

# CENTRAL COUNCIL OF INDIAN MEDICINE NEW DELHI

## SYLLABUS FOR POST – GRADUATE DIPLOMA COURSE

| NAME OF THE SPECIALITY             | PAGE No. |
|------------------------------------|----------|
| 1. Ayurvedic Pharmaceutics         | 2-8      |
| 2. Ayurvedic Dietetics             | 9-17     |
| 3. Balroga                         | 18-23    |
| 4. Manasik Swasthya Vigyan         | 24-27    |
| 5. Netra Roga Vigyan               | 28-33    |
| 6. Prasuti and Striroga            | 34-38    |
| 7. Dravyaguna                      | 39-43    |
| 8. Panchkarma                      | 44-50    |
| 9. Swasthavritta and Yoga          | 51-57    |
| 10. Rasayan and Vajikaran          | 58-64    |
| 11. Ayurvedic Cosmetology and Skin | 65-70    |
| 12. Kshar-Karma                    | 71-76    |
| 13. Rog Nidan Vidhi                | 77-81    |
| 14. Ayurvedic Sangyahan            | 82-85    |
| 15. Chhaya evam Vikiran Vigyan     | 86-89    |

**AYURVEDIC PHARMACEUTICS**  
**D. Rasa Shastra and Bhaishajya Kalpana**  
**First year**

Theory (Two papers) - Maximum Marks -100 (each)  
Practical (one) - Maximum Marks-100

**Paper – I**  
**Raw Materials Science**  
**Part-A**

1. Definition and categories of raw materials from plant, animal, metallic and mineral origin.
2. Plant concentrates, extracts and exudates, resins, excipients, sweetening agents, volatile oils, perfumes, flavours and colours.
3. Collection, shelf-life and storage of raw materials.
4. Study of plant material derived from prioritized medicinal plants.
5. Study of nomenclature, synonyms, description-macro and micro, identification, purity and strength, constituents, assay, properties – pharmacological activity, important formulations, therapeutic uses and dose of raw materials as given in the pharmacopoeia as applicable for following plants.

- |                       |                    |                  |
|-----------------------|--------------------|------------------|
| 1) Ahiphena           | 2) Agnimantha      | 3) Agar          |
| 4) Amalaki            | 5) Apamarga        | 6) Aragvadha     |
| 7) Ardraka-Shunthi    | 8) Arjuna          | 9) Arka          |
| 10) Ashvagandha       | 11) Ashvagola      | 12) Ashoka       |
| 13) Ativisha          | 14) Bakuchi        | 15) Baladvayam.  |
| 16) Bharangi          | 17) Bhallataka     | 18) Bibhitaka    |
| 19) Bijaka/Vijayasara | 20) Bilva          | 21) Brahmi       |
| 22) Bringaraj         | 23) Brihati        | 24) Chandandvaya |
| 25) Chitraka          | 26) Dadima         | 27) Danti        |
| 28) Daruharidra       | 29) Dhanyak        | 30) Dhatki       |
| 31) Draksha           | 32) Durva          | 33) Ela          |
| 34) Eranda            | 35) Gambhari       | 36) Gokshura     |
| 37) Guduchi           | 38) Guggulu        | 39) Haridra      |
| 40) Haritaki          | 41) Hingu          | 42) Jambu        |
| 43) Jatamamsi         | 44) Jatiphal       | 45) Jeerakdvaya  |
| 46) Jyotishmati       | 47) Kalmegh        | 48) Kampillak    |
| 49) Kanchar           | 50) Kantakari      | 51) Kapikacchu   |
| 52) Karkatashringi    | 53) Karpur         | 54) Katuki       |
| 55) Khadira           | 56) Kiratatikta    | 57) Kumari       |
| 58) Kupilu            | 59) Kumkum/Keshara | 60) Kushmanda    |

|                 |                  |                         |
|-----------------|------------------|-------------------------|
| 61) Lavang      | 62) Kutaja       | 63) Lodhra              |
| 64) Madanaphal  | 65) Manjishtha   | 66) Marich              |
| 67) Markandika  | 68) Mushali      | 69) Musta               |
| 70) Nagakeshar  | 71) Nimba        | 72) Nirgundi            |
| 73) Palasha     | 74) Palandu      | 75) Pashanabheda        |
| 76) Patala      | 77) Patola       | 78) Pippali-Pippalimula |
| 79) Punarnava   | 80) Rasna        | 81) Rasona              |
| 82) Saireyaka   | 83) Shallaki     | 84) Saptaparna          |
| 85) Sarpagandha | 86) Sariva       | 87) Shalparni           |
| 88) Shalmali    | 89) Shankhpushpi | 90) Shatavari           |
| 91) Shatapushpa | 92) Shigru       | 93) Shirish             |
| 94) Shyonaka    | 95) Talisa patra | 96) Tila                |
| 97) Trivrit     | 98) Tulsi        | 99) Tvak                |
| 100) Ushira     | 101) Vacha       | 102) Varun              |
| 103) Vasa       | 104) Vata        | 105) Vatsanabha         |
| 106) Vidari     | 107) Vidanga     | 108) Yashtimadhu        |
| 109) Yavani     | 110) Devadaru    |                         |

#### **Part-B**

1. Short introduction to minerology - including the process of mineral origin and formation, classification of minerals, their geographical distribution, as well as their utilization. Physical, chemical and minerological properties, identification, classification, categorization, pharmacological properties and uses of minerals.
2. Brief introduction to metallurgy, including the physical and chemical behavior of metallic elements, extractive metallurgy, properties of metals, important common alloy systems, general principles of metal working process, various heat treatments and chemical properties of metals.
3. Definition, classification, scientific and classical nomenclature, synonyms, characteristic features, physico-chemical properties of Rasa, Maharasa, Uparasa, Sadharanrasa, Ratna-Uparatna, Vishopavisha, Dhatu and Upadhatu (Metals and mineral containing drugs) along with their properties, pharmacological activity, important formulations, therapeutic uses and dose.
4. Brief introduction to animal products used in therapeutics, their physical and chemical properties, pharmacological activity, therapeutic uses and dose.
5. Storage and shelf life of metal, mineral and animal origin raw materials.

## Paper – II

### Drug Standardization and Regulations

#### Part-A

1. Methods of drug standardization in relation to drugs prepared from plant, mineral, metal and animal products.
2. Concept of evaluation of Plant drugs as per WHO guidelines.
3. Review of general methods of evaluation of drugs and foods.
4. Morphological, Microscopical, Cytomorphological examination of finished products.
5. Determination of physical and chemical constituents and its extractive values.
6. Techniques of separation, identification, estimation and characterization of various chemical components of drug.
7. Determination of Physical, Chemical and Biological adulterants and contaminants.

#### Part-B

##### Indian Statutory Regulations applicable to Ayurvedic products

1. Good Manufacturing Practices related to Ayurvedic Drug Industry.
2. Laws Governing Pharmacy
  - a) Relevant regulatory provisions of Ayurvedic drugs in Drug and Cosmetic Act 1940 and Rules 1945
  - b) Laws pertaining to Drugs and Magic remedies (objectionable advertisement) Act-1954.
  - c) Prevention of Food Adulteration (PFA) Act.
  - d) Laws pertaining to Narcotics
  - e) Factory and Pharmacy Acts
  - f) Consumer Protection Act -1986
  - g) Standards of Weights and Measures (Enforcement) Act 1985
3. Regulatory Affairs related to International Trade and Practices of Ayurvedic Drugs.
4. Introduction to Ayurvedic Pharmacopeia of India, Ayurvedic Formulary of India.
5. Introduction to Indian Pharmacopeia, British and United States Pharmacopeia, Pharmacopeial Codex.
6. Introduction to Traditional Knowledge Digital Library.

##### Patent and product registration

1. Intellectual property, importance and types of intellectual property.
2. Paris convention, World Trade Organization and GATT.
3. The Indian Patents Act 1970 and Indian Patents (Amendments) Act 2005.
4. Concepts of patentability – issue of novelty, inventive steps and industrial application with special reference of differences in Indian, United States and European patents.
5. Knowledge of US FDA and statutory regulations as applicable to plant drugs in U.S.
6. Introduction to European Union. Traditional Health Medicinal Product Directive (THMPD) and other directives and regulations related to plant drugs, Nutraceuticals applicable in European Union.

7. Introduction to product registrations in many countries such as - Natural Health Products of Canada, Traditional Medicine Registration of Malaysia, EMEA's Human Herbal Medicines, etc.
8. New Drug Application (NDA) and Abbreviated New Drug Application (ANDA).

### **Second Year**

Theory (Two papers) - Maximum Marks -100(each)

Practical (one) – Maximum Marks -100

### **Paper - I**

### **Pharmaceutical Technology of Kashtaushadhi**

#### **Part-A**

1. Introduction to Pharmaceutical technology, standard operating and manufacturing procedures.
2. Dosage forms of drugs- liquids, semi-solids and solids.
3. Size reduction- disintegrator, hammer mill, ball mill, fluid energy edge runner, roller mill.
4. Size separation, mixing and homogenization.
5. Filtration- various devices and methods.
6. Extraction- percolation and maceration, infusion, decoction, soxhlet extraction.
7. Distillation- Double and triple distillation, fractional distillation (rectification), molecular distillation, vacuum distillation.
8. Heat processes- fusion, calcination, ignition, exsiccation, sublimation.
9. Drying process– knowledge of current and advanced technologies of drying.
10. Freeze drying (Lipholization).
11. Tablet making- types of tablets, binders, adhesives, lubricants, colorants etc., compression- single, multiple station machines, coating, polishing.
12. Capsules– types of capsules, hard and soft gelatin, granulation, capsule filling technology.
13. Introduction to Stability studies and use of preservatives, anti-oxidants and other material with reference to shelf life of drug material.
14. Syrups, elixirs, ointments, emulsion, pastes, dental and cosmetic preparations.
15. Packaging technology, strip packing, blister packing, aerosols, labeling.
16. Marketing of Pharmaceutical products

#### **Part-B**

1. Introduction to technical terminologies used in Bhaishajya Kalpana.
2. Definition, composition, method of preparation of following dosage forms:
  - a) Liquid dosage forms - Svarasa, Kvatha, Hima, Phanta, Taila, Asava-Arista and Basti kalpa, etc.
  - b) Semi Solid Dosage forms – Avaleha, Ghrita, Kalka, etc.
  - c) Solid dosage forms – Churna, Gutika, Vati, Varti, Guggulu, Kshara, Lavana, Tablet, Capsules, etc.
  - d) Pathya / Aahara kalpana- Krita- akrita and Aushadh Siddha.

- e) Topical dosage forms – Malahara, Upanaha, Lepa, Udvardana, Karnapurana, Anjan, Ascchyotanadi Netra Kalpa, Nasya Kalpa and Mukha Kalpa.
- f) Preparation of Ksharasutra.
- 3. Study of organoleptic and physico-chemical characteristics, determination of heavy metal content and microbial load in different formulations.
- 4. Study of therapeutic uses, dosage and method of applications of different dosage forms described in Bhaishajya Kalpana.
- 5. Introduction to methods of packing and storage of drugs.
- 6. Introduction to new dosage forms –
  - a) Neutraceuticals and food supplements.
  - b) Concept of Organic food and Genetically Modified Food
  - c) Cosmeceuticals / Cosmetics – Study of ingredients used in various cosmetic products such as creams, powders, lotions, hair oils, toiletries, etc.
  - d) Introduction to raw materials of plant origin like fixed oils, waxes, gums, hydrophilic colloids, colours, perfumes, protective agents, bleaching agents, preservatives, antioxidants and other ancillary agents.
  - e) Plant Products – Evaluation of plant products using physico-chemical studies in whole form and identification of chemical components.

**Paper – II**  
**Pharmaceutical Technology of Rasaushadhi**

**Part-A**

1. Introduction to technical terminologies used in Rasashastra
2. Knowledge and application of yantra, puta, musha, chullika, koshthi etc. used in preparation of Rasaushadhis.
3. Introduction to current technology and equipments such as heating appliances like furnaces, boilers, drying chambers, heating mantles, hot plates, gas stoves, mixers, grinders, edge and end runners, mills, shifters, sieves used in pharmaceutical processing, manufacture and quality control of Rasaushadhi.
4. Concept of pharmaceutical engineering and instrumentation technology.

**Part-B**

1. Knowledge and application of processing techniques in Rasashastra.
  - a) Shodhana of raw materials like Rasa, Maharasa, Uparasa, Sadharanarasa, Ratna-Uparatna, Vishopavisha, Dhathu and Upadhatu. (Metals and mineral containing drugs).
  - b) Marana, Satvapatana, Amritikarana, Lohitikarana, Druti Nirmana of Rasa, Maharasa, Uparasa, Sadharanarasa, Ratna-Uparatna, Vishopavisha, Dhatu and Upadhatu.
2. Definition, composition, method of preparation of following dosage forms:
  - a) Pishti
  - b) Khalvi Rasa
  - c) Parpati Rasa
  - d) Kupipakva Rasa
  - e) Pottali Rasa

3. Study of organoleptic and physico-chemical characteristics
4. Determination of microbial load and heavy metal content (wherever relevant) in different formulations.
5. Study of therapeutic uses, dosage and method of applications of different dosage forms described in Rasashastra.
6. Introduction to methods of packing and storage of Rasaushadhi.

## PRACTICALS

### Contents of Practical

1. Preparation of minimum two formulation of each class (Total 50).
2. Work experience in every pharmaceutical process.
3. Visit to two GMP certified pharmacies.

### Pattern of Practical Examination

|                                   |                  |
|-----------------------------------|------------------|
| 1. Practical Records              | 10 marks         |
| 2. Practical (Rasa Shastra)       | 20 marks         |
| 3. Practical (Bhaishajya Kalpana) | 20 marks         |
| 4. Project Work                   | 20 marks         |
| 5. Viva - voce                    | 30 marks         |
| <b>Total</b>                      | <b>100 marks</b> |

### Text Books for Reference

- |                                 |   |                          |
|---------------------------------|---|--------------------------|
| 1. Aushadhi Guna Dharma Shastra | : | Vd.Gune                  |
| 2. Aushadhikaran                | : | Vd.Dhamankar             |
| 3. Ayurved Prakash              | : | Madhav Upadhyaya         |
| 4. Ayurvediya Rasashastra       | : | Dr.C.B.Jha               |
| 5. Bhaishajya Kalpana Vigyan    | : | Dr S K Mishra            |
| 6. Bhaishajya Kalpana Vigyan    | : | Dr.K.R.C. Reddy          |
| 7. Bhaishajya Kalpana Vigyan    | : | Dr.S G Hiremath          |
| 8. Bharat Bhaishajya Ratnakara  |   |                          |
| 9. Bhavaprakasha Nighantu       | : | Bhavamishra              |
| 10. Bhaishajya Ratnavali        | : | Govind Das               |
| 11. Kashyapa Samhita            | : | Kashyapa                 |
| 12. Paribhasha Khanda           | : | Yadavji Trikamji Acharya |
| 13. Ras – Tarangini             | : | Sadanand Sharma          |
| 14. Rasaratnasamucchya          | : | Rasa Vagbhata            |
| 15. Rasashastra                 | : | Dr.V.A.Dole (English)    |
| 16. Rasayogasagara              | : | Hariprapanna Sharma      |
| 17. Rasendrachintamani          | : | Dundukanath              |
| 18. Sharangadhar Samhita        |   |                          |

19. Relevant portions from Charak Samhita, Sushrut Samhita, Ashtanga Hridaya, Ashtanga Samgraha.
20. Bentley's T.B. of Pharmaceutics : Rawllins
21. Compendium of Medicinal Plants : Orient Longmann
22. Drugs & Cosmetic Act, 1940 and Rules 1945
23. Industrial Pharmacy : Lachmann
24. Indian Pharmacopoeia : Govt. of India
25. Pharmacognosy of Ayurvedic Drugs : Govt. of Kerala
26. Pharmacognosy of Ayurvedic Drugs : CCRAS
27. Pharmacopoeial standards of Ayurvedic Formulations – CCRAS, 1978, 1984.
28. Quality Standards of Indian Medicinal Plants: ICMR
29. Textbook of Clinical Practice of Pharmacy : Remington
30. Textbook of Mineralogy : Dana
31. Textbook of Pharmacognosy : Kokate
32. Textbook of Pharmacognosy : Trease & Evans
33. The Ayurvedic Formulary of India : AYUSH
34. The Ayurvedic Pharmacopoeia of India : AYUSH
35. Vogel's quantitative in Organic analysis : G.Svehla
36. Vogel's Text Book for Quantitative Chemical Analysis : G.H.Jeffery, J.Bassett, O.Mendham. R.C.Denny



**AYURVEDIC DIETETICS**  
**[Diploma in Nutrition - Ay.] (D.N. (Ay.))**

**First Year**

Theory (Two papers) - Maximum Marks -100(each)  
Practical (one) - Maximum Marks-100

**Paper - I**  
**Maulika Siddhanta**  
**Part-A**

**Ahara (आहार)**

1. Its व्युत्पत्ति (etymology), निरूक्ति एवम् परिभाषा।
2. History of the evolution of the Ahara Shastra from primitive times to today's era – From the use of raw food in the primitive times to the gradual change in the dietary habits according to time and invention of various Ahara Kalpana. The relevant references of Ahara Dravya and its kalpana in the ancient texts like Veda, Upanishada, etc.
3. Vaidyakiya Subhashita Sahityam (वैद्यकीय सुभाषित साहित्य)– Chapters 13, 14 and 36
4. Understanding the Ahara and Sharir relationship based on-
  - a) Loka-Purusha Samya Siddhanta (लोकपुरुषसाम्यसिद्धान्त)
  - b) Samanya Vishesha Siddhanta (सामान्यविशेषसिद्धान्त)with examples.
  - c) Panchamahabhuta Siddhanta (पंचमहाभूतसिद्धान्त)
  - d) Tridosha Siddhanta (त्रिदोष सिद्धान्त)
5. Classification of Ahara based on its Prabhava:
  - a) Sukhakar (सुखकर) – Dukhakar (दुःखकर) - Psychological concept
  - b) Satmya (सात्म्य) – Asatmya (असात्म्य) - Physiological concept
  - c) Pathya (पथ्य) – Apathya (अपथ्य) - Physio-pathological concept
  - d) Hitkara (हितकर) – Ahitkara (अहितकर) - (Ekantika Hitkar, Ekantika Ahitkar)
6. Role of Avastha-
7. Classification of Ahara according to its mode of intake- Bhakshya (भक्ष्य), Bhojya (भोज्य), Lehya (लेह्य), Chooshya (चूष्य), etc.
8. Classification of Ahara based on Source (Yoni) – Sthavara, Jangama, Khanija.
9. Classification of Ahara as Samisha (सामिष) and Niramisha (निरामिष) and their individual properties and effect on the body.
10. Understanding of this classification in context with social and health status, opinion of contemporary medicine for this classification.

## Part-B

### Ahara and Physiological Study (आहार और शारीर क्रिया)

1. Detailed understanding of Ahara Dravya on the basis of Shadrasa (6 tastes)
2. Effect of Desh on Ahara
3. Effect of Kaal on Ahara
4. Effect of Ahara on self (आहार विज्ञानम्)
5. Ahara and Sharir Sambandha: (आहार-शरीर संबन्ध)
  - a) The concept of Panchabhautikatva of Ahara as well as Sharir
  - b) Dosha, Dhatu, Mala and Oja vinyana. (Prakrita Sthana, Guna, Karma, Prakara, Vriddhi, Kshaya, Pradoshaja Vikar, Sama, Nirama and Dhatu Sara Lakshani)
  - c) Effect of Ahara Dravya on Tridosha and Triguna
  - d) Interrelation between Ahara and Agni.
  - e) Agni vinyan (अग्नि विज्ञान) – Types of Agni, Prakrit Agni (प्राकृत अग्नि) and Vikrit Agni (विकृत अग्नि).
  - f) Inter relation between Ahara and Srotas.
  - g) Srotasvinyan (स्रोतस् विज्ञान) – Description of the Srotas according to Charak and Sushrut Samhita and effect of Ahara Dravya on these Srotas.
6. Prakriti Vinyan (प्रकृति विज्ञान): Understanding of Prakritiyadi Dasha Pariksha Vidhi.
  - a) Body constitution, mental constitution, the dominant Guna and the status of Agni in different Prakriti and their importance in the selection of appropriate Ahara.
  - b) Understanding of the Manasik Prakriti of a person on the basis of the diet preferred by the person.
7. Pachanakriya and Dhatu Poshana:
  - a) Pachana Samsthana - A brief review of the organs which take part in the process of Ahara Pachana- Amashaya, Grahani, Pakwashaya, Yakrita, Agnyashaya, etc.
  - b) Trividha Awasthapaka (त्रिविध अवस्थापाक)
  - c) Aharaparinamakara Bhava (आहारपरिणामकरभाव)
  - d) Dhatu Poshankrama (धातु पोषणक्रम)- Trividha Nyaya (त्रिविधन्याय) - Kshiradadhinyaya (क्षीरदधिन्याय), Kedarikulyanyaya (केदारीकुल्यान्याय), Khalekapotanyaya (खलेकपोतन्याय)
  - e) Effect of Dravya, Matra and Kaal on Annapachana Kriya (अन्नपाचनक्रिया)
  - f) Role of Tridosha along with their subtypes in the process of Ahara Parinama or Pachana.
  - g) Sarakitta Vibhajana (सारकित्ट विभजन)
  - h) Samyaka Pachana Lakshani (सम्यक पचन लक्षणानि)
  - i) Dhatu Utpatti Krama (धातु उत्पत्ति क्रम)
  - j) Saarata Nirmana (सारता निर्माण)
  - k) Oja Utpatti (ओजोत्पत्ति)

**Paper - II**  
**Ahara- Dravya – Guna Kalpana Evam Sanskara Gyana**  
(आहार द्रव्यगुण कल्पना एवं संस्कार ज्ञान)

**Part-A**

1. Classification of the Ahara Dravya on the basis of Gurvadi (गुर्वादि) and Paradi (परादिगुण) Guna with Rasa panchaka and their utility particularly of Paradi Guna in the preparation and Gurvadi Guna in the selection and administration of Ahara Dravya.
2. Prakritisamasamaveta Dravya (प्रकृतिसमसमवेतद्रव्य), Vikritivishamasamaveta Dravya (विकृतिविषमसमवेतद्रव्य)
3. Samanapratyarabdha dravya (समानप्रत्यारब्धद्रव्य), Vichitrapratyarabdha Dravya (विचित्रप्रत्यारब्धद्रव्य)
4. Study of single dravya
5. Ahara Dravya– 14 Ahara Varga (आहार वर्ग)–
  - a) शूकधान्यवर्ग
  - b) शिंबीधान्यवर्ग
  - c) शाकवर्ग/पत्रशाक
  - d) हरितवर्ग
  - e) लवणवर्ग
  - f) गोरसवर्ग
  - g) मांसवर्ग
  - h) तैलवर्ग
  - i) फलवर्ग
  - j) इक्षुवर्ग
  - k) मधुवर्ग
  - l) मद्यवर्ग
  - m) जलवर्ग
  - n) आहार योगि वर्ग
6. All the classifications of Ahariya and Paniya Dravya in Brihatrayi (Varga Gyana)

**Part-B**

**Ahara Kalpana (आहार कल्पना)**

1. Introduction and Importance of Ahara kalpana.
2. Use of Paradi-Guna in Ahara kalpana, Methods of processing of various Ahara Dravya including water (both in the ancient times and present era) with respect to following Processes with examples-
3. Types of Samsakara (Processes)-
  - a) Roasting - भूनना / भर्जित
  - b) Boiling - उबालना
  - c) Baking
  - d) Fermenting - सन्धान
  - e) Mixing - मिश्रण
  - f) Wet Mixing - घोल
  - g) Dry Mixing - शुष्क मिश्रण
  - h) Churning - मंथन
  - i) Preserving / Pickling - संरक्षण उपाय/अचार

|    |                        |   |                       |
|----|------------------------|---|-----------------------|
| j) | Smoking                | - | धूपन                  |
| k) | Frying                 | - | तलना                  |
| l) | Rubbing                | - | घिसना / पीसना / मसलना |
| m) | Heating                | - | गर्म करना             |
| n) | Soaking                | - | भिगोना                |
| o) | Pounding / Crushing    | - | कूटना                 |
| p) | Garnishing             | - | प्रक्षेप              |
| q) | Temperature regulation | - | ताप नियन्त्रण         |
| r) | Washing                | - | धोना                  |
| s) | Doughing               | - | पीडन एवं पिण्डीकरण    |
| t) | Chopping               | - | काटना                 |
| u) | Sprouting              | - | विरूढ                 |

4. Understanding the action of samskara individually and also in combination.
5. Indications, contraindications and role of each samskara during preparation of recipe.
6. Alterations in Guna of Krita and Akrita Kalpana of Dravya with examples as Kritanna Varga – Manda, Peya, Vilepi, Yusha (Krita and Akrita), Yavagu, Odana, Siddhodana, Mantha, Khada, Kambalika, Kulmasha, Ladduka, Apupa, Modaka, Veshavara, Parpat, Dugdha vikriti, Payasam, Lapsika, Takra kalpana, Vatakam, Shadava, Saktu, Ghratapura, Phenika, Samyava (गुड़िया), Shulyadi mansa prakara alongwith other Sneha pravicharna, their use and effect on body.
7. Samisha and Niramisha Kalpana and their comparative effect on the body.
8. Guna of the Ahara Dravya traditionally used in day to day diet e.g. Roti of the various cereals available (Wheat, Maida, etc.), Dals, Vegetable preparations, Chutneys, Pickles, Papad, Salad, etc.
9. Food value of Virudha Ahara prevailing in the society traditionally.
10. Ahara Dravya and Kalpana commonly used in the present era. e.g. bread, pizzas, burgers, chats, cold drinks, coffee, tea, canned food, etc. and their effect on the body.
11. The Bhakshya, Lehya, Chushya and other Kalpana with their criteria of selection and effect on the body.
12. Ancient system and Contemporary Sanskara and effect of Ancient and Modern tools used for various Ahara Kalpana on Ahara Dravya e.g. kandookadi (तन्दूर), cookers, mixers, gas stoves, ovens, microwave, choolah, etc.
13. Preservation techniques of various Krita as well as Akrita Ahara Dravya (both ancient and modern kriya), their effect on Guna and Karma of Ahara Dravya.
14. Samyogkarna, Sayogvidhi Sayogakaal of Ahara Yogi Dravya.
15. The Dravya used as flavouring agents in the Ahara recipes. eg. Haridra, Sarshapa, Methika, Jeeraka, Hingu, Maricha, etc. Changes in the Guna of the Kalpana by their addition and manner and time of addition during the preparation of the Kalpana (e.g. addition of Haridra during the time of boiling of the uncooked Dal or after it is properly cooked changes the properties of the Kalpana) and their effect on the body.

16. Paryushita Ahara (पर्युषित आहार) –Definition, Guna and its effects on the body. The specific time after which the particular Kalpana can be called as Paryushita e.g. Mamsa, Odana, Dugdha, etc. Kalpana have shorter time span but pickles, fried or dried foods have a longer time span.
17. Savishakta Lakshanani (सविषाक्त लक्षणानि) - Garavisha Lakshanani (गरविष लक्षणानि) – The factors like nature of dravya, their specific samyoga with other substances, their Kalpanas, specific Patra, Kaal and Agni Samskar which add to Vishaktata of Ahara Dravya.
18. Siddha Annpariksha (सिद्धान्तपरीक्षा) - (पक्व अपक्व अन्न परीक्षा) Ancient methodology of cooked food.
19. Viruddha Ahara- 18 types.
20. Modern food analysis methods- Adulteration, Pesticides, Insecticide, Fertilizers and Soil therapy, understanding of organic and inorganic food items.
21. PFA (Prevention of Food Adulteration Act).

## Second Year

Theory (Two papers) - Maximum Marks -100 (each)  
Practical (one) – Maximum Marks-100

### Paper – I

#### Health Promotive Dietetics

(स्वास्थ्यवर्धक आहार विहार)

#### Part-A

Swasthya (स्वास्थ्य)

1. Swastha – Paribhasha and Vyutpatti.
2. Trayopasthambha (त्रयोपस्तम्भ) – Ahara, Nidra and Brahmacharya.
3. The preventive and promotive aspect of Ahara. The same Ahara which is responsible for the Sharir Poshana, if used against the rules and regulations of Ahara Vidhi is the cause of Vyadhi.
4. Ahara and its selection according to the norms of Dinacharya, Ritucharya, Desh, Prakriti, Kaal, Vaya, Agni, etc.
5. Ahara Vidhivisheshayatanani (आहार विधिविशेषायतनानि), Aharamana Vikalpa Vishesha (Kashyapa- Khilasthana), Ahara vidhi vidhana (च.वि.1), Dwadasha Ashana Pravicharana.
6. Concept of Trividha Kukshi. (च.वि.2).
7. Concepts of Samashana, Adhyashana, Atyashana, Anashana, Vishamashana. Samkirna Bhojana and their effect on health.
8. Method of serving Ahara Dravya– Ancient and Modern methodology .

9. Ahara Vidhi (आहार विधि )- Bhojana Vidhi (प्रधानकर्म), Bhojana Purva (पूर्वकर्म) and Paschata Karma(पश्चातकर्म) e.g. use of Lavana and Ardraka before meal, walking of a hundred steps after meals (शतपदचक्रमणं), sleeping on the left side (वामपार्श्व शयन) etc. after meals.
10. Tambula sevana and its utility and unhealthy aspect.
11. Changes in the Bhojana Vidhi in present era and its effects on the body.
12. Effect of disturbed meal and sleeping timings (working in shifts) on health and its dietary management.
13. Sahapana - Anupana (Use of liquids in the diet - analysis based on their quantity, quality and mode of administration).
14. The various types of vessels or utensils used for cooking, storing, serving and eating and their effects on the Ahara components - (ancient as well as modern aspect).

### **Part-B**

#### **Pathya**

1. The definition of Pathya, Apathya, Upashaya and Anupashaya
2. Pathyapathya according to Prakriti, Desha, Kaal and Agni.
3. Ekantatah Ahita and Hita Ahara
4. Abhyasa Yogya Ahara Dravyaani, Abhyasa Ayogya Ahara Dravyani.
5. Concept of Satmya and Asatmya. Methodology of leaving Asatmya Ahara and adapting Satmya Ahara in one fourth parts of the total Ahara quantity. (पादांश परित्यागतः आहार त्याग विधि)
6. Study of Desh Satmya, Deha Satmya.
7. As per Ayurveda and Modern dietetics - signs and symptoms of optimum, under and over nutrition.
8. Balanced diet, food counseling and budgeting and meal planning.

#### **Rasayan and Vajikaran (रसायन-वाजीकरण)**

1. Nitya Hita Rasayan Ahara Dravya
2. Nitya Ahita Ahara Dravya
3. Importance of Ahara in Apunarbhava Chikitsa
4. Ahara Dravya and their Kalpana which aid in Vajikaran e.g. Dugdha, Masha, Modaka, Rasala, etc.

#### **Modern approach**

Concepts in Modern dietetics-

1. Classification of dietary products as carbohydrates, proteins, etc.
2. Daily dietary chart.
3. Rules and regulations followed during eating.

4. Nutrition Education
  - a) Nutrition and Health Status of Community
  - b) Learning and working with Community
  - c) Factors influencing Community Nutrition
  - d) Themes and messages in Nutrition Education
  - e) Method of communication in Nutrition Education
5. Nutrition Programme -  
Past and Present Programme - ICDS (Integrated Child Development Services) etc.
6. Nutrition Education Programme - Planning, Implementation, Evaluation etc.

**Paper - II**  
**Therapeutic Dietetics**  
(रोगानुसार आहार)

**Part-A**

**Ahara as a cause of disease**

1. Ahara Dravya responsible for Agni dushti, Dosha dushti, Mano dushti, Indriya dushti, Dushya Daurbalyakar, Khavaigunya, Srotodushti, Amotpadaka and Ama Pradoshaja Vikar and Dhatu Pradoshaja Vikar
2. Ahara Kaal Diseases – Akaal Bhojana –Atitkaal Bhojana
3. Avidhi Bhojana – Disease due to not following the code and conduct of food like Dwadasha Anna Pravicharana
4. Manoabhighatkara Bhava and their effect on food intake, digestion and diseases
5. Nutrition related disorders- Santarpanajanya and Aptarpanajanya Diseases
6. Food borne diseases- Diseases due to sankramita, vishakta and paryushita ahara
7. Food, facts and misconceptions.

**Part-B**

**Chikitsa**

1. Ahara as Maha Aushadha.
2. Shadavidhopakrama Anuroopa Ahara (षडविधोपक्रमानुरूप आहार)
3. Importance of Pathyapathya in the treatment of following diseases-
  - a) प्राणवह स्रोतस – प्रतिश्याय, श्वास, कास, हिक्का, राजयक्ष्मा।
  - b) अन्नवह स्रोतस – अम्लपित्त, अजीर्ण, ग्रहणी।
  - c) उदकवह स्रोतस – उदर रोग, शोथ।
  - d) रसवह स्रोतस – हृद्रोग, ज्वर, पांडु।
  - e) रक्तवह स्रोतस – अर्श, कामला, रक्तपित्त, विसर्प।
  - f) मांसवह स्रोतस – अर्बुद, ग्रन्थि, अपतर्पणोत्थ विकार – काश्यादि।
  - g) मेदोवह स्रोतस – संतर्पणोत्थ विकार – स्थौल्य, प्रमेह।
  - h) अस्थिवह स्रोतस – संधिगतवात, वातव्याधि।
  - i) मज्जावह स्रोतस – भ्रम।
  - j) शुक्रवह स्रोतस – क्लैब्य, वंध्यत्व, गुह्यरोग।

- k) पुरीषवह स्रोतस - अतिसार, प्रवाहिका।  
 l) मूत्रवह स्रोतस - अश्मरी, मूत्रकृच्छ्र।  
 m) स्वेदवह स्रोतस - कुष्ठ।  
 n) मनोवह स्रोतस - उन्माद, अपस्मार, अतत्वाभिनिवेश।  
 o) संज्ञावह स्रोतस - सन्यास, मूर्च्छा, मदात्यय ।
4. Guidelines for dietary causativity (आहार कारणता) and dietary treatment (आहार चिकित्सा) of contemporary prevalent diseases - e.g. Hypertension, Angina, Diabetes Mellitus, Obesity, HIV , Cancer, Liver disorders, Stress, Musculo-skeletal disorders, Arthritis, Polio, Auto immune disorders, etc.
  5. Awastha Sapeksha Pathyapathya, importance of Ahara before, during and after Shodhana Karma, and surgical procedures.
  6. Use of liquids in Chikitsa as Anupana, their mode of action and specificity in relation to particular diseases with medicines and conditions where liquids are prohibited in diet e.g. Udararoga, Shotha, etc.
  7. Dietary Regimen according to Medicine and Rasayan.
  8. Ajirna Nashaka Gana (Bhaishajya Ratnavali and Yogaratnakara)

## PRACTICALS

### Contents of Practical

1. Selection of Ahara according to the occupation.
2. Selection of Ahara in specific conditions:
  - a) According to age – Bala (Infants, Preschool, School, Adolescent) Madhya evam Vriddhavastha
  - b) Pregnancy (Antenatal and Postnatal)
3. Effect of the changes in the method of Ahara intake in present era.
4. Case studies - 25 cases (Planning Dietary regimen for contemporary diseases mentioned in syllabus)

### Pattern of practical

|   |                  |
|---|------------------|
| 1. Case Record in respect to pathyapathya in various conditions of the diseases | 10 Marks         |
| 2. Diet prescription for given cases  | 20 Marks         |
| 3. Spotting   | 20 Marks         |
| 4. Project Work   | 20 Marks         |
| 5. Viva-voce  | 30 Marks         |
| <b>Total</b>  | <b>100 Marks</b> |



### Text Books for Reference

1. Charak Samhita:
  - Sutrasthana – Chapter 1, 5, 6, 11, 13, 21, 22, 23, 25, 26, 27, 28 and 30;
  - Vimanasthana – Chapter 1, 2, 5 and 8;
  - Sharirsthana – Chapter 4 and 6;
  - Chikitsasthana – Chapter 1, 2, 15 and 23;
2. Sushrut Samhita:
  - Sutrasthana – Chapter 14, 15, 21, 40, 42, 45 and 46;
  - Sharirsthana – Chapter 1, 4 and 9;
  - Chikitsasthana – Chapter 26, 27 and 28;
  - Kalpasthana – Chapter 1;
  - Uttarasthana – Chapter 64;
3. Ashtanga Samgraha:
  - Sutrasthana – Chapter 3, 4, 6, 7, 8, 9 and 10
4. Ashtanga Hridaya:
  - Sutrasthana – Chapter 2, 3, 5, 6, 7, 8, 9, 10, 11, 13, 14 and 18;
  - Sharirsthana – Chapter 3;
  - Uttarasthana – Chapter 39 and 40;
5. Triskandha Kosh Especially : Tilak Ayurved Vidyapeeth, Pune, M.S.  
Hetu and Chikitsa Kosha
6. Bhava Prakash
7. Kshemakutuhel : Indradeva Tripathi.
8. Yogaratnakar : Sadashiva Shastri
9. Chakradatta : Indradeva Tripathi
10. Siddha Bhaishajya Manimala
11. Bhojana Kutuhel : Raghunath Bhatta
12. Kaideva Nighantu : Acharya Priyavrat Sharma
13. Aartha Shastra (Food poisoning)
14. Nighantu Ratnakara : Panshikar
15. Pathya Apathya Adhikar : Shivadas

## **BALROGA**

### **[Diploma in Paediatrics -Ay.] D.CH. (Ay.)**

#### **First Year**

Theory (Two papers) - Maximum Marks -100 (each)

Practical (one) – Maximum Marks-100

#### **Paper - I**

#### **Kaumarbhritya- Siddhanta (Fundamentals of Kaumarbhritya)**

##### **Part-A**

Kaumarbhritya Paribhasha and Parichaya (Definition and Introduction), Pratishedha evam Samudayika Bal-Swasthya (Preventive and Community Paediatrics) and Bal-Panchkarma (Paediatric Panchkarma)

1. Definitions, Vaya vibhajan (classification of age), Raksha Karma, Lehan, Vyadhikshamatva and Vardhanopaya (concept of Immunity, Immunization), National Programme on child health care, role of Ayurveda in National Programme, Bheshaja and Bheshaja-Matra (Brief about the drugs and drugs dosages in children)
2. Bal-Panchkarma (Paediatric Panchkarma): Fundamentals of Purvakarma, Pradhan Karma and Paschata Karma in relation to Children. Panchkarma management of various paediatric disorders like Mashtishkaghat (Cerebral Palsy), Pakshaghat (Hemiplegia) Mamsagatvata (Muscular Dystrophy), Ardita (Facial Palsy), Ekangaghata (Monoplegia), Adharangaghat (Diplegia), Apasmara (Epilepsy), and Mastishka-shotha and Mastishkavarana-shotha janya updrava (Encephalitis and Post Meningitis Sequele) Aamvata (Rheumatoid Arthritis), Shwasgata Roga (Respiratory Disorders) and Twak Vikar (Skin Disorders)

##### **Part-B**

Balroga Nidan (Paediatrics Diagnostic Techniques) and Chikitsalaya Prabandhan (Hospital Management)

1. Vedanadhyaya, clinical examination of children, Roga and Rogi Pariksha Vidhi, common laboratory investigations including biochemical, haematological, urine and stool tests, use of X-ray, USG.
2. Chikitsalaya Prabandhan (Hospital Management) – Hospital function, staff pattern and their utilization, work load, maintenance of medical records, equipments and standards, evaluation of clinical services specific to paediatric hospital services and financial management in Hospital.

**Paper - II**  
**Kaumarbhritya-Samanya Vivechana (General Paediatrics)**

**Part-A**

Vridhhi evam Vikasakram-Samanya evam Vikriti (Growth and Development along with related disorders), Poshana evam Kuposhanajanya Vyadhi (Nutrition and Nutritional disorders)

1. Important milestones in Infancy and early Childhood in the areas of gross motor, fine motor, language and personal-social development.
2. Anthropometry: Measurement and interpretation of weight, length/height, head circumference, mid arm circumference.
3. Dwarfism and other common genetic disorders related to growth and development.
4. Poshana evam Kuposhanajanya Vyadhi (Nutrition and Nutritional disorders)
5. Nutrition, nutritional requirements, nutritional disorders- Parigarbhika, Bal-Shosha, Karshya, Phakka.
6. Protein Energy Malnutrition: Definition, classification, clinical features of Marasmus and Kwashiorker. Etiology and management of PEM.
7. Vitamins-Diagnosis of vitamin deficiencies, hypervitaminosis and their management.

**Part-B**

Bal-Manovigyan evam Vyavaharajanya Vikar (Child psychology and behavioral disorders) and Atyayika Chikitsa (Emergency Management)

1. Mental development, ADHD, Pica, Nocturnal Enuresis, Learning Disability, Autism, etc.
2. Atyayika Chikitsa (Emergency Management), Visha-Chikitsa: Principles of Management of common poisons.
3. Anya Atyayika Avastha evam Chikitsa (Other emergency conditions and their management) - Status Asthmaticus, Status Epilepticus, Shock and Anaphylaxis in children, Fluid and Electrolyte management, Epistaxis, etc.
4. Different paediatric emergency procedures e.g. venepuncture, pleural tap, ascitic tap, blood transfusion and monitoring, lumbar puncture and blood sampling, etc.

## **Second Year**

Theory (Two papers) - Maximum Marks -100 (each)  
Practical (one) – Maximum Marks-100

### **Paper - I**

#### **Navjata Shishu Paricharya (Neonatal Care)**

##### **Part-A**

#### **Garbha Vigyaniya (Embryology) and Navjata Shishu Paricharya (Neonatal Care):**

1. Garbha Vriddhi evam Vikasa (fetal growth and development), Garbha Poshana (fetal circulation, changes in fetal circulation after birth). Garbhopaghatakar Bhava (factors affecting fetal growth and development), Congenital Anomalies, Beejabhagavayava Vikriti (Genetic disorders)
2. Navjata Shishu Paricharya (Neonatal Care)
3. Sadyojat Shishu Paricharya: Definition – Live birth, neonate, neonatal period, classification according to weight and gestation, mortality rate, delivery room management, care of newborn, normal variations and clinical signs in the neonate, temperature regulation and transport of sick neonates.
4. Navjat Shishu Ahara (Neonatal feeding): Principles of feeding, Stanya (Breast milk) and their properties, Stanya Pariksha (examination of milk), Breast feeding, Problems in breast feeding.

##### **Part-B**

#### **Navjata Shishu Vyadhi (Neonatal Disorders) and Navjata Shishu Kaksha Prabandhan (Nursery Management)**

1. Pranapratyagaman (Neonatal resuscitation), Knowledge of traumatic disorders including perinatal injuries, Ulvaka (Aspiration pneumonia), Navjat Shvasavarodha (Asphyxia neonatorum): Clinical features, principles of management and prevention of Birth Asphyxia, Kamala (Neonatal Jaundice); Neonatal infections- Superficial infections, Sepsis, Hypoglycemia, Hypocalcaemia, Anemia, Necrotizing Enterocolitis, Akshepaka (Seizures), Raktavaishamyata (Rh and ABO Incompatibility), Sadhyojata Atyayaika Chikitsa (Management of Neonatal emergencies)- Diagnosis of life threatening conditions in neonates, management of common minor paediatric surgical disorders, hemorrhagic diseases of newborn.
2. Navjata Shishu Kaksha Prabandhan (Nursery Management) - Nursery plan, staff pattern, maintenance of medical records, Visanukramikarana (Sterilization), knowledge of equipments used in nursery such as resuscitation equipments, open care system, phototherapy, etc.

**Paper - II**  
**Balroga (Paediatric Disorders and their Management)**  
**Part-A**

1. Annavaha Srotasa Vikar (Gastrointestinal disorders)- Atisara (Diarrhoea), Assessment of dehydration, ORT/ ORS. Jirnatisara (Persistent/ Chronic Diarrhoea), etc.
2. Pranavaha Srotasa Vikar (Respiratory disorders)- Pratishyaya, Kasa (ARI), Pneumonia, Tamaka Swasa (Bronchial Asthma), etc.
3. Rasavaha and Raktavaha Srotovikar (Haemopoietic, Cardiovascular disorders)- Yakrita Shotha, Yakritodar (Hepatitis/Hepatomegaly), Pandu (Anemia), CHF, Thalassemia, etc.
4. Mutravaha Srotasa Vikar (Urinary disorders)- Acute post streptococcal glomerulonephritis, Nephrotic syndrome (Vrikka-shotha), Mutrakriccha (Dysuria), Mutraghata (Acute Renal Failure), etc.

**Part-B**

Aupsargika Roga, Krimi and Tvak Vikar (Infection, infestation and skin disorders) and Anya-Vikar (Miscellaneous Disorders)

1. Common bacterial, viral and parasitic infections with special reference to vaccine-preventable disease: Rajyakshma Roga (Tuberculosis), Rohini (Diphtheria), Kukkur Kasa (Whooping cough), Aptanaka (Tetanus including neonatal tetanus), Romantika (Measles, Mumps, Rubella and Chickenpox), Antrika Jwar (Typhoid and Viral hepatitis), Pravahika (Amoebiasis), Krimi Roga (Giardiasis and Intestinal helminthiasis); Vishama Jwar (Malaria, Kala Azar and Dengue Fever), Ahiputana (Napkin rashes), Shakuni (Impetigo), Sidhma, Pama, Vicharchika, Charmadal (Infantile atopic dermatitis).
2. Anya-Vikar (Miscellaneous Disorders): Jwar (Fever), rational management of PUO, clinical features, diagnosis, investigations, treatment and prevention of Aam-Vatik Jwara (Acute rheumatic fever), Basic concepts of Bal graha (specific syndromes).
3. Vata/Nadivaha Samsthan (CNS Disorders): Clinical diagnosis, investigations and treatment of pyogenic meningitis, encephalitis and tubercular meningitis. Apasmara (Seizural disorder) - causes and types of convulsion at different ages, diagnosis, categorization and management of epilepsy.
4. Antahsravi Granthi Vikar (Endocrinal disorders).

## PRACTICALS

### Contents of Practical

1. Kaumarbhryta- History taking, Clinical examination and complete record keeping – 10 cases
2. Navjata Shisu- History taking, Clinical examination and complete record keeping – 15 cases
3. Exposure of various Panchkarma Procedures in Balroga Practice – Minimum 50 procedures
4. Exposure to Neonatal Intensive Care Unit - The candidate should be posted in Neonatal Intensive Care Unit for atleast 150 hours per year.
5. Exposure to Pranapratyagaman Vidhi (Resuscitation Techniques) - The student should have exposure of Resuscitation Techniques on newborn “Mankin” and Live.
6. Exposure to use various instruments used in Neonatal Care Unit like Incubator, Radiant Warmer, Phototherapy, Bag and Mask etc.
7. Exposure to Immunization practices

*Note: The Logbook and Case Record to be maintained and duly signed by teacher and Head of the department.*

### Pattern of Practical Examination:

|                                  |                  |
|----------------------------------|------------------|
| 1. Case Record                   | 10 Marks         |
| 2. Case Taking                   |                  |
| a) Short Case                    | 10 Marks         |
| b) Long Case                     | 20 Marks         |
| 3. Identification of instruments | 10 Marks         |
| 4. Project Work                  | 20 Marks         |
| 5. Viva-voce                     | 30 Marks         |
| <b>Total</b>                     | <b>100 Marks</b> |

### Text Books for Reference

1. Kashyap Samhita or Vridhajivakiya : Prof. (Km.) P. V. Tewari with Dr. Neeraj  
Tantra; with english translation Kumar, Dr. R. D. Sharma and  
and commentary Dr. Abhimanyu Kumar
2. Kashyapa Samhita (Hindi translation : Nepal Raj Guru Pandita Hemaraja  
with commentary Sharma commentary by Shri Satyapal  
Bhishagacharya
3. Charak Samhita : Pt. Kashi Nath Shastri, Dr. Gorakh Nath  
Pandey; Vishvabharti
4. Sushrut Samhita Commentary : Ambikadutta Shastri
5. Ayurvedic concepts of Human : Prof Abhimanyu Kumar  
Embryology
6. Ashtanga Samgraha (Part-I &II), : Atrideva Vidyalankar  
Hindi commentary
7. Madhava Nidan
8. Bhava Prakasha
9. Harita Samhita
10. Clinical Methods : Meharban Singh
11. Child Health Care in Ayurveda : Prof Abhimanyu Kumar
12. Care of the Newborn : Meharban Singh
13. Text book of Paediatrics : Nelson
14. Principles and Practice of : Prof CHS Shastri  
Paediatrics in Ayurveda
15. Bal Chikitsadarsh : Dr. RD Sharma
16. Kaumarbhritya : Dr. D.N. Mishra

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**MANASIK SWASTHYA VIGYAN**  
**[Diploma in Psychiatry - Ay.] D.P.M. (Ay.)**  
**First Year**

Theory (Two papers) - Maximum Marks -100 (each)  
Practical (one) - Maximum Marks-100

**Paper - I**  
**Manovigyan**  
**Part-A**

1. A brief history of Manovigyan and Manasik Roga Vigyan from vedic period to modern psychology and psychiatry highlighting Ayurvedic contribution.
2. Synonyms, qualities, functions and Bhoutikatva and Ahankarikatva of Mana.
3. Satva and Sharir relationship, relationship between Tridosha and Mana.
4. Trigunatmakatva of mana.
5. Vata and Mana relationship - applied aspects.
6. Mana, Indriya and Oja relationship.
7. Jnanotpatti Prakriya- Sensory process and perception.
8. Atma and Mana relationship - applied aspects.
9. Knowledge and application of concept of Shatchakra.

**Part-B**

1. Manovaha srotas and its karma with sub classifications.
2. Psycho-anatomy and physiology of brain and related nervous system, psychoneuroendocrinology.
3. Behaviour, attitude and emotions.
4. Manas Prakriti – Personality.
5. Essential elements of Child psychology, Developmental psychology of child, adolescence and adult.
6. Assessment of Dhee, Dhriti and Smriti.
7. Assessment of cognition, intelligence and memory.

**Paper - II**  
**Manas Swasthya Vigyan**  
**Part-A**

1. Definition of Manas Swasthya.
2. Manasik Bhava, Satva assessment and examination of mind.
3. Nidra (sleep) – normal and abnormal.
4. Manovighatakara Bhavas.
5. Classification of Manasik Roga.
6. Etiology and patho-physiology of Manasik Vikar.
7. Psychiatric and psychometric tools for diagnosis.



### **Part-B**

1. General line of treatment of Manasik Vikar.
2. Ayurvedic and modern principles of management of Manovikar
3. Preventive aspects of Manovikar – Achara Rasayan, Sadvritta, Shodhana, Rasayan
4. Oorjaskara and Manaskar Dravya
5. Psychological rehabilitation
6. Forensic psychiatry
7. Research and recent development in Manas Swasthya.

### **Second Year**

Theory (Two papers) - Maximum Marks -100 (each)  
Practical (one) - Maximum Marks -100

### **Paper – I**

#### **Manasik Roga Vigyan Part-A**

1. Introduction to Bhutavidya and Graha Chikitsa.
2. General Etiopathogenesis of Unmada, classification and its modern correlation.
3. Nija Unmada and its management.
4. Agantuja Unmada and its management.
5. Chittodvega, Vishada, Atatvabhinivesha, Bhaya, Krodha, Kama, Lobha, Moha, Shoka, Maana, Dambha, etc. and their management.
6. Mood and effective disorders - Bipolar mood disorders, major depressive disorder, mania and their Ayurvedic correlation and management.

### **Part-B**

1. Madatyaya (Alcoholism), other addictions related disorders and their management.
2. Substance abuse related disorders and their management.
3. Delusional disorders: Mano - Buddhi – Sangyajanana – Smriti Vibhrama and their management.
4. Sensorial disorders: Tandra – Murcha - Sanyasa and their management.
5. Apasmara (Epilepsy) and its management along with modern perspective.
6. Nidra vikar (Sleep disorders) and their management.
7. Sex related mental disorders and their management.
8. Altered life style and stress related disorders and their management.

### **Paper - II**

#### **Manas Swasthya Upakrama Vigyan Part-A**

1. Childhood psychiatric disorders and their management (behavioural, learning and developmental disorders).
2. Jarajanya Manasik Vikar (senile psychiatric disorders) – Dementia, Alzheimer's disease and their management.
3. Importance of Panchkarma and allied procedures in the management of Manas Roga
4. Satvavajaya Chikitsa – Definition, relevance in manasik and manodaihika vikara.

5. Applied aspect of Ashtanga Yoga in Manovikar.
6. Daivavyapashraya and Adravya Bhuta Chikitsa in Manovikar.

**Part-B**

1. Schizophrenia and its Ayurvedic correlation and management
2. Somatoform and dissociative disorders and their Ayurvedic correlation and management
3. Importance and utility of Medhya Rasayan and Vajikaran drugs in Manas Swasthya.
4. Essentials of modern psychoneuropharmacology
5. A detailed study of Ayurvedic single and compound drugs for Manas Roga:  
Single Drugs: Bramhi, Mandukaparni, Vacha, Sarpagandha, Shankhapushpi, Ashwagandha, Yashtimadhu, Guduchi, Jyotishmati, Kushtha, Tagara, Kooshmanda, Jatamansi, Swarna, Rajata, Pravala, Mukta and other useful medicines, etc.  
Compound Drugs: Manasmitravati, Smritisagararasa, Unmadagajankhusharasa, Apatantrakarivati, Kumarakalyanarasa, Yogendrarasa, Kalyanakaghrita, Brahmighrita, Mahapaishachikaghrita, Panchagavyaghrita, Hingwadighrita, Kooshmandaghrita, Saraswatarishta, Ashwagandharishta, Himasagarataila, Brahmi Taila, Tungadrumadi Taila, Chandanadi Taila and other useful yoga, dhoopa, nasya and anjana yoga mentioned in the context of Apasmara and Unmada
6. Psychiatric Emergencies and their management

**PRACTICALS**

**Contents of Practical**

| S.No. | Topic   | No. of Cases                |    |
|-------|---|-----------------------------|----|
| 1.    | Hypnotherapy techniques                               | 25                          |    |
| 2.    | Case study-   | a) Unmada                   | 20 |
|       |   | b) Apasmara                 | 20 |
|       |   | c) Atatvabhinivesh          | 10 |
|       |   | d) Chittodvega              | 20 |
|       |   | e) Vishada                  | 20 |
|       |   | f) Madatyaya                | 20 |
|       |   | g) Sexual disorders         | 05 |
|       |   | h) Psychogenic headache     | 05 |
|       |   | i) Nidra vikar              | 10 |
|       |   | j) Stress related disorders | 10 |
| 3.    | Examination of Manasik Bhava in psychosomatic illness | 25                          |    |
| 4.    | Yogasana Pranayama and Meditation Techniques          | 25                          |    |
| 5.    | Panchkarma Procedures in Manas Roga                   | 25                          |    |
| 6.    | Anjana, Dhoopanadi Karma                              | 25                          |    |
| 7.    | Instruments (GSR Biofeedback, EST, ECT, EEG, etc.)    | 25                          |    |
| 8.    | Counselling on the pattern of Satvavajaya             | 25                          |    |

### Pattern of Practical Examination

|  |                  |
|--|------------------|
| 1. Case Record   | 10 Marks         |
| 2. Case Presentation   | 10 Marks         |
| 3. Assessment of Scales and Inventories<br>(Modern and Ayurvedic aspect) | 10 Marks         |
| 4. Project Work  | 20 Marks         |
| 5. Viva-voce   | 50 Marks         |
| <b>Total</b>   | <b>100 Marks</b> |

### Text Books for Reference

1. Charak Samhita
2. Sushrut Samhita
3. Ashtanga Samgraha
4. Ashtanga Hridaya
5. Kashyapa Samhita
6. Harita Samhita
7. Bhagavadgeeta
8. Yogavasistha
9. Comprehensive Text book of Psychiatry : Kaplan and Saddock
10. Text Book of Child and Adolescent Psychiatry : Wiener
11. Bourne Psychology
12. Carlon Abnormal Psychology and Modern Life
13. Ayurvediya Manas Vigyan : Rama Harsha Singh
14. Concept of Mind published at Ayurveda College, Kottakkal.
15. The Mind in Ayurveda and other Indian Tradition : Dr A.R.V.Murthy
16. Psychopathology in Indian Medicine : Satypal Gupta
17. A Text Book on Medical Jurisprudence and Toxicology : Modi
18. DSM IV and ICD 10
19. Other relevant textbooks

**NETRA ROGA VIGYAN**  
**[Diploma in Ophthalmology-Ay.] D.O.(Ay.)**  
**First Year**

Theory (Two papers) - Maximum Marks -100(each)  
Practical (one) –Maximum Marks-100

**Paper - I**

**Netra Chikitsa Vigyan – Maulika Siddhanta and Samanya Parichaya (Basic principles and General considerations in Ayurvedic Ophthalmology), Anusandhana evam anya Vishishta Vigyan (Research Methodology, Medical Statistics and Ethical Considerations)**

**Part-A**

1. Etymological aspects- Shalakya Tantra Nirukti, Parichaya and scope.
2. Historical considerations in Shalakya Tantra (Itihasa, vikasa and contribution from ancient to modern era)
3. Importance of Shalakya Tantra ( Shalakya Tantrasya Ayurveda Pradhanyam)
4. Importance of Head (Shiropadhanta) and organ of Vision (Sarvaendriyanam Nayanam Pradhanam)
5. Important texts of Shalakya and contributors (Ancient ,medieval and modern period)
6. Netra Vyutpatti, Paryaya, Parichaya and Netra Panchabhautikata.
7. Netra Sharir Rachana and Embryological, anatomical considerations in Ophthalmology- basic and applied aspects

**Part-B**

1. Netra Sharira Kriya , Chakshurendriya Kriya and Physiological considerations in Ophthalmology- Basic and applied aspects
2. Shirogata Marma Vichara (Anatomical and clinical aspects of vital points of head and neck).
3. General methodologies of Research and Evaluation in Ayurveda and traditional medicine (drug development comprising of standardisation, quality control of drugs, pre clinical safety and toxicity and clinical evaluation, etc.)
4. Guidelines on Good Clinical Practices (GCP) and Good Laboratory practices (GLP)
5. Ethical considerations in clinical and biomedical research and practice alongwith medico legal aspect in Netra Chikitsa.
6. Current trends and Contemporary developments in Ophthalmology.

## Paper - II

### **Netra roga Nidan evam Chikitsa Samanya Parichaya (General Principles of Clinical Diagnosis and Management in Ophthalmology)**

#### **Part-A**

1. General examination of eye.
2. Subjective and objective examination and clinical methods in Ophthalmology.
3. Latest instruments, diagnostic tools, technology and its utility in diagnosis and evaluation.
4. Other advanced diagnostic techniques and imaging technology.
5. General aetiological considerations (Netra Roga Samanya Nidan).
6. Pathological considerations in Ophthalmology (Hetu, Samprapti).
7. General principles of management (Chikitsa Sutra)

#### **Part-B**

1. Preventive Ophthalmology (Preventive or Netrasanrakshanopaya)
2. Pathyapathya in Netra roga (Diet and practices in eye diseases)
3. Introduction to Ophthalmic surgical instruments and equipments (Netra sambandhi Yantra, Shastra Parichaya) and asepsis and sterilization methods - Ayurvedic and modern aspects
4. Classification of Eye diseases (Netra Roga Bheda) and its significance.
5. Community Ophthalmology.
6. Essential modern drugs and anaesthetic agents of diagnostic and surgical importance.

## **Second Year**

Theory (Two papers) - Maximum Marks -100(each)

Practical (one) - Maximum Marks-100

### **Paper - I**

### **Clinical Ophthalmology (Sandhi, Vartma, Shukla, Krishna, Drishti, Sarvagata, Mandalagata Roga Vishesha Nidan evam Chikitsa)**

#### **Part-A**

### **Sandhigata Roga, Vartmagata Roga, Shuklagata Roga**

1. Introduction, aetiopathogenesis, clinical features and treatment.
2. Understanding and interpretations of diseases with a comparative study of contemporary knowledge of modern Ophthalmology.
3. Congenital, developmental, neoplastic and degenerative disorders, other ocular problems and their management.

## **Part-B**

### **Krishnagata Roga, Drishtigata Roga and Sarvagata Roga**

1. Introduction, aetiopathogenesis, clinical features and treatment.
2. Malnutritional ocular disorders.
3. Understanding and interpretations of diseases with a comparative study of contemporary knowledge of modern Ophthalmology and its management.
4. Eye donation, Eye Bank and Keratoplasty.
5. Basics of refraction and refractive errors.
6. Orthoptics and Neuro Ophthalmology.
7. National Programme for Control of Blindness.
8. Geriatric Ophthalmology(Jaravastha Janya Netra Vikar)
9. Ocular manifestation of systemic diseases
10. Ocular trauma and emergencies in Ophthalmology (Netra Abhighata and Atyayika chikitsa)
11. Congenital, developmental, neoplastic and degenerative disorders of Krishna, Drishti gata roga and other ocular problems.

## **Paper – II**

### **Netra Kriya Kalpa, Netra Chikitsa Sambandhi Dravyaguna Evam Bhaishajya Kalpana Gyanam. Shastra, Anushastra and Other Vishishta Chikitsa Prayoga Gyanam**

#### **Part-A**

#### **Kriya Kalpa**

1. Introduction, development of topical Ophthalmic therapeutic procedures (Netra rogeshu kriyakalpadi vishishtopakramascha parigyanam, vikas-krama cha)
2. Rational use and relevance of selection of Kriya Kalpas in the management of ocular diseases( based on inflammatory status of eye ,seat of origin of disease etc.)
3. Netra Kriya Kalpa procedures, Seka, Ashchytana, Pindi, Bidalaka, Tarpana, Putapaka, and Anjana and their practical aspects.
4. General introduction, types, indications, contraindications, dose, Kaal, Purva Karma, Pashchat Karma, Pradhan Karma, Complication, their management, drugs used for Seka, Ashchytana, Pindi,Bidalaka, Tarpana, Putapaka and Anjana.
5. Standard operative procedure in respect of application of Kriya Kalpa as well as preparation of the dosages used in the procedures.
6. Critical interpretation of Kriya Kalpa procedure based on the fundamentals of modern pharmacology viz. routes of administration, compliance, disposal , absorption, drug vehicles and bioavailability, duration and quantum of bioavailability and physical measures, Pharmaceutical dosage forms, etc.
7. Important Ayurvedic drugs/ formulations used in Ophthalmology (Netraroga chikitsa upayogi vishishtayoganam parigyanam).

## **Part-B**

### **Lekhana, Chedhanadi Ashtavidh Shashtra Karma**

1. Basic principles of Ophthalmic surgery (Shastra sadhya vyadhi parichaya)
2. Rational use and relevance of selection of surgical procedures in the management of ocular diseases
3. Modern ocular surgical techniques of the surgical diseases related to eye and its appendages.
4. General introduction, Poorva, Pradhan & Paschat karma, complications with management of Lekhana, Chedhana, Bhedhana, Vedhana, Eshana, Aaharana, Visravana and Seevana procedures with special Netra Roga Chikitsa.
5. Standard Operative Procedures to be adopted in above mentioned surgical procedures.

### **Raktamokshan (Therapeutic bloodletting)**

1. Shuddha Raktalakshana, Dustarakta Lakshana
2. General introduction to Raktamokshan (Therapeutic blood letting), Jalaukavacharana (different types of Jalauka, collection and identification of Jalauka, Purva, Pradhan and Paschat Karma of Jalauka)
3. Procedure of Prachhanna (bloodletting by incision), Sira Vedha (bloodletting by venepuncture )
4. Complications and their management
5. Standard Operative Procedures

### **Agnikarma & Kshara Karma**

1. Agnikarma and Kshara Karma applications in Netra Chikitsa and Utility of Lasers in Ophthalmology
2. Research and development (R&D) update on Ophthalmic drugs and surgical procedures

## **PRACTICALS**

### **Contents of Practical**

1. Application of Shadvidha parikshoupakrama in clinical Ophthalmology.
2. Clinical application of Asthavidha shastrakarma and Ksharadi anushastra karma in Ophthalmic practice.
3. Retinoscopy followed by refractive corrections.

4. Diagnostic procedures
  - a) Anterior Segment – Gonioscopy, A scanning, B scanning, Pachymetry
  - b) Posterior Segment – Knowledge of Indirect Ophthalmoscopy and other aids for posterior segment examination
5. Therapeutic procedures
  - a) Observation, assistance and performance of parasurgical and kriyakalpa procedures.
  - b) Practical hands on modern Ophthalmic surgical procedures.
6. The candidate should fulfill the participation of compulsory regular In House Clinical postings at attached hospital of teaching institute, Postings at Exclusive Eye Hospitals, centres of excellence and other national and regional institutes of Ophthalmology supported by submission of Case Documentation throughout the two academic years.

#### Pattern of Practical Examination

|  |                  |
|--|------------------|
| 1. Short case  | 10 Marks         |
| 2. Long Case   | 20 Marks         |
| 3. Procedures (Practical demonstration of Kriyakalpa/parasurgical/surgical procedures) | 10 Marks         |
| 4. Project work  | 20 Marks         |
| 5. Viva-voce   | 40 Marks         |
| <b>Total</b>   | <b>100 Marks</b> |

#### Text Books for Reference

1. Charak Samhita with commentaries
2. Sushrut Samhita with commentaries
3. Ashtanga Hridaya and Ashtanga Samgraha with commentaries
4. Madhava Nidan with commentaries
5. Bhavaprakasha with commentaries
6. Sarangadhara Samhita with commentaries
7. Sahashrayoga Samgraha
8. Chakradatta
9. Shalaky Tantra : Ramanath Dwivedi Chowkhambha Sanskrit Prathisthan, Delhi
10. Shalaky Tantra : R.C. Chaudhary, Chowkhambha Sanskrit Prathisthan, Delhi
11. The actions and uses of Indigenous Ophthalmic Drugs : N.Srikanth, Chowkhambha Sanskrit Prathisthan, Delhi
12. Ayurvedic Formulary of India (AFI) and Ayurvedic Pharmacopoeia of India (API), All Volumes : Dept. of AYUSH, Govt.of India
13. Clinical Examination of Ophthalmic Cases : Agarwal and Gupta, CBS publishers, Delhi



14. Alder's Physiology of the Eye and Clinical: Cotlier, St. Louis.  
Applications
15. Disease of the Lens and Vitreous, : Duke-Elder, St. Louis, Mosby.  
Glaucoma and Hypotony
16. A Text Book of Ophthalmology : Ahmed E. Oxford University Press,  
Calcutta.
17. A Text book of Clinical Ophthalmology : Dhanda et al. Galgoti Publishers,  
New Delhi
18. Modern Ophthalmology : Dutta, L.C. Jaypee Brothers,  
Medical Publishers New Delhi.
19. Manual of the Diseases of the Eye : May C. and Worth, C. Bailliere  
Tindal and Castell, London.
20. Ophthalmology – Principles and Concepts : Newell, F.W.C.V. Mosby Co. St.  
Louis.
21. Ocular Differential Diagnosis : Roy Fedrick Hamptn Lea & Febiger
22. Clinical Ophthalmology : Smith, R. Verghese Company,  
Bombay.
23. Abrahm Manual of Refraction : Duke and Elder
24. Hand Book of Ophthalmology : B.M. Chaterjee
25. Hand Book of Ophthalmology : Khurana
26. Clinical Ophthalmology : Kanski
27. Parsons Diseases of Eye
28. Stallard's Eye Surgery

**PRASUTI TANTRA AND STRI ROGA**  
**[Diploma in Obstetrics and Gynaecology-Ay.] D.G.O. (Ay.)**

**First Year**

Theory (Two papers) - Maximum Marks -100(each)  
Practical (one) –Maximum Marks-100

**Paper - I**

**Prasuti Tantra - Garbha Garbhini Prasava Vigyan**

**Part-A**

1. Importance of Ayurvediya Prasuti Tantra evam Stri Roga in women health care
2. Epocs of woman's life
3. Stri vishishta sharir rachana (applied anatomy of female reproductive system, pelvis and pelvic floor)
4. **Garbha Vigyan**
  - a) Garbha paribhasha, Garbhadaana samskara (prenatal counselling), Garbhavakranti, Garbha Sambhava Samagri, Garbhasya Shadghatak, Garbhasya Panchabhautikatwa.
  - b) Garbhasya Masanumasika Vriddhi, Garbhasya Avayavotpatti, Garbhasya Poshana (Physiology of conception, implantation and embryology)
  - c) Jarayu, Apra, Nabhinala evam Garbhodak Nirmaan evam Karya (Formation and functioning of Placenta, Umbilical cord and Amniotic fluid)
5. **Garbhini Vigyan**
  - a) Sadyograhit Garbha Lakshan, Vyakt Garbha Lakshan, Pumsavan Vidhi, Garbhini Masanumasik Lakshan (Signs, symptoms, diagnosis and differential diagnosis of pregnancy)
  - b) Garbhini Paricharya (Anatomical and physiological changes during pregnancy, nutrition during pregnancy).

**Part-B**

1. Prasav Kaal, Sutikagaar, Prasav Paribhasha, Prasava Hetu, Prasav Kaleen Garbhashayantar Garbha Sthiti, Prasavasya Vividh Awastha, Aavi, Prasav Paricharya.
2. Intrapartum maternal and foetal monitoring, Partogram, CTG.
3. Prasav Purva Raktasrav (Ante partum haemorrhage)
4. Kritrim Prasav Arambh (Augmentation of Labour)
5. Sutika Vigyan, Sutikaki Paribhasha, Sutika Kaal, Sutika Paricharya, Sutika Kaleen Sarvadaihk Parivartan
6. Stana, Stanya Sampat evam Stanya Dushti
7. Jatmatra Shishu Paricharya, Navjaat Shishu Paricharya.
8. Knowledge regarding writing research papers.

**Paper - II**  
**Stri Roga Vigyan**  
**Part-A**

1. Description of Raja, Artava and concept of Shukra in Stri Prathama Rajo Darshan (Menarche), Rituchakra (Menstrual cycle).
2. Ashta Artav Dushti, Shukra Dushti, Rajah Kshaya, Anartava including scanty menstruation and Amenorrhoea.
3. Asrigdar including abnormal uterine bleeding.
4. Rajo Nivritti (Menopause).

Part-B

1. Striroga vishishta sthanik chikitsa—Uttar Basti, Pichu, Yonidhavan, Dhoopan, etc.
2. Prasuti Tantra evam Stri Rogopayogi Aushadhasya Matra, Ghatak evam Upadeyata, (Pharmacology of selected Modern medicine used in Obstetrics and Gynaecology ).
3. Stri evam Matru Kalyan Karyakram (National Programme related to Women Health Care), Parivar Niyojan evam Santati Nirodhasya Upaya evam Shalya Vidhi (Medical and Surgical methods of Female Contraception and Sterilisation)
4. Yogasya prasuti evam Stri Roga chikitsakeeya upayogita.
5. Chikitsiya upyogita of Rasayan in Prasuti evam Stri Roga.
6. Prasuti evam Stri Rogaya naidanikiya parikshana (Diagnostics in Obstetrics and Gynaecology)
7. Shock and its management, Raktadana, Fluid and Electrolyte imbalance, Fluid therapy.

**Second Year**

Theory (Two papers) - Maximum Marks -100(each)  
Practical (one) –Maximum Marks-100

**Paper - I**  
**Garbha Garbhini Evam Prasav Vyapad**  
**Part-A**

1. **Garbhavyapad** - Garbhasraav, Garbhapaat (Abortion), Garbhashosh, Upvishtak, Upashushka (IUGR), Leen Garbha, Mrit Garbha (IUD), Jarayu dosh (Abnormalities of Amniotic fluid, Placenta and Umbilical cord), Rakta Gulma Bahuapatyata (Multiple Pregnancy), Ectopic Pregnancy, Molar Pregnancy, Rh incompatibility.
2. **Garbhanga Vikriti** - Clinical aspects of genetics and teratology. Prenatal diagnosis of foetal abnormalities and its management.
3. **Garbhini Vyapad** - Kikkis, Makkal, Hrilas, Emesis and Hyperemesis gravidarum, Jwar, Pandu, Kamala, Garbha janya Vishmayata (Toxaemia in pregnancy), Infections during pregnancy, Hridroga, Prameha (Diabetes) etc.
4. High Risk Pregnancy, management of pregnancies complicated by medical, surgical or Gynaecological diseases.

### **Part-B**

1. Kashta Prasav, Garbhasang, Vilambit Prasav, Distocia with its management, Garbha evam Matru Shroni Asamanjasya (CPD).
2. Malpresentations and their management
3. Aparasanga (Retention of Placenta and its management)
4. Prasavottar Raktasraav (PPH) and its management.
5. Complications during Labour and their management
6. Purva Kalik evam Kalateet Prasav (Preterm and post term labour)
7. Mudh Garbha (Obstructed Labour)
8. Sutika roga - Number, causes, clinical features, prognosis and treatment of Sutika Jwara, Shotha, Makkala and other complications.

### **Paper - II Part-A**

1. Detailed study of Yoni Vyapad mentioned by different Acharya and their possible modern correlations
2. Yoni-Kand, Yoni-Arsha, Yoni-Arbud (Benign and malignant cysts and tumors of female genital organ) and PCOS
3. Stri Vandhyatva (Female infertility) and its management with Ayurvedic and Modern techniques.
4. Sexually transmitted disease AIDS, etc.
5. Stan Roga evam Chikitsa –Stan Vidradhi (Mastitis and Breast abscess).

### **Part-B**

#### **Shastra Karma**

1. General principles of Gynaecological and Obstetric surgeries, analgesics and anesthesia in Gynaecology and Obstetrics, Nirjantukikaran (sterilisation), suturing materials and methods.
2. Muladhar Chhedan, Yantra Shastrena Garbhasya Aaharan, Udarpatan poorvak Garbha Nirharana.
3. Garbhashayamukh vistritikaran evam garbhashaya lekhan, Garbhashaya mukha samvritikaran, Garbhashayamukh dahan, Pap smear, Cervical biopsy, Swasthane garbhashaya sthapan, Yoni-arsh nirharan, Gulma Nirharan, Vidradhi Patan and Vrana Chikitsa.
4. Garbhashaya nirharana
5. Provision of safe abortion services.
6. Medico legal aspects in Prasuti Tantra including PNDT and MTP Act.
7. Record keeping of Gynaecological and Obstetrics cases.
8. Conditions and norms of referral cases in Gynaecology and Obstetrics.

## PRACTICALS

### Contents of Practical

#### A. Kriyatmaka

|                                    |           |
|------------------------------------|-----------|
| 1. O.P.D and IPD duties            | 06 months |
| 2. Labour Room duties              | 06 months |
| 3. Ultrasound Unit                 | 01 months |
| 4. Casualty related to the subject | 15 Days   |

#### B. Case records – Total 20 cases

|                                |          |
|--------------------------------|----------|
| 1. Prasuti Tantra (Obstetrics) | 10 cases |
| 2. Stri Roga (Gynaecology)     | 10 cases |

#### Pattern of Practical Examination

|                                 |                  |
|---------------------------------|------------------|
| 1. Case Record                  | 10 Marks         |
| 2. Case Study                   |                  |
| a) Long Cases                   | 20 Marks         |
| b) Short Cases                  | 10 Marks         |
| 3. Identification of Instrument | 10 Marks         |
| 4. Project Work                 | 20 Marks         |
| 5. Viva - voce                  | 30 Marks         |
| <b>Total</b>                    | <b>100 Marks</b> |

### Text Books for Reference

|   |   |                              |
|---|---|------------------------------|
| 1. Abhinava Prasuti Tantra              | : | Vaidya Damodar Sharma Gaur   |
| 2. Prasuti Vigyana                      | : | Dr. Acharya Ramanath Dwivedi |
| 3. Prasuti Vigyana                      | : | Dr. Mrinmayi Mukherjee       |
| 4. Prasuti Vigyana                      | : | Dr. Alakh Narayan Singh      |
| 5. Prasuti Vigyana                      | : | Dr. Manjari Dwivedi          |
| 6. Prasuti Vigyana                      | : | Vaidya Nirmala Tai Rajwade   |
| 7. Prasuti Tantra and Stri Roga         | : | Dr. Premvati Tiwari          |
| 8. Abhinava Prasuti Vigyana             | : | Dr. Ayodhya Prasad Achal     |
| 9. Striroga Vigyana                     | : | Vaidya Ramanath Dwivedi      |
| 10. Abhinava Striroga Vigyana           | : | Dr. Rajendra Bhatnagar       |
| 11. Abhinava Striroga Vigyana           | : | Dr. Ayodhya Prasad Achal     |
| 12. Stri Roga Chikitsa                  | : | Dr. J.S. Chauhan             |
| 13. Janasankhya Siddhanta aur Upadeyata | : | Dr. Nirmal Sahani            |
| 14. Theory of Population in Outline     | : | Dr. D.I. Vallentev           |
| 15. Text Book of Gynaecology            | : | Dr. C.S. Dawn                |
| 16. Text Book of Obstetrics             | : | Dr. C.S. Dawn                |

17. Clinical Obstetrics and Gynaecology : Dr. Williams
18. Shaw's Textbook of Gynaecology : Shaw
19. Shaw's Textbook of Obstetrics : Shaw
20. Text Book of Obstetrics : Dr. Dutta
21. Textbook of Gynaecology : Dr. Dutta
22. Notes on Obstetrics : Dr. Sachedeva
23. Ayurvedic Concepts in Gynaecology : Vaidya Nirmala Joshi
24. Useful parts of Charak, Sushrut, and Vagbhata and Sharangdhara.

g # f

## **DRAVYAGUNA (PHARMACOGNOSY AND STANDARDIZATION)**

### **D. Pharmacognosy (Ay.)**

#### **First Year**

Theory (Two papers) - Maximum Marks -100 (each)

Practical (one) –Maximum Marks-100

#### **Paper - I**

#### **Namaroopa Vigyan**

##### **Part-A**

1. Historical background of Dravyaguna from Vedic era, Samhita and Nighantu periods till modern times.
2. Introduction to Pharmacognosy, methods of classification of crude drugs- morphological, microscopical, chemical, taxonomical, pharmacological, therapeutical, chemotaxonomical, etc.
3. Brief knowledge regarding nomenclature, identification and classification of drugs in Ayurveda based on Samhita and in various Nighantu.
4. Organized and unorganized drugs and their methods of evaluation.
5. Cultivation, collection, storage and preparation for the market of ASU Drugs. Introduction to Good Agricultural Practices (GAP), Good Field Collection Practices (G.F.C.P.) and Good Storage Practices (G.S.P.), etc.
6. Environmental (Desh, Kaal, Ritu, etc.), genetic and gender factors affecting qualities of crude drugs.

##### **Part-B**

1. Introduction of tissue culture techniques used for Ayurvedic Drugs.
2. Anukta dravya (extra Pharmacopeial Drugs).
3. Controversial aspects of Ayurvedic Drugs.
4. Adulteration and substitutes of crude drugs and methods for detection of adulterants.
5. Standardization of crude drugs as per Ayurvedic Pharmacopeia of India (API) and WHO guidelines.

#### **Paper – II**

#### **Guna Karma Vigyan**

##### **Part-A**

1. Fundamental principles of Dravyaguna
2. Detailed study on the Rasa, Guna, Virya, Vipaka, Prabhava and Karma with their applied aspects.
3. Evaluation of karmas (Deepana, Pachana, Grahi, Stambhana, Mutrala, Mutrasangrahaniya, Anulomana, Rechana, Jwaraghna, Vedanahara).
4. Introduction to general pharmacology.
5. Knowledge on procedure, equipments and instruments used in pharmacological evaluation.
6. Introduction to phytochemistry, chemical analysis and chromatography.

## Part-B

1. Detail study of 50 Medicinal Plants and 25 Ahara Dravya according to therapeutic classification e.g. Rasayan Vajikaran, Medhya, Jvarahara, Kasahara, Shvasahara, Shothahara, Kushtghna, Krimighna, etc.
2. Biological Screening methods including animal experiments.
3. Safety evaluation of drugs (Toxicological evaluation) and their guidelines for evaluation for example OECD guidelines, WHO guidelines, etc.

## Second Year

Theory (Two papers) - Maximum Marks -100(each)

Practical (one) –Maximum Marks-100

## Paper – I

### Aushadha Prayoga Vigyan

#### Part-A

Aushadha prayoga marga (routes of drug administration) of Dravya, its Prayoga Vidhi, Matra-Anupana (Drug delivery regimen), etc.

1. Consideration of Samyoga-Virodha (Drug incompatibility).
2. Principles of Clinical pharmacology.
3. Introduction to Reverse pharmacology.
4. ADR in Ayurveda and conventional system of medicine.
5. IPR, Regulations pertaining to Import and Export of Drugs.

#### Part-B

1. Knowledge of Therapeutic Administration (Amayika prayoga) of plants mentioned as follows:

- |                       |                |                   |
|-----------------------|----------------|-------------------|
| 1) Ahiphena           | 2) Agnimantha  | 3) Agar           |
| 4) Amalaki            | 5) Apamarga    | 6) Aragvada       |
| 7) Ardraka-Shunthi    | 8) Arjuna      | 9) Arka           |
| 10) Ashvagandha       | 11) Ashvagola  | 12) Ashoka        |
| 13) Ativisha          | 14) Bakuchi    | 15) Baladvayam    |
| 16) Bharangi          | 17) Bhallataka | 18) Bibhitaka     |
| 19) Bijaka/Vijayasara | 20) Bilva      | 21) Brahmi        |
| 22) Bringaraj         | 23) Brihati    | 24) Chandanadvaya |
| 25) Chitraka          | 26) Dadima     | 27) Danti         |
| 28) Daruharidra       | 29) Dhanyak    | 30) Dhatki        |
| 31) Draksha           | 32) Durva      | 33) Ela           |
| 34) Eranda            | 35) Gambhari   | 36) Gokshura      |
| 37) Guduchi           | 38) Guggulu    | 39) Haridra       |
| 40) Haritaki          | 41) Hingu      | 42) Jambu         |



|                    |                    |                         |
|--------------------|--------------------|-------------------------|
| 43) Jatamamsi      | 44) Jatiphal       | 45) Jeerakdvaya         |
| 46) Jyotishmati    | 47) Kalamegh       | 48) Kampillak           |
| 49) Kanchanara     | 50) Kankari        | 51) Kapikacchu          |
| 52) Karkatashringi | 53) Karpur         | 54) Katuki              |
| 55) Khadira        | 56) Kiratatikta    | 57) Kumari              |
| 58) Kupilu         | 59) Kumkum/Keshara | 60) Kushmanda           |
| 61) Lavang         | 62) Kutaja         | 63) Lodhra              |
| 64) Madanaphal     | 65) Manjishtha     | 66) Marich              |
| 67) Markandika     | 68) Mushali        | 69) Musta               |
| 70) Nagakeshar     | 71) Nimba          | 72) Nirgundi            |
| 73) Palasha        | 74) Palandu        | 75) Pashanabheda        |
| 76) Patala         | 77) Patola         | 78) Pippali-Pippalimula |
| 79) Punarnava      | 80) Rasna          | 81) Rasona              |
| 82) Saireyaka      | 83) Shallaki       | 84) Saptaparna          |
| 85) Sarpagandha    | 86) Sariva         | 87) Shalparni           |
| 88) Shalmali       | 89) Shankhapushpi  | 90) Shatavari           |
| 91) Shatapushpa    | 92) Shigru         | 93) Shirish             |
| 94) Shyonaka       | 95) Talisa patra   | 96) Tila                |
| 97) Trivrit        | 98) Tulsi          | 99) Tvak                |
| 100) Ushira        | 101) Vacha         | 102) Varun              |
| 103) Vasa          | 104) Vata          | 105) Vatsanabha         |
| 106) Vidari        | 107) Vidanga       | 108) Yashtimadhu        |
| 109) Yavani        | 110) Devadaru      |                         |

2. Clinical trial- protocol designing, stages of Clinical Research and data management.
3. Bioethics in Clinical Research.
4. Introduction of Pharmaco epidemiology/observational study

**Paper – II**  
**Aushadha Yoga Vigyan**  
**Part-A**

**Importance and principles of formulations as per Ayurveda**

1. Introduction to relevant portions of Drugs and Cosmetic Act, Magic remedies Act, Intellectual Property Right (IPR), regulations pertaining import and export of drugs.
2. Good manufacturing practices (GMP).
3. Quality control procedures of formulations prescribed by Drug Regulatory Authorities.
4. General awareness about nutraceuticals, cosmoceutical, food additives, excipients, etc.

## Part-B

1. Detail study of five formulations from each kalpana of Ayurvedic Formulary of India (AFI)
2. Knowledge about herbal extracts, colours, flavours and preservatives
3. Standardization of various Ayurvedic Kalpana, eg- Churna, Vati, Avaleha, Siddha Sneha, Asava, Arishta, etc.

## PRACTICALS

### Contents of Practical

1. Survey of Adverse Drug Reaction (ADR) in prescribed format of national pharmacovigilance programmes of ASU Drugs (Minimum 2)
2. Shodhana methods of Visha Dravya.
3. Preparation of two Yoga from each kalpana of Ayurvedic Formulary of India.
4. Microscopical evaluation of certain Churna formulation e.g. Sitopaladi, Hingvashtak, Trikatu, Triphala etc.
5. Chemical evaluation of Asava and Arishta.

### Pattern of Practical Examination-

|   |                  |
|---|------------------|
| 1. Herbarium File   | 10 Marks         |
| 2. Experiment related to Macroscopical, Microscopical, Organoleptic evaluation, Extraction and Phytochemical Evaluation | 30 Marks         |
| 3. Spotting of Dravya   | 10 Marks         |
| 4. Project Work   | 20 Marks         |
| 5. Viva-voce  | 30 Marks         |
| <b>Total</b>  | <b>100 Marks</b> |

### Text Books for Reference

1. Abhinav Buti Darpan (Vol.1-2) : Vd. Roop Lal Vaishya
2. Aushadha Vigyana Shastra : Acharya Pt. Vishvanath Dwivedi
3. Ayurvediya Aushadhkarma 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 : Vd. Krishna Chandra Chunekar with commentary
8. Bhrihad 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 : Vd. Shiv Kumar Vyas  
Ke Kshetra Me Yogadana
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 Trikam Ji                           |
| 16. Dravyaguna Vigyana                             | : Dr. V.M. Gogate                                     |
| 17. Dravyaguna Vigyana (Vol. 1-5)                  | : Acharya Priyavrata Sharma                           |
| 18. Dravyaguna Shastram                            | : Vaidya G.A. Phadake                                 |
| 19. Dravyaguna Vigyana                             | : Dr. A.P. Deshpande                                  |
| 20. Dravyagunavigyana Basic Principles             | : Prof.D.S.Lucas                                      |
| 21. Forgotten Healers (Indian Medicinal Plants)    | : Dr. Prakash Paranjape                               |
| 22. Glossary of Vegetable Drugs in Brihatrayi      | : Thakur Balwant Singh & Vd. Krishna Chandra Chunekar |
| 23. Introduction to Dravyaguna                     | : Acharya Priyavrata Sharma                           |
| 24. Kriyatmaka 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 Pandey                                |
| 33. Text Book of Pharmacology                      | : Trees & Valis                                       |
| 34. Textbook of Dravyaguna                         | : Dr.K.Nishteswar                                     |
| 35. Unani Dravyaguna Vigyana                       | : Hakim Daljeet Singh                                 |
| 36. Useful parts of Charak, Sushrut, and Vagbhata. |   |
| 37. Uttarakhand 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                           |

**PANCHKARMA**  
**D.Panchkarma**  
**First Year**

Theory (Two papers) - Maximum Marks -100(each)  
Practical (one) –Maximum Marks-100

**Paper – I**  
**Introduction to Snehana, Swedana, Vamana and Virechana Karma**  
**Part-A**

**Introduction**

1. Basic Principles of Ayurveda and Kayachikitsa.
2. Derivation, Definition, History, Origin and scope of Panchkarma.
3. Panchkarma in Ashtanga Ayurveda.
4. Indication for Shodhana and Shamana Therapy.
5. Qualities of Panchkarma Vaidya.

**Snehana**

1. Etymology and definition of Sneha and Snehana.
2. Introduction and General consideration about Snehana.
3. Snehashrayas.
4. Properties of Snehana Dravya.
5. Classification of Snehana.
6. Quality and utility of Uttama Sneha.
7. Snehapaka vidhi with their varieties and uses.
8. Indications and contraindications of Snehana.
9. Abhyantara Snehana – Acchapanas, Snehavicharana, Sadyasnehana and Avapidaka Sneha.

**Swedana**

1. Etymology and definition of Swedana.
2. General consideration about Swedana.
3. Properties of Swedana and Swedopaga Dravya.
4. Classification of Swedana therapy.
5. Indications and contraindications.

**Upakalpana**

1. Knowledge about the materials, equipments and instruments used in Panchkarma and physical medicine.
2. Knowledge of technical modification of equipments to be used in Panchkarma.
3. Knowledge of Ahara and Aushadhi Kalpana used in Panchkarma.

## **Part-B**

### **Sharir Vivechana in relation with Panchkarma**

1. Concept of Twacha, Kaal, Ashaya, Kostha, Shakha, Srotas, Nasa Sharir Pranayatana, Shatchakra, Nadi, Peshi, Snayu, Sandhi, Marma and their implication in the practice of bio-purificatory and rehabilitative procedures of Panchkarma.
2. Concept of 'Gut Brain', its relevance to Vata System and Basti Therapy.

### **Vamana Karma**

1. Etymology and definition
2. General consideration
3. Properties of Vamaka and Vamanopaga Dravya.
4. Vamaka dravya according to various Samhita.
5. Vamana Yoga and their different ways of administration.
6. Sadyo Vamana and its utility.
7. Indications and contra-indications (general and specific) in various diseases and their stages.
8. Dose fixation- general and specific.

### **Virechana Karma**

1. Etymology and definition
2. General consideration
3. Properties of Virechaka and Virechanopaga Dravya
4. Virechana Dravya according to various Samhita
5. Types of Virechana and administration method
6. Indications and contra-indications (general and specific) in various diseases and their stages
7. Dose fixation- general and specific.

## **Paper – II**

### **Introduction to Basti, Nasya, Raktamokshan and Physiotherapy**

#### **Part-A**

### **Basti Karma**

1. Etymology and definition
2. General consideration and introduction
3. Classification of Basti
4. Drugs useful in Basti
5. Indications and contraindications (General and Specific) of Basti Kalpana in various diseases and their stages
6. Description of Basti Yantra - Basti Netra and Basti Putaka
7. Dose fixation of Niruha and Anuvasana Basti

### **Uttar Basti**

1. Definition of Uttar Basti
2. Uttar Basti Netra and Basti Putaka
3. Dose of Uttar Basti both in Male and Female / Sneha and Kashaya Basti

## Part-B

### Nasya Karma

1. Etymology and definition
2. General consideration and introduction
3. Nasya Dravya according to various Samhita
4. Classification of Nasya
5. Indications and contraindications
6. Dose fixations of different Nasya
7. Detailed study of different Nasya formulations like Ksheerabala/Anutaila/Shadbindu, etc.

### Raktamokshan

1. Definition
2. General principles of Raktamokshan
3. Classification of Raktamokshan
4. Indications and contra - indications
5. General and specific indications of different Raktamokshan techniques

### Physiotherapy

1. Definition
2. Introduction to physiotherapy
3. Basic principles of physiotherapy
4. Utility of physiotherapy vis a vis Ayurveda
5. Indication and contra-indications of physiotherapy in various disorders.

## Second Year

Theory (Two papers) - Maximum Marks -100(each)  
Practical (one) –Maximum Marks-100

### Paper – I

#### Applied aspects of Snehana, Swedana, Vamana and Virechana Karma

##### Part –A

### Snehana

1. Abhyantar Snehana  
Poorva karma - Rogipariksha (Examination of Patient), Koshtapariksha, Agnipariksha (Fixation of dose Diet)  
Pradhana karma - Administration of Sneha  
Jeeryamana (observation) – Jeerna, Ajeerna, Asnigdha, Atisnigdha Lakshana-Samyak Yoga/ Ayoga/ Atiyoga Lakshanas, Sneha Vyapat and treatment.  
Pashchat karma - Pariharavishaya (Planning of shodhana).
2. Bahya Snehana  
Detailed description of Lepana, Samvahana, Udvartana, Mardana, Padaghata, Murdhni taila, Gandusha, Kavala, Abhyanga– Marma and massage, Karna poorana, Akshi tarpana, Taila dharana, Kati Basti (Tarpan), Janu Basti (Tarpan), Prishtha Basti (Tarpan), Hridaya Basti (Hridaya tarpan) etc.

3. Proper understanding of digestion and metabolism of fat.
4. Karmukatva of Snehana
5. Prescription of different Sneha Yoga in different disorders
6. Knowledge of new Sneha dravya used at present time like olive oil, groundnut oil, etc.

#### **Swedana**

1. Kerala specialities of Swedana like Churna, Pinda Sweda, Jambheera/Patrapottali/ Shastikashali Pinda Swedana/ Kayaseka/ Ksheera Bhaspa Sweda, etc.
2. Administration of Swedana chikitsa- Poorvakarma
3. Samyak Yoga/Ayoga/Atiyoga lakshana
4. Swedana complications and management.
5. Karmukatva of Swedana.

### **Part-B**

#### **Vamana Karma**

Poorva karma –

1. Collection of medicine and materials
2. Examination of Patient
3. Preparation of patient

Pradhana karma –

1. Administration of vamana dravya
2. Observation of Samyakyoga/Ayoga/Atiyoga lakshana and their management.

Pashchat karma –

1. Dhumapana
2. Samsarjana and Santarpana karma
3. Parihara vishaya
4. Vyapat and its management

Physiology and pharmaco-dynamics of Vamana Karma.

#### **Virechana Karma**

Poorva karma-

1. Collection of medicines and materials
2. Examination of patient
3. Preparation of patient

Pradhana karma –

1. Administration of Virechana dravya
2. Observation of Samyakyoga/Ayoga/Atiyoga lakshana and treatment

Pashchat karma –

1. Samsarjana and Santarpana karma
2. Parihara vishaya
3. Planning of next shodhana
4. Vyapat and its management

Physiology and pharmaco-dynamics of Virechana Karma.

**Paper – II**  
**Applied aspects of Basti, Nasya Karma, Raktamokshan and Physiotherapy**  
**Part-A**

**Basti Karma**

Administration of Basti

**Niruha Basti**

Poorva karma-

1. Examination of the patient according to Dosha, Aushadha, Desh, Kaal etc.
2. Preparation of medicine
3. Preparation of patient

Pradhana karma-

1. Administration of Basti
2. Observation of expulsion
3. Samyakyoga /Ayoga/Atiyoga lakshana

Pashchat karma-

1. Follow up
2. Parihara vishaya, Kaal Diet
3. Vyapat and its management.

**Anuvasana Basti**

Poorva karma-

1. Preparation of medicine
2. Preparation of patient

Pradhana karma-

1. Administration of Basti
2. Samyakyoga /Ayoga/Atiyoga lakshana

Pashchat karma-

1. Basti pratyagamana
2. Diet
3. Vyapat and its management

**Matra Basti**

Detailed study of different Basti formulations like Ksheera Basti, Vaitarana Basti, Vrishya Basti, etc.

**Uttar Basti**

Administration of Uttar Basti-

- a) Poorva karma
- b) Pradhana karma
- c) Pashchat karma

Physiology, pharmaco-dynamics of Uttar Basti karma

**Part-B**

**Nasya Karma**

Administration of Nasya-

Poorva karma-

1. Collection of medicine and materials
2. Examination of patient
3. Preparation of patient



Pradhana karma -

1. Administration
2. Observation and follow up
3. Samyakyoga /Ayoga/Atiyoga lakshana
4. Vyapat and its management

Pashchat karma -

1. Immediate follow up
2. Dhumapana , kavala, gandusha
3. Diet
4. Parihara vishaya
5. Nasyottara karma

Physiology, pharmaco-dynamics of Nasya Karma

### **Raktamokshan**

Administration of Raktamokshan-

Poorva karma- Collection of Jalauka (Leeches) and materials Examination of Patient, preparation of patient, preparation of Jalauka

Pradhana karma- Administration of Raktamokshana by different techniques  
Observation of Samyakyoga/Ayoga/Atiyoga lakshana and Management

Pashchat karma- Management of patient  
Parihara vishaya and Parihara kaal  
Vyapat and its Management

Karmukatva of Raktamokshan (pharmacodynamics)

### **Physiotherapy**

Knowledge and administration of below mentioned Physiotherapy techniques / instruments-

1. Ultrasound
2. Magneto therapy
3. Nerve conduction therapy
4. Diathermy
5. Laser therapy
6. Ultraviolet therapy
7. Wax therapy, etc

## **PRACTICALS**

### **Contents of Practical**

1. The student should undertake the responsibility in the management and treatment of patients independently through Panchkarma and Upadrava of Panchkarma.
2. Students should have to go through exposure to all the physiotherapy procedures.
3. Student should acquire self experience of the Panchkarma procedure according to the seasons.
4. Assesment of the Vega.
5. Knowledge of Samsarjana Krama.

### Pattern of Practical Examination

|   |                  |
|---|------------------|
| 1. Case record                                  | 10 marks         |
| 2. Upakarma (Minor procedures)                  | 10 marks         |
| 3. Pradhan karma (Major procedures)             | 20 marks         |
| 4. Identification of drugs useful in Panchkarma | 10 marks         |
| 5. Project work                                 | 20 marks         |
| 6. Viva-voce                                    | 30 marks         |
| <b>Total</b>                                    | <b>100 Marks</b> |

### Text Books for Reference

1. Charak Samhita with Ayurveda Dipika by Chakrapani and Jalpakalpataru by Gangadhara
2. Sushrut Samhita with Nibhandha Samgraha by Dalhana and Nyayachandrika by Gayadasa and Panjika by Swami Kumar
3. Ashtanga Hridaya with Sarvanga Sundara and Ayurveda Rasayan commentaries
4. Ayurvediya Panchkarma Chikitsa : Dr Mukundilal Dwivedi
5. Panchkarma Vigyan : Dr Haridas Shreedhar Kasture
6. Illustrated Panchkarma : Dr G Srinivasa Acharya
7. Clinical Panchkarma (English) : Dr P. Yadaiah
8. Prayogika Panchkarma (Hindi) : Dr P. Yadaiah
9. Vividha Vyadhiyome Panchkarma (Hindi) : Dr P. Yadaiah
10. The Panchkarma Treatment of Ayurveda with Kerala Specialities : Dr T.L. Devaraj
11. Panchkarma Therapy : Dr R.H. Singh
12. Principles and practice of Basti : Dr Vasudevan Namboodri, Dr. L. Mahadevan

**SWASTHAVRITTA AND YOGA**  
**[Diploma in Public Health-Ay.] D.P.H.(Ay.)**

**First Year**

Theory (Two papers) - Maximum Marks -100(each)

Practical (one) – Maximum Marks-100

**Paper – I**

**Vaiyaktika and Samajika Swasthavritta**

**Part-A**

**Vyaktigata Swasthyam (Individual health)**

1. Definition of Swastha, Swasthavritta and Health.
2. Swasthavritta Prayojana and Mahatwam.
3. Swasthapurusha lakshana - Signs of Health.
4. Introduction to Preventive Medicine and its Terminologies.
5. Detail knowledge of Dinacharya, measures such as Danta Dhavana, Jihva Nirlekhana, Gandusha-Kavala, Pratimarsha Nasya, Anjana, Vyayama, Abhyanga, Dhumapana, Udvardhana, etc and their physiological effects in terms of modern knowledge.
6. Ritucharya and its importance in Swastha Paripalana
7. Importance of Vega and their role in Health & Disease.
8. Description of Sadvritta and Achara Rasayan and their role in Prevention of psychosomatic diseases. (Satvavajaya chikitsa)
9. Concept of Nindita & Anindita purusha.
10. Introduction to Trayopastambha- Ahara, Nidra and Brahmacharya and their role in maintenance of health and their clinical importance.
11. Role of Pragyaparadha in producing diseases and Sharir Rakshanatmaka Karya- Preventive measures - Roga anutpadaniya vigyan.
12. Concept of Vyadhikshamatwa – Sahaja, Kalaja and Yuktikrit.

**Ahara Vichara (Food and Nutrition)**

1. Nirukti, Vivechan of Ahara; Definition of food, diet and nutrition.
2. Aharasya Swaroopam, Shadrasatvam, Panchabhautikatvam and Chaturvidhatvam.
3. Ahara mahatvam (Importance of food).
4. Aharadravya Parichaya, Vargeekarana, advantages and disadvantages of Vegetarian and Non - Vegetarian food.
5. Ahara Vidhi Vishesha Ayatana.
6. Ahara Poshana (Nutrition) - Food proximate principles - Carbohydrates, Proteins, Fats, Vitamins etc., their functions, deficiency disorders and prevention. Diet in different types of diseases.
7. Balanced diet

**Nidra (Sleep)**

Definition, physiology, types, proper way of sleep and its relation to Health and Disease.

**Brahmacharya (Celibacy)**

1. Vyakhya, Lakshana (Characteristic)
2. Importance and Utility of Brahmacharya
3. Abrahmacharya Vyakhya
4. Vyavaya Sambandhi Niyama
5. Effect of Ativyavaya
6. Veeryotpatti
7. Veerya Naasha Phala
8. Veerya Rakshanopaya
9. Menstrual Hygiene (Stri Ritucharya)

**Part-B****Samajika Swasthavritta (Social Hygiene)**

1. Concept of Health, Health for all (H.F.A.) (Sarvesham Krute Arogyam).
2. Concept of Disease
3. Concept of Prevention

**Introduction to Public Health**

1. Definition of Hygiene, Public Health, Sanitation etc.
2. Health systems and Health Services in India.

**Environment and Health**

1. Water
2. Air and ventilation
3. Soil and residential dwellings (Healthful Environment of Housing).
4. Light, sound and radiation
5. Disposal of waste products (solids and liquids) [sewerage system].
6. Hospital waste management (Biomedical waste management)
7. Sanitation of fairs, festivals and villages.
8. Methods of disposal of dead body
9. Medical entomology

**Industrial Health**

1. Ergonomics
2. Health hazards of Industries.
3. Prevention and controlled measures of occupational diseases.
4. Measures of health protection in Industries.
5. ESI Act
6. Indian Factory Act.

### **School Health**

1. Construction of school/college building
2. Arrangement of light, ventilation, water supply

### **Aturalaya bhavan nirmana (Hospital building construction)**

## **Paper – II**

### **Janapadodhwamsa and Yoga – Nisargopachara**

#### **Part-A**

#### **Janapadodhwamsa (Epidemiology)**

1. Janapadodhwamsa- causes, manifestation and measures of its control.
2. Introduction to Basic epidemiology
3. Selected definition of infectious disease epidemiology like - infection, contamination etc.
4. Epidemiological Triad - Agent, Host and Environment.
5. Dynamics of disease transmission.
6. Screening for disease.
7. Classification of infectious diseases.
8. Disease prevention and control- notification, isolation, quarantine, etc.

#### **Disinfection/Visankramana - Definition and types**

**Immunity -** Definition, types of Immunity, Immunizing agents, Immunization schedule and hazards of Immunization

#### **Health Statistics / Vital Statistics**

1. Definition of statistics/ health statistics
2. Sources and uses of health statistics
3. Collection, classification, presentation and interpretation of data
4. Mortality, morbidity and fertility rate

#### **Part-B**

### **Yoga – Nisargopachara**

#### **Yoga**

1. Introduction to Yoga.
2. History, Nirukti, Vyutpatti and Paribhasha of Yoga.
3. Aims and Objectives of Yoga in relation to Ayurveda.
4. Different schools of Yoga.
5. Scriptural basis of Ashtanga Yoga according to Patanjali Yoga Sutra, Bhagavad Geeta and Yoga Vashishta.
6. Introduction to Meditation and its techniques
7. Introduction to Yogic diet and behaviour.
8. Description of Hatha Yoga and Shatkarma - Neti, Dhauti, Nauli, Trataka, Basti and Kapalabhati; Kundalini Yoga.
9. Description of Bandha, Mudra, Shatchakra, Panchakosha and Nadi.

### **Nisargopachara (Naturopathy)**

1. Definition, history and basic principles of Naturopathy.
2. Concept of Naturopathy in disease manifestation and diagnosis
3. Aims and objectives of Nisargopachara
4. Relation of Ayurveda and Naturopathy
5. Schools of Naturopathy- Indian and Western
6. Importance of Naturopathy
7. Treatment modalities of Naturopathy.
8. Vishranti – Role of rest and relaxation.

### **Second Year**

Theory (Two papers) - Maximum Marks -100(each)

Practical (one) –Maximum Marks-100

### **Paper – I**

### **Applied aspects of Vaiyaktika and Samajika Swasthavritta in Swasthya Rakshan Part-A**

#### **Vaiyaktika Swasthavrittam (personal hygiene)**

1. Description and Applied aspects of regimens of Dinacharya, Ratricharya, Ritucharya with practical knowledge of preventive aspects.
2. Shodhana therapy in Swastha Purusha
3. Garbhini, Sutika Paricharya and Balopachara (preventive O.B.G and paediatrics)
4. Malnutrition and its preventive measures
  - a) Santarpana apatarpana janya vikar and its preventive measures
  - b) Assessment of nutritional status and Nutritional surveillance
  - c) Nutritional problems in public health.
  - d) National Nutritional Programmes.
  - e) Food Hygiene and food poisoning.
5. Concept of Rasayan/Jara (Preventive Geriatrics)

#### **Part-B**

#### **Samajika Swasthavritta (Community Health Care)**

1. Health Care Management
  - a) Health Administration at International, Central, State and Local level.
  - b) Health schemes programmes in India
  - c) National eradication and control programmes of declared communicable diseases
  - d) Community development programmes.
  - e) Health Education and communication.
  - f) Laws related to Health (Medical Legislation).
  - g) Primary Health Care in India.
  - h) International Health Organizations - WHO, UNICEF etc.
  - i) Disaster management.
  - j) Hospital management

2. Family Welfare Programmes (Parivara Kalyana Karyakrama)
  - a) Demography
  - b) Definition and scope of family planning.
  - c) Family planning methods (both Modern and Ayurveda).
  - d) Family planning services.
  - e) National family planning programmes including R.C.H. programme.
  - f) Establishment of MCH centre, urban family welfare centre and their role in community health.
  - g) School health programmes.
  - h) Care of handicapped children.
  - i) Care of senior citizen.
3. Concept of Mental health- Manasika swasthya – Ayurvedic perspective.

### **Paper – II**

### **Aupasargika - Anoupasargika Roga Pratishedha and Applied Aspects of Yoga – Nisargopachara**

#### **Part-A**

#### **Aupasargika evam Anoupasargika Roga Pratishedha**

1. Communicable disease prevention and their management
  - a) Ayurvedic aspect of Kuprasangaja roga and Aupasargika roga.
  - b) Laboratory investigations for detection of various infectious diseases.
  - c) Description and preventive measures of viral, bacterial, vector borne and other communicable diseases.
  - d) Description and preventive measures of various STD's (HIV/ AIDS)
  - e) Emerging and re-emerging infectious diseases like SAARS, Chikungunya, Bird-flu etc.
  - f) Hospital acquired infections
2. Non-communicable diseases and their management– Hypertension, Cancer, Obesity, Blindness, Diabetes, etc.
3. Health promotive nutrition in Ayurveda like Balya, Urjaskara, Hridya, Chakshushya Dravya etc.
4. Disaster management in Natural calamities

#### **Part-B**

#### **Yoga**

1. Practical application of Ashtanga Yoga
2. Practising of Asana with precautions.
3. Individual Yoga practice- procedures, indications, contraindication and their effect on various organs and Dosha
  - a) Standing Position Asana- Tadasana, Vrikshasana, Chakrasana, Ardhakati Chakrasana, Trikonasana, Parivrittatrikonasana and Ardachakrasana.
  - b) Sitting position Asana (Meditative Asana)- Padmasana, Vajrasana, Siddhasana etc.

- c) Cultural Asana- Ardhamatsyendrasana, Gomukhasana, Yogamudrasana, Pashchimottanasana, Janushirshasana, Baddhakonasana, Ushtrasana, Kukkutasana, Kurmasana.
  - d) Supine Asana- Pavanamuktasana (Purna and Ardha), Ekapada Uttanasana, Halasana, Matsyasana, Viparitakarani, Sarvangasana, Chakrasana, Suptavajrasana, Ekapadasana and Shavasana.
  - e) Prone position Asana - Bhujangasana, Naukasana, Shalabhasana, Dhanurasana, Mayurasana, Makarasana.
4. Practice of Pranayama – Bhastrika, Ujjayi, Suryabhedhi, Chandrabhedhi, Anuloma-Viloma, Bhramari, Sheetal and Sheetikari.
  5. Shatkriya practice - Neti, Nauli, Dhouti, Trataka, Kapalabhati, Shankhprakhshalana, Agnisara.
  6. Practice of Bandha and Mudra.
  7. Practices of meditation and its importance in maintenance of health.
  8. Therapeutic application of yoga for various diseases and conditions.
  9. Researches conducted for management of diseases by Yoga and their results.

#### **Nisargopachara**

1. Jala Chikitsa (Hydrotherapy) –  
Different types of water used in treatment.  
Different types of baths and their indications and contra indications.  
Steam bath- indications and contra indications
2. Surya Rashmi Chikitsa (Solar therapy) - Mahatwa and methods of sun bath.
3. Mrittika Majjana- Mud therapy
4. Diet therapy
5. Upavasa (fasting) - techniques and benefits
6. Mardanam (massage )-Techniques and therapeutic effects

### **PRACTICAL**

#### **Content of Practical**

1. Family planning appliances like condom, copper-T, oral pills, etc.
2. Educational visits – P.H.C, Family Welfare Centre, Leprosy sanatorium, Rural Ayurvedic dispensary, M.C.H centre.
3. Health survey and field work in rural community.
4. Participation in National Health Programmes like immunization programmes and such other programmes, active participation in various health event days i.e. WHO day, AIDS day, etc.
5. Clinical Suggestion-Field Study-Case taking, recording and discussion of-
  - a) Non-infectious diseases
  - b) Infectious disease
  - c) Rugnapatrika regarding Yoga and Naturopathy
  - d) Antenatal cases
  - e) Vaccination report and Malnutrition - each of 10 cases
6. Applicability and management of the Janpadodhvansa in present era.
7. Applied aspect of the Pathyapathya, Dincharya, Ritucharya and Yoga.



### Pattern of Practical Examination

|   |                  |
|---|------------------|
| 1. Case Record in respect to Pathyapathya, Dincharya, Ritucharya and Yoga | 10 Marks         |
| 2. Therapeutic application of Yoga and Naturopathy                        | 20 Marks         |
| 3. Spotting   | 20 Marks         |
| 4. Project Work   | 20 Marks         |
| 5. Viva-voce  | 30 Marks         |
| <b>Total</b>  | <b>100 Marks</b> |

### Text Books for Reference

1. Brihatrayee - Laghutrayee - related portion
2. Hatha Yoga Pradeepika
3. Patanjalyogapradeep
4. Yogavashistha
5. Gherand Samhita
6. Swasthavritta Samucchaya : Vd Pandit Rajeshwardatta Shastri
7. Swasthya Vigyan : Dr. B.G. Ghanekar
8. Yoga aur Ayurveda : Acharya Rajkumar Jain
9. Swasthavritta Vigyan : Ram Harsh Singh
10. Preventive and Social Medicine : K. Park
11. Preventive and Social Medicine : Yashpal Bedi
12. Preventive and Social Medicine : Kulkarni
13. Preventive and Social Medicine : Mahajan
14. Dr. Reddy's Comprehensive guide to Swasthavritta : Dr.P. Sudhakar Reddy (Chowkhamba Sanskrit Pratishtan) New Delhi
15. Food and Nutrition Part I & Part II : M. Swami Nathan
16. WHO publications on preventive and social medicine
17. Kashyapa Samhita
18. Yogaratnakara

## **RASAYAN AND VAJIKARAN**

### **D. Geriatrics (Ay.)**

#### **First Year**

Theory (Two papers) - Maximum Marks -100(each)

Practical (one) – Maximum Marks-100

#### **Paper – I**

### **Rasayan and Vajikaran Siddhanta**

#### **Part-A**

1. Fundamentals of Rasayan
  - a) Historical evolution and concept of Rasayan (from Vedic to contemporary)
  - b) Source material related to Rasayan in various classics
  - c) Synonyms, utility, scope, etymology and definition of Rasayan.
  - d) Present scenario and future prospect in practice of Rasayan
2. Anatomy and applied physiology in context to Rasayan
  - a) Triguna, Mahabhuta, Dosha, Dhatu, Mala, Srotas, Agni, Ojas, Indriya and Mana.
  - b) Brief Introduction to Ahara Rasa Nirman, Dhatu Poshanakrama- Kedari Kulya, Kshiradadhi, Khale Kapota Nyaya and their role in Dhatu formation.
  - c) Concept of nutrition, preservation & promotion of tissue health. Role of various nutrients like vitamins, proteins, fats, micronutrients and trace elements in preservation and promotion of tissue health.
  - d) Metabolism: General and pertaining to ageing
  - e) Endocrinology: General, growth related and ageing.
  - f) Immunity: Antigen antibody reactions, cell mediated and humoral immunity, immune responses, immune deficiency states, hypersensitivity and autoimmunity.
3. Classification and application of Rasayan alongwith their types and examples
  - a) Kutipravesnik, Vatatapika, Droni pravesnik
  - b) Kamyā, Naimittika, Ajasrika, Medhya
  - c) Indriyanusari, Dhatvanusari
  - d) Lekhan-Brimhanusari
  - e) Samshodhan-Samshamanusari
  - f) Swasthyanuvartaka Rasayan- Achara Rasayan, Sadvritta, Brahmacharya.
  - g) Rasayan adhikaritva-Indications and contraindications.
  - h) Optimum time for the use of Rasayan as per age, season, day/night, etc.
  - i) Pathyapathya during and after the use of Rasayan
  - j) Methods of using Rasayan- Poorva, Pradhana and Pashchat Karma.
4. Preservation and Promotion of health by Rasayan
5. Prevention of recurrence of Physical and Mental disorders by Rasayan
6. Kutipravesnik Rasayan
  - a) Concept of Trigarbha Kuti and its descriptions
  - b) Scope and limitation of Kuti Pravesnika Rasayan
  - c) Standard Operative Procedures for Kutipravesnika Rasayan in general and specific to different Rasayan usage.

- d) Duration of Kutipravesik Rasayan and rules for termination of Kutipravesha
- e) Benefits of Kutipravesika Rasayan.

### **Part-B**

1. Fundamentals of Vajikaran
  - a) Historical evolution and concept of Vajikaran (from Vedic to contemporary era)
  - b) Source material related to Vajikaran in various classics
  - c) Etymology, definition, synonyms, utility and scope of Vajikaran
  - d) Epidemiology of sexual disorders and infertility – Indian and global scenario.
  - e) Present scenario and future prospects in practice of Vajikaran
  - f) Cross cultural perspectives of sexuality and fertility.
2. Applied Anatomy and Physiology in context of Vajikaran
  - a) Triguna, Mahabhuta, Dosha, Dhatu, Mala, Srotas, Agni, Oja, Indriya and Mana.
  - b) Srotas with special reference to Sukravaha Srotas and Artavavaha Srotas Shukradhara kala.
  - c) Study of Beeja, Shukra, Veerya, Retasa and Rupadravya
  - d) Dhatuposhan Krama with special reference to Shukra formation
  - e) Reproductive anatomy and physiology- spermatogenesis, oogenesis
  - f) Shuddha Shukra Lakshana, Falavata Shukra Lakshana, Shudha Artava Lakshana.
  - g) Process of fertilization, Factors responsible for Garbhotpatti
3. Sexual behavior and response
  - a) Physiology of erection, ejaculation and orgasm
  - b) Hormonal regulation of human sexuality and fertility
  - c) Metabolism: general and pertaining to sexuality and fertility
4. Types and Methods of Vajikaran.
  - a) Classification of Vajikaran.
  - b) When and which Vajikaran is to be used.
  - c) Methods of using Vajikaran – Poorva, Pradhan and Pashchatkarma.
  - d) Dietetic, physical and behavioural code for using Vajikaran.
  - e) Contraindications for Vajikaran.

## **Paper - II**

### **Part-A**

#### **Jara Samprapti Vigyan (Ageing)**

1. Concept of Jara and ageing
  - a) Introduction and definition.
  - b) Epidemiology of ageing and degenerative diseases.
2. Causes of ageing
  - a) Dosh, Dhatu, Agni and Mala in Jara.
  - b) Age of onset of ageing, different Ayurvedic and Modern concepts regarding onset of ageing.
  - c) Factors of ageing process- Swabhav, Jara, Kala.
  - d) Prakriti and ageing
  - e) Environment and allied factors in ageing.

- f) Town dwelling and Diet articles such as Lavana, Kshara, etc. in ageing.
- g) Effect of life style in ageing.
- h) Psychological factors in ageing- Irshya, Bhaya, Krodha, Chinta etc.
- 3. Samprapti of Jara
- 4. Roopa of Jara- Srotanusari Rupa of Jara
- 5. Epidemiology of ageing and degenerative diseases
- 6. Classification of Jara
  - a) Reversible and Irreversible ageing process.
  - b) Introduction to common geriatric disorders like- Dementia, Alzheimer's disease, Degenerative diseases, Stress induced diseases, Injuries, Urinary retention, GIT problems, BPH, CVA, TIA, PVD, OA.

### **Part-B Vajikaran**

- 1. Concept of Vajikaran
  - a) Knowledge of different terms used in reference to Vajikaran- Vrishya, Vajikaran, Chatakavat, Hastivat, Ashwavat, Apatyam, Santankaram
  - b) Different types of Shukradushti and their symptoms
  - c) Different types of Artavadushti and their symptoms
- 2. Panchanidan of diseases related to Shukravaha Srotas  
Klaibya, Shandya, Napunsakata, Shukragatavata, Dhvajabhanga, Vyavayashosha, Shighrapatan, Shukrataralya, Shukadosha
- 3. Sexual dysfunctions
  - a) Libido related disorders-increased libido, decreased libido
  - b) Erectile dysfunctions : - Organic,secondary to chronic diseases, functional and iatrogenic
  - c) Ejaculatory disorders – premature, delayed, retrograde, anejaculation
- 4. Infertility
  - a) Male infertility-oligozoospermia, asthenozoospermia, teratozoospermia, obstructive azoospermia, immunological infertility, pyospermia
  - b) Female infertility
- 5. Introduction to sexually transmitted diseases- Phiranga, Upadamsha, Puyameha, Syphilis, Gonorrhoea, HIV/AIDS.

### **Second Year**

Theory (Two papers) - Maximum Marks -100(each)

Practical (one) – Maximum Marks-100

#### **Paper - I**

#### **Rasayan and Vajikaran Pariksha Vigyan**

#### **Part-A**

#### **Rasayan Pariksha Vigyan**

- 1. History taking and Clinical examination
  - a) Rog and Rogi Pariksha, Trividha, Chaturvidha, Shadvidha, Ashtavidha, Dashavidha and Dwadashvidha.
  - b) Neurological, ENT and Ophthalmological examination.

2. Lab Investigations
  - a) Routine Investigations - Hb, TLC, DLC, ESR, Biochemistry (Blood Sugar, Blood Urea, Creatinine, Uric acid, Lipid profile) etc.
  - b) Hormonal Assay - Thyroid, biomarker related to ageing.
  - c) Immunoglobulin studies
  - d) Enzyme studies
  - e) Radiological and sonological investigations
  - f) Specific investigations for ageing.
3. Importance of Samshodhana in Rasayan
 

Role of importance of Shodhana Karma in Rasayan, knowledge of different procedures useful in Rasayan
4. Psychosocial Assessment
  - a) Personality assessment and development in relation with Rasayan.
  - b) Different Scales for assessment of IQ, Memory, EQ
  - c) Anxiety and depression scale
  - d) MME Scale
  - e) Quality of life parameters
  - f) Positive psychology assessment
  - g) Counselling techniques

#### **Part-B**

#### **Vajikaran Pariksha Vigyan**

1. History taking and examination
  - a) History- general and sexual
  - b) Physical examination
  - c) General examination
  - d) Neurological and vascular
  - e) Specific Examination - sexual examination- local examination of testes, penis, vas deferens, spermatic cord
  - f) Nocturnal penile tumescence ( NPT) Examination
2. Investigations
  - a) Routine Investigations - Hb, TLC, DLC, ESR, Biochemistry (Blood Sugar, Blood Urea, Creatinine, Uric acid, Lipid profile) etc.
  - b) Hormonal Assay - Thyroid, Testosterone, FSH, LH, Prolactin, etc.
  - c) Immunoglobulin studies
  - d) Enzyme studies
  - e) Genetic mapping, Chromosomal analysis
  - f) HIV, VDRL, HBSAg, etc.
  - g) Semen analysis (Semenogram)
  - h) Radiological and Sonological Investigations - Scrotal doppler, penile doppler, scrotal USG
3. Importance of Samshodhana in Vajikaran and knowledge of individual Karma useful in Vajikaran
4. Myths and Misconcepts about Sex and Vajikaran
  - a) Classification of males and females as per Kamashastra
  - b) Knowledge of different organs of sensuality and achieving orgasm.

5. Sex Education
  - a) Counselling techniques
  - b) Marriage sex counselling
  - c) Concepts of safer sex- Knowledge of pharmacology of male and female contraceptives.
  - d) Reproduction, contraception etc.
  - e) Decision making about pregnancy and parenthood
  - f) Ayurvedic and Modern concept of genetic defects leading to malformation of Secondary sexual factors.
6. Ethics and legal aspects of sex and reproduction.

## Paper – II

### Rasayan and Vajikaran Aushadhi Vigyan

#### Part-A

#### Rasayan Aushadhi Vigyan

1. Brief Introduction to Rasayan Drugs - Jivaniya, Brihaniya, Balya, Shramahar and Vayasthapana.
2. Pharmacology and Pharmacodynamics of Ayurvedic Rasayan Drugs.
3. Classification of Rasayan Drugs –
  - a) Vyadhyutapadaniya Pratibandhak Rasayan drugs
  - b) Vyadhibala Virodhaka Rasayan drugs
  - c) Medhya Rasayan drugs
  - d) Vatatapika Rasayan drugs
  - e) Naimittik Rasayan drugs for specific diseases
  - f) Svarna Prashana Rasayan
  - g) Knowledge of single herbal drugs used as Rasayan
  - h) Knowledge of Herbomineral-metalic and acqua marine compounds used as Rasayan
  - i) Knowledge of Compound formulation mentioned in Ayurveda
  - j) Knowledge of Drugs – Used in Kutipravesika and Vatatapika Rasayan.
  - k) Agravya Rasayan- Application and importance of Achara Rasayan in today's scenario.
4. Mode of action of Rasayan
5. Methodology of deciding the drug, dose, dosage form, anupana, pathya, apathya for Rasayan Karma.
6. Management –
  - a) Management of Jara and Akaal Jara
  - b) Management of immune deficiency disorders
  - c) Management of metabolic and endocrine disorders
  - d) Management of life style disorders
  - e) Management of degenerative disorders.
  - f) Management of pollution and toxicity related disorders
  - g) Symptomatic treatment of Kaal Jara
  - h) Procedures contraindicated in Jara
  - i) Rasayan useful in different branches of Ayurveda

- j) Rasayan drugs used in contemporary and other allied medical sciences e.g. Chinese – Ginseng, Ginko Biloba
- 7. Prevention or delaying of Jara - According to the stages
- 8. Modern perspectives of Rasayan- Immunomodulator, anti oxidants, tissue supplements, neutropics, disease modifying anti arthritics drugs, prebiotics, probiotics, Nano-Bio technological products etc.
- 9. Recent advances in Rasayan
- 10. Research methodologies in Rasayan

### **Part-B**

#### **Vajikaran Aushadhi Vigyan**

1. Classification of Vajikaran Drugs –
  - a) Vajikar, Vrishya, Chatakvat, Hastivat, Punsatvakar, Apatya Santankar, Shukra Janak, Shukra Pravartak, Shukrasrutikar, Shukravridhikar, Shukrasrutivridhikar, Shukrastambhaka, Shukrarechak and Shukrashosaka.
  - b) Single herbal drugs used in Vajikaran and their efficacy.
  - c) Herbomineral-metallic and aqua marine compounds used in Vajikaran and their efficacy.
  - d) Compound formulations mentioned in Ayurveda as Vajikar.
  - e) Detailed Study of Vajikaran Yoga -
    - i. Drugs used in Male infertility
    - ii. Drugs used in Female infertility
2. Management-
  - a) Management of sexual dysfunctions with Vajikaran Dravya.
  - b) Invasive and noninvasive procedures in Vajikaran
  - c) Uttarbasti- Its indication and contraindication, method, drugs used, precaution and complication.
  - d) Application of Panchkarma in infertility management
  - e) Surgical procedures and implants in Vajikaran
  - f) Management of male and female infertility
  - g) Assisted reproductive techniques (IVF, IUI, ICSI, GIFT, ZIFT, etc).
  - h) Use of Vajikaran drugs in different branches of Ashtanga Ayurveda.
  - i) Vajikaran drugs used in contemporary and other allied medical sciences. e.g. Chinese Ginseng, etc.
3. Modern perspectives of Vajikaran.
4. Pumsavan karma - Gender selection, legal aspects of sex and reproduction.
5. Recent Advances and Research Methodologies in Vajikaran.

### **PRACTICALS**

#### **Contents of Practicals**

1. Knowledge and practical aspects of Rasayan and Vajikaran.
2. Knowledge of Panchkarma procedures relevant to Rasayan and Vajikaran like Snehan Swedana, Vamana, Vircehana, Basti, Nasya and Samsarjan Krama.
3. Knowledge and interpretation of various Laboratory investigations relevant to Rasayan Vajikaran like Haemoglobin, TLC, DLC, ESR complete blood chemistry, LFT, Lipid profile, Urine examination, Semen examination, Hormonal assays etc.
4. Knowledge of current trends in Geriatrics and Sexology relevant to Rasayana and Vajikaran.

**Pattern of Practical examination**

|  |                  |
|--|------------------|
| 1. Interpretation of Lab investigations                        | 10 Marks         |
| 2. Knowledge of Panchkarma procedures in Rasayan and Vajikaran | 10 Marks         |
| 3. Case record of Rasayan                                      | 10 Marks         |
| 4. Case record of Vajikaran                                    | 10 Marks         |
| 5. Project Work  | 20 Marks         |
| 6. Viva-voce   | 40 Marks         |
| <b>Total</b>   | <b>100 Marks</b> |

**Text Books for Reference**

|  |  |
|--|--|
| 1. Vajikaran Tantra  | : Dr. J.L.N. Shastri & Dr. K. Nishteshwar                |
| 2. Aphrodisiacs and treatment of Impotence in Alternative system of medicine | : Dr. P.V.V. Prasad, Mohd. Siddique and Dr. Abdul Wadood |
| 3. Rajit Roga Shastra (Part I & Part II)                                     | : Dr. Shiv Kumar Shastri                                 |
| 4. Santati Nigraha   | : Dr. Shivdayal Gupta                                    |
| 5. Kamashastra antargat Vajikaran Vigyan                                     | : Prof. Jyotirmitra                                      |
| 6. Ayurvediya Rasayan Sar  | : Dr. Shailaja Shrivastava                               |
| 7. Rasayan Sar (Part I & Part II)  | : Dr. Shyam Sunder Acharya                               |
| 8. Rasayan Khand   | : Dr. Indra Dev Tripathi                                 |
| 9. Rasayan Tantra  | : Dr. Pakshdhar Jha                                      |
| 10. Ayurved Chikitsa Vigyan  | : Prof. Banwari Lal Gaur                                 |



## AYURVEDIC COSMETOLOGY AND SKIN DISEASE

(त्वक सौन्दर्य एवं रोग विज्ञान)

### D. Dermatology (Ay.) First Year

Theory (Two papers) - Maximum Marks -100(each)  
Practical (one) – Maximum Marks-100

#### Paper - I

#### Physiopathology of Tvak and Saundarya Vigyan

##### Part-A

1. Introduction and scope of Tvak Vigyan.
2. Embryological development and anatomy of Tvak and skin.
3. Applied anatomy of Tvak- Ayurveda and Modern aspect.
4. Description of Svedavah Srotas and Kleda and applied patho-physiology of sweat.
5. Applied physiology of Tvak (Skin) in Ayurveda and Modern aspect and Srotas Vivechan in relation to skin.
6. Applied anatomy of Nail.
7. Applied aspects of Tvak as adhistan of Indriya, Dosha and Dushya.
8. Trividha, Chaturvidha, Panchvidha, Shadvidha, Ashtavidha and Dashavidha Pariksha in diagnosis of Tvak and Yaun Sankramak Roga.
9. Varna, Chhaya, Prabha and their Vikar.
10. Role of Prakriti and Sara in health and Vikar of Tvak, Keshha and Loma.
11. Role of Ahar and Vihar in maintenance of healthy skin.
12. Role of Mana in Prakriti and Vikriti of Tvak
13. Cosmetology: Ayurved and Modern aspect.
  - a) Basics of skin care, beauty and biochemistry.
  - b) Review of single and compound drugs in Ayurved and Sanskrit literature for Saundarya Prasadhan.
  - c) Natural care of skin and preventive measures.
  - d) Lepa, Pralepa, Pradeha, Udvartan, Dhoopan, Abhyanga, Swedan, Utsadan, Avasadan, Krishnakarma, Pandukarma, Pratisaran, Romsanjanan, Lomapaharan for Saundarya Prasadhan and Tvak Vikar.
  - e) Prevention and management of ageing related Tvak Vikar.
  - f) Breast care and Stan Vriddhikar Chikitsa.
  - g) Hair care in Ayurved.
  - h) Role of Rasayan in promotion of skin health.

##### Part-B

1. Knowledge of various lesions:
  - a) Pitika, Pidaka, Visphot, Utsedh, Mandal, Sanrambh, Pak, Koth, Utkoth, Granthi, Arbud, Vidradhi, Vaivarnya, Vyang, Charmakeel, Mansankur, Arsha, Kikkis, Vali, Vranavastu, Tvakvidaran and Valmik.
  - b) Primary lesions – Macule, patch, papule, nodule, tumor, plaque, vesicle, pustule, bullae, cyst, wheal, telangiectasia.

- c) Secondary lesions: Scale, crust, erosion, ulcer, scar, atrophy, sclerosis, excoriations, burrow, comedo, milium.
2. Histopathological, microbiological (bacterial and fungal) skin test such as skin biopsy, skin scrapping, wood's light examination, Lepromin test, VDRL, Allergy test, patch testing etc.
3. Inflammation, de-generation, atrophy and hypertrophy in relation to skin.
4. Role of Krimi in various Tvak Vikar.
5. Role of Asatmya, Viruddhahar-Vihar in Tvak Vikar.
6. Knowledge of Tvak related to Arishta Lakshana.
7. Knowledge of immunity and genetics in relation to Tvak Vikar.

### **Paper -II**

#### **Principles of management of Tvak Roga and Kushtha Roga**

##### **Part-A**

1. Principle of management of Tvak Vikar evam Yaun Sankramak Roga in Ayurveda and Modern.
2. Role of various Shodhana measures and Raktamokshana specially Jalaukavacharana in Tvak Vikar evam Yaun Sankramak Roga.
3. Agnikarma, Ksharakarma, Shastrakarma in Tvak Vikar evam Yaun Sankramak Roga.
4. Kushthahara, Udarda prashamana, Tvachya, Varnya, Kandughna, Rakta prasadak, Rakta shodhak drugs.
5. Pathya, Apathya and Nidan parivarjan in Tvak Vikar evam Yaun Sankramak Roga.
6. Role of Sadvritta, Satvavajaya, Yoga and Rasayan in Tvak Vikar evam Yaun Sankramak Roga.
7. Recent advances in management of Tvak Vikar evam Yaun Sankramak Roga.

##### **Part-B**

1. Introduction to Kushtha.
2. Nidan, Purvarupa, Rupa, Upasaya and Samprapti of various Kushtha.
3. Various classifications of Kushtha.
4. Diagnostic methods, modern co-relation, differential diagnosis of each type of Mahakushtha and Kshudrakushtha.
5. Principles of management of each type of Kushtha including Dhatugat Avastha.
6. Detail management of all Mahakushtha and Kshudrakushtha
7. Upadrava of Kushtha and their management.
8. Sadhyata and Asadhyata of Kushtha.
9. Leprosy, its Ayurvedic co-relation and modern management in light of National Leprosy Eradication Programme.

## **Second Year**

Theory (Two papers) - Maximum Marks -100(each)

Practical (one) –Maximum Marks-100

### **Paper - I**

#### **Kilasa, Kshudra Roga Evam Anya Tvak Roga**

##### **Part-A**

1. Kilasa / Shvitra - etiopathogenesis, types, diagnosis and management.
2. Ayurvedic co-relation and management of Pigmentary skin disorders – Vitiligo, Leucoderma, Albinism, Pityriasis Versicolor, Melasma and Generalized Hyperpigmentation.
3. Ayurvedic co-relation and management of photosensitivity and photo induced disorders with environmental factors, sun burn, tanning, ultra violet radiation, skin related adverse drug reactions, photo dermatosis, localised heat urticaria, solar urticaria, cold urticaria, acrocyanosis, cold panniculitis, cold erythema, Raynaud's phenomenon.
4. Ayurvedic co-relation and management of cutaneous reaction to allergens and pollutants borne by the air, cutaneous reaction to cold, frost bite, trench foot, immersion foot, chilblains.
5. Ayurvedic co-relation and management of keratinisation and papulosquamous disorders: ichthyosis, corns, follicular keratosis, psoriasis
6. Knowledge of trichology.
7. Ayurvedic co-relation and management of alopecia, baldness, hypertrichosis, hirsutism and graying of hair.
8. Ayurvedic co-relation and management of sweat glands and sebaceous glands related disorders.

##### **Part-B**

1. Introduction to Kshudra Roga and their Modern correlation.
2. Diagnosis and management of all types of Kshudra Roga in relation to Tvak Vikar evam Yaun Sankramak Roga.
3. Diagnosis and management of all types of Prameha Pidika
4. Ayurvedic co-relation and management of Acne, Acneform eruptions and Rosacea
5. Diagnosis and management of Shitapitta, Udarda, Kotha, Utkotha
6. Ayurvedic co-relation and management of Urticaria, Urticarial vasculitis, Cholinergic urticaria, Angioedema, Insect bite.
7. Tvakgata Vata- lakshana and chikitsa.
8. Diagnosis and management of Vishphota.
9. Ayurvedic co-relation and management of Vesiculobullous skin disorders, viz –
  - a) Genetic bullous disorders like Epidermolysis bullosa, Epidermolysis bullosa simplex, Junctional epidermolysis bullosa, Hailey disease.
  - b) Autoimmune blistering disorders like Pemphigus, Bullous pemphigoid, Bullous SLE.
10. Knowledge of Skin tumors and its Ayurvedic management.

**Paper - II**  
**Sankramaka Tvak Roga and Yaun Roga**  
**Part-A**

1. Diagnosis and management of Shuka Roga.
2. Diagnosis and management of Guhya Roga.
3. Diagnosis and management of Phirang (Syphillis), Upadansha, Puyameha (Gonorrhoea)
4. Ayurvedic co-relation and management of skin disorders in AIDS.
5. Sexually transmitted infection and mucocutaneous manifestation:
  - a) Viral infection - Herpes Simplex, Warts, Molluscum Contagiosum.
  - b) Bacterial infection
  - c) Fungal infection - Candidiasis
6. Ayurvedic co-relation and management of Inflammatory dermatosis, Atopic dermatitis, Seborrhoeic dermatitis, Lichen simplex chronicus, Exogenous eczema, Irritant contact dermatitis, Allergic contact dermatitis, Phytodermatitis, Infective dermatitis.

**Part-B**

1. Diagnosis and management of all types of Visarpa.
2. Ayurvedic co-relation and management of viral skin infection: Herpes Simplex, Herpes Zoster, Warts and Molluscum Contagiosum.
3. Ayurvedic co-relation and management of fungal skin infection: Pityriasis versicolor, Candidiasis, Madurai foot, Dermatophytosis, Tinea Corporis, T. Cruris, T. Pedis and T. Capitis.
4. Ayurvedic co-relation and management of bacterial skin infections: Furuncle, Carbuncle, Folliculitis, Impetigo, Erysipelas, Cellulitis, Lupus vulgaris, Tubercular and non-tubercular Mycobacterial infection.
5. Ayurvedic co-relation and management of protozoal and parasitic skin infestation: Scabies, Dracunculiasis, Filariasis, Ascariasis, Pediculosis enterobiasis
6. Introduction to Paediatric, Geriatric and Occupational dermatology.

**PRACTICALS**

**Content of Practical**

1. Laboratory investigation and histopathology :
  - a) KOH preparation
  - b) Tzanck Smear
  - c) Wood's light examination
  - d) Lepromin test
  - e) Patch testing
  - f) VDRL
  - g) Biopsy
  - h) Allergy test and Hyposensitisation
  - i) Diascopy
2. Routine haematological, biochemical and pathological investigations and other routine lab investigations.

3. History taking of cases of Tvak Vikar evam Yaun Sankramak Roga:
  - a) Importance of personal history
  - b) Importance of associated complaints
  - c) Importance of family history
  - d) Importance of previous illness and its medication
  - e) History of vaccination
  - f) Importance of previous surgical interventions
  - g) Importance of present medication
  - h) Importance of occupational history: nature of work, time of work and climatic influences in working places.
  - i) Importance of food habits
  - j) Effects of drug abuse
  - k) Importance of personal hygiene
  - l) Importance of public hygiene
4. Clinical examination
  - a) Types of skin lesions
    - i. Primary
    - ii. Secondary and special
  - b) Pattern of skin lesions
  - c) Shape and surface of lesions
  - d) Distribution of lesions
  - e) Examination of all srotas
5. Clinical tests: Auspitz's sign, Nikolsky's sign, Darier's sign, Dermatographism, etc.
6. Panchkarma
  - a) Bahya Parimarjan Chikitsa
  - b) Vamana
  - c) Virechana
  - d) Basti
  - e) Nasya Karma
7. Raktamokshana:
  - a) Sira Vyadhana
  - b) Jalaukavacharana
8. Kshar Karma
9. Advance management and preventive measures in skin diseases

**Pattern of Practical Examination**

|   |                  |
|---|------------------|
| 1. Case Records                                       | 10 Marks         |
| 2. Knowledge and Interpretation of Lab Investigations | 10 Marks         |
| 3. Upakarma   | 10 Marks         |
| 4. Project Work                                       | 20 Marks         |
| 5. Viva-voce  | 50 Marks         |
| <b>Total</b>  | <b>100 Marks</b> |

### Text Books for Reference

1. Charak Samhita of Agnivesa with Chakrapani Tika
2. Sushruta Samhita of Sushruta with Dalhan Tika
3. Ashtanga Samgraha of Vagbhata with Indu Tika : Dr. Shivprasad Sharma
4. Ashtanga Hridaya with Arundatta and Hemadri Tika : Pt. Harishastri Paradkar
5. Bhavaprakash of Bhavmishra with Vidyotini Tika : Pt. Brahma Sankara Mishra
6. Sharangdhar Samhita with Dipika Tika : Dr. Brahmanand Tripathi
7. Bhaisajyaratnawali with Vidyotini Tika : Vd. Rageshwardatta Shastri
8. Chakradatta with Vaidyaprabha Hindi Commentary : Prof. Ramnath Dwivedi
9. Yogratnakar with Vidyotini Hindi Commentary : Bhashagaratna Brahmashankar Shastri
10. Shabda Kalpadruma : Radhakanta Deva
11. Ayurvedic Beauty Care : Melanie Sachs
12. Ayurvediya Shabdakosha : Vaidya Venimadhav shastri Joshi
13. Geriatrics in Ayurveda : Dr. S. Suresh Babu
14. AIDS evam Ayurveda : Dr. Hiralal Shivhare
15. An Illustrated Hand Book of Skin Diseases and Sexually Transmitted Infection : Uday Khopkar
16. Roxburgs Common Skin Diseases : Ronald Marks
17. Adams Occupational Skin Diseases : Adam
18. Dermatological Diseases A Practical Approach : Venkatraman Mysore
19. Clinical Methods in Dermatology and Venereology : J. S. Pasricha, Binod Khaitan
20. Illustrated Text Book of Dermatology : J. S. Pasricha, Ramji Gupta
21. Text Book of Clinical Dermatology : Virendra N. Sehgal
22. Harrisons Principles of Internal Medicine : Dennis Kasper
23. API Text Book of Medicine : Dr. Siddharth N. Shah
24. Essentials of Dermatology Venereology and Leprosy : S. P. Chattopadhyay
25. Clinical Leprosy : Virendra N. Sehgal
26. Text Book of Dermatology Venereology and Leprology : Devinder M. Thappa
27. Colour Atlas of Dermatology : L. K. Bhutani
28. Text Book of Dermatosurgery and Cosmetology : Satish Sawant
29. Illustrated Synopsis of Dermatology and STD : Neena Khanna
30. Clinical Anatomy for Medical Students : Richard Snell
31. Principles of Anatomy and Physiology : Tortora and Grabowski
32. Text Book of Medical Physiology : Guyton and Hall.

## **KSHAR KARMA**

### **D. Kshar Karma First Year**

Theory (Two papers) - Maximum Marks -100 (each)  
Practical (one) – Maximum Marks-100

#### **Paper - I Basic principles Part-A**

Introduction to Shalya Tantra - definition and importance of Shalya Tantra, qualities of surgeon.

1. Trividha karma- Poorva karma, Pradhan karma and Pashchat karma (preoperative, operative and post operative) procedures related to application of Kshara and Kshara Sutra in ano-rectal disorders.
2. Surgical ethics.
3. Basic surgical concepts and practice of surgery.
4. Anatomy and physiology of ano-rectal region.

##### a) Ayurvedic View

Anatomical concepts of Guda in Ayurveda, development, various measurements, Guda vali, Uttaraguda and Adharaguda, Guda as a Marma. Function of Uttarguda and Adharaguda. Importance of Guda valis and their functions in act of defaecation. Concept of Apana Vayu and its function. Importance of Apana Vayu in act of defaecation, micturation and its involvement in the development of various ano-rectal disorders. Features of vitiated Apana vayu and measures of pacification.

##### b) Modern View

Anatomical structures in ano-rectal region, anatomy of anal canal, rectum, perianal area, perianal skin, fascia, muscles, anal sphincters, supports of rectum and anal canal, various structures / spaces around anal and perianal area and their significance in ano-rectal disorders. Anal gland, anal crypts, anal mucosa, anal valves, land marks of anal canal and rectum. Venous and arterial supply, venous plexus, speciality of vascular supply of rectum and anal canal. Lymphatics and innervations of rectum and anal canal. Pudendal canal (Alcocks canal) its contents and importance. Peritoneal reflections, facial covering of rectum, pelvic diaphragm, male and female perineum. Histological structures of rectum and anal canal. Functions of anal canal, rectum, perianal muscles, anal sphincter, act of defaecation, storage of waste product, structures in relation to anorectal area and their functional impact on anorectal area in relation to anorectal disorders. Continence and incontinence, assessment of anal sphincter tone.

### **Part-B**

1. Knowledge of equipments/surgical instruments used for diagnosis and management of ano-rectal disorders. Instruments useful in the diagnosis and treatment of Fistula-in-ano. Dr.P.J.Deshpande's instruments for the use of Kshara karma.
2. Sterilization – Importance, methods and their application.
3. Diagnostic investigations for ano-rectal disorders, knowledge of Radiograph, Fistulogram, Sonogram, Sonography, CAT-Scan, MRI and other updated equipments.
4. Introduction to Research Methodology and Bio Statistics

### **Paper-II**

### **Ayurvedic and Modern Drugs Pharmacology**

#### **Part-A**

1. Detailed description of Kshara –
  - a) Definition, types- Pratisaraneeya Kshara and Paneeya Kshara , properties, pharmacological actions of drugs, chemical constituents, method of preparation, its standardization, sterilization and storage.
  - b) Indications, contraindications and complications of Kshara karma.
2. Ksharsutra preparation –
  - a) Historical aspects, various drugs used for its preparation including their identification, collection, properties, pharmacological actions of drugs, chemical constituents, method of preparation, its standardization, sterilization and storage.
  - b) Indications and contraindications and complications of Kshara Sutra in Ano-rectal diseases.
  - c) Various other Kshara preparations like – Kshar varti and Kshar pichu.
3. Pharmacodynamics of Kshara -  
Chemical analysis, pH value, probable mode of action like penetration, necrotic and dissolution actions of Kshara.
4. Description of Paneeya Kshara and its indications.

#### **Part-B**

1. Detailed study of pharmacology of the following drugs used in the management of ano-rectal disorders.

|                            |                  |
|----------------------------|------------------|
| (a) Antibiotics            | (b) Laxatives    |
| (c) Analgesics and NSAID's | (d) Haemostatics |
| (e) Anaesthetic agents     |                  |
2. Ayurvedic drugs used in ano-rectal disorders



## Second Year

Theory (Two papers) - Maximum Marks -100(each)

Practical (one) –Maximum Marks-100

### Paper - I

#### Nidan and Chikitsa

##### Part-A

1. Nidan, Samprapti, Lakshana and Chikitsa of Vrana Shopha, Vrana and Nadi Vrana.
2. Aetiopathogenesis, types, signs and symptoms of inflammation, wound, sinus & pilonidal sinus.
3. Nidan, Samprapti, Lakshana and Chikitsa of Guda vidradhi.
4. Bhagandar Pidika and Bhagandar –  
**Bhagandar Pidika** – Aetiology, types, clinical presentation, character, differential diagnosis, investigations, curable and incurable varieties, prevention and management of Bhagandar Pidaka.  
Perianal, ischio-rectal, sub mucosal and other abscesses in the ano-rectal area and perineum; their clinical presentation, investigations, differential diagnosis and management.  
**Bhagandar-** Aetiopathogenesis, types, classifications, clinical presentations, diagnosis, investigations, methods of treatment and prognosis, surgical principles, pre-operative preparations, types of incisions, operative techniques in Ayurveda for the management of Bhagandar. Post operative measures, Complications and their management.  
Medical management - conservative and para surgical procedures like Kshara and Agni karma in the treatment of Bhagandar.

##### Part-B

Fistula -in-ano:

1. Its definition, aetiology, classifications, clinical presentation and diagnostic modalities
2. Complicated fistulae and their management – Treatment of difficult and complicated fistula-in-ano e.g. blind internal, blind external, supra levator extension, multiple fistula-in-ano, long perineal and gluteal extension. Horse shoe type fistula-in-ano, recurrent fistula-in-ano.
3. Fistulae other than crypto glandular origin - Fistula communicating with other organs like urethra, vagina, and urinary bladder, traumatic fistula etc.
4. Treatment of fistula-in-ano – Different modalities of fistula-in-ano; fistulectomy, fistulotomy, fistulectomy with primary closure, fistulectomy with skin grafting, etc, Seton treatment of fistula-in-ano; indications and contraindications, merits and demerits.
5. Management of fistula in ano in patients suffering from Diabetes, HIV, Tuberculosis, IHD and in those on steroid therapy.
6. Pre operative measures - Different Pre-operative preparation related to application of Kshara and Ksharsutra in anorectal diseases specially fistula-in-ano.
7. Post operative care - Postoperative care, wound care, urinary problems and follow up patients, etc.
8. Adjuvant therapy - Analgesics and Antibiotics and other Ayurvedic medicines in the management of fistula-in-ano.

**Paper - II**  
**Nidan and Chikitsa**  
**Part-A**

1. Arshas (Haemorrhoids)
  - a) Definition, aetiopathogenesis, prodromal features, types, clinical features, diagnosis, differential diagnosis, complications, prognosis and management according to Ayurveda and Modern.
  - b) Management of Arsha by Kshara lepa and Kshara sutra – Indications, method of application, observations and post operative observations.
2. Parikartika (Fissure-in-ano)  
Definition, aetiopathogenesis, prodromal features, types, clinical features, diagnosis, differential diagnosis, complications, prognosis and management according to Ayurveda and Modern.
3. Guda Bhramsha (Prolapse of rectum): Definition, aetiopathogenesis, clinical features and management according to Ayurveda and Modern medicine.

**Part-B**

1. Management of pain during and after Ksharsutra therapy and measures to minimize the pain.
2. Problems and complications of Kshara Karma and Ksharsutra therapy e.g. pain, haemorrhage, infection, delayed cutting, recurrence, incontinence, strictures etc. and their management.
3. Modified technique of Ksharsutra in treatment of fistula-in-ano by Ksharsutra. Combination of surgery and Ksharsutra therapy.
4. Diagnosis of Malignancies and referral :
  - a) Malignancy of prostate
  - b) Malignancy of anal canal and rectum
  - c) Malignancy of external genitalia, cervix and uterus
  - d) Any other condition requiring immediate intervention /referral to an appropriate facility.
5. Update knowledge of Research and recent advances in the field of Kshara karma.

**PRACTICALS**

**Contents of Practical**

1. Case history recording and demonstration of Kshara Karma on patients.
2. Guidelines for Practical Training:
  - a) History taking and clinical examination of ano-rectal diseases.
  - b) Application of Kshara Karma-

|          |   |           |
|----------|---|-----------|
| Observed | - | 100 cases |
| Assisted | - | 50 cases  |
| Operated | - | 25 cases  |
3. Clinical examination of ano-rectal diseases includes rectal examination, digital examina-

- tion, abdominal examination and inguinal examination.
4. Special Investigations:
    - a) Proctoscopy
    - b) Sigmoidoscopy
    - c) Techniques of fistulogram
    - d) Anal manometry
    - e) Any other latest diagnostic radiological investigations.

#### **Pattern of Practical Examination**

|   |                  |
|---|------------------|
| 1. Case Record  | 20 Marks         |
| 2. Applicability of Kshara Karma in different diseases particularly in reference to the Fistula-in-Ano, Haemorrhoids etc. | 30 Marks         |
| 3. Project Work   | 20 Marks         |
| 4. Viva-voce  | 30 Marks         |
| <b>TOTAL</b>  | <b>100 Marks</b> |

#### **Text Books for Reference**

1. Relevant portions of Sharir Rachana and Kriya from Bhrihatrayee and Laghutrayee.
2. Clinical Anatomy for Medical student : Snell
3. Text Book of Medical Physiology : Guyton and Hall
4. Manual of Surgical Instruments and Procedures : M.M.Kapur
5. Kshara Sutra : RAV
6. Essentials of Medical Pharmacology : K.D. Tripathi
7. Primary Anaesthesia : Maurice King
8. Relevant portions from Bhrihatrayee and Laghutrayee
9. Surgery of Colon, Rectum and Anus : Rob and Smith
10. Surgery of the Anus, Rectum and Colon : Goligher. JC
11. Demonstration of Physical signs in clinical surgery : Hamilton Bailey
12. Treatment of Fistula-in-ano by a new technique : P.J. Deshpande and K.R.Sharma.

13. Standardisation of Kshara Sutra – Ayurvedic medicated thread used in the management of Fistula-in-ano : Anupam Sharma, Manisha Mehata, Handa S.S et al Jr. Proct. Feb. 1993
14. IMCR centre for advanced Pharmacological Research on Traditional Remedies, CDRI Lucknow.
15. Dr. P.J. Deshpande's instruments for the use of Kshara Karma.

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**ROGA NIDAN VIDHI (DIAGNOSTIC TECHNIQUES)**  
**[Diploma in Clinical Pathology-Ay] D.C.P (Ay.)**  
**First Year**

Theory (Two papers) - Maximum Marks -100(each)  
Practical (one) – Maximum Marks-100

**Paper - I**  
**Principles of Roga Nidan and General Pathology**  
**Part-A**

**Roga Nidan**

Importance of Roga Nidan in clinical and laboratory practice.

1. Dosha Dushya Vigyan
2. Concepts of Agni and Ama
3. Concept of Vyadhi Kshamatwa
4. Sroto Vigyan
5. Nidan Panchaka
6. Shatkriya Kaal.

**Part-B**

**General Pathology**

Basics of Pathology-

1. Cell injury
2. Inflammation and repair.
3. Haemodynamic disorders.
4. Neoplasia.
5. Immunopathology.
6. Environmental disorders
7. Nutritional disorders
8. Hereditary and genetic disorders

Principles of Laboratory medicine-

1. General concepts and administrative issues
2. Optimizing laboratory work flow and performance
3. Principles of instrumentation
4. Clinical laboratory automation
5. Quality Control
6. Laboratory Statistics
7. Anticoagulants
8. Biomedical waste management

**Paper – II**  
**Vyadhivigyan, Clinical Pathology and Chemical Pathology**  
**Part-A**

**Clinical Pathology**

Haematology and Blood Banking -

1. Collection of specimen, labelling, documentation and processing
2. Staining and reporting of smears
3. Complete Haemogram.
4. Special staining methods for blood cells.
5. Investigations in haemolytic anemias and haemorrhagic disorders.
6. Bone Marrow examination
7. Haematopoiesis
8. Erythrocytic Disorders
9. Leukocytic Disorders
10. Transfusion Medicine : Blood bank serology, ABO grouping, Rh typing, special blood groups, blood banking, selection of donors, investigations in transfusion reactions.
11. Coagulation disorders

**Part-B**

**Chemical Pathology**

1. Ayurvedanusara Vishesha Pariksha –Mutra-Purisha-Sweda-Rakta-Stanya-Nishtiva-Shukra-Vamita Dravya –Puya Pariksha
2. Examination of urine, body fluids and stool.
3. Collection of blood, anti coagulants, protein precipitants.
4. Colorimetry, chromatography and electrophoresis.
5. Estimation of Blood sugar , Urea ,Creatinine,Proteins,Bilirubin,Lipid profile, LFT, Uric acid, Electrolytes,Calcium and Enzymes, T3, T4, TSH, HCG, etc.
6. Use of autoanalyzer techniques.

**Second Year**

Theory (Two papers) - Maximum Marks -100(each)

Practical (one) –Maximum Marks-100

**Paper-I**

**Rogi Roga Pariksha and Clinical Methods**

**Part-A**

**Rogi Roga Pariksha**

1. Knowledge and clinical application of various examination tools mentioned in Ayurveda- Trividha pariksha, Chaturvidha Pariksha, Shadvidha Pariksha, Ashtavidha pariksha, Dasavidha Pariksha, Dwadasvidha Pariksha etc.

## **Part-B**

### **Microbiology, Immunopathology, Histopathology Methods Clinical Microbiology and Serology**

1. Collection, handling, documentation and selection of material for important procedures.
2. Use of various microbiological stains.
3. Use of various culture media and identification of bacteria by specific procedures.
4. Antibiotic sensitivity tests.
5. Sterilization and disinfection.
6. Identification of fungi in specimen and culture.
7. Diagnostic procedures in important viral infections.
8. Serological techniques, Widal, Weil Felix, VDRL, HIV, HBV, CRP, RF, ASO and Pregnancy tests.

## **Paper – II**

### **Immuno-Pathology and Histo-Pathology Part-A**

#### **Immuno-Pathology**

1. Overview of the immune system and immunologic disorders.
2. Immunoassay and immunochemistry
3. Laboratory evaluation of the cellular immune system
4. Laboratory evaluation of immunoglobulin function and humoral immunity
5. Mediators of inflammation: complement systems, cytokines and adhesion molecules
6. Clinical and laboratory evaluation of immunodeficiency disorders
7. Clinical and laboratory evaluation of autoimmune diseases
8. Clinical and laboratory evaluation of hypersensitivity reactions

## **Part-B**

#### **Histo-Pathology**

1. Collection of specimen, labelling, documentation, fixation.
2. Grossing techniques and tissue processing.
3. Cutting and staining of sections, use of special stains and immunocytochemistry, frozen sections
4. Interpretation and reporting.
5. Museum techniques.
6. Cytological techniques including FNAC – preparation, staining and reporting.

## PRACTICALS

### Contents of Practical

1. Laboratory Postings in various sections of Laboratory with Laboratory record book detailing, Collection, Processing and recording of the readings, Handling of Various instruments.
2. All investigative procedures, finalisation and opinion on the report.

### Pattern of Practical Examination

|                              |                  |
|------------------------------|------------------|
| 1. Laboratory Record book    | 10Marks          |
| 2. Laboratory Investigations | 40 Marks         |
| 3. Spotting                  | 10 Marks         |
| 4. Project Work              | 20 Marks         |
| 5. Viva-voce                 | 20 Marks         |
| <b>Total</b>                 | <b>100 Marks</b> |

### Text Books for Reference

1. Vyadhi Vigyan : Yadavji
2. Madhava Nidan (with Madhukosha Vyakhya)
3. Kaya Chikitsa (Part 1) : Ramraksha Pathak
4. Charak Samhita-Nidan-Vimana-Indriya Sthana
5. Charak, Sushrut, Vagbhata-Related reference
6. Rogi Roga Pariksha Paddhati : Dr.Govind Prasad Upadhyay
7. Ayurvediya Nadi Pariksha Vigyan : Dr.Govind Prasad Upadhyay
8. Vikruti Vigyan : Vd.Vidhyadar Shukla
9. Clinical Pathology : Shivnath Khanna
10. Clinical methods in Ayurveda : Dr. K.R.Srikanta Murthy
11. Ayurvediya Vikriti Vigyan and Roga Vigyan : Dr.P.S.Byadgi  
(Vol I & II)
12. Chest X-Ray made easy : Elsevier, Churchill Livingstone
13. Interpretation of diagnostic tests : Jacques Wallach M.D
14. Medical laboratory technology – Methods and interpretation : Dr. Sood
15. Interpreting ECG : P.J Mehta
16. Essential laboratory medicine : V.H.Talib M.D
17. Clinical radiology for medical students : G.M. Roberts, J.P.Hughes,  
M.D.Hariharan
18. Clinical pathology
19. Harper's illustrated biochemistry : Robert.K.Murray



|  |                    |
|--|--------------------|
| 20. Text book of Microbiology                        |                    |
| 21. Text book of Pathology                           | : Robins           |
| 22. Text book of Pathology                           | : Harshmohan       |
| 23. Pathologic basis of disease                      | : Robbins          |
| 24. Pathology  | : Anderson         |
| 25. Oxford text book of Pathology                    |                    |
| 26. General Pathology                                | : Walter & Israel  |
| 27. Systemic Pathology                               | : Symmers          |
| 28. Surgical Pathology                               | : Ackerman         |
| 29. Surgical Pathology and Cytology                  | : Silverberg       |
| 30. Soft Tissue Tumours                              | : Enzinger         |
| 31. Histopathology of the Skin                       | : Lever            |
| 32. Gynaecologic and Obstetric Pathology             | : Novak            |
| 33. Diagnostic Cytology                              | : Koss             |
| 34. Fine Needle Aspiration Cytology                  | : Orell            |
| 35. Clinical Haematology                             | : Wintrobe         |
| 36. Tumours of bone                                  | : Mirra            |
| 37. Haematology                                      | : De Gruchy        |
| 38. Practical Haematology                            | : Dacie            |
| 39. Histopathology techniques                        | : Bancroft/Culling |
| 40. Clinical diagnosis and management by lab methods | : Todd Sanford     |
| 41. Medical Microbiology                             | : Cruickshank      |
| 42. Short textbook of Chemical Pathology             | : Baron            |
| 43. Essential Immunology                             | : Roitt            |
| 44. Autopsy Pathology                                | : Rezek Millard    |
| 45. Transfusion methods                              | : Mollison         |

**AYURVEDIC SANGYAHARAN**  
**Diploma in Anaesthesiology -Ay. [D.A. (Ay.)]**  
**First Year**

Theory (Two papers) - Maximum Marks -100(each)  
Practical (one) – Maximum Marks-100

**Paper - I**

**Sangyahan Siddhant - Basic Sciences related to Sangyahan (Anaesthesia)**

**Part-A**

1. History and development of Sangyahan and Anaesthesiology.
2. Nirukti and definition of Sangyahan.
3. Shishyopanayan (Induction).
4. Vishikhanupraves (Internship).
5. Agropaharaniya (Preanaesthetic measures)
6. Knowledge of Yantra-Shastra
7. Dosha-Dhatu-Mala and Prakriti in Sangyahan.
8. Shat Kriya Kaal.
9. Roga-Rogi pariksha (Examination of patients)
10. Marma and Snayu
11. Knowledge of Unmad, Mada, Murchha, Stabdhatta and Sanyas
12. Poorva Karma - Snehan, Swedan, Vaman, Virechan and Basti.
13. Sanjeevan Vidhi.
14. The relevant parts of Ayurvedic classics especially Sushrut, Charak and Ashtang Hridaya

**Part-B**

1. Knowledge and practical application of essential investigations related to anaesthesia practice - Blood, urine, stool, X-ray, ECG, Sonography, CT Scan, MRI, etc.
2. Applied anatomy and physiology of respiratory, cardiovascular, nervous system, hepato renal system, musculo skeletal and endocrine system.
3. Fluid and electrolyte balance.
4. Blood and component therapy.
5. Principles of gaseous exchange
6. Principles of preanaesthetic assessment and premedication in anaesthesia.
7. Shock and its management.
8. Knowledge of anaesthesia apparatus and equipments.
9. Breathing systems and monitoring devices.
10. Ethics and values in Sangyahan practice- consequences and importance.
11. Medicolegal aspect in the practice of Anaesthesia.

## **Paper – II**

### **Sangyahanopayogi Bhaishajya Vigyanam (Pharmacology related to Anaesthesia with Ayurvedic and Modern concepts including recent advances)**

#### **Part-A**

1. Pharmacology and clinical application of Medhya Dravya - Brahmi, Vacha, Ashvagandha, Shankhpushpi, Jatamansi, Guduchi, Madhuyasthi, Jyotishmati, etc.
2. Vedanahara Dravya-Rasna, Eranda, Nirgundi, Bhringaraja, Parijata, Shigru, Kadamba, Padmaka, Guggulu, Bhanga, Ahiphena and Godanti, etc.
3. Nidrajanana Dravya.
4. Chhardihara dravya.
5. Hridayottejaka dravya.
6. Kasahara dravya.
7. Sanjeevana dravya.

#### **Part-B**

1. Pharmacology of local anaesthetics, general anaesthetics, muscle relaxants and reversal drugs.
2. Pharmacology of drugs used in premedication
3. Pharmacology of drugs acting on autonomic nervous system, central nervous system, cardio vascular system, respiratory system and endocrine system.
4. Pharmacology of drugs used as antidepressants, cardiac stimulants and respiratory stimulants.
5. Pharmacology of drugs used in Emergency.
6. Analgesics – Narcotics and non-narcotics.

## **Second Year**

Theory (Two papers) - Maximum Marks -100(each)  
Practical (one) – Maximum Marks-100

### **Paper - I**

#### **Sangyahan Vidhi (Techniques of Anaesthesia)**

#### **Part-A**

1. Types of Anaesthesia - Local, Regional and General Anaesthesia.
2. Techniques used in Anaesthesia.
3. The instruments and equipments useful in these techniques.
4. Special technique of anaesthesia in Paediatrics, Orthopedics, Gynaecology and Obstetrics, Cardiothoracic, Neurosurgery, Plastic surgery, Eye and E.N.T. Surgery.
5. Accident in Anaesthesia.

## Part-B

Management of Anaesthesia (technique) in the following conditions:  
Diabetes, Hypertension, Jaundice, Anaemia, Respiratory diseases, Thyroid diseases, Infections, Burns, Renal failure, Musculoskeletal disorders, Pulmonary Tuberculosis, Geriatrics, Laparoscopic Surgeries- Cholecystectomy, Herniotomy and Appendectomy etc.

## Paper – II

### Vedanaharan Evam Upshaman Chikitsa (Pain and Palliative Care)

#### Part-A

1. Concept of pain in Ayurved, pain pathways, pain management by drugs and other methods. e.g. Accupressure, Acupuncture, Aroma Therapy, Magnet Therapy, Panchkarma, Jalaukavacharan, Agni Karma and Siravyadha, their principles, materials and methods with indications and contraindications.
2. Upshaman Chikitsa (Palliative care) – Methods and importance.

#### Part-B

Saghan Chikitsa (Intensive care) –

1. Establishment and management of I.C.U. / C.C.U. / H.D.U. / NICU/ MICU/ Critical care unit.
2. Critical Care medicine.
3. Monitoring and resuscitation CPR (Cardiopulmonary Resuscitation)
4. Post anaesthetic care
5. Pain clinic setup.
6. Recent advances in the field of Pain management, Palliative care, Sangyaharan and Anaesthesiology.

## PRACTICALS

### Content of the Practical

Administration and Management of all type of anaesthesia techniques in different conditions and diseases as per syllabus under guidance and supervision of senior anaesthesiologist.

Practical knowledge of setting up and working of intensive care unit.

### Pattern of Practical Examination

- |  |                  |
|--|------------------|
| 1. Project work                                  | 20 marks         |
| 2. Presentation of different type of anaesthesia | 30 marks         |
| 3. Spotting                                      | 10 marks         |
| 4. Viva-voce                                     | 40 marks         |
| <b>Total</b>                                     | <b>100 marks</b> |

### Text Books for Reference

1. Sushrut Samhita with Dalhana Commentary
2. Charak Samhita
3. Ashtanga Hridaya
4. Practice of Anaesthesia : Churchill's Davidson
5. Anaesthesia : Renald D. Miller
6. Synopsis of Anaesthesia : Alfred Lee
7. Anaesthesia : Colins
8. Other upto date Reference Books and Journals available
9. Sangyahan Prakash : Dr. D.N. Pande
10. Agnikarma – Technological Innovation : Dr. P.D. Gupta
11. Practice of Anaesthesia and Resuscitation : Dr. P.K. Gupta
12. Essentials of Anaesthesiology : Prof. A.K. Paul
13. Clinical Anaesthesia : Prof. A.K. Paul
14. Anushastra Karma : Dr. D.N. Pande

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## **CHHAYA EVAM VIKIRAN VIGYAN**

**[Diploma in Radiodiagnosis (Ay.)] D.M.R.D. (Ay.)**

**First Year**

Theory (Two papers) - Maximum Marks -100(each)

Practical (one) – Maximum Marks-100

**Paper - I**

**Fundamentals of Vikiran evam Chhaya Vigyan (Radiodiagnosis and Imaging)**

**Part-A**

1. History and development of Vikiran evam Chhaya Vigyan.
2. Shishyopanayan - as described by Sushrut in context of Vikiran evam Chhaya Vigyan.
3. Discipline (duties and responsibilities) in Vikiran evam Chhaya section. (Radiodiagnosis and Imaging Section).
4. Fundamental principles of Ayurveda and their applied aspects, specially Panch Mahabhuta, Dosh, Dhatu, Mala, Panch Nidan, Prakriti, Shatkriyakaal, Praman, Chhaya-Pratichchaya , Prabha, Pranashta Shalya Vigyan, Rogi Pariksha (Trividha, Shadvidha especially Darshan Pariksha).

**Part-B**

1. Infrastructure of an ideal Vikiran evam Chhaya Section.
2. Fundamental principles of Vikiran evam Chhaya Vigyan
3. Ethics in Vikiran evam Chhaya Vigyan.
4. Introduction to basic radio imaging techniques.
5. Environmental issues related to Vikiran evam Chhaya Vigyan, disposing or recycling of radiological materials.
6. Ionizing and non ionizing energies- relevant hazards, prevention and precautions, their management by Ayurvedic and Modern medicine.
7. Emergencies in Vikiran evam Chhaya (Radiodiagnosis and Imaging) section and their management.

**Paper – II**

**Applied Anatomy, Physiology, Pathology and Procedures in Vikiran evam Chhaya Vigyan (Radiodiagnosis and Imaging)**

**Part-A**

Applied Anatomy, Physiology and Pathology in Vikiran evam Chhaya Vigyan (Radiodiagnosis and Imaging):

1. Knowledge of Ayurvedic and Modern applied radiological anatomy (including sectional), Physiology and Pathology of the human body.

2. Sira (Vessels), Gaurya Sira (Lymphatic channels), Mansa (Muscles), Snayu (Ligaments), Kandara (Tendons), Sandhi(Joints), Nadi (Nerve), Asthi(Bones), Strotas, Marma, Antahsravi granthi (Endocrine glands) etc.
3. Urdhwajatrugata(Supraclavicular) parts- Kapaal (Skull), Karna (Ears), Chakshu (Eyes), Nasa (Nose), Paranasal sinuses, Lala granthi (Salivary glands), Face, Greeva (Neck), Sushumna (Spinal cord) and Kaseruka (Vertebrae), Mukha (Mouth), Danta (Teeth), Mastulunga (Brain), Lasika granthi (Lymph glands), etc.
4. Koshtha (Trunk) parts- Sushumna (Spinal cord) and Kaseruka (Vertebrae).
  - a. Vaksha (Thoracic) parts- Phuphus (Lungs), Hridaya (Heart) and Sira (Vessels), Shwashnalika (Trachea, Bronchi), Annamarg (Oesophagus), Lymph nodes, Stan (Breast), Hridayabandhan (Diaphragm), etc.
  - b. Udar (Abdominal) parts- Audaryakala (Peritoneum) Aamashaya (Stomach), Kshudrantra (Small intestine), Brihadantra (Large intestine), Guda (Rectum and Anal canal), Aantrapuchha (Appendix), Yakrit (Liver), Tilam (Gall bladder), Billiary channels, Pleeha (Spleen), Agnyashaya (Pancreas), Vrikka (Kidney), Gavini (Ureter), Basti (Urinary bladder), Shishna (Penis), Paurushgranthi (Prostate), Vrishan (Testes), Shukrashaya (Seminal vesicles), Dimbashaya (Ovaries), Perineum, Garbhashaya (Uterus), Yoni, Dimbavahini (Fallopian tubes), Lasika granthi (Lymph nodes), etc.
5. Shakha- parts of upper and lower extremities.

#### **Part-B**

#### **Procedures in Vikiran evam Chhaya Vigyan (Radiodiagnosis and Imaging)**

1. Equipments used in Chhaya evam Vikiran Vigyan.
2. Trividha Karma- Poorva, Pradhan and Paschaat Karma in Vikiran evam Chhaya Vigyan.
3. Dark room techniques
4. Various routine and special, non-contrast and contrast radiography, digital radiography, radiographic positions and views.
5. Various ultra sonography procedures.
6. CT, MRI, Radionuclide scanning, PET and other recent advanced procedures in radiodiagnosis and imaging, mammography, bone densitometry, interventional radiology.

#### **Second Year**

Theory (Two papers) - Maximum Marks -100(each)

Practical (one) – Maximum Marks-100

#### **Paper - I**

#### **Physics and Biology related to Vikiran evam Chhaya Vigyan (Radiodiagnosis and Imaging)**

#### **Part-A**

1. Physics of radiography, their application, Digital radiography, Fluoroscopy.
2. Physics of ultrasonography, its applied aspect related to various USG, Doppler procedures.
3. Study of contrast materials used in Radiology.

### **Part-B**

1. Physics of CT scan, its applied aspect, efficiency and limitations.
2. Physics of MRI, its applied aspect, efficiency and limitations.
3. Physics and its applied aspect related to other imaging procedures, e.g. PET, Radio Nuclides imaging, etc.

### **Paper - II**

#### **Applied Vikiran Evam Chhaya Vigyan (Radiodiagnosis and Imaging)**

#### **Part-A**

1. Study of Ayurvedic classics and Modern medical Science texts related to Vikiran evam Chhaya Vigyan.
2. Applied aspects of Vikiran evam Chhaya Vigyan and interpretation of various diseases related to system, organ and metabolism as per syllabus through X-Rays.

#### **Part-B**

1. Applied aspects of Vikiran evam Chhaya Vigyan and interpretation of various diseases related to system, organ and metabolism as per syllabus through Ultrasonography, CT scan, MRI scan and other advanced Radiological techniques.
2. Application of Vikiran evam Chhaya Vigyan in context to Ayurvedic fundamentals, diagnosis, management and research.

### **PRACTICALS**

#### **Contents of Practical**

1. Routine and Special, non-contrast and contrast radiography, interpretation and reporting.
2. Various diagnostic Ultrasonography: Routine, various Endo-USG, Garbha vinishchaya, Masanumasik Garbha vridhhi, Garbha swasthya and vyadhi, Vikrita garbha, Apra, Nabhinadi darshan, Apra / Garbha Apatan, Yonivyapat, Vandhyatva, Garbhashayabhransha, Doppler, USG guided techniques, Interpretation and reporting etc.
3. Mammography, Bone Densitometry- interpretation and reporting.
4. Interventional Radiology – interpretation and reporting.

#### **Pattern of Practical Examination**

|   |                  |
|---|------------------|
| 1. Case Record                            | 20 Marks         |
| 2. Spotting/ Investigative Spot Diagnosis | 30 Marks         |
| 3. Project Work                           | 20 Marks         |
| 4. Viva-voce                              | 30 Marks         |
| <b>Total</b>                              | <b>100 marks</b> |



### Text Books for Reference

1. Sushrut Samhita
2. Charak Samhita
3. Ashtanga Hridaya / Samgraha
4. Introduction to Kayachikitsa : C. Dwarkanath
5. Text Book of Radiographic Positioning and Related Anatomy : Kenneth, L Bontrager, John P Lampignano
6. Procedures in diagnostic Radiology : T. Doyle, W. Have, K. Thomson
7. Radiographic positioning : Clark
8. Radiobiology for the Radiologist : Hall
9. Christensen's Physics of Diagnostic Radiology : Curry T S , Dowdey J E, Murry R C
10. Farr's Physics for Medical Imaging : Penelope Allisy, Roberts, Jerry Williams
11. Fundamental of Diagnostic Radiology : Brant
12. Diagnostic Imaging : Federle
13. Diagnostic Imaging : Peter Armstrong, Martin Wastie, Ansrea Rockall
14. Text Book in Radiology and Imaging : D. Sutton.
15. Introduction to Vascular Ultrasonography : Zwiebel , Pellerito
16. Text book in Ultrasonography : Roumack
17. Manual of Medical Diagnostic Ultrasonography : W.H.O. Scientific group
18. Computed Tomography and MRI of the whole body: Hagga.
19. Surface and Radiological Anatomy : A. Halim
20. X-Ray equipment for student Radiographers : D N and M O Chesney
21. Clinical Sonography, A Practical Guide : Roger C. Sanders, Tom Winter.

**CENTRAL COUNCIL OF INDIAN MEDICINE  
NEW DELHI**

**List of Experts who participated to review the PG Diploma Syllabus**

|                      |   |                                |   |
|----------------------|---|--------------------------------|---|
| <b>PHARMACEUTICS</b> |   | 22.                            | <b>Vd. Bhajandas Swami</b><br>Jaipur                                      |
| 1.                   | <b>Dr. M.M. Jumle</b><br>Convener                                   | 23.                            | <b>Dr. Satyanarayan Bhat</b><br>Bangalore                                 |
| 2.                   | <b>Dr. Pradeepkumar Prajapati</b><br>Jamnagar                       | 24.                            | <b>Prof. Rambabu Dwivedi</b><br>IPGTR, Jamnagar                           |
| 3.                   | <b>Dr. L.K. Dwivedi</b><br>NIA, Jaipur                              | <b>BALROGA</b>                 |   |
| 4.                   | <b>Dr. S.S. Savarikar</b><br>Mumbai                                 | 25.                            | <b>Prof. Shailaja Rao</b><br>SDM College, Hassan                          |
| 5.                   | <b>Dr. C.B. Jha</b><br>BHU Varanasi                                 | 26.                            | <b>Dr. B. M. Singh</b><br>BHU, Varanasi                                   |
| 6.                   | <b>Dr. Anand Chaudhary</b><br>BHU Varanasi                          | 27.                            | <b>Prof. Abhimanyu Kumar</b><br>NIA, Jaipur                               |
| 7.                   | <b>Dr. Ramachandra Reddy</b><br>BHU Varanasi                        | 28.                            | <b>Prof. S K Ramachandran</b><br>Govt. Ayu. Coll., Thiruvananthapuram     |
| 8.                   | <b>Dr. Ramkrishna</b><br>Susruta Ayu. Coll., Bangalore              | 29.                            | <b>Dr. Moti Rai</b><br>NIA, Jaipur  |
| 9.                   | <b>Dr. Ranges Parmesh</b><br>Himalaya Drugs Co. , Bangalore         | 30.                            | <b>Dr. BK Jaya Singh</b><br>PURI  |
| 10.                  | <b>Dr. Shajahan M.A.</b><br>Trivandrum                              | 31.                            | <b>Dr. Omkar Kulkarni</b><br>Ayurved Mahavidyalaya, Sion                  |
| 11.                  | <b>Dr. Neeraj Kumar</b><br>BHU, VARANASI                            | 32.                            | <b>Dr. Dinesh K S</b><br>V.P.S.V. Ayurveda College, Kerala                |
| <b>DIETETICS</b>     |   | 33.                            | <b>Dr. Kanak Prasad Vyas</b><br>Director, Dept. of Ayurved, Rajasthan     |
| 12.                  | <b>Prof. B L Gaur</b><br>Ex. Vice Chancellor, Raj. Ay. Uni. Jodhpur | 34.                            | <b>Prof. S D Sharma</b><br>Shri Baba Mast Nath Ay. Coll., Rohtak          |
| 13.                  | <b>Dr. D P Gadgil</b><br>Pune                                       | 35.                            | <b>Vaidya Jagjeet Singh</b><br>Mohali , Punjab                            |
| 14.                  | <b>H M Chandola</b><br>GAU Jamnagar                                 | 36.                            | <b>Prof. R D Sharma</b><br>Vadodara, Gujarat                              |
| 15.                  | <b>Vd. Srirang Galagali</b><br>Pune                                 | 37.                            | <b>Dr. R B Misra</b><br>Udaypur, Rajasthan                                |
| 16.                  | <b>Prof. R H Singh</b><br>BHU-Varanasi                              | 38.                            | <b>Dr. G N Tiwari</b><br>Nagpur   |
| 17.                  | <b>Prof. A K Manoj Kumar</b><br>VPS Varier Kotakkala                | 39.                            | <b>Prem Prakash Vyas</b><br>College of Ayurveda, Rajasthan                |
| 18.                  | <b>Dr. A. Raghu</b><br>Asst. Advisor AYUSH, Delhi                   | 40.                            | <b>Prof. M H Paranjape</b><br>Ashtang Ayurved College, Pune               |
| 19.                  | <b>Dr. Kamlesh Sharma</b><br>NIA Jaipur                             | <b>MANSIKA SWASTHYA VIGYAN</b> |   |
| 20.                  | <b>Prof. O P Upadhyay</b><br>NIA Jaipur                             | 41.                            | <b>Dr. Banwari Lal Gaur</b><br>Ex. Vice Chancellor, Raj. Ay. Uni. Jodhpur |
| 21.                  | <b>Dr. Surendra Katoch</b><br>Delhi                                 | 42.                            | <b>Prof. B Narayan Prakash</b><br>SDM College, Hassan                     |

|                          |  |                            |   |
|--------------------------|--|----------------------------|---|
| 43.                      | <b>Prof. R.H. Singh</b><br>BHU, VARANASI                           | 66.                        | <b>Prof. Sarbeswarkar</b><br>Sri Sri College of Ayurved, Bangalore    |
| 44.                      | <b>Prof. H M Chandola</b><br>IPGTR, Jamnagar                       | 67.                        | <b>Dr. Manjusha Rajagopal S</b><br>IPGTR, Jamnagar                    |
| 45.                      | <b>Dr. L. Mahadevan Iyer</b><br>Tamilnadu                          | 68.                        | <b>Dr Pranav Bhagvat</b><br>Gomantak Ayurved, Goa                     |
| 46.                      | <b>Dr.K. Sundaran K</b><br>Govt Ayu. Mental Hospital, Kerala       | 69.                        | <b>Prof. Kulwant Singh</b><br>Jammu Institue of Ayurveda, Jammu       |
| 47.                      | <b>Dr. C.R. Agnives</b><br>Mannath Ayurveda, Kerala                | 70.                        | <b>Dr. Paras Shah</b><br>Pune   |
| 48.                      | <b>Dr.Prakas Mangalasseri</b><br>V.P.S.V Ayurveda College, Kerala  | 71.                        | <b>Dr. S M Sathe</b><br>Pune  |
| 49.                      | <b>Prof. Ajay Kr. Sharma</b><br>NIA, Jaipur                        | 72.                        | <b>Prof. Kartar Singh Dhiman</b><br>IPGRR, Jamnagar                   |
| 50.                      | <b>Prof. B G Gopinath</b><br>Sri Sri College of Ayurved, Bangalore | 73.                        | <b>Dr. G S Lavekar</b><br>Director, CCRAS, New Delhi                  |
| 51.                      | <b>Dr. Shrinivas Acharya</b><br>Shri DM College, Udupi             | 74.                        | <b>Dr. S.K. Sharma</b><br>Advisor, Dept. of AYUSH, New Delhi          |
| 52.                      | <b>Dr. M.R. Vasudevan Namboodri</b><br>Thiruvanthapuram, Kerala    | 75.                        | <b>Prof. K V S Prabhakaran</b><br>Additional Director- Andhra Pradesh |
| 53.                      | <b>Dr. Baldev Kumar</b><br>NIA, Jaipur                             | <b>PRASUTI AND STIROGA</b> |   |
| 54.                      | <b>Prof. U N Prasad</b><br>Shri DM College, Udupi                  | 76.                        | <b>Prof. Manjiri Dwivedi</b><br>BHU, Varanasi                         |
| 55.                      | <b>Prof. Rambabu Ramadhar Dwivedi</b><br>IPGTR, Jamnagar           | 77.                        | <b>Dr. Sushila Sharma</b><br>NIA, Jaipur                              |
| 56.                      | <b>Prof. Eswara Sarma M P</b><br>V.P.S.V Ayurveda College, Kerala  | 78.                        | <b>Dr. Chandan Mal Jain</b><br>NIA, Jaipur                            |
| 57.                      | <b>Prof. Shivagautam</b><br>S M S Medical College, Jaipur          | 79.                        | <b>Dr. L. Sucharita</b><br>Bangalore                                  |
| 58.                      | <b>Vaidya Tarachanda</b><br>Delhi-85                               | 80.                        | <b>Prof. M. Ramesh</b><br>Government Ayurved College, Bangalore       |
| 59.                      | <b>Prof. Hariprasad Sharma</b><br>Smt. KG Mittal Ay. Coll., Mumbai | 81.                        | <b>Dr. Sujata Kadam</b><br>Tilak Ayurved, Pune                        |
| 60.                      | <b>Dr. Madhav Diggavi</b><br>Taranath Govt. Ayurved, Karnataka     | 82.                        | <b>Dr. Anjali Jadhav</b><br>College of Ayurveda, Akurdi               |
| <b>NETRA ROGA VIGYAN</b> |  | 83.                        | <b>Prof. Usha Deshmukh</b><br>Govt. Ayurved College, Nanded           |
| 61.                      | <b>Prof. B A Venkatesh</b><br>Government Ayurved, Coll., Bangalore | 84.                        | <b>Prof. Meera Paranjape</b><br>Ashtang Ayurved College, Pune         |
| 62.                      | <b>Dr. P. P Namboodri</b><br>Ernakulam, Kerala                     | 85.                        | <b>Prof. Mamata K V</b><br>Shri DM College, Udupi                     |
| 63.                      | <b>Dr. Shrikanth</b><br>Assisstant Director CCRAS, New Delhi       | 86.                        | <b>Prof. C H S Sastri</b><br>SDM College, Hassan                      |
| 64.                      | <b>Prof. Dilip B Bhusari</b><br>Ashtang Ayurved College, Pune      | 87.                        | <b>Prof. Ved Prakash Sharma</b><br>Jaipur                             |
| 65.                      | <b>Dr. B Mukhopadhyaya</b><br>BHU, VARANASI                        | 88.                        | <b>Prof. Indu U Mistry</b><br>Jamnagar                                |

|                    |  |                               |  |
|--------------------|--|-------------------------------|--|
| 89.                | <b>Dr. (Mrs.) Pooja Bhardwaj</b><br>DEHRADUN                           | 111.                          | <b>Dr. Radheshyam Sharma</b><br>NIA, Jaipur                      |
| 90.                | <b>Dr. Bimla Chaudhary</b><br>PANCHKULA, Haryana                       | 112.                          | <b>Dr. M.S. Baghel</b><br>PGTR, Jamnagar                         |
| <b>DRAVYAGUNA</b>  |  | 113.                          | <b>Prof. Sridhar</b><br>Govt. Ayurved College, Bangalore         |
| 91.                | <b>Prof. M C Sharma</b><br>NIA, Jaipur                                 | 114.                          | <b>Dr. H.S. Kasture</b><br>Ahmedabad, Gujrat                     |
| 92.                | <b>Prof. Tanuja Manoj Nesri</b><br>Tilak Ayurved, Pune                 | 115.                          | <b>Dr. P. Yadayya</b><br>Shri RT, Ayu. Coll., AKOLA              |
| 93.                | <b>Prof. K.S. Jayashree</b><br>Bangalore                               | 116.                          | <b>Dr. R.H. Singh</b><br>BHU, Varanasi                           |
| 94.                | <b>Dr. Ravinarayan Acharya</b><br>IPGTR, Jamnagar                      | 117.                          | <b>Dr. N.P. Singh</b><br>BHU, Varanasi                           |
| 95.                | <b>Prof. V.K. Joshi</b><br>BHU, VARANASI                               | 118.                          | <b>Dr. Shrikanth</b><br>SDM Ayurved College, Udupi               |
| 96.                | <b>Prof. C R S Pillai</b><br>Pankaj Kasthuri Ay. Coll. Kerala          | <b>SWASTHAVRITTA AND YOGA</b> |  |
| 97.                | <b>Dr. Shajahan M.A.</b><br>Thiruvananthapuram, Kerala                 | 119.                          | <b>Vaidya Shah Kisan Vithaldas</b><br>Gultekadi, PUNE            |
| 98.                | <b>Prof. D S Lucas</b><br>Bangalore                                    | 120.                          | <b>Prof. Rambabu Ramadhar Dwivedi</b><br>PGTR, JAMNAGAR          |
| 99.                | <b>Dr. Meeta Kotecha</b><br>NIA, Jaipur                                | 121.                          | <b>Dr. B R Doddamani</b><br>Shri DM College, Udupi               |
| 100.               | <b>Prof. R A Gupta</b><br>JD Ayurvedic Coll., Aligarh                  | 122.                          | <b>Prof. K. Jyotilal</b><br>Mannam Ayurvedic, Pandalam           |
| 101.               | <b>Prof. P P Sharma</b><br>PGTR, Jamnagar                              | 123.                          | <b>Dr. Sudhakar Reddy</b><br>JSS Ayurved Medical, Mysore         |
| 102.               | <b>Prof. Malatiben Chauhan</b><br>PGTR, Jamnagar                       | 124.                          | <b>Prof. Anjaneya Murthy</b><br>Govt. Ayurved College, Mysore    |
| 103.               | <b>Prof. Banwarilal Misra</b><br>Jaipur                                | 125.                          | <b>Prof. Sagitha K.</b><br>Sri Sri College of Ayurveda, Bagalore |
| 104.               | <b>Prof. Chunekar</b><br>Varanasi                                      | 126.                          | <b>Prof. Nagaratna</b><br>Bangalore                              |
| 105.               | <b>Dr. M R Uniyal</b> Advisor Medicinal &<br>Aromatic Plants, Dehradun | 127.                          | <b>Dr. K.V. Dilipkumar</b><br>V.P.S.V. Ayurveda College, Kerala  |
| 106.               | <b>Prof. R A Gupta</b><br>JD Ayurvedic Coll., Aligarh                  | 128.                          | <b>Dr. Kamlesh Kumar Sharma</b><br>NIA, Jaipur                   |
| 107.               | <b>Prof Gyanendra Pande</b><br>PGTR, Jamnagar                          | 129.                          | <b>Vaidya Devendrakumar Triguna</b><br>New Delhi                 |
| <b>PANCHAKARMA</b> |  | 130.                          | <b>Dr. Narain Singh Chudawat</b><br>NIA, Jaipur                  |
| 108.               | <b>Dr. M.R. Vasudevan Namboodri</b><br>Convener, Kerala                | 131.                          | <b>Vaidya S. K. Misra</b><br>Delhi                               |
| 109.               | <b>Dr. I. Mahadev</b><br>Kanyakumari                                   | 132.                          | <b>Dr. Niranjan Singh Tyagi</b><br>GHAZIABAD                     |
| 110.               | <b>Dr. L. Mahadevan Iyer</b><br>Sri Sarada Ayurved Hospital, Kerala    | 133.                          | <b>Prof. Dr. B T Chidananda Murthy</b><br>Director, CCRYN, Delhi |

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| 134.                                  | <b>Dr. B K Singh</b><br>Bharati Veedyapeeth, Pune                       | 158.                  | <b>Dr. C. V. Jayadevau</b><br>VPS Varier Kotakkal                  |
| 135.                                  | <b>Prof. B. V. Sathe</b><br>Pune  | 159.                  | <b>Prof. Ajay Kr. Sharma</b><br>NIA Jaipur                         |
| 136.                                  | <b>Dr. Baldev Kumar</b><br>NIA Jaipur                                   | 160.                  | <b>Dr. S.K. Tiwari</b><br>BHU Varanasi                             |
| <b>RASAYAN AND VAJIKARAN</b>          |   | 161.                  | <b>Prof. S.C. Varshney</b><br>BHU Varanasi                         |
| 137.                                  | <b>Dr. Banwari Lal Gaur</b><br>JODHPUR                                  | 162.                  | <b>Prof. Y G Joshi</b><br>Pune                                     |
| 138.                                  | <b>Prof. Gurudeep Singh</b><br>SDM College, Hassan                      | 163.                  | <b>Dr. Srinivas Acharya</b><br>SDM Ayurved College, Udupi          |
| 139.                                  | <b>Prof. Ajay Kr. Sharma</b><br>National Institute of Ayurved, Jaipur   | 164.                  | <b>Dr. H.S. Kasture</b><br>Ahemdabad                               |
| 140.                                  | <b>Dr. B. G. Gopinath</b><br>Sri Sri College of Ayurved, Bangalore      | 165.                  | <b>Dr. M.S. Baghel</b><br>GAU Jamnagar                             |
| 141.                                  | <b>Dr. Niranjn Rao</b><br>Shri DM College, Udupi                        | 166.                  | <b>Dr. Nesari</b><br>Deputy Advisor AYUSH Delhi                    |
| 142.                                  | <b>Dr. G. Vinod Kumar</b> Govt. Ayurved College,<br>Thiruvananthapuram  | 167.                  | <b>Dr. S N Ojha</b><br>D.Y. Patil Ayurved College, Pune            |
| 143.                                  | <b>Prof. R.H. Singh</b><br>Banaras Hindu University, VARANASI           | <b>KSHAR-KARMA</b>    |  |
| 144.                                  | <b>Prof. B L Mehra</b><br>Rajiv Gandhi, Paprola                         | 168.                  | <b>Prof. Kulwant Singh</b><br>Jammu, Convener                      |
| 145.                                  | <b>Dr. S M Angadi</b><br>Bangalore                                      | 169.                  | <b>Dr. Hemant Kushwaha</b><br>NIA, Jaipur                          |
| 146.                                  | <b>Dr. R P Misra</b><br>Ay. Cong. Punjabi Bagh, New Delhi               | 170.                  | <b>Dr. M. Sahu</b><br>BHU, Varanasi                                |
| 147.                                  | <b>Dr. Medhavi Lal Sharma</b><br>Government Ayurvedic College, Udayapur | 171.                  | <b>Dr. S.K. Sharma</b><br>Advisor Ayush                            |
| 148.                                  | <b>Vaidya Devendrakumar Triguna</b><br>New Delhi                        | 172.                  | <b>Dr. S. Bannigol</b><br>Ayurved Mahavidyalaya, Hubli             |
| 149.                                  | <b>Vaidya S. K. Misra</b><br>Delhi                                      | 173.                  | <b>Dr. Chaturbuj Bhuyan</b><br>IPGTR, Jamnagar                     |
| 150.                                  | <b>Dr. A P Haridasan</b><br>Kerala                                      | 174.                  | <b>Dr. Prasanna Rao</b><br>Principal, SDM Hassan                   |
| 151.                                  | <b>Dr. Sivanandam</b><br>HYDERABAD                                      | 175.                  | <b>Prof. S.V. Shailaja</b> Kalabhairaveshwar<br>College, Bangalore |
| 152.                                  | <b>Dr. Niranjn Singh Tyagi</b><br>GHAZIABAD                             | 176.                  | <b>Dr. Thomas</b><br>GAC, Trivendrum                               |
| 153.                                  | <b>Dr. Madhav Diggavi</b><br>Taranath Govt. Ayurved, Karnataka          | 177.                  | <b>Dr. Ksheersagar</b><br>GAMC, Mysore                             |
| 154.                                  | <b>Dr. O P Sharma</b><br>Delhi  | 178.                  | <b>Dr. Devadatt Bhadlikar</b><br>Principal, Dr. D. Y. Patil Mumbai |
| 155.                                  | <b>DR. K R Kohli</b><br>Director, ISM Maharashtra                       | <b>ROGNIDAN VIDHI</b> |  |
| 156.                                  | <b>Dr. A K Manoj Kumar</b><br>VPSV, Kottakkal                           | 179.                  | <b>Dr. A.C. Kar</b><br>BHU, Varanasi                               |
| <b>AYURVEDIC COSMETOLOGY AND SKIN</b> |   | 180.                  | <b>Dr. Pawan Goditwar</b><br>NIA, Jaipur                           |
| 157.                                  | <b>Dr. Jayaram Yadav</b><br>Convener Varanasi                           | 181.                  | <b>Dr. M.S. Baghel</b><br>IPGTR, Jamnagar                          |

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| 182.                              | <b>Dr. Gopkumar</b><br>Trivendrum                               | 196.                                    | <b>Dr. Murlidhar Sharma</b><br>SDM Ayurved College, Udupi                  |
| 183.                              | <b>Dr. B.V. Prasanna</b><br>SDM Ayurved College, Udupi          | 197.                                    | <b>Dr. S.S. Mishara</b><br>BHU Varanasi                                    |
| 184.                              | <b>Dr. Parameshwarappa Byadgi</b><br>BHU, Varanasi              | 198.                                    | <b>Dr. Arun Dwivedi</b><br>BHU, Varanasi                                   |
| 185.                              | <b>Dr. Shrikrishna Khandel</b><br>NIA, Jaipur                   | FINAL WORK OUT BY THE FOLLOWING EXPERTS |  |
| <b>AYURVEDIC SANGYAHARAN</b>      |   | 199.                                    | <b>Dr. Vaishali Mali</b> Ayurved Expert in<br>CCIM Office, New Delhi       |
| 186.                              | <b>Dr. Anil Dutta</b> Rajiv Gandhi Ayu. Coll.,<br>Paprola       | 200.                                    | <b>Dr. Richa Sharma</b> Ayurved Expert in<br>CCIM Office, New Delhi        |
| 187.                              | <b>Dr. K.K. Panda</b><br>BHU, Varanasi                          | 201.                                    | <b>Dr. Kamini Kaushal</b> Ayurved Expert in<br>CCIM Office, New Delhi      |
| 188.                              | <b>Dr. D.P. Puranik</b><br>Tilak Ayurved College, Pune          | 202.                                    | <b>Dr. Seema Ahlawat</b> Ayurved Expert in<br>CCIM Office, New Delhi       |
| 189.                              | <b>Dr. Chayakant Das</b><br>Govt. Ayurved College, Burhanpur    | 203.                                    | <b>Dr. Aarti Mal</b> Ayurved Expert in<br>CCIM Office, New Delhi           |
| 190.                              | <b>Dr. D.N. Pandey</b><br>BHU, Varanasi                         | 204.                                    | <b>Dr. Shweta Zade</b> Ayurved Expert in<br>CCIM Office, New Delhi         |
| 191.                              | <b>Dr. Subrahmanyam Bhat</b><br>SDM Ayurved College, Udupi      | 205.                                    | <b>Dr. Pradnya Sinalkar</b> Ayurved Expert in<br>CCIM Office, New Delhi    |
| 192.                              | <b>Dr. Prasanna Rao</b><br>SDM, Hassan                          | 206.                                    | <b>Dr. Namrata Kulshrestha</b> Ayurved Expert<br>in CCIM Office, New Delhi |
| <b>CHHAYA EVAM VIKIRAN VIGYAN</b> |   | 207.                                    | <b>Dr. Pooja Kohli</b> Ayurved Expert in<br>CCIM Office, New Delhi         |
| 193.                              | <b>Dr. V.A. Dole</b><br>Tilak Ayurved College, Pune             | 208.                                    | <b>Dr. Anant Samant</b> Ayurved Expert in<br>CCIM Office, New Delhi        |
| 194.                              | <b>Dr. B.V. Sharma</b><br>R.M.L. Hospital, Delhi                | 209.                                    | <b>Dr. Yashpal Chaudhary</b><br>Ayurved Expert in CCIM Office, New Delhi   |
| 195.                              | <b>Dr. Anil Kumar Sharma</b><br>Rajiv Gandhi Ay. Coll., Paprola |   |  |