

**SYLLABUS FOR RESEARCH ENTRANCE TEST (RET) OF  
AYURVEDA VIDYAVARIDHI (Ph.D AYURVEDA)**

- I. Research Methodology &  
General Aptitude: 50 Marks**  
**II. Concerned Subject: 50 Marks**

**PAPER -I**

**RESEARCH METHODOLOGY & GENERAL APTITUDE**

**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 Dashvidha Parikshya Bhava Tadvidya sambhasha, vadmarga and tantrayukti
6. Comparison between methods of research in Ayurveda (Pratigya, Hetu, Udaharana,

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 koshta.

8. Literary Research-

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

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

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).

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

10. 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 networkphysiology

-Brief introduction to the process of Drug development.

11. 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.

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

13. Introduction to bioinformatics, scope of bioinformatics, role of computers in biology.

Introduction to Data base- Pub med, Medlar and Scopus. Accession of databases.

14. Intellectual Property Rights- Different aspect and steps in patenting.

Information on Traditional Knowledge Digital Library (TKDL).

**MEDICAL STATISTICS**

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 1 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, McNamara’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 (Non-probability) 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

**General Aptitude:**

- a) General Knowledge
- b) Current Affairs of Haryana State

## **PAPER-II: CONCERNED SUBJECT**

### **AYURVED SAMHITA EVUM SIDDHANT**

#### **A. Charak Samhita**

1. Charak Samhita complete with Ayurved Dipika commentary by Chakrapani.
2. Introductory information regarding all available commentaries on Charak Samhita

#### **B. Sushrut Samhita & Ashtang-Hridayam**

1. Sushrut Samhita Sutra sthana and Sharir- sthana. with Nibandha Samgraha commentary by Acharya Dalhana.
2. Ashtang-Hridayam Sutra Sthanamatram with Sarvanga Sundara commentary by Arun Dutt.
3. Introductory information regarding all available commentaries on Sushrut Samhita and Ashtang Hridaya.

#### **C. Ayurvediya and Darshanika Siddhanta**

Introduction and description of philosophical principles incorporated in Charak Samhita, Sushrut Samhita, Ashtanga Hridya, shtang Samgraha.

1. Analysis of principles specially loka-purusha samya, Shadpadartha, Praman, Srishti Utpatti, Panchmahabhuta, Pilupaka, Pitharpaka Karana- Karyavada, Tantrayukti, Nyayas (Maxims), Atmatatva siddhant.
2. Importance of Satkaryavad, Arambhavada, Parmanuvada Swabhavoparamvada, Swabhava Vada, Yadricha Vada, Karmvada.
3. Practical applicability principles of Samkhya- Yoga, Nyaya-Vaisheshika, Vedanta and Mimansa.

#### **D. Ayurved Itihas and Prayogika Siddhant.**

1. Post independent Development of Ayurveda: Education, Research.
2. Globalisation of Ayurved.
3. Introduction of department of AYUSH, CCIM, CCRAS, RAV.
4. Tridosh Siddhant.
5. Panchabhautik Siddhant
6. Manastatva and its Chikitsa Siddhant.
7. Naishthiki Chikitsa.
8. Practical applicability principles of Charvak, Jain & Bauddha Darshana.
9. Journals, types of Journals review of Articles.

## DRAVYAGUNA VIGYANA

### **A. Namarupa Vigyana**

1. Importance of Namagyana of Dravya, origin of Namarupagyana of Aushadhi in Veda, etymological derivation of various names and synonyms of Aushadhi.
2. Rupagyana in relation to Aushadhi. Sthula and Sukshma description (Macroscopic and Microscopic study) of different parts of the plant.
3. Synonyms of dravyas( aushadha and Ahara) mentioned in Vedic compendia, Brihatrayee, Bhavaprakasha and Rajanighantu.
4. Basonyms, synonyms and distinguish morphological characteristic features of medicinal plants listed in Ayurvedic Pharmacopoeia of India(API).
5. Knowledge of Anukta dravya (Extrapharmacopial drugs)with regards to namarupa.
6. Sandigdha dravya(Controversial drugs) vinischaya.
7. Knowledge of biodiversity, endangered medicinal species.
8. Knowledge of TKDL, Introduction to relevant portions of Drugs and cosmetic act, Magic remedies Act, Intellectual Property Right (IPR) and Regulations pertaining to Import and Export of Ayurvedic drugs.
9. Knowledge of tissue culture techniques
10. Knowledge of Genetically Modified Plants

### **B. Guna Karma Vigyan**

1. Fundamental principles of drug action in Ayurveda and conventional medicine.
2. Detailed study of rasa-guna- virya- vipaka-prabhava and karma with their applied aspects and commentators (Chakrapanidatta, Dalhana, Arunadatta, Hemadri and Indu) views on them.
3. Comprehensive study of karma as defined in Brihatrayee & Laghutrayee
4. Detailed study of Guna and Karma of dravyas listed in API and Bhavaprakasha Nighantu along with current research review.
5. Detailed study of aharadravya/ ahara varga ascribed in Brihatrayee and various nighantus along with Kritanna varga.
6. Pharmacological principles and knowledge on drugs acting on various systems.
7. Basic knowledge on experimental pharmacology for the evaluation of - analgesic, anti pyretic, anti inflammatory, anti diabetic, anti hypertensive, hypo lipidemic, anti ulcer, cardio protective, hepatoprotective, diuretics, adaptogens, CNS activities.
8. Knowledge on Heavy metal analysis, pesticidal residue and aflatoxins
9. Knowledge on evaluation of anti microbial and antimycotic activities.

### **C. Prayogavigyana**

1. Bhaishjya Prayog Siddhant [Principles of drug administration] - Bhaishajya Marga (routes of drug administration), Vividha Kalpana (Dosage forms), Principles of Yoga Vijnan( compounding), Matra (Dosage), Anupana (Vehicle), Aushadha grahankal (Time of drug administration ), Sevankal avadhi (duration of drug administration), Pathyapathya (Dos' /Donts' /Contraindications), complete Prescription writing (Samagra Vyavastha patraaka).
2. Samyoga- Viruddh Sidhanta and its importance
3. Amayika prayoga (therapeutic uses) of important plants ascribed in as well as Brihatrayee, Chakradutta, Yoga ratnakara and Bhavaprakasha.
4. Knowledge of Pharmaco-vigilance in Ayurveda and conventional system of medicine.

5. Knowledge of clinical pharmacology and clinical drug research as per GCP guide lines.
6. Knowledge of Pharmacogenomics

**D.**

1. Etymology of nighantu, their relevance, utility and salient features.
2. Chronological history of the following Nighantus with their authors name, period and content- Paryaya ratnamala, Dhanvantari nighantu, Hridayadipika nighantu, Ashtanga nighantu, Rajanighantu, Siddhamantra nighantu, Bhavaprakasha nighantu, Madanpala nighantu, Rajavallabha nighantu, Madhava Dravyaguna, Kaiyadeva nighantu, Shodhala nighantu, Saligram nighantu, Nighantu ratnakara, Nighantu adharsha and Priya nighantu
3. Detailed study Aushadha kalpana mentioned in Sharangadhara samhita and Ayurvedic Formulary of India (AFI).
4. General awareness on poshaka ahara(Nutraceuticals),Varnya(cosmoceuticals), food additives, Excipients etc.
5. Knowledge of plant extracts, colors, flavors and preservatives.
6. Review of important modern works on classical medicinal plants published by Govt of India, department of AYUSH and ICMR.

## SWASTHAVRITTA

### **A. VAIYAKTIKA SWASTHAVRITTAM SADVRITTAM CHA**

1. Concept of holistic health according to Ayurveda.
2. Spectrum of health, Iceberg phenomenon of diseases, dimensions of health.
3. Dinacharya – Detailed accounts by Charaka, Sushruta, Vagbhata and Bhavamishra.
4. Probable Physiologic effect of Dinacharya procedures.
5. Ratricharya – Bhavamishra and other classics.
6. Day and night pattern in various countries.
7. Ritucharya – Classical description by Charaka, Sushruta, Vagbhata, BhelaSamhita and Bhavamishra.
8. Ritus prevalent in various Indian states.
9. Ritu pattern in various countries of the world.
10. Shodhana Schedule for Ritusandhis.
11. Concept of Vegas, types and the physiology behind each vega and vegadharana.
12. Ahara – Classical food items in Charaka, Sushruta, Vagbhata and Sharangadhara.
13. Aharavargas and comparison with today's food items.
14. Staple diet of various States of India.
15. Staple diet of various countries in correlation with their climate.
16. Principles of dietetics. Balanced diet for healthy adult, adolescent, elderly people, pregnant ladies and lactating mothers.
17. Food intervention in malnutrition, under nutrition and over nutrition.
18. Rules of food intake according to Charaka, Sushruta and Vagbhata.
19. Pros and Cons of vegetarian and Non vegetarian foods.
20. Viruddhahara – Classical and modern day examples.
21. Sadvritta – Compare Charaka, Sushruta and Vagbhata .
22. Prajnaparadha – Causes, Effects and solution.
23. AcharaRasayana, Nityarasayana.
24. Rasayana procedures for Swastha
25. Vajeekarana for Swastha.
26. Mental Health and the role of Ayurveda in it.
27. Vyadhikshamatva – Modern and Ayurvedic concepts.
28. Principles of Health Education.
29. Genetics in Ayurveda and Modern Science

### **B. SAMAJIKA SWASTHAVRITTAM (COMMUNITY HEALTH)**

1. Concept of community health.
2. Concept of Prevention according to Ayurveda.
3. Concept of prevention according to Modern medicine. Levels of prevention. Stages of intervention.
4. Web of causation of diseases, Multifactorial causation.
5. Natural History of diseases.
6. Ecology and community health.
7. Disinfection practices for the community – Modern and Ayurvedic.
8. Immunization programmes. Possible contribution of Ayurveda.
9. Environment and community health (Bhumi, Jala, Vayu, Shuddhikarana, Prakasha, Shabda, Vikirana)
10. Housing –W.H.O Standards. Design of Aaturalaya(hospital), Sutikagara, Kumaragara, Panchakarmagara and Mahanasa (Kitchen)

11. Disposal of Wastes- Refuse, Sewage. Methods of Sewage disposal in sewered and unsewered areas.
12. Occupational Health. Ergonomics. Role of Ayurveda in ESI.
13. Medical Entomology– Arthropods of Medical Importance and their control measures.
14. Knowledge of parasites in relation to communicable diseases.
15. School Health Services and possible contribution of Ayurveda.
16. Demography and Family Planning.
17. Family Welfare Programme and the role of Ayurveda in it.
18. Old age problems in community. Role of Ayurveda in Geriatrics.
19. Care of the disabled.
20. Life Style disorders (Non Communicable diseases) in community and the role of Ayurveda in them.
21. Health tourism. Ayurvedic Resort Management- Panchakarma and allied procedures.
22. Medical Sociology.

### **C. SAMKRAMAKA ROGA PRATISHEDHAM EVAM SWASTHYAPRASHASANAM**

1. Modern Concept of Epidemiology
2. Critical evaluation of Janapadodhwamsa.
3. Epidemiology of different Communicable diseases in detail.
4. General investigations for Communicable diseases
5. Sexually Transmitted Diseases and their control
6. Ayurvedic view of Samkramaka Rogas.
7. Investigation of an Epidemic
8. Control of Epidemics.
9. Host Defenses.
10. Ayurvedic methods of Vyadhikshamatva.
11. Health advice to travelers.
12. Hospital, Isolation ward and bio medical waste management
13. National Health Programmes. Contribution of Ayurveda in National Health Programmes.
14. Health administration under Ministry of H &FWD
15. AYUSH, NRHM, NUHM administration, functions and programmes.
16. National and International Health Agencies and their current activities.
17. Disaster management
18. Statistics related with Infectious diseases at International, National and State levels
19. Vital Statistics

### **D. YOGA AND NISARGOPACHARA**

1. History and evolution of Yoga
2. Different Schools of Yoga
3. Rajayoga –(Ashtanga yoga) philosophy of Patanjali according to Yogasutras.
4. Hathayoga - according to Hathayogapradeepika, GherandaSamhita and Shivsamhita.
5. Karmayoga – Philosophy according to Bhagavad Gita
6. Mantrayoga, Layayoga, Jnanayoga and Bhaktiyoga.
7. Physiological effect of Yoga on Body and mind – Ancient and modern concepts.
8. Concept of Sthula, Sukshma and Karana Shariras
9. Concept of Panchakoshas
10. Concept of Shad chakras and Kundalini
11. Shad Kriyas and their therapeutic effects.
12. Therapeutic effect of yogic practice in the following diseases - Diabetes, Hypertension, Cardiovascular disorders, Obesity, Asthma, Piles, Irritable Bowel Syndrome, Eczema, Psoriasis, Stress Disorders, Eye disorders, Head Ache, Juvenile Delinquency, Mental retardation, Depression, Neurosis, Sexual Dysfunction, Uterine Disorders, Cancer.



13. Yoga in Ayurveda –Concept of moksha,Tools for Moksha,Naishthikichikitsa, TatvaSmriti, Satyabudhhi, yoginamBalamAishwaram (charakaSamhitaSharirasthana chapter 1 & 5)
14. History of Nisargopachara.
15. Basic Principles of Western School of Nature Cure
16. Basic Principles of Indian School of Nature Cure – Panchabhuta Upasana and its therapeutic utility.
17. Different types of Massage and their therapeutic effects
18. Concepts of Acupuncture and Acupressure.
19. Principles of Chromotherapy and Magnetotherapy

## ROGA NIDANA EVUM VIKRITI VIGYANA

### **A. FUNDAMENTAL PRINCIPLES OF ROGANIDANA**

1. Concept of Tridosha and its Pathological implications. 63 permutations and combination of Tridosha. Lina and Stambhita Dosha, their cause and importance in manifestation of Samprapti
2. Concept of Rakta as a Chaturtha Dosha. Importance of Rakta in the manifestation of diseases.
3. Concept of Ashrayashrayi bhava and its applied utility.
4. Different types of Dosha Gati.
5. Causative factors and practical utility of movement of Doshas from Kostha to Shakha and Shakha to Koshtha. Concept of Ashayapakarsha.
6. Trayo roga marga, their diseases and clinical importance of Roga Marga.
7. Concept and classification of Avarana, its role in pathogenesis, mode of diagnosis of Avarana and its importance in chikitsa sutra.
8. Applied aspect of Dhatu Poshana Krama and Dhatu Samvahana. Concept of Margaga and Sthanastha Dhatus.
9. Concept and applied aspects of Doshapaka and Dhatupaka.
10. Fundamental and applied aspect of Dhatu, Upadhatu and Mala. Diseases developed due to their vitiation (pradoshaja vikara).
11. Concept and applied aspects of Srotas, their importance in health and diseased conditions. Concept and applied aspects of Sroto Dushti and Khavaigunya. Understanding the various srotas which are not included in classical list of srotas but enumerated while describing the samprapti of diseases.
12. Description of Dosha-Dushya-Sammurchhana, Concept of Prakriti Sama Samaveta and Vikriti Vishama Samaveta Sammurchhana. Importance of Dosha-Dushya-Sammurchhana in Diagnosis and treatment.
13. Concept of Vikara vighata bhavabhava prativisesha.
14. Concept of Agni and its role in manifestation of health and disease.
15. Concept and pathogenesis of Ama. Contemporary interpretation of Ama and its role in pathogenesis.
16. Sama, Nirama stages of Dosha, Dhatu and Mala.
17. Understanding Samprapti of Santarpanottha and Apatarpanottha Vyadhi.
18. Detailed classification of diseases as described in Ayurveda. Knowledge of ICD and DSM classification.
19. Detailed understanding of Nidan Panchaka with their classification and clinical importance.
20. Relation between 'Hetu & Lakshana' and 'Samprapti & Lakshna'.
21. Explanation and applied aspects of Kriyakala and its utility in diagnosis and treatment.
22. Importance of Upadrava, Arishta and Sadhyasadhyata and Udarka.
23. Natural History of the Diseases, concept of vyadhisankara in Ayurveda.

## B. ROGA VIGYANA

Knowledge of classical Samprapti of following diseases with interpretation of Nidana Panchaka including Upadrava, Arishta and Sadhyasadyata and Chikitsa Sutra. Knowledge of commonly occurring diseases of the respective systems mentioned in contemporary medicine and their Ayurvedic interpretation.

1. Diseases of Pranavaha srotas- Kasa - Shwasa - Hikka – Urahkshata – Shosha – Rajayakshma and Ayurvedic understanding of common clinical entities like Pneumonia, Pleural effusion, Bronchitis, Bronchiectasis, Pulmonary Tuberculosis, Bronchial Asthma.
2. Diseases of Annavaha- Pureeshavaha Srotas- Agnimandya - Ajirna - Aruchi- Chhardi, Amlapitta- Shoola, Grahani –Gulma- Udara Roga –Vibandha, Atisara – Pravahika along with various clinical presentations. Ayurvedic understanding of common clinical entities like Peptic Ulcer, Irritable Bowel Syndrome, Diarrhoea, Dysentery, Constipation, ulcerative colitis.
3. Diseases of Udakavaha Srotas- Trishna, Daha and knowledge of water and electrolyte imbalance disorders
4. Diseases of Rasavaha Srotas - jwara and Ayurvedic understanding of common clinical entities like various types of Fever- Malaria, Typhoid, viral fevers. Pandu, Amavata, Hridroga, Shotha and Ayurvedic understanding of common clinical entities like Anaemia & its Classification, Rheumatic fever, Rheumatoid Arthritis, Angina, Ischaemic Heart Disease, Hypertension, Myocardial Infarction ,Congestive cardiac failure.
5. Diseases of Raktavaha Srotas- Kamala - Raktapitta - Vatarakta – Kroshtukaseersha - Shitapitta – Maha Kushta – Visarpa – Shwitra and Kshudra Kushta and Ayurvedic understanding of common clinical entities like jaundice, hepatitis, bleeding disorders, Gout, Thrombo Angitis Obliterens (TAO), Deep Vein Thrombosis (DVT), Leukaemia, Thalessemia, Sickle cell Anaemia. Introduction to Urticaria, Psoriasis, Eczema, Pemphigus, Herpes.
6. Diseases of Mamsavaha srotas- Introduction to Granthi, Arbuda, Galaganda and Arsha. Ayurvedic understanding of all types neoplasia and Thyroid diseases.
7. Diseases of Medovaha srotas- Sthoulya - Karshya – Prameha and Ayurvedic understanding of common clinical entities like Obesity and Diabetes Mellitus.
8. Diseases of Asthi - Majjavaha srotas- Sandhigatavata, Introduction to Asthi-majjaparipaka, Asthigata Vidradhi and Ayurvedic understanding of common clinical entities like Osteo- Arthritis, Osteomyelitis, Osteoporosis.
9. Vatavyadhi-Akshepaka - Apatanaka - Ardita - Pakshaghata – Gridhrasi – Viswachi, Avabahuka, Manyasthambha – Katigraha-Pangutwa- Khanja-Khalwee and Ayurvedic understanding of common clinical entities like Hemiplagia, Parkinson's disease, Lumbago- Sciatica syndrome, Bell's Palsy, Ankylosing Spondylitis, MND and other commonly occurring neurological diseases.
10. Diseases of Sukravaha srotas- Klaibya and Vandhyatva and understanding of male and female Infertility, Impotence.
11. Diseases of Mutravaha srotas -Mutrakrichha – Mutraghata, Ashmari and Ayurvedic understanding of common clinical entities like Urinary Tract Infection, Urolithiasis, Nephropathies and Renal failure.

12. Diseases of Swedavaha srotas-knowledge of khalitya, Palitya and Cosmetology.
13. Diseases of Manovaha Srotas - Vishada, Udvega, Bhaya, Bhrama, Anidra, Mada, Murchha, Sanyasa, Apasmara, Unmada, Atatwabhinivesha and Ayurvedic understanding of common clinical entities like Depression, Anxiety neurosis, Phobia, Personality disorders.
14. Indriya Pradoshaja Vikara.
15. Jara janya Vyadhi: Alzheimer's Disease
16. Concept and tools for the study of Anukta Vyadhi (Unexplained and newly emerging diseases).
17. Understanding the concept of karmaja vyadhi

### **C. PARIKSHA VIGYANA**

1. Introduction to Clinical methods and technique for the study of clinical examination
2. Importance of medical history taking and its importance in clinical medicine.
3. Aims, Objectives and Methods, applied aspects and importance of various Rogi and Roga Pariksha as per classics.
4. Srotas Pariksha, Shadanga Pariksha vis-à-vis general & systemic examination of patient.
5. Interpretation of Charakokta trividha pramana pariksha and Sushrutokta shadvidha pariksha with clinical methods mentioned in modern medicine.
6. Interpretation and use of ashtasthana nirikshana along with use of current tools as per Ayurveda.
7. Charakokta dashavidha and Sushrutokta Dwadashavidha pariksha along with the use of modern supportive tools for understanding of rogibala and roga bala concept to derive chikitsa sutra
8. Ayurvedic interpretation of all relevant findings of modern clinical examinations, various Laboratory and other Diagnostic tools.
9. Understanding of diagnostic procedures in medical emergencies.
10. Concept of Good clinical practice in Ayurveda and modern medicine.
11. Knowledge of standard clinical laboratory set up useful for Ayurvedic practice.
12. Knowledge of Ancillary common laboratory investigations for diagnosis of diseases, their methods, normal and abnormal values, factors influencing values and their Ayurvedic interpretations & clinical significance as mentioned in practical syllabus.
13. Importance of Bio markers and their utility in clinical researches
14. . Update knowledge of emerging diagnostic tools and technologies.
15. . Knowledge of various Ayurvedic diagnostic softwares/programmes available.
16. Avayava Pariksha – Radio- Imaging Techniques, Sonological Techniques, ECG, EEG etc and their clinical interpretation.

### **D. VIKRITI VIGYANA AND JIVANU VIGYANA**

1. Introduction to pathology and technique for the study of pathology
2. Cell injury and cellular adaptations
3. Immunopathology including amyloidosis and its interpretation with the concept of Ojas vis-à-vis Bala
4. Concept of Shotha versus Inflammation, oedema and healing
5. Derangement of Homeostasis and Hemodynamic disorders
6. |General character and classification of Neoplasia
7. Upasargjanya Vyadhi (Communicable diseases)- Romantika – Masurika –U
8. Detail study of Krimi Vigyanam versus infectious and parasitic diseases along with their mode of infection and life cycle

9. Concept of Snayuka, Shleepada and introduction to Filariasis and classification of common parasites.
10. Concept and applied aspects of Janapadodhvamsa and Environmental diseases
11. Nutritional disorders
12. Concept of genetic diseases and its interpretation in terms of Bija dosha
13. Knowledge of common Bacteria, Virus, Parasites, Fungi and their classification with their disease processes, Nutrition requirements, media and methods for culture and sensitivity

## KAUMARBHRITYA-BALA ROGA

### 1. Bija, Garbha Vigyaniya (Human Genetics, Embryology)

#### **A. Prakrita Bija-Bijabhaga-Bijabhagavayava evam Tadjanya Vikriti (Genetics and related disorders)**

1. Ayurvedic genetics with modern interpretations: Shukra, Shonita, Shukra Shonita Doshas, Bija-Bijabhaga-Bijabhagavayava Vikriti, Matrija and Pitraja Bhavas, Yajjah Purushiya and Atulyagotriya; Measures for obtaining good progeny.
2. Modern genetics

##### Basic concepts:

1. Cell, cell division, nucleus, DNA, chromosomes, classification, karyotype, molecular and cytogenetics, structure of gene, and molecular Screening.
2. Human Chromosomes - Structure, number and classification, methods of chromosome preparation, banding patterns.
3. Single gene pattern inheritance: Autosomal & Sex chromosomal pattern of inheritance, Intermediate pattern and multiple alleles, Mutations, Non Mendelian inheritance, mitochondrial inheritance, Genomic imprinting, parental disomy.
4. Criteria for multi-factorial inheritance.

##### Pathogenesis

1. Pathogenesis of chromosomal aberrations and their effects, recombinant DNA, genetic inheritance, inborn errors of metabolism
2. Chromosomal abnormalities: Autosomal & Sex chromosomal abnormalities, syndromes
3. Multifactorial pattern of inheritance: Teratology, Cancer Genetics – Haematological malignancies, Pharmacogenetics.
4. Chromosomal disorders
5. Chromosomal aberration (Klinefelter, Turner and Down's syndrome)
6. Genetic Counseling, Ethics and Genetics.
- 7.

#### **B. Prakrita Bija-Bijabhaga-Bijabhagavayava evam Tadjanya Vikriti (Genetics and related disorders)**

1. Garbha (embryo), Garbhawastha (gestation period), sperm, ovum; spermatogenesis; oogenesis; structure of ovum
2. Sperm in the male genital tract; sperm in the female genital tract, activation and capacitation of sperm.
3. Garbha Masanumasika Vriddhi evam Vikasa (Ayurvedic and modern concepts of Embryo and Fetal development)
  - First week of development
  - Second week of development
  - Third week of development
  - Fourth to eighth week of development (Embryonic period)
  - Development from third month till birth (Fetal period)
4. Formation of Prakriti, their assessment in children viz. Bala, Kumara, Yauvana; Pathya-Apathya according to Prakriti.

5. Apara (Placenta) Apara Nirmana (Formation of placenta), Apara Karya (Functions of placenta); Apara Vikara (Placental abnormalities)
6. Nabhinadi (Umbilical Cord)  
Formation and features of umbilical cord
7. Garbha Poshana ( Nutrition- from conception to birth)
8. Yamala Garbha( twins)
9. Garbha Vriddhikara Bhavas, Garbhopaghatkara Bhavas.
10. Effect of maternal medication, diet and illness over fetus.
11. Teratology including defects of bija, atma karma, kal, ashaya etc.: causative factors for teratogenecity, mode of actions of teratogenes, critical periods
12. Perinatal Care and Perinatal complications
13. Scientific study of Jataharini specific to children.
14. Prenatal diagnosis
15. Samanya Janmajata Vikara (Common congenital anomalies of different systems): Sahaja Hridaya Vikara (Congenital Cardiac Disorders) Jalashirshaka (Hydrocephalus), Khandaoushtha (cleft lip), Khanda-Talu (cleft palate), Sanniruddha Guda (Anal stricture / imperforated anus), Pada-Vikriti (Talipes equanovarus and valgus), Tracheoesophageal Fistula (TOF), Spina bifida, Meningocele, Meningomyelocele, Pyloric Stenosis.

## 2. Navajata Shishu Vigyan evam Poshana

### PART-A

1. Navajata Shishu Paribhasha, Vargikarana (Important definitions and classification related to neonates.)
2. Navajata Shishu Paricharya evam Prana-Pratyagamana (Care of the newborn including recent methodology for the resuscitation)
3. Samanya Navajata Shishu Paricharya (General Neonatal Care –Labour room onwards)
4. Samaya purva evam Samaya pashchat Jata Shishu Paricharya (Management of preterm, post term and IUGR newborn)
5. Prasava Kalina Abhighataja Vyadhi (Birth injuries): Upashirshaka (Caput , cephalohematoma), Bhagna (Fractures), Mastishkantargata Raktasrava (ICH, IVH, Subdural hemorrhage)
6. Navajata Shishu Parikshana (Examination of new born): Ayu Parikshana (including Lakshanadhyaya) Modern approach of Neonatal Examination including gestational age assessment
7. Kumaragara: Navajata Shishu Kaksha Prabandhana (Nursery management), NICU, Nursery plan, staff pattern, medical records, Visankramnikarana (sterlization), Knowledge of equipments used in nursery.

## PART-B

8. Navajata Shishu Vyadhi (Early neonatal disorders): Hypothermia, Shvasavarodha (Asphyxia Neonatorum/Respiratory distress), Ulvaka (Aspiration pneumonia), Rakta Vishamayata (Neonatal septicemia), Kamala (Neonatal Jaundice), Akshepaka (Neonatal convulsion), Pandu (Anemia), Atisara (Diarrhea), Asamyaka Nabhinal kartanjanya vyadhi.
9. Navjata Kshudra Vikara (Minor neonatal ailments): Chhardi (Vomiting), Vibandha (constipation), Udara shul (Infantile colic), Puya Sphota (Pyoderma), Shishu Netrabhishyanda (Ophthalmia neonatorum).
10. Sadyojatasya Atyayayika Chikitsa (Management of neonatal emergencies): Shock, Fluid and electrolyte imbalance, Convulsion, Hemorrhagic diseases of Newborn etc.
11. Procedures: Shiro-Pichu, Abhyanga, Parisheka, Pralepa, Garbhodaka Vamana (Stomach wash), Ashchyotana Neonatal resuscitation techniques, Blood sampling, Intravenous canulation, Umbilical vein catheterization, Bone marrow aspiration, Phototherapy, Naso-Gastric tube insertion, Urethral catheterization, Exchange blood transfusion, Thoracocentesis, Bone marrow infusion, Lumbar puncture
12. Nutrition:
  - A. Navjat Shishu Ahara (Neonatal feeding):
    1. Specific Feeding methodology as per Ayurveda and recent advances; Day to day fluid, milk, caloric requirement for the newborn, feeding technique for the preterm baby.
    2. Stanyotpatti and Prasruti (Lactation physiology), Stanya Samghatana (Composition of breast milk), Stana Sampat (Characteristics of normal breast), Stanya Sampata evam Mahatva (Properties & importance of pure milk), Stanya-Piyusha (Colostrum); Stanya-Pana-Vidhi (Method for breast milk feeding), Stanyakshaya / Stanyanasha (Inadequate production and absence of breast milk), Stanya parikshana (Examination of breast milk), Stanyabhava Pathya Vyavastha (Alternative feeding methods in absence of breast milk), Various feeding methods, TPN( Total Parenteral Nutrition)
    3. Stanyadosha (Vitiation of Breast milk), Stanya Shodhana (Purification of breast milk), Stanya Janana and Vardhanopakrama (Methods to enhance breast milk formation)
    4. Dhatri (Wet nurse): Dhatri Guna and Dosha (Characteristics of Wet nurse), Concept of Breast Milk Banking.
    5. Lehana (Elucturies)
  - B Bala-Poshana (Child Nutrition):
    6. Daily requirements of nutrients for infant and children
    7. Common food sources
    8. Satmya and Asatmya Ahara (Compatible and incompatible diet)
    9. Pathya evam Apathya Ahara (Congenial and non-congenial diet)
    10. Stanyapanayana (Weaning)



### 3. Balrog (Pediatric Disorders)

#### PART-A

1. Pranvaha Srotasjanya Vyadhi (Respiratory disorders)- Kasa (Cough), Shvasa (Respiratory distress Syndrome), Tamaka Shwasa (Childhood Asthma), Bronchiolitis, Shvasanaka Jwara (Pneumonia- bacterial, viral etc) Rajyakshma (tuberculosis), Vaksha-Puyata (Pyothorax), Vaksha Vata-Purnata (Pneumothorax)
2. Annavaha Srotasjanya Vyadhi (Gastrointestinal disorders): Jwar (Fever), Chhardi (Vomiting) Ajirna (Indigestion), Kshiralsaka, Atisara (Diarrhea), Pravahika, Vibandha (Constipation, Udarshula (Pain in abdomen), Guda bhramsh (Rectal prolapse)
3. Rasa evam Raktavaha Srotasjanya Vyadhi (Hematological and circulatory disorders): Pandu (Anemia and its various types like Nutritional, haemolytic etc.) and , Raktapitta (Bleeding disorders), Vishishta Hridrog (Specific cardiac diseases- RHD etc), Hypertension, Leukemia.
4. Mamsavaha Srotasjanya Vyadhi: Myopathies
5. Mutravaha srotasjanya Vyadhi (Urinary System disorders): Vrikkashotha (Glomerulonephritis and nephrotic syndrome), Mutrakriccha (Dysuria), Mutraghata (Anuria),
6. Vatavaha Sansthanjanya Vyadhi (Nervous system disorders): Apasmara (Epilepsy), Mastulunga-Kshaya, Mastishka-Shotha (Encephalitis), Mastishkavrana-Shotha (Meningitis),
7. Pediatric disabilities and Rehabilitation: Cerebral palsy, Ardita (Facial paralysis), Pakshavadha (Hemiplegia), Ekangaghata (Monoplegia), Adharanga Vayu (diplegia), Amavata (Juvenile Rheumatoid arthritis)
8. Manovaha Srotasa Vyadhi: Breath holding spell, Shayya mutra (Bed wetting), Autism, ADHD (Attention Deficit and hyperactive disorders), Learning Disability, Mental retardation, Temper tantrum, Pica.

#### PART-B

9. Antahsravi evam Chayapachayajanya Rog (Endocrine and Metabolic disorders)
10. Kuposhanjanya Vyadhi (Nutritional disorders): Karshya-Phakka-Balshosha- Parigarbhika (PEM and allied disorders), Vitamin-mineral and trace elements deficiency disorders, Hypervitaminosis,
11. Krimi evam Aupsargika Rog (Infestations and Infections):Krimi (Giardiasis and intestinal helminthiasis, Amoebiasis) Common bacterial, viral infections with special reference to vaccine-preventable diseases: Rohini (Diphtheria), Whooping cough, Aptanaka (Tetanus including neonatal tetanus), Romantika (Measles), Karnamula Shotha (Mumps), Rubella and Masurika (Chickenpox), Antrika Jwar (Typhoid and Paratyphoid), Viral Hepatitis,; Vishama Jwar (Malaria) and Kala-azar, Dengu fever, HIV (AIDS), Poliomyelitis, Mastishkavaran Shotha (Meningitis), Mastishka Shotha (Encephalitis), Chickengunia
12. Tvaka Vikara (Skin disorders): Ahiputana (Napkin Rashes), Shakuni (Impetigo), Sidhma, Pama, Vicharchika, Charmadal (Infantile atopic dermatitis), Gudakutta.
13. Anya Vyadhyi (Miscellaneous disorders): Jalodar (Ascites), Gandamala, Apachi (Cervical lymphadenitis), Kukunakadi Akshi Rog, Hodgkin & non-Hodgkin Lymphoma, Abnormal growth patterns, Short stature , Niruddha prakash (Phimosis), Paridagdha Chhavi, Utphullika
14. Samghata- Bala Pravrita Rog (damstra): Dog bite. Snake bite, Scorpion bite etc
15. Atyayika Balarog Prabandhana (Pediatric emergency management): Shock and Anaphylaxis, Fluid and electrolyte management, Drowning, Foreign body aspiration, Status epilepticus, Acute hemorrhage, Acute renal failure, Febrile convulsion, Status

asthmaticus, Burn, Acute Poisoning

16. Balagraha: Scientific study of Graha Rogs

17. Life Style disorders

**4. Kaumarabhritya in Ancient Classics and recent Advances**

1. Significant contributions of Kashyapa samhita, Arogya raksha Kalpadrum and other texts /treatises of Ayurveda such as Harita Samhitain the field of Kaumarbhritya including relevant parts from Brihatrai
2. Panchakarma: Principles of Panchakarma [Swedan–Hasta–Pata sweda etc], and their application in pediatric practice in detail.
3. Update knowledge of clinical pediatrics including recent researches in Kaumarbhritya.
4. Fundamentals of Hospital management with special emphases on Pediatric Ward.

## KAYACHIKITSA

### **A. Fundamentals of Kayachikitsa**

1. Rogi-Roga Pariksha: Nidan Panchak, Trividha pariksha, Ashtavidhapariksha, Dashvidhapariksha in the light of recent advances. Clinical methods-Detailed history taking and patient examination, Systemic examination as per ayurveda and recent advances.
2. Interpretation of common investigations: ECG, Echo cardiography, TMT, Spirometry, X-ray, USG, CT-Scan, MRI, EEG, EMG, in different pathological conditions.
3. Detailed Knowledge of Principles of Chikitsa in Ayurveda. Types of Chikitsa. Principles and practices of Rasayana and Vajikarna.
4. National Health Programmes and prospective role of Ayurveda services and therapeutics in them.
5. Medical ethics, Common laws and regulations applicable to clinical practice.
6. Elaborate knowledge of undertaking common medical procedures like Ryle's tube feeding, tapping, transfusions, catheterization, tractions.
7. Ayurveda Dietetics: importance of Pathya, Apathya and Anupana.
8. Drug-drug interactions and adverse drug reactions, Iatrogenic disorders.

### **B. Samanya Roga Chikitsa**

Nidana/ Chikitsa including Nidana Parivarjana, Pathya, Apathaya, Chikitsa siddhanta, Shamana, Shodhana, Panchakarma, Rasayana and Atyayika Chikitsa (Anupana, Drug/Non- drug) as per Ayurvedic and conventional therapeutics of following Srotogata vyadhi:

1. Pranavahasrotas: Shwasa, Hikka, Kasa, Rajayakshma, Hridroga, Parshwashoola, Urakshata, Svarabheda  
Cardio-respiratory system: Bronchitis, Bronchiactasis, Bronchial asthma, COPD, Cor-pulmonale, Pneumonias, Occupational lung diseases, Pulmonary tuberculosis, Congenital Heart disorders, IHD, RHD- Valvular diseases, Cardiac failures, Cardiomyopathy, Pericarditis, Endocarditis, Hypertension,.
2. Annavahasrotas: Agnimandya, Ajirna, Aruchi, Amadosha, Amlapitta, Chhardhi, Shoola, Grahani.  
Gastrointestinal disorders: GERD, APD, Malabsorption Syndrome,
3. Udakavahasrotas: Trishna, Shotha, Udararoga, water and electrolyte imbalance
4. Rasavaha srotas: Jwara, Amavata, Pandu, Madatyaya, Anaemias, Rheumatoid arthritis, Substance abuse disorders.
5. Raktavaha Srotas: Raktapitta, Kamala, Vatarakta, Kushtha, Kshudraroga, Sheetpitta, Uarda, Kotha, Visarpa, Shvitra. Haemopoeitic disorders, Bleeding and Coagulation disorders, Leukaemias, Thrombocytopenia, Disorders of Bone Marrow, Hepatobiliary disorders, Hepatitis, Cirrhosis, Cholecystitis, Liver abscess, Jaundice, Dermatological disorders, Parasitic, Infective, Allergic, Autoimmune skin disorders, Eczemas,
6. Mamsa-Medovahasrotas: Medoroga, Sthaulya, Prameha, Galaganda, Gandamala, Urustambha, Diabetes mellitus, over weight .
7. Asthi-Majjha vahasrotas: Asthikshaya, Sandhigatavata, Osteoarthritis, Osteopenia
8. Shukravahasrotas: Such as Kalibya, Dwajabhanga. Impotence
9. Mutravahasrotas: Mutrakricchra, Mutraghata, Ashmari, Urinary disorders: UTI, Lithiasis, ARF, CRF, Uraemia, BPH.
10. Purishvaha srotas: Atisara, Pravahika, Anaha, Adhamana, Krimi, Udavarta, Enteritis, Dysenteries, Ulcerative colitis, IBS, Worm infestation.

### **C. Vishishta Roga Chikitsa**

Comprehensive knowledge of etiology, demography, pathogenesis, symptomatology, complications, investigations, diagnosis and drug/non-drug management of following diseases as

per Ayurveda/ Conventional therapeutics:

1. Vata-Vyadhi- Pakshavadha, Adharanga Vata, Sarvanga Vata, Ananta Vata, Gata Vata, Gridhrasi, Ardita, Akshepaka, Apatantraka, Ekangvata, Vishvachi, Avabahuka, Avarana. Musculoskeletal disorders: Myopathies, G B Syndrome, Muscular dystrophies, Lumbago  
Neurological disorders: Neurodegenerative disorders like Alzheimer's, Parkinsonism, CVA, Neuropathies, Facial palsy, Motor Neuron Diseases, Epilepsy, Sciatica.
2. Sankramakroga: Sheetala, Masoorika, Updansha, Phiranga, Gonorrhoea, Chancroids, Syphilis,
3. Manasa vyadhi; Unmada, Apasmara, Atatvavinivesha, Mada, Moorcha, Sanyasa. Common psychiatric disorders: Classification of psychiatric ailments. Disorders of thought like Schizophrenia. Disorders of Mood like Mania, Depression. Neurosis, personality disorders, psychosexual disorders.
4. Metabolic disorders: Gout, Dyslipidaemia, Atherosclerosis, Obesity.
5. Endocrinal disorders; Disorders of Pituitary, Thyroid, Adrenal Medulla, Reproductive hormones.
6. Parasitic/Infective/Communicable disorders: Shlipada, Filariasis, Vishama Jvara, Malaria, Manthara Jvara, Enteric Fever, Dengue, Chickenpox, Measles, Influenza, Kalaazar, Mumps, Rabies, Poliomyelitis, Plague, Meningitis, Encephalitis, Chickungunya, HIV/AIDs, Common worm infestations.
7. Common neoplastic disorders and their management strategies. Role of Ayurveda medicines in cancer care including palliative care.
8. Autoimmune diseases: Myopathies, Rheumatic fever, SLE.
9. Common poisonings and their management like Insecticide/Pesticide poisoning, Snake poisoning, Vegetable and chemical poisoning.
10. Janapadodhvamsa Vikara, Environmental diseases and their management.

#### **D. Advances in Kayachikitsa**

Critical care medicine, Management of medical emergencies, ICU services, Field medical services

1. Hospital management strategies, Infrastructure, use of IT technology, essential manpower, equipment, Patient care, management and coordination with contemporary health institutions and field institutions.
2. National Health Campaigns of AYUSH and components under NRHM.
3. Clinical Research in Kayachikitsa and its application in clinical medicine as per new evidence base in different systemic disorders.
4. New emerging health challenges and ayurvedic medicines: Chickangunya, HIV/AIDs, Swineflu, Chickenflu, Dengue, Restless leg syndrome, Sick building syndrome, Fibromyalgia.
5. Role of Ayurveda in immune-protection, immuno-modulation and in management of other allergies and immunological disorders.
6. Indications and importance of Organ transplantation, Ethical and legal issues involved.
7. Knowledge of Geriatric care and terminal care medicine.
8. Basic knowledge of Gene therapy, Stem cell therapy, Genetic modeling and chromosomal disorders in different disease conditions.
9. Radio-isotopes, disease and tumor markers in diagnosis and assessment of therapy.
10. Scope and methods of independent and collaborative research in Kayachikitsa.
11. Disaster management strategies.
12. Application of advances in Rasayana and Vajikarana therapies
13. Application of emerging trends in Panchakarma in medical management.
14. Physical medication and rehabilitation.

## SHALYA TANTRA

### **A. Shalya Siddhanta – Fundamentals of Surgery**

1. Sushruta's contributions in surgical concepts and practices.
2. Knowledge of Dosha, Dhatu and Mala Vigyan and their importance in surgical diseases.
3. Significance and importance of Rakta as the Chaturth Dosha.
4. Yantras and Shastras – Surgical Instruments - Ancient and recent advances.
5. Trividha Karma – Purva, Pradhana and Pashchat Karma and its Importance.
6. Asepsis and Antisepsis.
7. Nirjantukarana – Sterilization – Various methods for surgical equipments, laparoscopes, linen and Operation theatre.
8. Surgical infections – Sepsis, Tetanus and Gas gangrene.
9. Care of patients suffering from Hepatitis, HIV-AIDS, STD and other associated infectious diseases.
10. Ashtavidha Shastra Karma – Critical knowledge and their application in surgical practice.
11. Suturing materials, appropriate use of sutures, drains, prosthetic, grafts and surgical implants.
12. Concept of Marma and their clinical application.
13. Shock - Its varieties and management.
14. Raktasrava / Haemorrhage – Types, Clinical features and Management.
15. Concept of Raktastambhana –Haemostasis.
16. Vranasopha – Inflammation and Vidradhi - Abscess
17. Granthi – Cyst and Arbuda – Benign and malignant Neoplasm – Concept of Oncogenesis and genetics of cancer.
18. Gulma and Udara Roga.
19. Kshudra Roga.
20. 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 surgical conditions and their management.
  - v. Plasma volume expanders and their use in surgical condition.
  - vi. Various replacement fluids in surgery, mode of administration and complications.
  - vii. Nutrition – Indications, types, mode of administration and complications.
21. Blood Transfusion – Blood groups, compatibility, Indications, Contraindications and complications with management.
22. Knowledge of antibiotics, analgesics, anti-inflammatory and emergency drugs in surgical practice.

### **B. Vishishta Shalya Vigyana - Shalya Tantra Speciality**

1. Yogya Vidhi - Practical and Experimental training
  - i. Practice of surgical procedures on different models.
  - ii. Training of Laproscopic and Endoscopic procedures.
2. Vrana – Wound management
  - i. Management of Nija Vrana, Agantuja Vrana, Dushta Vrana and Nadi Vrana.
  - ii. Vrana Chikitsa – Shasti upakramas, Pathya-apathya .
  - iii. Types and Management of Dagdha Vrana - Burns and scalds.
  - iv. Infection of hands and foot, Diabetic wound, Prameha Pidaka – Diabetic carbuncle and its management.
  - v. Management of Pressure ulcers, Venous ulcers and other chronic non-healing ulcers.
  - vi. Gangrene and its management.

3. Mutra Roga – Urological diseases.
  - i. Anatomical and physiological knowledge of kidney, ureter, urinary bladder, prostate, seminal vesicles, urethra and penis.
  - ii. Investigations of Mutravaha Srotas – Urinary tract.
  - iii. Aetiopathogenesis and surgical procedures of Ashmari – Urinary stone diseases.
  - iv. Kidney and ureter – Clinical presentation, Investigations and Management of Congenital anomalies, Trauma, Infection, Neoplasm, Hydronephrosis, Hydroureter and Haematuria.
  - v. Urinary bladder - Clinical presentation, Investigations and Management of Congenital anomalies, Trauma, Infection, Neoplasm, Diverticulum, Vesico-vaginal fistula, Atony, Schistosomiasis, Urinary diversions, Retention of urine – Mutraghata and Mutrakruccha.
  - vi. Urethra - Clinical presentation, Investigations and Management of Congenital anomalies – Hypospadias, Epispadias, Posterior urethral valve, Trauma, Infection, and Neoplasm.
  - vii. Prostate and seminal vesicles – Benign and malignant enlargement of prostate, Prostatitis, Prostatic abscess and Calculi.
  - viii. Penis – Clinical presentation, Investigations and Management of Congenital anomalies, Trauma, Infection, Phimosis, Paraphimosis, Peyronie’s disease and Neoplasm.
  - ix. Testis and scrotum - Clinical presentation, Investigations and Management of Congenital anomalies, Ectopic testis, Trauma, Infection, Neoplasm, Testicular torsion, Hydrocele, Varicocele, Spematocele, Chylocele, Pyocele, Haematocele, Epididymal cyst and Fournier’s gangrene.
  - x. Renal failure – Causes, Diagnosis, Investigations and Management.
4. Asthi roga and Marma Chikitsa - Orthopaedics
  - i. Anatomy and physiology of bone.
  - ii. Diseases of Asthi / Bone and Sandhi / Joints – Congenital, Degenerative, Infective, Metabolic and Neoplastic Disorders of Bones and Joints.
  - iii. Aetiopathogenesis, treatment along with surgical procedures of Bhagna - Fracture, Sandimoksha - Dislocation and bone grafting.
  - iv. Diseases of Spine, vertebral column and spinal cord.

### **C. Adhunik Shalya Karma - Modern surgery**

1. Fundamentals of modern surgery and treatment of surgical disorders including surgical anatomy, physiology and pathology.
2. Diagnosis and Surgical treatment of head and spine injury, thoracic trauma and abdominal trauma. Blast injuries and Management
3. Diagnosis and Surgical management of neck disorders e.g. salivary glands, thyroid, Thyroglossal cyst and Fistula, Branchial cyst and fistula, Cystic hygroma and Lymphadenopathies.
4. Diagnosis and Surgical management of breast diseases, Benign and Malignant breast tumours.
5. Diagnosis and Surgical measures of diseases of Gastrointestinal system -
  - i. Oral cavity - Oral ulcers, Oral cancer, Precancerous conditions, Submucosal fibrosis, Leukoplakia, Cleft lip and palate, Lip tumours, Mucosal cyst, Nasopharyngeal cancer, Tongue ulcer and cancer.
  - ii. Oesophagus - Oesophageal varices, Dysphagia, Neoplasm, Strictures and Gastro oesophageal reflux.
  - iii. Stomach and duodenum –Congenital anomalies, Injuries, Inflammation, Ulcer,

- Neoplasm, Pyloric stenosis, Acute dilatation, Hiatus hernia and Foreign bodies.
- iv. Pancreas - Congenital anomalies, Acute and Chronic pancreatitis, Calculi Neoplasm and Cysts of pancreas.
  - v. Peritoneum, Omentum, Mesentery, Retroperitoneal Space – Peritonitis, Abscess, Neoplasm, Mesenteric cyst, Torsion of mesentery, Vascular thrombosis, Retroperitoneal cyst and Fibrosis.
  - vi. Abdominal mass - Diagnosis and Management.
  - vii. Small intestine - Congenital anomalies, Inflammation, Ulcer, Neoplasm, Stenosis, Injuries, Foreign bodies, Diverticuli, Peutz-jeghers syndrome, Chron's disease, Carcinoid tumours, Enteric perforation and Intestinal fistula.
  - viii. Large intestine - Congenital anomalies, Inflammation, Ulcer, Neoplasm, Stenosis, Injuries, Foreign bodies, Diverticuli, Faecal fistula, Amoebiasis and Familial polyposis coli.
  - ix. Caecum and Vermiform appendix- Appendicitis, Appendicular abscess, Appendicular mass, Perforation, Carcinoid Tumor and other Neoplasm.
  - x. Gastrointestinal bleeding – Haematemesis, Malaena, Haemobilia, Bleeding per anum - Causes, Diagnosis and Management.
  - xi. Rectum and anal canal - Diagnosis and Surgical management of Congenital Anomalies, Inflammation, Ulcer, Neoplasm, Stenosis, Prolapse, Haemorrhoids, Fistula-in-ano, Fissure-in-ano, Anorectal Abscess, Incontinence, Injuries, Foreign bodies, Sacrococcygeal Teratomas and Pilonidal sinus .
6. Umbilicus and abdominal wall – Congenital anomalies, Umbilical infections, Sinus, Neoplasm, Abdominal dehiscence, Divarication of recti, Desmoid tumor and Meleney's gangrene.
  7. Diagnosis and surgical measures of diseases of Hepatobiliary system -
    - i. Liver – Abscess, Cyst - Hydatid cyst, Primary and Secondary malignant tumours, Portal Hypertension and Budd-Chiari Syndrome.
    - ii. Gall bladder and Bile duct - Congenital anomalies, Acute and Chronic Cholecystitis, Cholelithiasis, Neoplasm, Cholangitis, Stenosis, Choledocholithiasis, Choledochal cyst and Cholangiocarcinoma.
    - iii. Spleen – Splenomegaly and Splenic Injury.
  8. Diagnosis and surgical measures for disorders of Artery, Vein, Ligaments, Muscles and Tendons.
  9. Diagnosis and surgical management of Hernias – Inguinal, Femoral, Umbilical, Incisional, Abdominal wall and other hernias.
  10. Endoscopic procedures - Oesophagogastroduodenoscopy, Sigmoidoscopy and Colonoscopy.
  11. Diagnostic and therapeutic laparoscopy.
  12. Anaesthesia - Definition, Types, Anesthetic agents, Indications, Contraindications, Procedures, Complications and management.

**D. Shalya Vangmaya – Shalya literature, Research and Development**

1. Thorough study of the Sushruta Samhita including other relevant portions of Brihatrayee and Laghutrayee.
2. Knowledge and importance of Surgical Audit.
3. Medico legal issues – Understanding the implications of acts of omission and commission in practice. Issues regarding Consumer Protection Act, medical profession, national health policy - Implications in a medico-legal case like accidents, assaults etc.
4. Surgical ethics including Informed consent.
5. Knowledge of different type of experimental Surgical Model for Research in Surgery.
6. Sandhana Karma – Plastic reconstructive and cosmetic surgery. Fundamentals of Sandhana Karma –
  - i. Karna Sandhana – Auroplasty
  - ii. Nasa Sandhana – Rhinoplasty
  - iii. Ostasandhana – Cheiloplasty
  - iv. Grafts and Flaps – Techniques and applications.
  - v. Vascular anastomosis and grafts.
7. **Anushalya Karma** – Parasurgical procedures
  - i. Kshara Karma, Kshara Sutra, Agnikarma and Raktamoskhana.



## SHALAKYA TANTRA

### **A. Netra Rog Vangmaya**

1. Available literature of Netra roga vigyana in Brihatrayi, Laghutrayi, Yogaratnakar, Chakradutta, Bhel Samhita, Harita samhita and Kashyap samhita.
2. Critical analysis of the available literature of netra roga vigyana in the above given classics e.g. Puyalasa and Vatahata Vartma In Sushruta samhita and Vagabhat samhita.
3. Unique/ specific contribution of different classics, Acharyas and commentators in the development of Netra roga vigyana.
4. Analytical determination of subjects related to eye disorders in ancient and modern literatures.
5. Update chronological development of Netra roga vigyana right from Vedic period.
6. Update chronological development of Ophthalmology.

### **B. Ayurvediya Netra Rog Vigyan**

1. Enumeration and classification of Netra Rogas.
2. Descriptive knowledge of *etiology, pathogenesis, prodromal symptoms, clinical features, complications and prognosis of pakhma -vartma- sandhi- - shukla- Krishna- dristi & sarvagata rogas* along with exogenous eye diseases available in Ayurvedic classics. Medical and surgical Management of the above diseases with special skill development in Ashtavidha shastra & Trividha Anushastra chikitsa related to Netra roga.
3. Netra kriya kalpa procedures like seka, ashchytana, vidalaka, pindi, tarpan, putapaka & anjana and their practical application and analysis based on ocular pharmacology. Standard operative procedures for Kriyakalpas including Aushada kalpanas.
4. Study of nayanabhighata and , its management and prevention.
5. Knowledge of preventive and community ophthalmology along with national programme for control of blindness and role of Ayurveda.
6. Ayurvedic Concept of Congenital, developmental and neoplastic diseases of netra.

### **C. Adhunik Netra Rog Vigyan**

1. Knowledge and application of current diagnostic techniques and equipments and therapeutics in Ophthalmology.
2. Detailed study of refractive errors along with defects of accommodation and their management.
3. Detailed knowledge of classification, etiology, pathogenesis, signs and symptoms, differential diagnosis, prognosis and complications of diseases of eye orbit, lacrimal apparatus, lids, conjunctiva, cornea, sclera, uveal tract, lens, vitreous, retina, optic nerve and visual pathway with comprehensive knowledge of their medical and surgical management.
4. Ocular trauma , its emergencies and management.
5. Ocular motility disorders and their medical and surgical management
6. Neurological and systemic disorders affecting the eyes and their management.

### **D. Recent Advances in Netra Chikitsa & Ophthalmology.**

1. Update advances in the development of Ayurvedic drug formulations, therapeutic procedures and treatments of Netra roga.
2. Advanced technologies in the diagnosis of eye diseases.
3. Advanced technologies & techniques in the medical & surgical management of

Netra roga.

4. Advanced management and technologies in Ophthalmology.
5. Detailed study of recent research works on chakshushya dravyas.
6. Comparative and critical study of modern advances in surgical techniques over the surgical methods described in Ayurvedic classics.

**E. Shiro- Nasa- Karna - Kantha Roga Vigyan Maulik Siddhanta and Vangmaya**

1. Detailed study of Shalakyatantra from Bruhat trayee, Laghutrayee, Kashyap samhita, Yoga ratnakar, Chakradutta, Bhel samhita , Harita samhita and other granthas.
2. Comparative and critical study of rogas explained by various granthas.
3. Syntactical derivation, definition and importance of the word “Shalakya”. Sequential development and history of science of ear, nose, throat and Shiras disorders. Establishment of “Superiority of shiras’ among the organs. Determination and importance of the verse ‘**Nasa Hi Shiraso Dvaram**’. Syntactical derivation and the synonyms of the words Karna, Nasa, Kantha, Shiras etc.
4. Descriptive knowledge of the anatomy and Physiology of ear, nose, throat and Shiras as per ancient and modern science.
5. Examination of the ear, nose, kantha and shira as per Ayurveda and modern science.
6. Common etiology of ear, nose, throat and shiras disorders, their pathogenesis, prodromal symptoms, classification, clinical features and general treatment.
7. Importance of shaman and sodhana therapy in ear, nose, throat and shira disorders with general introduction to local therapeutic procedures of ear nose and throat and shira e.g. kaval, gandusha etc.
8. Detailed applied knowledge of recent advanced diagnostic and therapeutic techniques and equipments (Yantra and Shastra) used for ENT and Shira disorders.
9. General knowledge of ‘vrana bandhana’ (bandaging of wounds) and applied bandage in ear etc.
10. Update chronological development of ENT from Vedic period.
11. Study of essential modern drugs, anaesthetic agents of diagnostic and surgical importance.

**F. Ayurvediya Shiro – Nasa - Karna - Kantha Roga Vigyan**

1. Examination of the ear, nose, throat and shira patients.
2. Karna-Nasa –Kantha –and Shira rogas samkhya samprapti, descriptive knowledge of etiology, pathogenesis, prodromal symptoms, classification, clinical features, Upasaya-Anupsaya(prognostic measures) sadhyasadhyatwa and, complications of ear disorders described in the classics of Ayurved. Detail description along with practical orientation of their management.
3. Nasa rogas samkhya samprapti, descriptive knowledge, etiology, pathogenesis, prodromal symptoms, classification, clinical features, Upasaya-Anupsaya (prognostic measures), sadhyasadhyatwa and complications of nasal diseases described in the classics of Ayurved. Detail description along with practical orientation of their treatment.
4. Kantha rogas samkhyasamprapti, descriptive knowledge about etiology, pathogenesis, prodromal symptoms, classification, clinical features, Upasaya- Anupsaya (prognostic measures),sadhyasadhyatwa and complications of kantha diseases described in the classics of Ayurved. Detail description along with practical knowledge of treatment.
5. Shira and Kapala (cranial vault) disorders samkhya samprapti, descriptive knowledge, etiology, pathogenesis, prodromal symptoms, classification, clinical features, Upasaya-Anupsaya (prognostic measures) and complications of Shira and kapala diseases described in the classics of Ayurved. Detail description along with practical knowledge of treatment.

**G. Adhunika Shiro- Nasa- Karna - Kantha Roga vigyan**

1. Descriptive knowledge of instruments and recent equipments available for diagnosis of ear – nose – throat – head disorders along with their practical application.
2. Descriptive knowledge of etiology, pathogenesis, clinical features, differential diagnosis, classification along with complications of different ear – nose- throat and head disorders. Detail knowledge of the treatment (including conservative and surgical) of the above mentioned disorders.
3. Imaging in ENT and Head disorders, detailed knowledge of LASERS, radiotherapy, chemotherapy and other recently advanced treatment modalities like speech therapy, cochlear implant, rehabilitation of the deaf and mute, etc. related to ear – nose – throat – and head disorders.
4. Management of emergencies in ENT and head disorders.

**H. Shiro- Nasa- Karna -Kantha Roga Vigyan Shalya Chikitsa**

1. Knowledge of agropaaharniya and d trividha karma i.e pre operative, operative and post operative measures. Knowledge of eight types of surgical procedures (Astavidha Sasthra Karma) and post operative care of the patient with respect to ENT disorders (Vranitopasaniya).
2. Practical knowledge of updated surgical procedures in ear – like constructive surgery of external and middle ear, excision of pre auricular sinus, Tympanoplasty, Mastoidectomy, Stapedectomy, Endolymphatic sac surgery, Facial nerve decompression surgery, Cochlear implant, etc with their complications and their management.
3. Nose – Septo-rhinoplasty, SMR, Functional Endoscopic sinus surgery, Caldwell luc surgery, Antral puncture, Antral lavage, Turbinectomy, Polypectomy, Various surgical procedures done for malignancy of Nose and paranasal sinuses, Young's surgery, etc
4. Throat - Adenoidectomy, Tonsillectomy, Surgical procedures for pharyngeal abscesses, cauterization of pharyngeal wall granulations, tracheostomy, vocal cord surgery, surgery of vocal cord paralysis, management of laryngeal trauma, laryngectomy, etc.
5. General introduction of four treatment procedures like Bhesaj– Kshar – Agni– Shastra and Raktavsechana with their applied aspects in ear nose throat and shiro disorders. Chaturvidha upakrama in raktasandhan vidhi related to ear nose throat and head disorders. Haemostatic management in ENT.
6. Removal of foreign bodies in the ear nose throat and shira as per Ayurveda and modern science.
7. Karna-Sandhan Nasa-Sandhan, fundamental and applied aspects of Ayurveda.

**I. Danta evum Mukha Roga – Ayurveda Siddhanta and Vangmaya**

1. Etymology, definition and importance of the word 'Shalakyā', History and development of the science of oral and dental diseases. Etymology and synonyms of the word 'Mukha' and 'Danta'. Ancient and recent knowledge of anatomy of oral cavity and teeth along with the knowledge of salivary glands.
2. Detailed study of Oral cavity and gustatory physiology.
3. Oral hygiene, Social aspect of oral hygiene, preventive measures in oral cavity diseases, general etiology, pathogenesis, prodromal symptoms, clinical features and general management of oral cavity diseases.
4. Agropaharaniya, knowledge of purva, pradhan and pashchat karma. Study of Ashta Vidha Shastra Karmas in relation to Danta and Mukha Roga.
5. Applied and detailed study of therapeutic measures for oral and dental disorders, like

Kavala, Gandusha, Dhumapana, Nasya, Murdhtaila Mukhalepa and Pratisarana and their definition, types, indications, contraindications, procedure, features of proper, excess, deficient application and their management.

6. Importance of shodhan and shaman treatment in oral and dental diseases and knowledge of common recipes useful in oral and dental diseases.
7. General introduction of four types of treatment (Bheshja, Shastra, Kshara, Agni). Detail description of Anushastra karma; their practical knowledge in oral and dental diseases.
8. Analytical determination of related subjects of danta-mukha disorders available in ancient and modern commentaries of different Samhita.

#### **J. Ayurvediya Danta evum Mukha Rog Vijnana**

1. Examination of oral cavity, periodontia and teeth. Teeth eruption and its systemic disturbances in a child, Classification, Number of teeth along with detail knowledge of abnormal tooth eruption. Dental disorders in paediatric age group, their prevention and treatment.
2. Danta gata rogas - Dental diseases detailed in the classics of Ayurved; their etiology, pathogenesis, prodromal symptoms, clinical features, complication and applied approach in the treatment of dental diseases.
3. Detailed study of etiology, pathogenesis, prodromal-symptoms, clinical features, complications and prognosis of diseases of the Danta-Mula Gata Roga (**gum- periodontia**) as detailed in the classics of Ayurved. Practical approach/orientation in Treatment of the periodontal diseases.
4. Oshtha (lip), Jihva (tongue) and Talu (palate) Rogas, detailed study of etiology, pathogenesis, prodromal - symptoms, clinical features, complications and, prognosis. Detailed description of their treatment along with practical orientation.
5. Sarvasara Mukharogas (Generalized oral diseases) available in ayurvedic classics. Detailed study of etiology, pathogenesis, prodromal-symptoms, clinical features, complications, prognosis and management of mukha rogas along with practical orientation.
6. Knowledge of Dantabhighata (dental trauma) and Mukhabhighata (oral injury) along with diagnostic and referral skills.

#### **J. Adhunik Danta evum Mukha Rog Vijnana**

1. Detail study of etiology, pathogenesis, clinical features, classification and complication of various oral and dental diseases available in literature of Modern sciences. Detail study of their recent available medical therapeutics.
2. Detail description of diagnostic technology in the diagnosis of oral and dental disease.
3. Study of essential modern drugs, anaesthetic agents of diagnostic and surgical importance.
4. Descriptive Knowledge of up-to-date available modern instruments and their application for examination, diagnosis and management of oral, periodontal and dental diseases.
5. Up-to-date knowledge of applied and available surgical procedures indicated in various dental diseases like tooth extraction, RCT, Dental filling, filling materials, tooth fixation and tooth implants etc.
6. Systemic Effects of oral, periodontal and dental diseases. -

#### **K. Danta evum Mukha Rog Vijnana & Dentistry**

1. Jaalandhara Bandha, its importance and application in Tooth extraction without anaesthesia.

2. Vishishta Upadanta parikalpana (Dental Material and Prosthesis).
3. Recent Research studies and advanced clinical applications of Kriya Kalpas in Danta and Mukha Rogas.
4. Detailed study of recent available medical therapeutics and Research studies in Dental and oral cavity disorders.
5. Advanced diagnostic technology in Dentistry and oral pathology.
6. Benign and malignant tumors of Oral Cavity, their management and role of Ayurveda in Such conditions.
7. Useful conducts for treatment of oral and dental diseases with study of related medico-legal aspects.

## PANCHAKARMA

### **1Purva Karma-Snehana and Svedana**

1. Panchakarma in Ashtanga Ayurved and Significance of Shodhana
2. Ama and Shodhana, benefits of Shodhana, Samikshya Bhavas in Shodhana,
3. Importance of Pachana prior to Snehana, methods, drugs, duration and dose for Pachana, samyak Lakshana of Pachana

#### **Snehana**

1. Etymology and definition of Sneha and Snehana
2. General considerations about Snehana
3. Classifications of Sneha, Sneha-Yoni, detailed knowledge of four types main Sneha-Ghrita, Taila, Vasa and Majja with their characteristics, importance and utility, various aspects of Uttama Sneha
4. Properties of Snehana Dravya and their interpretation
5. Effects of Snehana
6. Sneha Kalpana, various types of Sneha Paka with their utility
7. Indications and contraindications of Snehana
8. Classification of Snehana: Bahya and Abhyantara Snehana
9. Bahya Snehana and Bahir-Parimarjana, utility and importance of Bahya Snehana
10. Classification of Bahya Snehana  
Methods, indications, contraindications, specific utility of the followings Abhyanga, Mardana, unmardana, Padaghta, Samvahana, Udvartana/Utsadana, Udgharshana, Avagaha, Pariseka, Lepa, Pralepa, updeha, Gandusha, Kavala; Karana and Nasa Purna, Akshi Tarpana; Murdhni Taila: Shiro-abhyanga, Shirodhara, Siro Pichu and Siro Basti, Shiro Lepa (Talapotichil), Talam and Takradhara, etc.
11. Knowledge of digestion and metabolism of fat
12. Karmukata of Abhyantara and Bahya Snehana
13. Knowledge of different western massage techniques
14. Abhyantara Snehana: Brimhnartha, Shamanartha and Shodhanartha, definition, method and utility of Brimhanartha and shamanartha Snehana; difference between Shamanartha and Shodhanartha Snehana
15. Methods of Abhyantar Snehana
16. Shodhanartha Snehana: Acchapana and Vicharana, Utility and various methods of Sadyasnehana, Avapidaka Sneha
17. Matra of Sneha : Hrasiyasi, Hrasva, Madhyama and Uttma Matra with their indications, specific utility of Ghrita, taila, Vasa and majja; Anupana of Sneha
18. Need and method of Rukshana before performing Snehana in specific conditions and Samyak Rukshana Lakshana
19. Shodhannga Snehana Vidhi and methods of fixation of dose
20. Diet and Pathya during Snehana
21. Observation of sneha Jiryamana, Jirna and Ajirna Lkashana
22. Samyak, Asnigdha and Ati Yoga Lakshana of Snehana
23. Snehs vyapta and their management
24. Pariharya vishaya and Parihara Kala

## **Svedana**

1. Etymology and definition of Svedana
2. General considerations about Svedana
3. Properties of Svedan and Svedopaga Dravya
4. Indications and contraindications of Svedana
5. Various Classifications of Sveda and Svedna
6. Detailed knowledge of four types of Sveda of Sushruta with their utility;
7. Hina, Mridu, Madhya and Mhana Sveda; Ekanga and Sarvanga sveda with their utility
8. Utility and method of each of 13 types of Sagni and 10 types of Niragni Sveda
9. Shodhannga and Samshamaniya Sveda
10. Methods to protect the vital organs (varjya anga) during Svedan Procedure
11. Detailed Knowledge about Utility of below mentioned Svedan procedures:- Patrapinda Sveda, Shashtika Shalipinda Sveda, Churna Pinda Sveda, Jambira Pinda Sveda, Dhanya Pinda Sveda, Kukkutanda Sveda, Anna lepa, Valuka Sveda, Ishtika Sveda, Nadi Sveda, Bashpa Sveda, Kshira bashpa Sveda, Avagaha Sveda, Parisheka Sveda, Pizichil, Dhanyamla Dhara, Kashaya Dhara, Kshira Dhara and Upanaha Sveda.
12. Avasthanusari Svedana in various disorders
13. Samyak, Ayoga and Atiyoga Lakshana, Sveda Vyapat and their management
14. Diet and regimens during and after Svedana
15. Karmukata of Svedana
16. Current sudation modalities like Sauna bath, Steam Bath, Infrared, etc.
17. Svedana with Kati Basti, Janu Basti and Griva Basti
18. Study of Snehana and Svedana related portions in classics with commentaries

## **2. Vamana and Virechana Karma Vamana**

### **Karma**

1. Etymology, definition and general considerations of vamana
2. Properties of Vamaka and Vamanopaga drugs
3. Knowledge and utility of important Vamaka drugs and their preparations (Vamana Yoga)
4. Avasthanusara Vamana and its utility.
5. Indications of Vamana
6. Contraindications of Vamana with reasons
7. Pachana prior to Snehana
8. Detailed knowledge and method of preparation of patient with Snehana
9. Abhyanga and Svedana as Purvakarma of Vamana
10. Diet and management of gap day
11. Need of increasing of Kapha for proper Vamana, Kapha increasing diet
12. Management of Patients on the morning of Vamana
13. Administration of food articles prior to Vamana
14. Drug, time, Anupana, Sahapana, dose and method of administration of Vamana and Vamanopaga preparations
15. Method of Vamana Karma, waiting period for automatic Vamana Vega and manipulation in its absence
16. Observations prior to beginning of Vamana such as sweat on forehead, horripilation, fullness of stomach and nausea
17. Observation and assistance of the patient during Vamana
18. Vega and Upavega of Vamana and its counting, observations and preservation of

vomit matter and its weighing

19. Samyak, Ayoga and Atiyoga of Vamana
20. Laingiki, Vaigiki, Manaki and Antiki Shuddhi,
21. Hina, Madhya and Pravara Shddhi and Samsajana Krama accordingly
22. Detail knowledge of methods of Samsarjana Krama and its importance
23. Kavala and Dhumapana after vamana
24. Management of Ayoga, Atiyog and Vyapat of Vamana with Ayurveda and modern drugs
25. Parihara Vishaya and Kala for Vamana.
26. Vamana Karmukata with Pharmacodynamics of Vamana

### **Virechana Karma**

1. Etymology, definition and general considerations of Virechana
2. Importance of Vamana and Virechana as shodhana, Virechana better than Vamana
3. Necessity of Vamana prior to Virechana
4. Preparation of patients for Virechana after Vamana
5. Preparation of patients directly for Virechana
6. Properties of main Virechaka and Virechanopaga drugs, Classifications of Virechana drugs with definition, example and utility of each type
7. Indications of Vamana Karma
8. Contraindications of Virechana with reasons
9. Utility of Virechana for the specific conditions and stages of the disease
10. Internal Snehana for Virechana with diet
11. Management of 3 gap day with diet and importance of low Kapha for proper Virechana
12. Abhyanga and Svednana as Purvakarma of Virechana
13. Management of Patients on the morning of Virechana
14. Virechana should be performed in empty stomach
15. Drug, dose, time, Anupana, sahapana and method of administration of Virechana and Virechanopaga preparations
16. Method of performing of Virechana Karma
17. Observations during Virechana, Vega and Upavega of Virechana and its counting, observations and preservation of feces and its weighing
18. Samyak, Ayoga and Atiyoga of Virechana
19. Laingiki, Vaigiki, Manaki and Antiki Shuddhi of Virechana
20. Hina, Madhya and Pravara Shddhi and Samsajana Krama accordingly
21. Detail knowledge of methods of Samsarjana Krama and its importance, and Tarpana krama and its importance
22. Management of Ayoga, Atiyog and Vyapat of Virechana with Ayurveda and modern drugs
23. Parihara Vishaya and Kala for Virechana
24. Virechana a Karmukata with Pharmacodynamics of Virechana
25. Applied anatomy and physiology of Gastrointestinal system related with Vamana and Virechana
26. Study of Vamana and Virechana related portions in classics with commentaries
27. Recent advances of researches on the effect of Vamana and Virechana
28. Scope of research for Vamana and Virechana.
29. Role of Vamana and virechana in promotion of health prevention and treatment of diseases



### **3. Basti Karma and Nasya Karma**

#### **Basti Karma**

1. Etymology, definition and general considerations of Basti
  2. Importance of Basti in Kayachikitsa and other branches of Ayurveda
  3. Classifications of Basti
  4. Drugs useful in Basti
  5. Indications of Basti, its role at the various stages of diseases
  6. Contraindications of Basti with reasons
  7. Description of Basti yantras, Basti netra and Basti putaka and their Doshas. Modified Basti Yantra, their merits and demerits
8. Dose schedules of Niruha and Anuvasana basti

#### **Niruha basti**

Etymology, synonyms, definition and classifications and subclassifications of Niruha Basti and detailed knowledge of each type of Niruha Basti along with indications and contraindications and benefits

Contents of various types of Niruha Basti, their proportions, methods of mixing basti Dravya,

Relation of Virechana, Shodhana, Anuvasana Basti with Niruha Basti

Purvakarma for Niruha Basti; Pathya before, during and after Niruha Basti; all the aspects of administration of various Niruha Basti

Observations during and after Niruha Basti

Basti Pratyagamana,

Samyakyoga, Ayoga and Atiyoga Lakshana and Various Vyapat of Niruha Basti and their management according to Ayurved and Modern Systems of Medicines Management during and after Niruha Basti

Pariharya vishaya and pariharakala,

#### **Anuvasana basti**

Etymology, synonyms, definition and classifications of Anuvasana Basti and detailed knowledge of each type of Anuvasana Basti along with indications and contraindications and benefits

Various types of Ghrita and Taila useful in Anuvasana Basti; Anuvasana Basti with Vasa and Majja along with their merits and demerits

Relation of Virechana, Shodhana, Niruha Basti, Snehana with Anuvasana Basti

Purvakarma for Anuvasana Basti; Pathya before, during and after Anuvasana Basti; all the aspects of administration of Anuvasana Basti including Kala

Observations during and after Anuvasana Basti

Anuvasana Basti Pratyagamana,

Samyakyoga, Ayoga and Atiyoga Lakshana and Various Vyapat of Anuvasana Basti and their management.

Management during and after Anuvasana Basti

Pariharya vishaya, Pathya and pariharakala for Anuvasana

Various combined basti schedules such as Karma, Kala, yoga Basti etc.

Detailed knowledge of Matra Basti

Detailed Knowledge of different basti formulations like Piccha Basti, Kshira Basti,

Yapana Basti, Madhutailika Basti, Erandamuladi Niruha Basti, Panchaprasrutika Basti, Kshara Basti, Vaitarana Basti, Krimighna Basti, Lekhana Basti, Vrishya Basti, Manjishtadi Niruha Basti, Dashamula Basti, Ardhamatrika Basti, Sarva roghara Niruha Basti, Brimhana Basti, Vataghna Basti, Pittaghna Basti and Kaphaghna Basti etc, and their practical utility.

### **Uttara basti**

1. Definition and Classification of Uttara Basti, its Netra and Putaka. Dose of Uttara Basti Sneha and Kashaya Basti. Different Uttara Basti Kalpanas in various diseases.
2. Detailed knowledge of Purvakarma and Administration of Uttara Basti in male and female, precautions, aseptic measures, complications and their management Karmukata of Basti. Applied anatomy and physiology of colon, Pharmacodynamics of Basti.
3. Concept of 'Gut Brain' and its relevance to Basti Therapy.
4. Study of relevant portions of Basti in classics with commentaries.

### **Nasya Karma**

1. Etymology, synonyms, importance and definition of Nasya
2. Nasya drugs according to various Samhita

1. Classifications and sub-classifications of Nasya with detailed knowledge of each type
2. Indications and contraindications of each type of Nasya with reasons
3. Drugs useful for Nasya with Dose and methods of preparations and their doses
4. Nasya Kala and Pathya before, during and after Nasya; Duration of different Nasyas
5. Purvakarma of each type of Nasya
6. Detailed knowledge of administration of each type of Nasya with management during and after Nasya.
7. Detailed knowledge of common Nasya formulations such as Shadabindu Taila, Anu taila, Kshirabala Taila, Karpasastyadi Taila, Bramhi Ghrita.
8. Samyak yoga, Ayoga and Atiyoga of each type of Nasya, its Vyapat and their management
9. Pashchata Karma; Role of Dhumapana, Kavala after Nasya,
10. Diet and Pathya before, during and after Nasya Karma
11. Pariharya vishaya, Parihara Kala,
12. Nasya Karmukata, Applied anatomy and physiology related to Nasa hi Sirso Dvaram, blood and nerve supply to nose, Shringataka marma, olfactory nerve and centers, aroma therapy, trans nasal administration of drug, recent advances in nasal drug delivery
13. Study of relevant portion in classics with commentaries

### **4. Raktamokshana, Physiotherapy and Diseasewise Panchakarma**

#### **A. Raktamokshana**

1. Definition, importance, classifications and detailed knowledge of each type of Raktamokshana with their methods of performance
2. General principles, indications, contraindications of Raktamokshana
3. Detailed knowledge of Jalaukavacharana: Indications and contraindications of Jalaukavacharana, various types of Jalauka with their beneficial and harmful effects.
4. Purvakarma and method of Jalaukavacharana, observations and Pathya before, during and

- after Jalaukavacharana
5. Management during and after Jalaukavacharana
  6. Symptoms of Samyak, Ayoga and Atiyoga and Vyapat of of Raktamokshana and their management with Ayurveda and Modern medicines.
  7. Pariharya vishaya and Parihara kala
  8. Karmukata of different types of Raktamokshana

## **B. Clinical Physical Medicine**

1. Definitions and terminology
2. Biomechanics of human movements; Physiology of exercise
3. Treatment modalities used in Physical Medicine- general properties and detailed clinical use of each
  - a. Heat – general physiological properties and mode of action as a treatment agent, Forms of heat therapy – superficial and deep heating. General knowledge of Infrared, Paraffin Wax bath, short wave diathermy, electro magnetic therapy, ultra sound therapy, convection heating devices,
  - b. Cold as a therapeutic agent
  - c. Prescription of physical modalities and their applications in medicine.
4. Clinical use of massage, manipulation, stretching
5. Principles of occupational therapy, training in activities of daily living for rehabilitation, self-help devices (walking aids, wheelchairs, tricycles & modified vehicles), instrumental activities of daily living,
6. Physiotherapy exercises for Paralytical disorders, cervical spondylosis, frozen shoulder and slip disc.

## **C. Disease-wise Panchakarma**

Role of Panchakarma in Different Stages of the following Diseases:

Jvara, Raktapitta, Madhumeha, Kushtha, Shvitra, Unmada, Apasmara, Shotha, Plihodara, Yakridaluodara, jalodara,, Arsha, Grahani, Kasa,Tamaka Shwasa, Vatarakta, Vatavyadhi, Amlapitta, Parinama Shula, Ardhavabhedaka, Ananta Vata,, Amavata, Sheetapitta, Shleepada, Mutrakruchchra, Mutrashmari, Mutraghata, Hrudroga, Pinasa, Drushtimandya, Pandu, Kamala, Sthaulya, Krimi, Madatyaya, Moorchcha, Padadari, Mukhadushika, Khalitya, Palitya,

Use of Various panchakarma Procedures in the following disorders –

Migraine, Parkinson's Disease, trigeminal neuralgia, Bell's palsy, cerebral palsy, Muscular dystrophy, hemiplegia, paraplegia, Lumbar Disc disorders, Spondylolisthesis, Ankylosing spondylosis, Carpel Tunnel Syndrome, Calcaneal Spur, Plantar fasciitis, GB syndrome, Alzhiemer's disease, Irritable Bowel Syndrome, ulcerative colitis, psoriasis, hypothyroidism, hyperthyroidism, hypertension, allergic rhinitis, , Eczema, diabetes mellitus, Chronic obstructive pulmonary Disease, Insomnia, Rheumatoid Arthritis, Gout, Osteoarthritis,multiple sclerosis, SLE, male & female infertility, cirrhosis of liver, Jaundice, General Anxiety Disorders.

