<table>
<thead>
<tr>
<th>NAME OF THE SPECIALITY</th>
<th>PAGE No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ayurvedic Pharmaceutics</td>
<td>2-8</td>
</tr>
<tr>
<td>2. Ayurvedic Dietetics</td>
<td>9-17</td>
</tr>
<tr>
<td>3. Balroga</td>
<td>18-23</td>
</tr>
<tr>
<td>4. Manasik Swasthya Vigyan</td>
<td>24-27</td>
</tr>
<tr>
<td>5. Netra Roga Vigyan</td>
<td>28-33</td>
</tr>
<tr>
<td>6. Prasuti and Striroga</td>
<td>34-38</td>
</tr>
<tr>
<td>7. Dravyaguna</td>
<td>39-43</td>
</tr>
<tr>
<td>8. Panchkarma</td>
<td>44-50</td>
</tr>
<tr>
<td>9. Swasthavritta and Yoga</td>
<td>51-57</td>
</tr>
<tr>
<td>10. Rasayan and Vajikaran</td>
<td>58-64</td>
</tr>
<tr>
<td>11. Ayurvedic Cosmetology and Skin</td>
<td>65-70</td>
</tr>
<tr>
<td>12. Kshar-Karma</td>
<td>71-76</td>
</tr>
<tr>
<td>13. Rog Nidan Vidhi</td>
<td>77-81</td>
</tr>
<tr>
<td>14. Ayurvedic Sangyaharan</td>
<td>82-85</td>
</tr>
<tr>
<td>15. Chhaya evam Vikiran Vigyan</td>
<td>86-89</td>
</tr>
</tbody>
</table>
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) Agaru
4) Amalaki  5) Apamarga  6) Aragvadha
7) Ardraka-Shunthi  8) Arjuna  9) Arka
10) Ashvagandha  11) Ashvagola  12) Ashoka
16) Bharangi  17) Bhallataka  18) Bibhitaka
19) Bijaka/Vijayasara  20) Bilva  21) Brahmi
22) Bringaraj  23) Brihati  24) Chandadvaya
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) Jeerkadvaya
46) Jyotishmati  47) Kalmegh  48) Kampillak
49) Kanchanar  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) Shalpani
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

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 mineralogical 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.
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

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
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.
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, Neutraceuticals 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.
10. Freeze drying (Lipholization).
11. Tablet making- types of tablets, binders, adhesives, lubricants, colorants etc., compression- single, multiple station machines, coating, polishing.
13. Introduction to Stability studies and use of preservatives, anti-oxidants and other material with reference to shelf life of drug material.
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.

5 PGD Syllabus
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 Kalpaka.

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.

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, Sadhanarasa, Ratna-Uparatna, Vishopavisha, Dhatu and Upadhatu. (Metals and mineral containing drugs).
   b) Marana, Satvapatana, Amritikarana, Lohitikarana, Druti Nirmana of Rasa, Maharasa, Uparasa, Sadhanarasa, 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

6 PGD Syllabus
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
Total 100 marks

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
10. Bhaishajya Ratnavali : Govind Das
11. Kashyapa Samhita : Kashyapa
12. Paribhasha Khanda : Yadavji Trikamji Aacharya
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

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


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

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. Vaidyakya Subhashita Sahityam (वैद्यकीय सुभाषित साहित्य) – Chapters 13, 14 and 36
4. Understanding the Ahara and Sharir relationship based on-
   a) Loka-Purusha Samya Siddhanta (लोकपूर्वसाम्यसिद्धान्त)
   b) Samanya Vishesha Siddhanta (सामान्यविशेषसिद्धान्त) with examples.
   c) Panchamahabhuta Siddhanta (पंचमाहभूतसिद्धान्त)
   d) Tridosha Siddhanta (त्रिदोष सिद्धान्त)
5. Classification of Ahara based on its Prabhava:
   a) Sukhakara (सुखकर) – Dukhakara (दुःखकर) - Psychological concept
   b) Satmya (सत्त्य) – Asatmya (असत्त्य) - 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 (चूस्य), etc.
8. Classification of Ahara based on Source (Yoni) – Sthavara, Jangama, Khanija.
9. Classification of Ahara as Samisha (समिश्र) and Niramisha (निर्मिश्र) 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.

9 PGD Syllabus
Part-B

Ahara and Physiological Study (आहार और शारीरिक 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 विज्ञान)
5. Ahara and Sharir Sambandha: (आहार-शारीर संबन्ध)
   a) The concept of Panchabhautikatva of Ahara as well as Sharir
   b) Dosha, Dhatu, Mala and Oja vigyana. (Prakrita Sthana, Guna, Karma, Prakara, Vridhhi, Kshaya, Pradoshaja Vikar, Sama, Nirama and Dhatu Sara Lakshanani)
   c) Effect of Ahara Dravya on Tridosha and Triguna
   d) Interrelation between Ahara and Agni.
   e) Agni vigyan (अग्नि विज्ञान) – Types of Agni, Prakrit Agni (प्राकृत अग्नि) and Vikrit Agni (विकृत अग्नि).
   f) Inter relation between Ahara and Srotas.
   g) Srotasvigyan (स्रोतस्विज्ञान) – Description of the Srotas according to Charak and Sushrut Samhita and effect of Ahara Dravya on these Srotas.
   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 अवस्थापक)
   c) Aharaparinamakara Bhava (आहारपरिनामकर्मभाव)
   d) Dhatu Poshankrama (धातु पोषणक्रम)- Trividha Nyaya (त्रिविधन्याय) - Kshiradadhinyaya (शीर्षरधिन्याय), Kedarikulyanyaya (केदरिकुल्यन्याय), 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 Parinamana or Pachana.
   g) Sarakitta Vibhajana (सारकिट्टा विभाजन)
   h) Samyaka Pachana Lakshanani (सम्यक पचन लक्षणानि)
   i) Dhatu Utpatti Krama (धातु उत्पत्ति क्रम)
   j) Saarata Nirmana (सारता निर्माण)
   k) Oja Utpatti (ोजात्पत्ति)

10 PGD Syllabus
Paper - II
Ahara- Dravya – Guna Kalpana Evam Sanskara Gyana
(आहार द्रव्यमण कल्पना एवं संस्कार ज्ञान)

Part-A

1. Classification of the Ahara Dravya on the basis of Gurvadi (गुरवदि) and Paradi (परवदिगु) 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 (विकृतिविशसमवेतद्रव्य)

3. Samanaprayarabdha dravya (समानप्रयारबद्धद्रव्य), Vichitrtraprayarabdha Dravya (विचित्रप्रयारबद्धद्रव्य)

4. Study of single dravya

5. Ahara Dravya– 14 Ahara Varga (आहार वर्ग)–
   a) शूक-भान्यवर्ग
   b) शिबंधान्यवर्ग
   c) शाक-वर्ग/पत्रशाक
   d) हरितवर्ग
   e) लाभवर्ग
   f) गोस्सवर्ग
   g) मांसवर्ग
   h) तेलवर्ग
   i) फलवर्ग
   j) इत्यवर्ग
   k) मधुवर्ग
   l) मदवर्ग
   m) जलवर्ग
   n) आहार योगी वर्ग

6. All the classifications of Ahariya and Paniya Dravya in Brihattrayi (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
   b) Boiling
   c) Baking
   d) Fermenting
   e) Mixing
   f) Wet Mixing
   g) Dry Mixing
   h) Churning
   i) Preserving / Pickling

11 PGD Syllabus
j) Smoking - धूपन
k) Frying - तलना
l) Rubbing - चिसना / पीसना / मसलना
m) Heating - गर्म करना
n) Soaking - भिगोना
o) Pounding / Crushing - बूटना
p) Garnishing - प्रक्षेप
q) Temperature regulation - ताप नियन्त्रण
r) Washing - धोना
s) Doughing - पीड़न एवं पिण्डीकरण
t) Chopping - काटना
u) Sprouting - विकृति

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, Ghritapura, Phenika, Samyava (मुख्यत्व), 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.
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 (कंदूकडी), 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 Gunas and Karma of Ahara 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 (सविशेष लक्षणानि) - Garavisha Lakshanani (गरविशा 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 Annapariksha (सिद्धानन्दीपरीक्षा) - (पक्व अपक्व अन परीक्षा) Ancient methodology of cooked food.


20. Modern food analysis methods- Adulteration, Pesticides, Insectiside, 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
(स्वास्थ्यप्रोमोटिव आहार विहार)

**Part-A**

Swasthya (स्वास्थ्य)

1. Swastha – Paribhasha and Vyutpatti.

2. Trayopasthambha (श्रोष्टिप्रमन) – 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 Vidhivishayatanani (आहार विधिविशयात्मननि), Aharamana Vikalpa Vishesha (कश्याप- खिलास्तहान), Ahara vidhi vidhana (च.वि.1), Dwadasha Ashana Pravicharan.

6. Concept of Trividha Kukshi. (च.वि.2).


9. Ahara Vidhi (आहार विधि) - Bhojana Vidhi (प्रथानकर्म), Bhojana Purva (पूर्वकर्म) and Paschata Karma (पश्चातकर्म) e.g. use of Lavana and Ardraka before meal, walking of a hundred steps after meals (शतपद्चरण), sleeping on the left side (मामपाश्व शवन) 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. Pathyapathy according to Prakriti, Desha, Kaal and Agni.
3. Ekantatah Ahita and Hita Ahara
5. Concept of Satmya and Asatmya. Methodology of leaving Asatmya Ahara and adapting Satmya Ahara in one fourth parts of the total Ahara quantity. (पादेश परिवर्तनः आहार त्वांग विधि)
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.


**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. Manoabighatkara Bhava and their effect on food intake, digestion and diseases
5. Nutrition related disorders- Santarpanajanya and Apterpanajanya 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 (षङ्खविभोषणानुरूपाः आहार)
3. Importance of Pathyapathy in the treatment of following diseases-
   a) प्राणव्रह्यों में – प्रतिव्रेक्ष, रक्तसंचार, काद्य, हिंचक, राजवश्याम।
   b) अन्नव्रह्यों में – अष्टमिति, अजीर्ण, ग्रहणी।
   c) उदकव्रह्यों में – उदर रोग, शोष।
   d) रसव्रह्यों में – होथग, ज्वर, प्रांडु।
   e) रक्तव्रह्यों में – अशी, कामला, रक्तपिप्ठ, विस्फंप।
   f) मांसव्रह्यों में – अबुदु, गृह्व, अपादिक्षित विकार – कार्यादि।
   g) मेडोरव्रह्यों में – संतरणों विकार – शैल्प, प्रमेह।
   h) अतिरिक्तव्रह्यों में – संधिगतवाट, वातवाचि।
   i) मन्जुव्रह्यों में – प्रम।
   j) शुद्धव्रह्यों में – क्लैफ, वंध्यवृत, गुहरोग।
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 pathyapthya 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

**Total** 100 Marks
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


8. Yogaratnakar : Sadashiva Shastri

9. Chakradatta : Indradeva Tripathi

10. Siddha Bhaishajya Manimala

11. Bhojana Kutuhal : 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 Mastishkavaravan-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

Vriddhi 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.
3. Dwarfism and other common genetic disorders related to growth and development.
4. Poshana evam Kuposhanajanya Vyadhi (Nutrition and Nutritional disorders)
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.
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.

Part-B

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

1. Pranapraptadaman (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, Akshepakaka (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), Aptyanaka (Tetanus including neonatal tetanus), Romantika (Measles, Mumps, Rubella and Chickenpox), Antrika Jwar (Typhoid and Viral Hepatitis), Pravahika (Amoebiosis), Krimi Roga (Giardiasis and Intestinal helminthiasis); Vishama Jwar (Malaria, Kala Azar and Dengue Fever), Ahiputana (Napkin rashes), Shakuni (Impetigo), Sthidma, 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.

PRACTICALS

Contents of Practical

1. Kaumarbhritya- 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 at least 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
Total 100 Marks

22 PGD Syllabus
<table>
<thead>
<tr>
<th>Text Books for Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Kashyap Samhita or Vridhajivakiya</td>
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<tr>
<td>2. Kashyapa Samhita (Hindi translation)</td>
</tr>
<tr>
<td>with commentary</td>
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<tr>
<td>3. Charak Samhita</td>
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<tr>
<td>4. Sushrut Samhita Commentary</td>
</tr>
<tr>
<td>5. Ayurvedic concepts of Human</td>
</tr>
<tr>
<td>Embryology</td>
</tr>
<tr>
<td>6. Ashtanga Samgraha (Part-I &amp;II),</td>
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<tr>
<td>Hindi commentary</td>
</tr>
<tr>
<td>7. Madhava Nidan</td>
</tr>
<tr>
<td>8. Bhava Prakasha</td>
</tr>
<tr>
<td>9. Harita Samhita</td>
</tr>
<tr>
<td>10. Clinical Methods</td>
</tr>
<tr>
<td>11. Child Health Care in Ayurveda</td>
</tr>
<tr>
<td>12. Care of the Newborn</td>
</tr>
<tr>
<td>14. Principles and Practice of</td>
</tr>
<tr>
<td>Paediatrics in Ayurveda</td>
</tr>
<tr>
<td>15. Bal Chikitsadarsh</td>
</tr>
<tr>
<td>16. Kaumarbhritya</td>
</tr>
</tbody>
</table>
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.
4. Trigunatmakatva of mana.
5. Vata and Mana relationship - applied aspects.
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.
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.
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.
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.
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).
3. Importance of Panchkarma and allied procedures in the management of Manas Roga
4. Satvavajaya Chikitsa – Definition, relevance in manasik and manodaihika vikara.

25 PGD Syllabus
5. Applied aspect of Ashtanga Yoga in Manovikar.
6. Daivavyapashrasya 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, Shankhpushpi, Ashwagandha, Yashimadhu, Guduchi, Jyotishmati, Kushtha, Tagara, Kooshmanda, Jatamansi, Swarna, Rajata, Pravala, Mukta and other useful medicines, etc.
   Compound Drugs: Manasmitravati, Smritisagararasa, Unmadagajankusharasa, Apatantrakarivati, Kumarakalyanarasa, Yogendarasa, Kalyanakaghrita, Brahmi Kaghrita, Mahapaishachikaghrita, Panchagavyaghrita, Hingwedighrita, Kooshmandaghrita, Saraswatariṣhta, Ashwagandharishta, Himasagarataila, Brahmi Taila, Tungadrumadi Taila, Chandanadi Taila and other useful yoga, dhoopa, nasya and anjana yoga mentioned in the context of Apsmara and Unmada
6. Psychiatric Emergencies and their management

PRACTICALS

Contents of Practical

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

1. Case Record 10 Marks
2. Case Presentation 10 Marks
3. Assessment of Scales and Inventories 10 Marks (Modern and Ayurvedic aspect)
4. Project Work 20 Marks
5. Viva-voce 50 Marks

**Total** 100 Marks

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**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
10. Text Book of Child and Adolescent Psychiatry : Weiener
11. Bourne Psychology
12. Carlon Abnormal Psychology and Modern Life
13. Ayurvediya Manas Vigyan : Rama Harsha Singh
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 Opthalmology-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 Opthalmology), 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 (Shiropradhanta) and organ of Vision (Sarvaendriyanam Nayanam Pradhanam)
5. Important texts of Shalakya and contributors (Ancient ,medieval and modern period)
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.
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.

29 PGD Syllabus
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.
5. Basics of refraction and refractive errors.
7. National Programme for Control of Blindness.
8. Geriatric Ophthalmology (Jaravastha Janya Netra Vikar)
9. Occular manifestation of systemic diseases
10. Occular trauma and emergencies in Ophthalmology (Netra Abhighata and Atyayika chikitsa)
11. Congenital, developmental, neoplastic and degenerative disorders of Krishna, Drishtigata 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.)
4. General introduction, types, indications, contraindications, dose, Kaal, Purva Karma, Pashchat Karma, Pradhan Karma, Complication, their management, drugs used for Seka, Ashchyotana, 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.
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

2. Clinical application of Asthavidh shastrakarma and Ksharadi anushastra karma in Ophthalmic practice.
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
Total 100 Marks

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. Shalakya Tantra : Ramanath Dwivedi Chowkhambha Sanskrit Prathisthan, Delhi
10. Shalakya 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 Applications**
   - Cotlier, St. Louis.

15. **Disease of the Lens and Vitreous, Glaucoma and Hypotony**
   - Duke-Elder, St. Louis, Mosby.

16. **A Text Book of Ophthalmology**

17. **A Text book of Clinical Ophthalmology**
   - Dhanda et al. Galgoti Publishers, New Delhi

18. **Modern Ophthalmology**


20. **Ophthalmology – Principles and Concepts**

21. **Occular 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. Epochs 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, Apara, 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

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 Sarvadaihik Parivartan
6. Stana, Stanya Sampat evam Stanya Dushti
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 Nirdhavasya 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
3. Garbhini Vyapad - Kikkis, Makkal, Hrillas, 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

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.
4. Garbhashaya nirharana
5. Provision of safe abortion services.
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
Total 100 Marks

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
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
15. Text Book of Gynaecology : Dr. C.S. Dawn
16. Text Book of Obstetrics : Dr. C.S. Dawn
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<td>Clinical Obstetrics and Gynaecology</td>
<td>Dr. Williams</td>
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<td>Shaw’s Textbook of Gynaecology</td>
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<td>22</td>
<td>Notes on Obstetrics</td>
<td>Dr. Sachedeva</td>
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<td>23</td>
<td>Ayurvedic Concepts in Gynaecology</td>
<td>Vaidya Nirmala Joshi</td>
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<td>Useful parts of Charak, Sushrut, and Vagbhata and Sharangdhara.</td>
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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.
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.
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).
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) Ahiphera   2) Aghminantha   3) Agaru
   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) Chandanadvaya
   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

40 PGD Syllabus
43) Jatamamsi  44) Jatiphal  45) Jeerakdvaya
46) Jyotishmati  47) Kalamegh  48) Kampilak
49) Kanchanara  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) 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.
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 neutraceuticals, cosmeceutical, 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
Total 100 Marks

Text Books for Reference

1. Abhinav Buti Darpan (Vol.1-2) : Vd. Roop Lal Vaishya
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
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 Ke Kshetra Me Yogadana : Vd. Shiv Kumar Vyas
12. Dravyaguna Kosha : Acharya Priyavrata Sharma

42 PGD Syllabus
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  
23. Introduction to Dravyaguna : Acharya Priyavrata Sharma  
24. Kriyatmaka Aushadi Parichaya : Acharya Pt. Vishvanath Dwivedi  
25. Materia Medica : Acharya Ghosh  
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 : Dr. Gyanendra Pandey  
37. Uttarakhand Ki Vanaspatiya : Thakur Balwant Singh  
38. Vanoaushadi Darshika : Dr. Ram Sushil Singh  
39. Vanoaushadi Nidarshika : Dr. Dinesh Chandra Sharma  
40. Vedic Vanaspatiyan : Dr. Gyanendra Pandey
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
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.
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.

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.
Part-B

Sharir Vivechana in relation with 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.
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
   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, Jambeera/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
Pradhanaka 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-
1. Poorva karma
2. Pradhana karma
3. 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. Samyak yoga / 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-
Poovarama - 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 Samyak yoga / 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. Assessment 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

Total 100 Marks

Text Books for Reference

1. Charak Samhita with Ayurveda Dipika by Chakrapani and Jalpakalpataru by Gangadhara
2. Sushrut Samhita with Nibandha 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.
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, Udvartana, 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 psycho-somatic 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.
7. Balanced diet

51 PGD Syllabus
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)  
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.  
5. ESI 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.
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.
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 Swasthayavritta in Swasthya Rakshan
Part-A

Vaiyaktika Swasthayavritta (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 Swasthayavritta (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

54 PGD Syllabus
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
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 Ardhachakrasana.
   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 – Bastarika, Ujjayi, Suryabhedhi, Chandrabhedhi, Anuloma-Viloma, Bhramari, Sheetali and Sheetkari.
6. Practice of Bandha and Mudra.
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.
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 Pathyapathy, 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
Total 100 Marks

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 (Chowkhamba Sanskrit Pratishtan) New Delhi : Dr. P. Sudhakar Reddy
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, Dhatus, 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 along with their types and examples
   a) Kutipraveshik, Vatatapika, Droni praveshik
   b) Kamya, Naimittika, Ajasrika, Medhya
   c) Indriyanusari, Dhatvanusari
   d) Lekhan-Brimhanusari
   e) Samshodhan-Samshamananusari
   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. Kutipraveshik Rasayan
   a) Concept of Trigarbha Kuti and its descriptions
   b) Scope and limitation of Kuti Praveshika Rasayan
   c) Standard Operative Procedures for Kutipraveshika Rasayan in general and specific to different Rasayan usage.

58 PGD Syllabus
d) Duration of Kutipraveshik Rasayan and rules for termination of Kutipravesha

e) Benefits of Kutipraveshika 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.

59 PGD Syllabus
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, Dhwajabhanga, 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, Gonorrhea, 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**

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
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 Kutipraveshika and Vatatapika Rasayan.
   k) Adravya 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, apathy 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, Punsatvakaar, Apatya Santankar, Shukra Janak, Shukra Pravartak, Shukrasrutikar, Shukravridhikar, Shukrasrutivridhikar, Shukrastambhaka, Shukrechak and Shukrashosaka.
   b) Single herbal drugs used in Vajikaran and their efficacy.
   c) Herbomineral-metallic and acqua 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.
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, Virechana, 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.
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

Total  100 Marks

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 adhisthan of Indriya, Dosha and Dushya.
8. Trividha, Chaturvidha, Panchvidha, Shadvidha, Ashtavidha and Dashavidha Pariksha in diagnosis of Tvak and Yau Sankramak Roga.
10. Role of Prakriti and Sara in health and Vikar of Tvak, Kesha and Loma.
11. Role of Ahar and Vihar in maintenance of healthy skin.
12. Role of Mana in Prakriti and Vikriti of Tvak
   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 Vridhikar 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, Vyanga, 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 scraping, 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.


5. Pathya, Apathya and Nidan parivarjan in Tvak Vikar evam Yaun Sankramak Roga.

6. Role of Sadvrittta, 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.

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.
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
7. Ayurvedic co-relation and management of alopecia, baldness, hypertrichosis, hirsuitism 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
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 (Syphilis), 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.
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
Total 100 Marks
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. Yogaratnakar with Vidyotini Hindi Commentary
   Bhishagaratna Brahmarshankar 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.


   a) Ayurvedic View
   b) Modern View
Part-B

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.
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
3. Fistulae other than crypto glandular origin - Fistula communicating with other organs likes urethra, vagina, and urinary bladder, traumatic fistula etc.
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.
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, prodormal 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.
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
TOTAL 100 Marks

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
5. Kshara Sutra : RAV
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

75 PGD Syllabus
13. Standardisation of Kshara Sutra – Ayurvedic medicated thread used in the management of Fistula-in-ano

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.

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

Part-B

General Pathology
Basics of Pathology-
1. Cell injury
2. Inflammation and repair.
3. Haemodynamic disorders.
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 Vishesa 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, Chathurvidha 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.

**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
Total 100 Marks

Text Books for Reference

1. Vyadhi Vigyan : Yadavji
2. Madhava Nidan (with Madhukosha Vyakhya) : Ramraksha Pathak
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
8. Vikruti Vigyan : Shivnath Khanna
9. Clinical Pathology : Dr. K.R. Srikanta Murthy
10. Clinical methods in Ayurveda : Dr. K.R. Srikanta Murthy
11. Ayurvediya Vikriti Vigyan and Roga Vigyan (Vol I & II) : Dr. P.S. Byadgi
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

80 PGD Syllabus
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<th>Title</th>
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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.
4. Vishikhanupravesh (Internship).
5. Agropaharaniya (Preanaesthetic measures)
6. Knowledge of Yantra-Shastra
9. Roga-Rogi pariksha (Examination of patients)
10. Marma and Snayu
11. Knowledge of Unmad, Mada, Murchha, Stabdhata and Sanyas
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.
5. Principles of gaseous exchange
7. Shock and its management.
8. Knowledge of anaesthesia apparatus and equipments.
10. Ethics and values in Sangyahan practice - consequences and importance.
11. Medicolegal aspect in the practice of Anaesthesia.
Paper – II

Sangyaharanopayogi 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, Shankpushpi, 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.
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, cardiovascular 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.

Second Year

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

Paper - I

Sangyaharan 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.
5. Accident in Anaesthesia.

83 PGD Syllabus
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) –
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

Total 100 marks

84 PGD Syllabus
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 up to date Reference Books and Journals available
9. Sangyaharan 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
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-Pratichchhaya, 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. Urdhwa-jatragata (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.
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
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 vriddhi, Garbha swasthya and vyadhi, Vikrita garbha, Apara, Nabhinadi darshan, Apara / Garbha Apatan, Yoniyapat, Vandhyatva, Garbhashayabhransha, Doppler, USG guided techniques, Interpretation and reporting etc.
3. Mammography, Bone Densitometry- 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
Total 100 marks
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
7. Radiographic positioning : Clark
8. Radiobiology for the Radiologist : Hall
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
15. Introduction to Vascular Ultrasonography : Zwiebel, Pellerito
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
**CENTRAL COUNCIL OF INDIAN MEDICINE**  
**NEW DELHI**

List of Experts who participated to review the PG Diploma Syllabus

<table>
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<tr>
<th>PHARMACEUTICS</th>
<th>22. Vd. Bhajandas Swami Jaipur</th>
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<tbody>
<tr>
<td>1. Dr. M.M. Jumle Convener</td>
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<td>2. Dr. Pradeepkumar Prajapati Jamnagar</td>
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<td>3. Dr. L.K. Dwivedi NIA, Jaipur</td>
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<td>4. Dr. S.S. Savarik Mumbai</td>
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<td>5. Dr. C.B. Jha BHU Varanasi</td>
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<td>6. Dr. Anand Chaudhary BHU Varanasi</td>
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<td>7. Dr. Ramachandra Reddy BHU Varanasi</td>
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<td>8. Dr. Ramkrishna Susruta Ayu. Coll., Bangalore</td>
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<td>9. Dr. Rangesh Parmesh Himalaya Drugs Co., Bangalore</td>
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<td>10. Dr. Shajahan M.A. Trivandrum</td>
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<td>11. Dr. Neeraj Kumar BHU, VARANASI</td>
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| 23. Dr. Satyanarayan Bhat Bangalore                |                               |
| 24. Prof. Rambabu Dwivedi IGPTR, Jamnagar         |                               |
| 25. Prof. Shailaja Rao SDM College, Hassan        |                               |
| 26. Dr. B. M. Singh BHU, Varanasi                 |                               |
| 27. Prof. Abhimanyu Kumar NIA, Jaipur             |                               |
| 29. Dr. Moti Rai NIA, Jaipur                      |                               |
| 30. Dr. BK Jaya Singh PURI                       |                               |
| 31. Dr. Omkar Kulkarni Ayurved Mahavidyalaya, Sion|                               |
| 32. Dr. Dinesh K S V.P.S.V. Ayurveda College, Kerala|                        |

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<td>36. Prof. R D Sharma Vadodara, Gujarat</td>
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<td>39. Prem Prakash Vyas College of Ayurveda, Rajasthan</td>
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<td>40. Prof. M H Paranjape Ashtang Ayurveda College, Pune</td>
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<td>17. Prof. A K Manoj Kumar VPS Varier Kotakkala</td>
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<td>22. Prof. B Narayan Prakash SDM College, Hassan</td>
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90 PGD Syllabus
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91 PGD Syllabus
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Pune | 159. | Prof. Ajay Kr. Sharma  
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Banaras Hindu University, VARANASI |
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Rajiv Gandhi, Paprola | 169. | Prof. Kulwant Singh  
Jammu, Convener |
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Rajiv Gandhi, Paprola | 170. | Dr. Hemant Kushwaha  
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Director, ISM Maharashtra | 182. | Dr. Niranjan Sing  
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94 PGD Syllabus