

**MD/MS AYU FIRST YEAR EXAMINATION TO BE HELD IN YEAR NOV/DEC 2021,
2022, 2023**

MD/MS AYU FIRST YEAR SYLLABUS : DURATION 1 YEAR

S. No.	Subjects	Paper/ Part	Theory		Practical Hrs		Total	
			Marks	Hrs	Marks	Hrs	Marks	Hrs
1	RESEARCH METHODOLOGY AND MEDICAL STATISTICS	1- A&B	100	200	100	120	200	320
2	KRIYA SHARIR	2- A&B	100	--	100	--	200	--
3	KAYACHIKITSA	2- A&B	100	--	100	--	200	--
4	SHALYA TANTRA- SAMANYA	2- A&B	100	--	100	--	200	--

MD/MS (Ayd) Course-First Year

MD/MS AYU FIRST YEAR EXAMINATION TO BE HELD IN YEAR NOV/DEC 2021,
2022, 2023

Subject: RESEARCH METHODOLOGY AND MEDICAL STATISTICS

Subject code: 1-MD/MS (AYD)- 1001

1.	Course No	MD/MS (Ayd) Ist year	6.	Theory marks	100
2.	Subject Code	1001	7.	Paper I-60 + 40	100
3.	Course title	RESEARCH METHODOLOGY AND MEDICAL STATISTICS	8.	Practical marks	100
4.	Category	Compulsory	9.	Total Marks	200
5.	Examination Duration	3 Hrs			

PAPER-I
RESEARCH METHODOLOGY AND MEDICAL STATISTICS
PART-A
RESEARCH METHODOLOGY

- 1 **Introduction to Research**
Definition of the term research
Definition of the term anusandhan
Need of research in the field of Ayurveda
- 2 **General guidelines and steps in the research process**
Selection of the research problem
Literature review: different methods (including computer database) with their advantages and limitations
Defining research problem and formulation of hypothesis
Defining general and specific objectives
Research design: observational and interventional, descriptive and analytical, preclinical and clinical, qualitative and quantitative
Sample design
Collection of the data
Analysis of data.
Generalization and interpretation, evaluation and assessment of hypothesis.
Ethical aspects related to human and animal experimentation.
Information about Institutional Ethics Committee (IEC) and Animal Ethics Committee (AEC) and their functions. Procedure to obtain clearance from respective committees, including filling up of the consent forms and information sheets and publication ethics.
- 3 **Preparation of research proposals in different disciplines for submission to funding agencies taking EMR-AYUSH scheme as a model.**
- 4 **Scientific writing and publication skills.**
Familiarization with publication guidelines- Journal specific and CONSORT guidelines.
Different types of referencing and bibliography.
Thesis/Dissertation: contents and structure
Research articles structuring: Introduction, Methods, Results and Discussions (IMRAD)
- 5 **Classical Methods of Research.**
Concept of Pratyakshadi Pramana Pariksha, their types and application for Research in Ayurveda.
Dravya-, Guna-, Karma-Parikshana Paddhati
Aushadhi-yog Parikshana Paddhati
Swastha, Atura Pariksha Paddhati
Dashvidha Parikshya Bhava
Tadvidya sambhasha, vadmarga and tantrayukti
- 6 **Comparison between methods of research in Ayurveda (Pratigya, Hetu, Udaharana, Upanaya,**

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Nigaman) and contemporary methods in health sciences.

7. Different fields of Research in Ayurveda

Fundamental research on concepts of Ayurveda

Panchamahabhuta and tridosha.

Concepts of rasa, guna, virya, vipak, prabhav and karma

Concept of prakriti-saradi bhava, ojas, srotas, agni, aam and koshta.

8. Literary Research-

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

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

9. Drug Research (Laboratory-based)- Basic knowledge of the following:

Drug sources: plant, animal and mineral. Methods of drug identification.

Quality control and standardization aspects: Basic knowledge of Pharmacopoeial standards and parameters as set by Ayurvedic Pharmacopoeia of India.

Information on WHO guidelines for standardization of herbal preparations. Good Manufacturing Practices (GMP) and Good Laboratory Practices (GLP).

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

11. Introduction to latest Trends in Drug Discovery and Drug Development

-Brief information on the traditional drug discovery process

-Brief information on the latest trends in the Drug Discovery process through employment of rational approach techniques; anti-sense approach, use of micro and macro-arrays, cell culture based assays, use of concepts of systems biology and network physiology

-Brief introduction to the process of Drug development

12. Clinical research:

Introduction to Clinical Research Methodology identifying the priority areas of Ayurveda

Basic knowledge of the following:-

Observational and Interventional studies

Descriptive & Analytical studies

Longitudinal & Cross sectional studies

Prospective & Retrospectives studies

Cohort studies

Randomized Controlled Trials (RCT) & their types

Single-case design, case control studies, ethnographic studies, black box design, cross-over design, factorial design.

Errors and bias in research.

New concepts in clinical trial- Adaptive clinical trials/ Good clinical practices (GCP)

Phases of Clinical studies: 0,1,2,3, and 4.

Survey studies -

Methodology, types, utility and analysis of Qualitative Research methods. Concepts of in-depth interview and Focus Group Discussion.

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

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

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

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PART-B

40 marks

MEDICAL STATISTICS

Teaching hours: 80

- 1 **Definition of Statistics :** Concepts, relevance and general applications of Biostatistics in Ayurveda
- 2 **Collection, classification, presentation, analysis and interpretation of data** (Definition, utility and methods)
- 3 **Scales of Measurements** - nominal, ordinal, interval and ratio scales.
Types of variables – Continuous, discrete, dependent and independent variables.
Type of series – Simple, Continuous and Discrete
- 4 **Measures of Central tendency** – Mean, Median and Mode.
- 5 **Variability:** Types and measures of variability – Range, Quartile deviation, Percentile, Mean deviation and Standard deviation
- 6 **Probability:** Definitions, types and laws of probability,
- 7 **Normal distribution:** Concept and Properties, Sampling distribution, Standard Error, Confidence Interval and its application in interpretation of results and normal probability curve.
- 8 **Fundamentals of testing of hypotheses:**
Null and alternate hypotheses, type I and type 2 errors.
Tests of significance: Parametric and Non-Parametric tests, level of significance and power of the test, 'P' value and its interpretation, statistical significance and clinical significance
- 9 **Univariate analysis of categorical data:**
Confidence interval of incidence and prevalence, Odds ratio, relative risk and Risk difference, and their confidence intervals
- 10 **Parametric tests:** 'Z' test, Student's 't' test: paired and unpaired, 'F' test, Analysis of variance (ANOVA) test, repeated measures analysis of variance
- 11 **Non parametric methods:** Chi-square test, Fisher's exact test, McNemar's test, Wilcoxon test, Mann-Whitney U test, Kruskal – Wallis with relevant post hoc tests (Dunn)
- 12 **Correlation and regression analysis:**
Concept, properties, computation and applications of correlation, Simple linear correlation, Karl Pearson's correlation co-efficient, Spearman's rank correlation.
Regression- simple and multiple.
- 13 **Sampling and Sample size computation for Ayurvedic research:**
Population and sample. Advantages of sampling, Random (Probability) and non random (Non-probability) sampling. Merits of random sampling. Random sampling methods- simple random, stratified, systematic, cluster and multiphase sampling. Concept, logic and requirement of sample size computation, computation of sample size for comparing two means, two proportions, estimating mean and proportions.
- 14 **Vital statistics and Demography:** computation and applications - Rate, Ratio, Proportion, Mortality and fertility rates, Attack rate and hospital-related statistics
- 15 **Familiarization with the use of Statistical software** like SPSS/Graph Pad

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100 marks

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PRACTICAL

I. RESEARCH METHODOLOGY

Teaching hours 120

PRACTICAL NAME

- 1 **Pharmaceutical Chemistry**
Familiarization and demonstration of common lab instruments for carrying out analysis as per API
- 2 **Awareness of Chromatographic Techniques**
Demonstration or Video clips of following:
Thin-layer chromatography (TLC).
Column chromatography (CC).
Flash chromatography (FC)
High-performance thin-layer chromatography (HPTLC)
High Performance (Pressure) Liquid Chromatography (HPLC)
Gas Chromatography (GC, GLC)
- 4 **Pharmacognosy**
Familiarization and Demonstration of different techniques related to:-
Drug administration techniques- oral and parenteral.
Blood collection by orbital plexuses puncturing.
Techniques of anesthesia and euthanasia.
Information about different types of laboratory animals used in experimental research
Drug identification as per API including organoleptic evaluation
- 5 **Pharmacology and toxicology**
Familiarization and demonstration of techniques related to pharmacology and toxicology
- 6 **Biochemistry (Clinical)**
Familiarization and demonstration of techniques related to basic instruments used in a clinical biochemistry laboratory – semi and fully automated clinical analyzers, electrolyte analyzer, ELISA-techniques, nephelometry.
Demonstration of blood sugar estimation, lipid profiles, kidney function test, liver function test. HbA1, cystatin and microalbumin estimation by nephelometry or other suitable techniques.
Interpretation of the results obtained in the light of the data on normal values.
- 7 **Clinical Pathology**
Familiarization and demonstration of techniques related to basic and advanced instruments used in a basic clinical pathology lab. Auto cell counter, urine analyzer, ESR, microscopic examination of urine.
- 8 **Imaging Sciences**
Familiarization and demonstration of techniques related to the imaging techniques.
Video film demonstration of CT-Scan, MRI-scan and PET-scan.
- 9 **Clinical protocol development**

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PG 1st Year Syallabus-5

II. MEDICAL STATISTICS

Practical hours:20

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

Records to be prepared.

Distribution of marks (practical):

- | | |
|--|------------|
| 1. Instrumental spotting test | – 20 marks |
| 2. Clinical protocol writing exercise on a given problem | – 20 marks |

Records:

- | | |
|-------------------------|-----------|
| 4. Research methodology | -10 Mark |
| Medical statistics | -10 marks |
| Viva- Voce | -40 Marks |

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Pharmacognosy:

Aushotosh Kar "Pharmacognosy & Pharmacobiotechnology" New Age International Publisher. Latest Edition. New Delhi.

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PG 1st Year Syallabus-6

Pharmaceutical chemistry, quality control and drug standardization:

Ayurvedic Pharmacopoeia of India. Part I- volume 1 to 8 and Part II- volume 1to 3. Ministry of Health and Family Welfare. Controller of Publication. Govt of India. New Delhi.

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Laboratory Guide for- The Analysis of Ayurved and Siddha Formulations – CCRAS, New Delhi.

Mahadik KR, Bothara K G. Principles of Chromatography by, 1st edition, Nirali Prakashan.

Qadry JS and Qadry S Z., Text book of Inorganic Pharmaceutical and Medicinal Chemistry, B. S. Shah Prakashan, Ahmedabad.

Quality Control Methods for Medicinal Plant Material. Reprint (2002). WHO- Geneva.

Rangari V.D., Pharmacognosy & Phytochemistry, Vol I, II, Career Publication,

Sharma BK. Instrumental Methods of Chemical Analysis by, Goel Publishing House.

Srivastav VK and Shrivastav KK. Introduction to Chromatography (Theory and Practice)

Stahl E., Thin Layer Chromatography - A Laboratory Handbook, Springer Verlag, Berlin.

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Clinical Biochemistry -Sabitri Sanyal, Clinical Pathology, B.I.Churchill Livingstone (P) Ltd, New Delhi.2000.
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Research methodology:

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Cooray P.G. Guide to scientific and technical writing.
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Relevant portions of Ayurvedic Samhitas and other texts

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Bombay.

- 12- Jaju B.P.: Pharmacological Practical Exercise Book, *Jaypee Brothers, New Delhi.*
- 13- Kulkarni S.K.: Hand Book of Experimental Pharmacology, *Vallabh Prakashan, New Delhi*
- 14- Ravindran R.: X-Pharm (Software), Indian Journal of Pharmacology, *JIPMER, Pondicherry.*

PG 1st Year Syallabus-8

Biotechnology and Bio-informatics:

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- www.strobe-statement.org
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Clinical Evaluation:

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- William C. Scheffer Introduction to Clinical Researchs

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Medical Statistics:

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Subject code: 1-MD/MS (AYD)-1002

1.	Course No	MD/MS (Ayd) Ist year	6.	Theory marks	100
2.	Subject Code	1002	7.	Paper II- 50+50	100
3.	Course title	Kriya Sharir	8.	Practical marks	100
4.	Category	Compulsory	9.	Total Marks	200
5.	Examination Duration	3 Hrs			

M.D.-AYURVEDA PRELIMINARY KRIYA SHARIR

(Physiology)

PAPER-II

Theory 100 Marks

PART-A

50 marks

1. Theory of Loka-Purusha Samya
2. Theory of Panchamahabhuta
3. Physiological aspects of Samanya – Vishesha siddhanta
4. Concepts of Tridosha and Triguna
5. Concept of Dhātu
6. Concept of Mala
7. Description of Ojas
8. Process of Ahara Parinama including Aharaparinamakara Bhava and Asta Ahara Vidhi Visesayatana
9. Physiological importance of Agni, its classification and functions
10. Dhātuposana theories
11. Concepts of Atma, Manas and Indriya.
12. Concepts of Prakriti and Ashtavidha Sara.
13. Concept of Srotas

PART-B

50 marks

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

1. Essentials of cell physiology – organization of cell.
2. Membrane physiology- transport across cell membrane, action potentials and resting membrane potentials.
3. Homeostasis- negative and positive feedback mechanisms.
4. Genetic code, its expression and regulation of gene expression.

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5. Essentials of cardiovascular physiology- cardiac cycle, regulation of heart rate and blood pressure.
6. Essentials of respiratory physiology- regulation of respiration-chemical and neural, gaseous exchange, transportation of gases.
7. Gastrointestinal physiology- various digestive juices and their actions, gastrointestinal hormones, enteric nervous system.
8. Nervous system physiology- ANS, somatic nervous system, reflexes, general and special sensations, higher mental functions, functions of brain, brainstem and spinal cord.
9. Blood: Blood cells-RBCs, WBCs, platelets, plasma proteins and immunity.
10. Muscle physiology: properties and mechanisms of contraction of skeletal, cardiac and smooth muscles.
11. Physiology of excretion- mechanism of urine formation, micturition.
12. Endocrine physiology: Classification of hormones, hormones secreted by pituitary, thyroid, parathyroid, adrenal glands, pineal, pancreas and their functions.

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

PRACTICAL

100 marks

Contents:

Ayurvedic practicals

Assessment of Prakriti

Assessment of Sara

Pramana Pariksha

Hematology

Hemoglobin estimation

Total RBC count

Total WBC count

Differential leukocyte count

Packed cell volume (PCV)

ESR

Bleeding time

Clotting time

Blood grouping and Rh typing

Urine examination -

Physical examination- Specific gravity and reaction of urine

Chemical examination

Albumin test

Sugar test

Ketone bodies

Bile salts and pigments

Distribution of marks (Practical)

1. Laboratory Practical - 20
2. Human Experiment - 15
3. Spotting - 15

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- | | |
|-----------------------------|------|
| 4. Prakriti Saradi pariksha | - 20 |
| 5. Practical Record | - 10 |
| 6. Viva-voce | - 20 |

REFERENCE BOOKS:

- | | |
|--|--|
| 1. Ayurvediya Kriyasharir | - Ranjit Rai Desai |
| 2. Kayachikitsa Parichaya | - C. Dwarkanath |
| 3. Prakrit Agni Vigyan | - C. Dwarkanath |
| 4. Sharir Kriya Vigyan | - Shiv Charan Dhyani |
| 5. Abhinava Sharir Kriya Vigyana | - Acharya Priyavrata Sharma |
| 6. Dosha Dhatu Mala Vigyana | - Shankar Gangadhar Vaidya |
| 7. Prakrita Dosha Vigyana | - Acharya Niranjana Dev |
| 8. Tridosha Vigyana | - Shri Upendranath Das |
| 9. Sharira Tatva Darshana | - Hirlekar Shastri |
| 10. Prakrita Agni Vigyana | - Niranjana Dev |
| 11. Deha Dhatvagni Vigyana | - Vd. Pt. Haridatt Shastri |
| 12. Sharir Kriya Vigyana (Part 1-2) | - Acharya Purnchandra Jain |
| 13. Sharir Kriya Vigyana | - Shri Moreshwar Dutta Vd. |
| 14. Sharira Kriya Vijnana (Part 1-2) | - Nandini Dhargalkar |
| 15. Dosha Dhatu Mala Vigyana | - Basant Kumar Shrimal |
| 16. Abhinava Sharir Kriya Vigyana | - Dr. Shiv Kumar Gaur |
| 17. Pragyogik Kriya Sharir | - Acharya P.C. Jain |
| 18. Kaya Chikitsa Parichaya | - Dr. C. Dwarkanath |
| 19. Concept of Agni | - Vd. Bhagwan Das |
| 20. Purush Vichaya | - Acharya V.J. Thakar |
| 21. Kriya Sharir | - Prof. Yogesh Chandra Mishra |
| 22. Sharir Kriya Vigyana | - Prof. Jayaram Yadav & Dr. Sunil Verma |
| 23. Basic Principles of Kriya-Sharir (A treatise on Ayurvedic Physiology) by | -Dr. Srikant Kumar Panda |
| 24. Sharir Kriya – Part I & II | - Dr. Ranade, Dr. Deshpande & Dr. Chobhe |
| 25. Human Physiology in Ayurveda | - Dr Kishor Patwardhan |
| 26. Sharirkriya Vignyan Practical Hand Book | - Dr.Ranade, Dr.Chobhe, Dr. Deshpande |
| 27. Sharir Kriya Part 1&2 | - Dr.R.R.Deshapande, Dr.Wavhal |
| 28. Textbook of Physiology | - Gyton & Hall |
| 29. Review of medical physiology | - William Ganong |
| 30. Essentials Of Medical Physiology | - Sembulingam, K. |
| 31. Concise Medical Physiology | - Chaudhari, Sujit. K. |
| 32. Fundamental of Anatomy & Physiology | - Martini |
| 33. Principals of Anatomy & Physiology | - Tortora & Grabowski |
| 34. Human Physiology | - Richards, Pocock |
| 35. Samson Wrights Applied Physiology, Keele, Neil, joels | |
| 36. Brainstem Control of Wakefulness And Sleep | - Steriade, Mirce |
| 37. An Introduction to Human Physiology | - Green, J.h. |
| 38. Ancient Indian Medicine | - Kutumbiah P. |
| 39. Biographical History of Indian Medicine | - Srikanthamurthy KR |
| 40. Ayurveda Kriya Sharira | - Yogesh Chandra Mishra |
| 41. Textbook of Medical Physiology | - Indu Khurana |
| 42. Tridosha Theory | - Subrahmanya Shastri |
| 43. Statistics in Medicine | - K. Syamalan |

MD/MS (Ayd) Course-First Year

MD/MS AYU FIRST YEAR EXAMINATION TO BE HELD IN YEAR NOV/DEC 2021, 2022, 2023

Subject: KAYACHIKITSA

Subject code: 1-MD/MS (AYD)-1003

1.	Course No	MD/MS (Ayd) 1st year	6.	Theory marks	100
2.	Subject Code	1003	7.	Paper II- 50+50	100
3.	Course title	KAYACHIKITSA	8.	Practical marks	100
4.	Category	Compulsory	9.	Total Marks	200
5.	Examination Duration	3 Hrs			

KAYACHIKITSA

(General Medicine)

PAPER-II

Theory- 100 marks

PART A

50 marks

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

PART B

50 marks

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

**MD/MS AYU FIRST YEAR EXAMINATION TO BE HELD IN YEAR NOV/DEC 2021,
2022, 2023**

Subject: Kayachikitsa

Subject code: 1003

Vati- : Sanjivani, Chandraprabha, Agnitundi, Chitrakadi, Khadiradi, Vyoshadi, Shankha Vati, Shiva Gutika.

Guggula-Kalpna-Triphalaguggula, Kaishoraguggula, Trayodashangaguggula, Simhanadaguggula, Yogarajaguggula, Gokshuradi guggula, Kanchanaraguggula.

Rasaushadhi- Tribhuvanakirti Rasa, Arogyavardhini Rasa, Shwasakuthara Rasa, Rasamanikya Rasa, Smritisagara Rasa, Lakshmilasa Rasa, Sutshekhara Rasa, Pravala Panchamrita Parpati, Hemagarbhapottali Rasa.

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

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

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

PRACTICAL

100 marks

Content:-

Daily hospital duties in OPD, IPD and casualty

Bed-side case taking – 25 patients

Distribution of marks (practical):

- | | |
|--|----------|
| 1. Case records of 25 Patients in detail | 20 marks |
| 2. Bedside clinical case taking- | |
| Long case | 20 marks |
| Short case | 10 marks |
| 3. Medical procedures/laboratory work | 15 marks |
| 4. Instruments and spotting | 15 marks |
| 5. Viva voce | 20 marks |

REFERENCE BOOKS-

- | | |
|---|-----------------------------------|
| Charak Samhita | -Cakrapanidutta commentry |
| Sushrut Samhita | -with all available commentaries. |
| Ashtang Samgraha | -Indu commentary |
| Ashtang Hridaya | -Arundutta and Hemadri commentry |
| Cikitsadarsha | - Pandit Rajesvardutta Shastri |
| Kayachikitsa | - Ramaraksha Pathak |
| Rog Pariksha Vidhi | - Priyavrat Sharma |
| Panchakarma Vigyan | - Haridas Sridhar Kasture |
| Ayurved Nidan Chikitsa Siddhanta | - Prof. R.H.Singh. |
| Kayachikitsa Vol. I-IV. | - Prof. Ajay Kumar |
| Davidson's Principles and Practice of Medicine. | |
| API Text Book of Medicine. | |
| Harrison's Text Bok of Medicine. | |
| Cecil Text Book of Medicine. | |
| Relevant texts of concerned subjects. | |

MD/MS (Ayd) Course-First Year

MD/MS AYU FIRST YEAR EXAMINATION TO BE HELD IN YEAR NOV/DEC 2021,
2022, 2023

Subject: Shalya Tantra

Subject code: 1-MD/MS (AYD)-1004

1.	Course No	MD/MS (Ayd) 1st year	6.	Theory marks	100
2.	Subject Code	1004	7.	Paper II- 50+50	100
3.	Course title	Shalya Tantra-Samanya	8.	Practical marks	100
4.	Category	Compulsory	9.	Total Theory Marks	200
5.	Examination Duration	3 Hrs			

M.S.-AYURVEDA PRELIMINARY
SHALYA TANTRA – SAMANYA
(General Surgery)

PAPER-II

Theory- 100 marks

PART A

50 marks

1. Etymology and definition of Shalya Tantra.
2. Scope and importance of Shalya Tantra.
3. Study of Sushruta Samhita Sutra Sthana.
4. Study of modern surgical clinical methodology.
5. Applied anatomy, physiology and surgical pathology of common surgical conditions including relevant Ayurvedic aspect.
6. Applicability of Shat Kriyakala in the pathogenesis of surgical diseases.
7. Applicability of Prakriti in understanding the causes and role of treatment in surgical diseases.
8. Applicability of basic principles of Ayurveda in Rogi Pariksha (Trividha, Shadvidha, Ashtavidha and Dashavidha Pariksha) and latest investigations.
9. Concept of Rakta according to Sushruta.
10. Introduction of clinical and diagnostic methods in Shalya Tantra - X-rays, U.S.G., Endoscopies (for diagnostic and treatment purposes), MRI, CAT scanning and other recent diagnostic tools.
11. Concept and applicability of Sadhya-Asadhya (Prognosis) - Arishtha lakshana.
12. Knowledge of life saving drugs.
13. Emergency conditions and its management.
14. Diagnosis and management of Pranashtha Shalya.

**MD/MS AYU FIRST YEAR EXAMINATION TO BE HELD IN YEAR NOV/DEC 2021,
2022, 2023**

Subject: Shalya Tantra

Subject code: 1-MD/MS (AYD)-1004

PART B

50 marks

- Yantra and Shastra – Surgical Instruments - Ancient and recent advances.
- Sterilization – methods and types.
- Basic knowledge of Sangyahan – Anaesthesia - Types, methods, indications, contraindications, complications and its management.
- Concept of Trividha Karma – Purva, Pradhana and Pashchat.
- Ashtavidha Shastra Karmas.
- Bandhana Karma – Ancient and recent advances.
- Kshara Karma – Introduction, types, method of various preparations like Kshara, Kshara Varti, Kshara Pichu and applications.
- Kshara Sutra – Method of preparation, standardization and applications.
- Agnikarma – Introduction, types and applications.
- Raktamokshana – Introduction, types and applications.
- Application of Panchakarma therapy in surgical practice.
- Scope of Pathya-Apathya in the management of surgical diseases.

PRACTICAL

100 marks

Content:-

1. Hospital duties in OPD, IPD, OT and casualty
2. Case record – 25 cases
3. Surgical cases - observation/performing- 10 cases
4. Knowledge of instruments required in surgical practices.
5. Ayurvedic diagnostic and therapeutic procedures.
6. Fluid therapy and blood transfusion.
7. Contraception and sterilizations.
8. Pre-operative, operative and post operative procedures.

Distribution of marks (practical):

1. Case records of 25 Patients in detail	20 marks
2. Bedside clinical case taking- Long case	20 marks
Short case	10 marks
3. Identification of instruments, X-ray etc	15 marks
4. Medical procedures	15 marks
5. Viva voce	20 marks

REFERENCE BOOKS:-

1. Sushruta Samhita
2. Ashtanga Sangraha
3. Ashtanga Hridaya
4. Charaka Samhita
5. The Surgical instruments of the Hindus - Girindranath Mukhopadhyaya
6. Shalya Tantra Samuchchaya - Pandit Ramadesh Sharma

**MD/MS AYU FIRST YEAR EXAMINATION TO BE HELD IN YEAR NOV/DEC 2021,
2022, 2023**

Subject: Shalya Tantra

Subject code: 1-MD/MS (AYD)-1004

- | | |
|--|---|
| 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. Soushruti | - 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 and Dr. Kulwant Singh. | - Dr. S.K. Sharma, Dr. K.R.Sharma |
| 14. Anorectal diseases in Ayurveda | - Dr. Sizoria and Dr. Praveen Kumar Chowdary. |
| 15. Adhunka 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

- | | |
|---|-----------------------|
| 1. Arsha Evum Bhagander Mein sutra Avacharan- | Vd. Kanak Prasad Vyas |
| 2. Recent advances in Kshara Sutra | - Dr. M. Bhaskar Rao |
| 3. Leech application in Ayurveda | - Dr. M. Bhaskar Rao |
| 4. Kshara Sutra | - Dr. S.N.Pathak |
| 5. Shalya Shalakyta Tantra | - Vd. S.G. Joshi |
| 6. Surgical ethics of Ayurveda | - Dr. D.N. Pande |
| 7. Text book of Surgery | - Sabistan |
| 8. Operative Surgery | - Rob and smith |

PG 1st Year Syallabus-50

- | | |
|---|----------------------------------|
| 1. Bailey and Love's Short Practice of Surgery
Mann and R.C.G. Russell | - Norman.S. Williams, Charles.V. |
| 2. Fractures and Joint Injuries | - Watson-Jones |
| 3. Text books of Operative Surgery | - Farquharsons' |
| 4. Principles of Surgery | - Schwartz |
| 5. Emergency Surgery | -Hamilton Bailey's |
| 6. Surgical pathology | - Willing Worth |
| 1. Clinical methods in surgery | - S. Das |
| 2. Textbook of Operative Surgery | - S. Das |
| 3. Shalya Vigyan (Sachitra) | - Anantram Sharma |
| 4. Anushastra Karma | - Dr. D.N. Pande |
| 5. Concept of Vrana is Ayurveda | - Dr. Lakshman Singh |
| 6. Significance for Poorva Karma in Surgical Patient | - Dr. Lakshman Singh |
| 7. Sangyahan Prakash | - Dr. D.N. Pande |
| 8. A concise Text Book of Surgery | - S. Das |
| 9. A manual on Clinical Surgery | - S. Das |
| 10. A System of Surgical Diagnosis | - T.N. Patel |
| 11. A Practical Guide to Operative Surgery | - S. Das |
| 12. Drugs and Equipment for Anaesthesia | - Arun kumar |

**MD/MS AYU FIRST YEAR EXAMINATION TO BE HELD IN YEAR NOV/DEC 2021,
2022, 2023**

Subject: Shalya Tantra

Subject code: 1-MD/MS (AYD)-1004

13. Manual of Surgical Instruments
14. Ward Procedures
15. Recent trends in the management of

- M.M. Kapur
- Patel Mansukh. B

Arshas / Haemorrhoids

- Dr. P. Hemantha Kumar

1. Primary Anaesthesia
2. Synopsis of Anaesthesia
3. Clinical Anatomy/ Surgical Anatomy
4. Surgical Instruments of the Hindus
5. Outline of Orthopedics
6. Outline of Fracture
7. Recent trends in the management of
Bhagandara / Fistula-in-ano
8. Principles and Practice of Agnikarma
9. Manipal Manual of Surgery

- Maurice King
- Lee
- John E. Skandalakis
- Girindharnath Mukopadyay
- John Crawford Adams and David Hamblen. L
- John Crawford Adams
- Dr. P. Hemantha Kumar
- Dr. Anand Kumar and Dr. Kanchan Shekokar.
- Dr. Rajgopal Shenoy
