Gomayachurniyam Indriya Adhyaya / Cha.In.5-Purvarupeeyam Indriyam Adhyaya</p>
Q3	<p>Long answer Questions Four Questions 10 marks each All compulsory</p> <p>All questions on must know. No Questions on Nice to know and Desirable to know</p>	<p>1. Cha.Su.13- Sneha Adhyaya / Cha.Su.14-Sveda Adhyaya / Cha.Su.16-Chikitsaprabhritiya Adhyaya / Cha.Su.18-Trisotheeya Adhyaya / Cha.Su.17-Kiyantashiraseeya Adhyaya / Cha.Su.15-Upakalpaneeya Adhyaya</p> <p>2. Cha.Su.28- Vividhashitapeeteeya Adhyaya / Cha.Su.26- Atreyabhadraakaapeeya Adhyaya / Cha.Su.25- Yajjapurushheeya Adhyaya / Cha.Su.22- Langhanabrimhaneeya Adhyaya / Cha.Su.23- Santarpaneeya Adhyaya / Cha.Su.24- Vidhishoniteeya Adhyaya / Cha.Su.21- Ashtauninditeeya adhyaya / Cha.Su.30- Arthedashamahamooleeya Adhyaya</p> <p>3. Cha.Ni.04-Prameha nidana adhyaya / Cha.Ni.05-Kushta nidana Adhyaya / Cha.Ni.08-Apasmara nidana adhyaya / Cha.Ni.02-Raktapitta nidana Adhyaya / Cha.Ni.06-Shosha nidana Adhyaya / Cha.Ni.01-Jwara nidana Adhyaya / Cha.Ni.07-Unmada nidana Adhyaya</p> <p>4. Cha.Vi.04-Trividha roga vishesha vijnyaneeya adhyaya / Cha.Vi.02-Trividha kuksheeya Adhyayam / Cha.Vi. 08-Rogabhishagjiteeyam Adhyaayam. / Cha.Vi. 06-Roganika vimana adhyaya / Cha.Vi.03-Janapadodhwansaneeya Vimanam Adhyaya / Cha.Vi. 05- Sroto vimana Adhyaya / Cha.Vi. 07- Vyadhita rupeeya vimana Adhyaya / Cha.Vi.01- Rasa</p>

6 H Distribution of Practical Exam

S.No	Heads	Marks
1	Viva on Practical record	10
2	Shloka recitation	10
3	Viva on vyakhyana	5
4	Viva on Sutrasthana	20
5	Viva on Nidanasthana	10
6	Viva on Vimanasthana	10
7	Viva on Shareerasthana	5
8	Viva on Indriyasthana	5
9	Electives <u>[(Set_SB)]</u>	10
10	IA	15
Total Marks		100

References Books/ Resources

S.No	Book	Resources
1	Charakasamhita with Cakrapani Commentary	Yadavji Trikamji, editor. Agnivesha. Charaka Samhita. Ayurveda Dipika. Chakrapanidatta (comm)(Sanskrit) Varanasi: Chaukambha Sanskrit Sansthan
2	Charak Samhita (English Commentary)	Ram Karan Sharma and Bhagawan Dash, editor. Charak Samhita (English Commentary): Varanasi: Chowkambha Sanskrit Series
3	Charak Samhita (Hindi commentary)	Harishchandra Singh Kushvaha, editor and translator. Charak Samhita (Hindi Commentary): Varanasi: Chaukambha Orientalia
4	Charak Samhita (Hindi commentary)	Jayadev Vidyalkar, editor. Charak Samhita (Hindi commentary): Motilal Banarsi Dass Publishers Pvt. Ltd
5	Charak Samhita (Hindi commentary): Vaidya Atridev Vidyalkar	Charak Samhita (Hindi commentary): Vaidya Atridev Vidyalkar
6	Charak Samhita (Hindi commentary)	Gorakhanath Chaturvedi and Kashinath Pandeya Shastri, editor. Charak Samhita (Hindi commentary): Varanasi: Chaukambha Bharati Academy
7	Charak Samhita (Hindi commentary)	Brahmanand Tripathi, editor. Charak Samhita (Hindi commentary): Varanasi: Chaukambha Surbharati Prakashan
8	Charak Samhita (Hindi commentary): Dr. Ravidatta Tripathi	Vidyadhar Shukla and Ravidatta Tripathi Charak Samhita (Hindi commentary): Varanasi: Chaukambha Sanskrit Pratishthan
9	Charaka Samhita (Hindi commentary)	Banwari Lal Gaur, editor. Charaka Samhita (Hindi commentary): Rashtriya Ayurved Vishwavidyalaya
10	Legacy of Caraka	M S Valiathan, Legacy of Caraka (English): Hyderabad: Orient Longman
11	Charakasamhita	Charak e-Samhita –National Institute of Indian Medical Heritage – http://niimh.nic.in/ebooks/ecaraka
12	Charakasamhita	Charakasamhitaonline.com - www.charakasamhitaonline.com
13	Illustrated Charakasamhita, Dr. R Vidyant	R Vidyant, editor. Illustrated Charakasamhita (English Commentary): Varanasi Chaukambha Prakashak
14	Namaste Portal	NAMASTE - Portal (ayush.gov.in)
15	CCRAS Prakriti tool	CCRAS Prakriti Tool http://www.ccras.res.in/
16	Sanskrit English Dictionary	Monnier Williams. A Sanskrit English Dictionary. Delhi. Motilal Banarsidasspublishers Pvt Ltd.

17	Shabdakalpadruma	Raja Radha Kanta Deva, Shabda Kalpa Drum: Varanasi: Chowkhamba Sanskrit Series Office
18	Vaidyak Shabda Sindhu	Kaviraj Shri Nagendra Nath Sen Vaidya Shastri, Vaidyak Shabda Sindhu: Varanasi: Chowkhamba Orientalia

Abbreviations

Assessment

S.No	Short form	Discription
1	T-EMI	Theory extended matching item
2	T- EW	Theory Essay writing
3	T- MEQs	Theory MEQs
4	T-CRQs	Theory CRQs
5	T-CS	Theory case study
6	T-OBT	Theory open book test
7	P-VIVA	Practical Viva
8	P-REC	Practical Recitation
9	P-EXAM	Practical exam
10	PRN	Presentation
11	P-PRF	Practical Performance
12	P-SUR	Practical Survey
13	P-EN	Practical enact
14	P-RP	Practical Role play
15	P-MOD	Practical Model
16	P-POS	Practical Poster
17	P-CASE	Practical Case taking
18	P-ID	Practical identification
19	P-PS	Practical Problem solving
20	QZ	Quiz
21	PUZ	Puzzles
22	CL-PR	Class Presentation,
23	DEB	Debate
24	WP	Word puzzle
25	O-QZ	Online quiz

26	O-GAME	Online game-based assessment
27	M-MOD	Making of Model
28	M-CHT	Making of Charts
29	M-POS	Making of Posters
30	C-INT	Conducting interview
31	INT	Interactions
32	CR-RED	Critical reading papers
33	CR-W	Creativity Writing
34	C-VC	Clinical video cases,
35	SP	Simulated patients
36	PM	Patient management problems
37	CHK	Checklists
38	OSCE	OSCE
39	OSPE	OSPE,
40	Mini-CEX	Mini-CEX
41	DOPS	DOPS
42	CWS	CWS
43	RS	Rating scales
44	RK	Record keeping
45	COM	Compilations
46	Portfolios	Portfolios
47	Log book	Log book
48	TR	Trainers report
49	SA	Self-assessment
50	PA	Peer assessment
51	360D	360-degree evaluation
52	TT-Theory	Theory
53	PP-Practical	Practical
54	VV-Viva	Viva

Domain

S.No	Short form	Discription
1	CK	Cognitive/Knowledge
2	CC	Cognitive/Comprehension
3	CAP	Cognitive/Application
4	CAN	Cognitive/Analysis
5	CS	Cognitive/Synthesis
6	CE	Cognitive/Evaluation
7	PSY-SET	Psychomotor/Set
8	PSY-GUD	Psychomotor/Guided response
9	PSY-MEC	Psychomotor/Mechanism
10	PSY-ADT	Psychomotor Adaptation
11	PSY-ORG	Psychomotor/Origination
12	AFT-REC	Affective/ Receiving
13	AFT-RES	Affective/Responding
14	AFT-VAL	Affective/Valuing
15	AFT-SET	Affective/Organization
16	AFT-CHR	Affective/ characterization

T L method

S.No	Short form	Discription
1	L	Lecture
2	L&PPT	Lecture with Power point presentation
3	L&GD	Lecture & Group Discussion
4	L_VC	Lecture with Video clips
5	DIS	Discussions
6	BS	Brainstorming
7	IBL	Inquiry-Based Learning
8	PBL	PBL
9	CBL	CBL
10	PrBL	Project-Based Learning
11	TBL	TBL
12	TPW	Team project work
13	FC	Flipped classroom
14	BL	Blended Learning
15	EDU	Edutainment
16	ML	Mobile learning
17	ECE	ECE
18	SIM	Simulation
19	RP	Role plays
20	SDL	Self-directed learning
21	PSM	Problem solving method
22	KL	Kinesthetic Learning
23	W	Workshops
24	GBL	Game-Based Learning
25	D-M	Demo on Model

26	LS	Library Session
27	PL	Peer learning
28	RLE	Real life experience
29	REC	Recitation
30	SY	Symposium
31	TUT	Tutorial
32	PER	Presentations
33	PT	Practical
34	XRy	X ray identification
35	CD	Case diagnosis
36	LRI	Lab report interpretation
37	DA	Drug analysis
38	D	Demonstration
39	D_BED	Demonstration bedside
40	D_L	Demonstration Lab
41	DG	Demonstration Garden
42	FV	Field visit
43	PRA	Practical
44	VIVA	Viva
45	TH	Theory

॥ आयुषे सर्वलोकानाम् ॥



**Course curriculum for Second Professional BAMS (PRESCRIBED BY
NCISM)**

Swasthavritta evam Yoga

(SUBJECT CODE : AyUG-SW)

(Applicable from 2021-22 batch, from the academic year 2023-24 onwards for 5 years or until further notification by NCISM, whichever is earlier)

BOARD OF AYURVEDA

**NATIONAL COMMISSION FOR INDIAN SYSTEM OF MEDICINE NEW DELHI-
110058**

II Professional Ayurvedacharya (BAMS)**Subject Code : AyUG-SW****Summary**

Total number of Teaching hours: 400			
Lecture hours(LH)-Theory		150	150(LH)
Paper I	75		
Paper II	75		
Non Lecture hours(NLH)-Theory		250	250(NLH)
Paper I & II	75		
Non Lecture hours(NLH)-Practical			
Paper I & II	175		

Examination (Papers & Mark Distribution)					
Item	Theory Component Marks	Practical Component Marks			
		Practical	Viva	Elective	IA
Paper I	100	100	60	(Set SC) 10	30
Paper II	100				
Sub-Total	200	200			
Total marks	400				

Important Note:-The User Manual II BAMS is a valuable resource that provides comprehensive details about the curriculum file. It will help you understand and implement the curriculum. Please read the User Manual II before reading this curriculum file. The curriculum file has been thoroughly reviewed and verified for accuracy. However, if you find any discrepancies, please note that the contents related to the MSE should be considered authentic.

In case of difficulty and questions regarding curriculum write to cur.imp@ncismindia.org

PREFACE

Health care, especially the preventive health care is coming to a fore front, most so during recent years due to pandemic situation. In fact, the preventive health care is indeed the strength of Ayurveda as its primary motto itself is ‘Swasthasya swasthya rakshanam’, Keep sustaining health of a healthy and nourishes it. The students of Ayurveda need to understand it better, who can carry this message and contribute for building a healthy India, may the entire world. Keeping this in mind any effort to sensitize the student community to understand the basics of Swasthavritta, the preventive health care of Ayurveda is laudable. Swasthavritta is an important subject of the BAMS program for the undergraduate students of Ayurveda. The term Swastha means healthy individual and Vritta means actions or regimen thus Swasthavritta denotes the actions or regimen which can be observed to maintain the health of a healthy individual and to prevent the diseases. This subject refers to the Preventive medicine and social medicine/ Community medicine of contemporary medical science.

Swasthavritta deals with the Vaiyaktika swasthavritta (Individualized lifestyle including in terms of prevention, promotion & maintainance of health) incudes Dinacharya, Ritucharya, Sadvritta, Rasayana , Pathya-Apathya for both Swastha as well as disease condition. Samajika swasthavritta- Community health deals with Janapadodhwamsa, Environmental health, Occupational health, School health and National health programs etc, along with these topics Swasthavritta also deals Yoga and Naturopathy. Thus, Swasthavritta provides holistic health care to community.

New curriculum of Swasthavritta is designed considering cognitive, affective, and psychomotor domains. There are group discussions, workshops, field visits, health institutional visits, factory visits health surveys and activities beyond the textbook during the practical hours like preparation of charts, models, seminar presentations by students. Swasthavritta subject also deals with teaching learning methods like role play, flipped the classroom, etc. Some assessment methods like OSPE, PBL, DOPS, CBD, skill assessment, etc are incorporated.

This curriculum serves as a valuable resource for both educators and students, guiding them through the fascinating realm of swasthavritta. May the knwoledge gained from this curriculum empower students to make a positive impact in promoting health, preventing diseases and creating a healthier society. This curriculum epmowers the Ayrurvedic graduates who capable of designing customized individualized lifestyle as well as community health measures as per Ayurvedic principles. This also makes graduates to become health educators, who will take part in national health programs, who can assess community needs and develop measures to counteract the health problems and make them to prepare competent community physicians.

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Course Code and Name of Course

Course code	Name of Course
AyUG-SW	Swasthavritta evam Yoga

Table 1- Course learning outcomes and matched PO

SR1 CO No	A1 Course learning Outcomes (CO) AyUG-SW At the end of the course AyUG-SW, the students should be able to-	B1 Course learning Outcomes matched with program learning outcomes.
CO1	Demonstrate application of principles of Swasthavritta in lifestyle modifications.	PO1,PO2,PO4,PO6
CO2	Assess the health status and advise preventive & promotive measures according to Ayurveda principles	PO3
CO3	Demonstrate and advise Yoga and Naturopathy as health promotive and disease preventive regimen	PO1,PO4
CO4	Understand and apply the principles and components of primary health care and health policies to achieve the goal of health for all	PO2,PO5
CO5	Advocate and propagate preventive principles of Ayurveda and contemporary sciences through Information, Education and Communication(IEC)	PO8
CO6	Conduct community surveys and apply epidemiological principles for the assessment of health & morbidity as a community physician	PO2,PO5
CO7	Understand and apply the principles of environmental health and its effects on public health with control measures	PO3,PO4
CO8	Demonstrate skills and research aptitude for the promotion of health and prevention of diseases	PO9

Table 2 : Contents of Course

Paper 1 Principles of Swasthavritta, Yoga and Naturopathy					
Sr. No	A2 List of Topics	B2 Term	C2 Marks	D2 Lecture hours	E2 Non- Lecture hours
1	Swastha and Swasthya Definition of Swasthavritta and its objective. Swasthalakshanas, Arogyalakshanas, Dhatusamyalakshanas. Concept of Health & Operational definition of health. Importance of Shodhana in Swastha in relation to Sanchita & Asanchita Dosha & Classification of Swastha purusha as Sanchita dosha and Asanchita Dosha. Dimensions of health -Physical, Mental and Social. Concept of well-being : objective component of well-being - standard of living and level of living and subjective component of well-being - Quality of Life. One health concept / Vasudhaiva Kutumbakam” or “One Earth · One Family- One Future”.	1	6	3	0
2	Healthy Life style -Dinacharya (Daily regimen) Concept of Primordial, Primary, Secondary and Tertiary Prevention along with examples in Ayurveda. Importance of Ahara and Vihara as the health promotive and disease preventive measures. Importance of Niyata kala vihara (Dinacharya, Ritucharya) and Aniyata kala Vihara (Vegadharana, Vegaudirana, Ritushodhana, Brumhana and Bhutadi asparshana) for health promotion and disease prevention. Concept of waking up at 'Brahme muhurta' in the present scenario and the effect of early rise on health, sleep, alertness and memory. UshaJalapana' (Drinking water in early morning). Importance of Malatyaga in vata kaala - early morning (Good Bowel Habits.). Mukhaprakshalana and face washes used currently. Concept of Dantadhavana and modern-day brushing techniques and dentifrices. Concept of Jihwanirlekhana and the tools used in today's era and their benefits. Concept of Anjana as a health promotive measure. Kavala and gandusha for oral hygiene including mouthwashes available in the market. Abhyanga as health promotive measure. Importance of the Tambula. Prayogika Dhoomapana (Practicable & non-practicable Dhoomapana- inhalation of herbal fumes/ herbal inhalers with their benefits and contraindications. Ill effects of tobacco smoking of various sorts viz. beedi, cigarette, hookah on health. Applied aspects of Sarvanga Abhyanga, Padabhyanga, Shiroabhyanga and their possible physiological effects. Application of Abhyanga according to different age groups and occupation/activity. Different snehas/oils to be used for daily abhyanga as per seasons and geographical variations. Concept of Vyayama and present-	1	38	8	5

	<p>day practices such as aerobic exercises, muscle strengthening exercises etc. to be practiced as per prakriti, age and occupation. Ardhashakti lakshanas of vyayama and the consequences of ati vyayama. Udwartana, Utsadana Udgharshana . Snana- Types of different types of bath and Physiological effects of snana on body and mind. Importance and benefits of Anulepana. Merits and demerits of present-day applications like face powder, face pack, balm, lotions, lipsticks, deodorants and perfumes etc. Importance of proper clothing (Vastradharana) in social life.</p>				
3	<p>Ratricharya Ratri bhojanvidhi and its relation to health. Ratri shayana vidhi in relation to the proper time of sleep. Relation between Nidra and health. Effects of Yukta & Ayukta nidra. Effects of Ratri Jagarana, Diwaswapna, Anidra, Atinidra and Akala Nidra. Ahara and Vihara Causing sound sleep as well as disturbed sleep. Formulation of the duration of sleep according to age and Sleep in healthy and ailing persons. Various Aspects of Sleep like: a. Daytime Sleepiness and Alertness b. Sleep Deprivation c. Sleep and Host Defense d. Master Circadian Clock and Master Circadian Rhythm e. Human Circadian Timing System and Sleep-Wake Regulation f. Circadian Rhythms in Sleepiness, Alertness, and Performance g. Circadian Disorders of the Sleep-Wake Cycle. Sleep apnea , insomnia, narcolepsy and restless leg syndrome. Solutions to Asatmya jagarana (sleep disorders). Importance of observing brahmacharya and abrahmacharya in ratricharya in relation to health. Brahmacharya with special reference to lifestyle guidelines. Reproductive and sexual health according Ayurveda.</p>	1		6	1
4	<p>Ritucharya Classification of kaala , Adana kala and visarga kala , identification of seasons based on the ritu lakshanas in different geographical areas. Sanchaya- Prakopa- Prashamana of Dosha with their gunas in each ritu. Relation of Agni , Bala and Ritu with its application. Ritu shodhana for the prevention of diseases. Pathya - Apathya in regards to Ahara -Vihara in all six ritus in present scenario. Importance of ahara and vihara in ritu sandhi and Yamadanshtra kala. Rituharitaki as a rasayana with research updates. Effects of Rituviparyaya on health and its relation to janapadaudhwamsa/maraka vyadhis with present day examples.</p>	1		5	2
5	<p>Roganutpadaniya Concept of vegadharana and vega-udirana in relation to health and morbidity. Symptoms and management principles of adharaniya vega janya vyadhis from</p>	1	13	2	1

	bruhatrayee. Concept of vegaudirana (viz. Use of snuffing powder, forcible evacuation of bowels & bladder etc.). Importance of dharaniya vegas in promotion of mental health.				
6	Sadvritta Sadvritta measures for the maintenance of personal ,social and spiritual health. Observance of Sadvritta for the prevention of Adharma. Achara Rasayana" and its role in the prevention and control of diseases.Characteristics of a mentally healthy person, warning signals of poor mental health, types of mental illness and causes of mental ill-health. Mental health services and comprehensive mental health programme. Role of trigunas and satvavajaya in mental health promotion in present era. Digital health promotion	1		2	1
7	Ahara Significance of Ahara for health and well-being according to Ayurveda & Contemporary science. Classification of aharadravyas as per Ayurveda & Contemporary science. Ahara vidhividhana, Ahara sevanakala & Dwadasha ashanapravicharana . Applied aspect of Pathyahara, Apathyahara, Samashana, Adhyashana, Vishamashana. Ahara &vihara leading to Santarpanajanya evam Apararpanajanyavyadhi and importance of upavasa and concept of intermittent fasting. Benefits of Shadrasabhojana. Importance of Ashta aharavidhivishesha ayatanani in present era. Importance of Nityasevaniyadravyas in the maintenance of health. Properties (Guna& karmas) of Ahara dravyas in the following vargas with their nutritive value: Dhanyavarga – Shuka Dhanya (Cereals and Millets), Shami Dhanya (Pulses), Shaka and Haritavarga (Leafy and Non leafy vegetables), Kanda varga (roots and tubers), Phalavarga (Fruits), Taila varga (Fats and Oils), Ikshuvarga (Sugarcane Products) &Madyavarga(Alcoholic Beverages), Dugdhavarga (Milk and Milk products), Ahara UpayogiVarga (Spices & Condiments), Kritannavarga(Prepared Food), Mamsavarga (Meat types) and JalaVarga.Definition of Pro-biotics and Pre-biotics and their utility. Proximate principles of Food - Recommended Daily Allowance according to various conditions, Sources and deficiency diseases of Protein, Carbohydrate, Fats, Vitamins, and Minerals. Definition of Balanced diet and diet for an individual depending on age, body weight and physiological status and Social Aspects of Nutrition.Food hygiene, Sanitation of eating places, Preservation of food, Food handlers, Foodborne diseases, Food fortification, Food adulteration and Food toxicants. Milk Hygiene, Milk composition, Source of infection for Milk, Milk borne	1	20	20	15

	<p>diseases, Clean and Safe milk and Pasteurization of milk Meat Hygiene, Meat inspection, Slaughterhouse and Freshness of fish and egg. Safety and hygiene measures for Fruits and Vegetables. Formulation of Pathya-Apathya diet for prevention of lifestyle disorders such as Obesity, Diabetes mellitus, Cardiovascular diseases and Acid peptic diseases. Description of Food safety and standards regulation (Ayurveda Ahara Regulations), 2022 and Food safety and standards Act, 2006. Different Dietary Supplements and Ergogenic Aids. Impact of different dietary patterns: Mediterranean diet, Keto Diet, DASH diet, the MIND diet, Vegan diet, Ovo-lacto-vegetarian, Pesco-vegetarian, Plant-based diet, Intermittent diet, the Nordic diet, importance of organic foods, merits and demerits of genetically modified foods and inflammatory foods such as fried foods, cookies, hot dogs, red meat, refined grains, pizza, burger etc., and instant foods like Maggi etc., Concept of slow and fast foods and impact of cooking processes like boiling, steaming, sautéing, fermenting etc. (samskara) on health. Definition of Nutraceuticals, Nutrigenomics, Nutrigenetics. Concept of Viruddhaahara with classical and modern-day examples and the application of this in the prevention of diseases</p>				
8	<p>Rasayana for Swastha Definition of Rasayana and benefits of Rasayana. Classification and types of Rasayana with examples. Urjaskara Rasayanas as per age and occupations /Activities Antioxidant & immunomodulatory effects of Rasayana with reference to research articles. Importance of lifestyle counselling with its methods.</p>	1	5	2	2
9	<p>Yoga Etymology/derivation of the word 'Yoga'. Definitions of Yoga according to Patanjali Yogasutras, Bhagavad Gita and Charaka Samhita. Difference between Rajayoga, Hathayoga and Karmayoga. Yogabhyasa Pratibhandhakas and Yoga Siddhikarabhavas. Mitahara and Pathya-apathyas during Yogabhyasa. Concept of Panchakosha theory. Description of Ashtangas of Yoga - Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana and Samadhi. Suryanamaskara. Description of Shatkarmas - Dhauti, Basti, Neti, Trataka, Nauli, and Kapalabhati. Bandha - procedure and benefits of Mulabandha, Jalandharabandha and Uddiyanabandha. Mudras - Shanmukhi mudra and Jnana mudra. Shatchakras and their importance in Yoga practice. Description of Ida-Pingala-Sushumna nadis and their importance in yoga practice. Concept of Moksha according to Charaka, Muktatmalakshana and Moksha upayas. Importance of International Day of Yoga (IDY).</p>	2	18	22	6

	Adverse effects of improper Yoga practices			
10	Naturopathy Basic principles of Naturopathy. Concept of Panchabhutopasana. Therapeutic effects of Mud therapy. Therapeutic effects of Sun bath. Fasting therapy - its types and benefits. Hydrotherapy - types of water used based on the temperature and therapeutic effects of Hydrotherapy. Therapeutic effects of Massage	2	5	4
Total Marks			100	75 hr
			37 hr	

Paper 2 Public health					
Sr. No	A2 List of Topics	B2 Term	C2 Marks	D2 Lecture hours	E2 Non- Lecture hours
11	Janapadodhwamsa / Maraka Vyadhi Causes of Janapadodhwamsa/ maraka vyadhi. Manifestation and control measures of Janapadodhwamsa. Principles and uses of epidemiology. Dynamics of disease transmission. Theory of disease causation - epidemiological triad and natural history of disease. Concept of prevention, modes of intervention, risk factors, incidence and prevalence. Susceptible host and host defense. Immunizing Agents. Concept of vyadhikshamatwa. Investigation of an epidemic. Prevention and control of an epidemic. Sankramaka roga as per Ayurveda. Epidemiological determinants, brief pathology, transmission, incubation period, clinical features, diagnosis and preventive measures of 1. Droplet Infections such as Chicken Pox, Measles, Rubella, Diphtheria, Pertussis, Mumps, Tuberculosis, SARS, Influenza, Pneumonia, Covid-19 and Leprosy. 2. Water borne Infections / intestinal infections - Cholera, Polio, Viral Hepatitis, Typhoid. 3. Intestinal infestations – Ascariasis, Hook worm and Tape worm. 4. Emerging and re-emerging diseases. Explain Role of Ayurveda in Epidemics like COVID-19, Zika Virus, H1N1, H3N2, etc., 5. Sexually transmitted diseases (STDs) with prevention and control - HIV/ AIDS, Syphilis and Gonorrhea. Role of Ayurveda in the prevention and control with recent research updates of Lifestyle diseases such as DM, Obesity, Coronary artery disease (CAD) and Cancer. Epidemic Diseases (Amendment) Ordinance Act, 2020 .,	2	10	37	10
12	Environmental health Air: Properties of Vayu and composition of air. Changes in	2	16	10	5

	<p>air of the occupied room. Comfort zone and indices of thermal comfort. Air pollution -causes, prevention and control. Effects of air pollution on health and social aspects .Effects of Global warming with recent updates. Definition of ventilation and types of Ventilation. Effects of high altitude and mountain air on health. Water : Safe and wholesome water and water requirements. Properties of water from different sources. Water pollution and health hazards. Contemporary and Ayurvedic methods of water purification. Hard Water - its effects on health and methods of removal of hardness. Quality of water stored in different vessels as per classics. Rain water harvesting - methods and its importance. Soil : Types of soil and relation between soil and health. Land pollution - its prevention and control. Land purification as per the classics. Social goals of Housing and Housing standards. The Building and other construction workers (Regulation of employment and conditions of services) Act, 1996 Effects of housing on health. Overcrowding and its impact on health. Light: Good lighting, natural lighting and artificial lighting. Biological effects of lighting. Noise : Definition of noise and its sources, effects on health and control measures. Radiation: Radiation - sources and effects on health and control measures. Waste disposal : Types of solid waste, Storage and collection of refuse. Methods of disposal of solid waste (Rural & urban). Excreta Disposal methods & Sanitary Latrines. Modern Sewage disposal methods. Disposal methods of Excreta during camps, fairs, and festivals. Bio-medical waste management and Bio-medical waste management rules, 2016. Environment protection Act, 1986.</p>				
13	<p>Disaster management Definition of disaster and disaster management. Effects of natural and man-made disasters. Epidemiologic surveillance and disease control measures.</p>	2		1	2
14	<p>Occupational Health Definition of occupational health and Ergonomics. Occupational Hazards and Occupational diseases. Prevention and control of Occupational diseases . ESI Act ,1948 and The factories Act.1948. Role of Ayurveda in various Occupational health problems. The Merchant Shipping / Medical Examination Rules,2000</p>	2	20	3	3
15	<p>School health services Health problems of school children. Aspects of school health services. Duties of school medical officers. Healthy environment in the school.</p>	2		2	3
16	<p>Disinfection</p>	2		2	3

	Definition of different term used in relation to disinfection. Types of disinfection. Natural agents, Physical agents and Chemical agents of disinfection. Recommended disinfection procedures of feces & urine, sputum, and room. Ayurvedic disinfection methods.				
17	Primary health care Definition of Primary Health Care. Principles and elements of primary health care. Levels of health care. Structure of Primary health care at village, sub-center, Primary health center (PHC), Community health center (CHC) and Rural hospital levels. Primary health care in Health insurance, Private agencies, Voluntary health agencies, NGOs and the AYUSH sector. Role of Ayurveda in Primary Health Care.	2	20	2	1
18	Mother and Child health care Objectives of Maternal and Child Care services. MCH problems & indicators of MCH care.	2		1	1
19	Family welfare programme Definition of Demography and sources of demographic statistics in India. Demographic cycle & definition of life expectancy. Definition of family planning, eligible couple and target couple. Objectives of family planning. Problems of population explosion . National population policy. Methods of Contraceptive (Fertility Regulating Methods).	2		2	2
20	Preventive Geriatrics Health problems of the aged and prevention and control measures. Relation between lifestyle and healthy aging. Role of Rasayana in preventive geriatrics.	2		1	1
21	World Health Organization and International health agencies Definition of World Health organization. Structure, regions, and works of the World Health Organization. Functions of various international health agencies - United Nations health agencies, Bilateral health agencies and Non- Governmental agencies. Contribution of the World health organization to the global acceptance of Ayurveda.	2	19	3	1
22	Vital Statistics Definition of Vital Statistics. Sources of Vital statistics. Fertility , Morbidity and Mortality rates. Registration of Birth and Death Act, 1969	2		1	1
23	Health Administration Health administration including AYUSH at the Central, State, District, and Village levels.	2		2	1
24	National Health Programmes	2	15	7	3

	National Health Programs : Leprosy(NLEP), AIDS (NACP), Blindness (NPCB), Polio , National TB Elimination program , Vector born disease control program, RCH program, ICDS program, Universal Immunization program, National mental health program , National Program for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases & Stroke (NPCDCS) , Swachha Bharat mission, Ayushman Bharat Yojana, Ayushman Bharat Digital Mission, National health mission (NRHM&NUHM), National AYUSH Mission (NAM).National nutrition programs: National Iodine Deficiency Disorders Control program, National Iron Plus Initiative for Anemia Control, National Vitamin A prophylaxis program, Mid-Day Meal program & Balwadi nutrition program.			
25	National Health Policy National Health Policy (NHP) and the scope of Ayurveda in NHP.	2	1	1
Total Marks			100	75 hr
			38 hr	

Table 3: Learning objectives (Theory) of Course

Paper 1 Principles of Swasthavritta, Yoga and Naturopathy									
A3 Course outcome	B3 Learning Objective (At the end of the session, the students should be able to)	C3 Domain/sub	D3 Must to know / desirable to know / Nice to know	E3 Level Does/ Shows how/ Knows how/ Know	F3 T-L method	G3 Assessment (Refer abbreviations)	H3 Formative/summative	I3 Term	J3 Integration
Topic 1 Swastha and Swasthya (Lecture :3 hours, Non lecture: 0 hours)									
CO1	Define Swasthavritta and describe its objective.	CK	MK	K	L	TT-Theory	S	I	
CO1	Describe and compare Swasthalakshanas Arogyalakshanas, Dhatusamyalakshanas. Describe Concept of Health & Operational definition of health.	CC	MK	K	L&PP T	TT-Theory	S	I	
CO1	Describe the Importance of Shodhana in Swastha in relation to Sanchita& Asanchitha Dosha & Classify Swastha purusha as Sanchita dosha and Asanchita Dosha.	CC	MK	KH	L	M-CHT	S	I	
CO1	Explain the Physical, Mental and Social dimensions of health.	CK	MK	KH	L&G D	T- EW	S	I	
CO1,CO2	Describe the objective component of well-being - standard of living and level of living and subjective component of well-being - Quality of Life.	CK	MK	KH	L	T- EW	S	I	
CO1,CO2,CO 7	Explain one health concept / Vasudhaiva Kutumbakam” or “One Earth · One Family One Future”	CK	DK	K	L	T- EW	F	I	

Topic 2 Healthy Life style -Dinacharya (Daily regimen) (Lecture :8 hours, Non lecture: 5 hours)									
CO1,CO2	Explain the Primordial, Primary, Secondary, and Tertiary Preventive measures in the context of Ayurveda with examples	CK	MK	KH	L&PP T,SD L	TT-Theory	F&S	I	
CO1,CO2	Explain the importance of Ahara and Vihara as the health promotive and disease preventive measures.	CK	MK	KH	L&PP T	TT-Theory	S	I	
CO1,CO2	Describe the importance of Niyata kala vihara (Dinacharya, Ritucharya) and Aniyata kala Vihara (Vegadharana, Vegaudirana, Ritushodhana, Brumhana and Bhutadi asparshanaa) for health promotion and disease prevention.	CAN	MK	KH	L&PP T	T- EW	S	I	
CO1,CO2	Explore and analyse the concept of waking up at 'Brahma muhurta' in the present scenario and the effect of early rise on health, sleep, alertness and memory	CAN	DK	KH	IBL	DEB	F	I	
CO1,CO2	Describe the time, quantity and benefits of 'Usha Jalapana' (Drinking water in early morning).	CC	MK	K	L&PP T	T- EW	S	I	
CO1,CO2	Explain the Importance of Malatyaga in vata kaala - early morning (Good Bowel Habits)	CK	MK	KH	L&PP T	TT-Theory	S	I	
CO1,CO2	Explain the procedure, dravyas and benefits of Mukhaprakshalana and face washes used currently.	CK	MK	KH	L&PP T	T- EW	F&S	I	
CO1,CO2	Describe the time, procedure, benefits, contraindications and herbs used as per rasa for dantadhavana and modern-day brushing techniques and dentifrices.	CC	MK	KH	L&PP T	T- EW	F&S	I	
CO1,CO2	Describe jihwanirlekhana, explain the tools used in today's era and their benefits.	CAP	MK	KH	SDL	TT-Theory	F&S	I	
CO1,CO2	Explain the Anjana dravyas for Swastha and their benefits	CK	MK	K	L	INT	F&S	I	V-

									SHL
CO1,CO2	Describe the occupation /activity in which Anjana can be used as a health promotive measure	CS	NK	KH	SDL	O-QZ	F	I	
CO1,CO2	Explain the dravyas used with their doses for Pratimarsha Nasya and their benefits.	CC	MK	KH	L&PP T	T- EW	F&S	I	V-PC
CO1,CO2	Describe the various kaal for administering Pratimarsha Nasya as per day and season (ritu)	CAP	MK	KH	L&PP T	P-VIVA	F&S	I	V-PC
CO1,CO2	Describe the occupation /activity in which Pratimarsha Nasya can be used as a health promotive measure.	CAP	MK	KH	L&G D	INT	F&S	I	V-PC
CO1,CO2	Describe the ingredients, procedure and benefits of kavala and gandusha for oral hygiene including mouthwashes available in the market	CAP	MK	KH	L&PP T	TT-Theory	F&S	I	
CO1,CO2	Mention different snehas/oils to be used for daily abhyanga as per seasons and geographical variations.	CK	MK	K	L&PP T	INT	F&S	I	
CO1,CO2	Justify the importance of the classical tambula by comparing it with the present-day betel chewing.	CE	DK	KH	TBL	TT-Theory	F	I	
CO1,CO2	Explain the practical application of Prayogika Dhoomapana (inhalation of herbal fumes/ herbal inhalers) with their benefits and contraindications	CAP	MK	SH	BL	TT-Theory	S	I	
CO1,CO2	Explain the ill effects of tobacco smoking of various sorts viz. beedi, cigarette, hookah on health	CAP	MK	KH	ECE	P-CASE	F&S	I	
CO1,CO2	Describe the applied aspects of Sarvanga Abhyanga, Padabhyanga, Shiroabhyanga and	CAP	MK	KH	DIS	T- EW	F&S	I	V-PC
CO1,CO2	Explain the application of Abhyanga according to different age groups and occupation/activity.	CAP	DK	KH	SDL	T-CS	F	I	V-PC

CO1,CO2	Explain the indications, contraindications and benefits of Vyayama.	CK	MK	KH	L&PP T	T- EW	F&S	I	
CO1,CO2	Describe the types & benefits of vyayama and present-day practices such as aerobic exercises, muscle strengthening exercises etc.to be practiced as per prakriti, age and occupation.	CAP	MK	KH	DIS	CR-RED	F&S	I	
CO1,CO2	Describe the assessment of ardhashakti lakshanas of vyayama and the consequences of ati vyayama.	CE	MK	KH	DIS	TT-Theory	F&S	I	
CO1,CO2	Describe and compare the dravyas, benefits, and application of Udvartana, Udgharshana and Utsadana.	CAN	MK	KH	L&PP T	M-CHT	F&S	I	V-KC
CO1,CO2	Explain the physiological effects of snana on body and mind and explain the reasons for contraindications of Snana.	CAN	MK	KH	L&PP T	CR-W	F&S	I	
CO1,CO2	Explain the importance and benefits of Anulepana.	CK	MK	KH	L&PP T	P-VIVA	F&S	I	
CO1,CO2	Describe the merits and demerits of present-day applications like face powder, face pack, balm, lotions, lipsticks, deodorants and perfumes.	CAP	NK	KH	PrBL	CL-PR	F	I	
CO1,CO2	Explain the importance of proper clothing (vastradharana) in social life.	CK	MK	KH	L&PP T	INT	F&S	I	
Topic 3 Ratricharya (Lecture :6 hours, Non lecture: 1 hours)									
CO1,CO2	Describe ratri bhojanvidhi and its relation to health.	CK	MK	KH	L&PP T	T- EW	F&S	I	
CO1,CO2	Describe ratri shayana vidhi in relation to the proper time of sleep.	CK	MK	KH	L&PP T	T- EW	F&S	I	
CO1,CO2	Explain the relation between Nidra and health.	CK	MK	KH	L&PP T	T- EW	F&S	I	

CO1,CO2	Describe effects of Yukta & Ayukta nidra.	CK	MK	KH	L&PP T	T- EW	F&S	I	
CO1,CO2	Explain the effects of Ratri Jagarana, Diwaswapna, Anidra, Atinidra and Akala Nidra.	CK	MK	K	L&PP T	T- EW	F&S	I	
CO1,CO2	Identify Ahara and Vihara Causing sound sleep as well as disturbed sleep.	CAN	DK	KH	SDL	INT	F	I	
CO1,CO2	Formulate the duration of sleep according to age, Sleep in healthy and ailing persons.	CE	DK	KH	SDL	INT	F	I	
CO1,CO2,CO 8	Explain various Aspects of Sleep like: a. Daytime Sleepiness and Alertness b. Sleep Deprivation c. Sleep and Host Defense d. Master Circadian Clock and Master Circadian Rhythm e. Human Circadian Timing System and Sleep-Wake Regulation f. Circadian Rhythms in Sleepiness, Alertness, and Performance g. Circadian Disorders of the Sleep-Wake Cycle	CK	DK	KH	L&PP T	C-INT	F	I	
CO1,CO2,CO 8	Explain Sleep apnoea , insomnia, narcolepsy and restless leg syndrome. Explain solutions to Asatmya jagarana (sleep disorders .)	CK	DK	KH	L&PP T	C-INT	F	I	
CO1	Explain the importance of observing brahmacharya and abrahmacharya in relation to health	CAP	MK	KH	L&G D	TT-Theory	F&S	I	
CO1	Describe Brahmacharya with specail reference to lifestyle guidelines	CAP	MK	KH	L&G D	TT-Theory	F&S	I	
CO1	Describe reproductive and sexual health according to Ayurveda	CAP	MK	KH	L&G D	TT-Theory	F&S	I	
Topic 4 Ritucharya (Lecture :5 hours, Non lecture: 2 hours)									

CO1	Explain classification of kaala , distinguish Adana kala and visarga kala , identification of seasons based on the ritu lakshanas in different geographical areas.	CAP	MK	K	L&PP T	M-CHT	F&S	I	
CO1	Analyse the Sanchaya- Prakopa- Prashamana of Dosha with their gunas in each ritu.	CAN	MK	K	L&PP T	PUZ	F&S	I	
CO1	Describe the Relation of Agni , Bala and Ritu with its application.	CAP	MK	K	L&PP T	CL-PR	F&S	I	
CO1	Explain ritu shodhana for the prevention of diseases.	CC	MK	KH	L	T- EW	F&S	I	
CO1	Analyse Pathya - Apathya in regards to Ahara -Vihara in all six ritus in present scenario.	CAN	MK	K	FC	CL-PR	F&S	I	
CO1	Explain the importance of ahara and vihara in ritu sandhi and yamadanshtra kala.	CK	MK	KH	SDL	T- EW	F&S	I	
CO1	Describe rituharitaki as a rasayana with research updates.	CE	DK	K	SDL	CR-RED	F	I	
CO1	Explain the effects of Rituviaryaya on health and its relation to janapadaudhwansa/maraka vyadhis with present day examples.	CAP	MK	K	L&PP T	CL-PR	F&S	I	
Topic 5 Roganutpadaniya (Lecture :2 hours, Non lecture: 1 hours)									
CO1,CO2	Explain vegadharana and vega-udirana in relation to health and morbidity.	CK	MK	K	L&PP T	T- EW	F&S	I	
CO1,CO2	Compare the symptoms and management principles of adharaniya vega janya vyadhis from bruhatrayee.	CAN	MK	K	L&PP T	T- EW	F&S	I	
CO1,CO2	Explain with examples the concept of vega-udirana (viz. Use of snuffing powder, forcible evacuation of bowels & bladder etc.).	CK	MK	K	L&PP T	T- EW	F&S	I	
CO1,CO2	Explain the importance of dharaniya vegas in promotion of	CK	MK	K	L&PP	T- EW	F&S	I	

	mental health.				T				
Topic 6 Sadvritta (Lecture :2 hours, Non lecture: 1 hours)									
CO1	Describe digital health	CK	DK	KH	L&G D	TT-Theory	F&S	I	
CO1,CO2	Explain Promotion of Digital health	CAP	DK	KH	L&G D	TT-Theory	F&S	I	
CO1,CO2	Describe Digital health problems	CAP	DK	KH	DIS	PP-Practical	F&S	I	V- SHL
CO1,CO2	Understand and adopt the Sadavritta measures for the maintenance of personal ,social and spiritual health.	AFT- VAL	DK	D	RP	INT	F	I	
CO1,CO2	Explain how the observance of Sadvritta helps for the prevention of Adharma.	CC	MK	KH	DIS	T- EW	F&S	I	
CO1,CO2	Describe 'Achara Rasayana" and its role in the prevention and control of diseases.	CK	MK	K	L&PP T	TT-Theory	F&S	I	
CO1,CO2	Explain characteristics of a mentally healthy person, warning signals of poor mental health, types of mental illness and causes of mental ill-health.	CK	MK	K	L&PP T	TT-Theory	F&S	I	
CO1,CO2	Describe the mental health services and comprehensive mental health programme.	CK	MK	K	L&PP T	TT-Theory	F&S	I	
CO1,CO2	Explain the role of trigunas and satvavajaya in mental health promotion in present era.	CAP	DK	KH	CBL	INT	F	I	V-KC
Topic 7 Ahara (Lecture :20 hours, Non lecture: 15 hours)									
CO1	Explain significance of Ahara for health and well-being according to Ayurveda & Contemporary science Explain	CK	MK	K	L	T- EW	F&S	I	

	significance of Ahara for health and well-being according to Ayurveda & Contemporary science								
CO1	Classify aharadravyas as per Ayurveda & Contemporary science	CK	MK	K	L&PP T	T- EW	F&S	I	
CO1	Enumerate and explain the features of Ahara vidhividhana, Ahara sevanakala & Dwadashashanapravicharana .	CK	MK	K	L&PP T	T- EW	F&S	I	
CO1	Discuss the applied aspect of Pathyahara, Apathyahara, Samashana, Adhyashana, Vishamashana. Discuss the Ahara & vihara leading to Santarpanajanya evam Apatarpanajanyavyadhi and importance of upavasa and effects of practice of intermittant fasting on health	CAN	MK	KH	L&PP T	T- EW	F&S	I	
CO1	Explain the benefits of Shadrasabhojana	CAP	MK	KH	L&PP T	T- EW	F&S	I	
CO1	Enumerate and explain the importance of Ashtaharavidhivisheshayatanani in present era	CK	MK	KH	L&PP T	T- EW	F&S	I	
CO1	Explain the importance of Nityasevaniyadravyas in the maintenance of health	CAP	MK	KH	L&PP T	T- EW	F&S	I	H-DG
CO1	Explain the properties (Guna& karmas) of Ahara dravyas in the following vargas with their nutritive value: Dhanyavarga – Shuka Dhanya (Cereals and Millets), Shami Dhanya (Pulses), Shaka and Haritavarga (Leafy and Non leafy vegetables), Kanda varga (roots and tubers), Phalavarga (Fruits), Taila varga (Fats and Oils), Ikshuvarga (Sugarcane Products)&Madyavarga(Alcoholic Beverages), Dugdhavarga (Milk and Milk products), Ahara Upayogi Varga (Spices & Condiments), Kritannavarga(Prepared Food), Mamsavarga (Meat types) and Jala Varga	CC	MK	KH	L&PP T	T- EW	F&S	I	H-DG

CO1	Define Pro-biotics and Pre-biotics and explain their utility	CK	DK	KH	IBL	INT	F	I	
CO1	Explain the Proximate principles of Food, Recommended Daily Allowance according to various conditions, Sources, and deficiency diseases of Protein, Carbohydrate, Fats, Vitamins, and Minerals.	CC	MK	K	L_VC	COM	F&S	I	
CO1	Define Balanced diet and explain diet for an individual depending on age, body weight and physiological status and explain the Social Aspects of Nutrition	CK	MK	KH	L&G D	T- EW	F&S	I	
CO1	Explain Food hygiene, Sanitation of eating places, Preservation of food, Food handlers, Foodborne diseases, Food fortification, Food adulteration, and Food toxicants	CC	NK	KH	L&PP T,ML	P-REC,CHK	F	I	
CO1	Explain Milk Hygiene, Milk composition, Source of infection for Milk, Milk borne diseases, Clean and Safe milk and Pasteurization of milk	CC	DK	KH	L&PP T,ML	P-REC,CHK	F	I	
CO1	Explain Meat Hygiene, Meat inspection, Slaughterhouse and Freshness of fish and egg	CC	DK	KH	L&PP T,ML	P-REC,CHK	F	I	
CO1	Explain safety and hygiene measures for Fruits and Vegetables	CC	NK	K	ML	O-QZ	F	I	
CO1	Formulate a Pathya-Apathya diet for prevention of lifestyle disorders such as Obesity, Diabetes mellitus, Cardiovascular diseases and Acid peptic diseases	CAP	DK	D	SDL	P-REC,CHK	F	I	
CO1	Describe Food safety and standards regulation(Ayurveda Ahara Regulations), 2022 and Food safety and standards Act, 2006.	CK	NK	K	ML	INT	F	I	
CO1	Explain different Dietary Supplements and Ergogenic Aids	CK	NK	K	IBL	TT-Theory	F	I	
CO1	Explain the impact of different dietary patterns: Mediterranean	CC	NK	KH	L&G	INT	F	I	

	diet, Keto Diet, DASH diet, the MIND diet, Vegan diet, Ovo-lacto-vegetarian, pesco-vegetarian, plant-based diet, Intermittent diet, the Nordic diet, importance of organic foods, merits and demerits of genetically modified foods				D				
CO1	Describe the Slow and Fast foods . Explain the impact of cooking processes like boiling, steaming, sautéing, fermenting etc. (samskara) on health and effect of instant foods like Maggi etc,...	CC	NK	KH	DIS	TT-Theory	F	I	
CO1	Define Nutraceuticals, Nutrigenomics, Nutrigenetics	CK	DK	K	L&PP T	T- EW	F	I	
CO1	Explain the concept of Viruddhaahara with classical and modern-day examples and the application of this in the prevention of diseases	CK	MK	KH	ECE	T- EW	F&S	I	H-AT
Topic 8 Rasayana for Swastha (Lecture :2 hours, Non lecture: 2 hours)									
CO1	Explain the importance of lifestyle counselling with its methods	CC	NK	K	L&G D	TT-Theory	F&S	I	
CO1	Define Rasayana and mention the benefits of Rasayana	CK	MK	K	L&PP T	T- EW	F&S	I	
CO1	Classify the types of Rasayana with examples	CK	MK	K	L&PP T	T- EW	F&S	I	
CO1	Explain Urjaskara Rasayanas as per age and occupations /Activities	CAP	MK	K	L&G D	T-CS	F&S	I	
CO1	Explain the antioxidant&immunomodulatory effects of Rasayana with reference to research articles	CC	NK	K	L&G D	CR-RED	F	I	
Topic 9 Yoga (Lecture :22 hours, Non lecture: 6 hours)									
CO1	Describe adverse effects of improper Yoga practices	CK	DK	KH	L&G	TT-Theory	F&S	II	

					D				
CO3	Describe Global importance of International Day of Yoga (IDY)	CK	NK	K	L&PP T	INT	F	II	
CO3	Explain the etymology / derivation of the word 'Yoga' .	CK	MK	K	L&PP T	T- EW	F&S	II	
CO3	Define Yoga according to Patanjali Yogasutras, Bhagavad Gita and Charaka Samhita.	CK	MK	K	L&PP T	TT-Theory	F&S	II	
CO3	Distinguish between Rajayoga, Hathayoga and Karmayoga.	CAN	MK	KH	L&PP T	M-CHT	S	II	
CO3	Explain Yogabhyasa Pratibhandhakas and Yoga Siddhikarabhavas.	CK	MK	K	L&PP T	T- EW	F&S	II	
CO3	Describe Mitahara and Pathya-apathyas during Yogabhyasa.	CC	MK	KH	L&PP T	T- EW	F&S	II	
CO3	Explain Panchakosha theory.	CC	MK	KH	L&PP T	M-POS	F&S	II	
CO3	List out the Ashtangas of Yoga.	CK	MK	K	L&PP T	T- EW	F&S	II	
CO3	Describe Yama and Niyama with meaning according to Yogasutras and Hathayogapradipika.	CC	MK	K	L&PP T	T- EW	F&S	II	
CO3	Define Asana and explain the importance of asana. Distinguish between asana and physical exercise.	CK	MK	K	L&PP T	TT-Theory	F&S	II	
CO3	Describe the procedure, benefits, indications, and contraindications of Standing Yoga Postures such as Ardhakatichakrasana, Padahastasana, Ardhashakrasana, and Trikonasana.	CC	MK	KH	L_VC	PRN	F&S	II	

CO3	Describe the procedure, benefits, indications and contraindications of Sitting Yoga postures such as Swasthikasana, Gomukhasana, Padmasana, Vajrasana, Bhadrasana, Shashankasana, Ushtrasana, Pashchimottanasana, Suptavajrasana, Ardhamatsyendrasana, and Siddhasana.	CC	MK	KH	L_VC	PRN	F&S	II	
CO3	Describe the procedure, benefits, indications and contraindications of Supine Yoga postures such as Pavanamuktasana, Sarvangasana, Matsyasana, Halasana, Chakrasana, Shavasana and Setubandhasana.	CC	MK	KH	L_VC	PRN	S	II	
CO3	Describe the procedure, benefits, indications, and contraindications of Prone Yoga postures such as Bhujangasana, Shalabhasana, Dhanurasana, and Makarasana.	CC	MK	KH	L_VC	PRN	F&S	II	
CO3	Describe the procedure, benefits and contraindications of Suryanamaskara.	CC	MK	KH	L_VC	PRN	S	II	
CO3	Define pranayama and explain its types, benefits, time of practice, and avara-pravara-madhyamalakshanas.	CC	MK	KH	L&PP T	T- EW	F&S	II	
CO3	Describe the procedure of Nadishudhi Pranayama, its benefits, and Nadishudhilakshana.	CC	MK	KH	L_VC	PRN	S	II	
CO3	Enumerate the Kumbhakabhedas.	CK	MK	K	L&PP T	TT-Theory	S	II	
CO3	Describe the procedure and benefits of Suryabhedana, Ujjayi, Sheetal, Sitkari, Bhastrika, Bhramari, Murcha, and Plavini.	CC	MK	KH	L_VC	PRN	F&S	II	
CO3	Enlist Shatkarmas of Yoga , indications and their importance.	CK	MK	K	L&PP T	TT-Theory	S	II	
CO3	Describe the procedure, benefits, indications, contraindications, and precautions of Dhauti, Basti, Neti, Trataka, Nauli, and	CC	MK	KH	L_VC	T- EW	S	II	

	Kapalabhati.								
CO3	Explain the term bandha & Describe the procedure and benefits of Mulabandha, Jalandharabandha, and Uddiyanabandha.	CC	MK	KH	L_VC	T- EW	S	II	
CO3	Describe Mudras and explain the benefits of Shanmukhi mudra and Jnana mudra .	CC	DK	KH	L_VC	T- EW	F	II	
CO3	Describe Shatchakras and explain their importance in Yoga practice.	CAP	DK	KH	L&PP T	T-OBT	F	II	
CO3	Describe Ida-pingala-sushumna nadis and their importance in yoga practice.	CAP	NK	K	L&PP T	T- EW	F	II	
CO3	Define Pratyahara and explain its importance in Yoga practice.	CAP	MK	KH	L&PP T	TT-Theory	S	II	
CO3	Define Dharana and explain its importance in Yoga practice.	CAP	MK	KH	L&PP T	TT-Theory	S	II	
CO3	Define Dhyana and explain its importance in Yoga practice.	CAP	MK	KH	L&PP T	TT-Theory	S	II	
CO3	Describe Cyclic Meditation and Mindfulness meditation and their benefits.	CAP	DK	KH	L&PP T,L_ VC	CL-PR	F	II	
CO3	Define Samadhi and explain its types and importance.	CK	MK	K	L&PP T	TT-Theory	S	II	
CO3	Define Moksha according to Charaka and explain Muktatmalakshana and Moksha upayas.	CK	DK	K	L&G D	INT	F	II	
Topic 10 Naturopathy (Lecture :5 hours, Non lecture: 4 hours)									
CO3	Explain the basic principles of Naturopathy.	CK	DK	K	L&PP	INT	F&S	II	

					T				
CO3	Describe the concept of Panchabhutopasana.	CK	DK	KH	L&PP T	INT	F&S	II	
CO3	Explain the procedure and therapeutic effects of Mud therapy.	CAP	MK	KH	L_VC	TT-Theory	F&S	II	
CO3	Explain the procedure and therapeutic benefits of Sun bath.	CAP	MK	KH	L_VC	TT-Theory	F&S	II	
CO3	Explain Fasting therapy and its types and benefits.	CK	MK	KH	L&PP T	TT-Theory	F&S	II	
CO3	Explain hydrotherapy, types of water used based on the temperature and therapeutic effects of Hydrotherapy.	CAP	MK	KH	L_VC	TT-Theory	F&S	II	
CO3	Describe types, methods and benefits of massage.	CAP	MK	KH	L_VC	TT-Theory	F&S	II	

Paper 2 Public health

A3 Course outcome	B3 Learning Objective (At the end of the session, the students should be able to)	C3 Domain/sub	D3 Must to know / desirable to know / Nice to know	E3 Level Does/ Shows how/ Knows how/ Know	F3 T-L method	G3 Assessment (Refer abbreviations)	H3 Formative/ summative	I3 Term	J3 Integration
Topic 1 Janapadodhwamsa / Maraka Vyadhi (Lecture :37 hours, Non lecture: 10 hours)									
CO1	Understanding the Epidemic Diseases (Amendment) Ordinance	CK	MK	KH	L&G	TT-Theory	F&S	II	

	Act,2020 .,				D				
CO1	Explain the causes of Janapadodhwamsa/ maraka vyadhi State the manifestation and control measures of Jnapadodhwamsa Explain the importance of Panchakarma and Rasayana in preventing Janapadodhwamsa	CK	MK	KH	L&PP T	T- EW	F&S	I	
CO1	Define Epidemiology, enumerate and describe the principles and uses of epidemiology.	CK	MK	KH	L&G D	T- EW	S	I	
CO3	Describe the basic terms of epidemiology.Explain and discuss the dynamics of disease transmission.Explain the theory of disease causation, epidemiological triad and natural history of disease.	CK	MK	KH	L&PP T	T- EW	S	II	
CO2	Explain the concept of prevention, modes of intervention, risk factors, incidence and prevalence.	CK	MK	KH	L&PP T	T-EMI	S	II	
CO2	Explain Susceptible host and host defense.Describe Immunizing Agents.Explain the concept of vyadhikshamatwa.Enlist methods to improve Vyadhikshamatwa.Classify Bala, enlist factors of Bala vriddhikara bhava.	CK	MK	KH	L&PP T	T- EW	F&S	II	
CO2	Explain the investigation of an epidemic. Explain prevention and control of an epidemic.	CK	MK	KH	L&PP T	T- EW	F&S	II	
CO1	Explain Sankramaka roga as per Ayurveda.	CK	MK	K	L&PP T	T- EW	S	II	
CO2	Explain Epidemiological determinants, brief pathology ,transmission, incubation period , clinical features, diagnosis and preventive measures of 1.Droplet Infections such as Chicken Pox, Measles, Rubella, Diphtheria, Pertussis, Mumps, Tuberculosis, SARS, Influenza, Pneumonia, Covid-19 and Leprosy	CK	MK	KH	L&PP T,ED U,D_ BED	T- EW	F&S	II	

CO2	2. Water borne Infections / intestinal infections - Cholera, Polio, Viral Hepatitis, Typhoid	CK	MK	K	L&PP T,D_ BED	T- EW	S	II	V-KC
CO2	3. Intestinal infestations – Ascariasis, Hook worm, Tape worm 4. Emerging and re-emerging diseases. Explain Role of Ayurveda in Epidemics like COVID-19, Zika Virus, H1N1, H3N2, etc	CK	MK	KH	L&G D,D_ BED	T- EW	S	II	
CO2	5. Sexually transmitted diseases (STDs) with prevention and control - HIV/ AIDS, Syphilis and Gonorrhea.	CK	MK	KH	L&G D,D_ BED	T- EW	S	II	
CO2	Explain the role of Ayurveda in the prevention and control with recent research updates of Lifestyle diseases such as DM, Obesity, Coronary artery disease (CAD) and Cancer	CK	MK	KH	L&PP T,D_ BED	T- EW	S	II	
Topic 2 Environmental health (Lecture :10 hours, Non lecture: 5 hours)									
CO1	Understanding the Environment protection Act, 1986	CK	MK	KH	L&G D	TT-Theory	F&S	II	
CO1	Describe the properties of Vayu and state the composition of air.	CK	DK	KH	L	INT	F	II	
CO1	Specify the changes in air of the occupied room.	CK	DK	KH	L	INT	F	II	
CO1	Explain comfort zone and indices of thermal comfort.	CK	DK	KH	L	INT	F	II	
CO2	Comprehend the causes, prevention and control of air pollution. Discuss the effects of air pollution on health and social aspects	CC	DK	KH	L	DEB	F	II	
CO2	Elaborate the effects of Global warming with recent updates	CAP	DK	KH	L&G D	CR-RED	F	II	
CO2	Define ventilation and illustrate its types.	CAP	DK	KH	L&G D	DEB	F	II	

CO2	Explain the effects of high altitude and mountain air on health.	CAP	DK	KH	L&G D	DEB	F	II	
CO1	Explain safe and wholesome water and state water requirements.	CK	MK	KH	L&PP T	TT-Theory,V V-Viva	F&S	II	
CO1	Explain the properties of water from different sources.	CK	MK	KH	L&PP T	TT-Theory,V V-Viva	F&S	II	
CO1,CO6	Explain water pollution and health hazards.	CAP	MK	KH	L&PP T,DIS	CL-PR	F&S	II	
CO1,CO6	Describe the contemporary methods of water purification along with Ayurvedic methods.	CAP	MK	KH	L&PP T,DIS	CL-PR	F&S	II	
CO1,CO6	Elucidate the effects of Hard Water on health and methods of removal of hardness.	CAP	MK	KH	L&PP T,DIS	CL-PR	F&S	II	
CO7	Describe the quality of water stored in different vessels as per classics.	CAP	DK	SH	L	DEB	F	II	
CO7	Explain the rain water harvesting methods and its importance	CAN	NK	SH	L	DEB	F	II	
CO7	Enlist the types of soil.	CK	DK	KH	L&PP T	INT	F	II	
CO7	Interpret the relation between soil and health.	CK	DK	KH	L&PP T	INT	F	II	
CO7	Explain Land pollution and its prevention and control	CK	DK	KH	L&PP T	INT	F	II	
CO7	Explain land purification as per the classics.	CAN	NK	KH	L&G D	T-OBT	F	II	
CO7	Explain the Social goals of Housing and Housing	CE	DK	KH	L&G	T- EW	F	II	

	standards. Understanding of The building and other construction workers Act,1996				D				
CO7	Analyze the effects of housing on health.	CE	DK	KH	L&G D	T- EW	F	II	
CO7	Explain overcrowding and its impact on health	CE	DK	KH	L&G D	TT-Theory	F	II	
CO7	Explain good lighting, natural lighting and artificial lighting	CK	DK	KH	L&PP T	M-POS	F	II	
CO7	Explain the biological effects of lighting.	CK	DK	KH	L&PP T	M-POS	F	II	
CO7	Define noise. Illustrate its sources, effects on health and control measures.	CK	DK	KH	L&PP T	PRN	F	II	
CO7	Enlist the sources of Radiation and explain its effects on health and describe control measures.	CK	DK	KH	L	PRN	F	II	
CO7	Enlist Different types of solid waste and Explain the Storage and collection of refuse.	CK	MK	KH	L,D- M	TT-Theory	S	II	
CO7	Explain the Methods of disposal of solid waste (Rural & urban)	CK	MK	KH	D-M	M-MOD	S	II	
CO7	Describe Bio-medical waste management and Bio-Medical waste management rules, 2016	CK	MK	KH	D-M	TT-Theory	S	II	
CO7	Enlist excreta Disposal methods and explain Sanitary Latrines	CAN	DK	KH	D-M	DEB	F	II	
CO7	Explain the Modern Sewage disposal method	CAN	DK	KH	D-M	DEB	F	II	
CO7	Describe the disposal methods of Excreta during camps, fairs, and festivals	CAN	DK	KH	D-M	DEB	F	II	

Topic 3 Disaster management (Lecture :1 hours, Non lecture: 2 hours)									
CO5	Define disaster and explain disaster management	CK	DK	KH	L&G D	PRN	F	II	
CO5	Explain effects of natural and man-made disasters	CK	DK	KH	L&G D	PRN	F	II	
CO2	Explain epidemiologic surveillance and identify disease control measures	CAP	DK	KH	L&G D	PRN	F	II	
Topic 4 Occupational Health (Lecture :3 hours, Non lecture: 3 hours)									
CO1	Understand the Merchant Shipping / Medical Examination Rules, 2000	CK	DK	KH	L&G D	TT-Theory	F	II	
CO7,CO8	Define Occupational Health and Ergonomics.	CK	MK	K	L&G D	TT-Theory	F&S	II	
CO7,CO8	Explain occupational Hazards.	CK	MK	K	L&G D	T- EW	F&S	II	
CO7,CO8	Enlist occupational diseases and explain their prevention & control.	CK	MK	K	L&G D	T- EW	F&S	II	
CO1	Explain ESI Act, 1948 and The factories Act,1948	CK	MK	K	L&PP T	T- EW	S	II	
CO1	Describe the role of Ayurveda in various Occupational health problems.	CK	MK	KH	L&G D	TT-Theory	S	II	
Topic 5 School health services (Lecture :2 hours, Non lecture: 3 hours)									
CO2	State the Health problems of school children.	CC	MK	KH	L&PP T	T- EW	F&S	II	

CO2	Mention the aspects of school health services.	CC	MK	KH	L&PP T	T- EW	F&S	II	
CO2	Mention the duties of school medical officers.	CC	MK	KH	FV	T- EW	F&S	II	
CO2	Explain how to Maintain a healthy environment in the school.	CC	MK	KH	FV	T- EW	F&S	II	
Topic 6 Disinfection (Lecture :2 hours, Non lecture: 3 hours)									
CO1,CO2,CO 6,CO7	Define the term disinfection	CK	MK	K	L	TT-Theory	F&S	II	
CO1,CO2,CO 6,CO7	Enlist and explain the types of disinfection.	CK	MK	K	L&PP T	P-VIVA,P-PS	F&S	II	
CO1,CO2,CO 6,CO7	Describe the Natural agents, Physical agents, and chemical agents of disinfection	CK	MK	K	L&PP T	T- EW	F&S	II	
CO1,CO2,CO 6,CO7	Demonstrate the recommended disinfection procedures of feces & urine, sputum, and room.	PSY- MEC	DK	KH	L_VC	P-VIVA,QZ	F	II	
CO1,CO2,CO 6,CO7	Explain Ayurvedic disinfection methods.	CK	DK	K	L&PP T	QZ	F	II	
Topic 7 Primary health care (Lecture :2 hours, Non lecture: 1 hours)									
CO1,CO2,CO 3,CO4,CO5,C O8	Define Primary Health Care.	CK	MK	K	L	TT-Theory	S	II	
CO1,CO2,CO 3,CO4,CO5,C O8	Describe the principles and elements of primary health care and the levels of health care.	CK	MK	K	L&PP T	T- EW	F&S	II	
CO1,CO2,CO 3,CO4,CO5,C	Describe the Structure at village, sub-centre, PHC, CHC, Rural hospital levels	CK	MK	K	L&PP T	T- EW	F&S	II	

O8									
CO1,CO2,CO3,CO4,CO5,C O8	Describe primary health care in Health insurance, Private agencies, Voluntary health agencies, NGOs, and the AYUSH sector	CK	DK	K	L&PP T	T-OBT	F	II	
CO1,CO2,CO3,CO4,CO5,C O8	Describe the role of Ayurveda in Primary Health Care.	CK	MK	K	L&PP T	TT-Theory	F&S	II	
Topic 8 Mother and Child health care (Lecture :1 hours, Non lecture: 1 hours)									
CO2,CO3,CO8	Describe the objectives of Maternal and Child Care services.	CK	MK	K	L	T- EW	F&S	II	
CO2,CO3,CO8	Explain the MCH problems & enlist the indicators of MCH care	CC	MK	K	L&PP T	T- EW	F&S	II	
Topic 9 Family welfare programme (Lecture :2 hours, Non lecture: 2 hours)									
CO4,CO5,CO6	Define demography and enlist the sources of demographic statistics in India.	CK	MK	K	L&PP T	TT-Theory	F&S	II	
CO4,CO5,CO6	Describe the demographic cycle & define life expectancy.	CK	MK	K	L&PP T	CL-PR	F&S	II	
CO2,CO4,CO5	Define family planning, eligible couple and target couple.Enlist & explain the objectives of family planning.	CK	MK	K	L&PP T	TT-Theory	F&S	II	
CO2,CO4,CO5	Explain the problems of population explosion and describe national population policy.	CK	MK	K	DIS	TT-Theory	F&S	II	
CO2,CO4,CO5	Classify and describe the Contraceptive methods (Fertility Regulating Methods).	CK	MK	K	L_VC	M-CHT	F&S	II	
Topic 10 Preventive Geriatrics (Lecture :1 hours, Non lecture: 1 hours)									

CO8	Enlist the health problems of the aged and explain their prevention and control measures	CK	MK	K	DIS	INT	F&S	II	
CO8	Explain the relation between lifestyle and healthy aging.	CC	MK	K	DIS	INT	F&S	II	
CO8	Describe the role of rasayana in preventive geriatrics.	CC	MK	K	L&PP T,W	INT	F&S	II	
Topic 11 World Health Organization and International health agencies (Lecture :3 hours, Non lecture: 1 hours)									
CO4	Define and describe the structure, regions, and works of the World Health Organization	CK	MK	KH	L&G D	T- EW,P- VIVA	F&S	III	
CO4	Describe the functions of various international health agencies - United Nations health agencies, bilateral health agencies, and Non- Governmental agencies	CK	MK	KH	L&G D	T- EW,P- VIVA	F&S	III	
CO4	Describe the contribution of the world health organization to the global acceptance of Ayurveda	CK	MK	KH	L&G D	T- EW,P- VIVA	F&S	III	
Topic 12 Vital Statistics (Lecture :1 hours, Non lecture: 1 hours)									
CO1	Understanding of Registration of Birth and Death Act, 1969	CK	MK	KH	L&G D	TT-Theory	F&S	II	
CO4,CO8	Define Vital Statistics. Enumerate the sources ofVital statistics	AFT- RES	MK	SH	DIS	T- EW,P- VIVA	F&S	III	
CO4,CO8	Describe Fertility , Morbidity and Mortality rates	AFT- RES	MK	SH	L&G D	T- EW,P- VIVA	F&S	III	

Topic 13 Health Administration (Lecture :2 hours, Non lecture: 1 hours)									
CO4,CO8	Describe the health administration including AYUSH at the Central, State, District, and Village levels	CK	DK	KH	L&G D	T- EW,P- VIVA	S	III	
Topic 14 National Health Programmes (Lecture :7 hours, Non lecture: 3 hours)									
CO4,CO8	<p>State the vision/objective and outline the goals, strategies and plan of action of National Health Programs - Leprosy(NLEP), AIDS (NACP), Blindness (NPCB), Polio , National TB Elimination Program , Vector born disease control program, RCH program, ICDS program, Universal Immunization Program, National mental health program , National Program for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases & Stroke (NPCDCS) , Swachha Bharat mission, Ayushman Bharat Yojana, Ayushman Bharat Digital Mission, National health mission (NRHM&NUHM), National AYUSH Mission (NAM).</p> <p>National nutrition programs- National Iodine Deficiency Disorders Control program, National Iron Plus Initiative for Anemia Control, National Vitamin A prophylaxis program, Mid-Day Meal program & Balwadi nutrition program.</p>	CK	MK	KH	L&PP T,DIS ,FV	T- EW,P- VIVA	F&S	III	
Topic 15 National Health Policy (Lecture :1 hours, Non lecture: 1 hours)									
CO4	Describe the National Health Policy (NHP) and the scope of Ayurveda in NHP.	CK	MK	KH	L,L& PPT	T- EW,P- VIVA	F&S	III	

List of Practicals (Term and Hours)

PRACTICALS (Marks-100)			
S.No	List of Topics	Term	Hours
1	Dinacharya	1	25
2	Disinfectants	1	2
3	Ahara	1	30
4	Health Education (IEC)	2	10
5	Yoga performance	2	35
6	Community survey	3	20
7	Local Health Educational Visits	3	36
8	Visit to Observe National Health Programs and Ayurveda Centre	3	12
9	Monitoring of health and hygiene	1	5

Table 4: Learning objectives (Practical)

A4 Course outcome	B4 Learning Objective (At the end of the session, the students should be able to)	C4 Doma in/sub	D4 Must to know / desirable to know / Nice to know	E4 Level Does/ Shows how/ Knows how/ Know	F4 T-L meth od	G4 Assessment (Refer abbreviations)	H4 Form ative/ summ ative	I4 Term	K4 Integr ation
Topic 1 Dinacharya									
CO1	Collect and Compare different Dantadhawana Churnas/ Tooth pastes available in the market and choose/ advise the appropriate one based on the need.	PSY- ADT	DK	D	PrBL	PRN	F	I	
CO1	Collect and Compare different JiwhaNirlekhana Yantra(Tongue cleaners) available in the local area/ market and choose/advise the appropriate one for swastha	PSY- ADT	DK	D	PrBL	PRN	F	I	
CO1	Collect different dravya/kashaya/mouthwashes available in the market for kavala and gandusha; demonstrate the procedure of kavala and gandusha with appropriate liquids /dravyas for swastha	PSY- ADT	MK	D	PrBL, D,PR A	PRN	F&S	I	
CO1	Collect different types of Anjana (Collyriums) available in the market, Demonstrate Anjana procedure as per local traditions and	PSY- ADT	MK	D	PrBL, PT,D	PRN	F&S	I	

	advise different types of Anjana for swastha.								
CO1	Demonstrate Pratimarsha Nasya with Anutaila/ Sesame oil and prescribe the appropriate taila for Pratimarsha Nasya for swastha.	PSY-ADT	MK	D	PrBL, PT,D	DOPS	F&S	I	
CO1	Demonstrate Prayogika Dhoomapana and advise prayogika dhoomapana dravya for swastha.	PSY-ADT	MK	D	PrBL, PT,D	DOPS	F&S	I	
CO1	Demonstrate the procedure of Abhyanga techniques for full body abhyanga, padabhyanga and shiroabhyanga and prescribe suitable taila for Abhyanga for Swastha.	PSY-ADT	MK	D	PrBL, PT,D	DOPS	F&S	I	
CO1	Demonstrate the procedure of Udwartana techniques and prescribe suitable dravya for Udwartana for Swastha.	PSY-ADT	MK	D	PrBL, PT,D	DOPS	F&S	I	
CO2	Prescribe appropriate dinacharya module regarding ahara and vihara as per age and occupation /activity.	CE	MK	SH	PrBL	P-CASE	F&S	I	
CO2	Advise /counsel people regarding healthy lifestyle based on the Ayurvedic principles (one student should counsel at least five person and should be documented).	CE	MK	SH	PrBL	P-CASE	F&S	I	
Topic 2 Disinfectants									
CO7	Identify and demonstrate the suitability, dose, dilution, and contact period of the following disinfectants:Bleaching powder, Dettol, Lysol, Savlon.	PSY-ADT	MK	SH	CBL	PP-Practical	S	II	
CO7	Observe the procedure of fumigation of the operation theatre.	AFT-REC	NK	D	D	P-VIVA	F	II	
CO7	Write the mode of working and uses of an autoclave.	CK	DK	KH	SDL	T- EW	F	II	

Topic 3 Ahara									
CO8	Collect and compile different regional staple food articles.	PSY-SET	MK	D	SDL	COM	F	I	H-DG
CO8	Mention the nutritive value of the following preparations per 100gm and calculate the food portions/serving size of the following recipes: a. Yusha b. Yavagu c. Odana d. Krushara e. Peya f. Panaka g. Takra h. Manda i. Vilepi	CE	MK	D	PT	P-EN	F&S	I	
CO8	Plan a dietary Menu according to different Prakriti (preparation of diet chart considering all ahara Vargas for Eka doshaja, dvidoshaja prakriti)	PSY-GUD	MK	SH	TBL	P-MOD,P-POS	F	I	
CO8	Plan the dietary menu for different occupations / Activities, Age groups, and physiological conditions. (diet chart for 1-5 years child, 6-18 years, 18 & above till 60 years, above 60 years, sedentary, sedentary intellectuals, night shifts, drivers, standing professionals. physiological conditions like Garbhini, Sutika, Kshirapa, Ksheerada, Ksheerannada, Annada etc.,..)	PSY-GUD	MK	D	CBL	P-CASE	F&S	I	
CO8	Plan Ahara-Vihara based on the different Ritus (preparation of diet and lifestyle charts for each ritu)	PSY-GUD	MK	D	PrBL	M-CHT	F	I	
CO8	Plan a dietary menu for any one individual according to prakriti, agni, Sara, satva, age, sex, occupation/ activity, and season based on the regional food habits with serving sizes with different food exchange/options.	PSY-GUD	MK	D	IBL	P-CASE	F	I	
CO8	Document the maintenance of various equipment and appliances used in the kitchen/ diet section of the hospital such as cooking gas, pressure cooker, mixer-grinder, microwave oven, refrigerator	AFT-RES	NK	D	PL	PP-Practical	F	I	

CO8	Assess various Anthropometric variables like Weight, height, and BMI (including differentiation between Sara)and Mid-arm Circumference in order to assess the state of nutrition.	AFT-RES	MK	D	PSM	PP-Practical	F	I	
Topic 4 Health Education (IEC)									
CO5	Demonstrate communication methods for health education.	PSY-SET	MK	SH	DIS, W	P-RP,M-POS,OSPE ,DOPS	F&S	II	
CO5	Demonstrate/present different health education materials (dinacharya practices, sadvritta practices,family planning methods, breast feeding techniques, environmental hygiene, preventive and control measures of communicable and non - communicable diseases etc.) to the target population in the community.	AFT-RES	MK	SH	DIS,T PW,R P	DOPS,Log book	F&S	II	
Topic 5 Yoga performance									
CO3	Perform four Standing Postures namely - Ardhakatchakrasana, Padahastasana, Ardhashakrasana, and Trikonasana step by step with Sthiti, main procedure, and vishrama.	PSY-ADT	MK	SH	KL	DOPS	S	II	
CO3	Perform eleven Sitting Postures namely - Swasthikasana, Gomukhasana, Padmasana, Vajrasana, Bhadrasana, Shashankasana, Ushtrasana, Pashchimottanasana, Suptavajrasana, Ardhamatsyendrasana, and Siddhasana step by step with Sthiti, main procedure, and vishrama.	PSY-ADT	MK	SH	KL	DOPS	S	II	
CO3	Perform seven Supine Postures namely - Pavanamuktasana, Sarvangasana, Matsyasana, Halasana, Chakrasana, Shavasana, and Setubandhasana step by step with Sthiti, main procedure and visrama	PSY-ADT	MK	SH	KL	DOPS	S	II	
CO3	Perform four Prone Postures namely - Bhujangasana,	PSY-	MK	SH	KL	DOPS	S	II	

	Shalabhasana, Dhanurasana, and Makarasana step by step with Sthiti, main procedure and vishrama.	ADT							
CO3	Perform Nadishuddhi Pranayama with inhalation-retention-exhalation in the ratio of 1:4:2 in a comfortable sitting posture.	PSY-ADT	MK	SH	KL	DOPS	S	II	
CO3	Perform Kumbhakabhedas namely - Suryabhedana, Ujjayi, Sitkari, Sheetali, Bhastrika and Bhramari.	PSY-ADT	MK	SH	KL	DOPS	S	II	
CO3	Perform Jalaneti, Kapalabhati and Trataka.	PSY-ADT	MK	SH	KL	DOPS	S	II	
CO3	Demonstrate and instruct Common Yoga Protocol of IDY (International Day of Yoga).	PSY-ADT	DK	SH	EDU	DOPS	F	II	
Topic 6 Community survey									
CO6	Conduct minimum 05 Family surveys using structured questionnaire in specific rural populations and report the survey finding and discuss possible solutions to the family	PSY-SET	MK	D	ECE	DOPS	F&S	III	
CO6	Conduct minimum 05 Family surveys using structured questionnaire in specific urban populations and report the survey finding and discuss possible solutions to the family.	PSY-SET	MK	D	ECE	DOPS	F&S	III	
Topic 7 Local Health Educational Visits									
CO2	Report the functioning of milk dairy such as methods of processing and preservation of milk, testing of milk before and after pasteurization and the standards of milk & milk products.	PSY-SET	MK	KH	EDU, FV	P-VIVA,RK	F&S	III	
CO2,CO7	Report and explain the various process involved in large-scale water purification.	PSY-MEC	MK	KH	D-M,FV	P-VIVA,RK	F&S	III	
CO2,CO7	Explain and Report the processes involved in modern sewage treatment.	PSY-MEC	MK	KH	D-M,FV	P-EXAM,RK	F&S	III	

CO1,CO2,CO5,CO6,CO8	Explain and report the various measures adopted in the industry for the prevention and control of occupational diseases.	CC	MK	KH	TPW, FV	P-VIVA,RK	F&S	III	
CO1,CO2,CO8	Explain and Report the food safety standards and methods of food processing techniques.	CC	MK	K	PrBL, RLE, FV	P-VIVA,RK	F&S	III	
CO3,CO6	Report and explain various naturopathic treatment methods.	CC	MK	KH	L_VC,EDU, FV	P-EXAM,RK	F&S	III	
Topic 8 Visit to Observe National Health Programs and Ayurveda Centre									
CO4,CO8	Report the functioning of National Health Programs at Primary health centers/Community health centers/District hospitals and Govt. Ayurveda Dispensary	PSY-SET	MK	SH	L_VC,IBL, FV	T- EW,P-VIVA,RK	F&S	III	V-KC
CO4	Report the functioning of a Primary Health Centre/ Community Health Centre/ Rural Hospital/ District Hospital with regards to the implementation of different National Health Programmes viz. infectious disease control, immunization, ANC, Family planning etc.	AFT-RES	DK	D	FV	Log book	F	III	
CO4	Report the structure and functioning of an Ayurvedic Dispensary/ Taluk Hospital/ District Hospital available in the district.	AFT-RES	DK	D	FV	Log book	F	III	
Topic 9 Monitoring of health and hygiene									
CO2,CO6,CO7,CO8	Collect the demographic profile of allotted 2 subjects/Individuals (one from the community and one from employees of the college/hospital) and conduct clinical examination (Assess Prakriti, Sattva, Saara, etc.)	AFT-RES	MK	D	IBL	P-CASE,RK	F&S	I	
CO2,CO6,CO7,CO8	Conduct periodic check-ups for allotted individual/employer (2) health status / occupational health status and if any treatment	AFT-RES	MK	D	PT	P-CASE,OSCE	F	I	

	is prescribed then coordinate the treatment under the overall guidance of the Mentor								
CO2,CO6,CO7,CO8	Counsel the adopted individuals/employer (2) and analyze the health trajectory(individual following the prescribed regimen) of the adopted individual/employer under the overall guidance of the mentor	AFT-RES	MK	D	PT	P-SUR,RK	F	II	
CO2,CO6,CO7,CO8	Document the maintenance of water sanitation, waste disposal, food hygiene, etc., in the hospital canteen/ pathya section/cafeteria	CE	MK	KH	PrBL	RK	F	I	

Table 4a: List of Practical

S.No	Name of practical	Term	Activity	Practical hrs
1	Dinacharya	1	<ol style="list-style-type: none"> 1. Analyze the composition of different Dantadhawana Churnas/ Tooth pastes and tooth brushes available in the market 2. Analyze different Jivwa Nirlekhana Yantra(Tongue cleaners) available in the local area/ market 3. Demonstrate the procedure of kavala and gandusha with appropriate liquids /dravyas for swastha 4. Demonstrate Anjana procedure as per local traditions and advise different types of Anjana for swastha. 5. Demonstrate Pratimarsha Nasya with Anutaila/ Sesame oil and prescribe the appropriate taila for Pratimarsha Nasya for swastha. 6. Demonstrate Prayogika Dhoomapana (Practicable and Non- practicable Dhoomapana)and advise prayogika dhoomapana dravya for swastha. 7. Demonstrate the procedure of Abhyanga techniques for full body abhyanga, padabhyanga and shiroabhyanga and prescribe suitable Taila for Abhyana for Swatha. 8. Demonstrate the procedure of Udwartana techniques and prescribe suitable dravya for Udwartana for Swatha. 9. Prescribe appropriate dinacharya module regarding ahara and vihara as per age and occupation /activity. 10. Advise /counsel people regarding healthy lifestyle based on the Ayurvedic principles (one student should counsel at least five person and should be documented). 	25
2	Disinfectants	1	Identify and demonstrate the suitability, dose, dilution, and contact period of the following disinfectants : Bleaching powder, Dettol, Lysol, Savlon . Observe the procedure of fumigation of the operation theatre. Write the mode of working and uses of an autoclave.	2

3	Ahara	1	<p>Collect, compile and document region wise different varieties of Ahara Varga (Millets, cereals, pulses, vegetables, varieties of milk/oil/honey/ available in the market). Demonstrate the therapeutic indication and nutritive values of Pathya kalpanas a. Manda b. Peya c. Vilepi d. Yavagu e. Odana f. Krishara g. Yusha h. Takra .</p> <p>Prepare the dietary regime according to different Prakriti. Prepare/Prescribe the dietary regime for different occupations / activities, age groups, and physiological conditions. Prepare/Prescribe the diet and lifestyle regimen (pathya- apathya) with reference to Ahara and Vihara for each ritu. Conduct diet counselling according to prakriti, agni, sara, satva, age, sex, occupation/ activity, and prevailing season based on the regional food habits with serving sizes with different food exchange/options for 5 persons. Assess various anthropometric variables like weight, height, and BMI and mid-arm circumference etc., in order to assess the state of nutrition of five individuals.</p>	30
4	Health Education (IEC)	2	<p>Demonstrate communication methods for health education. Demonstrate/ Present different health education materials (dinacharya practices, Sadvritta practices, family planning methods, breastfeeding techniques, etc.) patients and general public .</p>	10
5	Yoga performance	2	<p>Perform four Standing Postures namely - Ardhakatichakrasana, Padahastasana, Ardhashakrasana, and Trikonasana step by step with sthiti, main procedure and vishrama.</p> <p>Perform eleven Sitting Postures namely - Swasthikasana, Gomukhasana, Padmasana, Vajrasana, Bhadrasana, Shashankasana, Ushtrasana, Pashchimottanasana, Suptavajrasana, Ardhamatsyendrasana, and Siddhasana step by step with sthiti, main procedure and vishrama.</p> <p>Perform seven Supine Postures namely - Pavanamuktasana, Sarvangasana,</p>	35

			<p>Matsyasana, Halasana, Chakrasana, Shavasana, and Setubandhasana step by step with sthiti, main procedure and visrama</p> <p>Perform four Prone Postures namely - Bhujangasana, Shalabhasana, Dhanurasana, and Makarasana step by step with Sthiti, main procedure and vishrama. Perform Jalaneti and kapalbhati . Perform Anuloma – Viloma Pranayama in a comfortable sitting posture. Perform Nadishuddhi Pranayama with inhalation-retention-exhalation in the ratio of 1:4:2 in a comfortable sitting posture. Perform Kumbhakabhedas namely - Suryabhedana, Ujjayi, Sitkari, Sheetali, Bhastrika and Bhramari.</p> <p>Demonstrate and instruct Common Yoga Protocol of IDY (International Day of Yoga).</p>	
6	Community survey	3	<p>Conduct minimum 05 Family surveys using a structured questionnaire in specific rural populations and report the survey findings and discuss possible solutions to the family.</p> <p>Conduct minimum 05 family surveys using a structured questionnaire in specific urban populations and report the survey findings and discuss possible solutions to the family.</p>	20
7	Local Health Educational Visits	3	<p>Report the functioning of milk dairies such as methods of processing and preservation of milk, testing of milk before and after pasteurization, and the standards of milk & milk products. Report the various process involved in water purification plant. Report the processes involved in modern sewage treatment plant. Report the various measures adopted for the prevention and control of occupational diseases in any industry. Report the food safety standards and methods of food processing techniques adopted in any food industry. Report the various treatment modalities adopted in Naturopathy and Yoga canthers.</p> <p>Note : Swasthavritta, Agada Tantra.</p>	36

			Dravyaguna & Rasashastra - Combined out campus visits can be palled wherever feasible.	
8	Visit to Observe National Health Programs and Ayurveda Centre	3	Report the functioning of a Primary health centre/Community health centre/Rural hospital/District hospital with regards to the implementation of different National Health Programmes viz. infectious disease control, immunization, ANC, Family planning etc. Report the structure and functioning of a Ayurveda Dispensary/ Taluk Hospital /District Hospital available in the district.	12
9	Monitoring of health and hygiene	1	Conduct periodic check-ups , collect demographic profile and clinical examination of allotted 2 subjects/Individuals - Assess Prakriti, Satva, Sara, etc.)for their health status / occupational health status and if any treatment is prescribed then coordinate the treatment under the overall guidance of the teacher/Mentor. Counsel and advice the allotted 2 subjects a healthy regime prescription and analyze their health status after following the healthy regime under the overall guidance of the teacher/mentor. Document the maintenance of water sanitation, waste disposal including biomedical waste in the hospital.	5
Total Hr				175

Activity

CO	Topic name	Activity Details	Hours #
CO1	Dinacharya	Demonstration, Making posters, Real-life experiences , Roleplay , We- based activities	5

		Example - Collection and analyze of different tooth paste/tooth brushes, mouth washes and collyriums available in the market including GMP pharmacies	
CO1	Ratricharya	Chart preparation and real-life experiences of Ratri bhojana and Sleep principles	1
CO1	Ritucharya	Assessment of changes happening in the human body in particular ritu Poster preparation of food recipes in different ritus	2
CO1	Sadvritta	Role play	1
CO1	Ahara	Listing of Ahitakara (Junk) food habits, Gathering information of Organic farming and Organic food items , Application of Ashtaahara vidhivesha ayatana in real life - Team base project, Roleplay , Presentation & Collection of Research updates in the field of Ayurvedic food	15
CO1	Roganutpadaniya	Survey and documentation on effect of Adharaneeya vega on different occupations	1
CO1	Rasayana for swastha	Poster making and Library work	2
CO1	Nidra	Survey on sleep and awakening patterns among the staff and students	1
CO7	Yoga	Participation in International day of Yoga , Poster presentation of Yogic practices as per diseases , Preparation of Short videos on Yoga and Conducting Quiz	7
CO2,CO5	Disaster management	Group discussion	2
CO1	Janapadodwamsa	Assignment , Symposiums and Problem-based learning	10
CO1,CO5	Environmental health	Seminars, Quiz andm PBL	5
CO3	Disinfection	PBL	3
CO2	Family welfare programe	Roleplay , Web-based learning and Discussion	2

CO7,CO8	Mother and child health care	PBL	1
CO8	Preventive geriatrics	Group discussion and Seminar	1
CO4,CO8	National health programs	Web-based learning , Assignments and Participating in celebration of health related days	3
CO3	School health services	Role play and Presentations	2
CO7,CO8	Occupational health	Poster making , PBL and Group discussion	3
CO2,CO3,CO4,CO5,CO8	Primary health care	Group discussions	2
CO3	Naturopathy	Web-based learning , Tutorials and Group discussions	4
CO4	World health organizations and International health agencies	Web-based learning and Quiz	1
CO8	Health Statistics	Presentations and Seminars	1

Hours indicated are included in calculations of Table 3 and 4

Table 5- Teaching learning method

Sr No	Teaching learning methods in the course	No of Activities
1	Lecture	14
2	Lecture with Power point presentation	61
3	Lecture & Group Discussion	16
4	Lecture with Video clips	15

5	Discussions	6
6	Inquiry-Based Learning	1
7	Project-Based Learning	1
8	TBL	1
9	Flipped classroom	1
10	Blended Learning	1
11	ECE	1
12	Self-directed learning	8
13	Demo on Model	6

These are overall teaching learning methods listed in Table 3 and 4. Teachers can select the best possible method amongst the given methods as per objective, available time etc.

Table 6: Assessment Summary: Assessment is subdivided in A to H points

6 A-Number of Papers and Marks Distribution

Subject Code	Papers	Theory	Practical/Clinical Assessment					Grand Total
			Practical	Viva	Elective	IA	Sub Total	
AyUG-SW	2	200	100	60	10	30	200	400

6 B - Scheme of Assessment (formative and Summative)

PROFESSIONAL COURSE	DURATION OF PROFESSIONAL COURSE		
	First Term (1-6 Months)	Second Term (7-12 Months)	Third Term (13-18 Months)
Second	3 PA & First TT	3 PA & Second TT	3 PA & UE**

PA: Periodical Assessment; **TT:** Term Test; **UE:** University Examinations.

** University Examination shall be on entire syllabus

6 C - Calculation Method for Internal assessment Marks

TERM	PERIODICAL ASSESSMENT*					TERM TEST**	TERM ASSESSMENT	
	A 6	B	C	D	E	F	G	H
	1 (15 Marks)	2 (15 Marks)	3 (15 Marks)	Average (A+B+C/3)	Converted to 30 Marks (D/15*30)	Term Test (Marks converted to 30)	Sub Total _/60 Marks	Term Assessment (.../30)
FIRST							E+F	(E+F)/2
SECOND							E+F	(E+F)/2
THIRD						NIL		E
Final IA	Average of Three Term Assessment Marks as Shown in 'H' Column.							
	Maximum Marks in Parentheses *Select an Evaluation Method which is appropriate for the objectives of Topics from the Table 6 D for Periodic assessment. Conduct 15 marks assessment and enter marks in A, B, and C. ** Conduct Theory (100 Marks)(MCQ(20*1 Marks), SAQ(8*5), LAQ(4*10)) and Practical (100 Marks) Then convert to 30 marks.							

6 D - Evaluation Methods for Periodical Assessment

S. No	Evaluation Methods
1	Activities Indicated in Table 3 - Column G3 as per Indicated I, II or III term in column I3

Evaluation Methods in MSE

1. Practical / Clinical Performance
2. Viva Voce, MCQs, MEQ (Modified Essay Questions/Structured Questions)
3. Open Book Test (Problem Based)
4. Summary Writing (Research Papers/ Samhitas)
5. Class Presentations; Work Book Maintenance
6. Problem Based Assignment
7. Objective Structured Clinical Examination (OSCE), Objective Structured Practical Examination (OPSE), Mini Clinical Evaluation Exercise (Mini-CEX), Direct Observation of Procedures (DOP), Case Based Discussion (CBD)

6 E Question Paper Pattern

II PROFESSIONAL BAMS EXAMINATIONS AyUG-SW

PAPER-1

Time: 3 Hours Maximum Marks: 100

INSTRUCTIONS: All questions compulsory

		Number of Questions	Marks per question	Total Marks
Q 1	MULTIPLE CHOICE QUESTIONS (MCQ)	20	1	20
Q 2	SHORT ANSWER QUESTIONS (SAQ)	8	5	40
Q 3	LONG ANSWER QUESTIONS (LAQ)	4	10	40
				100

Similar for Paper II (If

6 F Distribution of theory examination

Paper 1 Principles of Swasthavritta, Yoga and Naturopathy						
Sr. No	A List of Topics	B Term	C Marks	MCQ (1 Mark)	SAQ (5 Marks)	LAQ (10 Marks)
1	Swastha and Swasthya	1	6	Yes	Yes	No
2	Healthy Life style -Dinacharya (Daily regimen)	1	38	Yes	Yes	Yes
3	Ratricharya	1		Yes	Yes	No
4	Ritucharya	1		Yes	Yes	Yes
5	Roganutpadaniya	1	13	Yes	Yes	No
6	Sadvritta	1		Yes	Yes	No
7	Ahara	1	20	Yes	Yes	Yes
8	Rasayana for Swastha	1	5	Yes	Yes	No
9	Yoga	2	18	Yes	Yes	Yes
10	Naturopathy	2		Yes	Yes	No
Total Marks			100			

Paper 2 Public health						
Sr. No	A List of Topics	B Term	C Marks	MCQ (1 Mark)	SAQ (5 Marks)	LAQ (10 Marks)
11	Janapadodhwamsa / Maraka Vyadhi	2	10	Yes	Yes	Yes
12	Environmental health	2	16	Yes	Yes	Yes

13	Disaster management	2		Yes	Yes	No
14	Occupational Health	2	20	Yes	Yes	No
15	School health services	2		Yes	Yes	No
16	Disinfection	2		Yes	Yes	No
17	Primary health care	2	20	Yes	Yes	Yes
18	Mother and Child health care	2		Yes	Yes	No
19	Family welfare programme	2		Yes	Yes	No
20	Preventive Geriatrics	2		Yes	Yes	No
21	World Health Organization and International health agencies	2	19	Yes	Yes	No
22	Vital Statistics	2		Yes	Yes	No
23	Health Administration	2		Yes	Yes	No
24	National Health Programmes	2	15	Yes	No	Yes
25	National Health Policy	2		Yes	Yes	No
Total Marks			100			

Paper No:1		
Question No	Type of Question	Question Paper Format
Q1	<p>Multiple choice Questions 20 Questions 1 mark each All compulsory</p> <p>Must know part - 15 MCQ Desirable to know - 3 MCQ Nice to know part - 2 MCQ</p>	<ol style="list-style-type: none"> 1. Swastha and Swasthya 2. Healthy Life style -Dinacharya (Daily regimen) 3. Ratricharya 4. Ritucharya 5. Roganutpadaniya 6. Ahara 7. Sadvritta 8. Rasayana for Swastha 9. Yoga 10. Naturopathy 11. Swastha and Swasthya 12. Healthy Life style -Dinacharya (Daily regimen) 13. Ritucharya 14. Ratricharya 15. Roganutpadaniya 16. Sadvritta 17. Ahara 18. Rasayana for Swastha 19. Yoga 20. Naturopathy
Q2	<p>Short answer Questions Eight Questions 5 Marks Each All compulsory</p> <p>Must know - 7 SAQ Desirable to know - 1 SAQ No questions on Nice to know</p>	<ol style="list-style-type: none"> 1. Swastha and Swasthya 2. Healthy Life style -Dinacharya (Daily regimen) 3. Ratricharya 4. Ritucharya 5. Roganutpadaniya 6. Sadvritta 7. Naturopathy / Yoga 8. Ahara
Q3	<p>Long answer Questions Four Questions 10 marks each All compulsory</p> <p>All questions on must know. No Questions on Nice to know and Desirable</p>	<ol style="list-style-type: none"> 1. Healthy Life style -Dinacharya (Daily regimen) 2. Ritucharya 3. Ahara 4. Yoga

	to know	
Paper No:2		
Question No	Type of Question	Question Paper Format
Q1	<p>Multiple choice Questions 20 Questions 1 mark each All compulsory</p> <p>Must know part - 15 MCQ Desirable to know - 3 MCQ Nice to know part - 2 MCQ</p>	<ol style="list-style-type: none"> 1. Janapadodhwamsa / Maraka Vyadhi 2. Environmental health 3. Disaster management 4. Occupational Health 5. School health services 6. Disinfection 7. Primary health care 8. Mother and Child health care 9. Family welfare programme 10. Preventive Geriatrics 11. World Health Organization and International health agencies 12. Vital Statistics 13. Health Administration 14. National Health Policy 15. National Health Programmes 16. Janapadodhwamsa / Maraka Vyadhi 17. Environmental health 18. Occupational Health 19. National Health Programmes 20. Family welfare programme
Q2	<p>Short answer Questions Eight Questions 5 Marks Each All compulsory</p> <p>Must know - 7 SAQ Desirable to know - 1 SAQ No questions on Nice to know</p>	<ol style="list-style-type: none"> 1. Janapadodhwamsa / Maraka Vyadhi 2. Disaster management 3. Environmental health 4. School health services 5. Occupational Health 6. Mother and Child health care 7. Family welfare programme 8. Preventive Geriatrics
Q3	<p>Long answer Questions Four Questions 10 marks each All compulsory</p> <p>All questions on must know. No Questions on Nice to know and Desirable</p>	<ol style="list-style-type: none"> 1. Janapadodhwamsa / Maraka Vyadhi 2. Environmental health 3. Primary health care 4. National Health Programmes

	to know	
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6 H Distribution of Practical Exam

S.No	Heads	Marks
1	Yoga - Demonstration of 4 Asanas and 1 Pranyama or Shatkarma procedure Any four asanas from following list for demonstration- Trikonasana, Ardhakatichakrasana, Gomukhasana, Bhadrasana, Pavanamuktasana, Sarvangasana, Bhujangasana and Shalabhasana. Each asana will carry 4 marks x 4 = 16 Procedure -1 mark, Final posture Holding time - 1, Breathing pattern-1 mark and On site viva - 1 mark Any one Pranayama among Nadishuddhi, Suryabhedana, Seetali, Seetkari , Bhramari or any one shatkarma among Neti and Kapalabhati Each pranayama or Shatkarma will carry 4 marks	20
2	Diet and Lifestyle advice case sheet A. Advise on Diet case - 25 Marks - Scenario will be given and asking student to prescribe diet as per the age, prakriti, occupation, agni bala etc,.. B. Advise on Lifestyle - 15 Marks - Scenario will be given and asking student advise lifestyle modifications such as Brahme muhurta uthishteth, Vyayama, Kavala- gandusha, Abhyanga, Udwartana ,Pratimarsha nasya etc,.. ,	40
3	Problem-based evaluation - Disinfection, Communicable diseases Environmental health, & Non- Communicable including deficiency diseases , A. Disinfection (identification, dose, suitability , dilution and contact period), Communicable diseases (giving scenarios and identifying diseases and mentioning preventive measures) and Environmental health (giving scenarios related environmental health issues and asking students to mention preventive and control measures) - 15 Marks B. Non- Communicable diseases (creating scenarios and asking to identify the diseases with preventive and control methods) and deficiency diseases (creating scenarios and asking students to identify the deficiency conditions and asking the students to recommend the nutrients with nutritional profile etc,. - 15 Marks	30
4	Practical Records	10
5	Viva Viva on Project work (Activity based) - 10 Marks	60

Viva on I Paper - 25 Marks

A. Definition of Swastha , Swasthya, Swasthavritta and Health, dimensions of health, objective and subjective components of well-being- 2Mark

B. Benefits of Ushajala pana, Kavala , Gandusha, Dantadhavana, Anjana, Abhyanga,Udvartana, Vyayama, Snana and Tambula - 4 Mark

C. Rati bhojana, Definition of Nidra , Types of nidra, Ahita nidra, definitions of sleep disorders , Definitions of Brahmacharya and Abrahmacharya and Adanakala and Visarga kala ritus, Doshavastha ,Balavastha,Agniavastha of different ritus , Definition of Ritusandhi, Yamadamshttra - 2 Marks

D. Adharaneeya vegas , Dharaneeya vega , definition of sadvritta and Acararasayana - 2 Marks

E. Importance of Ahara, classification of foods, Aharasevana kala, Ashta ahara vidhivishesha ayatana, Dwadasaha asana pravicarana with slokas , listing of nityasevana ahara dravya(Preferebly sloka), meaning of Pathya , Samashana, Adhyashana, Vishamasana. Sources and deficiency diseases of nutrients, Pastuerization of milk and its methods, meaning of different diet patterns, definition of nutrogeomics, nutraceuticals, nutrigenetics and viridhha ahara . Definition, benefits and types of rasayana and definition of anti-oxidants with examples- 10 Marks

F. Definitions of Yoga , Meaning and types of Yama , Niyama, Asana,Pranayama, Pratyahara, Dharana, Dhyana,Samadhi (slokas mandatory), listing of shatkarma and indications of shatkarma (sloka mandatory), types of Bamdha, names of Shatchakra, differences between Sushumna, Pingala and Ida nadi, definition of Moksha, Muktatma lakshana , Moksha upaya, , Basic principles of Naturopathy, Types of Fasting, Hydrotherapy and Massage - 5

Paper II - 25 Marks

	<p>A. Meaning and causes of Janapadodhwamsa, Definitions of terms related to Epidemiology and infectious diseases, Dynamics of disease transmission, Immunizing agents and Immunization schedule. Definition of vyadhikshamatva, Causative organisms and preventive measures of Communicable diseases -5 Marks</p> <p>B. Composition of Air, Definition of Comfort zone, Ventilation and its types, Definition of safe and wholesome water, Sources and types of Water , Purification methods of water as per Ayurveda & Contemporary medicine, Definition of different types of waste, Definition of disaster and types of disasters- 5Marks</p> <p>C. Definition of occupational health, listing out occupational hazards and diseases. Est act & Factories act, Health problems of school children, definition of different terms related to disinfection, types and agents of disinfection - 5 Marks</p> <p>D. Definition, principles and elements of Primary health care, population coverage , functions and staff pattern at Sub-centre, Primary health centre and Community health centre, Objectives, problems and indicators of MCH, Definitions of demography, family planning ,eligible couple and target couple and methods of family planning - 5Marks</p> <p>E. Definition of Geriatrics,Problems of aged, Definition,structure and regions of WHO, Year of establishment , head quarters and main functions of international health agencies, Definition and sources of vital statistics, organizational structure of health administration , Year of establishment and main objectives of different national health programmes- 5 Marks</p>	
6	Elective test (Set SC)	10
7	Internal Assessment -	30
Total Marks		200

References Books/ Resources

S.No	Book	Resources
1	Relevant portions of Charaka, Sushruta, Vagbhata, Sarngadhara, Bhavaprakasha, Yogaratnakara, Madhavanidana and Bhelasamhita.- relevant Samhithas	Print /online samhithas
2	Swasthavritta Samucchaya	Vaidya . Rajeswaradutta shastri , Chaukhambha Viswabharathi, Varanasi, India
3	Swasthavrittavigyan	Dr.Ramaharsha singh , Chaukhambha Publishing house, Varanasi, India
4	Yoga sutras of Patanjali	BKS Iyengar , Published by Harper collins , Publishers India , Newdelhi
5	Hathayogapradipika	Swami Muktibodananda , Published by Yoga publications trust, Ganga darshan, Munger, Bihar, India
6	Gheranda samhitha	Edited with Sweta , English commentary of Mrs.Shweta Bhat and Edited by Goswami Prahlad Giri, Published by Krishnadas Academy , Varanasi- 221001
7	Yoga deepika	BKS Iyengar , Published by Harper collins , Publishers India , Newdelhi
8	Light on Yoga	BKS Iyengar , Published by Harper collins , Publishers India , Newdelhi
9	Light on Pranayama -	BKS Iyengar , Published by Harper collins , Publishers India , Newdelhi
10	The Foundations of Contemporary Yoga	Professor RH Singh , Published by Chaukhambha Sanskrit Pratishtan, Newdelhi ..
11	Park's Text book of Preventive and Social Medicine	K.Park , Published by M/s BANARASIDAS BHANOT, LABALPUR, INDIA
12	Text book of Preventive and Social Medicine	MC Gupta & BK Mahajan, Published by JAYPEE BROTHERS , Medical publishers , Newdelhi
13	Dr. Reddy's comprehensive guide to Swasthavritta	Dr.P.Sudhakar Reddy , Published by Chaukhambha Sanskrit Pratishtan, New Delhii
14	Indian food composition Tables	T Longvah , Published by National institute of Nutrition, Hyderabad
15	Food and nutrition	Swaminathan , Published by Bangalore Printing & Publishing Co.Ltd, Bangalore
16	Swasthavrittisudha	Vd.Kashinath Samagandi, Published by Ayurveda Sanskrit hindi pustak bhandar , Jaipur .

17	S.Kashi's Text book of Svasthavrtttamritam	Vd.Kashinath Samagandi, Published by Ayurved sanskrit hindi pustak bhandar, Jaipur
18	Text Book of Swasthavrittam	Dr. Mangala Gouri V Rao, Chaukhambha Orientalia, Varanasi, India (2022)
19	Text book on Swasthavritta	Dr.P. Sudhakar Reddy , Dr.Beena MD Publishers : Chaukhambha Orientalia, Varanasi, India Year : 2022
20	Bhojanakutuhalam	Raghunatha suri, Edited by Scholars of the Centre for Theoretical foundations (CTF), Institute of Ayurveda and Integrative Medicine I-AIM, FRLHT , Bengaluru- 560064
21	Kshemakutuhalam	Compiled by Kshema sharma , Published By Indian institute of Ayurveda & Integrative medicine , Bengaluru-560064
22	Recent trends in Community Medicine	Suryakantha AH, Published by JAPEEPY BROTHERS
23	The Essentials of Natur cure	Dr.Mangala Gouri.V. Rao, Published by Chaukhambha Orientalia, Varanasi
24	WHO	https://www.who.int
25	Food laws	https://www.corpseed.com/knowledge-centre/food-laws-and-regulations-in-india
26	Food acts	: https://fssai.gov.in/cms/food-safety-and-standards-act-2006.php
27	National health programs	https://ncdc.mohfw.gov.in/index4.php?lang=1&level=0&linkid=55&lid=138
28	Family welfare programme	https://ncdc.mohfw.gov.in/index4.php?lang=1&level=0&linkid=55&lid
29	Health & Family welfare	https://www.india.gov.in/topics/health-family-welfare
30	Census of India	: https://censusindia.gov.in
31	Hatha yoga Pradeepika	Pandith. Hariprasad Tri[athi, Published by Chaukhambha Krishna das Academy, Varanasi , India
32	A Complete Handbook of Nature cure	H.K.BAKHRU , JAICO Publishing house, Bombay
33	Yoga & Ayurveda	Satyendra prasad Mishra , Published by Chaukhambha Sanskrit Samsthan , Varanasi
34	The Yoga Science	Dr. Ravi R Javalgekar , Published by Chaukhambha Sanskrit Sansthan , Varanasi, India
35	Concept of Ayurveda for perfect Health & Longevity	Vaidya H.S. Kasture , Published by Shree baidyanath Ayurveda Bhavan Private LTD, Nagpure , India

36	Essentials of Community medicine practicals	DK Mahabalaraju, Published by JAYPEE BROTHERS Medical publishers , Newdelhi
37	Positive health through Ayurveda	Dr.LP Gupta & Dr.LV Guru, Published by Chaukhambha sanskrit Pratishtana , Newdelhi
38	Food Science	B Srilakshmi , Published by NEW AGE INTERNATIONAL (P)LIMITED, PUBLISHERS , NEWDELHI
39	Apollo Clinical Nutrition- Handbook	Anita Jatan, Daphnee DK, Haritha Shyam, Priyanka Rohatgi and Kajal Pandya Yeptho- Published by JAYPEE BROTHERS MEDICAL PUBLISHERS PVT LTD, NEWDELHI

Abbreviations

Assessment

S.No	Short form	Discription
1	T-EMI	Theory extended matching item
2	T- EW	Theory Essay writing
3	T- MEQs	Theory MEQs
4	T-CRQs	Theory CRQs
5	T-CS	Theory case study
6	T-OBT	Theory open book test
7	P-VIVA	Practical Viva
8	P-REC	Practical Recitation
9	P-EXAM	Practical exam
10	PRN	Presentation
11	P-PRF	Practical Performance
12	P-SUR	Practical Survey
13	P-EN	Practical enact
14	P-RP	Practical Role play
15	P-MOD	Practical Model
16	P-POS	Practical Poster
17	P-CASE	Practical Case taking
18	P-ID	Practical identification
19	P-PS	Practical Problem solving
20	QZ	Quiz
21	PUZ	Puzzles
22	CL-PR	Class Presentation,
23	DEB	Debate
24	WP	Word puzzle
25	O-QZ	Online quiz

26	O-GAME	Online game-based assessment
27	M-MOD	Making of Model
28	M-CHT	Making of Charts
29	M-POS	Making of Posters
30	C-INT	Conducting interview
31	INT	Interactions
32	CR-RED	Critical reading papers
33	CR-W	Creativity Writing
34	C-VC	Clinical video cases,
35	SP	Simulated patients
36	PM	Patient management problems
37	CHK	Checklists
38	OSCE	OSCE
39	OSPE	OSPE,
40	Mini-CEX	Mini-CEX
41	DOPS	DOPS
42	CWS	CWS
43	RS	Rating scales
44	RK	Record keeping
45	COM	Compilations
46	Portfolios	Portfolios
47	Log book	Log book
48	TR	Trainers report
49	SA	Self-assessment
50	PA	Peer assessment
51	360D	360-degree evaluation
52	TT-Theory	Theory
53	PP-Practical	Practical
54	VV-Viva	Viva

Domain

S.No	Short form	Discription
1	CK	Cognitive/Knowledge
2	CC	Cognitive/Comprehension
3	CAP	Cognitive/Application
4	CAN	Cognitive/Analysis
5	CS	Cognitive/Synthesis
6	CE	Cognitive/Evaluation
7	PSY-SET	Psychomotor/Set
8	PSY-GUD	Psychomotor/Guided response
9	PSY-MEC	Psychomotor/Mechanism
10	PSY-ADT	Psychomotor Adaptation
11	PSY-ORG	Psychomotor/Origination
12	AFT-REC	Affective/ Receiving
13	AFT-RES	Affective/Responding
14	AFT-VAL	Affective/Valuing
15	AFT-SET	Affective/Organization
16	AFT-CHR	Affective/ characterization

T L method

S.No	Short form	Discription
1	L	Lecture
2	L&PPT	Lecture with Power point presentation
3	L&GD	Lecture & Group Discussion
4	L_VC	Lecture with Video clips
5	DIS	Discussions
6	BS	Brainstorming
7	IBL	Inquiry-Based Learning
8	PBL	PBL
9	CBL	CBL
10	PrBL	Project-Based Learning
11	TBL	TBL
12	TPW	Team project work
13	FC	Flipped classroom
14	BL	Blended Learning
15	EDU	Edutainment
16	ML	Mobile learning
17	ECE	ECE
18	SIM	Simulation
19	RP	Role plays
20	SDL	Self-directed learning
21	PSM	Problem solving method
22	KL	Kinesthetic Learning
23	W	Workshops
24	GBL	Game-Based Learning
25	D-M	Demo on Model

26	LS	Library Session
27	PL	Peer learning
28	RLE	Real life experience
29	REC	Recitation
30	SY	Symposium
31	TUT	Tutorial
32	PER	Presentations
33	PT	Practical
34	XRay	X ray identification
35	CD	Case diagnosis
36	LRI	Lab report interpretation
37	DA	Drug analysis
38	D	Demonstration
39	D_BED	Demonstration bedside
40	D_L	Demonstration Lab
41	DG	Demonstration Garden
42	FV	Field visit
43	PRA	Practical



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SCHOOL OF AYURVEDA

Ordinances,Regulations & Syllabus

For

BAMS FIVE AND HALF YEARS PROGRAMME

(W.e.f.session2020-2021)

CENTRAL COUNCIL OF INDIAN MEDICINE NEW DELHI

SYLLABUS OF AYURVEDACHARYA (BAMS) COURSE INDEX

1ST PROFESSIONAL

1.1	PADARTHA VIGYAN AND AYURVED ITIHAS	2-6
1.2	SANSKRIT	7-8
1.3	KRIYA SHARIR	9-14
1.4	RACHANA SHARIR	15-18
1.5	MAULIK SIDDHANT AVUM ASHTANG HRIDAYA	19

1.1 **PADARTHA VIGYAN EVUM AYURVEDA ITIHAS**

(Philosophy and History of Ayurveda)

Theory- Two papers– 200 marks (100 each paper)

Total teaching hours: 150 hours

PAPER-I

Padartha Vigyanam

100marks

PART A

50 marks

1. Ayurveda Nirupana

- 1.1 Lakshana of Ayu, composition of Ayu.
- 1.2 Lakshana of Ayurveda.
- 1.3 Lakshana and classification of Siddhanta.
- 1.4 Introduction to basic principles of Ayurveda and their significance.

2. Ayurveda Darshana Nirupana

- 2.1 Philosophical background of fundamentals of Ayurveda.
- 2.2 Etymological derivation of the word "Darshana". Classification and general introduction to schools of Indian Philosophy with an emphasis on: Nyaya, Vaisheshika, Sankhya and Yoga.
- 2.3 Ayurveda as unique and independent school of thought (philosophical individuality of Ayurveda).
- 2.4 Padartha: Lakshana, enumeration and classification, Bhava and Abhava padartha, Padartha according to Charaka (Karana-Padartha).

3. Dravya Vigyanam

- 3.1 **Dravya:** Lakshana, classification and enumeration.
- 3.2 **Panchabhuta:** Various theories regarding the creation (theories of Taittiriyaopanishad, Nyaya-Vaisheshika, Sankhya-Yoga, Sankaracharya, Charaka and Susruta), Lakshana and qualities of each Bhoota.
- 3.3 **Kaala:** Etymological derivation, Lakshana and division / units, significance in Ayurveda.
- 3.4 **Dik:** Lakshana and division, significance in Ayurveda.
- 3.5 **Atma:** Lakshana, classification, seat, Gunas, Linga according to Charaka, the method / process of knowledge formation (*atmanah jnasya pravrittih*).
- 3.6 **Purusha:** as mentioned in Ayurveda - Ativahikapurusha/ Sukshmasharira/ Rashipurusha/ Chikitsapurusha/ Karmapurusha/ Shaddhatvatmakapurusha.
- 3.7 **Manas:** Lakshana, synonyms, qualities, objects, functions, dual nature of mind (*ubhayaatmakatvam*), as a substratum of diseases, penta-elemental nature (*panchabhutatmakatvam*).
- 3.8 Role of Panchamahabhuta and Triguna in Dehaprakriti and Manasaprakriti respectively.
- 3.9 Tamas as the tenth Dravya.
- 3.10 Practical study/application in Ayurveda.

4. Gunavigyaniyam

- 4.1 Etymological derivation, classification and enumeration according to Nyaya-Vaisheshika and Charaka, Artha, Gurvadiguna, Paradiguna, Adhyatmaguna.
- 4.2 Lakshana and classification of all the 41 gunas.
- 4.3 Practical / clinical application in Ayurveda.

5. Karma Vigyaniyam

- 5.1** Lakshana, classification in Nyaya.
- 5.2** Description according to Ayurveda.
- 5.3** Practical study/ application in Ayurveda.

6. Samanya Vigyaniyam

- 6.1 Lakshana, classification.
- 6.2 Practical study/ application with reference to Dravya, Guna and Karma.

7. Vishesha Vigyaniyam

- 7.1** Lakshana, classification.
- 7.2** Practical study/ application with reference to Dravya, Guna and Karma.
- 7.3** Significance of the statement "*Pravrittirubhayasya tu*".

8. Samavaya Vigyaniyam

- 8.1 Lakshana
- 8.2 Practical study /clinical application in Ayurveda.

9. Abhava Vigyaniyam

- 9.1 Lakshana, classification
- 9.2 Clinical significances in Ayurveda.

PAPER II**Padartha Vigyan and Ayurveda Itihas****100 marks****PART A - Pramana/ Pariksha- Vigyaniyam****75 marks****1. Pariksha**

- 1.1. Definition, significance, necessity and use of *Pariksha*.
- 1.2. Definition of *Prama*, *Prameya*, *Pramata*, *Pramana*.
- 1.3. Significance and importance of *Pramana*, Enumeration of *Pramana* according to different schools of philosophy.
- 1.4. Four types of methods for examination in *Ayurveda* (Chaturvidha-Parikshavidhi), *Pramana* in Ayurveda.
- 1.5. Subsudation of different *Pramanas* under three *Pramanas*.
- 1.6. Practical application of methods of examination (Parikshavidhi) in treatment (Chikitsa).

2. Aptopdesha Pariksha/ Pramana

- 2.1. Lakshana of Aptopadesha, Lakshana of Apta.
- 2.2. Lakshana of Shabda, and its types.
- 2.3. Shabdavritti-Abhidha, Lakshana, Vyanjana and Tatparyakhya. Shaktigrahaheetu.
- 2.4. Vaakya: Characteristics, Vaakyarthagyanahetu- Aakanksha, Yogyata, Sannidhi.

3. Pratyaksha Pariksha/ Pramana

- 3.1. Lakshana of Pratyaksha, types of Pratyaksha- Nirvikalpaka- Savikalpaka with description, description of Laukika and Alaukika types and their further classification.
- 3.2. Indriya-prapyakaritvam, six types of Sannikarsha.
- 3.3. Indriyanam lakshanam, classification and enumeration of Indriya. Description of Panchapanchaka, Penta-elemental nature of Indriya by Panchamahabhuta (*Panchabhautikatwa* of Indriya) and similarity in sources (*Tulyayonitva*) of Indriya.
- 3.4. Trayodasha Karana, dominance of Antahkaran.
- 3.5. Hindrances in direct perception (*pratyaksha-anupalabdhikaaran*), enhancement of direct perception (Pratyaksha) by various instruments/ equipments, necessity of other Pramanas in addition to Pratyaksha.
- 3.6. Practical study/ application of Pratyaksha in physiological, diagnostic, therapeutics and research grounds.

4. Anumanapariksha/Pramana

- 4.1. Lakshana of Anumana. Introduction of Anumiti, Paramarsha, Vyapti, Hetu, Sadhya, Paksha, Drishtanta. Types of Anumana mentioned by Charaka and Nyayadarshana.
- 4.2. Characteristic and types of Vyapti.
- 4.3. Lakshana and types of Hetu, description of Ahetu and Hetwabhasa.
- 4.4. Characteristic and significance of Tarka.
- 4.5. Practical study/ application of Anumanapramana in physiological, diagnostic, therapeutics and research.

5. Yuktipariksha/ Pramana

- 5.1. Lakshana and discussion.
- 5.2. Importance in Ayurveda.
- 5.3. Practical study and utility in therapeutics and research.

6. Upamana Pramana

- 6.1 Lakshana.
- 6.2 Application in therapeutics and research.

7. Karya- Karana Siddhanta (Cause and Effect Theory)

- 7.1. Lakshana of Karya and Karana. Types of Karana.
- 7.2. Significance of Karya and Karana in Ayurveda.
- 7.3. Different opinions regarding the manifestation of Karya from Karana: Satkaryavada, Asatkaryavada, Parinamavada, Arambhavada, Paramanuvada, Vivartavada, Kshanabhanguvada, Swabhavavada, Pilupaka, Pitharpaka, Anekantavada, Swabhavoparamavada.

PART B - Ayurved Itihas

25 marks

1. Etymological derivation (Vyutpatti), syntactical derivation (Niruktti) and definition of the word Itihas, necessity of knowledge of history, its significance and utility, means and method of history, historical person (Vyakti), subject (Vishaya), time period (Kaal), happening (Ghatana) and their impact on Ayurveda.
2. Introduction to the authors of classical texts during Samhitakaal and their contribution: Atreya, Dhanwantari, Kashyapa, Agnivesha, Sushruta, Bhela, Harita, Charaka,

Dridhabala, Vagbhata, Nagarjuna, Jivaka.

3. Introduction to the commentators of classical Samhitas – Bhattaraharicchandra, Jejjata, Chakrapani, Dalhana, Nishchalakara, Vijayarakshita, Gayadas, Arunadutta, Hemadri, Gangadhara, Yogindranath Sen, Haranachandra, Indu.
4. Introduction to the authors of compendiums (Granthasamgrahakaala) – Bhavmishra, Sharngadhara, Vrinda, Madhavakara, Shodhala, Govinda Das (Author of Bhaishajyaratnawali), Basavraja.
5. Introduction to the authors of Modern era –Gana Nath Sen, Yamini Bhushan Rai, Shankar Dajishastri Pade, Swami Lakshmiram, Yadavji Tikramji, Dr. P. M. Mehta, Ghanekar, Damodar Sharma Gaur, Priyavrat Sharma.
6. Globalization of Ayurveda – Expansion of Ayurveda in Misra (Egypt), Sri Lanka, Nepal other nations.
7.
 - a) Developmental activities in Ayurveda in the post-independence period, development in educational trends.
 - b) Establishment of different committees, their recommendations.
 - c) Introduction to and activities of the following Organizations :- Department of AYUSH, Central Council of Indian Medicine, Central Council for Research in Ayurvedic Sciences, Ayurvedic Pharmacopeia commission, National Medicinal Plants Board, Traditional Knowledge Digital Library (TKDL)
 - d) Introduction to the following National Institutions :
 - National Institute of Ayurved, Jaipur.
 - IPGT&RA, Gujrat Ayurved University, Jamnagar.
 - Faculty of Ayurved, BHU, Varanasi.
 - Rashtriya Ayurveda Vidyapeetha, New Delhi.
 - e) Drug and Cosmetic Act.
8. Introduction to national & international popular journals of Ayurveda.
9. Introduction to activities of WHO in the promotion of Ayurved.

Reference Books:-

A). Padartha Vigyan:-

- | | |
|--|--------------------------------|
| 1. Padarthavigyan | Acharya Ramraksha Pathak |
| 2. Ayurvediya Padartha Vigyana | Vaidya Ranjit Rai Desai |
| 3. Ayurved Darshana | Acharya Rajkumar Jain |
| 4. Padartha Vigyana | Kashikar |
| 5. Padartha Vigyana | Balwant Shastri |
| 6. Sankhyatantwa Kaumadi | GajananS hastri |
| 7. Psycho Pathology in Indian Medicine | Dr. S.P. Gupta |
| 8. Charak Evum Sushrut ke Darshanik Vishay ka Adhyayan | Prof. Jyotirmitra Acharya |
| 9. Ayurvediya Padartha Vigyana | Dr. Ayodhya Prasad Achal |
| 10. Padartha Vigyana | Dr. Vidyadhar Shukla |
| 11. Padartha Vigyana | Dr. Ravidutta Tripathi |
| 12. Ayurvediya Padartha Vigyana | Vaidya Ramkrishna Sharma Dhand |
| 13. Ayurvediya Padartha Vigyan Parichaya | Vaidya Banwarilal Gaur |
| 14. Ayurvediya Padartha Darshan | Pandit Shivhare |

15. Scientific Exposition of Ayurveda Dr. Sudhir Kumar
16. Relevant portions of Charakasamhita, Sushrutasamhita.

B) History of Ayurveda:-

- | | |
|---|--------------------------------|
| 1. Upodghata of Kashyapasamhita | Rajguru Hem Raj Sharma |
| Paragraph of acceptance of Indian medicine | |
| 2. Upodghata of Rasa Yogasagar | Vaidy Hariprapanna Sharma |
| 3. Ayurveda Ka Itihas | KaviraSuram Chand |
| 4. Ayurveda Sutra | Rajvaidya Ram Prasad Sharma |
| 5. History of Indian Medicine (1-3 part) | Dr. GirindrNath Mukhopadhyaya |
| 6. A Short history of Aryan Medical Science | Bhagwat Singh |
| 7. History of Indian Medicine | J. Jolly |
| 8. Hindu Medicine | Zimer |
| 9. Classical Doctrine of Indian Medicine | Filiyosa |
| 10. Indian Medicine in the classical age | AcharyaPriyavrata Sharma |
| 11. Indian Medicine (Osteology) | Dr. Harnley |
| 12. Ancient Indian Medicine | Dr. P. Kutumbia |
| 13. Madhava Nidan and its Chief | Dr. G.J. Mulenbelt |
| Commentaries (Chapters highlighting history) | |
| 14. Ayurveda Ka BrihatItihasa | Vaidya Atridev Vidyalkara |
| 15. Ayurveda Ka VaigyanikaItihasa | Acharya Priyavrata Sharma |
| 16. Ayurveda Ka PramanikaItihasa | Prof. Bhagwat Ram Gupta |
| 17. History of Medicine in India | Acharya Priyavrata Sharma |
| 18. Vedomein Ayurveda | Vaidya Ram GopalS hastri |
| 19. Vedomein Ayurveda | Dr. Kapil Dev Dwivedi |
| 20. Science and Philosophy of Indian Medicine | Dr. K.N. Udupa |
| 21. History of Indian Medicine from | Dr. Jyotirmitra |
| Pre-Mauryan to Kushana Period | |
| 22. An Appraisal of Ayurvedic Material in | |
| Buddhist literature | Dr. Jyotirmitra |
| 23. Mahayana Granthon mein nihita | Dr. RavindraNathTripathi |
| Ayurvediya Samagri | |
| 24. Jain Ayurveda Sahitya Ka Itihasa | Dr. Rajendra Prakash Bhatnagar |
| 25. Ayurveda- Prabhashaka Jainacharya | Acharya Raj Kumar Jain |
| 26. CharakaChintana | Acharya Priyavrata Sharma |
| 27. Vagbhata Vivechana | Acharya Priyavrata Sharma |
| 28. Atharvaveda and Ayurveda | Dr. Karambelkara |
| 29. Ayurvedic Medicine Past and Present | Pt. Shiv Sharma |
| 30. Ancient Scientist | Dr. O.P. Jaggi |
| 31. Luminaries of Indian Medicine | Dr. K.R. Shrikanta Murthy |
| 32. Ayurveda Ke Itihasa Ka Parichaya | Dr. RaviduttaTripathi |
| 33. Ayurveda Ke Pranacharya | Ratnakara Shastri |
| 34. Ayurveda Itihasa Parichaya | Prof. Banwari Lal Gaur |

1.2 ■aLd`re

THEORY - ONE PAPER - 100 marks TEACHING

HOURS - 90 hours

PART-A

50 marks

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- 1- laKkizdj. ke'
- 2- foHkDR;FkkZ:
- 3- lfU/kizdj. ke' ¼ lfU/kfoPNsn:] lfU/kdj. ke' ½
- 4- ekM`fyaxizdj. ke' ¼ k`en : ik. ;so½
- 5- /kkrdj. ke' ¼ /kkrq:ik. ;so½
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- 9- vuqokn:

- A) From English / Hindi / regional language to Sanskrit
- B) From Sanskrit to English / Hindi / regional language
- C) Identification and correction of grammatical errors in the given sentences

The sentences for translation should be selected from the under mentioned reference books-

- 1) Laghusiddhanta Kaumudi- Acharya Varadaraja (Commentary by Shri Dhananand Shastri)
- 2) Brihatrayee- (Charaka Samhita, Sushruta Samhita, Ashtanga Hridayam)
- 3) Anuvada Chandrika-Chakradhara Hansa Nautiyal
- 4) Sanskruta Ayurved Sudha- Dr. Banwari Lal Gaur
- 5) Rachananuvada Kaumudi- Dr. Kapildev Dwivedi
- 6) Bhasha Sopanam- Published by Rashtreeya Samskruta Samsthanam, New Delhi

PART- B

50 marks

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t'eer' thim, eh'pter.4) | 25 marks |
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iÆpdFkk:½ | 10 marks |

REFERENCE BOOKS-

- 1.) Sushruta Samhita, Shareera Sthanam, Chapter-4
- 2.) Prabhashanam Work Book, Su.sam.chap.4
Published by-AYURVEDA ACADEMY® BANGALORE;
Email-ayuacademy@gmail.com
- 3.) Vaidyakeeya Subhashita Sahityam - Dr. Bhaskara Govinda Ghanekar
- 4.) Panchatantra-(Apareekshitakarakam) -Pt. Vishnu Sharma

1.3 KRIYA SHARIR (PHYSIOLOGY)

Theory-Two Papers-200 Marks (100 marks each)

Teaching hours-180 hours

PAPER- I

100 marks

PART- A

50 marks

1. Conceptual study of fundamental principles of Ayurvediya Kriya Sharir e.g - Panchamahabhuta, Tridosha, Triguna, Loka-Purusha Samya, Samanya-Vishesha. Description of basics of Srotas.
2. Definition and synonyms of the term Sharir, definition and synonyms of term Kriya, description of Sharir Dosha and Manasa Dosha. Mutual relationship between Triguna-Tridosha & Panchmahabhuta. Difference between Shaarir and Sharir. Description of the components of Purusha and classification of Purusha, role of Shatdhatupurusha in Kriya Sharira and Chikitsa.
3. Dosha- General description of Tridosha. Inter relationship between Ritu-Dosha-Rasa-Guna. Biological rhythms of Tridosha on the basis of day-night-age-season and food intake. Role of Dosha in the formation of Prakriti of an individual and in maintaining of health. Prakrita and Vaikrita Dosha.
4. Vata Dosha: Vyutpatti (derivation), Nirukti (etymology) of the term Vata, general locations, general properties and general functions of Vata, five types of Vata (Prana, Udana, Samana, Vyana, Apana) with their specific locations, specific properties, and specific functions.
Respiratory Physiology in Ayurveda, Physiology of speech in Ayurveda.
5. Pitta Dosha: Vyutpatti, Nirukti of the term Pitta, general locations, general properties and general functions of Pitta, five types of Pitta (Pachaka, Ranjaka, Alochaka, Bhrajaka, Sadhaka) with their specific locations, specific properties, and specific functions. Similarities and differences between Agni and Pitta.
6. Kapha Dosha: Vyutpatti, Nirukti of the term Kapha, general locations, general properties and general functions of Kapha, five types of Kapha (Bodhaka, Avalambaka, Kledaka, Tarpaka, Śleshaka) with their specific locations, specific properties, and specific functions.
7. Etiological factors responsible for Dosha Vriddhi, Dosha Kshaya and their manifestations.
8. Concept of Kriyakala.
9. Prakriti:
 - a) Deha- Prakriti: Vyutpatti, Nirukti, various definitions and synonyms for the term „Prakriti“. Intra-uterine and extra-uterine factors influencing Deha-Prakriti, classification and characteristic features of each kind of Deha-Prakriti.
 - b) Manasa- Prakriti: Introduction and types of Manasa- Prakriti.
10. Ahara: Definition, classification and significance of Ahara, Ahara-vidhi-vidhana, Ashta Aharavidhi Viseshayatana, Ahara Parinamkar Bhava.

11. Aharapaka (Process of digestion): Description of Annavaha Srotas and their Mula. Role of Grahani & Pittadhara Kala.
12. Description of Avasthapaka (Madhura, Amla and Katu). Description of Nishthapaka (Vipaka) and its classification. Separation of Sara and Kitta. Absorption of Sara. Genesis of Vata-Pitta-Kapha during Aharapaka process. Definition of the term Koshta. Classification of Koshta and the characteristics of each type of Koshta.
13. Agni – Definition and importance, synonyms, classification, location, properties and functions of Agni and functions of Jatharagni, Bhutagni, and Dhatvagni.

PART- B

50 marks

Modern Physiology

- a) Definition and mechanisms of maintenance of homeostasis. Cell physiology. Membrane physiology. Transportation of various substances across cell membrane.
- b) Resting membrane potential and action potential.
- c) Physiology of respiratory system: functional anatomy of respiratory system. Definition of ventilation, mechanism of respiration, exchange and transport of gases, neural and chemical control of respiration, artificial respiration, asphyxia, hypoxia. Introduction to Pulmonary Function Tests.
- d) Physiology of Nervous System: General introduction to nervous system, neurons, mechanism of propagation of nerve impulse, physiology of CNS, PNS, ANS; physiology of sensory and motor nervous system, Functions of different parts of brain and physiology of special senses, intelligence, memory, learning and motivation. Physiology of sleep and dreams, EEG. Physiology of speech and articulation. Physiology of temperature regulation.
- e) Functional anatomy of gastro-intestinal tract, mechanism of secretion and composition of different digestive juices. Functions of salivary glands, stomach, liver, pancreas, small intestine and large intestine in the process of digestion and absorption. Movements of the gut (deglutition, peristalsis, defecation) and their control. Enteric nervous system.
- f) Acid-base balance, water and electrolyte balance. Study of basic components of food. Digestion and metabolism of proteins, fats and carbohydrates. Vitamins & Minerals- sources, daily requirement, functions, manifestations of hypo and hypervitaminosis.

PAPER- II

100 marks

PART- A

50 marks

1. Dhatu:

Etymology, derivation, definition, general introduction of term Dhatu, different theories related to Dhatuposhana (Dhatuposhana Nyaya)

2. Rasa Dhatu:

Etymology, derivation, location, properties, functions and Praman of Rasa-dhatu. Physiology of Rasavaha Srotas, Formation of Rasa Dhatu from Aahara Rasa, circulation of Rasa (Rasa-Samvahana), role of Vyana Vayu and Samana Vayu in Rasa Samvahana. Description of functioning of Hridaya. Ashtavidha Sara (8 types

of Sara), characteristics of Tvakasara Purusha, conceptual study of mutual interdependence (Aashraya-Aashrayi Bhaava) and its relation to Rasa and Kapha. Manifestations of Kshaya and Vriddhi of Rasa.

3. Rakta Dhatu:

Etymology, derivation, synonyms, location, properties, functions and Praman of Rakta Dhatu. Panchabhautikatva of Rakta Dhatu, physiology of Raktavaha Srotas, formation of Raktadhatu, Ranjana of Rasa by Ranjaka Pitta, features of Shuddha Rakta, specific functions of Rakta, characteristics of Raktasara Purusha, manifestations of Kshaya and Vriddhi of Raktadhatu, mutual interdependence of Rakta and Pitta.

4. Mamsa Dhatu :

Etymology, derivation, synonyms, location, properties and functions of Mamsa Dhatu, physiology of Mamsavaha Srotas, formation of Mamsa Dhatu, characteristics of Mamsasara Purusha, manifestations of Kshaya and Vriddhi of Mamsa Dhatu .Concept of Peshi.

5. Meda Dhatu :

Etymology, derivation, location, properties, functions and Praman of Meda Dhatu, physiology of Medovaha Srotas, formation of Medo Dhatu, characteristics of Medasara Purusha and manifestations of Kshaya and Vriddhi of Meda.

6. Asthi Dhatu:

Etymology, derivation, synonyms, location, properties, functions of Asthi Dhatu. Number of Asthi. Physiology of Asthivaha Srotas and formation of Asthi Dhatu, characteristics of Asthisara Purusha, mutual interdependence of Vata and Asthi Dhatu, manifestations of Kshaya and Vriddhi of Asthi Dhatu.

7. Majja Dhatu :

Etymology, derivation, types, location, properties, functions and Praman of Majjaa Dhatu, physiology of Majjavaha Srotas, formation of Majja Dhatu, characteristics of Majja Sara Purusha, relation of Kapha, Pitta, Rakta and Majja, manifestations of Kshaya and Vriddhi of Majja Dhatu.

8. Shukra Dhatu:

Etymology, derivation, location, properties, functions and Praman of Shukra Dhatu, physiology of Shukraravaha Srotas and formation of Shukra Dhatu. Features of Shuddha Shukra, characteristics of Shukra-Sara Purusha, manifestations of Kshaya and Vriddhi of Shukra Dhatu.

9. Concept of Ashraya-Aashrayi bhava i.e. inter-relationship among Dosha, Dhatu Mala and Srotas.

10. Ojas: Etymological derivation, definition, formation, location, properties, Praman, classification and functions of Ojas. Description of Vyadhikshamatva. Bala Vriddhikara Bhava. Classification of Bala. Etiological factors and manifestations of Ojavisramsas, Vyapat and Kshaya.

- 11. Upadhatu:** General introduction, etymological derivation and definition of the term Upadhatu. Formation, nourishment, properties, location and functions of each Upadhatu.
- Stanya: Characteristic features and methods of assessing Shuddha and Dushita Stanya, manifestations of Vriddhi and Kshaya of Stanya.
 - Artava: Characteristic features of Shuddha and Dushita Artava. Differences between Raja and Artava, physiology of Artavavaha Srotas.
 - Tvak: classification, thickness of each layer and functions.
- 12. Mala:** Etymological derivation and definition of the term Mala. Aharamala: Enumeration and description of the process of formation of Aharamala.
- Purisha: Etymological derivation, definition, formation, properties, quantity and functions of Purisha. Physiology of Purishavaha Srotas, manifestations of Vriddhi and Kshaya of Purisha.
 - Mutra: Etymological derivation, definition, formation, properties, quantity and functions of Mutra. Physiology of Mutravaha Srotas, physiology of urine formation in Ayurveda, manifestations of Vriddhi and Kshaya of Mutra.
 - Sveda: Etymological derivation, definition, formation and functions of Sveda. Manifestations of Vriddhi and Kshaya of Sveda. Description of Svedvaha Srotas
 - Dhatumala: Brief description of each type of Dhatumala.
- 13. Panchagyanendriya:** Physiological description of Panchagyaanendriya and physiology of perception of Shabda, Sparsha, Rupa, Rasa and Gandha. Physiological description of Karmendriya.
- 14. Manas:** Etymological derivation, definition, synonyms, location, properties, functions and objects of Manas. Physiology of Manovaha Srotas.
- 15. Atma:** Etymological derivation, definition, properties of Atma. Difference between Paramatma and Jivatma; Characteristic features of existence of Atma in living body.
- 16. Nidra:** Nidrotipatti, types of Nidra, physiological and clinical significance of Nidra; Svapnotipatti and types of Svapna.

PART –B

50 marks

Modern Physiology

- Haemopoetic system – composition, functions of blood and blood cells, Haemopoiesis (stages and development of RBCs, and WBCs and platelets), composition and functions of bone marrow, structure, types and functions of haemoglobin, mechanism of blood clotting, anticoagulants, physiological basis of blood groups, plasma proteins, introduction to anaemia and jaundice.
- Immunity, classification of immunity: Innate, acquired and artificial. Different mechanisms involved in immunity: Humoral (B-cell mediated) and T-Cell mediated immunity. Hypersensitivity.
- Muscle physiology – comparison of physiology of skeletal muscles, cardiac muscles and smooth muscles. Physiology of muscle contraction.
- Physiology of cardio-vascular system: Functional anatomy of cardiovascular system. Cardiac cycle. Heart sounds. Regulation of cardiac output and venous

return. Physiological basis of ECG. Heart-rate and its regulation. Arterial pulse. Systemic arterial blood pressure and its control.

5. Adipose tissue, lipoproteins like VLDL, LDL and HDL triglycerides.
6. Functions of skin, sweat glands and sebaceous glands.
7. Physiology of male and female reproductive systems. Description of ovulation, spermatogenesis, oogenesis, menstrual cycle.
8. Physiology of Excretion – functional anatomy of urinary tract, functions of kidney. Mechanism of formation of urine, control of micturition. Formation of faeces and mechanism of defecation.
9. Endocrine glands – General introduction to endocrine system, classification and characteristics of hormones, physiology of all endocrine glands, their functions and their effects.

PRACTICAL

100 marks

Teaching hours-180

Ayurvedic practical

1. Assessment of Prakriti
2. Assessment of Dosha (Features of Vriddhi- Kshaya)
3. Assessment of Dhatu (Features of Vriddhi- Kshaya)
4. Assessment of Agni
5. Assessment of Koshtha
6. Assessment of Sara
7. Nadi pariksha

Modern physiology practical

1. Introduction to laboratory instruments- Simple & Compound Microscope, Scalp vein set, bulbs for blood collection, Sahli's Haemometer, Haemocytometer, pipettes, Urinometer, Albuminometer, Stethoscope, B.P. Apparatus, Harpenden's caliper, Clinical Hammer, Tuning Fork, Stop Watch, Thermometer, Centrifuge machine, ECG Machine
2. Collection of blood sample – prick, vene-puncture method, use of anticoagulants
3. Preparation of blood smear and staining
4. Estimation of Hemoglobin
5. Microscopic examination of blood
 - a. Total RBC count
 - b. Total WBC count
 - c. Differential leucocyte count
6. Packed cell volume (PCV) demonstration
7. ESR demonstration
8. Bleeding time, Clotting time
9. Blood grouping and Rh typing
10. Examination of Cardio-Vascular system
 - a. Pulse examination
 - b. Arterial blood pressure measurement
 - c. Examination of heart sounds
 - d. ECG demonstration
11. Examination of Respiratory system
 - a. Respiratory rate
 - b. Breath sounds
 - c. Spirometry
12. Examination of Nervous System- Sensory & Motor.

13. Urine examination –Physical examination, chemical examination. Test for normal constituents of urine. Detection of specific gravity and reaction of urine.

Distribution of Practical marks

1. Laboratory Practical	- 20
2. Human Experiment	- 15
3. Spotting	- 15
4. Prakriti Saradi pariksha	- 20
5. Practical Record	- 10
6. Viva- voce	- 20

REFERENCE BOOKS:-

- Ayurvediya Kriyasharir - Ranjit Rai Desai
- Kayachikitsa Parichaya - C. Dwarkanath
- Prakrit Agni Vigyan - C. Dwarkanath
- Sharir Kriya Vigyan - Shiv Charan Dhyani
- Abhinava Sharir Kriya Vigyana - Acharya Priyavrata Sharma
- Dosha Dhatu Mala Vigyana - Shankar Gangadhar Vaidya
- Prakrita Dosha Vigyana - Acharya Niranjana Dev
- Tridosha Vigyana - Shri Upendranath Das
- Sharira Tatva Darshana - Hirlekar Shastri
- Prakrita Agni Vigyana - Niranjana Dev
- Deha Dhatvagni Vigyana - Vd. Pt. Haridatt Shastri
- Sharir Kriya Vigyana (Part 1-2) - Acharya Purnchandra Jain
- Sharir Kriya Vigyana - Shri Moreshwar Dutt. Vd.
- Sharira Kriya Vijnana (Part 1 and 2) – Nandini Dhargalkar
- Dosha Dhatu Mala Vigyana - Basant Kumar Shrimall
- Abhinava Sharir Kriya Vigyana - Dr. Shiv Kumar Gaur
- Pragyogik Kriya Sharir - Acharya P.C. Jain
- Kaya Chikitsa Parichaya - Dr. C. Dwarkanath
- Concept of Agni - Vd. Bhagwan Das
- Purush Vichaya - Acharya V.J. Thakar
- Kriya Sharir - Prof. Yogesh Chandra Mishra
- Sharir Kriya Vigyana - Prof. Jayaram Yadav & Dr. Sunil Verma.
- Basic Principles of Kriya-Sharir (A treatise on Ayurvedic Physiology) by Dr. Srikant Kumar Panda
- Sharir Kriya – Part I & Part II – Dr. Ranade, Dr. Deshpande & Dr. Chobhe
- Human Physiology in Ayurveda - Dr Kishor Patwardhan
- Sharirkriya Vignyan Practical Hand Book– Dr.Ranade, Dr.Chobhe, Dr. Deshpande
- Sharir Kriya Part 1 – Dr.R.R.Deshapande, Dr.Wavhal
- Sharir Kriya Part 2 – Dr. R.R.Deshapande, Dr.Wavhal
- Ayurveda Kriya Sharira- Yogesh Chandra Mishra
- Textbook of Physiology - Gyton & Hall
- A Textbook of Human Physiology – A.K.Jain
- Essentials of Medical Physiology - Sembulingam, K.
- Concise Medical Physiology - Chaudhari, Sujit K.
- Principals of Anatomy & Physiology - Tortora & Grabowski
- Textbook of Medical Physiology- Indu Khurana

1.4 RACHNA SHARIR (ANATOMY)

Theory- Two Papers-200 Marks-(100 marks each)

Teaching Hours-180 hours

PAPER-I

100 marks

PART-A

50 marks

1. Shariopkramaniya Shaarira

Sharira and shaarira vyakhya (definitions of sharira and shaarira), shadangatvam (six regions of the body), anga pratyanga vibhaga (sub divisions). Mrita sharir samshodhan. Shaarira shastra vibhaga, shaarira gyan prayojana . Constitution of purusha according to dhatubheda, panchabhautikatvam, trigunatmakatvam, tridoshamayatvam, karma purusha, and doshadhatumala-mulakatvam.

2. Paribhasha Shaarira

Kurcha, kandara, jala, asthisanghat, seemanta, seevani, rajju, snayu and lasika.

3. Garbha Shaarira

Garbha definitions, explanation of shukra, artava, garbhadhana. Role of tridosha and panchmahabhuta in the fetal development. Beeja, beejabhaga and beejabhagavayava, linga vinischaya, masanumasika garbha vridhhi-krama, garbhottpadakbhava, garbhavriddhikara bhava, garbha poshana, apara nirmana , nabhinadi nirmana. Aanga pratyanga utpatti.

4. Pramana Shaarira: Anguli pramana.

5. Asthi Shaarira

Asthi vyakhya, number, types, asthi swaroopa, vasa, meda and majja.

6. Sandhi Shaarira

Sandhi vyakhya, numbers, types of asthi sandhi.

7. Sira, Dhamani, Srotas Shaarira

- a) Definition, types and number of sira and dhamani.
- b) Description of Hridaya.
- c) Sroto shaarira: Definition, types of srotas and srotomula.

8. Peshi Shaarira

- a) Peshi vyakhya, structure, types, number and importance.
- b) Description of Peshi.

9. Koshtha Evam Ashaya Shaarira

- a) Definition of koshta and number of koshtanga.
- b) Types and description of ashaya.

10. Kalaa Shaarira

Kalaa: definition and types.

11. Uttamangiya Shaarira

Shatchakra, ida, pingala and sushumna nadi - brief description.

12. Marma Shaarira

Marma: definition, number, location, classification, clinical importance with viddha lakshana. Explanation of trimarmas. Detail description of marmas.

13. Indriya Shaarira

Definition of indriya, indriya artha and indriya adhisthan, their number and importance. Description of gyanendria, karmendriya and ubhayendriya (manas).

PART-B

50 marks

1. Definition and branches of anatomy. Preservation methods of the cadaver.

2. Anatomical Terminologies

Anatomical position, Planes, and explanation of anatomical terms related to skin, fasciae, bones, joints and their movements, muscles, ligaments, tendons, blood vessels, nerves,.

3. Embryology

Definitions and branches of embryology. Embryo and fetus. Sperm and ovum, fertilization. Cleavage. Germ layers formation and their derivatives. Laws of heredity, Sex determination and differentiation, Month-wise development of embryo. Foetal circulation, placenta formation, Umbilical cord formation.

4. Osteology

Bone: Definition, ossification, structure and types. Description of bones with clinical anatomy.

5. Arthrology

Joints: Definition, structure types and movements. Description of joints of extremities, vertebral joints and temporomandibular joint with their clinical anatomy.

6. Cardiovascular system

- a. Definition, types and structure of arteries and veins.
- b. Description of heart and blood vessels with their course and branches.
- c. Pericardium with applied aspect.

7. Lymphatic system

Definition, types and structure of lymph vessels, lymph glands with their clinical aspect.

8. Myology

- a) Structure and types of muscles.
- b) Description of muscles; their origin, insertion, actions, nerve supply and clinical anatomy.

Paper II

100 marks

Part A

50 marks

1. Respiratory System

- a. Bronchial tree and lungs with their clinical aspects.
- b. Respiratory tract: nasal cavity, pharynx, larynx, trachea, bronchial tree.
- c. Pleura with its clinical aspects.
- d. Diaphragm.

2. Digestive system

- a. Organs of digestive tract (alimentary tract) with their clinical aspects.
- b. Digestive glands: liver, spleen and pancreas.
- c. Description of peritoneum with its clinical aspects.

3. Urinary System

Urinary tract: kidney, ureter, urinary bladder and urethra with their clinical aspects.

4. Reproductive system

- a. Male Reproductive system: reproductive organs, tract and glands (prostate and seminal vesicles) with their clinical aspects.
- b. Female reproductive system: reproductive organs, tract and glands with their clinical aspects.

5. Endocrinology

Definition, classification & description of endocrine glands (pituitary, thyroid, parathyroid, thymus and suprarenal glands) with clinical aspects.

PART B

50 marks

6. Nervous System

Nervous system: definition, classification and its importance. Description of brain and spinal cord.

Description of peripheral nervous system: cranial and spinal nerves, nerve plexuses, and autonomic nervous system, formation and circulation of cerebrospinal fluid and blood supply of brain and spinal cord.

7. Sensory organs

Description of structures of eye, ear, nose, tongue and skin with their clinical aspects.

8. Surface and radiological anatomy

- a. Study of radio-imaging of limbs, abdomen, pelvis and vertebral column with its clinical application.
- b. Surface anatomy of thoracic and abdominal viscera.

PRACTICAL

100 marks

Teaching hours: 180

Content of practical

1. Practical study of bones
2. Practical study of organs
3. Practical study of surface and radiological anatomy.
4. Shava vichhedana – detailed dissection of the whole body.
5. Practical study of location of marma
6. Demonstration of histology slides (10 slides)

Distribution of marks

1. Spotting -	20 marks
2. Dissected organs and histology slides -	20 Marks
3. Bones, joints, marma -	20 Marks
4. Surface & radiological anatomy -	10 Marks
5. Practical records -	10 Marks
6. Viva-Voce -	20 Marks
Total	100 Marks

Reference Books :-

S. No.	Name of Book	Author
1.	Brihat Shariram Vaidyaratna-	P.S. Varrier
2.	Abhinava Shariram-	Acharya Damodar Sharma Gaur
3.	Manava Sharir (Revised Edition)-	Prof. Dinkar Govind Thatte
4.	Manava Bhruna Vigyana -	Prof. Dinkar Govind Thatte
5.	Manava Anga Rekhankan Vikrian -	Prof. Dinkar Govind Thatte
6.	Sharir Rachana Vigyan (English)-	Vaidya P.G. Athawale
7.	Manual of Practical Anatomy Cunnigham	Practical Manual Vol-1, Vol-2, Vol-3
8.	Clinical Anatomy in Ayurveda -	Prof. D.G. Thatte & Prof. Suresh Chandra
9.	Sharir Rachna Vigyan (English)-	Prof. D.G. Thatte
10.	Ayurvedic Human Anatomy -	Prof. Dr. Giridhar M. Kanthi
11.	Regional Anatomy -	B. D. Chaurasia
12.	Rachana Sharir Vigyana -	Dr. Mahendra Sing
13.	relevant chapters of Brihtrayee and Laghuthrayee	
14.	Gray's Anatomy	
15.	Text Book of Human Anatomy-	Inderbir Singh
16.	Clinical Anatomy-	Richard S Snell
17.	Fundamentals of Human Anatomoy-	Dr. Chakraborty
18.	Human Osteology -	Poddar

1.5 Maulik Siddhant avum Ashtang Hridaya
(Basic Principles and Ashtang Hridaya- An ancient text of Ayurveda)

Theory- One Paper– 100 marks Teaching Hours -
120 hours

Part A

60 marks

Ashtang Hridaya Sutrasthana Adhyaya 1 to 15

Part B

40 marks

1. Ashtang Hridaya Sutrasthana Adhyaya 16 to 30
2. Description of Ashta Prakriti
3. Shastra Lakshan (Tantra), Tantraguna, Tantradosha, Tachitalya, Arthasraya, Kalpana

Reference Books:

1. Astang Hridaya : Hindi commentary by Lalchanda Vaidya
2. Astang Hridaya : Hindi commentary by Vd. B.L. Gaur
3. Astang Hridaya : English commentary by Dr. T. Sreekumar
4. Astang Hridaya : English commentary by Dr. Vishwavasudhara Gaur
5. Astang Hridaya : Sanskrit commentary by Hemadri
6. Astang Hridaya : Sanskrit commentary by Arunadatta

CENTRAL COUNCIL OF INDIAN MEDICINE
NEW DELHI

**SYLLABUS OF AYURVEDACHARYA (BAMS)
COURSE**

INDEX

2ND PROFESSIONAL

1.1	DRAVYAGUNA VIGHYAN	2-9
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2.1

DRAVYAGUNA VIGYAN

(PHARMACOLOGY & MATERIA MEDICA)

Lectures: 200 Hrs.

Practicals: 200 Hrs.

Total Marks -400

Theory Two Papers– 100 Marks Each

Practical/Viva voce – 200 Marks

Paper I

100 Marks

Part A

50 Marks

- 1- Dravyaguna Shastra Paribhasa-** Lakshana of Sapta Padartha of Dravyaguna Vijnana viz Dravya- Rasa-Guna- Virya- Vipaka- Prabhava and Karma.
- 2- Dravya:**
Etymological derivation, definition, panchbhoutikatwa.
Classification of Dravya according to Samhitas and Nighantus Taxonomical classification.
- 3- Guna:**
Etymological derivation, definition and Classification of Guna.
Detailed knowledge of Gurvadi Guna & Paradi gunas.
- 4- Rasa:**
Etymological derivation, definition, Meaning of "Rasa" in various contexts. Shad Rasas (Madhura, Amla, Lavana, Katu, Tikta, and Kashaya), Panchabhautik constitution of Rasas, Nirvritivisheshakrama (manifestation in general and particular), Ritu and shad rasa Rasanurasayoh bheda (Difference between rasa and anurasa), Lakshana (characteristics), Guna and Karma of shad Rasas, Kopana and Shamana of Dosha and dushya by Shad rasas. Effects of excess usage of Rasa. Rasopalabdhi, Rasaskandha.
- 5- Vipaka:**
Etymological derivation and definition, difference between Avasthapaka and Vipaka, Types of Vipaka, (Dvidvidha-Trividha, Panchavidha) Guna and karma of Vipaka.
Grades of Vipaka (taratamya), Vipakopalabdhi hetu (Factors to determine Vipaka).
- 6- Veerya:**
Etymological derivation, definition and Swarupa of Virya, Number of Virya.
(Dwividha & Ashtavidha), Panchabhauthikatva
Virya karmani (Effects of Virya), General principles in determination of virya along with exceptions.

7- Prabhava:

Definition, Effects of Prabhava.

8- Interrelation of Rasa-Guna-Virya-Vipaka-Prabhava with respect to their strength (balabal nirupana). Samanapratyayarabdha and Vichitrapratyayarabdha dravyas.

9- Karma:

Lakshana, swaroopa and bheda of karma (Definition, nature and types of action).

Explanation of the following Karmas with examples:

1. Deepana	2. Pachana	3. Samshodhana
4. Samshamana	5. Anulomana	6. Sransana
7. Bhedana	8. Rechana	9. Chhedana
10. Lekhana	11. Grahi	12. Sthambhana
13. Madakari	14. Pramathi	15. Abhishyandi
16. Vyavayi	17. Vikashi	18. Rasayana
19. Vajeeekarana	20. Jeevaneeya	21. Balya
22. Brimhana	23. Langhana	24. Medhya

10. Brief information on Karmas of dashemani gana of Charak Samhita.

11- Mishraka Gana:

11a)- Audbhida Gana (Vegetable origin) Brihatpanchamoola, Laghupanchamoola, Vallipanchamoola, Katakapanchamoola, Trinapanchamoola, Madhyamapanchamoola, Jeevaneeya panchamoola, Panchapallava, Panchavalakala, Triphala, Trikatu, Trimada, Chaturusana, Panchakola, Shadusana, Chaturbeeja, Jeevaniya gana, Ashtavarga, Trijataka, Chaturajataka, Katuchaturjataka Panchatikta, Amlapanchaka, Chaturbhadrak, Trikarshika, Swalpatriphala, Madhuratriphala, Mahavisha, Upavisha, Agrya aushadh varga- Knowledge of Agrayaaushadha Varga with example.

11 b)- Jangama Gana (Animal origin)- Ksheerashtaka, Mutrashtaka, Pitta panchaka.

11 c)- Parthiva Gana (Mineral origin) - Lavana Panchaka, Kshara dvaya, Kshara Ashtaka.

12- Basis of nomenclature:

Basis of nomenclature of dravya, Basis and Derivation of synonyms.

13. Bheashaja Pariksha vidhi (as described in Charaka samhita vimana sthana 8), Dravya Sangrahana (collection of dravya)- Ecology- Classification of desha (geographical area) and bhumi (soil), swarupa of sangrahaniya dravya of (Nature and quality of drug to be collected). Sangrahana vidhi (Method of collection) -Vegetable and Animal origin drugs according to part used. Period of collection according to virya, samrakshana vidhi (preservation of collected dravyas), bheshajagara (Storehouse), study on different prayojyanga (useful plant parts).

Part B**50 Marks****(I)****20 Marks**

14 a) Concept of dravya shodhan (purification of dravya).

14 b) Brief knowledge of Apamishran (adulterants)

14 c) Concept of Abhava pratinidhi dravya (substitutes)

15- Prashasta bhesaja (ideal drug), plant extracts. Concept of viruddha Dravya (incompatibility of the dravya).

16- Introduction to Nighantu Vigyan - Dhanwantari Nighantu, Bhavaprakashanighantu, Rajanighantu.

17- Brief knowledge of cultivation, conservation of medicinal plants and information about endangered species.

(II)**30 Marks**

18. - Introduction, Definition & scope of Pharmacology and Principles of general Pharmacology. Brief Knowledge about pharmacology of the following - Anaesthetics, CNS depressants, Sedatives, Hypnotics, Tranquilisers, Antipyretics, Analgesics, Antiepileptics, Antihypertensive, Antianginal, Antiplatelet, Hypolipidaemic, Haemopoetic, Coagulants, Bronchodilators, Aerosols/ Inhalants, Expectorants, Digestants, Carminatives, Antacids, Antiulcer, Laxatives, Antidiarrhoeals, Antiemetic, Hepatoprotective, Diuretic, Antidiuretic, Lithotriptic, Antiinflammatory, Hormonal therapy, Antiobesity, Antidiabetic, Antithyroid, Oxytocic. Galactagogues, Contraceptives, Styptics, Antihistamines, Antimicrobial, Antibiotics, Antimalarial, Amoebicidal, Antifilarial, Anthelmintic, Antifungal, Vitamins, Minerals, Water imbalance and IV fluids, Vaccines, antivenom, antirabies serum, Local anti septics, drugs in ophthalmic practice, Anti cancer drugs and immunomodulators.

Paper II**100 Marks****Part A****70 marks****1-Detailed Knowledge of Following Dravya –**

- 1- Detailed knowledge of following drugs with respect to Basonym of drug, Main Synonyms, Regional Name, Botanical Name, Family, Classification of Dravya (Gana) as described in Charak and Sushrut, External morphology, Useful parts, Important phytoconstituents, Rasa panchaka, Action on Dosha, Dhatu, Mala, Prayogarha vyadhi (therapeutic indications), Amayikaprayoga and Matra (Therapeutic administration and Dose), Vishishta yoga (names of important formulations), Vishakta Lakshan (adverse effects), Chikitsopachara (remedial measures) and Shodhana (as required)

[Alphabetical order and Botanical names to all the drugs are to be added]

Agaru	Guggulu	Pashanabheda
Agnimantha	Haridradvaya	Patala
Agnimantha	Haritaki	Pippali-Pippalimula
Ahiphena	Hingu	Prishniparni
Amalaki	Jambu	Punarnava
Apamarga	Jatamansi	Pushkarmoola
Aragvadha	Jatiphal	Rasna
Aragvadha	Jeerakadvaya	Rasona
Ardra-Sunti	Jyotishmati	Rohitaka
Arjuna	Kalamegha	Saireyaka
Arjuna	Kampillaka	Sarivadvaya
Arkadvaya	Kanchanara	Sarpagandha
Ashvagandha	Kantakari	Shalaparni
Asoka	Kapikacchu	Shallaki
Ativisha	Karkatakshringi	Shalmali
Bakuchi	Karpura	Shankhapushpi
Baladvayam.	Katuki	Shatavari
Bhallataka	Khadira	Shigru
Bharangi	Kiratatikta	Shirisha
Bhrungaraj	Kumari	Shyonaka
Bibhitaka	Kumkum Kesara	Talisa Patra
Bijak/ Vijaysar	Kupilu	Tila
Bilva	Kushta	Trivrut
Brahmi	Kutaja	Tulasi
Bruhati	Lavanga	Tvak
Chandanadvaya,	Lodhra	Ushira
Chitraka	Madanaphala	Vacha
Dadima	Mandukaparni.	Varahi
Devadaru	Manjishtha	Varahi
Dhataki	Maricha	Varuna
Durva	Musta	Vasa
Eladvayam	Nagakeshara	Vatsanabha
Eranda	Nimba	Vidanga
Gambhari	Nirgundi	Vidari
Gokshura	Palasha	Yastimadhu
Guduchi	Parpata	Yavani

Part B-

II- Brief Knowledge of following dravyas with Respect to Sanskrit Name, Botanical Name, Family, Habit (Samanya Swarupa), Parts Used and Indications.

Agastya	Jati	Palandu
Ajamoda	Jayapala	Parasika Yavani
Akarkarabh	Jeevanti	Parijata
Amlavetasa	Kadali,	Parisha
Amra	Kadamba	Parnabija

Amragandhiharidra	Kaidarya	Parnayavani
Ankola	Kakamachi	Parpataka
Aparajita	Kamala	Parushaka
Ashvagol	Kankola	Patalagarudi
Ashvattha	Karanja	Patha
Asthishrunkhala	Karavellaka	Patola
Atasi	Karavira	Patranga
Avartaki	Karira	Pilu
Avartani	Karpasa	Plaksha
Babbula	Kasamarda	Prasarani
Badara	Kasha	Priyala
Bakula	Kasni	Priyangu
Bhumyamalki	Kataka	Puga
Bijapooru	Katphala	Putiha
Bola	Kebuka	Putranjivaka
Chakramarda	Kharjura	Rajika/Sarshapa
Champaka	Kitmari	Rohitaka
Chandrashura	Kokilaksha	Saptachakra
Changeri	Koshataki	Saptaparna
Chavya	Kulatha	Saral
Chirbilva	Kumuda	Sarja
Chopachini	Kusha	Shala
Danti	Kusmanda	Shara
Darbha	Lajjalu	Sharapunkha
Dattura	Langali	Shatahwa
Dhanvayasa	Latakaranja	Shati
Dhanyaka	Latakasturi	Snuhi
Draksha	Madayantika	Sringataka
Dronapushpi	Mahanimba	Svarnakshiri
Gandhaprasarini	Mandukaparni	Tagara .
Garjara	Markandika	Tailaparni
Gojihva,	Masha	Talmuli
Gorakshaganja	Mashaparni	Taruni
Gunja	Matulunga	Tavakshira
hinsapa	Mayaphala	Teja Patra
Hinstra	Meshashruni	Tuvaraka
Hribera	Methika	Udumbara
Hrutpatri	Mudgaparni	urana
Ikshu	Mulaka	Vamsha
Indravaruni	Murva	Vata
Ingudi	Nagabala	Vatada
Irimesa	Nala	Vrudhadaru
Ishvaku	Narikela	Vrukshamla
Isvari	Nili	
Japa	Padmaka	

III .-Introduction, Guna, Karma and Uses of following Jantava Dravya (Drugs of Animal Origin).

1. Kasturi
2. Gorochana
3. Mrigasringa

IV- Introductory Knowledge of Following Annapana Varga:

- | | | |
|----------------|---------------------|----------------------|
| 1. Jala Varga | 2. Dugdha Varga | 3. Madhu Varga |
| 4. Taila Varga | 5. Sukadhanya Varga | 6. Shamidhanya Varga |
| 7. Phala Varga | 8. Shaka Varga | 9. Mamsa Varga |
| 10. Aharayogi | | |

PRACTICALS

1. A. Study of Macroscopic, Microscopic characters and Demonstration of organoleptic characteristics and grahya-agrahyatva of following plants and their useful parts.
 - i. Kanda (stem) - Guduchi or Ashtishrinkhala
 - ii. Patra (leaves) - Vasa or Kumari
 - iii. Pushpa (flower and Parts of flower)- Dhataki or Japa
 - iv. Phala (fruit) – Maricha or Madanaphala or Vidanga
 - v. Beeja (seeds) – Eranda or Kapikacchhu
 - vi. Twak (bark) – Kutaja or Arjuna or Ashwattha
 - vii. Moola(Root)- Punarnava or Chitraka
 - viii. Nirayasa (exudate) – Guggulu or Mocharasa
 - ix. Jangama dravya - Madhu or Ghrita.
2. Records of Herbarium sheets of 50 medicinal plants Compulsory study tour other state/s for field knowledge and procurement of plant species.

PRACTICAL MARKS DIVISION

1	Herbarium	20 Marks
2	Practical record	20 Marks
3	Drug identification- spotting –Raw/crude drugs	30 marks
4	Plant identification spotting –fresh	30 marks
5	Practical	40 marks
6.	Viva-Voce	60 Marks
Total		200 marks

Reference Books

1.	Abhinav Buti Darpan (Vol.1-2)	-	Vd. Roop Lal Vaishya
2.	Aushadna Vigyna Shastra	-	Acharya Pt. Vishvanatha Dwidevi
3.	Ayurvediya Aushadnkarma vigyana	-	Acharya V.J. Thakur
4.	Bedi Vanaspati Kosha	-	Prof. Ramesh Bedi
5.	Bhaishajyaguna Vigyana	-	Dr. Alakhnarayan Singh
6.	Bhav Prakash Nigantu (English)	-	Shreekanthamurti
7.	Bhav Prakash Nighantu	-	With Vd. Krishna Chandra Chunekar commentary
8.	Bhrinad dravyagunadarsha	-	Mahendra Kumar Shastri
9.	Classical Uses of Medicinal Plants	-	Acharya Priyavrata Sharma
10.	Controversial Medicinal Plants	-	Vd. G. Bapa Lal
11.	Dalhana Ka Dravyaguna Shastra Ke Kshetra Me Yogadana	-	Vd. Shiv Kumar Vyas
12.	Dravyaguna Kosha	-	Acharya Priyavrata Sharma
13.	Dravyaguna Sutram	-	Acharya Priyavrata Sharma
14.	Dravyaguna Vigyana	-	Dr. Gyanendra Pandey
15.	Dravyaguna Vigyana(Vol. 1-2)	-	Acharya Yadavji Tikram Ji
16.	Dravyaguna Vijyana	-	Dr. V.M. Gogate
17.	Dravyaguna Vigyana (Vol. 1-5)	-	Acharya Priyavrata Sharma
18.	Dravyaguna Shastrum	-	Vaidya G.A. Phadake
19.	Dravyaguna Vijyana	-	Dr. A.P. Deshpande
20.	Dravyagunavijnana basic Principles	-	Prof.D.S.Lucas
21.	Forgotten Healers (Indian Medicinal Plants)	-	Dr. Prakash Pranjape
22.	Glossry of Vegetable Drugs in Bhrittrayis	-	Thakur Balwant Singh & Vd. Krishna Chandra Chunekar
23.	Introduction to Dravyaguna	-	Acharya Priyavrata Sharma
24.	Kriyatamka Aushadi Parichaya	-	Acharya Pt. Vishvanath Dwidevi
25.	Materia Medica	-	Acharya Ghosh
26.	Nighantu Adarsh (Vol. 1-2)	-	Vd. Bapa Lal
27.	Pharmacological basis of Medical Practice	-	Goodman & Gillman
28.	Pharmacology and Pharmacotherapeutics	-	Satoskar Bhandarkar & Ainapure
29.	Prayogatamaka Dravyaguna Vigyana	-	Dr. Maya Ram Uniyal
30.	Priya nighantu	-	Acharya Priyavrata Sharma
31.	Raspanchaka/Dravyaguna Siddhanta	-	Prof. Shivcharan Dhyani
32.	System of Plant Nomenclature in Ayurveda	-	Dr. Gyanendra Panday
33.	Text Book of Pharmacognosy	-	Trees & Valis
34.	Textbook of Dravyaguna	-	Dr.K.Nishteswar
35.	Unani Dravyaguna Vigyana	-	Hakim Daljeet Singh

-
- | | | | |
|-----|---|---|---------------------------|
| 36. | Useful parts of Charaka, Sushurut,
and Vagbhata. | - | |
| 37. | Uttarakand Ki Vanaspatiya | - | Dr. Gyanendra Pandey |
| 38. | Vanoaushadi Darshika | - | Thakur Balwant Singh |
| 39. | Vanoaushadi Nidarshika | - | Dr. Ram Sushil Singh |
| 40. | Vedic Vanaspatiyan | - | Dr. Dinesh Chandra Sharma |

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Theory Two Papers – 100 Marks Each
Practical/Viva voce – 100 Marks

PAPER -1

100 Marks

Part A**50 Marks****I. Dosha Dushyadi Vigyan**

1. Definition and importance of Roganidana.
2. Samanya Nidana and Samanya Lakshana of Dosha Vriddhi, Kshaya and Prakopa.
3. Dosha Dhatu Ashraya Ashrayi Bhava.
4. Dhatu Kshaya Vriddhi Lakshana.
6. Mala Kshaya Vriddhi Lakshana.
7. Hetu, Bheda and Lakshana of Agni Dushti.
8. Definitions and Samanya Lakshana of Ama.
9. Sama and nirama Dosha, Dushya Lakshana.
10. Dosha Paka and Dhatu Paka Lakshana.
11. Concept, classification, diagnosis and general complications of Avarana.
12. Doshagati and Rogmarga.
13. Detailed study of Srotomoola and Srotodushti Samanya and Vishishta Hetu Lakshana of all Srotas. Differences between Sroto Dushti and Kha Vaigunya.

II. Vyadhi Vigyan

1. Definition, synonyms and classification of Vyadhi & Vyadhi Ghatak.
2. Criteria for nomenclature of Diseases in Ayurveda (Vyadhinamakara).
3. Bija, Bija Bhaga and Bija Bhaga Avayava Dushti.
4. Basic knowledge of Hereditary, Congenital, Acquired, Multifactorial, Traumatic and Environmental disorders.
5. Introduction to ICD Classification of Diseases of WHO and DSM classification.
6. Samanyaja and Nanatmaja Vikara. Nidanarthakara Vyadhi, Hetu Sankara, Lingasankara, Vyadhisankara, Vyadhi Awastha.
7. Dhatu, Updhatu, Mala and Indriya Pradoshaj Vikara.
8. Concept of AshtaMahagada .
9. Introduction to Ashta Nindita.
10. Definition and classification of Vyadhikshamatva.
11. Ojas – types of Ojo Dushti- Visrimsa- Vyapad & Kshaya & It's Diseases.

III. Basic Pathology

1. Introduction to pathology and its sub-divisions.
2. Introduction to Cell Injury and Cellular adaptations.
3. Definition and brief description of inflammation – Healing/repair.
4. Definition and brief description of edema – shock – hemorrhage, Thrombosis , embolism, Ischemia and Infarction.
5. Types of Immunity – different types of immune responses in the body – Basic knowledge of auto immune diseases, Acquired immune deficiency disease and hypersensitivity.
6. Nomenclature and classification of tumors - difference between benign and malignant tumors.

7. Introduction to Nutritional disorders – disorders of macro and micro nutrients.
 8. Introduction to infections.
-

9. Introduction and classification of microorganisms such as virus- bacteria-fungus.

Part B

50 Marks

IV. Nidana Panchaka Vigyana

1. Difference between Roga and Rogi Pariksha.
2. Importance of Nidan Panchaka.
3. Hetu - Definition, Synonyms and Classification.
4. Purva Rupa – Definition, Synonyms, Samanya and Vishishta Purvarupa.
5. Rupa - Definition, Synonyms, Samanya and Pratyatma Lakshana. Difference between Vyadhi and Lakshana.
6. Upashaya / Anupashaya– Definition, Types and its importance in diagnosis.
7. Samprapti – Definition, Synonyms and Type and Samprapti Ghataka.
8. Shat Kriyakaala. Relationship between Nidana Panchaka and Shat Kriyakaala.
9. Upadrava and Udarka.
10. ArishtaVigyan – Definition, Types and its importance.
11. Sadhyasadhyatwa – Types, their parameters and importance.
12. General diagnostic principles of AnuktaVyadhi (Ch. Vi. 4).

V. Pariksha Vigyana

1. Importance and knowledge of Aptopadeshadi & Darshanadi Trividha, Chaturvidha, and Shadvidha Pariksha.
2. Importance and Knowledge of Ashtasthana Pariksha.
3. Importance and Knowledge of Karanadi Dashavidha Parikshya Bhava.
4. Importance and Knowledge of Dashavidha Pariksha.
5. Basic knowledge of ECG, USG, X Ray, CT Scan, MRI.

Paper II

100 Marks

Part A

50 Marks

Systematic study of Nidana Panchaka of following diseases (Including Upadrava, Arishta and Sadhyasadhyata).

I. Diseases of Rasavaha Srotas

- 1(a) Jwara(Jwarabheda-Ama, Pachyamana and Nirama Jwara,Agantukajwara, Punaravartaka Jwara,Vishama Jwara, Dhatugata Jwara, Charakokta Sannipata Jwara.
- 1(b) General mechanism of Fever, Introduction to the Aetiopathogenesis of Malaria,Typhoid, Dengue fever, Influenza and Chikungunya.
- 2(a) Pandu, Amavata, Hridroga, Shotha.
- 2(b) Introduction to Anaemia & its Classification, Rheumatic fever, Rheumatoid Arthritis, Hypertension, Angina, Ischaemic Heart Disease, Myocardial Infarction and CCF.

II. Diseases of Raktavaha Srotas

1. Kamala - Raktapitta - Vatarakta – Kroshtuksheersha - Shitapitta – Maha Kushtha – Visarpa – Shwitra and Introduction to Kshudra Kushtha.
2. Introduction to Hepatomegaly, Spleenomegaly, Leukaemia, Thalessemia, Sick cell Anaemia.
3. Introduction to Urticaria, Psoriasis, Eczema, Pemphigus.

III. Diseases of Mamsavaha Srotas

- (a) Galganda
- (b) Introduction to Thyroid disorders

IV. Diseases of Medovaha Srotas

-
1. Sthoulya - Karshya – Prameha.
 2. Introduction to Obesity and Diabetes Mellitus.

V. Diseases of Asthi – Majjavaha Srotas

1. Vatavyadhi - Akshepaka - Apatanaka - Ardita - Pakshaghata – Gridhrasi –Vishwachi, Avabahuka, - Manyasthambha ,Katigraha,Pangutwa
2. Sandhigatavata, Asthi-Majjagata vata.
3. Introduction to Osteo- Arthritis, Osteoporosis.
4. Introduction to Parkinson’s disease, Stroke, Lumbago- Sciatica syndrome, Bell’s Palsy, Cervical- Lumber & Ankylosing Spondylitis.

VI. Diseases of Shukravaha Srotas

1. Introduction to Klaibya and Vandhyatva.
2. Introduction to male and female infertility.

Part B

VII. Diseases of Pranavaha Srotas

50 Marks

- 1(a). Kasa - Shwasa - Hikka – Urahkshata – Shosha – Rajayakshma.

- 1(b). Introduction to the aetiopathogenesis of Pneumonia, Pleural effusion, Bronchitis, Bronchiectasis, Bronchial Asthma.

VIII. Diseases of Annavaha- PureeshavahaSrotas

1. Agnimandya - Ajirna - Aruchi- Chhardi - Amlapitta- Shoola – Parinama Shoola – AnnadravaShoola- Atisara – Pravahika - Grahani –Gulma- Udara Roga.
2. Introduction to Anaha, Adhmana, Atopa, Visuchika Alasaka, Vilambika.
3. Introduction to Peptic Ulcer, Irritable Bowel Syndrome (IBS) Diarrhoea, Dysentery, Constipation, Inflammatory Bowel Diseases.

IX. Diseases of Udakavaha Srotas

- 1(a) Introduction to Trishna, Daha.
- 1(b) Introduction to water and electrolyte imbalance disorders.

X. Diseases of Mutravaha Srotas

- 1(a) Mutrakrichha – Mutraghata.
- 1(b) Introduction to Urinary Tract Infection, Nephropathies.

XI. Diseases of Swedavaha Srotas

- 1(a) Introduction to Khalitya, Palitya.

XII. Diseases of Manovaha Srotas

- 1(a) Apasmara, Unmada, Atatwabhinivesha-Vishada, Anidra, Mada, Murchha, Sanyasa.
- 1(b) Introduction to Epilepsy, Depression, Anxiety neurosis.

XIII. Upasargajanya Vyadhi (Communicable diseases)

- 1(a) Romantika – Masurika – Upadamsha – Phiranga.
- 1(b) Introduction to Measels, Chickenpox, Leprosy, Tuberculosis and AIDS.

XIV. Krimi Vigyana

- 1) Definition, classification of Krimi and features of Krimiroga
- 2) Snayuka, Shleepada.
- 3) Introduction of Filariasis and classification of common parasites.

PRACTICAL

(100 Marks)

i) Fundamental Principles of Laboratory Tests

Introduction to laboratory, Sterilization, glass wares, solutions reagents and safety procedures, Disposal of biomedical wastes.

ii) Haematology

- 1 Haemoglobin estimation.
- 2 Blood cells counting - WBC, RBC, platelets.
- 3 Hematocrit /Packed cell volume (PCV).
- 4 Erythrocyte indices - MCV, MCH, MCHC.
- 5 Peripheral blood smear, staining technique and differential leucocyte count.
- 6 Peripheral blood film examination in Anemia, Leukemia, Malaria, Filariasis (Demonstration).
- 7 ESR.
- 8 Screening test for bleeding disorders- bleeding time (BT), Clotting time (CT), Demonstration of Prothrombin time (PT).
- 9 Blood grouping - ABO system, Rh typing (Rhesus system).

iii) Urine Examination

1. Ayurveda anusara mutrapariksha.
2. Physical Examination - Volume, Reaction (Ph) & Specific Gravity.

3. Chemical Examination for - Proteins, Glucose, Phosphate, Ketone, Bile salts, Bile pigment.
4. Dipstick examination
5. Demonstration of Microscopic Examination.

iv) Stool Examination

- 1 Ayurveda anusara purishapariksha.
- 2 Physical examination, Sama-Nirama Pariksha.
- 3 Microscopic examination of ova & cyst (Demonstration)
- 4 Occult Blood Test.

v) Demonstration of Sputum Examination

- 1 Ayurveda anusara sthivanapariksha.
- 2 Physical, Chemical and Microscopic Examination of the sputum.
- 3 Sample collection and Demonstration of AFB.

vi) Demonstration of Semen examination

- 1 Ayurveda anusara Retaspariksha.
- 2 Semen examination.

vii) Biochemical Examination – (Demonstration)

Blood Glucose, Serum Bilirubin, Blood Urea, Lipid Profile, Serum Creatinine, Serum Uric acid etc.

viii) Demonstration of different staining techniques in microbiology.

ix) Demonstration of Sero-immunological Investigations: RA and Widal.

x) Laboratory record – maintenance of laboratory record book.

Bed side Practical (Clinical Methods)

1. Introduction and demonstration of clinical methods (General and Systemic Examination).
 2. Practical demonstration of examination of Roga based on Pancha Nidana.
 3. Demonstration of instruments used for clinical examination.
 4. Practical records of clinical examination of at least 20 long cases in I.P.D including Aturbala-pramana pareeksha.
 5. Practical records of clinical examination of at least 20 short Cases based on Ashta vidha pariksha in O.P.D.
-

6. Demonstration of ECG, USG and Radio imaging techniques.

Distribution of Marks for final Practical Examination

1. Daily Record -10 Marks
2. Identification of Instruments -10 Marks
3. Laboratory Experiments -20 Marks
4. Short Case -10 Marks
5. Long Case -20 Marks
6. Viva - Voce -30 Marks

Total 100 Marks

Reference Books

1. Madhava Nidana (Madhukosha Pt. Yadunandan Upadhyay Commentary) Part 1 – 2
2. Doshakaranatwa Mimamsa - Acharya P.V. Sharma
3. Nadi Darshan - Vd. Tara Shankar Mishra
4. Nadi Vigyana Vidyotini Hindi Tika
5. Nadi Vigyan- Shri Satya Dev Vashisht
6. Nadi Vigyan- Gangadhar Tika
7. Rogi Pariksha vidhi Acharya- Priyavrata Sharma
8. Ayurvediya Roga Vargikaran- Vd. Ramanath Dwivedi & Vd. Gurdip Singh.
9. Ayurvediya Nidan Evum Chikitsa Ke Siddhanta - Prof. Ram Harsh Singh.
10. Relevant portions of Charak Samhita, Sushrut Samhita and Vagbhata.
11. Text Book of Pathology- William Boyds.
12. Text Book of Pathology- Harsh Mohan.
13. Text Book of Pathology- Dey and Dey.
14. Text Book of Parasitology -Ramnik Sood.
15. Clinical Pathology and Bacteriology- S.P. Gupta.
16. Clinical methods in Ayurveda- K. R . S. Murthy.
17. Parameswarappa's Ayurvediya Vikriti Vigyan and Roga Vikriti Vigyan-Dr. P.S. Byadgi.
18. Oxford Handbook of Clinical Examination Oxford Handbooks and Practical Skills.
19. Advanced Clinical Evaluation System for Practical Assessment of Clinical Examination Skills.
20. Symptoms & Signs in Clinical Medicine - Chamberlains.
21. Clinical Methods- Hutchison's.
22. Bedside Clinics in Medicine Part- I & II-Kundu.
23. Common Medical Symptoms- Mehta.
24. Advances in Pathology & Lab Med- Weimstean, Gralem, Anderson, Cortan, Wick, Zumwelt.
25. Clinical Laboratory medicine Edited by Kenneth D Mc. Chately.
26. General Pathology- Walter & Israel Churchill Living stone.
27. A Comprehensive Dictionary of Pathology- Chris Newann.
28. Practical Pathology- Dr. K. Uma Chaturvedi.
29. Clinical examination- Douglas/Macleod's.
30. Pathology Practical book for Undergraduates- Harsh Mohan.
31. Medical Laboratory Technology - R. Sood.
32. Clinical Diagnosis and Management by Todd, Sanford and Davidson Laboratory methods
33. Clinical Hematology In Medical Practice- Degruchy's.
34. Robbins Basic Pathology- Kumar, Abbas, Fausto et al.

2.3. Rasashastra Evam Bhaishajyakalpana

(IATROCHEMISTRY AND AYURVEDIC PHARMACEUTICS)

Theory -Two PapersTotal

Marks- 200 Teaching

hours-200

Practical :-

Total Marks-200 Teaching

hours-200

RASASHASTRA

Paper 1

100 Marks

Part A

50 Marks

1. Definition and etymology of Rasa, History of Rasashastra, Importance of Rasaushadhi, Concept of Rasa-Rasayana, Concept of Raseshwar Darshana. Concept of Rasashala and Rasamandap.
2. Brief Description and Application of Technical terminologies (Paribhasha): Avapa, Nirvapa, Dhalana, Bhavana, Jarana, Murchana, Shodhana, Marana, Amrutikarana, Lohitikarana, Mruta Loha, Satwa Patana, Druti, Apunarbhava, Niruttha, Rekhpurna, Varitara.
3. Dravya Varga: Amlavarga, Panchamrittika, Panchagavya, Panchamrita, Ksharashtaka, Dravakagana, Mitra panchaka, Rakta varga, Lavanapanchaka.
4. Brief description of Yantras and their application Ulukhala Yantra, Khalwa Yantra, Kachhapa Yantra, Damaru Yantra - Vidhyadhara Yantra- Urdhwapatan, Addhapatan & Tiryakpatana Yantra, Jaranartha Tulayantra, Dolayantra, Patalayantra, Palika Yantra, Baluka Yantra, Bhudhara Yantra, Sthali Yantra, Swedana Yantra.
5. Brief description & application of Musha (Crucible): Samanya Musha, Gostani musha, Vajra Musha, Maha musha, Yoga musha, Vrintaka Musha, Malla / Pakwa musha. Different types of crucibles e.g. Silica crucible, platinum crucible. Mudra and Sandhi Bandhana.
6. Brief description & applications of Chullika, Satwapatana Koshti, Patala Koshti, Gara Koshti, Angarakoshti and knowledge of various heating appliances viz. Gas stove, Hot plate, Heating mantle, Induction Stove, Hot Air Oven.
7. Concept, definition and types of Puta: Suryaputa, Chandraputa, Gomayaputa, Lawakaputa, Kukkutaputa, Kapotaputa, Varahaputa, Gajaputa, Mahaputa, Kumbhaputa, Valukaputa, Bhudharaputa, Applications of Electric muffle furnace and fuel (diesel)dependent furnace. Brief introduction to thermocouple and pyrometer.
8. Knowledge of Parada: Synonyms, Occurrence, natural and artificial sources of Parada, Hingulottha parada, Types of Parada, Parada Dosha: Naisargika, Yougika, Aupadhika

(Kanchuka). Grahya-Agrahya Parada, Parada gati, Parada bandha, Shodhana of Parada. Parada sanskara and brief description of Ashtasamskara.

9. Concept of Murchhana and Jarana of Parada, Preparation of Kajjali, Classification of Rasaushadhi: Khalvi rasa e.g. Tribhuvana Keerti Rasa, Parpati Rasa- Rasa Parpati, Kupipakva Rasa- Rasa sindur, Pottali rasa - Hemagarbha pottali. Rasa sevana vidhi and pathya and apathya.
10. Brief introduction of quality control , standardization and GMP of Rasaushadhis.

Part B

50 Marks

Occurrence, Synonyms, Mineralogical identification, Sources, Types, Grahya and Agrahyata, Shodhana, Marana and other processing techniques. Properties, dose, anupan and therapeutic uses, pathya – apathya and ashuddha, apakwa and avidhee sevanjanya dosha and its management, important formulations of the following:

1. **Maharasa** – Abhraka (Biotite Mica), Vaikrantha, Makshika (Chalco-pyrite), Vimala (Iron Pyrite), Shilajatu, Sasyaka (Peacock ore), Chapala and Rasaka (Sphalerite).
2. **Uparasa** – Gandhaka (Sulfur), Gairika (Red Ochre), Kasisa (Green Vitriol), Kankshi (Alum), Haratala (Orpiment), Manahshila (Realgar), Anjana and Kankustha.
3. **Sadharana Rasa** – Kampillaka, Gauri pashana (Arsenic oxide), Navasagara (Ammonium chloride), Kaparda (Cowry), Agnijara, Giri Sindura (Red oxide of Hg), Hingula (Red Cinnabar) and Mriddara shringa (Litharge).
4. **Dhatu** - Swarna (Gold), Rajata (Silver), Tamra (Copper), Loha (Iron), Vanga (Tin), Naga (Lead), Yashada (Zinc), Kamsya (Bronze), Pittala (Brass), Vartalo. Dhatu -graha sambandha.
5. **Ratna** - Manikya (Ruby), Mukta (Pearl), Pravala (Coral), Tarkshya (Emerald), Pushparaga (Topaz), Vajra (Diamond), Nilam (Sapphire), Gomeda (Zircon or Cinnamon stone), Vaidurya (Cat's eye). Ratnapariksha, Ratnadosha, Ratna-graha sambandha.
6. **Uparatna**- Vaikranta (Tourmaline), Suryakanta (Sun stone), Chandrakanta (Moon stone), Rajavarta (Lapis lazuli), Perojaka (Turquoise), Sphatikamani (Quartz), Trinakanta, Palanka, Putika, Rudhir.
7. **Sudha varga** – Sudha (Lime stone), Kaparda (Cowries), Shukti (Oyster Shell) , Shankh (Conch Shell), Mriga shringa (Stag horn), Khatika, Godanti (Gypsum) and Samudraphena (Cattle Fish bone), Kukkutanda twak (Hen's Egg Shell).
8. **Sikata varga** - Sikata (Silica), Dugdhapashana (Talc), Nagapashana / Jaharmohara (Serpentine), Badarshama (silicate of lime), Vyomashma (Sangeyashab - Jade),

Kousheyashma (Asbestos) and Akika (Agate).

- 9. Kshara varga** - Sarja kshara (Sodium bicarbonate), Yava kshara, Tankana kshara (Borax), Surya Kshara (Potassium Nitrate).
- 10. Miscellaneous** - Mandura, Bola, Dam-ul Akhawayan (Raktabandhini), Kasturi, Bhoonag, Mayurpiccha, Sarjarasa, Madhoocchishta.
- 11. Visha and Upavisha**-Introduction, collection and storage, classification, synonyms, shodhana, antidote, therapeutic and toxic doses, anupan, therapeutic uses, and formulations of following Visha and Upavisha-Vatsanabha, Kuchala, Jayapala, Dhattura, Bhanga, Bhallataka, Gunja, Arka, Snuhi. Langali, Karaveera, Ahiphena and Chitrakmool.
- 12. Aushadhi Yoga Gyanam- ingredients, manufacturing process, and bhesajprayogvidhi.** Arogya Vardhini Gutika, Kasturibhairava Rasa, Kumara Kalyana Rasa, Garbhapala Rasa, Chandraprabha Vati, Chandramrita Rasa, Pratapalankeshwara Rasa, Pravalapanchamrita Rasa, Anandbhairava Rasa, Yogendra Rasa, Laxmivilas Rasa, Vasantakusumakara, Vasantamalati Rasa, Brihat Vata Chintamani Rasa, Shankha vati, Shwaskuthara Rasa, Hinguleswara Rasa, Hemagarbhapottali, Hridyarnava Rasa, Swarnavanga, Makaradhwaja, Putapakwavaisham Jwarantaka Loha, Vatvidhvamsan Rasa, Kamadugha Rasa, Laghusutshekhara Rasa, Navayasa Loha, Saptamrita Loha, Tamra Parpati, Panchamrita Parpati, Sveta Parpati.
- 13. Introduction to pharamcovigilance and its status in India, with reference to Ayurvedic drugs.**
A) Necessary to know – From part A and B : S. No. 1 to 9
B) Desired to know – From part B : S. No. 10

Practical

100 Marks

Minimum Twenty five practicals to be performed

- | | |
|-------------------------|--|
| 1. Rasa [Parada] | Samanya Shodhana of Parada
Kajjali
Mugdha rasa |
| 2 Maharasa varga | Shodhana of Abhraka
Dhanyabhraka nirmana
Shodhana of Makshika
Shodhana of Shilajatu
Shodhana of Sasyaka. |

3. Uparasa varga

Shodhana of Gandhaka
Shodhana of Gairika
Shodhana of Kasisa
Shodhana of Kankshi
Shodhana of Haratala
Rasa manikya nirman
Shodana of Manashila

4.	Sadharana rasa varga	Shodhana of Hingula Shodhana of Navasadar Shodhana of Kapardika
5.	Sudha Varga	Shodhana of Shankha Shodhana of Shukti Shodhana of Pravala mula Shodhana of Godanti
6.	Dhatu varga	Samanya Shodhana of Lauha Shodhana of Mandura Samanya Shodhana of Tamra Shodhana of Naga Shodhana of Vanga Shodhana of Yashada Shodhana of Tankana
7.	Kshara Varga	Shodhana of Tankana
8.	Parpati	Preparation of Rasaparpati, Bola Parpati and Swetaparpati
9.	Visha varga	Shodhana of Vatsanabha, Bhallataka, Kupilu, Dhattura beeja, Jayapala, Gunja, Chitrakamoola.

PRACTICAL FOR DEMONSTRATION / GROUP PRACTICALS

- 1.** Hingulad rasakrishti (Hingulottha Parada).
- 2.** Bhasma: 4 (One from each group)
 - i. Abhraka bhasma, Swarna Makshika bhasma, Tamra bhasma
 - ii. Vanga bhasma, Naga bhasma, Yashada bhasma
 - iii. Mandura bhasma, Kasisa bhasma
 - iv. Shankha bhasma, Kapardika bhasma, Godanti bhasma.
- 3.** Pishti : 1 Pravala pishti, Jaharmohara / Akika pishti,
Trina kantha mani pishti, Mukta pishti.
- 4.** Druti : 1 Gandhaka druti.
- 5.** Formulations 4 (one from each group)
 - i. Rasasindura, Swarna vanga, Sameer pannaga rasa
 - ii. Saptamruta lauha, Punarnava mandura, Navayasa lauha
 - iii. Agnitundi vati, Tribhuvana kirti rasa, Sootshekhara rasa,
Laghusutashekhara Rasa
 - iv. Arogyavardhini vati, Laghumalinivasanta rasa, Hinguleshwar rasa,
Anandbhairav rasa, Rajapravartini vati

BHAISHAJYAKALPANA

Paper II

100 Marks

Part A

50 Marks

- 1. History and Chronological (kramika vikasa) development** of Bhaishajyakalpana. Concept of Aushadha and Bhesaja.
- 2. Fundamental principles of Bhaishajya Kalpana.**
- 3. Study of Ancient and Contemporary systems of 'Maana' (Units of measurement), Shushka -ardra –drava- dravya grahan niyam** (Rules of measures of dry, fresh, liquid drugs); Grahyagrahyatva, Nava Puran dravya grahan niyam.
- 4.** Guidelines and Methods of collection, storage, preservation of Aushadhi dravya. Concept of Saviryatavadhi (shelf life) and stability in ancient and contemporary science.
- 5. Bhesajprayogavidhi : Aushadha Matra, Anupana and sahapan and Aushadh sevan kaala. (Posology).**
- 6. Panchavidha kashaya kalpana and Other kalpana :** Kashaya Yoni, Swarasa, Kalka, Kwatha, Hima and Phanta, Pramathya, Aushadha siddha paniya, Tandulodaka, Laksha rasa, Mantha, Panaka, Arka, Churna, Rasakriya, Ghana, Phanita, Avaleha, Prasha, Gudapaka, Sharkara, Syrups, Ksheerapaka, Satva, Guggulu kalpana, Vati, Gutti, Pinda, Modaka, Varti Preparation of Tablets, pills, capsule and Suppositories. Masi kalpana, Lavana kalpana, Kshara kalpana and Kshara sutra.
- 7. Introduction and general knowledge of useful instruments/ Equipments -** Disintegrator, Mixer, Grinder, End Runner, Edge Runner, Sieve-Shaker, Granulator, Tableting machine, Pill making machines, coating and polishing pan, capsule filling machine, sieves and mesh.
- 8. Sneha kalpana :** Sneha yoni, Types of Sneha, Sneha murchana vidhi, Sneha paka vidhi, patra paka, types and their use. Sneha siddhi lakshana, dose, Preparation and uses of Triphala Ghrita, Bramhighrita, Narayana taila, Anutaila.
- 9. Sandhana Kalpana and its types:** Madya Kalpana, Asava, Arishta, Sura (Prasanna - Kadambari - Medaka - Jagala - Bakkasa), Maireya, Surasava, Shukta, Kanjika, Sauvira, Tushodaka, Sidhu kalpana their methods of preparation, siddhi lakshana, properties, uses, doses. Takrarishta, Draksharishta, Ashokarishta, Dashamoolarishta, Kumaryasava, Chandanasava.

- 10. Kritanna and Aushadhisiddha anna Kalpana:** Definition of Kritanna, Concept of Pathya and Apathya, Yavagu –types of yavagu, Manda, Peya, Vilepi, Anna, Bhakta, Odan, Yush –types, Krishara, Mansa rasa, Vesavara, Khad Kamblika, Raga, Shadava, Dadhi and Takra Varga – Takra, Udasvita, Katvar, Mathita, Chhachika.

PART B

- 1. Bahyopacharartha kalpana (External Applications)-Lepa** -Types of Lepa, methods of preparation and mode of application. Udvartan and Avachurnan, Method of preparation of Siktha Taila, Malahara – Sarjarasa Malahara, Gandhak Malahara, Upanaha, Atasi upanaha, Shatadhouta and Sahastradhouta Ghrita. Brief introduction of semi solid dosage forms- Ointments, Creams, Emulsions, Gels, Lotions.
- 2. Principles and precautions for preparation of formulations for following:**
 - 2.1 Netraupacharartha kalpana (Ophthalmic preparations)** – Seka, Drava, Pindi, Anjana - Ashchyotana - Tarpana - Putapaka and Vidalaka, Methods of preparation of eye drops, eye ointments.
 - 2.2 Nasyopacharartha Kalpana** - Classification of Nasya, Navana, Avapidana, Pradhaman, Marsha and Pratimarsha nasya.
 - 2.3 Dhumapanartha kalpana** - Classification of dhumpaana, Method of preparation of dhumvarti and its therapeutic uses. Dhupan: Vranadhupan, arshodhupan.
 - 2.4 Mukhaprayogartha kalpana** - Gandoosha - Kavala - Pratisaran, Tooth paste, Tooth powders and Mouth wash.
 - 2.5 Basti kalpana**- Classification, Method of preparation of Niruha and Anuvasana, Basti Therapeutic properties and uses of Basti.
- 3** Brief knowledge of Standardization of Ayurvedic formulations- Kastaushadhi.
- 4** Brief introduction of Drug and Cosmetics Act 1940 and Rules 1945.
- 5** Concept of, Aushadhi Nirmanshala, with respect to Good Manufacturing Practices (GMP) in accordance to Schedule T.

Practical Bhaishajya Kalpana

50 Marks

Following practicals to be performed- (Minimum one from each category)

Method of preparation, therapeutic uses, dose and anupana of the following

- 1.** Swarasa- Ardraka swarasa, Tulasi swarasa, Kumari Swarasa, Vasa putapaka swarasa
- 2.** Kalka- Nimba kalka, Rasana kalka.
- 3.** Kwatha- Punarnavasthaka kwatha, Rasna Saptaka kwatha, Kulattha kwath.
- 4.** Hima- Dhanyaka hima, Sarivadi hima .
- 5.** Phanta- Panchakola phanta, Yastimadhu Phanta.

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6. Pramathya- Mustadi pramathya
 7. Mantha- Kharjuradi mantha
 8. Aushadh siddha paniya- Shadanga paniya
 9. Laksha Rasa.
 10. Arka - Yavani arka, Gulab arka, Misreya arka
 11. Panaka- Chinchā panaka, Chandan panaka.
 12. Sharkara- Banapsha sharkara, Nimbu sarkara.
 13. Churna- Sitopaladi Churna, Hinguwashtaka Churna.
 14. Gutika- Chitrakadi Gutika, Sanjivani Vati.
 15. Guggulu-Triphala Guggulu, Kaishora Guggulu.
 16. Avaleha- Chyavanaprashavaleha, Vasavaleha, Vyaghri Haritaki avaleha, Manibadra avaleha.
 17. Rasa kriya - Darvi Rasakriya, Guduchi Ghana, Kutaja Ghana.
 18. Khanda- Haridra khanda, Narikela khanda, Sowbhagya shunti paka
 19. Satva- Amruta satva,
 20. Varti- Phala varti, Chandrodaya varthi
 21. Lavana- Arka lavana, Narikela lavana
 22. Masi- Triphala masi, Mayurpiccha Masi
 23. Ksheerapaka- Arjuna ksheerapaka, Rasona ksheerapaka, Shunthi Ksheerpaka
 24. Kshara- Apamarga kshara, Snuhi kshara, Ksharasutra. .
 25. Manda, Peya, Vilepi, Yavagu, Krishra, Vesavara
 26. Yusha - Mudga yusha, Saptamushtika yusha, Kulattha yusha
 27. Aristha- Kutajarishta, Takrarishta .
 28. Asava - Kumaryasava, Kanakasava
 29. Sukta kalpana- Kanji
 30. Udaka- Tandulodaka
 31. Upanaha- Atasi Upanaha
 32. Siktha Taila Nirmaan
 33. Malahara- Sarjarasa malahara, Gandaka malahara, Cream, Emulsion. Sneha Kalpana
Sneha Murchhana - Ghrita Murchana, Taila Moorchna, Ghrita kalpana: Jatyadi ghrita, Triphala ghrita, ksheerashatphala ghrita- Taila kalpana-Panchaguna taila, Arka taila, Bala taila, Jatyadi taila
 35. Taila patana- Bhallataka taila patana, Jayapala taila patana
 36. Shodhana- Guggulu, Hingu.

II. Visit of minimum three GMP approved Ayurvedic manufacturing units.

Distribution of Practical Marks: Total 200 MarksRasashastra -

100

- | | | |
|----------------|---|----------|
| 1. Record Book | - | 10 Marks |
| 2. Experiment | - | 30 Marks |
| 3. Spotting | - | 20 Marks |
| 4. Viva-voce | - | 40 Marks |

Bhaishajyakalpana - 100

- | | | |
|----------------|---|----------|
| 1. Record Book | - | 10 Marks |
| 2. Experiment | - | 30 Marks |
| 3. Spotting | - | 20 Marks |
| 4. Viva-voce | - | 40 Marks |

Reference Books

1. Adyatan Rasa Shastra
2. Abhinav Rasa Shastra
3. Asava Arishta Vigyanam
4. Ayurvediya Rasa Shastra (Sachitra)
5. Ayurvediya Rasa Shastra
6. Rasa Bhaishajya Paribhasa
7. Ayurvediya Rasa Shastra
8. Ayurved Prakash
9. Drugs and Cosmetic Act - 1940
10. Paka Darpana
11. The Paka-darpana of King Nala
12. Parada Vigyaniam
13. Pratyaksha Aushadh Nirmanam
14. Bhaishjyakalpana Vigyanam
15. Rasa Tarangini
16. Rasa Darpan
17. Rasa Bindu
18. Rasa Bhaishajya Kalpana Vigyan Vaidya
19. Rasa Mitra
20. Rasa Ratna Samuchchaya (Hindi)
21. Rasaratna samuchchaya-
22. Rasaratna samuchchaya -
23. Rasa Shastra Prayogiki Srivastava,
24. Rasamritam

R.K. Goyal
Vaidya Somadev Sharma
Dr. Pakshdhar Jha
Chandrabhusan Jha
Badrinarayan Pandey
Sureshananda Thapaliyal
Prof. Siddhi Nandan Mishra
Vaidya Gujrat Mishra

Dr. Indradev Tripathi
Dr. Madhulika critical study
Vasudev M. Dwivedi
Acharya VishwanathDwivdei
Dr. Agnihotri
Sadanand Sharma
Prof. Bhajan Das Swami
Dr. Sanjay Sharma
Santosh Kumar Khandal
Dr. Tryambak Nath Sharma
Dattatreya Ananta Kulkarni.
Ambikadatta shastri
Damodar Joshi
Yadav and Prof. Ramesh Saxena
Vaidya Yadavji Tirkramji Achar

25. Vaidyak Paribhasha Pradeep (Hindi Translation)
26. Sharangadhara Samhita
27. Bharatiya Bhaishajya Kalpana Vigyana
28. Bhaishajya Kalpana Vijnanam
29. Rasa Shastra (English)
30. Rasa Ratna Samuchchaya (English)
31. Rasendra Chintamani (Hindi)
32. Ayurvedic formulary of India 38. Ayurvedic Pharmacopiea of India , CCRAS
33. Bhaishjya Kalpana Vigyan
34. Textbook of Rasashasra
35. Ashadhayoga Vigyanam
36. Vaidyaka Paribhasha Pradipa (English Translation)
37. Relevant parts of Brihatrayee
38. Text book of Bhaishjya Kalpana -
39. Text Book of Rasa Shastra
40. Rasa Chandashu
- 47 .Bhaishjya Ratnawali
41. 48 Yoga Ratnakar

Dr. Indradev Tripathi
 Dr. Radhakrishna Parashar
 Gananath Vishwanath Dwivedi
 Dr. K Ramachandra Reddy
 Prof. Damodar Joshi
 Prof. Damodar Joshi
 Prof. Siddhinandan Mishra

Siddhi Nandan Mishra
 Dr. K Ramachandra Reddy.
 Dr. K. Ramachandra reddy
 Dr. K. Ramachndra Reddy &
 i. Dr. P. Suresh

Dr Shobha G Hiremath
 Dr P H C Murthy
 Prof S S Savirkar (CCRAS Publication)
 Prof S N Mishra

 *

2.4 CHARAKASAMHITA -PURVARDHA

(Sutrasthana, Nidanasthana, Vimanasthana, Sharirasthana and Indriyasthana)

Theory- One Paper– 100 Marks

Lectures – 200 Hours

Part A

- | | | |
|------------------|---|----------|
| 1. Sutrasthana | - | 40 Marks |
| 2. Indriyasthana | - | 10 Marks |

Part B

- | | | |
|------------------|---|----------|
| 1. Nidanasthana | - | 15 Marks |
| 2. Vimanasthana | - | 20 Marks |
| 3. Sharirasthana | - | 15 Marks |

CENTRAL COUNCIL OF INDIAN MEDICINE
NEW DELHI

SYLLABUS OF AYURVEDACHARYA (BAMS) COURSE

INDEX

3RD PROFESSIONAL

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AGADTANTRA, VYAVAHAR-AYURVED EVUM **VIDHIVAIDYAK**

(TOXICOLOGY, FORENSIC MEDICINE AND MEDICAL JURISPRUDENCE)

Theory One Paper – 100 Marks

Practical/Viva voce -50 Marks

Theory -200 hrs

Practical - 100 hrs

Part- A

50 Marks

- 1** Derivation, definition of Visha and Agadatantra. Scope of Agadatantra. Visha Utpatti, Visha Prabhava, Visha Pranaharana Kriya, Visha Guna, Visha Gati, Visha Vega Visha Sankata, Shanka Visha.
- 2** Definition of toxicology, Definition of poison, suicidal and homicidal poisons, classification of poisons, their action and route of administration, absorption, excretion, metabolism, diagnosis and general principles of treatment, duties of a medical practitioner in case of suspected poisoning.
- 3** Origin and Classification of Visha:-Its sources, Difference between Visha, Madya and Oja guna, Visha Upadrava and Visha Mukta Lakshana.
- 4** Tests for detection of Visha, and Modern Toxicological Techniques of detection of poisons Visha Data Lakshana, Visha Peeta Lakshana, Signs and symptoms of Visha afflicted organs and personal effects. (Poisoning with Anjana, Lepa paduka, Abharana etc.
- 5** Introduction to Environmental Toxicology- Samuhika Vishaprayoga- effect of chemical and nuclear warfare.
- 6** Vishopakrama described by Charak, General principles of Management of poisoning.
- 7** Manifestation of poisoning due to poisons of plant origin their fatal Dose, fatal period, management of poisoning, post mortem appearance and its medico legal importance. Visha and Upavisha- Arka, Snuhi, Langali, Karaveera, Gunja, Ahiphena, Dhatura, Bhallataka, Vatsanabha, Kupeelu, Jayapala, Bhanga & Tobacco, Parthenium hysteriphorus, Chitraka, Eranda, Digitalis and Cerebra Odallam.
- 8** Garavisha, Dooshivisha, Viruddhahara. Food adulteration and poisoning–classification, diagnosis, management and contemporary significance.
- 9** Jangama Visha – Detailed study of Sarpa, Keeta, Loota, Vrischika, Mooshika, Alarka – Visha; Lakshana, Bheda, Chikitsa and their Sadhyasadyata (contemporary and classical views).
- 10** Introduction to poisoning due to Acids, Alkalis, metals, Non-metals, Asphyxiants and others, their Fatal Dose, Fatal period, Manifestation, management, medico legal importance and postmortem appearance of poisoning due to:
 - a) Acid and Alkalis– Sulphuric acid, Hydrochloric acid, Nitric acid, Hydrocyanic acid, Oxalic acid, Carbolic acid, Formic acid, alkalis in general.
 - b)** Asphyxiants – Carbon monoxide, Carbon dioxide, Hydrogen sulphide
 - c) Nonmetallic poisons – Phosphorous, Iodine
 - Metallic poisoning – Arsenic, Mercury, Lead, Copper, Zinc, Tin.
 - d) Others - Petroleum – Kerosene Organo phosphorus compounds -Aluminum

phosphate, Organo Chlorinated Compounds, Household poisons.

11 Madya and Madatyaya. Alcohol poisoning (Ethanol and Methanol).

12 *Introduction to Narcotic drugs and Psychotropic substances Act 1985.*

Part –B

50 Marks

- 1.** Definition of Vyavahara Ayurveda (Forensic medicine) and Vidhivaidyaka (Medical jurisprudence), concise history of Vyavahara Ayurveda (Forensic medicine) and Vidhivaidyaka (Medical jurisprudence). Introduction to Indian Penal Code, Indian Evidence Act and Criminal Procedure Code.
- 2.** Legal Procedures:- Inquest, Evidence, Witness, Courts and their powers.
- 3.** Personal identity and its Medico legal aspects, forensic odontology, Introduction to Forensic Serology and DNA profiling.
- 4.** Death and its Medico Legal Aspects, Medico Legal autopsy and *exhumation*.
- 5.** Injuries and thermal injuries, their medico Legal aspects, general introduction of weapons.
- 6.** Dowry deaths (Domestic Violence), their Medico Legal importance and laws in relation to it.
- 7.** Asphyxial deaths and its Medico Legal importance.
- 8.** Medico Legal importance of Pregnancy, Delivery; Impotence & Sterility, Abortion, Infanticide, battered baby. Virginity, Artificial Insemination, Legitimacy.
- 9.** Sexual offences, and their Medico Legal aspects. Sexual perversions.
- 10.** Introduction to Forensic psychiatry.
- 11.** Introduction to forensic laboratory.
- 12.** Ethics as in classical Texts. Types of Vaidya, Pranabhisara and Rogabhisara Vaidya, Qualities of Vaidya, Responsibilities of Vaidya, Chaturvidha Vaidyavrutti, Duties of Vaidya to his patient, Vaidya Sadvrittam, Apujya Vaidya, Code of conduct.
- 13.** Laws in relation to Medical practitioners: Indian Medicine Central Council Act.
- 14.** Maintenance of medical record.
- 15.** Physician's responsibility in criminal matters, Professional negligence, Civil negligence, Criminal negligence, Medico Legal aspects of Acquired Immune Deficiency Syndrome, Rights of an unborn child, Medical Termination of Pregnancy Act Transplantation of human organs Bill 1994, Pre Natal Diagnostic Testing Act, Malingering of feigned diseases, International Code of Medical Ethics for Doctors. Clinical establishment Act.

Consumer Protection Act 1986.

PRACTICAL

Practical Training

1. Post Mortem examination
2. Evidence in the court
3. Demonstrations in the Forensic & Toxicology museum
(Toxic & Anti toxic substances, medico legal specimens & Charts)
4. Clinical postings
5. Library Hours for compilation

Distribution of Practical Marks

- | | |
|--|----------|
| 1. Post Mortem examination and Court posting – Case Record | 10 Marks |
| 2. Practical/Clinical Record Book | 10 Marks |
| 3. Identification (spotting) | 10 Marks |
| 4. Viva – voce | 20 Marks |

Total

50 Marks

Reference Books

- | | |
|---|--|
| 1. Topics related to Agada Tantra from Charak Samhita, Sushrut Samhita, Ashtanga Hridaya, Ashtanga Samgraha, Kasyapa Samhitha, Yogaratnakara, Bhavaprakasha and Madhava Nidana. | |
| 2. Vidhivaidyaka (Vyavahar Ayurveda Vijnan) | Dr.Charuchandra Pathak |
| 3. Medical Jurisprudence and Toxicology | Modi |
| 4. Basavarajeeyam | Edited by Vd.Govardhan |
| 5. Agada Tantra | Sh. Ramanath Dwivedi |
| 6. Text book of Agada Tantra | Edited by Dr Huparikar, Dr.Joglekar |
| 7. Agadatantra ki Pathyapustaka | Edited By Dr Huparikar,
Dr.Joglekar |
| 8. Agad Tantra | Dr. Shekher Namboodri |
| 9. Vishachikitsa
(Ayurveda Toxicology English Translation) | Vaidya Balakrishnan Nair, Kerala |
| 10. Medical Ethics and Medical Laws in India | Dr. H.S. Mehta |
| 11. Toxicology Ayurvedic Perspective | VPSV Ayurveda college Kottakkal |
| 12. Kautilya Arthashastra (English) | Prof. Kangle |
| 13. Kautilya Arthashastra (Hindi) | Dr. Raghunath Singh |
| 14. Vyavahar Ayurveda | Dr.Ayodhya Prasad Achal |
| 15. Vyavahar Ayurveda Vigyanam | Dr.Indramohan Jha (Sachchan) |
| 16. Textbook of Forensic Medicine and Toxicology | Dr. V.V.Pillay |
| 17. Forensic Medicine | Dr. B. Umadathan |
| 18. Relevant Acts | Govt. of India |
| 19. Relevant topics from Manu Smriti | |

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3.2

SWASTHAVRITTA

Theory- Two papers - 100 marks each

Practical / Viva voce -100 marks

Lectures –200 Hrs

Practicals and demonstration – 100 Hrs

Paper-I

PART A- VAIYAKTIKA SWASTHAVRITTA

50 marks

Introduction

Definition of swastha & swasthya and swasthavritta. Arogya lakshana, swasthavritta prayojanam, WHO definition of health.

Dimensions of health-Physical, Mental, Social.

Concept of wellbeing- objective, subjective, standard of living, quality of life.

Dinacharya

1. Definition of Dinacharya
2. Aims and importance of dinacharya
3. Brahma Muhurta evam Utthana
4. Usha Jalapana
5. Sharirachinta
6. Malatyaga
7. Mukha prakshalan
8. Dantadhavana and preparation of Ayurvedic tooth powder and paste
9. Jihvanirlekhanavidhi
10. Anjana
11. Pratimarsha Nasya
12. Gandusha and Kavala
13. Tambulasevana
14. Dhoomapana
15. Abhyanga
16. Udvartana
17. Utsadana
18. Vyayama
19. Chankramana
20. Snana
21. Anulepana
22. Vastra dharana
23. Danda dharana
24. Padatra dharana
25. Chatra dharana
26. Ushnisha dharana
27. Ratnabharana dharana
28. Madhyahna charya
29. Cosmetic effect of Dinacharya procedures

Rathricharya

1. Sandhya charya
2. Rathri bhojana vidhi
3. Shayanavidhi according to Bhavamishra

Ritucharya

1. Importance of ritucharya
2. Ritu presentation as per different acharyas
3. Adana kala & visarga kala
4. Sanchaya-Prakopa-Prashamana of Dosha according to ritu
5. Doshashodhana in Ritu Charya
6. Relation of Agni bala and Ritu
7. Pathya and Apathya Ahara and Vihara in different ritus
8. a) Ritusandhi
b) Yamadamsthra
c) Rituharitaki
d) Rituviaryaya

Sadvritta

Description of Sadvritta and Achara Rasayana their role in Prevention and control of diseases.

Trayopastambha

i) Ahara- Nirukti, Swarupa, Pramukhatva, Ahara dravya Vargikaranam, Aharavidhividhana, Dwadashashana pravicharana, Ashtaharvidhivisheshayatanani, Pathyahara, Apathyahara, Samashana, Adhyashana, Vishamashana, Ahara dushparinama & tajjanya vyadhaya, Santarpanajanya evam Apatarpanajanya vyadhi, Viruddhahara and its effects, Shadrasabhojanasya mahatwam.

Dietetic standards, Proximate principles of Food, Nutritional requirements, Sources and deficiency diseases of Protein, Carbohydrate, Fat, Vitamins and Minerals.

Concept of balanced diet in Ayurveda, Nitya sevaneeya dravya, Balanced diet for different sections of people in the society, Social aspects of nutrition.

Aharavarga - Dhanya varga(Cereals and millets), Shaka and Harita varga (Leafy and Non leafy vegetables), Kanda varga (roots and tubers), Phala varga (Fruits), Taila varga(Fats and Oils), Ikshu varga & Madhya varga(Alcoholic Beverages), Dugdha varga (Milk and Milk products), Masala and vyanjana dravyas (Spices & Condiments), Kritanna varga(Prepared Food), Mamsa varga (Meat types).

Food hygiene

Milk hygiene-Milk composition, Source of infection (for Milk), Milk borne diseases, Clean and Safe milk, Pasteurization of milk.

Meat hygiene-Meat inspection, Slaughter house, Freshness of fish and egg. Fruits and Vegetables hygiene

Sanitation of eating places, Preservation of food, Food handlers, Food borne diseases, Food fortification, and Food adulteration, Food toxicants, Properties of Vegetarian and Non- vegetarian diet, Effects of spices and condiments

Consumption of Alcohol and its effects on personal and social health. Effects of pathya-apathya in life style disorders-Diabetes, Hypertension, Obesity and Coronary heart Disease.

ii) Nidra- Nirukti and Utpatti, Types , Nidra – Swasthya sambandha, Properties of Yukta Nidra, Effects of Ratri Jagarana, Diwaswapna, Anidra, Atinidra, Ahara and Vihara causing disturbed sleep , Ahara and Vihara Causing sound sleep.

Duration of sleep according to age, Sleep in healthy and diseased persons.

iii) Brahmacharya – Brahmacharya and Abrahmacharya, Importance of Bharmacharya and Abrahmacharya, Vyavaya sambandhi niyama, Effects of Ativyavaya. Methods of Virya Raksha, Surataspriha (Libido) through Vajikarana, Viryanasa phala.

Roganutpadaniya- Concept of Vega- Adharaniya Vega and Dharaneeya Vega, Diseases due to vegadharana and their chikitsa, sharir shodhan.

Rasayana for Swastha-Nirukti, paribhasha (definition), classification and examples

Ashta nindita purusha

Menstrual hygiene

Part B (YOGA AND NISARGOPACHARA)

50 marks

YOGA

Introduction

Yoga shabda utpatti, definitions, Different schools of Yoga – Rajayoga, Hathayoga, Mantrayoga, Layayoga, Jnanayoga, Karmayoga, Bhaktiyoga.
Yoga prayojana

Ayurveda yoga sambandha, swasthya rakshane yogasya mahatvam
Yogabhyasa pratibhandhaka & siddhikara bhavas as per Hathayoga.
Mitahara and Pathyapathyani during Yogabhyasa.

Panchakosha Theory

Astanga yoga

Yama, Niyama

Asana and its importance

Standing Postures

Ardhakatichakrasana, Padahastasana, Ardhashakrasana, Trikonasana.

Sitting postures

Swasthika, Gomukhasana, Padmasana, Vajrasana, Bhadrasana, Shashankasana, Ushtrasana, Pashchimottanasana, Suptavajrasana, ardhmatsyendrasana, Siddhasana.

Supine Postures

Pavanamuktasana, Sarvangasana, Matsyasana, Halasana, Chakrasana, Shavasana, Setubandhasana.

Prone postures

Bhujangasana, Shalabhasana, Dhanurasana, Makarasana.

Suryanamaskara – procedure and benefits.

Pranayama

Benefits of pranayama, time of practice, avara-pravara-madhyama lakshana, yukta-ayukta lakshana

Nadishudhi Pranayama .

Kumbhakabheda – suryabhedana, ujjayi, sheetali, Sitkari, Bhastrika, Bhramari Murcha, Plavini.

Nadishudhilakshana

Shatkarma

Dhauti, Basti, Neti, Trataka, Nauli, Kapalabhati

Bandhas and Mudras

Shad chakras, Ida-pingala-sushumna nadis.

Pratyahara, Dharana, Dhyana, Samadhi

Description of Yoga in Ayurveda

Moksha and Muktatma lakshana and upaya, Naishthiki chikitsa, Satyabuddhi, Tatvasmriti, Ashta Aishwarya, Ashta siddhis.

NISARGOPACHARA (Prakritika chikitsa)

Definition, history, aims and objectives Theories as per Western school of Naturopathy Indian school – Panchabhutopasana

Relation of Ayurveda and Naturopathy

Importance of Naturopathy in present era.

Jalachikitsa(hydrotherapy) – Hot water treatment, Cold water treatment, foot and arm bath, Spinal bath, hip bath, abdominal wet pack, Steam bath, enema and whirl pool bath.

Mrittika chikitsa (Mud therapy)

Types of soil, doctrine of mud selection, mud bath.

Suryakirana sevana (sun bath - heliotherapy)

Mardana (Massage) – different methods and effects.

Diet types – Soothing, Eliminative, Constructive, Positive and negative diet, Acidic and alkaline diet

Upavasa chikitsa(Fasting therapy) – Importance, types, therapeutic effects of fasting.

Visrama chikitsa upayoga

PAPER II – SAMAJIKA SWASTHAVRITTA

Part A

50 marks

Janapadodhwamsa

Causes, Manifestations and control measures, importance of Panchakarma and Rasayana.

Vayu (Air)

Vayu guna according to sushruta samhita, Properties of Vayu as per different directions, Vayu shudhi prakara – Ayurvedic aspect.

Composition of air.

Air of occupied room- Thermal discomfort and comfort zone, indices of thermal comfort.

Air pollution – health and social aspects, Prevention and control of air pollution ,Global warming.

Ventilation and its types.

Mountain air & High altitude – Health problems

Jala (Ayurvedic and modern aspects)

Importance of water , safe and wholesome water, water requirements, properties, types and sources of water, water pollution and health hazards, Methods of water purification.

Hardness of Water.
Examination, Tests and analysis of water.
Rain water harvesting and water recycling

Bhumi and nivasa sthana(Land and housing)

Types of soil, soil & health, Land pollution, Bhumi shodhana, Nivasa yogya bhoomi, Social goals of housing, Housing standards, Mahanasa (Kitchen) standards, Rural housing, Housing and health, Overcrowding.

Prakasha(lightning)

Requirement of good lighting, natural lighting, artificial lighting, biological effects of lighting.

Dhwani pradooshana(Noise pollution) -Noise, Sources, effects,& control

Vikirana(Radiation)- sources, effects and control

Apadravya Nirmulana (Disposal of solid waste)

Different types of solid waste
Storage and collection of refuse
Methods of disposal of solid waste (Rural & urban)
Bio-medical waste management

Malanishkasana Vyavastha (Excreta Disposal)

Methods for Unsewered area and Sewered area Latrines
for camps, fairs and festivals

Disposal of dead body – Burial, Burning, Electric cremation.

Meteorology (Ritu evam Vatavarana jnanam)

Definition of weather and climate, factors influencing weather and climate.

Disaster management

Definition, natural and man-made disasters, epidemiologic surveillance and disease control.

Occupational Health

Occupational Hazards, Occupational Diseases, Prevention of Occupational Diseases, Health & precautionary measures, ESI Act, Indian factories Act.

Offensive Trades- Effects on health and precautionary measures .

School health services

Health problems of school children, aspects of school health service, duties of school medical officers, Maintenance of healthy environment

Epidemiology

Concept of Epidemiology, Dynamics of disease transmission, concept of diseases, concept of causation, Epidemiological triad, natural history of disease, concept of control, concept of prevention, Risk factor, modes of intervention, incidence and prevalence. Susceptible host, host defenses, Immunizing Agents, Disease prevention and control, investigation of epidemic.

Disinfection – definition, types.

Ayurvedic concept of Vyadhikshamatva and sankramaka rogas.

Epidemiology of communicable Diseases

Chicken Pox, Measles, Diphtheria, Pertussis, Mumps, Tuberculosis, SARS, Influenza, Pneumonia, Cholera, Polio, Viral Hepatitis , Typhoid, Leptospirosis, Dengue Fever, Chikungunya, Malaria, Filariasis , Leprosy, Rabies , Tetanus, Emerging and re-emerging diseases

Kuprasangaja vyadhi (STDs)

AIDS, Syphilis, Gonorrhoea, Chancroid

Non-communicable disease epidemiology

Diabetes, Obesity, Hypertension, Coronary Heart Diseases, Rheumatic Heart Disease, Cancer

Chikitsalaya Bhavana (Hospital Building)

Part B

50marks

Prathamika swasthya samrakshana (Primary Health Care) Definition, principle, elements, levels of health care.

Structure at village, sub centre, PHC, CHC, Rural hospital levels.

Health insurance, Private agencies, Voluntary health agencies, NGOs and AYUSH sector. Role of Ayurveda in Primary Health Care.

Parivara kalyana Yojana (Family welfare Programmes) – Demography, demographic cycle, life expectancy.

Family planning, methods of family planning.

Matru sishu kalyana Yojana – MCH programme

Ante natal, intra natal, post natal, neo natal care. Child health problems and indicators of MCH care.

Preventive geriatrics – Problems of elderly, prevention and control measures.

World Health Organisation – Objectives, structure and functions.

International health agencies – United Nations agencies, Health work of bilateral agencies.

Alma Ata declaration

National Health Policy

Health statistics – Definition, Sources, uses Data collection, Classification, Presentation.

Vital statistics – Morbidity rates, Mortality rates, Fertility rates.

Health survey

Swasthya prashasana (Health Administration) – Health administration at Central including AYUSH, state, district, village levels.

National health programmes

Tuberculosis (RNTCP), Leprosy (NLEP), AIDS (NACP), Blindness (NPCB), Polio (PPI), Diabetes (NDCP), Cancer (NCCP), Guinea worm, Vector born disease control programme, NRHM, all the upcoming national health programmes, RCH programme, Universal Immunization Programme.

National Nutritional Programmes – IDD, Vitamin A prophylaxis, Mid day meal, anemia control programmes.

PRACTICALS

Demonstration of Dinacharya procedures- anjana, nasya, kavala, gandoosha dhoomapana, abhyanga, udvartana.

Parichaya of aharadravya, immunization agents, disinfectants and family planning devices

Practical demonstrations of Asanas mentioned in the syllabus

Pranayama (Suryabhedana, Ujjayi, Shitali, Sitkari, Bhastrika, Bhramari and Nadishuddhi) and Shad karmas (Jala dhauti, Jananeti, Sutrakriti, Trataka, Kapalabhati).

Preparing and delivering of a health educational talk on health related issues.

A short compilation on any topic on environmental health.

Educational Visits

Observe the functioning of the Milk Dairy, Water purification unit, Sewage treatment unit, MCH/Family welfare centre, Leprosy hospital and industrial unit.

Visit to Primary Health Centre for knowledge of actual implementation of National health programmes including knowledge of rural health.

Visit of rural Ayurvedic dispensary.

Visit to naturopathy centre to observe naturopathic treatment modalities.

Health survey- Minimum 5 families of rural and urban areas.

There should be 3 case sheets for Yoga Naturopathy & pathya apathya together and 3 case sheets for communicable diseases.

Proformas for Case sheets/practical records/survey/Dinacharya projects etc should be prepared by the respective universities.

Practical and Viva Voce examination

Marks distribution

100 marks

1. Vaiyaktika Swasthavritta	20
2. Samajik swasthavritta	20
3. Demonstration of Yoga	10
4. Naturopathy	10
5. Journal and compilation work	10
6. Viva voce	30

Reference Books:

Relevant portions of Charaka, Sushruta, Vagbhata, Sarngadhara, Bhavaprakasha, Yogaratnakara, Madhavanidana and Bhelasamhita.

Swasthavritta Samucchaya
Swasthya Vigyan
Swasthya Vigyan
Swasthavritta
Swasthavritta

- Pandit Rajeshwar dutt Shastri
- Dr. Bhaskar Govind Ghanekar
- Dr. Mukund swarup Varma
- Vaidya Sakad
- Dr. Ranade and Dr. Firke

Ayurveda Hitopadesh	- Vaidya Ranjit Rai Desai
Yoga and Ayurved	- Acharya Rajkumar Jain
Swasthavritta vigyan	- Dr. Ramharsha Singh
Swasthavrittam	- Dr. Brahmanand Tripathi
Swasthavrittam	- Dr. Shivkumar Gaud
Ayurvediya Swasthavritta	- Vaidya Jalukar Shastri
Patanjala yogasutra	- Patanjali Maharshi
Hathayogapradipika	- Swatmaram Yogendra
Gheranda samhita	- Gherand Muni
Yoga Paddhati	- Bharatiya Prakritik Chikitsa Parishad
Yogik Chikitsa	- Shri. Kedar Nath Gupta
Sachitra Yogasan darshika	- Dr. Indramohan Jha
Yoga deepika	- Shri. B.K.S. Iyengar
Light on Yoga	- Shri. B.K.S. Iyengar
Light on Pranayama	- Shri. B.K.S. Iyengar
Yoga and yoga chikitsa	- Dr. Ramharsha Singh
Foundations of Contemporary Yoga	- Dr. Ramharsha Singh
Yoga Sidhant evam Sadhana	- Harikrishna Shastri datar
Prakritik chikitsa Vidhi	- Sharan Prasad
Prakritik chikitsa vigyan	- Verma
Preventive and Social Medicine	- J. Park
Preventive and Social Medicine	- Baride and kulkarni
Janasankhya Shiksha Sidhanta	- Dr. Nirmal Sahani
Evam upadesya	
Health Administration in India	- S.C.Seel
Health and family welfare	- T.L.Devaraj
Positive Health	- L.P. Gupta
Biogenic Secrets of food in Ayurveda	- L.P.Gupta
Smriti granthon mein nihit	- Dr. Smt. Nigam Sharma
Swasthaprakara samagri	
Dr. Reddy's comprehensive guide to Swasthavritta	- Dr.P.sudhakar Reddy
Nutritive value of Indian foods	- ICMR
Yoga and Nisargopachar	- Vd. Prama Joshi
Prachin Vangmay mein prakritik chikitsa	- swami Anant Bharati, CCRYN
Swasthavritta	- Vd Yashwant Patil and Vd. Vhawal
Food and nutrition	- Swaminathan
Organology and sensology in yoga	-Prashant S Iyengar
Yoga-A game for Women	-Geeta S Iyengar
Yoga-A game for Women(hindi translation)-Madhu Pandey	

3.3

PRASUTI TANTRA & STRIROGA

Marks 200 (100marks each paper)

Practical-100 marksHOURS

Theory-200 HrsPractical-100

Hrs

PAPER-1 PRASUTI TANTRA

PART-A

INTRODUCTION TO SUBJECTSTRI

SHARIRAVIJNAN

Etymological origin of the word Stri. Artava vaha and Stanyavaha strotamsi. Tryavarta yoni Stri Vishishta,Peshi Marmani.

Anatomy of female reproductive system.(External and internal genital organs) Soft & Bony Pelvis and its obstetrical importance.

DESIRABLE (non detail)

Vayobhedena Stri sangnya

RAJO VIGYANA

Description of Raja, Artava and Prathama Rajo Darshana, Rajasvala Charya. Ritumati Lakshana, Ritumaticharya, Ritukala

Menarche, Menstrual cycle and their regulation by endocrine glands,

Ovulation –Importance in conception

DESIRABLE (non detail)

Concept of Stri Sukra

GARBHA VIGYANA

- a) Garbhasya paribhasha, Garbhadhanavidhi, Garbhavakranti, Garbha Sambhava samagri, Garbhakara bhava, Panchabhautikatwa of Garbha, Masanumasika Vridhi of Garbha, Garbha Poshana , Garbhasayasthe Garbhashthiti

Foetal attitude, lie, position, presentation

- b) Apari, GarbhaNabhinadi, Jarayu, Ulba

Formation, Development, Function of Placenta, Umbilical cord, Amniotic fluid

Foetal membranes -Abnormalities of Placenta

DESIRABLE (non detail)

Garbhalingotpatti, Garbhasya Avayavotpatti, Garbha Varnotpatti, Garbha Vikriti

GARBHINI VIGYANA

- a) Lakshana of Sadhyograhita Garbha, Lakshana of Vyakta Garbha, Pumsavana vidhi
Diagnosis of Pregnancy
- b) Garbhini vyavastha: Garbhini Paricharya, Garbha Upaghatakara Bhava, Dauhrida
Ante Natal care-Examination, Investigation and Management
- c) Garbha Vyapada: Nidana, Samprapthy and Chikitsa Garbhasrava and Garbhapata-
Garbha shosha-Upavishtaka, Nagodara, Upashushka, Leena garbha,
Antarmrita garbha, Raktagulma, Bahugarbhatha
- d) Abortions, Rh-incompatability-
Causes, clinical features, complications and management.

Gestational trophoblastic neoplasias, Ectopic pregnancy, IUGR, Intrauterine foetal death, Multiple pregnancy

GARBHINI VYAPAD

- a) Hrillasa, Chardi, Aruchi, Atisara, Vibandha, Arsa, Udavarta, Sotha, Parikarthika, Vaivarnya, Kandua, Kikkisa, Pandu, and Kamala, makkala
- b) Common ailments of Pregnancy-High Risk Pregnancy, Emesis gravidarum, Gestational Anemia, Gestational Hypertension, Gestational Diabetes, Toxemias of Pregnancy, Jaundice, AIDS,

Ante Partum Hemorrhage causes, clinical features complications and Management

PART B

PRASAVA VIGYANA

- a) Prasava Paribhasha, Prasava hetu, Prasavkaala, Sutikagaranirmana, Sangrahaniya Dravyani, Sutikagara pravesha vidhi.
- b) Prasavavastha; Prajayani/ Upasthita Prasava/ Asannaprasava lakshana, Aavi. Prasavaparicharya, Jatamatraparicharya
- c) Normal Labour:-Definition of Labour, Physiology & Mechanism of Labour, Monitoring of Labour and management, Pictogram, Episiotomy, care and resuscitation of newborn.

PRASAVA VYAPAD

- a) Garbhasanga, Yonisamvarana, Aparasanga, Mudagarbha-definition, Nidana, Types & Management
- b) Induction and augmentation of labour, Cervical dystocia, Cephalopelvic disproportion, Prolonged labour, Preterm labour, Post term labour, foetal distress, Assisted Labour, Caesarian
- c) Retention of Placenta, PPH - causes, clinical features and management, Genital tract Injuries during labour

DESIRABLE (non detail)

Uterine Inversion, Amniotic Fluid Embolism, Garbhashthithi parivarthan (Version), Forceps Delivery, Ventouse Delivery.

SUTIKA VIGYANA

- a) Sutika Paribhasha, Sutika Kaal, Sutika paricharya. Changes during sootika avastha (Sareerika & Manasika)
Normal and abnormal Puerperium and its Management
- b) Sutika Roga – Number of Sutika Roga, Sutika Jwara, Shotha and Makkala.
- c) Stanyavijnan- Sthanyadushti, Sthanyakshaya, Sthanyavridhi -their causes, clinical features and treatment
- d) Emergency care in obstetrics

DESIRABLE (non detail) Stana stanya – Pareeksha, Stanya sampat.

PART-2 STRI ROGA PART-

A

ARTAVA VYAPAD

- a) Artava-kshaya vridhi, Ashtartavadushti lakshana chikitsa
Asrigdara lakshana samprapti Chikitsa
- b) Menstrual disorders- Amenorrhoea, hypomenorrhoea, Oligomenorrhoea, Dysmenorrhoea, Abnormal uterine Bleeding

YONI VYAPAD

Sankhya, Nidana, Lakshana, Upadrava evam Chikitsa

Endometriosis, Fibroid uterus, Genital Prolapses, Retroverted Uterus, Pelvic infections, Cervical erosion, Pelvic Inflammatory Diseases

VANDHYATWA – Prakar, Nidana, Chikitsa

Infertility – Causes, Types, Investigations and Management.

Yoni Kanda, Yoni Arsa, Granthi, Arbud,

Pelvic Infections including Sexually Transmitted Infections, HIV, AIDS, Preventive measures.

MENOPAUSE-changes during menopause ,menopause syndrome, management.

DESIRABLE (non detail)

Congenital malformations of female genital tract.

Sukra vijnan –kshaya,vridhi, dushti hetu lakshana and chikitsa

Benign and Malignant tumours of Genital Tract

PART-B

STANA ROGA

- a) Stanakeela- nidana lakshana chikitsa, Stanagranthi, Stanavidradhi, Stanashoph Mastitis, Breast abscess, Galactoceles -Etiopathology, clinical features, diagnosis, prognosis and complications
- b) Sthanik Chikitsa
Snehana, Swedana, Uttarabasti, Pichu, Varti, Lepana, Dhupana, Dhavana, Dahana, Ksharakarma -. Practical knowledge of all these procedures along with indications, complications and management.

Shastra Karma

Surgical procedures their Indications, Contraindications of cauterization of cervix, cervical dilatation and curettage, female surgical sterilization

Knowledge of indication and procedure of PAP smear. Endometrial biopsy and interpretation of the reports

Stri roga Sambandhita Pramukha Aushadhyai, Prasuti & Stri Roga Chikitsa Upayogi Yantra Shastra Parichaya and Vyadhivinishchaya Upaya (Investigative and Diagnostic Aids)

Garbhanirodhaka Upaya.

Parivar Niyojana, Reproductive and Child Health Care, AIDS/HIV control Programme, MCH, PNDT Act, MTP Act, and importance of current National Programme

Knowledge of important Commonly used Ayurvedic and Allopathic drugs used in Prasutitantra and Streeroga. Pharmacotherapeutics of allopathic drugs in obstetrics and Gynaecology

Record keeping, ethical and medicolegal issues in Streeroga and prasutitantra

DESIRABLE (non detail)

Laprosopy, hysteroscopy, hysterosalpingography, USG, X-RAY, Colposcopy, Cervical Biopsy. Granthi evum Granthi nirharan samanyajnan (Myomectomy, hysterectomy)

CLINICAL TRAINING-OBSTETRIC SKILLS

To perform independently

1. History taking and examination of antenatal and gynaecological cases
2. Diagnosis of Pregnancy, assessing of gestational period, to diagnose onset of labour
3. To monitor labour progress, able to plot Partogram
4. Observation of 10 labours
5. To diagnose abnormalities of labour and decide about the referral of the patient
6. Able to provide first aid for obstetric emergencies
7. Recognition of post partum complications
8. Counselling and promoting of breast feeding
9. Record 5 antenatal cases, 5 intrapartum and 5 post partum cases

To observe/assist-D&C, D&E, Caesarean section, Repair operations, Resuscitation of new born.

GYNAECOLOGICAL SKILLS -To perform independently

1. History taking and examination of gynaecological cases
2. Recording 10 gynaecological cases, 5 gynaecological procedures
3. Taking vaginal smear, high vaginal swab
4. Practical knowledge of sthanika chikitsa
5. Observation and practical knowledge of minor gynaecological procedures
6. Observation of Surgical procedures
7. Identification, uses., Demonstration of surgical instruments
8. Observation of Method of sterilization, MTP, Surgical procedures Hysterectomy, Oophorectomy

DISTRIBUTION OF PRACTICAL MARKS

1. Case taking-2cases –one Gynec,one obstetric- 30marks

2. Instruments ,Drugs, &Models-	20 marks
3. General Viva-	40 marks
4. Record -2-(one Prasuti, one streerog)-	10 marks
Total	100 marks

3.4. Kaumarbhritya (Ayurvedic Pediatrics)

Theory One Paper – 100 Marks
Practical Viva Voce - 50 Marks

Paper I

100 Marks

Kaumarbhritya Parichaya Evum Balaka Paricharya (Introduction to Ayurvedic Pediatrics and Child Care)

Part A

50 Marks

1. General introduction and scope of Kaumarbhritya (Ayurvedic Pediatrics), Definitions and terminologies used in Kaumarbhritya.
2. Scientific contribution of Kashyapa Samhita in Kaumarbhritya.
3. Vayobheda (Classification of age): Garbha, Bala, Kumara; Kshirada, Kshirannada & Annada etc. and modern classification of childhood period.
4. Prana Pratyagamanam (Neonatal Resuscitation): Methodology; complications and their management (Ayurvedic and modern view). Assessment of gestational age.
5. Navajata Shishu Paricharya (Neonatal Care): Care of the Jatmatra (Newly born child) and the Sadyojata, Care of the Samaya-purvajata Shishu (Preterm), Purnakalika Shishu (Full term), and Samaya-Paschatjata Shishu (Post term neonate), Nabhinala Chhedana (Cutting of umbilical cord), Complications of improper cutting of umbilical cord and its treatment, Rakshoghna Karma (Protective measures- Ayurvedic and modern view).
6. Navajata Shishu Parikshana (Examination of newborn): Ayu-Parikshana, Modern approach to Neonatal Examination
7. Navajat Shishu Poshana (infant feeding): Specific feeding schedule as per Ayurvedic texts and modern concept; Stanya-Sampat (Properties of normal breast milk) Stanyotpatti (Physiology of lactation), Stanya Sangathana (Composition of breast milk), Stanya Parikshana (Examination of breast milk), Stanya-Piyusha (Colostrum); Stanya-Pana-Vidhi (Techniques of breast feeding), Stanyakshaya- Stanyanasha (Inadequate production and absence of breast milk), Dhatri (wet nurse)- Stanyabhave dugdh Vyavastha (alternative feeding in the absence of breast milk), Various other milk feeding methods.
8. Stanyadosha (Vitiation of Breast milk), Stanya Shodhana (Purification of breast milk), Stanya Janana and Vardhanopakrama (Methods to enhance breast milk formation).
9. Garbha Vridhi Vikasa Krama: Samanya Parichaya (brief monthwise development of

fetus), Milestones of development during infancy and childhood including concepts of various Samskaras.

10. Poshana (Nutrition): Normal requirements of nutrients and common food sources.
11. Dantotpatti evum Danta Raksha Vidhi (Dentition and dental care): Danta-sampat (Characteristics of healthy teeth), Danta Nisheka evum Dantodbheda (Eruption of teeth), Dantodbhedjanya Vikara (Dentition disorders).
12. Vyadhikshamatva: General concepts of Bala (Immunity) and methods of Bala Vriddhi.
13. Prashan & Lehana: Indications, contra-indications, different drugs used in lehana
14. Knowledge of National Programs related to Child Health Care: Reproductive and Child Health (RCH) Program, Community Child Health Programs, Nutritional Programs, National Immunization Program and other programs incorporated by Govt. of India from time to time

Part B

50 Marks

Samanya Chikitsa Siddhanta and Balaroga

(General Principles of Treatment and Management of Pediatric Disorders)

1. Bala Pariksha-vidhi Evam Shishu Vedana Parigyan (Examination of sick child and Diagnostic methods-Ayurvedic and modern). Samanya Chikitsa Siddhanta (General principles of treatment in children).
2. General Aushadhi Matra Nirdharana - for Ayurvedic and modern drugs preparations (drug doses according to age, weight and drug contents)
3. Specific therapeutic panchakarma procedures in children with special emphases on snehan, swedan and basti.
4. Prasava Kaleena Abhighata (Birth injuries): Shwasavrodha (Asphyxia neonatorum), Ulvaka, Upashirshaka (Caput Succidanum and Cephalohaematoma), Facial Paralysis, Erb's Paralysis, Bhagna (fractures).
5. Brief description of Sahajavyadhi (Congenital disorders): Sahaja Hridaya Vikara (Congenital Cardiac Disorders) Jalashirshaka (Hydrocephalus), Khandaoushtha (cleft lip), Khanda-Talu (cleft palate) Sanniruddha Guda (Anal stricture / imperforated anus), Pada Vikriti (Talipes equinovarus and valgus), Spina bifida, Meningocele, Meningomyelocele.
6. Brief knowledge of genetic disorders): Down syndrome, Turner Syndrome, Muscular dystrophy, Sickle-Cell Anemia, Thalassaemia, Sahaja Madhumeha (Juvenile diabetes).
7. Prasavottara Vyadhi (Neonatal disorders): Navajata Kamala (Neonatal Jaundice), Navajata Netrabhishyanda (Neonatal conjunctivitis), Nabhiroga (Umbilical disorders), Navajatshishu-raktavishmayata (Neonatal Septicemia)
8. Dushta Stanyapanajanya Vyadhi (Disorders due to Vitiated Milk): Lactose intolerance, Kshiralasaka, Kukunaka, Ahiputana (Napkin Rashes)
9. Kuposhanajanya Vyadhi (Nutritional disorders): Karshya, Phakka, Balashosha and Parigarbhika (Protein Energy Malnutrition), Vitamin and Micro-nutrient deficiency

disorders, Hyper-vitaminosis, failure to thrive.

10. Aupasargika Vyadhi (Infectious Diseases): Karnamula Shotha (Mumps), Romantika (Measles), Rubella, Masurika (Chicken Pox), Rohini (Diphtheria), Kukkura-Kasa (Whooping Cough), Dhanurvata (Tetanus), Krimiroga (Worm Infestations), AntrikaJwara (Typhoid), Mastisakavarnashotha (Meningitis), AIDS, Dengue, Malaria, Rajayakshma (Tuberculosis), Jivanujanya Yakrit Shotha (Hepatitis)

1. Srotas Vikara:

- a) Pranavaha Srotas: Pratishyaya (common cold), Kasa (Cough), Shwasa (Respiratory distress syndrome), Tamaka Shwasa (Bronchial Asthma), Utphuliika, Swasanaka Jwara (Pneumonia/Pneumonitis, Bronchiolitis), Gala shotha (Pharyngitis, Laryngitis), Talukantaka (Tonsillitis)
- b) Annavaha_ Srotas: Ajirna (Indigestion), Atisara (Diarrhoea), Chhardi (Vomiting), Vibandha (Constipation), Mukhapaka (Stomatitis), Gudapaka (Proctitis), Parikartika (Anal fissure), Udarshula (Infantile Colic), Pravahika (Dysentery), Gudabhransa (Rectal Prolapse). Ama and its disorders like Ama vata jwara (Rheumatic fever).
- c) Rasavaha Srotas: Jwara (Fever), Pandu (Anemia), Mridbhakshanajanya Pandu (Anemia associated with clay eating/Pica).
- d) Raktavaha Srotas: Kamala (Jaundice), Raktapitta (Haemorrhagic disorders), Yakritodara (Hepatomegaly). and Pieehodara (Spleenomegaly)
- e) Mamsa-Medovaha Srotas: Apachi (Lymphadenitis), Galaganda (Goitre), Gandamala (Cervical Lymphadenopathy).
- f) Mutravaha Srotas: Shopha in Vrikka (Glomerulonephritis and Nephrotic syndrome)

2. Anya Bala Vikara (Miscellaneous Pediatric Disorders), Apasmara (Epilepsy), Akshepa (Convulsions), Nirudhaprakasha (Phimosis), Cerebral palsy.

3. Behavioral Disorders of Children, their management and counseling: Breath holding spell, Shayyamutra (Bed wetting), Pica, Unmada, Autism, ADHD (Attention Deficit and Hyperactive Disorders), Jadatwa (Mental retardation).

4. Pran raksha vidhi (Life saving measures in children): Principles of management of Shock and Anaphylaxis, Poisoning, Foreign body in respiratory tract, Status epilepticus, Hemorrhage, Acute Renal Failure, Febrile Convulsion, Status Asthmaticus, Fluid and Electrolyte Management.

5. Balagraha: General description, classification, clinical features and management.

PRACTICAL

Content of Practical / demonstration

1. Clinical training of above mentioned disorders of children.

2. Exposure to -

- a) Navajata Shishu Paricharya (Care of the newborn)
- b) Pranapratyagamana Vidhi (Resuscitation procedure of new born)
- c) Vaccination
- d) Panchakarma Vidhi (Panchakarma procedures) especially Snehana, Swedana, Basti.

3. Knowledge of various equipments such as phototherapy unit, overhead radiant

- warmer, resuscitation equipments, Panchakarma equipments and their application
4. Knowledge of IV fluid administration, blood sampling
 5. Anthropometry measurements and their interpretation
 6. Various Ayurvedic & modern Procedures and investigations in pediatric practice

Distribution of Marks

Clinical work: Pediatric and neonatal case records [1.0 case sheets of each]	10 Marks
Patient Examination	20 Marks
Spotting	05 Marks
Viva – voce	15 Marks
Total	50 Marks

Reference Books

1. Kashyapa Samhita Complete Hindi translation by Satyapal
Vidhyalankara English translation by Prof. Premvati Tiwari
 2. Principles & practice of Pediatrics in Ayurveda: Dr. CHS Shastry
 3. Child Health Care in Ayurveda: Prof. Abhimanyu Kumar
 4. Ayurvedic Concepts of human Embryology: Prof. Abhimanyu Kumar
 5. Kaumarbhritya by Prof. D.N. Mishra
 6. Kaumarbhritya Ke Antargata Balgraho Ka Kramika Evam Vaigyanika
Adhyana by Prof. Chanchal Sharma
 7. Notes on Kaumarbhritya-by Dr. Dinesh K S
 8. Pran - Pratyagannanann-by Dr. B.M. Singh
 9. Ayurveda Dwara Matra Evam Shishu Paricharya by Dr. KS
Patel,V.K.Kori & Raigopal
 10. Kaumarbhritya related references from Charaka Samhita, Sushruta
Samhita Vagbhata etc.
 11. Clinical Methods in Paediatrics by Meharban Singh
 12. Pediatrics Emergencies by Meharban Singh
 13. Essential Pediatrics O,P. Ghai
 14. Text Book of Pediatrics Nelson
 15. Care of New Born by Meharban Singh
 16. Panchakarma in Pediatrics Dr. Yogita Srivas
-

3.5. CHARAK SAMHITA- UTTARARDHA

(Uttarardha: Chikitsa – Kalpa - Siddhi Sthana)

Theory- One Paper – 100 Marks

The marks of theory examination are distributed as follows:

- | | |
|--------------------|----------|
| 1. Chikitsa sthana | 60 Marks |
| 2. Kalpa sthana | 15 Marks |
| 3. Siddhi sthana | 25 Marks |

Reference Books

1. Charak Samhita -Chakrapani Tika (Sanskrit Commentary)
2. Charak Samhita (Hindi Commentary) Vd. Jayadev Vidyalankar or Vd. Atridev Vidyalankar or Prof. Gorakh Nath Chaturvedi & Kashinath Shastri or Dr. BrahmanandTripathy or Dr. Ravidutta Tripathy
3. Charak Samhita (English Commentary): Dr. Ram Karan Sharma & Vd. Bhagwan Dash or Acharya Priyavrata Sharma.

CENTRAL COUNCIL OF INDIAN MEDICINE
NEW DELHI

SYLLABUS OF AYURVEDACHARYA (BAMS) COURSE

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4.1 KAYACHIKITSA

Theory Two Papers – 100 Marks Each
Practical/Viva voce – 100 Marks

Paper I

100 Marks

Part - A

50 Marks

- 1 Derivation of the terms 'Kaya', 'Chikitsa' and their definitions and synonyms. Definition of 'Kayachikitsa, Definition of 'Bheshaja'. Types and detailed description of Bheshaja and Chikitsa, Knowledge about Chikitsa Chatushpada, Roga Roga Pariksha Siddhantha, Astasthan Pariksha.
 - 2 Importance of Kriya Kaala according to stages of Dosha and their management.
 - 3 Chikitsa sutra and Management of vriddhi (increased) and kshaya (decreased) of Dosha, Dhatu and Mala, Ojo Vyapat (Kshaya, Visramsa and Vyapat) and its management. Chikitsasutra and Management of Sama-Nirama states, Roga-Anutpattikara Chikitsa, Roga Prashamana Chikitsa (Doshapratyanika, Vyadhipratyanika, Ubhayapratyanika), Doshopakrama, Chikitsa sutra and Management of Sthanantara Dosha (Ashayapakarsha, Anuloma/Pratiloma gati of Dosha, Vimarga gamana of Dosha), Knowledge of Lina Dosha & its management, Diagnosis, Chikitsa Sutra and Management of Avarana and of Dhatu Pradoshaja diseases, Importance of Dosha, Dushya, Bala, Kaala, Agni, Prakriti, Vaya, Sattva Satmya, Desha, Ahara and stage of diseases in treating them. Chikitsa Sutra and Management of 'Samanyaja and Nanatmaja' diseases.
 - 4 Detailed description of Dvidividhopakrama (Santarpana and Apatarpana) and Shadavidhopakrama (Rookshana, Snehana, Swedana, Sthambhana, Langhana and Brimhana). Detailed description of Shodhana, Shamana and Nidana Parivarjana. Knowledge of Aushadha matra, Sevan kaala and Anupana, Definition and Knowledge of Pathya-Apathya with examples of diseases of various systems.
 - 5 Derivation of the term 'Manas', its sthana (place), Guna (qualities) and Karma (functions). Samanya Chikitsa Siddhanta of Manasa Roga.
 - 6 Principles & Management of Nutritional deficiency disorders.
 - 7 Management of Vardhakyajanita vikara, Indriyapradoshaja vikara, Alzhiemer's Disease, Sleep disorders, General debility.
-
- 8 General introduction and principles of Management of diseases produced by Genetic, Environmental and Iatrogenic factors. Disorders due to drug and Food allergy and their management and other allergic conditions.

Part B

50 Marks

1. Detailed description of Chikitsa Sutra and Management of Jwara and its types. Etiopathogenesis & relevant Ayurvedic and Modern management of following types of Fevers-Typhoid, Pneumonia, Pleurisy, Influenza, Mumps, Meningitis, Encephalitis, Tetanus, Yellow fever, Plague, Dengue Fever, Chikun Guniya, Leptospirosis, Viral Fever, Anthrax, Masurika (Small pox), Laghu Masurika (Chicken pox), Romantika (Measles).
1. Chikitsa sutra and Management of the diseases of Rasavaha Srotas such as – Pandu,

Amavata, Madatyaya, Hridroga, Hridshoola, Hypotension, Hypertension, Anaemia, Rheumatoid arthritis.

2. Chikitsa sutra and Management of the diseases of Raktavaha Srotas such as - Raktapitta, Kamala, Kumbhakamala, Halimaka, Daha, Mada, Murcha, Sanyasa, Vatarakta, Plihadosh, Yakrut dosha, Haemolytic disorders, Hepatitis, Cirrhosis of Liver, Leukaemia, Kushta, Shvitra, Visarpa, Sheetapitta, Udarda, Kotha and Kshudra Roga.
3. Knowledge of National Health Programmes and the relevant Ayurvedic Management of the following diseases enlisted by World Health Organisation- Malaria, Filariasis, Kala Azar, Leprosy, Tuberculosis, AIDS.
4. Introduction of general principles of maintenance of health and management of diseases of following systems of Medicine- Yoga, Naturopathy, Unani, Siddha, Physiotherapy and Rehabilitation.
5. Diseases of different Endocrine Glands- such as Thyroid, Parathyroid, Pituitary, Pancreas and Adrenal glands and their management.
6. General introduction, types and Management of diseases caused by Vyadhi Kshamatwa Hinata (Immuno deficiency disorders), Auto Immune Disorders.
7. Description and Management of following Emergency Conditions- Acute Haemorrhage, Hypertensive Emergencies, Acute abdominal pain (Renal colic, Biliary colic, Gastritis, Pancreatitis, Peritonitis and Appendicitis), Acute Abdomen, Anuria/ Oliguria, Congestive Heart Failure, Myocardial Infarction/Angina, Shock, Syncope, Convulsions, Hyperpyrexia, Hyperglycaemia, Hypoglycaemia, Status Asthmaticus, Acute Respiratory distress Syndrome, Drowning and Electric shock.

PAPER II

100 Marks

Part A

50 Marks

1. Chikitsa sutra and Management of the diseases of Pranavaha Srotas such as - Kasa, Shwasa, Hikka, Rajayakshma, Urakshata, Parshwashoola, Bronchitis, Bronchiectasis, Emphysema and COPDs.
2. Chikitsa sutra and Management of the diseases of Udakavaha Srotas such as - Shotha, Jalodara, Trishna, Water & Electrolyte Imbalance.
3. Chikitsa sutra and Management of the diseases of Annavaha Srotas such as - Agnimandya, Aruchi, Ajirna, Anaha, Atopa, Adhmana, Alasaka, Vilambika, Visuchika, Chardi, Grahani, Amlapitta, Gulma, Shoola, Bhasmaka, Acid peptic disorders.
4. Principles of treatment and management of Vata Vyadhi such as - Pakshavadh, Ekangavata, Sarvangavata, Ardita, Avbahuka, Kati Graha, Manyastambha, Gridhrasi, Vishwachi, Khalli, Khanja, Pangu, Padaharsha, Padadaha, Vatakantaka, Kroshtukashirsha, Udavarta, Kampavata, Dhatugata and Ashayagata Avarana Vata, other Vata Rogas, Parkinsonism.
5. Nidana and Chikitsa of Urusthambha, Guillain Barrie syndrome, Muscular Dystrophy, Myasthenia Gravis, Motor Neuron Diseases and Neuralgia.

1. Chikitsa Sutra and Management of Mamsavaha Srotas and Medovaha Srotas such as Gandamala, Galaganda, Mamsashosha, Arbuda, Apachi, Prameha, Sthaulya, Karshya, Diabetes Mellitus, Dyslipidaemia.
2. Chikitsa Sutra and Management of 'Asthi and Majjavaha Srotas such as Asthimajja Vidradhi, Asthisousharya, Asthi kshaya, Sandhigata Vata, Osteo Arthritis, Osteomyelitis, Osteoporosis, Osteopenia.
3. Chikitsa sutra and management of Shukravaha srotas such as Klaibya, shukralpata, shukradosha, kshina shukra, dhvajabhanga.
4. Chikitsa Sutra and Management of diseases of Mutravaha Srotas such as -Mutrakricha, Mutraghata, Ashmari, Cystitis, Nephritis, Nephrotic Syndrome, BPH, Renal Failure.
5. Chikitsa Sutra and Management of diseases of Purishavaha Srotas such as - Atisara, Pravahika, Arsha, Purishaj Krimi, IBS and Ulcerative Colitis.
6. Chikitsa Sutra and Management of Sexually Transmitted Diseases such as - Phiranga, Puyameha, Upadamsha, lymphogranuloma inguinale, Syphilis, Gonorrhoea.
7. Introduction, Definition and Management of Kama, Krodha, Lobha, Moha, Mada, Matsarya, Shoka, Bhaya, Vishada, Dainya, Harsha and Pragyaparadha.
8. Manas and Manovahasrotas, Nidana and Chikitsa of the following disorders - Unmada- Apasmara-Atattvabhinivesha, Chittodvega, Vishada, Anxiety disorders, Depression, Somatoform and Mood disorders, Stress induced disorders, Psychosexual Disorders. Importance of Daivavyapashraya, Sattwavajaya, Adravyabhuta Chikitsa. Medhya Rasayana in the management of Manasa Roga. Bhuta Vidya diagnosis and management of graha disorders.
9. Derivation, definition and synonyms of Rasayana, importance of Rasayana and its benefits. Indications of Rasayana therapy. Classification of Rasayana. Kutipravesika and Vatatapika Rasayana. Indications of Vatatapika Rasayana. Knowledge of Kayakalpa, Achara Rasayana. Procedures of Kutipravesika, Poorvakarma and specific schedules to be followed after Kutipravesha, benefits of Kutipravesika Rasayana, duration of process, Rasayana yoga and directions for their use. Determination of dose of Rasayana according to age. Rules and regulation after Rasayana therapy, Importance of Immunomodulators and antioxidants in Rasayana therapy.
10. Vajikarana- Derivation, definition, synonyms, necessity, benefits, importance of fertility, Symptoms of Shûkra (Semen), Vajikaran Dravya and Aushadhi. Properties, doses, methods of administration, ingredients and methods of formation of Rasayana & Vajikarana formulation. Classification and importance of Vajikarana Dravya

Distribution of practical Marks 100

- | | |
|--------------------------------|------------|
| 1) Daily case record/ 20 cases | - 20 marks |
| 2) Patient examination | |
| a) 1 Long case | - 20 marks |
| b) 1 short case | - 10 marks |
| 3) Viva -voice | |
| a) Paper I | - 25 marks |
| b) Paper II | - 25 marks |

Reference books:

1. Charak Samhita, Sushrut Samhita, Ashtanga Samgraha and Ashtanga Hridaya with their commentaries. Madhav Nidana with Madhukosha Commentary.
 2. Ayurvediya Vyadhi Vigyana - Yadavji Trikamji
 3. Roga Pariksha Vidhi - Priyavrat Sharma
-
4. Panchakarma Vigyan -Haridasa Sridhar Kasture
 5. Cikitsadarsha -Pandit Rajesvardutta Shastri
 6. Kayachikitsa I-IV -Ramaraksha Pathaka

7. Ayurved Nidan Chikitsa Siddhanta -Prof. R.H.Singh.
8. Kayachikitsa Vol. I-IV. -Prof. Ajay Kumar
9. Davidson's Principles and Practice of Medicine.
10. API Text Book of Medicine.
11. Harrison's Text Bok of Medicine.
12. Cecil Text Book of Medicine.
13. Panchkarma Illustrated by Dr. G.Srinivasacharya.
14. Other relevant publications on subjects concerned

4.2. PANCHAKARMA

Theory One Paper – 100 Marks Practical Viva-voce – 50 Marks

Hours of teaching Theory – 100 Clinical training: 3 months

I. Snehana

1. Etymology and Definition of Sneha and Snehana
2. Snehayoni- Sthavara and Jangama: Properties of Sneha dravyas, Snehopag Dravyas
3. General knowledge of Ghrita, Taila, Vasa and Majja with their specific utility and actions ,Yamaka, Trivrit and Maha Sneha
4. Metabolism of fat
5. Achcha and Pravicharana of Sneha
6. Snehapaka and its importance in Panchakarma
7. **Types of Snehana:** i) Bahya and ii) Abhyantara Snehana

i) Bāhya Snehana :

Methods, indications and contraindications of the following types of Bahyasnehana; Mardana, Unmardana, Pādāghāta, Samvāhana, Karna Purana & Akshi Tarpan, Lepa, Talam,

Murdhni Taila: Siro-Abhyanga, Shiro Seka/dhārā, Siro Pichu and Siro-Basti

ii) Ābhyantara Snehana

Three Types of Ābhyantara Snehana: Shodhanārtha, Shamanārtha and Brimhanārtha Snehana, Indications and contraindications for Snehana

Shodhanārtha Snehana

- a. Importance and method of Deepan Pāchan and Rookshana in Shodhanārtha Snehana. Properties of Rookshana Dravya. Samyak Rookshana Lakshana
- b. Consideration of Agni and Koshtha in Snehana
- c. Indication of Different Matra, Various dose schedules for Shodhanārtha Snehana; Hraseeyasi, Hrasva, Madhyama and Uttama Mātrā, Ārohana Mātrā
- d. Methods of Shodhanārtha Snehana,

- e. Jeerna and Jeeryaman Lakshana
- f. Samyak Yoga, Ayoga and Atiyoga of Snehana, Sneha Vyāpat & their management according to Ayurveda & Modern Medicine
- g. Diet and regimen during Snehana

Sadyo Sneha: Method of administration, dose fixation and utility **Shamanārtha Snehana,** Method of administration, dose fixation and utility **Brimhanārtha Snehana:** Method of administration, dose fixation and utility **Avapeedak Sneha:** Method of administration, dose fixation and utility

8. Snehana Kārmukata (mode of action)

9. Special Procedures:

Takradhara, Udvartanam, Putpāka, Aschotana, Anjana, Gandusha, Kavala, Dhoompāna, Udvartana, Utsādana, Udgharshana, Talapothichil

II. Svedana

1. Etymology and Definition of Sveda and Svedana
2. Classifications of Sveda/Svedana
3. General Sweda dravya, Properties of Sweda dravyas, Swedaopag dravyas ,
4. Indications and contraindications of Svedana
5. Ten Types of Niragni Svedana
6. Knowledge of 13 types of Sagni Svedana and Chaturvidh Svedan
7. Detailed Knowledge with their Utility of the following Svedana procedures:
Sankara/Pinda Sveda-Ruksha and Snigdha Sveda
Patrapinda Sveda, Jambir Pinda Sveda, Vāluka Sveda, Churna Pinda Sveda, Kukkutand
Pinda Sveda, Shashtika Shalipinda Sveda, Nadi Sveda, Bashpa Sveda Ksheer dhooma
, Ksheer Seka, Kwath Seka, Avagaha Sveda, Dhanymla Dhara
Parisheka Sveda, Pizichil, Upanaha Sveda, Annalepa
8. Local Basti such as Kati Basti, Janu Basti, Greeva Basti and Urobasti
9. General precautions during Sagni Svedana and Methods to protect vital during svedana
10. Samyak Yoga, Ayoga and Atiyoga of Svedana
11. Complications of Svedana and their Management according to Ayurveda & Modern Medicine
12. Diet and management during and after Svedana
13. Parihār Vishaya
14. Svedana Kārmukata (Mode of action)
15. General Knowledge about current Sudation techniques like Sauna bath, Steam bath

III. Vamana Karma

1. Etymology, definition and importance of Vamana Karma
2. Utility of Vamana Karma in health and disease
3. Indications and Contraindications for Vamana
4. Knowledge of Koshta and Agni
5. General knowledge of Vamana and Vamanopaga drugs; properties, actions, preparations, preservation with special reference to Madanphala, Kutaj, Nimba, Yashti, Vacha
6. Purva Karma of Vamana: Deepan-Pāchana, Abhyantara Snehana and diet

7. Management of one gap day-Abhyanga & Svedana, diet, special Kapha increasing diet
8. Preparation of the patient on Morning of Vamana day
9. Vamaka Yoga, Anupana, fixation of dose and method of administration
10. Administration of Vamanopaga Dravya such as milk, sugarcane juice, Yashtimadhu decoction
11. Lakshana indicating Doshagati during the process
12. Management during Vamana Karma & observations
13. Symptoms of Samyak Yoga, Ayoga and Atiyoga of Vamana Karma
14. Post Vamana management
15. Types of Shuddhi-Hina, Madhya and Pravara
16. Peyadi Samsarjana Karma and Tarpanadi Karma with their specific indications
17. Complication of Vamana and their management with Ayurveda and modern drugs
18. Pariharya Vishaya
19. Vamana Karmukata (Mode of action).

IV. Virechana Karma

1. Etymology, definition and importance of Virechana Karma
2. Utility of Virechana Karma in health and disease
3. Indications and Contraindications for Virechana
4. Knowledge of Koshta and Agni
5. Classification of Virechana Drugs, General properties of Virechana dravya
6. General knowledge of single and compound Virechana drugs; properties, actions, preparations, preservation with special reference to Trivrutta, Aragvadha, Eranda, Katuki, Jaipal
7. Purva Karma of Virechana: Deepan- Pachana, Abhyantara Snehana and diet
8. Management of 3 gap days-Abhyanga, Svedana & diet
9. Management on Morning of Virechana day
10. Preparation of Virechana Kalpa, Anupana, dose and method of its administration
11. Method of Virechana Karma and management during Virechana Karma & observations
12. Symptoms of Samyak Yoga, Ayoga and Atiyoga of Virechana Karma
13. Post Virechana management
14. Types of Shuddhi-Hina, Madhya and Pravara and accordingly Samsarjana Karma
15. Complications of Virechana and their management with Ayurveda and modern drugs
16. Pariharya Vishaya
17. Virechana Karmukata (Mode of action)

V. Basti Karma

1. Etymology, definition and importance of Basti as Ardha-Chikitsa
2. Utility of Basti Karma in health and disease
3. Basti Yantra- Putaka & Netra, Detailed study of traditional Basti Yantra and their Doshas
Knowledge of alternative Basti Yantra-enema can, enema syringe, modified plastic/rubber bag for Putaka, modified plastic netra.
4. Classifications of Basti

5. Karma, Kāla and Yoga Basti schedules along with their utility.
6. **Niruha Basti:** Its etymology, synonyms, definition, classifications, sub-classifications & indications and contraindications.
 - a. Dose fixation of Niruha Basti according to age
 - b. Contents and Method of preparation of Niruha Basti dravya
 - c. Diet
 - d. Administration of Niruha Basti
 - e. Pratyāgamana Kāla, Post Niruha Basti management
 - f. Samyak Yoga, Ayoga and Atiyoga of Niruha.
 - g. Complication of Niruha Basti and its management according to Ayurved and Modern Medicines
 - h. Pariharya Vishaya and kala
7. **Anuvasana Basti:** Its etymology, synonyms, definition, classifications, sub-classifications & indications and contraindications.
 - a. Dose fixation of Anuvasan Basti according to age
 - b. Contents and Method of preparation of Anuvasan Basti dravya
 - c. Diet
 - d. Administration of Anuvasan Basti
 - e. Pratyāgamana Kāla, Post Anuvasan Basti management
 - f. Samyak Yoga, Ayoga and Atiyoga of Anuvasana.
 - g. Complication of Anuvasan and its management according to Ayurved and Modern Medicines
 - h. Pariharya Vishaya and kala
8. Basti Kārmukatā (Mode of action).
9. Knowledge of following types of Basti:
Madhutailika Basti, Erandmuladi Basti, Yāpana Basti, Pichchha Basti, Kshira Basti, Kshara Basti, Vaitarana Basti, Panchaprasutik Basti, Lekhan Basti, Krumighna Basti, Tiktashir Basti, Ardhamātrika Basti
10. **Uttara Basti:** its definition, indications and contraindications, Detailed study of traditional Basti Yantra and their Doshas Knowledge of alternative Basti Yantra
 - a. Preparation of patient,
 - b. Preparation of Trolley for Uttarbasti,
 - c. drug preparation and Fixation of dose,
 - d. method of administration in male and females,
 - e. observations,
 - f. complications and their management

VI. Nasya

1. Etymology, definition, Significance of Nasya Karma.
2. Classifications and sub-classifications
3. Knowledge of general Dravya used for Nasya Karma, Shirovirechan Gana, Shirovirechanopag dravyas
4. Indications and contraindications of Nasya
5. Time of administration of Nasya
6. Dose fixation of different types of Nasya
7. Diet and regimen before and after Nasya Karma
8. Administration of Marsha, Pratimarsha, Avapeedaka, Dhoomapana and Dhuma Nasya
9. Symptoms of Samyak-yoga of Nasya,

10. Complication of Nasya and their management
11. Parihār Vishaya
12. Nasya Karmukata (mode of action)

VII. Raktamokshana

1. Definition, importance and Types of Raktamokshana
2. General Principles and rules of Raktamokshana
3. Classification of Raktamokshan
4. General Indication and Contra indication of Raktamokshan
5. **Jalaukavacharana:** Knowledge of different types of Jalauka (Leech) , Indications and contraindications of Jalaukavacharana, various types of Jalauka. Method of Application, Samyak Lakshan, Complication of Jalaukavacharana and their management with Ayurveda and Modern medicines.
6. **Pracchāna:** Indications and contraindications of Pracchana. Method of Application, Samyak Lakshan, Complication of Pracchana and their management with Ayurveda and Modern medicines
7. **Sirāvedha:** Indications and contraindications of Siravedha. Method of Application, Samyak Lakshan, Complication of Siravedha and their management with Ayurveda and Modern medicines
8. Knowledge of emergency management of complications such as water & electrolyte imbalance, shock, bleeding per rectal, hematemesis, epistaxis

VIII. Physiotherapy

1. Definition, Utility and Importance of Physiotherapy.
2. Basic Knowledge of Static exercise, Infrared, Short wave diathermy, Electromagnetic therapy, Wax bath therapy, Ultrasonic therapy.

PRACTICALS / CLINICAL TRAINING –

Total Duration of 3 Months posting

OPD (for 1-Month): observation of OPD patients, selection of the patients, observation of OPD base Panchakarma procedures

IPD (Panchkarma) and Panchakarma Unit – Observation of different procedures of Panchakarma, Assistance to the procedure under guidance of Panchakarma specialist
Under clinical posting, each student has to study and write 15-long Cases and 10 short cases in prescribed format

Long case Paper- minimum 1 Vaman , 1 Virechan, 1Niruha & Anuvasan Basti, 1Nasya, 1 Raktamokshan

Short case paper –Minimum one each of Pinda sweda, Shirodhara, Abhyanga, Netra Tarpan, Bahya Basti, Nadi Sweda etc.

Distribution of Marks

- | | |
|--------------------------------------|----------|
| 1. Practical Record of 25 procedures | 05 Marks |
| 2. Long Procedure | 10 Marks |

3. Long Procedure Viva	05 Marks
4. Short Procedure	08 Marks
5. Viva on Short Procedure	02 Marks
6. General Viva-voce	20 Marks
Total	50 Marks

Reference Books

1. Charak Samhita with Commentary of Ayurveda Dipika by Chakrapanidatta & Jalpakalpataru by Gangadhara
2. Sushrut Samhita with the Sushruta Nibhandha Samgraha Commentary of Dalhana & Nyayachandrika Panjika of Gayadasa on Nidana Sthana
3. Ashtanga Hridaya with Sarvanga Sundara & Ayurveda Rasayana Commentaries
4. Ashtanga Sangraha with Shashilekha Commentaries
5. Ayurvediya Panchakarma Chikitsa Dr Mukundilal Dwivedi
6. Panchakarma Vigyan Dr Haridas Shreedhar Kasture
7. Illustrated Panchakarma Dr.G Srinivasa Acharya
8. Clinical Panchkarma (English) Dr. P.Yadaiah
9. Prayogika Panchkarma (Hindi) Dr. P. Yadaiah
10. Vivida Vyadhiyome Panchkarma (Hindi) Dr. P. Yadaiah
11. The Panchkarma Treatment of Ayurveda with Kerala Specialtie Dr. T.L. Devaraj
12. Panchkarma Therapy Dr. R.H. Singh
13. Ayurveda-Principles and Panchakarma Practice Dr Mandip R. G. & Prof. Gurdip Singh
14. Principles and Practice of Basti Dr. Vasudevan & Dr. L. Mahadevan
15. Panchakarma Sangraha Dr. Manoj Shamkuwar
16. Essential of Panchakarma Therapy Dr.Pulak Kanti Kaur
17. Principles and Practice of Panchakarma Vaidya Vasant Patil
18. Harrison's Principle of Internal Medicine
19. Guyton's Physiology

4.3 SHALYA TANTRA

Theory Two Papers – 100 Marks Each
Practical - Viva voce – 100 Marks

PAPER –I

100 Marks

Part – A

50 Marks

Definition of Shalya, Shalya Tantra and its importance. Introduction to Shalya Tantra: Historical background and progress made.

- **Target** - Fluency in textual reading and comprehension.
- Preferable targets - Know recent developments and controversies.

Description of Yantra, Shastra, Anushastra: Definition, number, types, uses, Dosha, Guna, Karma. Relevant modern instruments.

- Target - Basic understanding of the concepts of Yantra and Shastra. Acquaintance with commonly used surgical instruments. Knowledge of textual descriptions.
- Preferable targets - Knowledge about currently used surgical instruments, their specifications, procurement sources etc.

Nirjantakarana / Sterilization: Methods, types and its role in surgical practice.

- Target - Basic surgical discipline of maintaining asepsis.
- Preferable targets- Knowledge of recently developed chemicals, instruments for sterilization.

Sangyahan / Anaesthesia: Definition and Types.

- Local anaesthesia** – Drugs, Techniques, Indications, Contraindications, Complications and their Management.
 - Regional and General anaesthesia**- Drugs, Techniques, Indications, Contraindications, Complications and their Management.
- Target-Basic knowledge of the drugs and instruments of anaesthesia. To observe the process of induction, monitoring and recovery.
 - Preferable targets- Assisting and handling anaesthesia.

Trividha Karma – Purva Karma, Pradhana Karma and Paschat Karma.

- Target- Capability to identify conditions which can affect the outcome of surgery in pre, intra and post- operative period.
- Preferable targets- Experience of handling incidents.

Ashtavidha Shastra Karma - Surgical procedures.

- Targets- Appreciation and comprehension of concepts and indications of different procedures.
- Preferable targets –Hands on experience of surgical procedures.

Yogya - Experimental Surgery.

- Target –Appreciation and comprehension of concepts of Yogya. Idea of patient's safety in experimental training.
- Preferable targets- Hands on training on mannequins.

Marma: Nirukti, types, description and importance.

- Target –Clinical application of concepts of marma.
- Preferable targets- Study of relevance of marma in the light of current anatomical and surgical knowledge.

Kshara and Kshara Karma:

- Nirukti, Pradhanyata, Guna, Dosha, Karma, Prakara, Yogya, Ayogya, Procedure, Upadrava and Chikitsa.**
- Kshara nirmana vidhi, knowledge of Kshara Varti, Taila and Pichu.
- Kshara Sutra – Preparation, Indications, Contraindications and Method of application, Complications and their Management.**
 - Target – Capability to identify and practice the use of kshara, kshara sutra in common clinical conditions.
 - Preferable targets – Broader knowledge of current trends and ongoing researches in kshara application.

Agnikarma: Mahatva, Upakarana, Vidhi, Akrti bheda, Yogya, Ayogya and Upadrava Chikitsa.

Contemporary techniques and tools of Agnikarma.

- Target - Capability to appreciate the clinical indications and comprehend Agnikarma procedure.
- Preferable targets - Hands on experience of use of cautery in surgical practice.

Raktamokshana: Mahatva, Prakara - Siravyadha, Pracchanna, Shringa, Alabu, Jaloukavacharana – Yogya, Ayogya, Procedure, Upadrava and Chikitsa.

- Target- Capability to appreciate and comprehend clinical indications of Jaloukavacharana and other Raktamokshana procedures.
- Preferable targets - Uses of bloodletting in current therapy.

Bandha Vidhi – Prayojana, Dravya, Indications, Contraindications, Prakara, Upadrava, Pichu, Plota, Kavalika and Vikeshika.

- Target- Hands on experience of techniques of bandaging.
- Preferable targets - New generation of bandaging and splintage tools.

Pranasta Shalya and Nirharana Upaya.

- Target – Importance of concepts of Sushruta in the management of Shalya and concerns of patient safety. Identification and management of foreign bodies.
- Preferable targets - Current concepts and diagnostic tools of dealing with foreign bodies.

Fluid, Electrolyte, Acid Base Balance and Nutrition:

- i. Introduction of physiology of fluids and electrolytes.
- ii. Dehydration and over hydration.
- iii. Specific electrolyte loss, Acidosis, Alkalosis, Symptomatology and Management.
- iv. Electrolyte changes in specific diseases like pyloric stenosis, intestinal obstruction and anuria.
- v. Various replacement fluids in surgery, mode of administration and complications.
- vi. Nutrition.
 - Target – Capability to identify and manage fluid and electrolyte imbalance. Ability to administer parenteral fluid.
 - Preferable targets - Advanced techniques of fluid and electrolyte assessment and management.

Rakta Mahatwa, Raktasrava / Haemorrhage: Prakara and Lakshana.

- i. Raktastambhana – Haemostasis.
- ii. Blood Transfusion –Blood groups, Compatibility, Indications, Contraindications and Complications with Management.
- iii. Component therapy.
 - Target-Knowledge of achieving haemostasis in haemorrhage.
 - Preferable targets - Detailed knowledge of blood bank techniques.

Antibiotics, analgesics, anti-inflammatory and emergency drugs in surgical practice.

- Target – Working knowledge of commonly used drugs.
- Preferable targets - Advanced pharmacological study of the above drugs.

Diagnostic techniques – X-ray, Imaging techniques, Ultrasonography, CAT Scan, MRI, Biopsy / Cytological study.

- Target- Knowledge of proper indications for optimum investigational tools and their interpretation.
- Preferable targets - Capability to work independently in the field of diagnostic techniques.

Part - B

50 Marks

Shat Kriyakala in surgical practice.

- Target- Clinical utility of the concepts.
- Preferable targets - Applied aspects of Kriyakalas in the light of current concepts of pathogenesis.

Nirukti, Nidana, Samprapti, Prakara, Lakshana, Sadhya-asadhyata, Upadrava and Chikitsa of the following disorders.

- i. Vranashotha - Inflammation
 - ii. Vidhradi - Abscess
 - iii. Pidika - Boils
 - iv. Nadi Vrana - Sinus / Fistulae
 - v. Vrana Granthi - Keloid / Hypertrophic scar
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- vi. Marmagata - Shock
 - vii. Kotha – Gangrene and Principles of Amputation.
 - viii. Granthi - Cyst
 - ix. Arbuda - Tumour
- Target-Clinical application of the concepts.
 - Preferable targets - Hands on experience of management of different conditions.

Vrana – Nirukti and Prakara

- i. Nija Vrana – Nidana, Samprapti, Vrana Vasthu, Prakara, Lakshana, Vrana Pariksha – Sthana, Vrana Akrti, Srava, Gandha, Vedana. Vrana Avastha- Dustavrana, Shuddha Vrana, Ruhyamana Vrana, Samyak Roodha Vrana, Vrana Sadhya-asadhyatha and Vrana Upadrava.
- ii. Vrana Chikitsa – Pathya-apathya and Shashti Upakrama, Vranitagara and Rakshakarma.
- iii. Agantuja Vrana :
 - a. Sadyo Vrana - Traumatic wounds – Nidana, Prakara, Lakshana, Upadrava and Chikitsa.
 - b. Management of bites and stings.
- iv. Dagdha Vrana – Burns and scalds.
- v. Ulcer - Types and their management.
- vi. Wound healing stages and their management.
- vii. Pramehapidaka - Diabetic carbuncle and wounds.
 - Target - Clinical application of the concepts.
 - Preferable targets - Hands on experience of management of different conditions.

Twak Vikara - Nidana, Samprapti, Lakshana and Chikitsa of Chipka – Paronychia, Kadara – Corn and Kshudra rogas.

- Target - Clinical application of the concepts.
- Preferable targets - Hands on experience of management of different conditions.

Manya Vikara – Nidana, Samprapti, Lakshana and Chikitsa of Galaganda – Goitre, Gandamala, Apachi –Lymphadenitis, Pashanagardhabha – diseases of parotid gland.

- Target-Clinical application of the concepts.
- Preferable targets - Hands on experience of management of different conditions.

Sira Vikara - Venous disorders – Superficial and Deep venous thrombosis, Haemangioma, Varicose veins - Diagnosis and their Management.

- Target - Clinical application of the concepts.
- Preferable targets - Hands on experience of management of different conditions.

Dhamani Vikara - Arterial disorders – Nidana, Samprapti, Lakshana and Chikitsa of Aneurysm, Buerger's disease, Atherosclerosis, Raynaud's disease.

- Target - Clinical application of the concepts.
- Preferable targets - Hands on experience of management of different conditions.

Snayu Vikara - Diseases of tendons and ligaments – Tennis elbow, Ganglion and their Management.

- Target - Clinical application of the concepts.
- Preferable targets - Hands on experience of management of different conditions.

Care of AIDS - HIV and hepatitis infected patients.

- Target - *Knowledge of safety precautions.*

PAPER - II

100 Marks

Part - A

50 Marks

Bhagna – Skeletal injuries: Prakara including pathological fracture, Samanya Lakshana, Upadrava and Chikitsa.

Description of fracture of following bones with Clinical features, Diagnosis, Complications and Management – scapula, clavicle, humerus, radius, ulna, femur, patella, tibia and pelvis bones.

Sandimoksha - Dislocation: Dislocation of following joints with Clinical features, Diagnosis, Complications and Management of shoulder, elbow and hip.

- Target - Clinical utility of the concepts.
- Preferable targets - Hands on experience of management of different conditions.

Diseases of bone: Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Congenital anomalies, Osteomyelitis, Cysts, Tumours and Tuberculosis.

- Target - Clinical utility of the concepts.
- Preferable targets - Hands on experience of management of different conditions.

Cranio-cerebral injuries: Mechanism, Pathology, Classification, Investigations, Complications and primary management.

- Target - Clinical utility of the concepts.
- Preferable targets - Hands on experience of management of different conditions.

Diseases of Spine: Mechanism, Pathology, Classification, Investigations, Complications and primary management of Tuberculosis, Ankylosing Spondylitis and Disc prolapse.

- Target - Clinical utility of the concepts.
- Preferable targets - Hands on experience of management of different conditions.

Diseases of breast: Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Sthana Vidradhi - Breast abscess and Sthana Arbuda - Breast tumours.

- Target - Clinical utility of the concepts.
- Preferable targets - Hands on experience of management of different conditions.

Diseases of chest: Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Chest injury, Pleural effusion, Pleurisy and Tumours.

- Target - Clinical utility of the concepts.
- Preferable targets - Hands on experience of management of different conditions.

Diseases of esophagus: Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Congenital anomalies, Oesophagitis, Varices, Ulcer and Tumours.

-
- Target - Clinical utility of the concepts.
 - Preferable targets - Hands on experience of management of different conditions.

Gulma Roga - Nidana, Prakara, Lakshana, Upadrava and Chikitsa.

Shoola vyadhi - Nidana, Prakara, Lakshana, Upadrava and Chikitsa.

- Target - Clinical utility of the concepts.
- Preferable targets - Hands on experience of management of acute abdomen.

Udara Roga: Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Jalodara - Ascites, Chidrodara – Perforation, Peritonitis and Badhagudodara-Intestinal obstruction.

- Target - Clinical utility of the concepts.
- Preferable targets - Hands on experience of management of different conditions.

Diseases of stomach and duodenum: Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Pyloric Stenosis, Peptic Ulcer and Tumours.

- Target - Clinical utility of the concepts.
- Preferable targets - Hands on experience of management of different conditions.

Diseases of small intestine: Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Tuberculosis, Obstruction and Perforation.

- Target - Clinical utility of the concepts.
- Preferable targets - Hands on experience of management of different conditions.

Diseases of large intestine - Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Tuberculosis, Obstruction, Perforation, Tumours, Appendicitis, Crohn's disease and Ulcerative Colitis.

- Target - Clinical utility of the concept.
- Preferable targets - Hands on experience of management of different conditions.

Diseases of Rectum and Anal Canal – Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Congenital disorders, Arshas - Haemorrhoids, Parikartika - Fissure-in-ano, Bhagandara - Fistula-in-ano, Guda Vidradi - Anorectal abscesses, Gudabhramsa - Rectal prolapse, Sanniruddaguda - Anal stricture, Incontinence, Rectal Polyp and Tumours.

- Target - Clinical utility of the concepts.
- Preferable targets - Hands on experience of management of different conditions.

Abdominal injuries and their management.

- Target - Clinical utility of the concepts.
- Preferable targets - Hands on experience of management of different conditions.

Part – B

50 Marks

Diseases of Liver: Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Yakrit Vidhradi - Abscess, Neoplasia, Portal hypertension and Yakritdalyodar –Hepatomegaly.

- Target - Clinical utility of the concepts.
- Preferable targets - Hands on experience of management of different conditions.

Diseases of Gallbladder: Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Cholecystitis, Cholelithiasis, Obstructive jaundice and Tumours.

- Target - Clinical utility of the concepts.
- Preferable targets - Hands on experience of management of different conditions.

Diseases of Pancreas: Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Pancreatitis, Cysts of Pancreas and Tumours.

- Target - Clinical utility of the concepts.
- Preferable targets - Hands on experience of management of different conditions.

Diseases of Spleen – Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Pleehodara – Splenomegaly and Splenic rupture.

- Target - Clinical utility of the concepts.
- Preferable targets - Hands on experience of management of different conditions.

Diseases of Kidney and Ureters - Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Congenital anomalies, Polycystic kidney, Injuries, Perinephric abscess, Calculus and Neoplasms.

- Target - Clinical utility of the concepts.
- Preferable targets - Hands on experience of management of different conditions.

Diseases of Urinary bladder – Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Congenital anomalies, Injuries, Ashmari - Vesical Calculus, Cystitis and Neoplasms.

- Target - Clinical utility of the concepts.
- Preferable targets - Hands on experience of management of different conditions.

Mutraghata and Mutrakrichra - Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management. Retention of urine.

- Target - Clinical utility of the concepts.
- Preferable targets - Hands on experience of management of different conditions.

Diseases of Prostate - Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Prostatitis, Prostatic abscess, Benign Enlargement of Prostate and Carcinoma of Prostate.

- Target - Clinical utility of the concepts.
 - Preferable targets - Hands on experience of management of different conditions.
-

Diseases of Urethra – Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Urethritis, Stricture and Rupture.

- Target - Clinical utility of the concepts.
- Preferable targets - Hands on experience of management of different conditions.

Diseases of Penis: Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Congenital anomalies, Niruddhaprakasha -Phimosis, Parivartika -Paraphimosis, Avapatika - Prepuceal ulcer, Arbuda- Tumours and Lingarsha - Penile Warts.

- Target - Clinical utility of the concepts.
- Preferable targets - Hands on experience of management of different conditions.

Diseases of Scrotum and Testis: Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Epididymo-orchitis, Epididymal cyst, Scrotal filariasis, Shukrashmari - Seminal calculus, Torsion of testis, Ectopic testis, Undescended testis and Tumours.

Vridddhi Roga: Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Mutravridddhi – Hydrocele.

- Target - Clinical utility of the concepts.
- Preferable targets - Hands on experience of management of different conditions.

Antra Vridddhi – Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Hernia - Inguinal, Femoral, Epigastric, Umbilical, Incisional and rare forms of Hernia.

- Target - Clinical utility of the concepts.
- Preferable targets - Hands on experience of management of different conditions.

PRACTICALS

Content of Practicals:

1. Identification, uses, demonstration of surgical instruments and methods of sterilization.
2. Training of case taking, bed side clinicals and case presentation.
3. Demonstration and Practical training in Anaesthesia.
4. Training to develop skills in following Parasurgical and other procedures
 - i. Kshara Karma
 - ii. Agnikarma
 - iii. Kshara Sutra
 - iv. Raktamokshana
 - v. Application of bandages and splints
 - vi. Catheterization
 - vii. Wound management procedures like Parisheka and Patradana
 - viii. Ryle's tube aspiration
 - ix. Injections -Intramuscular / Intravenous / Subcutaneous / Intradermal
 - x. Incision and drainage of abscess
 - xi. Suturing of open wounds
5. Observation of following procedures

- i. Circumcision
- ii. Hydrocele
- iii. Hernial repair
- iv. Vasectomy
- v. Haemorrhoidectomy
- vi. Fistulectomy
- vii. Fissurectomy
- viii. Appendectomy
- ix. Cholecystectomy

6. Training of Surgical Emergencies and Management.

Clinical Training (Indoor and Outdoor)

- Shalya (Samanya)
- Shalya (Kshara and Anushastra Karma)
- Asthi and Sandhi Chikitsa (Orthopaedics and Trauma)
- Anaesthesia
- Radiology

09 Months

03 Months (atleast one month in OT)
 03 Months (atleast one month in OT)
 02 Months
 15 days
 15 days

Distribution of Marks

- | | |
|------------------|-------------|
| 1) Daily records | - 10 Marks |
| 2) Instruments | - 20 Marks |
| 3) Short case | - 10 Marks |
| 4) Long case | - 20 Marks |
| 5) Viva – voce | - 40 Marks |
| Total | - 100 Marks |

Reference Books

- | | |
|--|--|
| 1. Sushruta Samhita | |
| 2. Ashtanga Sangraha | |
| 3. Ashtanga Hridaya | |
| 4. Charaka Samhita | |
| 5. The Surgical instruments of the Hindus | - Girindranath Mukhopadhyaya |
| 6. Shalya Tantra Samuchchaya | - Pandit Ramadesh Sharma |
| 7. Shalya Vigyan (Part 1-2) | - Dr. Surendra Kumar Sharma |
| 8. Shalya Samanvaya (Part 1-2) | - Vd. Anantaram Sharma |
| 9. Shalya Pradeepika | - Dr. Mukund Swaroop Verma |
| 10. Sushruti | - Dr. Ram Nath Dwivedi |
| 11. Clinical Shalya Vigyan | - Dr. Akhilanand Sharma |
| 12. Bhagna Chikitsa | - Dr. Prabhakar Janardhan Deshpande |
| 13. Kshara sutra management in anorectal ailments | - Dr. S.K. Sharma, Dr. K.R.Sharma and Dr. Kulwant Singh. |
| 14. Anorectal diseases in Ayurveda | - Dr. Sijoria and Dr. Praveen Kumar Chowdary. |
| 15. Adhunik Shalya Chikitsa Siddhanta | - Dr. Katil Narshingham Udupa |
| 16. Agnikarma Technology Innovation | - Dr. P.D. Gupta |
| 17. Shalya Tantra Ke Siddhant | - Dr. K.K.Takral |
| 18. Recent advances in the management of Arshas / Haemorrhoids | - Dr. P. Hemantha |

19. Arsha Evum Bhagander Mein sutra Avacharan	Kumar
20. Kshara Sutra	- Vd. Kanak Prasad Vyas
21. Surgical ethics of Ayurveda	- Dr. S.N.Pathak
22. Bailey and Love's Short Practice of Surgery	- Dr. D.N. Pande
	- Norman.S. Williams, Charles.V. Mann and R.C.G. Russell
23. Clinical methods in surgery	- S. Das
24. Textbook of Operative Surgery	- S. Das
25. Shalya Vigyan (Sachitra)	- Anantram Sharma
26. Anushastra Karma	- Dr. D.N. Pande
27. Concept of Vrana is Ayurveda	- Dr. Lakshman Singh
28. Significance for Poorva Karma in Surgical Patient	- Dr. Lakshman Singh
29. Sangyahan Prakash	- Dr. D.N. Pande
30. A concise Text Book of Surgery	- S. Das
31. A manual on Clinical Surgery	- S. Das
32. A System of Surgical Diagnosis	- T.N. Patel
33. A Practical Guide to Operative Surgery	- S. Das
34. Drugs and Equipment for Anaesthesia	- Arun kumar
35. Manual of Surgical Instruments	- M.M. Kapur
36. Ward Procedures	- Patel Mansukh. B
37. Recent trends in the management of Arshas / Haemorrhoids	- Dr. P. Hemantha Kumar
38. Primary Anaesthesia	- Maurice King
39. Synopsis of Anaesthesia	- Lee
40. Clinical Anatomy/ Surgical Anatomy	- John E.Skandalakis
41. Surgical Instruments of the Hindus	- Girindharnath Mukopadyay
42. Outline of Orthopedics	- John Crawford Adams and David Hamblen. L
43. Outline of Fracture	- John Crawford Adams
44. Recent trends in the management of Bhagandara / Fistula-in-ano	- Dr. P. Hemantha Kumar
45. Principles and Practice of Agnikarma	- Dr. Anand Kumar and Dr. Kanchan Shekokar
46. Manipal Manual of Surgery	- Dr. Rajgopal Shenoy

4.4

SHALAKYA TANTRA

Theory Two Papers – 100 Marks Each
Practical/Viva voce – 100 Marks

NETRA ROGA VIGYAN

Paper I

100

Marks

I. Introduction

- Shalakyatantra nirukti, Parichayam, Ithihasam
- Netra rachana shariram (Mandala, Patala, Sandhi, Drushti Vichara) and Netra Kriya Sharira alongwith modern anatomy of Eye.
- Eye examination and knowledge of basic instruments/equipments required for examination of Eye.
- Netrarognanam – Samanya Hetu (Nija and agantuja), Purvarupa, Samprapti, Rupa and Chikitsa.
- Classification of Netraroga and its importance.

II. Netra Samanya and Vishishta Chikitsa - Kriya Kalpa

- Netra and Chakshu swasthya hitkara Dinacharya, Ritucharya, Aahara evam Vihara.
- Kriya-kalpa-Seka, Aschyotana, Pindi, Vidalaka, Tarpana, Putapaka, Anjana and importance of Panchkarma in Netra Chikitsa.
- Basic fundamentals of Netra Shastra Chikitsa e.g. Purva – Pradhana - Paschat karma, Ama-Pachyaman-Pakva Vrana shotha, Vranitopasana, Pranashtashalya, & Vranbandhana. Methods and concepts of sterilization, asepsis and antisepsis as per ancient and modern point of view.
- Basic applied knowledge of Ashtavidha shastrakarma, agni, kshara, raktamokshana in Netra rogas.
- Essential diagnostic and therapeutic modern pharmacological agents required in Netra Chikitsa

III. Sandhigata Roga(Diseases of junctional areas of eye)

- Number of sandhigata rogas, detailed etiology, pathology, clinical features and management of Pooyalasa and Srava Rogas.
- Brief Study of krimi granthi, Parvani and Alaji Rogas.
- Study of Acute and Chronic Dacryocystitis, Epiphora, Blepharitis including their aetiology, pathology, signs & symptoms, differential diagnosis and medical & surgical management.

IV. Vartmagata Roga(Diseases of Lids)

- Number of vartmagata rogas, and detailed knowledge of etiology, pathology, clinical features and management of Anjananamika, Utsangini, Lagana, Vatahata vartma, Pakshma kopa, Sikta vartma, Pothaki, Klinna vartma, Krichronmeelana and Kukunaka diseases of Vartma.
- Brief Knowledge of Vartmarbuda, Utklishta vartma, Nimesh, Pakshmeshata, Vartmarsha
- Knowledge of Hordeolum, Ptosis, Trachoma, Trichiasis, Entropion, Ectropion including their Etiology, signs and symptoms differential diagnosis and medical & surgical management.

V. Shuklagata Roga(Diseases of sclera and conjunctiva)

- Number of Shuklagata rogas, detailed knowledge of etiology, pathology, clinical features

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- and management of Arma, Arjuna and Shuktika
- b) Brief Knowledge of Sira pidika, Sira jala, Pishtaka, Balasgrathita.
 - c) Study of Pterygium, Scleritis, Episcleritis, Sub-Conjunctival Hemorrhage including their Etiology, signs and symptoms, differential diagnosis and medical & surgical management.

VI. Krishnagata Roga (Diseases of cornea and uvea)

- a) Number of krishnagata rogas, detailed knowledge of Etiology, Pathology, Clinical features, differential diagnosis, complications and Management of Savrana /kshata Shukla (Shukra), Avrana shukra (Shukla)
- b) Brief knowledge of Sira shukla, Akshipakatyaya and Ajakajata.
- c) Knowledge of Corneal ulcer, Corneal Opacity, Uveitis, Acute Iridocyclitis, Staphyloma, their aetiology, pathology, symptoms, differential diagnosis, complications and management.

VII. Sarvagata Roga (Diseases effecting all parts of eye)

- a) Number of Sarvagata rogas, detailed knowledge of etiology, pathology, clinical features, complications, differential diagnosis and Management of Abhishyanda, Adhimantha, Hatadhimantha and Shushkakshipaka.
- b) Brief Knowledge of Amloshit, Vata paryaya, Anyato vata, Sashopha & Ashophakshipaka-Pilla roga, Sirotpata and Siraharsha.
- c) Knowledge of Conjunctivitis, Glaucoma, Dry Eye Syndrome including their etiology, pathology, clinical features, differential diagnosis, complications and their management.

VIII. Drishtigata Roga (vision disorders)

- a) Number of Drishtigata rogas detailed knowledge of - etiology, pathology, clinical features, differential diagnosis and management of Timira, Kacha and Linga nasha.
- b) Brief Knowledge of Abhighataja lingnasha, sanimittaja & Annimittaja Lingnasha Doshandhya/Kaphavidagdha drishti, Naktandhya, Ushna vidagdha drishti, Pittavidagdha drishti, Dhumadarshi, Hriswajadya, Gambhirika, Nakulandhya, Nayanabhighata.
- c) Knowledge of Refractive errors, Cataract including their etiology, pathology, clinical features, differential diagnosis, complications and their management.
- d) Study of Eale's disease, Hypertensive & Diabetic Retinopathies, Age related Macular degeneration, Strabismus, Retinitis pigmentosa, Night blindness, Amblyopia, Central serous retinopathy, Optic Neuritis and Optic atrophy

IX. Miscellaneous Diseases

- a) Xerophthalmia and other malnutritional eye disorders.
- b) Knowledge of ocular trauma and their management.
- c) Introduction to Eye bank, Eye donation, Corneal Transplantation
- d) Preventive Ophthalmology and Community Ophthalmology

SHIRA - KARNA- NASA- MUKHA ROGAS

PAPER II

100 Marks

I Samanya Chikitsa

- Study of therapeutic procedures like Sveda, Kavala, Gandusa, Dhuma, Murdhni Taila, Nasya, Pratisarana, Karna Purana, karna prakshalana, nasa prakshalana Mukha Lepa.
- Ashtavidha shastrakarma and anushastrakarma used in the treatment of Shira, Karna, Nasa & evam Mukha Rogas.

II Shiro Roga

- Importance and Superiority of Shira.
- Number, general etiology, pathology and cardinal features of shiro rogas and kapalgata rogas along with their common line of management/treatment.
- Detailed study of Vataja, Pittaja, Kaphaja shirashoola, Suryavarta, Ardhavabhedaka, Khalitya, Palitya.
- Brief Knowledge of Raktaja shiraha shoola, Krimija shiraha shoola, Kshayaja shiraha shoola & Sannipataja shiraha shoola, Ananta vata, Indralupta, Darunaka.
- Detailed study of Headache, Migraine its differential diagnosis and treatment.

III Karna Roga

- Detailed study of Rachana and Kriyasharir of Karna (Ear) & Shravanendriya as per Ayurvedic and modern view, Examination of Ear along with instruments/equipments required in Ear examination.
- Detailed study of etiology, pathology, classification, clinical features and management of diseases of Karna – karna shool, karna nada & shweda, Badhira, karnastrava, karna pratinaha, pootikarna, karnagoothaka, karnavidradhi.
- Brief Knowledge of karna kandu, karnapaka, karnarsha, karnarbuda, krimikaran & karnapali rogas, Karna sandhana (Auroplasty), fundamentals, method and Vaikritpaham
- Detailed study of Otagia, ASOM, CSOM, Deafness, wax including their etiology, pathology, clinical features, differential diagnosis, complications and medical & surgical management
- Brief Knowledge of Otomycosis, Otosclerosis, Tinnitus, Vertigo, Foreign body in ear and Noise pollution.

IV Nasa Roga

- Detailed study of Rachana and Kriyasharir of Nasa (Nose and paranasal sinuses) & Ghranendriya as per Ayurvedic and modern view, Examination of Nose along with instruments/equipments required in Nose examination.
- Detailed study of Pratishyaya, Dushta pratishyaya, Nasanaha, Kshavathu, Nasagata raktapitta & Nasarsha.
- Brief Knowledge of Putinasa, Bhranshatu, Peenasa, Apeenasa, Nasarbuda, Nasashotha, Dipta, Nasa Sandhana.
- Detailed study of Rhinitis & Sinusitis Epistaxis, Nasal Polyp, DNS, Foreign body including their Etiology, pathology, clinical features differential diagnosis and medical & surgical management.
- Brief Knowledge of Nasal trauma, Tumours of nose and Para nasal sinuses.

V Mukha Roga (Diseases of Oral Cavity)

- a) Detailed study of Rachana and Kriyasharir of Mukha Rogaadhisthana- oshtha, dantamoola, danta, jivha, talu, gal, sarvasara (Oral cavity) as per Ayurvedic and modern view along with their Basic examination including instruments/equipments required for the examination
- b) Mukha and Danta Swasthya as per ancient and modern concepts including prevention of malignancy of oral cavity.
- c) Number and general aetiology, pathology, cardinal features of Mukha rogas along with their common line of management/treatment.

Oshtha Roga (Diseases of Lips)

- a) Detailed study of Etiology, pathology, classification, clinical features and management of - Oshtha prakopa, khandoshtha
- b) Brief Knowledge of Gandalaji, Jalarbuda, Kshataja Oshthaprakopa
- c) Knowledge of cleft lip.

Dant Mula Gata Roga (Diseases of Periodontia)

- a) Detailed study of Etiology, pathology, classification, clinical features and management of - Shitada, Dantaveshta, Upakush, Danta Nadi, Danta Vidradhi, Adhimansa
- b) Brief Knowledge of dantapupputaka, Saushira, Mahasaushira, Danta Vaidarbha , Paridara, Vardhana.
- c) Detailed study of Etiology, pathology, classification, clinical features and management of Gingivitis, Apical abscess, Periodontitis (Pyorrhoea).

Danta Roga (Dental Diseases)

- a) Detailed study of Etiology, pathology, classification, clinical features and management of Daalan, Krimidanta, Dantaharsha, Danta sharkara, Hanumoksha
- b) Brief Knowledge of karala, Bhanjanak , Kapalika, Shyava Danta, Danta bheda,
- c) Danta chaal, Adhidanta, Danta Utpatana including Jalandhar bandha method and Danta Purna.
- d) Knowledge of Dental Caries, Dental Tartar & Tooth extraction.

Jihwa Gata Roga (Diseases of Tongue)

- a) Detailed study of Etiology, pathology, classification, clinical features and management of - jivha kantaka (vataja, pittaja and kaphaja)
- b) Brief Knowledge of Upajihva, Adhijihva, Alasa.
- c) Knowledge of Glossitis, Tongue Tie, Ranula, Benign and Malignant Tumors of tongue.

Talu Roga (Diseases of Palate)

- a) Detailed study of Etiology, pathology, classification, clinical features and management of - Gala shundika, Talushosha, Talupaka
- b) Brief Knowledge of Talupupputa, Adhrusha, Kacchapa, Talvarbuda, Mamsasanghata.
- c) Knowledge of Cleft palate, palatitis, uvulitis and tumours of the palate.

Kantha and Gala gata Roga (Diseases of Pharynx & Larynx)

Detailed study of Etiology, pathology, classification, clinical features and management of - Tundikeri, Kantha shaluka, Gilayu, Galaganda,

- Swrabhedha , Galavidradhi.
- Brief Knowledge of Rohini, Galashotha, Kantharbuda, Kanthavidradhi, Galarbuda Galaugham, Vrindam, Ekavrindam, Valaya, balasa , Shataghni, Swaraghna.
 - Detailed study of Etiology, pathology, classification, clinical features and management of - Pharyngitis, Laryngitis, Tonsillitis & Adenoiditis
 - Brief Knowledge of foreign body in the throat, Carcinoma of Larynx & Pharynx, Dysphagia Diphtheria & diseases of salivary glands.

Sarvasara Mukha Roga (Generalised mucosal affections of the oral cavity)

- Detailed study of Etiology, pathology, classification, clinical features and management of Sarvasar mukhapaka
- Brief Knowledge of urdhvaguda, putivaktrata, mukharbuda
- Detailed Knowledge of Stomatitis.

VI Miscellaneous Diseases

National Programme for Prevention and Control of Deafness.

PRACTICAL

Content of Practical

Identification, Uses, Demonstration of surgical/non-surgical equipment/ instruments, materials used in shalakya chikitsa. Method of sterilization. Training of case taking, bedside clinics and case presentation.

Training in para- surgical procedures-

- 1) Kshara karma
- 2) Agnikarma
- 3) Raktamokshana
- 4) Training of ward procedures. Application of bandages, wound management
- 5) Training of minor procedures (ashtavidha)
- 6) Observation of surgical procedures in Shalakya

Clinical Training

04 Months (OPD, IPD OT and kriya kalpa)

Distribution of marks

- 1) Long Case 30 Marks
- 2) Short Case 20 Marks
- 3) Identification of instruments 10Marks
- quipments,medicines,etc 30 Marks
- 4) Viva – voce 10 Marks
- 5) Daily Record (Case record)

Total

100 Marks

Reference Books:-

- | | |
|--|--------------------------------|
| 1. Shalakya Tantra | Dr. Rama Nath Dwivedi |
| 2. Shalakya Vigyan | Dr. Ravindra Chandra Choudhary |
| <hr/> | |
| 3. Abhinava Netra Chikitsa | Acharya Vishva Nath Dwivedi |
| 4. Netra Chikitsa Vigyan | Dr. Ravindra Chandra Choudhary |
| 5. Netra Roga Chikitsa | Dr. Munje |
| 6. Netra Roga Vigyan | Dr. Hans Raj |
| 7. Parson's Diseases of Eye | |
| 8. Diseases of ENT Log and Turner | |
| 9. Shalakya Tantra | Shiv Nath Khanna |
| 10. A text book of ophthalmology in Ayurveda | Dr. P.K.Shantha kumara |
| 11. Shalakya Kriya Kalpa Vigyan | Prof. K. S. Dhiman |
| Useful portions of Charak, Sushrut, Vagbhata | |

4.5

Research methodology and Medical statistics

Total Marks 50 (Part A-30 and Part B- 20)

PART – A –Research Methodology

1. Brief historical background of research in Ayurved and contemporary medical science
Evidences of researches in ayurvedic classics
2. Etymology, definitions and synonyms (Anveshana, Gaveshana, Prayeshana, Anusandhan and Shodha) of the word Research
3. Research in Ayurved - Scope, need, importance, utility
4. Types of Research (familiarization of the terms)
 - a) Pure and Applied
 - b) Qualitative , Quantitative and Mixed
Observational and interventional.
5. Research process (Importance of each steps in brief)
 - a. Selection of the topic
 - b. Review of the literature
 - c. Formulation of Hypothesis
 - d. Aims and Objectives
 - e. Materials and methods
 - f. Observations and results
 - g. Methods of communication of Research
6. Research tools – Role of the pramanas as research tools
7. The concept and importance of ethics in research
8. Concept of Evidence Based Medicine and Scientific Writing
9. Importance of IT in data mining and important research data portals concerned with Ayurved and contemporary medical science (DHARA , PubMed, Ayush Research Portal, Bioinformatics Center, Research Management Informatic System etc.)

Part – B Medical-Statistics

1. Definition, scope and importance of the Medical statistics
2. Common statistical terms and notations
 - a. Population
 - b. Sample
 - c. Data
 - d. Variable
 - e. Normal distribution
3. Collection and Presentation of data
 - a. Tabular
 - b. Graphical
 - c. Diagrammatical
4. Measures of location

- a. Average
 - b. Percentile
- Measures of Central Tendency
- a. Arithmetic mean
 - b. Median
-
- c. Mode
5. Variability and its measurement
 - a. Range
 - b. Standard deviation
 - c. Standard error
 6. Introduction to probability and test of significance
 7. Parametric and non parametric tests
 8. Introduction to commonly used statistical soft-wares.

Reference books for Research methodology :

1. Dawson, Catherine, 2002, Practical Research Methods, New Delhi, UBS Publishers' Distributors
2. Kothari, C.R., 1985, Research Methodology-Methods and Techniques, New Delhi, Wiley Eastern Limited.
3. Kumar, Ranjit, 2005, Research Methodology-A Step-by-Step Guide for Beginners, (2nd.ed), Singapore, Pearson Education
4. Students guide to research methodology – Undergraduates. Alexandria Medical Students Association.
5. Health research methodology. A guide for training in research methods. 2nd edition. Manila, World Health Organization Regional Office for the Western Pacific, 2001.

Reference Books for statistics :

1. Health research methodology. A guide for training in research methods. 2nd edition. Manila, World Health Organization Regional Office for the Western Pacific, 2001.
2. Statistical methods in medical research. P.Armitage (Ed) Oxford Blackwell
3. Statistical methods . Snedecor GW and Cochran, WG
4. Altman, D. G. (1991). Practical statistics for medical research. London: Chapman Principles of Medical Statistics by A. Bradford Hill
5. Interpretation and Uses of Medical Statistics by Leslie E Daly, Geoffrey J Bourke, James MC Gilvray.
6. Research in Ayurveda-M S Baghel
7. research methodology in ayurveda-V.J.Thakar,Gujarat Ayurved University
8. Ayurveda anusandhan paddhati-P.V.Sharma
9. Research methodology methods and statistical techniques- Santosh Gupta. Greenhouse SW.
10. The growth and future of biostatistics: (A view from the 1980s). Statistics in Medicine 2003; 22:3323–3335.
11. Knapp GR & Miller MC. Clinical epidemiology and Biostatistics, NMS series Antonisamy B, Christopher S & Samuel PP. Biostatistics : Principles and practice
12. Sundara Rao PSS & Richard J. An introduction to Biostatistics, PHI
13. Senn S (1997). Statistical Issues in Drug Development. Chichester: John Wiley & Sons.
14. Methods in Bio-statistics for Medical Students- BK Mahajan
15. Vaidyakeeya Sankhiki Shastra- Dr.S.S.Savrikar
