



BHARATI VIDYAPEETH
(DEEMED TO BE UNIVERSITY) PUNE, INDIA.
FACULTY OF AYURVED
Pune- Satara Road, Pune-411043.

Accredited with 'A+' Grade (2017) by NAAC.
'A' Grade University status by MHRD, Govt. of India
Accredited (2004) & Reaccredited (2011) with 'A' Grade by NAAC.

Undergraduate (B.A.M.S)
&
Post- Graduate (M.D./M.S./Diploma in Ayurved)
Syllabus/ Curriculum
2016 courses

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Preface

Ayurveda is accepted worldwide as one of the oldest traditional systems of medicine. The ancient insight in this traditional system of medicine is still not profoundly discovered. Ayurveda signifies as "the life-science " where ayur means "life" and veda means "science" in Sanskrit. Ayurveda is the upaveda i.e. "auxiliary knowledge of Atharvaveda in Vedic tradition with its prime origin from Atharva-Veda and a supplement of the Rig-Veda. Lord Dhanvantari is worshipped as the God of Ayurveda. The goal of this traditional medicine system is to prevent illness, disease cure and preserve life. Being originated in India Ayurveda extends its wings in various parts of the world. In ancient days Ayurveda was taught in Gurukula system, which is now evolved in to under undergraduate graduate courses from Institutions.

The Indian Medical Council was set up in 1971 by the Indian government to establish maintenance of standards for undergraduate and postgraduate education. It establishes suitable qualifications in Indian medicine and recognizes various forms of traditional practice including Ayurveda.

Ayurvedic practitioners also work in rural areas, providing health care to at least 500 million people in India alone. They therefore represent a major force for primary health care, and their training and placement are important to the government of India. Being a scientific medicine, Ayurveda has both preventive and curative aspects. The preventive component emphasizes the need for a strict code of personal

and social hygiene, the details of which depend upon individual, climatic, and environmental needs.

Now Bachelor of Ayurvedic Medicine and Surgery, MD/MS in various discipline of Ayurveda started with the intention to encourage integrated teaching and de-emphasize compartmentalization of disciplines so as to achieve horizontal and vertical integration in different phases which helps to support National Health Services.

Looking into the health services provided to the public, understanding the need of practitioners of Ayurvedic system of medicine, as per the guidelines of apex body NCISM and suggestions provided by the faculty of various sections, stake holders and strategy of university this governance is framed based on following aims and objectives -

Aims of BAMS programme

- To create an efficient Physician capable of functioning independently in both urban and rural environment.
- To produce graduates of Ayurveda with thoughtful knowlege having deep base of scientific knowledge in harmony with Ayurvedic fundamentals with extensive practical training who would be able to become an efficient teacher, research worker and Kaya Chikitsak (Physician) and Shalayachikitsak (Surgeon) competent to serve for health services.

Objectives

To develop following attitude and skills in our students -

- Knowledge of Ayurveda science, pertinent modern subjects, common investigations and their clinical interpretation, art of diagnosis of common ailments, selection and administration of suitable Pancha karma procedures, common single and compound drug formulations, Pathyaapathya, preventive measures, Rasayana, National Health Programme.
- Capable to perform Para surgical procedures, conduct deliveries and resuscitate new born babies.

Faculty of Ayurved, Bharati Vidyapeeth (Deemed to be University), Pune

Vision-

To be a world class university for social transformation through dynamic education

Mission-

- To ensure the good health and longevity of mankind.
- To carve a niche for our college in the world of Ayurved education
- To provide
 - Borderless access to Ayurved education
 - Quality Ayurved education
- To promote
 - Quality research in diverse areas of health care system.
 - Extensive use of ICT for teaching, learning and governance.
 - To develop national and international networks with industry and other academic and research institutions.

Program Outcomes For Undergraduate Course of Ayurveda

- The Bachelor of Ayurved will have profound knowledge of Ashtanga Ayurved backed up by extensive practical training.
- This knowledge will be supplemented by scientific advances in modern medicine along with extensive practical training.
- The BAMS graduate will become globally competent Ayurved practitioner and a research scholar to serve the health care services.

Program specific outcome

The BAMS degree holder should be capable of functioning independently in both urban and rural environment.

Course outcomes

After completion of B.A.M.S course the Graduates of Ayurved –

- Should have thorough knowledge of all the subjects including Sanskrit so that he/she can have the ability to interpret Sanskrit quotations from Classical texts of Ayurved.
- Must have the practical/ clinical skills of all the subjects.
- Are able to diagnose and treat the patients independently with Ayurved management.
- Should be able to conduct minor procedures and preliminary management of accidental cases.
- Should be able to treat the patients with empathy and have proper interpersonal and communication skills as the competent health care professionals.
- Ought to have the current knowledge of recent advances in the field by self-learning and /or participating in continuing Medical Education Programs.
- Shall be able to critically analyze relevant published research literature and use them appropriately to influence practice of Ayurved.
- Must be able to participate in National health program.

Regulations governing the B.A.M.S. programme (CCIM- Minimum standards of Undergraduate Ayurved education- Regulations- 2016

Eligibility

- The failed student of second professional who have passed all the subjects of first professional examination shall be allowed to appear in third professional examination, but the student shall not be allowed to appear in final professional examination unless the student passes all the subjects of second professional examination and maximum four chances shall be given to pass second professional examination within a period of maximum three years.
 - The third professional session shall start every year following completion of second professional examination and the third professional examination shall be ordinarily held and completed every year after completion of one year of third professional session.
 - The student failed in any of the four professional examinations in four chances shall not be allowed to continue his or her studies:

Provided that, in case of serious personal illness of a student and in any unavoidable circumstances, the Vice-

Chancellor of the concerned University may provide one more chance in any one of four professional examinations;

- The student failed in any of the four professional examinations in four chances shall not be allowed to continue his or her studies:

Medium of instruction

The medium of instruction for the programme shall be Sanskrit or Hindi or any recognized regional language or English with use of Ayurvedic technical terms.

Duration of the Course Study

Total duration of course – Five and Half years

- a) First Profession- 18 Months [Course 2021], 12 Months [Course 2017]
- b) Second Profession- 12 Months [Course 2017]
- c) Third profession -12 Months [Course 2017]
- d) Forth Profession- 18 Months [Course 2017]**
- e) Compulsory Internship- 12 Months

Attendance and Progress

Each student shall be required to maintain minimum seventy-five percent attendance in each subject in theory (i.e., lecture hours) practical and clinical (i.e., non-lecture hours) separately for appearing in examination at the end of academic year subject to the condition that his/her progress and conduct are counted satisfactory by the principal.

Subjects taught, Number of lectures/ practical and demonstrations for various subjects [Second year B.A.M.S.]

Sr No.	Subject with code	Number of teaching hours		Total
		Lectures	Practical/ Clinics	
1	Kayachikitsa	200	100	300
2	Panchakarma	100	50	150
3	Shalyatantra	200	100	300
4	Shlakyantra	200	100	300
5.	Research Methodology and Medical statistics	50	--	50
	Total hours	750	350	1400

The Forth Professional examination shall ordinarily be held and completed by the end of the second professional session.

Scheme of Examination

Internal assessment

There shall be minimum three internal assessments for each subject before First Term Test ordinarily at 6th month of respective professional B.A.M.S.) minimum of three periodical assessment before Second Term Test (ordinarily at 12th month of respective professional B.A.M.S.) and minimum of three internal assessments before final university examinations (Summative Assessment) of respective professional B.A.M.S.

University Examination

The theory examination shall have twenty percentage marks for Multiple Choice Questions (MCQ), forty percentage marks for Short Answer Questions (SAQ) and forty percentage marks for Long Explanatory Answer Questions (LAQ) and these questions shall cover the entire syllabus of the subject.

The minimum marks required for passing the examination shall be fifty per cent. In theory component and fifty percent in practical component (that include practical, clinical, viva-voce, internal assessment, and electives wherever applicable) separately in each subject.

Number of Papers and Marks Distribution for Second Professional B.A.M.S. Subjects

Sl. No.	Subject Code	Papers	University Examination		Internal Examination IA		Sub Total		Grand Total
			Theory	Practical/Clinical	Theory	Practical/Clinical	Theory	Practical	
1.	Kayachikitsa	Two	160	80	40	20	200	100	300
2.	Panchakarma	One	80	40	20	10	100	50	150
3.	Shalyatantra	Two	160	80	40	20	200	100	300
4.	Shalakyatantra	Two	160	80	40	20	200	100	300
5.	Research methodology and medical statistics	One	40	-	10	-	50	-	50
Grand Total									1100

Declaration of Class

- A candidate obtaining sixty per cent. and above marks shall be awarded first class in the subject and seventy five percent and above marks shall be awarded distinction in the subject.
- The award of class and distinction shall not be applicable for supplementary examinations.

KAYACHIKITSA

Theory Two Papers – 100 Marks Each
Practical/Viva voce – 100 Marks

PAPER-1 100 Marks PART–A, 50 Marks

Sr No	TOPIC	HOURS
1	Derivation of the terms ‘Kaya’, ‘Chikitsa’ and their definitions and synonyms. Definition of ‘Kayachikitsa, Definition of ‘Bheshaja’. Types and detailed description of Bheshaja and Chikitsa, Knowledge about ChikitsaChatushpada, RogiRogaParikshaSiddhantha, AstasthanaPariksha.	14
2	Importance of KriyaKaala according to stages of Dosha and their management.	03
3	Chikitsa sutra and Management of vriddhi (increased) and kshaya (decreased) of Dosha, Dhatu and Mala, OjoVyapat (Kshaya, Visramsa and Vyapat) and its management. Chikitsasutra and Management of Sama-Nirama states, Roga-AnutpattikaraChikitsa, RogaPrashamanaChikitsa (Doshapratyanika, Vyadhipratyanika, Ubhayapratynika), Doshopakrama, Chikitsa sutra and Management of SthanantaraDosha (Ashayapakarsha, Anuloma/Pratilomagati of Dosha, Vimargagamana of Dosha), Knowledge of Lina Dosha& its management, Diagnosis, Chikitsa Sutra and Management of Avarana and of DhatuPradoshaja diseases, Importance of Dosha, Dushya , Bala, Kaala, Agni, Prakriti, Vaya, SattvaSatmya, Desha, Ahara and stage of diseases in treating them. Chikitsa Sutra and Management of ‘Samanyaja and Nanatmaja’ diseases.	25
4	Detailed description of Dvidividhopakrama (Santarpana and Apatarpana) and Shadavidhopakrama (Rookshana, Snehana, Swedana, Sthambhana, Langhana and Brimhana). Detailed description of Shodhana, Shamana and NidanaParivarjana. Knowledge of Aushadhamatra, Sevankaala and Anupana, Definition and Knowledge of Pathya-Apathya with examples of diseases of various systems.	13
5	Derivation of the term ‘Manas’, its sthana (place), Guna (qualities) and Karma (functions). SamanyaChikitsaSiddhanta of ManasaRoga	03
6	Principles & Management of Nutritional deficiency disorders.	06
7	Management of Vardhakyajanitavikara, Indriyapradoshjavikara, Alzhiemer’s Disease, Sleep disorders, General debility.	05
8	General introduction and principles of Management of diseases produced by Genetic, Environmental and Iatrogenic factors. Disorders due to drug and Food allergy and their management and other allergic conditions.	06
PART-B 50 Marks		
1	Detailed description of Chikitsa Sutra and Management of Jwara and its types. Etiopathogenesis & relevant Ayurvedic and Modern management of following types of Fevers-Typhoid, Pneumonia, Pleurisy, Influenza, Mumps, Meningitis, Encephalitis, Tetanus, Yellow fever, Plague, Dengue Fever, ChikunGuniya, Leptospirosis, Viral Fever, Anthrax, Masurika (Small pox), LaghuMasurika (Chicken pox), Romantika (Measles).	20
2	Chikitsa sutra and Management of the diseases of RasavahaSrotas such as – Pandu, Amavata, Madatyaya, Hridroga, Hridshoola, Hypotension, Hypertension, Anaemia, Rheumatoid arthritis.	10
3	Chikitsa sutra and Management of the diseases of RaktavahaSrotas such as - Raktapitta, Kamala, Kumbhakamala, Halimaka, Daha, Mada, Murcha, Sanyasa, Vatarakta, Plihadosha, Yakrutdosha, Haemolytic disorders, Hepatitis, Cirrhosis of	15

	Liver, Leukaemia, Kushta, Shvitra, Visarpa, Sheetapitta, Udarda, Kotha and KshudraRoga.	
4	Knowledge of National Health Programmes and the relevant Ayurvedic Management of the following diseases enlisted by World Health Organisation- Malaria, Filaria, Kala Azar, Leprosy, Tuberculosis, AIDS.	05
5	Introduction of general principles of maintenance of health and management of diseases of following systems of Medicine- Yoga, Naturopathy, Unani, Siddha, Physiotherapy and Rehabilitation.	06
6	Diseases of different Endocrine Glands- such as Thyroid, Parathyroid, Pituitary, Pancreas and Adrenal glands and their management.	05
7	General introduction, types and Management of diseases caused by VyadhiKshamatwaHinata (Immuno deficiency disorders), Auto Immune Disorders.	05
8	Description and Management of following Emergency Conditions- Acute Haemorrhage, Hypertensive Emergencies, Acute abdominal pain (Renal colic, Biliary colic, Gastritis, Pancreatitis, Peritonitis and Appendicitis), Acute Abdomen, Anuria/ Oliguria, Congestive Heart Failure, Myocardial Infarction/Angina, Shock, Syncope, Convulsions, Hyperpyrexia, Hyperglycaemia, Hypoglycaemia, Status Asthmaticus, Acute Respiratory distress Syndrome, Drowning and Electric shock	09

PAPER-2 100 Marks PART-A 50 Marks

Sr No	TOPIC	HOURS
1	Chikitsa sutra and Management of the diseases of Pranavaha Srotas such as - Kasa, Shwasa, Hikka, Rajayakshma, Urakshata, Parshwashoola, Bronchitis, Bronchiectasis, Emphysema and COPDs.	15
2	Chikitsa sutra and Management of the diseases of Udakavaha Srotas such as- Shotha, Jalodara, Trishna, Water & Electrolyte Imbalance.	08
3	Chikitsa sutra and Management of the diseases of Annavaha Srotas such as – Agnimandya, Aruchi, Ajirna, Anaha, Atopa, Adhmana, Alasaka, Vilambika, Visuchika, Chardi, Grahani, Amlapitta, Gulma, Shoola, Bhasmaka, Acid peptic disorders.	19
4	Principles of treatment and management of Vata Vyadhi such as - Pakshavadha, Ekgangavata, Sarvangavata, Ardita, Avbahuka, Kati Graha, Manyastambha, Gridhrasi, Vishwachi, Khalli, Khanja, Pangu, Padaharsha, Padadaha, Vatakantaka, Kroshtukashirsha, Udavarta, Kampavata, Dhatugata and Ashayagata Avarana Vata, other Vata Rogas, Parkinsonism.	23
5	Nidana and Chikitsa of Urusthambha, Gullian Barrie syndrome, Muscular Dystrophy, Myasthenia Gravis, Motor Neuron Diseases and Neuralgia.	10
PART-B 50 Marks		
1	Chikitsa Sutra and Management of Mamsavaha Srotas and Medovaha Srotas such as- Gandamala, Galaganda, Mamsashosha, Arbuda, Apachi, Prameha, Sthaulya, Karshya, Diabetes Mellitus, Dyslipidaemia.	10
2	Chikitsa Sutra and Management of ‘Asthi and Majjavaha Srotas such as Asthimajja Vidradhi, Asthisoushirya, Asthi kshaya, Sandhigata Vata, Osteo Arthritis Osteomyelitis, Osteoporosis, Osteopenia.	08
3	Chikitsa sutra and management of Shukravaha srotas such as Klaibya, shukralpata, shukradosha, kshina shukra, dhvajabhanga.	04
4	Chikitsa Sutra and Management of diseases of Mutravaha Srotas such as Mutrakricha, Mutraghata, Ashmari, Cystitis, Nephritis, Nephrotic Syndrome, BPH, Renal Failure	08
5	Chikitsa Sutra and Management of diseases of Purishavaha Srotas such as – Atisara, Pravahika, Arsha, Purishaj Krimi, IBS and Ulcerative Colitis.	07

6	Chikitsa Sutra and Management of Sexually Transmitted Diseases such as – Phiranga, Puyameha, Upadamsha, lymphogranuloma inguinale, Syphilis, Gonorrhoea.	05
7	Introduction, Definition and Management of Kama, Krodha, Lobha, Moha, Mada, Matsarya, Shoka, Bhaya, Vishada, Dainya, Harsha and Pragyaparadha.	02
8	Manas and Manovahasrotas, Nidana and Chikitsa of the following disorders - Unmada, Apasmara, Atattvabhinivesha, Chittodvega, Vishada, Anxiety disorders, Depression, Somatoform and Mood disorders, Stress induced disorders, Psychosexual Disorders. Importance of Daivavyapashraya, Sattwavajaya, Adravyabhuta Chikitsa. Medhya Rasayana in the management of Manasa Roga. Bhuta Vidya diagnosis and management of graha disorders.	07
9	Derivation, definition and synonyms of Rasayana, importance of Rasayana and its benefits. Indications of Rasayana therapy. Classification of Rasayana. Kutipravesika and Vatatapika Rasayana. Indications of Vatatapika Rasayana. Knowledge of Kayakalpa, Achara Rasayana. Procedures of Kutipravesika, Poorvakarma and specific schedules to be followed after Kutipravesha, benefits of Kutipravesika Rasayana, duration of process, Rasayana yoga and directions for their use. Determination of dose of Rasayana according to age. Rules and regulation after Rasayana therapy, Importance of Immunomodulators and antioxidants in Rasayana therapy.	14
10	Vajikarana- Derivation, definition, synonyms, necessity, benefits, importance of fertility, Symptoms of Shûkra (Semen), Vajikaran Dravya and Aushadhi. Properties, doses, methods of administration, ingredients and methods of formation of Rasayana & Vajikarana formulation. Classification and importance of Vajikarana Dravya	10

Distribution of practical Marks

Sr No	Topic	Marks
1	Long case	20
2	Short case	10
3	Case record Journal	20
4	Viva- Paper 1	15
5	Viva-Paper 2	15
6	Internal assessment	20
Total		100

Reference books:

- Charak Samhita, Sushrut Samhita, Ashtanga Samgraha and Ashtanga Hridaya with their commentaries. Madhav Nidana with Madhukosha Commentary.
- Ayurvediya Vyadhi Vigyana Yadavji Trikamji
- Roga Pariksha Vidhi Priyavrat Sharma
- Panchakarma Vigyan Haridasa Sridhar Kasture
- Cikitsadarsha Pandit Rajesvardutta Shastri
- Kayachikitsa I-IV Ramaraksha Pathaka
- Ayurved Nidan Chikitsa Siddhanta Prof. R.H.Singh.
- Kayachikitsa Vol. I-IV. Prof. Ajay Kumar
- Davidson's Principles and Practice of Medicine.
- API Text Book of Medicine.
- Harrison's Text Bok of Medicine.
- Cecil Text Book of Medicine.
- Panchkarma Illustrated by Dr. G.Srinivasacharya.
- Other relevant publications on subjects concerned

PANCHAKARMA

**Theory one Paper 100 Marks Practical Viva-voce – 50 Marks
Hours of teaching Theory-100 Clinical Training -3 Months**

Sr No	TOPIC	HOURS
1	<p>Introduction</p> <ol style="list-style-type: none"> 1. Introduction to Panchakarma, Panchakarma and Shodhana, its importance for promotion of health, prevention and treatment of diseases. 2. Trividha Karma- Purva, Pradhana and Pashchat Karma in relation to Shodhana and their importance. 3. Indications of Shodhana, Shodhana according to Ritu 4. General Principles of doshagati from Koshta to Shaka and vice versa 5. General precautions (Pariharya Vishaya) for Panchakarma 6. Specifications of Panchakarma theatre and necessary equipments. 7. Importance of Koshta and Agni Parikshan 	08
2	<p>Snehana</p> <ol style="list-style-type: none"> 1. Etymology and Definition of Sneha and Snehana 2. Snehayoni- Sthavara and Jangama: Properties of Sneha dravyas, Snehopag Dravyas 3. General knowledge of Ghrita, Taila, Vasa and Majja with their specific utility and actions ,Yamaka, Trivrit and Maha Sneha 4. Metabolism of fat 5. Achcha and Pravicharana of Sneha 6. Snehapaka and its importance in Panchakarma 7. Types of Snehana: i) Bahya and ii) Abhyantara Snehana <ul style="list-style-type: none"> i) Bāhya Snehana : Methods, indications and contraindications of the following types of Bahyasnehana; Mardana, Unmardana, Pādāghāta, Samvāhana, Karna Purana & Akshi Tarpan, Lepa, Talam, Murdhni Taila: Siro-Abhyanga, Shiro Seka/dhārā, Siro Pichu and Siro-Basti ii) Ābhyantara Snehana Three Types of Ābhyantara Snehana: Shodhanārtha, Shamanārtha and Brimhanārtha Snehana, Indications and contraindications for Snehana Shodhanārtha Snehana <ol style="list-style-type: none"> a. Importance and method of Deepan Pāchan and Rookshana in Shodhanārtha Snehana. Properties of Rookshana Dravya. Samyak Rookshana Lakshana b. Consideration of Agni and Koshta in Snehana 	11

	<p>c. Indication of Different Matra, Various dose schedules for Shodhanārtha Snehana; Hraseeyasi, Hrasva, Madhyama and Uttama Mātrā, Ārohana Mātrā</p> <p>d. Methods of Shodhanārtha Snehana,</p> <p>e. Anupāna of Sneha</p> <p>f. Jeerna and Jeeryaman Lakshana</p> <p>g. Samyak Yoga, Ayoga and Atiyoga of Snehana, Sneha Vyāpat & their management according to Ayurveda & Modern Medicine</p> <p>h. Diet and regimen during Snehana</p> <p>Sadyo Sneha: Method of administration, dose fixation and utility</p> <p>Shamanārtha Snehana, Method of administration, dose fixation and utility</p> <p>Brunhanarth Senhana: Method of administration, dose fixation and utility</p> <p>Avapeedak Sneha: Method of administration, dose fixation and utility</p> <p>8.Snehana Karmukata (Mode of action)</p> <p>9.Special Procedures</p> <p>Takradhara, Udvardanam, Putpāka, Aschotana, Anjana, Gandusha, Kavalā, Dhoompāna, Udvardana, Utsādana, Udgharshana, Talapothichil</p>	
4	<p>Svedana</p> <ol style="list-style-type: none"> 1. Etymology and Definition of Sveda and Svedana 2. Classifications of Sveda/Svedana 3. General Sweda dravya, Properties of Sweda dravyas, Swedaopag dravyas , 4. Indications and contraindications of Svedana 5. Ten Types of Niragni Svedana 6. Knowledge of 13 types of Sagni Svedana and Chaturvidh Svedan 7. Detailed Knowledge with their Utility of the following Svedana procedures: <p>Sankara/Pinda Sveda-Ruksha and Snigdha Sveda Patrapinda Sveda, Jambir Pinda Sveda, Vāluka Sveda, Churna Pinda Sveda, Kukkutand Pinda Sveda, Shashtika Shalipinda Sveda, Nadi Sveda, Bashpa Sveda Ksheer dhooma , Ksheer Seka, Kwath Seka, Avagaha Sveda, Dhanymla Dhara Parisheka Sveda, Pizichil, Upanaha Sveda, Annalepa</p> <ol style="list-style-type: none"> 1. Local Basti such as Kati Basti, Janu Basti, Greeva Basti and Uro-basti 2. General precautions during Sagni Svedana and Methods to protect vital during svedana 3. Samyak Yoga, Ayoga and Atiyoga of Svedana 4. Complications of Svedana and their Management according to Ayurveda & Modern Medicine 	09

	<ol style="list-style-type: none"> 5. Diet and management during and after Svedana 6. Parihār Vishaya 7. Svedana Kārmukata (Mode of action) 8. General Knowledge about current Sudation techniques like Sauna bath, Steam bath. 	
5	<p>Vamana Karma</p> <ol style="list-style-type: none"> 1. Etymology, definition and importance of Vamana Karma 2. Utility of Vamana Karma in health and disease 3. Indications and Contraindications for Vamana 4. Knowledge of Koshta and Agni 5. General knowledge of Vamana and Vamanopaga drugs; properties, actions, preparations, preservation with special reference to Madanphala, Kutaj, Nimba, Yashti, Vacha 6. Purva Karma of Vamana:Deepan-Pāchana, Abhyantara Snehana and diet 7. Management of one gap day-Abhyanga & Svedana, diet, special Kapha increasing diet 8. Preparation of the patient on Morning of Vamana day 9. Vamaka Yoga, Anupana, fixation of dose and method of administration 10. Administration of Vamanopaga Dravya such as milk, sugarcane juice, Yashtimadhu decoction 11. Lakshana indicating Doshagati during the process 12. Management during Vamana Karma & observations 13. Symptoms of Samyak Yoga, Ayoga and Atiyoga of Vamana Karma 14. Post Vamana management 15. Types of Shuddhi-Hina, Madhya and Pravara 16. Peyadi Samsarjana Krama and Tarpanadi Kram with their specific indications 17. Complication of Vamana and their management with Ayurveda and modern drugs 18. Pariharya Vishaya 19. Vamana Karmukata (Mode of action). 	11
6	<p>Virechana Karma</p> <ol style="list-style-type: none"> 1. Etymology, definition and importance of Virechana Karma 2. Utility of Virechana Karma in health and disease 3. Indications and Contraindications for Virechana 4. Knowledge of Koshta and Agni 5. Classification of Virechana Drugs, General properties of Virchana dravya 6. General knowledge of single and compound Virechan drugs; properties, actions, preparations, preservation with special reference to Trivrutta, Aragvadha, Eranda, Katuki, Jaipal 7. Purva Karma of Virechana: Deepan-Pachana, Abhyantara Snehana and diet 8. Management of 3 gap days-Abhyanga, Svedana & diet 	12

	<p>9. Management on Morning of Virechana day 10. Preparation of Virechana Kalpa, Anupana, dose and method of its administration 11. Method of Virechana Karma and management during Virechana Karma & observations 12. Symptoms of Samyak Yoga, Ayoga and Atiyoga of Virechana Karma 13. Post Virechana management 14. Types of Shuddhi-Hina, Madhya and Pravara and accordingly Sam-sarjana Krama 15. Complications of Virechana and their management with Ayurveda and modern drugs 16. Pariharya Vishaya 17. Virechana Kārmukatā (Mode of action)</p>	
<p>7</p>	<p>Basti Karma 1. Etymology, definition and importance of Basti as Ardha-Chikitsa 2. Utility of Basti Karma in health and disease 3. Basti Yantra- Putaka & Netra, Detailed study of traditional Basti Yantra and their Doshas Knowledge of alternative Basti Yantra-enema can, enema syringe, modified plastic/rubber bag for Putaka, modified plastic netra. 4. Classifications of Basti 5. Karma, Kāla and Yoga Basti schedules along with their utility. 6. Niruha Basti: Its etymology, synonyms, definition, classifications, sub-classifications & indications and contraindications. a. Dose fixation of Niruha Basti according to age b. Contents and Method of preparation of Niruha Basti dravya c. Diet d. Administration of Niruha Basti e. Pratyāgamana Kāla, Post Niruha Basti management f. Samyak Yoga, Ayoga and Atiyoga of Niruha. g. Complication of Niruha Basti and its management according to Ayurved and Modern Medicines h. Pariharya Vishaya and kala 7. Anuvasana Basti: Its etymology, synonyms, definition, classifications, subclassifications & indications and contraindications. a. Dose fixation of Anuvasan Basti according to age b. Contents and Method of preparation of Anuvasan Basti dravya c. Diet Administration of Anuvasan Basti. d. Pratyāgamana Kāla, Post Anuvasan Basti management e. Samyak Yoga, Ayoga and Atiyoga of Anuvasana.</p>	<p>20</p>

	<p>f. Complication of Anuvasan and its management according to Ayurved and Modern Medicines</p> <p>g. Pariharya Vishaya and kala</p> <p>8.Basti Kārmukatā (Mode of action).</p> <p>9.Knowledge of following types of Basti: Madhutailika Basti, Erandmuladi Basti, Yāpana Basti, Pichchha Basti, Kshira Basti, Kshara Basti, Vaitarana Basti, Panchaprasutik Basti, Lekhan Basti,Krumighna Basti,Tiktashir Basti,Ardhamātrika Basti</p> <p>10.Uttara Basti,: its definition, indications and contraindications, Detailed study of traditional Basti Yantra and their Doshas Knowledge of alternative Basti Yantra</p> <p>a. Preparation of patient, b. Preparation of Trolley for Uttarbasti, c. drug preparation and Fixation of dose, d. method of administration in male and females, e. observations, f. complications and their management.</p>	
8	<p>Nasya</p> <ol style="list-style-type: none"> 1. Etymology, definition, Significance of Nasya Karma. 2. Classifications and sub-classifications 3. Knowledge of general Dravya used for Nasya Karma, Shirovirechan Gana, Shirovirechanopag dravyas 4. Indications and contraindications of Nasya 5. Time of administration of Nasya 6. Dose fixation of different types of Nasya 7. Diet and regimen before and after Nasya Karma 8. Administration of Marsha, Pratimarsha, Avapeedaka, Dhoomapana and Dhuma Nasya 9. Symptoms of Samyak-yoga of Nasya, 10. Complication of Nasya and their management 11. Parihār Vishaya 12. Nasya Karmukata (mode of action) 	11
9	<p>Raktamokshana</p> <ol style="list-style-type: none"> 1. Definition, importance and Types of Raktamokshana 2. General Principles and rules of Raktamokshana 3. Classification of Raktamokshan 4. General Indication and Contra indication of Raktamokshan 5. Jalaukavacharana: Knowledge of different types of Jalauka (Leech) , Indications and contraindications of Jalaukavacharana, various types of Jalauka. Method of Application, Samyak Lakshan, Complication of Jalaukavcharana and their management with Ayurveda and Modern medicines. 	06

	<p>6. Pracchāna: Indications and contraindications of Pracchana. Method of Application, Samyak Lakshan, Complication of Pracchana and their management with Ayurveda and Modern medicines</p> <p>7. Sirāvedha: Indications and contraindications of Siravedha. Method of Application, Samyak Lakshan, Complication of Siravedha and their management with Ayurveda and Modern medicines.</p> <p>8. Knowledge of emergency management of complications such as water & electrolyte imbalance, shock, bleeding per rectal, heme-temsis, epistaxis</p>	
10	<p>Physiotherapy</p> <p>1. Definition, Utility and Importance of Physiotherapy.</p> <p>2. Basic Knowledge of Static exercise, Infrared, Short wave diathermy, Electromagnetic therapy, Wax bath therapy, Ul-trasonic therapy.</p>	12

PRACTICALS / CLINICAL TRAINING –

Total Duration of 3 Months posting

- OPD (for 1-Month): observation of OPD patients, selection of the patients, observation of OPD base Panchakarma procedures
- IPD (Panchkarma) and Panchakarma Unit – Observation of different procedures of Panchakarma, Assistance to the procedure under guidance of Panchakarma specialist Under clinical posting, each student has to study and write 15-long Cases and 10 short cases in prescribed format
- Long case Paper- minimum 1 Vaman , 1 Virechan, 1Niruha & Anuvasan Basti, 1Nasya, 1 Raktamokshan
- Short case paper –Minimum one each of Pinda sweda, Shirodhara,Abhyanga, Netra Tarpan, Bahya Basti, Nadi Sweda etc.

Distribution of Marks

Sr No	Topic	Marks
1	Long case	15
2	Short case	08
3	Case record Journal	05
4	Viva- Paper 1	06
5	Viva-Paper 2	06
6	Internal assessment	10
	Total	50

Reference Books

1. Charak Samhita with Commentary of Ayurveda Dipika by Chakrapanidatta & Jalpakalpataru by Gangadhara
2. Sushrut Samhita with the Sushruta Nibhandha Samgraha Commentary of Dalhana & Nyayachandrika Panjika of Gayadasa on Nidana Sthana
3. Ashtanga Hridaya with Sarvanga Sundara & Ayurveda Rasayana Commentaries
4. Ashtanga Sangraha with Shashilekha Commentaries
5. Ayurvediya Panchakarma Chikitsa Dr Mukundilal Dwivedi
6. Panchakarma Vigyan Dr Haridas Shreedhar
Kasture
7. Illustrated Panchakarma Dr.G Srinivasa Acharya
8. Clinical Panchkarma (English) Dr. P.Yadaiah
9. Prayogika Panchkarma (Hindi) Dr. P. Yadaiah
10. Vivida Vyadhiyome Panchkarma (Hindi) Dr. P. Yadaiah
11. The Panchkarma Treatment of Ayurveda with Kerala Specialtie Dr. T.L.
Devaraj
12. Panchkarma Therapy Dr. R.H. Singh
13. Ayurveda-Principles and Panchakarma Practice Dr Mandip R. G. & Prof.
Gurdip Singh
14. Principles and Practice of Basti Dr. Vasudevan & Dr. L. Ma-
hadevan
15. Panchakarma Sangraha Dr. Manoj Shamku-
war
16. Essential of Panchakarma Therapy Dr.Pulak Kanti Kaur
17. Principles and Practice of Panchakarma Vaidya Vasant Patil
18. Harrison's Principle of Internal Medicine
19. Guyton's Physiology

SHALYA TANTRA

Theory Two Papers 100 Marks Each
Practical - Viva voce – 100 Marks

PAPER-1, 100 Marks

PART-A 50 Marks		
Sr No	TOPIC	HOURS
1	<p>Definition of Shalya, Shalya Tantra and its importance.</p> <p>Introduction to Shalya Tantra: Historical background and progress made.</p> <ul style="list-style-type: none"> • Target - Fluency in textual reading and comprehension. • Preferable targets - Know recent developments and controversies. <p>Description of Yantra, Shastra, Anushastra: Definition, number, types, uses, Dosha, Guna, Karma. Relevant modern instruments.</p> <ul style="list-style-type: none"> • Target - Basic understanding of the concepts of Yantra and Shastra. Acquaintance with commonly used surgical instruments. Knowledge of textual descriptions. • Preferable targets - Knowledge about currently used surgical instruments, their specifications, procurement sources etc. <p>Nirjantukarana / Sterilization: Methods, types and its role in surgical practice.</p> <ul style="list-style-type: none"> • Target - Basic surgical discipline of maintaining asepsis. • Preferable targets- Knowledge of recently developed chemicals, instruments for sterilization. <p>Sangyahan / Anaesthesia: Definition and Types.</p> <ol style="list-style-type: none"> i. Local anaesthesia – Drugs, Techniques, Indications, Contraindications, Complications and their Management. ii. Regional and General anaesthesia- Drugs, Techniques, Indications, Contraindications, Complications and their Management. <ul style="list-style-type: none"> • Target-Basic knowledge of the drugs and instruments of anaesthesia. To observe the process of induction, monitoring and recovery. • Preferable targets- Assisting and handling anaesthesia. <p>Trividha Karma – Purva Karma, Pradhana Karma and Paschat Karma.</p> <ul style="list-style-type: none"> • Target- Capability to identify conditions which can affect the outcome of surgery in pre, intra and post- operative period. • Preferable targets- Experience of handling incidents. 	17

	<p>Ashtavidha Shastra Karma - Surgical procedures.</p> <ul style="list-style-type: none"> • Targets- Appreciation and comprehension of concepts and indications of different procedures. • Preferable targets –Hands on experience of surgical procedures. <p>Yogya - Experimental Surgery.</p> <ul style="list-style-type: none"> • Target –Appreciation and comprehension of concepts of Yogya. Idea of patient’s safety in experimental training. • Preferable targets- Hands on training on mannequins. 	
2	<p>Marma: Nirukti, types, description and importance.</p> <ul style="list-style-type: none"> • Target –Clinical application of concepts of marma. • Preferable targets- Study of relevance of marma in the light of current anatomical and surgical knowledge. 	03
3	<p>Kshara and Kshara Karma:</p> <ol style="list-style-type: none"> Nirukti, Pradhanyata, Guna, Dosha, Karma, Prakara, Yogya, Ayogya, Procedure, Upadrava and Chikitsa. Kshara nirmana vidhi, knowledge of Kshara Varti, Taila and Pichu. Kshara Sutra – Preparation, Indications, Contraindications and Method of application, Complications and their Management. <ul style="list-style-type: none"> • Target – Capability to identify and practice the use of kshara, kshara sutra in common clinical conditions. <p>Preferable targets – Broader knowledge of current trends and ongoing researches in kshara application</p>	04
4	<p>Agnikarma: Mahatva, Upakarana, Vidhi, Akrti bheda, Yogya, Ayogya and Upadrava Chikitsa.</p> <p>Contemporary techniques and tools of Agnikarma.</p> <ul style="list-style-type: none"> • Target - Capability to appreciate the clinical indications and comprehend Agnikarma procedure. <p>Preferable targets - Hands on experience of use of cautery in surgical practice.</p>	04
5	<p>Raktamokshana: Mahatva, Prakara - Siravyadha, Pracchanna, Shringa, Alabu, Jaloukavacharana – Yogya, Ayogya, Procedure, Upadrava and Chikitsa.</p> <ul style="list-style-type: none"> • Target- Capability to appreciate and comprehend clinical indications of Jaloukavacharana and other Raktamokshana procedures. <p>Preferable targets - Uses of bloodletting in current therapy.</p>	03
6	<p>Bandha Vidhi – Prayojana, Dravya, Indications, Contraindications, Prakara, Upadrava, Pichu, Plota, Kavalika and Vikeshika.</p>	03

	<ul style="list-style-type: none"> Target- Hands on experience of techniques of bandaging. Preferable targets - New generation of bandaging and splintage tools. 	
7	<p>Pranastha Shalya and Nirharana Upaya.</p> <ul style="list-style-type: none"> Target – Importance of concepts of Sushruta in the management of Shalya and concerns of patient safety. Identification and management of foreign bodies. Preferable targets - Current concepts and diagnostic tools of dealing with foreign bodies. 	02
8	<p>Fluid, Electrolyte, Acid Base Balance and Nutrition:</p> <ol style="list-style-type: none"> Introduction of physiology of fluids and electrolytes. Dehydration and over hydration. Specific electrolyte loss, Acidosis, Alkalosis, Symptomatology and Management. Electrolyte changes in specific diseases like pyloric stenosis, intestinal obstruction and anuria. Various replacement fluids in surgery, mode of administration and complications. Nutrition. <ul style="list-style-type: none"> Target – Capability to identify and manage fluid and electrolyte imbalance. Ability to administer parenteral fluid. Preferable targets - Advanced techniques of fluid and electrolyte assessment and management. 	05
9	<p>Rakta Mahatwa, Raktasrava / Haemorrhage: Prakara and Lakshana.</p> <ol style="list-style-type: none"> Raktastambhana – Haemostasis. ii. Blood Transfusion –Blood groups, Compatibility, Indications, Contraindications and Complications with Management. iii. Component therapy. <ul style="list-style-type: none"> Target-Knowledge of achieving haemostasis in haemorrhage. <p>Preferable targets - Detailed knowledge of blood bank techniques.</p>	04
10	<p>Antibiotics, analgesics, anti-inflammatory and emergency drugs in surgical practice.</p> <ul style="list-style-type: none"> Target – Working knowledge of commonly used drugs. Preferable targets - Advanced pharmacological study of the above drugs. <p>Diagnostic techniques – X-ray, Imaging techniques, Ultrasonography, CAT Scan, MRI, Biopsy / Cytological study.</p>	05

	<ul style="list-style-type: none"> Target- Knowledge of proper indications for optimum investigational tools and their interpretation. <p>Preferable targets - Capability to work independently in the field of diagnostic techniques</p>	
PART-B 50 Marks		
1	<p>Shat Kriyakala in surgical practice.</p> <ul style="list-style-type: none"> Target- Clinical utility of the concepts. Preferable targets - Applied aspects of Kriyakalas in the light of current concepts of pathogenesis. 	01
2	<p>Nirukti, Nidana, Samprapti, Prakara, Lakshana, Sadhya-asadhyata, Upadrava and Chikitsa of the following disorders.</p> <ol style="list-style-type: none"> Vranashotha - Inflammation Vidhradi - Abscess Pidika - Boils Nadi Vrana - Sinus / Fistulae Vrana Granthi - Keloid / Hypertrophic scar Marmagata - Shock Kotha – Gangrene and Principles of Amputation. Granthi – Cyst Arbuda - Tumour <ul style="list-style-type: none"> Target-Clinical application of the concepts. Preferable targets - Hands on experience of management of different conditions. 	08
3	<p>Vrana – Nirukti and Prakara</p> <ol style="list-style-type: none"> Nija Vrana – Nidana, Samprapti, Vrana Vasthu, Prakara, Lakshana, Vrana Pariksha – Sthana, Vrana Akrti, Srava, Gandha, Vedana. Vrana Avastha- Dustavrana, Shuddha Vrana, Ruhyamana Vrana, Samyak Roodha Vrana, Vrana Sadhya-asadhyatha and Vrana Upadrava. Vrana Chikitsa – Pathya-apathya and Shashti Upakrama, Vranitagara and Rakshakarma. Agantuja Vrana : <ol style="list-style-type: none"> Sadyo Vrana - Traumatic wounds – Nidana, Prakara, Lakshana, Upadrava and Chikitsa. Management of bites and stings. Dagdha Vrana – Burns and scalds. Ulcer - Types and their management. Wound healing stages and their management. Prameha pidaka - Diabetic carbuncle and wounds. <ul style="list-style-type: none"> Target - Clinical application of the concepts. Preferable targets - Hands on experience of management of different conditions. 	08
4	Twak Vikara - Nidana, Samprapti, Lakshana and Chikitsa of	05

	<p>Chippa – Paronychia, Kadara – Corn and Kshudra rogas.</p> <ul style="list-style-type: none"> • Target - Clinical application of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	
5	<p>Manya Vikara – Nidana, Samprapti, Lakshana and Chikitsa of Galaganda – Goitre, Gandamala, Apachi –Lymphadenitis, Pashanagardhabha – diseases of parotid gland.</p> <ul style="list-style-type: none"> • Target-Clinical application of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	06
6	<p>Sira Vikara - Venous disorders – Superficial and Deep venous thrombosis, Haemangioma, Varicose veins - Diagnosis and their Management.</p> <ul style="list-style-type: none"> • Target - Clinical application of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	06
7	<p>Dhamani Vikara - Arterial disorders – Nidana, Samprapti, Lakshana and Chikitsa of Aneurysm,Buerger’s disease,Atherosclerosis, Raynaud’s disease.</p> <ul style="list-style-type: none"> • Target - Clinical application of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	06
8	<p>Snayu Vikara - Diseases of tendons and ligaments – Tennis elbow, Ganglion and their Management.</p> <ul style="list-style-type: none"> • Target - Clinical application of the concepts. • Preferable targets - Hands on experience of management of different conditions 	05
9	<p>Care of AIDS - HIV and hepatitis infected patients.</p> <ul style="list-style-type: none"> • Target - Knowledge of safety precautions 	05

PAPER-2, 100 Marks

PART-A -50 Marks		
Sr No	TOPIC	HOURS
1	<p>Bhagna – Skeletal injuries: Prakara including pathological fracture, Samanya Lakshana, Upadrava and Chikitsa. Description of fracture of following bones with Clinical features, Diagnosis, Complications and Management – scapula, clavicle, humerus, radius, ulna, femur, patella, tibia and pelvis bones.</p>	10
2	<p>Sandimoksha - Dislocation: Dislocation of following joints with Clinical features, Diagnosis, Complications and Management of shoulder, elbow and hip.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	06
3	<p>Diseases of bone: Aetiopathogenesis, Classification, Clinical</p>	04

	<p>features, Diagnosis, Complications and Management of Congenital anomalies, Osteomyelitis, Cysts, Tumours and Tuberculosis.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	
4	<p>Cranio-cerebral injuries: Mechanism, Pathology, Classification, Investigations, Complications and primary management.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions 	03
5	<p>Diseases of Spine: Mechanism, Pathology, Classification, Investigations, Complications and primary management of Tuberculosis, Ankylosing Spondylitis and Disc prolapse.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	02
6	<p>Diseases of breast: Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Sthana Vidradhi - Breast abscess and Sthana Arbuda - Breast tumours.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. <p>Diseases of chest: Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Chest injury, Pleural effusion, Pleurisy and Tumours.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	02
7	<p>Diseases of esophagus: Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Congenital anomalies, Oesophagitis, Varices, Ulcer and Tumours.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	02
8	<p>Gulma Roga - Nidana, Prakara, Lakshana, Upadrava and Chikitsa.</p>	01
9	<p>Shoola vyadhi - Nidana, Prakara, Lakshana, Upadrava and Chikitsa.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of acute abdomen. 	03
10	<p>Udara Roga: Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Jalodara - Ascites, Chidrodara – Perforation, Peritonitis and Badhagudodara-Intestinal obstruction.</p>	02

	<ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	
11	<p>Diseases of stomach and duodenum: Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Pyloric Stenosis, Peptic Ulcer and Tumours.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions 	02
12	<p>Diseases of small intestine: Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Tuberculosis, Obstruction and Perforation.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	02
13	<p>Diseases of large intestine - Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Tuberculosis, Obstruction, Perforation, Tumours, Appendicitis, Crohn's disease and Ulcerative Colitis.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concept. • Preferable targets - Hands on experience of management of different conditions. 	03
14	<p>Diseases of Rectum and Anal Canal – Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Congenital disorders, Arshas - Haemorrhoids, Parikartika - Fissure-in-ano, Bhagandara - Fistula-in-ano, Guda Vidradi - Anorectal abscesses, Gudabhramsa - Rectal prolapse, Sanniruddaguda - Anal stricture, Incontinence, Rectal Polyp and Tumours.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	05
15	<p>Abdominal injuries and their management.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions 	03
PART -B 50 Marks		
Sr No	TOPIC	HOURS
1	<p>Diseases of Liver: Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Yakrit Vidhradi - Abscess, Neoplasia, Portal hypertension and Yakritdalyodar –Hepatomegaly.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	04
2	<p>Diseases of Gallbladder: Aetiopathogenesis, Classification, Clinical</p>	03

	<p>features, Diagnosis, Complications and Management of Cholecystitis, Cholelithiasis, Obstructive jaundice and Tumours.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	
3	<p>Diseases of Pancreas: Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Pancreatitis, Cysts of Pancreas and Tumours.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions 	03
4	<p>Diseases of Spleen – Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Pleehodara – Splenomegaly and Splenic rupture.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	02
5	<p>Diseases of Kidney and Ureters - Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Congenital anomalies, Polycystic kidney, Injuries, Perinephric abscess, Calculus and Neoplasms.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	06
6	<p>Diseases of Urinary bladder – Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Congenital anomalies, Injuries, Ashmari Vesical Calculus, Cystitis and Neoplasms.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	03
7	<p>Mutraghata and Mutrakrichra - Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management. Retention of urine.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	04
8	<p>Diseases of Prostate - Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Prostatitis, Prostatic abscess, Benign Enlargement of Prostate and Carcinoma of Prostate.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. 	05

	<ul style="list-style-type: none"> • Preferable targets - Hands on experience of management of different conditions. 	
9	<p>Diseases of Urethra – Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Urethritis, Stricture and Rupture.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	05
10	<p>Diseases of Penis: Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Congenital anomalies, Niruddhaprakasha -Phimosis, Parivartika -Paraphimosis, Avapatika - Prepuceal ulcer, Arbuda- Tumours and Lingarsha Penile Warts.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	04
11	<p>Diseases of Scrotum and Testis: Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Epididymo-orchitis, Epididymal cyst, Scrotal filariasis, Shukrashmari - Seminal calculus, Torsion of testis, Ectopic testis, Undescended testis and Tumours.</p>	07
12	<p>Vridhhi Roga: Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Mutravridhhi – Hydrocele.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	02
13	<p>Antra Vridhhi – Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Hernia - Inguinal, Femoral, Epigastric, Umbilical, Incisional and rare forms of Hernia.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. <p>Preferable targets - Hands on experience of management of different conditions.</p>	02

PRACTICALS

Content of Practicals:

1. Identification, uses, demonstration of surgical instruments and methods of sterilization.
2. Training of case taking, bed side clinicals and case presentation.
3. Demonstration and Practical training in Anaesthesia.
4. Training to develop skills in following Parasurgical and other procedures
 - i. Kshara Karma

- ii. Agnikarma
- iii. Kshara Sutra iv. Raktamokshana
- v. Application of bandages and splints
- vi. Catheterization
- vii. Wound management procedures like Parisheka and Patradana
- viii. Ryle's tube aspiration
- ix. Injections -Intramuscular / Intravenous / Subcutaneous / Intradermal
- x. Incision and drainage of abscess
- xi. Suturing of open wounds

5. Observation of following procedures

- i. Circumcision
- ii. Hydrocele
- iii. Hernial repair iv. Vasectomy
- v. Haemorrhoidectomy
- vi. Fistulectomy
- vii. Fissurectomy
- viii. Appendectomy
- ix. Cholecystectomy

6. Training of Surgical Emergencies and Management.

Clinical Training (Indoor and Outdoor)

09 Months

Shalya (Samanya)	03 Months (atleast one month in OT)
Shalya(Kshara and Anushastra Karma)	03Months(at least one month in OT)
Asthi and Sandhi Chikitsa (Orthopaedics and Trauma)	02 Months
Anaesthesia	15 days
Radiology	15 days

Distribution of Practical Marks

Sr No	Topic	Marks
1	Long case	20
2	Short case	10
3	Instrument and drug viva	10
4	General case record	10
5	Viva voce	30
6	Internal assessment	20
	Total	100

Reference Books

1. Sushruta Samhita
2. Ashtanga Sangraha
3. Ashtanga Hridaya
4. Charaka Samhita
5. The Surgical instruments of the Hindus - Girindranath Mukhopadhyaya
6. Shalya Tantra Samuchchaya - Pandit Ramadesh Sharma
7. Shalya Vigyan (Part 1-2) - Dr. Surendra Kumar Sharma
8. Shalya Samanvaya (Part 1-2) - Vd. Anantaram Sharma
9. Shalya Pradeepika - Dr. Mukund Swaroop Verma
10. Sushruti - Dr. Ram Nath Dwivedi
11. Clinical Shalya Vigyan - Dr. Akhilanand Sharma
12. Bhagna Chikitsa - Dr. Prabhakar Janardhan Deshpande
13. Kshara sutra management in anorectal ailments - Dr. S.K. Sharma, Dr. K.R.Sharma and Dr. Kulwant Singh.
14. Anorectal diseases in Ayurveda - Dr. Sijoria and Dr. Praveen Kumar Chowdary.
15. Adhunik Shalya Chikitsa Siddanta - Dr. Katil Narshingham Udupa
16. Agnikarma Technology Innovation - Dr. P.D. Gupta
17. Shalya Tantra Ke Siddhant - Dr. K.K.Takral
18. Recent advances in the management of Arshas / Haemorrhoids - Dr. P. Hemantha Kumar
19. Arsha Evum Bhagander Mein sutra Avacharan - Vd. Kanak Prasad Vyas
20. Kshara Sutra - Dr. S.N.Pathak
21. Surgical ethics of Ayurveda - Dr. D.N. Pande
22. Bailey and Love's Short Practice of Surgery - Norman.S. Williams, Charles.V. Mann and R.C.G. Russell
23. Clinical methods in surgery - S. Das
24. Textbook of Operative Surgery - S. Das
25. Shalya Vigyan (Sachitra) - Anantram Sharma
26. Anushastra Karma - Dr. D.N. Pande
27. Concept of Vrana is Ayurveda - Dr. Lakshman Singh
28. Significance for Poorva Karma in Surgical Patient - Dr. Lakshman Singh
29. Sangyahan Prakash - Dr. D.N. Pande
30. A concise Text Book of Surgery - S. Das
31. A manual on Clinical Surgery - S. Das
32. A System of Surgical Diagnosis - T.N. Patel
33. A Practical Guide to Operative Surgery - S. Das
34. Drugs and Equipment for Anaesthesia - Arun kumar
35. Manual of Surgical Instruments - M.M. Kapur

36. Ward Procedures - Patel Mansukh. B
37. Recent trends in the management of Arshas / Haemorrhoids - Dr. P. Hemantha
Kumar
38. Primary Anaesthesia - Maurice King
39. Synopsis of Anaesthesia - Lee
40. Clinical Anatomy/ Surgical Anatomy - John E. Skandalakis
41. Surgical Instruments of the Hindus - Girindharnath Mukopadyay
42. Outline of Orthopedics - John Crawford Adams and David
Hamblen. L
43. Outline of Fracture - John Crawford Adams
44. Recent trends in the management of Bhagandara / Fistula-in-ano - Dr. P. Hemantha
Kumar
45. Principles and Practice of Agnikarma - Dr. Anand Kumar and
Dr. Kanchan Shekokar
46. Manipal Manual of Surgery - Dr. Rajgopal Shenoy

SHALAKYA TANTRA

Theory- 2 Papers – 100 Marks Each Total Marks- 200

Practical/Viva voce – 100 Marks

PAPER-1 100 Marks NETRA ROGA VIGYAN

Sr No	TOPIC	HOURS
1	<p>Introduction</p> <p>a) Shalakyatantra nirukti, Parichayam, Ithihasam</p> <p>b) Netra rachana shariram (Mandala, Patala, Sandhi, Drushti Vichara) and Netra Kriya Sharira alongwith modern anatomy of Eye.</p> <p>c) Eye examination and knowledge of basic instruments/equipments required for examination of Eye.</p> <p>d) Netrarognanam – Samanya Hetu (Nija and agantuja), Purvarupa, Samprapti, Rupa and Chikitsa.</p> <p>e) Classification of Netraroga and its importance.</p>	12
2	<p>Netra Samanya and Vishishta Chikitsa - Kriya Kalpa</p> <p>a) Netra and Chakshu swasthya hitkara Dinacharya, Ritucharya, Aahara evam Vihara.</p> <p>b) Kriya-kalpa-Seka, Aschyotana, Pindi, Vidalaka, Tarpana, Putapaka, Anjana and importance of Panchkarma in Netra Chikitsa.</p> <p>c) Basic fundamentals of Netra Shastra Chikitsa e.g. Purva – Pradhana - Paschat karma, Ama-Pachyaman-Pakva Vrana shotha, Vranitopasana, Pranashtashalya, & Vran-bandhana. Methods and concepts of sterilization, asepsis and anti-sepsis as per ancient and modern point of view.</p> <p>d) Basic applied knowledge of Ashtavidha shastrakarma, agni, kshara, raktamokshana in Nerta rogas.</p> <p>e) Essential diagnostic and therapeutic modern pharmacological agents required in Netra Chikitsa</p>	10
3	<p>Sandhigata Roga (Diseases of junctional areas of eye)</p> <p>a) Number of sandhigata rogas, detailed etiology, pathology, clinical features and management of Pooyalasa and Srava Rogas.</p> <p>b) Brief Study of krimi granthi, Parvani and Alaji Rogas.</p> <p>c) Study of Acute and Chronic Dacryocystitis, Epiphora, Blepharitis including their aetiology, pathology, signs & symptoms, differential diagnosis and medical & surgical management.</p>	06
4	<p>Vartmagata Roga(Diseases of Lids)</p> <p>a) Number of vartmagata rogas, and detailed knowledge of etiology, pathology, clinical features and management of Anjananamika, Utsangini, Lagana, Vatahata vartma, Pakshma kopa, Sikta vartma,</p>	14

	<p>Pothaki, Klinna vartma, Krichhronmeelana and Kukunaka diseases of Vartma.</p> <p>b) Brief Knowledge of Vartmarbuda, Utklishta vartma, Nimesh, Pakshmathata, Vartmarsha</p> <p>c) Knowledge of Hordeolum, Ptosis, Trachoma, Trichiasis, Entropion, Ectropion including their Etiology, signs and symptoms differential diagnosis and medical & surgical management.</p>	
5	<p>Shuklagata Roga (Diseases of sclera and conjunctiva)</p> <p>a) Number of Shuklagata rogas, detailed knowledge of etiology, pathology, clinical features and management of Arma, Arjuna and Shuktika</p> <p>b) Brief Knowledge of Sira pidika, Sira jala, Pishtaka, Balasgrathita.</p> <p>c) Study of Pterygium, Scleritis, Episcleritis, Sub-Conjunctival Hemorrhage including their Etiology, signs and symptoms, differential diagnosis and medical & surgical management.</p>	08
6	<p style="text-align: center;">Krishnagata Roga (Diseases of cornea and uvea)</p> <p>a) Number of krishnagata rogas, detailed knowledge of Etiology, Pathology, Clinical features, differential diagnosis, complications and Management of Savrana /kshata Shukla (Shukra), Avrana shukra (Shukla)</p> <p>b) Brief knowledge of Sira shukla, Akshipakatyaya and Ajakajata.</p> <p>c) Knowledge of Corneal ulcer, Corneal Opacity, Uveitis, Acute Iridocyclitis, Staphyloma, their aetiology, pathology, symptoms, differential diagnosis, complications and management</p>	06
7	<p>Sarvagata Roga (Diseases effecting all parts of eye)</p> <p>a) Number of Sarvagata rogas, detailed knowledge of etiology, pathology, clinical features, complications, differential diagnosis and Management of Abhishyanda, Adhimantha, Hatadhimantha and Shushkakshipaka.</p> <p>b) Brief Knowledge of Amloshit, Vata paryaya, Anyato vata, Sashopha & Ashophakshipaka- Pilla roga, Sirotkata and Siraharsha.</p> <p>c) Knowledge of Conjunctivitis, Glaucoma, Dry Eye Syndrome including their etiology, pathology, clinical features, differential diagnosis, complications and their management.</p>	12
8	<p>Drishtigata Roga (vision disorders)</p> <p>a) Number of Drishtigata rogas detailed knowledge of - etiology, pathology, clinical features, differential diagnosis and management of Timira, Kacha and Linga nasha.</p>	20

	<p>b) Brief Knowledge of Abhighataja lingnasha, sanimittaja & An-nimittaja Lingnasha Doshandhya/Kaphavidagdha drishti, Nak-tandhya, Ushna vidagdha drishti, Pittavidagdha drishti, Dhuma-darshi, Hriswajadya, Gambhirika, Nakulandhya, Nayanabhighata.</p> <p>c) Knowledge of Refractive errors, Cataract including their etiology, pathology, clinical features, differential diagnosis, complications and their management.</p> <p>d) Study of Eale's disease, Hypertensive & Diabetic Retinopathies, Age related Macular degeneration, Strabismus, Retinitis pigmentosa, Night blindness, Amblyopia, Central serous retinopathy, Optic Neuritis and Optic atrophy.</p>	
9	<p>Miscellaneous Diseases</p> <p>a) Xerophthalmia and other malnutritional eye disorders.</p> <p>b) Knowledge of ocular trauma and their management.</p> <p>c) Introduction to Eye bank, Eye donation, Corneal Transplantation.</p> <p>d) Preventive Ophthalmology and Community Ophthalmology</p>	12

PAPER-2 100 Marks SHIRA - KARNA- NASA- MUKHA ROGAS

Sr No	TOPIC	HOURS
1	<p>Samanya Chikitsa</p> <p>a) Study of therapeutic procedures like Sveda, Kavala, Gandusa, Dhuma, Murdhni Taila, Nasya, Pratisarana, Karna Purana, karna prakshalana, nasa prakshalana Mukha Lepa.</p> <p>b) Ashtavidha shastrakarma and anushastrakarma used in the treatment of Shira, Karna, Nasa evam Mukha Rogas.</p>	06
2	<p>Shiro Roga</p> <p>a) Importance and Superiority of Shira.</p> <p>b) Number, general etiology, pathology and cardinal features of shiro rogas and kapalgata rogas along with their common line of management/treatment.</p> <p>c) Detailed study of Vataja, Pittaja, Kaphaja shirashoola, Suryavarta, Ardhavabhedaka, Khalitya, Palitya.</p> <p>d) Brief Knowledge of Raktaja shiraha shoola, Krimija shiraha shoola, Kshayaja shiraha shoola & Sannipataja shiraha shoola, Ananta vata, Indralupta, Darunaka.</p> <p>e) Detailed study of Headache, Migraine its differential diagnosis and treatment.</p>	10
3	Karna Roga	17

	<p>a) Detailed study of Rachana and Kriyasharir of Karna (Ear) & Shruvanendriya as per Ayurvedic and modern view, Examination of Ear along with instruments/equipments required in Ear examination.</p> <p>b) Detailed study of etiology, pathology, classification, clinical features and management of diseases of Karna – karna shool, karna nada& shweda, Badhirya, karnastrava, karna pratinaha, pootikarna, karnagoothaka, karnavidradhi.</p> <p>c) Brief Knowledge of karna kandu, karnapaka, karnarsha, karnar-buda, krimikaran & karnapali rogas, Karna sandhana (Auroplasty), fundamentals, method and Vaikritpaham</p> <p>d) Detailed study of Otagia, ASOM, CSOM, Deafness, wax including their etiology, pathology, clinical features, differential diagnosis, complications and medical & surgical management</p> <p>e) Brief Knowledge of Otomycosis, Otosclerosis, Tinnitus, Vertigo, Foreign body in ear and Noise pollution.</p>	
4	<p>Nasa Roga</p> <p>a) Detailed study of Rachana and Kriyasharir of Nasa (Nose and paranasal sinuses) & Ghranendriya as per Ayurvedic and modern view, Examination of Nose. along with instruments/equipments required in Nose examination.</p> <p>b) Detailed study of Pratishtyaya, Dushta pratishtyaya, Nasanaha, Kshavathu, Nasagata raktapitta & Nasarsha.</p> <p>c) Brief Knowledge of Putinasa, Bhranashathu, Peenasa, Apeenasa, Nasar-buda, Nasashotha, Dipta, Nasa Sandhana.</p> <p>d) Detailed study of Rhinitis & Sinusitis Epistaxis, Nasal Polyp, DNS, Foreign body including their Etiology, pathology, clinical features differential diagnosis and medical & surgical management.</p> <p>e) Brief Knowledge of Nasal trauma, Tumours of nose and Para nasal sinuses.</p>	17
5	<p>a) Mukha Roga (Diseases of Oral Cavity)</p> <p>b) Detailed study of Rachana and Kriyasharir of Mukha Roga adhisthana – oshtha, dantamoola, danta, jivha, talu, gal, sarvasara (Oral cavity) as per Ayurvedic and modern view along with their Basic examination including instruments/equipments required for the examination</p> <p>c) Mukha and Danta Swasthya as per ancient and modern concepts including prevention of malignancy of oral cavity.</p> <p>d) Number and general aetiology, pathology, cardinal features of Mukha rogas along with their common line of management/treatment.</p>	03
6	<p>Oshtha Roga (Diseases of Lips)</p> <p>a Detailed study of Etiology, pathology, classification, clinical features and management of - Oshtha prakopa, khandoshtha</p> <p>b Brief Knowledge of Gandalaji, Jalarbuda, Kshataja Oshthaprakopa</p>	04

	c Knowledge of cleft lip.	
7	<p>Dant Mula Gata Roga (Diseases of Periodontia)</p> <p>a. Detailed study of Etiology, pathology, classification, clinical features and management of - Shitada, Dantaveshta, Upakush, Danta Nadi, Danta Vidradhi, Adhimansa</p> <p>b. Brief Knowledge of dantapupputaka, Saushira, Mahasaushira, Danta Vaidarbha , Paridara, Vardhana.</p> <p>c. Detailed study of Etiology, pathology, classification, clinical features and management of Gingivitis, Apical abscess, Periodontitis (Pyorrhoea).</p>	06
8	<p>Danta Roga (Dental Diseases)</p> <p>a) Detailed study of Etiology, pathology, classification, clinical features and management of Daalan, Krimidanta, Dantaharsha, Danta sharkara, Hanumoksha</p> <p>b) Brief Knowledge of karala, Bhanjanak , Kapalika, Shyava Danta, Danta bheda,</p> <p>c) Danta chaal, Adhidanta, Danta Utpatana including Jalandhar bandha method and Danta Purna.</p> <p>d) Knowledge of Dental Caries, Dental Tartar & Tooth extraction.</p>	06
9	<p>Jihwa Gata Roga (Diseases of Tongue)</p> <p>a) Detailed study of Etiology, pathology, classification, clinical features and management of - jivha kantaka (vataja, pittaja and kaphaja)</p> <p>b) Brief Knowledge of Upajihva, Adhijihva, Alasa.</p> <p>c) Knowledge of Glossitis, Tongue Tie, Ranula, Benign and Malignant Tumors of tongue.</p>	05
10	<p>Talu Roga (Diseases of Palate)</p> <p>a) Detailed study of Etiology, pathology, classification, clinical features and management of - Gala shundika, Talushosha, Talupaka</p> <p>b) Brief Knowledge of Talupupputa, Adhrusha, Kacchapa, Talvarbuda, Mamsasanghata.</p> <p>c) Knowledge of Cleft palate, palatitis, uvulitis and tumours of the palate</p>	05

11	<p>Kantha and Gala gata Roga (Diseases of Pharynx & Larynx)</p> <p>a) Detailed study of Etiology, pathology, classification, clinical features and management of - Tundikeri, Kantha shaluka, Gilayu, Galaganda, Swrabhedha , Galavidradhi.</p> <p>b) Brief Knowledge of Rohini, Galashotha, Kantharbuda, Kanthavidradhi, Galarbuda Galaugham, Vrindam, Ekavrindam, Valaya, balasa , Shata-ghni,</p> <p style="padding-left: 40px;">i. Swaraghna.</p> <p>c) Detailed study of Etiology, pathology, classification, clinical features and management of - Pharyngitis, Laryngitis, Tonsillitis & Adenoiditis</p> <p>d) Brief Knowledge of foreign body in the throat, Carcinoma of Larynx & Pharynx, Dysphagia Diphtheria & diseases of salivary glands.</p>	06
12	<p>Sarvasara Mukha Roga (Generalised mucosal affections of the oral cavity)</p> <p>a) Detailed study of Etiology, pathology, classification, clinical features and management of Sarvasar mukhapaka</p> <p>b) Brief Knowledge of urdhvaguda, putivaktrata, mukharbuda .</p> <p>c) Detailed Knowlege of Stomatitis</p>	10
13	Miscellaneous National Programme for Prevention and Control of Deafness.	05

PRACTICAL

Content of Practical

Identification, Uses, Demonstration of surgical/non-surgical equipment/ instruments, materials used in shalaky chikitsa. Method of sterilization. Training of case taking, bedside clinics and case presentation.

Training in para- surgical Procedures-

- 1) Kshara karma
- 2) Agnikarma
- 3) Raktamokshana
- 4) Training of ward procedures. Application of bandages, wound management
- 5) Training of minor procedures (ashtavidha).
- 6) Observation of surgical procedures in Shalaky

Clinical Training

04 Months (OPD, IPD OT and kriya kalpa)

Distribution of Practical marks

Sr No	Topic	Marks
1	Long case	20
2	Short case	10
3	Identification of instruments, equipments, medicines etc	10
4	Journal	10
5	Vive- voce	30
6	Internal assessment	20
	Total	100

Reference Books:-

- | | |
|--|--------------------------------|
| 1. Shalakya Tantra | Dr. Rama Nath Dwivedi |
| 2. Shalakya Vigyan | Dr. Ravindra Chandra Choudhary |
| 3. Abhinava Netra Chikitsa | Acharya Vishva Nath Dwivedi |
| 4. Netra Chikitsa Vigyan | Dr. Ravindra Chandra Choudhary |
| 5. Netra Roga Chikitsa | Dr. Munje |
| 6. Netra Roga Vigyan | Dr. Hans Raj |
| 7. Parson's Diseases of Eye | |
| 8. Diseases of ENT Log and Turner | |
| 9. Shalakya Tantra | Shiv Nath Khanna |
| 10. A text book of ophthalmology in Ayurveda | Dr. P.K. Shantha kumara |
| 11. Shalakya Kriya Kalpa Vigyan | Prof. K. S. Dhiman |
| Useful portions of Charak, Sushrut, Vagbhata | |



Research methodology and Medical statistics

Total Marks 50
(Part A-30-Part B- 20)

PART – A Research Methodology		
Sr No	TOPIC	HOURS
1	Brief historical background of research in Ayurved and contemporary medical science Evidences of researches in ayurvedic classics	02
2	Etymology, definitions and synonyms (Anveshana, Gaveshana, Prayeshana, Anusandhan and Shodha) of the word Research .	02
3	Research in Ayurved - Scope, need, importance, utility	02
4	Types of Research (familiarization of the terms) a) Pure and Applied b) Qualitative , Quantitative and Mixed Observational and interventional.	05
5	Research process (Importance of each steps in brief) a) Selection of the topic b) Review of the literature c) Formulation of Hypothesis d) Aims and Objectives e) Materials and methods f) Observations and results g) Methods of communication of Research	10
6	Research tools – Role of the pramanas as research tools	02
7	The concept and importance of ethics in research	02
8	Concept of Evidence Based Medicine and Scientific Writing .	02
9	Importance of IT in data mining and important research data portals concerned with Ayurved and contemporary medical science (DHARA , Pub-Med, Ayush Research Portal, Bioinformatics Center, Research Management Informatic System etc.)	03

PART-B		Medical Statistics
Sr No	TOPICS	HOURS
1	Definition, scope and importance of the Medical statistics	01
2	Common statistical terms and notations a. Population b. Sample c. Data d. Variable e. Normal distribution	01
3	Collection and Presentation of data a. Tabular b. Graphical c. Diagrammatical	02
4	Measures of location a. Average b. Percentile	01
5	Measures of Central Tendency – a. Arithmetic Mean b. Median c. Mode	02
6	Variability and its measurement a. Range b. Standard deviation c. Standard error	02
7	Introduction to probability and test of significance - Parametric and non parametric tests	10
8	Introduction to commonly used statistical soft-wares	01

Reference books for Research Methodology :

1. Dawson, Catherine, 2002, Practical Research Methods, New Delhi, UBS Publishers' Distributors
2. Kothari, C.R., 1985, Research Methodology-Methods and Techniques, New Delhi, Wiley Eastern Limited.
3. Kumar, Ranjit, 2005, Research Methodology-A Step-by-Step Guide for Beginners, (2nd.ed), Singapore, Pearson Education
4. Students guide to research methodology – Undergraduates. Alexandria Medical Students Association.
5. Health research methodology. A guide for training in research methods. 2nd edition. Manila, World Health Organization Regional Office for the Western Pacific, 2001.

Reference Books for Statistics :

1. Health research methodology. A guide for training in research methods. 2nd edition. Manila, World Health Organization Regional Office for the Western Pacific, 2001.
2. Statistical methods in medical research. P.Armitage (Ed) Oxoford Blackwell
3. Statistical methods . Snedecor GW and Cochran, WG
4. Altman, D. G. (1991). Practical statistics for medical research. London: ChapmanPrinciples of Medical Statistics by A. Bradford Hill
5. Interpretation and Uses of Medical Statistics by Leslie E Daly, Geoffrey J Bourke, James MC Gilvray.
6. Research in Ayurveda-M S Baghel
7. research methodology in ayurveda-V.J.Thakar,Gujarat Ayurved University
8. Ayurveda anusandhan paddhati-P.V.Sharma
- 9.Research methodology methods and statistical techniques- Santosh Gupta. Greenhouse SW.
- 10.The growth and future of biostatistics: (A view from the 1980s).
Statistics in Medicine 2003; 22:3323–3335.
- 11.Knapp GR & Miller MC. Clinical epidemiology and Biostatistics, NMS series Antonisamy B, Christopher S & Samuel PP. Biostatistics : Principles and practice
- 12.Sundara Rao PSS & Richard J. An introduction to Biostatistics, PHI
- 13.Senn S (1997). Statistical Issues in Drug Development. Chichester: John Wiley & Sons.
- 14.Methods in Bio-statistics for Medical Students- BK Mahajan
- 15.Vaidyakeeya Sankhiki Shastra- Dr.S.S.Savrikar
