

**Revised Ordinance Governing Regulations and Curriculum of
HOMOEOPATHY DEGREE B.H.M.S. COURSE**

2019

In conformity with

**Homoeopathy (Degree Course) B.H.M.S. Regulations, 1983
(as Amended upto December 2018)**

of

Central Council of Homoeopathy, New Delhi



**Rajiv Gandhi University of Health Sciences,
Karnataka, Bangalore**

The Emblem



The Emblem of the Rajiv Gandhi University of Health Sciences is a symbolic expression of the confluence of both Eastern and Western Health Sciences. A central wand with entwined snakes symbolises Greek and Roman Gods of Health called Hermis and Mercury is adapted as symbol of modern medical science. The pot above depicts Amrutha Kalasham of Dhanvanthri the father of all Health Sciences. The wings above it depicts Human Soul called Hamsa (Swan) in Indian philosophy. The rising Sun at the top symbolises knowledge and enlightenment. The two twigs of leaves in western philosophy symbolises Olive branches, which is an expression of Peace, Love and Harmony. In Hindu Philosophy it depicts the Vanaspathi (also called as Oushadi) held in the hands of Dhanvanthri, which are the source of all Medicines. The lamp at the bottom depicts human energy (kundalini). The script “Devahitham Yadayahu” inside the lamp is taken from Upanishath Shanth i Manthram (Bhadram Karnebh i Shrunuyanadev...), which says “May we live the full span of our lives allotted by God in perfect health” which is the motto of the Rajiv Gandhi University of Health Sciences.



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Ref: RGU/DCD/BHMS/Revised Ordinance/359/2019-20

Date: 27/08/2019

NOTIFICATION

Sub: Revised Ordinance pertaining to Regulation and Curriculum of BHMS Course

- Ref:
- 1) Proceedings of BOS meeting of BHMS held on 24/01/2019
 - 2) Proceedings of Faculty meeting of Homoeopathy held on 21/05/2019
 - 3) Proceedings of AC meeting held on 17/06/2019
 - 4) Proceedings of Syndicate meeting held on 29/06/2019

In exercise of the powers vested under Section 35 of RGUHS Act, 1994, the Revised Ordinance pertaining to Regulation and the curriculum of BHMS Course is notified herewith as per Annexure.

The above Regulation shall be applicable to the students admitted to the said course from the academic year 2019-20 onwards.

By Order,

Sd/-

REGISTRAR

To

The Principals of all affiliated Homoeopathy colleges of RGUHS, Bangalore

Copy to :

1. The Principal Secretary to Governor, Raj Bhavan, Bangalore - 560001
2. The Principal Secretary Medical Education, Health & Family Welfare Dept., M S Building, Dr.B.R. Ambedkar Veedhi, Bangalore – 01
3. PA to Vice – Chancellor/PA to Registrar/Registrar (Eva.)/Finance Officer, Rajiv Gandhi University Health Sciences, Bangalore
4. All Officers of the University Examination Branch/ Academic Section.
5. Guard File / Office copy.

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Section – I: INTRODUCTION

Basic objectives of education and training in a Homoeopathic institution is to prepare a competent Homoeopathic Physician, who is capable of functioning independently and effectively in Rural and Urban set up.

a. Sound Foundation

To function effectively as a Homoeopathic physician, a thorough grasp over the medical concepts is imperative. For this, the educational process shall be perceived as an integrated evolving process and not merely as an acquisition of a large number of disjointed facts.

A student shall have to pass through a training procedure, which encompasses the above, right from I BHMS to IV BHMS and also during the internship period. He / She shall undergo an education process wherein learning of Facts and Concepts right from I Year are in continuity, in an evolutionary and progressive pattern. In I BHMS, students shall study the fundamental principles of Homoeopathy and will also learn more of applied anatomy than a multitude of minor anatomical details.

In II BHMS, a student shall be exposed to very vital concepts of susceptibility and symptomatology with Analysis-Evaluation and details of the Homoeopathic concepts and logic of Homoeopathy. These will attain much deeper significance (if care is taken by teachers of Pathology and Organon-Philosophy) when the current knowledge of Inflammation, Immunity, is correlated well with the concepts of susceptibility.

In III BHMS, there is opportunity to fortify the foundation at the best by correlating between theory of Chronic diseases and the Patho-Physiological facts of Gynecology, Surgery and Medicine. A student shall have to be taught the spectrums of various diseases in correlation with the spectrum of miasmatic manifestations. He will then be able to use a well-concluded evaluation order of Characteristics to derive an Operationally valid Repertorial Totality.

The Knowledge gathered in this pattern will keep him constantly aware of his objectives and his role as a Homoeopathic Physician. The integration will eliminate the state of confusion. The Therapeutic actions then will be right and complete, utilizing the full repertories of the Medicinal and Non-medicinal measures, keeping him up-to-date about all fresh scientific developments and inculcating values of Continuous Medical Education.

b. Execution

Maximum emphasis shall be placed on the applied aspects of all the subjects. Thus teachings of Anatomy, Physiology and Biochemistry will demand greater emphasis on applied aspects. Teaching of Pathology will demand sharp focus on General Pathology, while Regional Pathology will come up as an application. It shall require correlation with Medicine, Surgery and Gynecology.

All these need to be studied from Homoeopathic perspectives, with emphasis on applied aspects of Organon Philosophy & Homoeopathic Therapeutics, representing application to all other subjects.

c. Inter-Departmental Co-ordination

Essentially, the entire approach becomes integrated. All departments shall develop a cohesive well-defined programme of inter-departmental co-ordination.

It is therefore desirable to have teaching programmes wherein, by rotation each department participates in the teaching, co-ordinating well with the other faculties with constant updating and evaluation. This will ensure fundamental and exceptional clarity.

d. Deductive-Inductive Teachings

While teaching, there shall be balance in designing deductive and inductive process in mind. There shall be less emphasis on didactic lectures. Major portion of the time of the students shall be devoted to demonstrations, group discussions, seminars and clinics. Every attempt shall be made to encourage students to participate in all these to develop his personality, character, expressions and to ensure rapid grasp over the concepts.

e. Patient Oriented Teachings

In order to impart the integrated medical education, PATIENT has to be the Centre of learning.

Importance of social factors in relation to the problem of health and disease, shall receive proper emphasis throughout the course and to achieve this objective, the educational process shall be community as well as hospital based.

Based on the above concepts, the course of studies as laid down in these Regulations will help to fulfill these needs. While doing so, the need of the hour, past experience in learning and teaching is taken into consideration.

Section – II: GOALS

1 The curriculum should enable the students to play the role of a competent Homoeopathic Physician and fulfill the responsibilities of a medical graduate in both rural and urban environment confidently and effectively.

2. Emphasis in the course should be to demonstrate to the students:

- a) Application of Homoeopathic principles.
- b) Scope and limitations of Homoeopathy.
- c) Role of Homoeopathy in the present and future context.
- d) Skills in clinical diagnosis.
- e) Techniques of individualization.
- f) Evolution of constitutional totality.
- g) Miasmatic analysis of the patient.

3 Teaching programme should be an integrated one, avoiding compartmentalization of disciplines. The teaching of clinical subjects, Para-clinical subjects and pre clinical subjects should be done with a Homoeopathic perspective and need. All the departments should jointly develop a teaching programme so that the students are presented with an integrated and cohesive knowledge and skills both vertically and horizontally. A uniform method of clinical approach that blends the tenets of Homoeopathy and contemporary developments in the field of medicine to meet the requirements of effective Homoeopathic practice should be evolved and adopted by all the clinical departments.

4 The educational experience should provide community orientation in addition to mere hospital orientation. The scope of Genus epidemicus should be fully tapped in the field of preventive medicine.

5 Every effort should be made to use learner-oriented methods that encourages cultivation of the values like logical thinking, clarity of expression and action, independence of judgment, scientific habits, problem-solving abilities, self-initiated and self-directed learning, purity of purpose and other necessary values.

6 Reduction of theoretical and class-room lectures and increasing use of the methods of active learning like group discussions, seminars, role modeling, field visits, clinical case-demonstration etc. should be attempted by all departments to develop the inter-personal and communicative skills and to provide an integrated learning.

7 As education without character and discipline is futile, more so in the field of medicine, educational institution should also be a center for character building than a mere center for learning. Examination should be an avenue not merely to assess the student's extent and depth of knowledge and skills but also to assess his dedication, integrity, habits, behavior, values and other essential expressions of affective domain.

8 Regular periodic internal assessment of the student should be done throughout the course. It should not be limited to written tests. Maintenance of records, participation in seminars and group discussions, clinical case study, participation in other projects and assignments should also have a bearing on the internal assessment. These may be evaluated objectively.

9 Teachers shall expand their role from mere imparting of knowledge to that of facilitator, motivator and role model for students learning and practice during the entire course.

10 Every institution shall have a medical education unit (cell) for faculty development, preparation of learning resource materials, evolving standardized techniques in teaching, case-study, methods of prescription, potency selection, repetition procedures, evaluation of teaching methods etc.

11 Students should be taught to appreciate the scope of other systems of medicine and utilize this knowledge for the optimal benefit of human being, sick or well person.

12 The educational experience should result in appreciation of the effects of social, psychological, cultural, economical and environmental factors on health and resolution of these with a human concern.

13 The curriculum should create an interest in the student for continuous learning, updating the knowledge and indulge in research. He/she should be open to all developments in the field of medicine and accept them after critical analysis and adopt them for furthering his/her professional competence.

14 The teaching programme should facilitate the development of personal characteristics and attitude acquired for professional life such as personal integrity, sense of responsibility and dependability and ability to relate to or show concern for other individuals and society.

Section – III: OBJECTIVES

The goals of BHMS course have been stated in Section II. In this Section the general objectives are given. It is desired that in consonance with the goals and objectives, each medical college should evolve institutional objectives.

At the end of undergraduate programme, the medical students shall:

- a. Be competent in diagnosis and management of common health problems of individual and the community.
- b. Be competent to practice promotive, preventive, curative and rehabilitative medicine in respect to the commonly encountered health problems.
- c. Be able to appreciate the social-psychological, cultural, economic and environmental factors affecting health and disease.
- d. Develop humane attitude towards the discharging of one's professional responsibilities.
- e. Possess the attitude for continued self-learning and to seek further expertise or to pursue research in any chosen area of medicine.
- f. Be familiar with the basic factors which are essential for the implementation of the National Health Programmes including practical aspects of the following:
 - i. Family Welfare and Maternal and Child Health (MCH)
 - ii. Sanitation and water supply
 - iii. Prevention and control of communicable and non-communicable diseases
 - iv. Immunization
 - v. Health education
 - vi. National Health Mission.
- g. Acquire basic management skill in the area of human resources, materials and resources management related to health care delivery.
- h. Be able to identify community health problems and learn to work to resolve these by designing and instituting corrective steps and evaluating outcome of such measures.
- i. Be able to work as a leading partner in health care teams and acquire proficiency in communication skills.
- j. Be competent to work in a variety of health care settings commensurate with his/her position as a member of the health team at the primary, secondary or tertiary levels, using his/her clinical skills.
- k. Have personal characteristics and attitude for professional life such as personal integrity, sense of responsibility and dependability and ability to relate to or show concern for other individuals.

Section – IV: REGULATIONS

1. Eligibility for Admission: 1. Eligibility for Admission:

1 A candidate must have passed the two year Pre-University examination conducted by Department of Pre-university Education, Karnataka State or any other examination recognized as equivalent thereto with the subject of Physics, Chemistry, Biology and English individually and must have obtained a minimum of 50 percent marks taken together in Physics, Chemistry, Biology at the qualifying examination mentioned above for unreserved candidates and 40 percent marks in respect of the SC/ST and OBC candidates.

2 Candidate with bench marks disabilities as specified under the rights of the persons with Disabilities act, 2016 (49 of 2016), the minimum qualifying marks in qualifying examination in Physics, Chemistry and Biology shall be 45 percent for General category and 40 % for the SC/ST/OBC

3 No candidate shall be admitted to BHMS degree course unless he has attained the age of 17 years on or before the 31st December of the year of admission in the first year of the course and not older than age of 25 years on or n or before the 31st December of the year of admission in the first year of the course provided that the upper age limit may be relaxed to the SC/ST/OBC/Physically handicapped candidates.

4 In order to be eligible for admission to under graduate course for an academic year, it shall be necessary for the candidate to obtain minimum of marks at 50th percentile in the National Eligibility Entrance Test (NEET) conducted by an authority designated by the Central government, for the under graduate course held for the said academic year.

- i. Provided that in respect of
 - a. Candidate belonging to the SC/ST/OBC the minimum marks shall be at 40th percentile;
 - b. Candidate with bench marks disabilities as specified under the rights of the persons with Disabilities act, 2016 (49 of 2016), the minimum marks shall be at 45th percentile for General category and 40th percentile for the SC/ST/OBC
- ii. Provided further that when sufficient number of candidates in the respective categories fail to secure minimum marks in the NEET as specified above, held for any academic year for admission to undergraduate courses, the Central government in consultation with cetral council may at its discretion lower the minimum marks required for admission to undergraduate course for candidates belonging to respective categories and marks so lowered by the central government shall be applicable for that academic year only.
- iii. An all Indian common merit list as well as state wise merit list of the eligible candidates shall be prepared on the basis of the marks obtained in the NEET and the candidate, within the respective categories shall be admitted to the undergraduate course form the said merit list only.
- iv. The seat matrix for admission in the Government, Government aided institutions and private institutions shall be 15% for the All India quota and 85% percent for the state and union territories quota.
- v. Karnataka Examinations Authority (KEA) shall be designated authority for

counseling for all the admission to undergraduate course in all Homoeopathic educational institutions in the state including the institutions established by the State Government, University, Deemed university, Trust, Society, Minority institution, Corporation or company shall be in accordance with relevant rules and regulations of the Government of Karnataka State.

- vi. The counseling for all admission to undergraduate course for seats under the All India quota as well as for all Homoeopathic educational institutions established by the Central Government shall be conducted by the authority designated by the Central Government.
- vii. No candidate who has failed to obtain the minimum eligibility marks as specified above shall be admitted to undergraduate course in the academic year
- viii. For Foreign national candidates any other equivalent qualification to be approved by the Central Government may allowed, and entrance examination for admission to undergraduate course namely NEET shall not be applicable for the Foreign national candidates

Provided that a candidate who has appeared in the qualifying examination the result of which has not been declared, he may be provisionally permitted to take up the competitive examination and in case of selection for admission to the BHMS Degree course, he shall not be admitted to that course until he fulfills the eligibility criteria under regulation 1&2.

2. Course of Study

- (i) The Bachelor of Homoeopathic Medicine and Surgery degree course shall comprise a course of study spread over a period of 5 ½ years including a Compulsory Rotatory Internship of one-year duration after passing the IV BHMS examinations.

I BHMS	- 1 year
II BHMS	- 1 year
III BHMS	- 1 year
IV BHMS	- 1 ½ year
INTERNSHIP	- 1 year
- (ii) As mentioned above i.e., (i) Every candidate after passing IV BHMS examination shall undergo a Compulsory Internship for a period of twelve (12) months as per the procedure laid down in these regulations.
- (iii) On successful completion of Internship, an internship completion certificate signed and issued by the head of the institution is mandatory before the University issues degree certificates to such candidates.
- (iv) Every candidate shall complete the course including the passing of all the examinations in all the subjects and complete the Compulsory Internship within a period of eleven years from the date of admission to I BHMS Degree Course in the college concerned, failing which his name shall be removed from the rolls of the college and consequently the University.

3. Subjects & Hours of Teaching
First Year BHMS (Duration 1Year)

Table I: Subjects prescribed and distribution of teaching hours for theory and practical classes

Sl No	Subject	Theory	Practical/ Tutorial/Seminar	Total
1	Anatomy	200 Hrs (including 10 hours each for histology and embryology)	275 Hrs (including 30 hours for histology and embryology)	475 Hrs
2	Physiology	200 Hrs. (including 50 hours for Bio-chemistry)	275 Hrs (including 50 hours for Bio-chemistry)	475 Hrs
3	Homoeopathic Pharmacy	100 Hrs	70 Hrs	170 Hrs
4	Homoeopathic Materia Medica	35Hrs	--	35 Hrs
5	Organon of Medicine with Homoeopathic Philosophy	35 Hrs(including 10 Hrs of Logic)	--	35 Hrs
	TOTAL	570 Hrs	620 Hrs	1190Hrs

Second Year BHMS (Duration 1 Year)

Table II: Subjects prescribed and distribution of teaching hours for theory and practical classes

Sl No	Subject	Theoretical Lectures (In Hours)	Practical or Clinical or Tutorial or Seminar (In Hours)	Total
1	Pathology	200	80	280
2	Forensic Medicine and Toxicology	80	40	120
3	Organon of Medicine with Homoeopathic Philosophy	160	60	220
4	Homoeopathic Materia Medica	160	60	220
5	Surgery	80	60 (One term of three months in surgical ward and outpatient department)	140
6	Gynaecology and Obstetrics	40 +40 = 80	60 (One term of three months in surgical ward and outpatient department)	140
	TOTAL	760	360	1120

Note: Clinical postings: Monday to Friday of 3 hrs. duration.

Third Year BHMS (Duration 1 Year)

Table III: Subjects prescribed and distribution of teaching hours for theory and practical classes

Sl No	Subject	Theoretical lecture (in Hours)	Practical or clinical or tutorial or seminar (In hours)	Total
1	Surgery including ENT, Ophthalmology, dentistry & Homoeopathic Therapeutics	100Hrs 50 Hrs Total: 150Hrs	75 Hrs (three months clinical postings in ward and OPD)	225Hrs
2	Obstetrics and Gynaecology, Infant Care and Homoeopathic Therapeutics	100 Hrs 50 Hrs Total:150Hrs	75 Hrs (three months clinical postings in ward and OPD)	225Hrs
3	Homoeopathic Materia Medica	100Hrs	75Hrs	175Hrs
4	Organon of Medicine	100Hrs	75Hrs	175Hrs
5	Practice of Medicine and Homoeopathic Therapeutics	50Hrs 25Hrs Total 75Hrs	75Hrs	150Hrs
6	Repertory	50Hrs	25Hrs	75Hrs
7	Community Medicine	35Hrs	15Hrs	50Hrs
	TOTAL	660Hrs	415Hrs	1075Hrs

Note: Clinical postings: Monday to Saturday of 3 hrs duration.

Fourth Year BHMS (Duration 1.1/2 Year)

Table IV: Subjects prescribed and distribution of teaching hours for theory and practical classes

Sl No	Subject	Theoretical Lectures (in Hrs)	Practical or clinical or tutorial or seminar (In hours)	Total
1	Practice of Medicine and Homoeopathic Therapeutics	120Hrs 60Hrs Total: 180	300 Hrs	480Hrs
2	Homoeopathic Materia Medica	180 Hrs	110 Hrs	290 Hrs
3	Organon Of Medicine	180 Hrs	110 Hrs	290Hrs
4	Repertory	100 Hrs	200 Hrs	325Hrs
5	Community Medicine	100 Hrs	100Hrs	200Hrs
	Total	740 Hrs	820 Hrs	1560 hr

Note:

1. Clinical classes in the subjects of Homoeopathic Materia Medica, Organon of Medicine, Principles of Homoeopathic Philosophy, Case taking and Repertory have to be accommodated within Surgery, Obstetrics and Gynaecology and Medical OPD /IPD postings during 2nd to 4th BHMS courses.

2. One term of three months each in outpatient department and in patient department respectively for case taking analysis, evaluation and provisional prescription just for case presentation on 10 cases per month.

4. Eligibility Criteria for appearance to the university examination

4.1 Attendance

- i. Every candidate shall have attendance of not less than 75% of the total classes conducted in theory and practical's separately in each academic year calculated from the date of commencement of the academic year as notified by the university in each of the subjects prescribed to be eligible to appear for the university examination.
- ii. The Principal should notify at the college, the attendance details of all the students once in every three months
- iii. Special classes, seminars, demonstrations, practical's, tutorials etc. shall be arranged for the repeaters in the subject in which they have failed before they are allowed to appear in the next examination, in which attendance is compulsory.

4.2 Internal Assessment

- i. It shall be based on evaluation of assignment, presentation of seminar, clinical presentation etc.
- ii. There shall be periodical tests and internal (theory & practical) examinations in each academic year.
- iii. Although the question of number of examinations is left to the institution, there should be a minimum of three Internal assessment examinations in each academic year during the I, II, III and IV BHMS course and average of best of two examination marks for each year should be taken into consideration while calculating the marks of the internal assessment.
- iv. Proper record of the work should be maintained, which will be the basis of internal assessment of all students and should be available for scrutiny.
- v. Faculty from the cadre of Assistant Professor on wards in the concerned subject can conduct internal assessment examination.
- vi. Proportion of marks for Internal Assessment shall be 20% of maximum marks prescribed for university examination for each subject in theory and practical separately. Please see Tables V to VIII of the RGUHS BHMS degree course regulations
- vii. A student must secure at least 50% (including theory and practical), of total marks fixed for internal assessment in a particular subject, in order to be eligible to appear in University Examination in that subject.
- viii. Each student appearing for II, III & IV BHMS shall maintain practical record/ journal comprising of 20 cases (10 short & 10 long cases) with complete processing of the case material for each examination, which shall be evaluated by the head of the department./Teacher concerned

4.3 Eligibility to appear in the university examination

- i. I BHMS - A student shall be eligible to appear for I BHMS examination provided he/she has pursued the course satisfactorily and has requisite attendance as per regulation.

- ii. II BHMS - The candidate shall pass I BHMS Examination in all the subjects at least one term (six months) before he is allowed to appear in Second BHMS Examination and has required attendance as per regulation.
- iii. III BHMS - No candidate shall be eligible to appear in III BHMS examination unless he/she has passed in the second BHMS examination and has required attendance as per regulation.

Note:- to consider as pass in second BHMS examination, a candidate has to pass in all the subjects prescribed for the University examination. In case a candidate has failed in one or more subjects in II BHMS examination he/she shall have to pass in these failed subject(s) atleast one term (6 months) before he/she is allowed to appear in the III BHMS examination.

- iv. IV BHMS - No candidate shall be eligible to appear in IV BHMS examination unless he/she has passed in the third examination and he/she has requisite attendance as per regulation.

Note:- to consider as pass in third BHMS examination, a candidate shall have to pass in all the subjects prescribed for the university examination. In case a candidate has failed in one or more subjects in third BHMS examination, he/she shall have to pass in the failed subject(s) at least one term (6 months) before he/she is allowed to appear in the IV BHMS examination.

Subjects:

Subjects for study and examination for the BHMS Degree Course shall be as under namely:-

Sl. No	Name of the subject	Subject taught during	Holding of Examination
1	Anatomy	First BHMS	At the end of first BHMS
2	Physiology	First BHMS	At the end of first BHMS
3	Homoeopathic Pharmacy	First BHMS	At the end of first BHMS
4	Organon of Medicine with Homoeopathic Philosophy	First BHMS, Second BHMS, Third BHMS, Fourth BHMS	At the end of Second, Third and Fourth BHMS.
5	Homoeopathic Materia Medica	First BHMS, Second BHMS, Third BHMS, Fourth BHMS	At the end of Second, Third and Fourth BHMS.
6	Pathology	Second BHMS,	At the end of Second BHMS.
7	Forensic Medicine and Toxicology	Second BHMS,	At the end of Second BHMS.
8	Practice of Medicine	Third BHMS, and Fourth BHMS	At the end of Fourth BHMS.
9	Surgery	Second BHMS, Third BHMS.	At the end of Third BHMS.
10	Gynecology and Obstetrics	Second BHMS, Third BHMS.	At the end of Third BHMS.
11	Community Medicine	Third BHMS and Fourth	At the end of Fourth

		BHMS	BHMS
12	Repertory	Third BHMS and Fourth BHMS	At the end of Fourth BHMS

5. University Examination:

The university shall conduct two examinations annually with an interval of not less than four to six months between the two examinations.

a. Schedule of Examination

I BHMS -The first year BHMS examination shall be at the end of 12 months (ONE year) after admission.

II BHMS - The second year BHMS examination shall follow ONE year of course of study after the I BHMS examination

III BHMS - The third year BHMS examination shall follow ONE year of course of study after the II BHMS examination

IV BHMS - The fourth year BHMS examination shall follow ONE AND HALF year of course of study after the III BHMS examination

All examinations shall be held as per notification issued in the calendar of events by the university from time to time.

b. Particulars of subjects for university examination:

The subjects, the number of theory papers, practical and viva-voce examination shall be as follows.

I BHMS:

1. **Anatomy including Histology and Embryology.** There shall be two theory papers. One Practical and one viva-voce examination.
2. **Physiology including Biochemistry.** There shall be two theory papers, one practical and one viva-voce examination.
3. **Homoeopathic Pharmacy.** There shall be one theory, one practical & one viva-voce examination.

II BHMS:

1. **Pathology and Microbiology.** There shall be two theory papers, one practical and one viva-voce examination.
2. **Forensic Medicine and Toxicology.** There shall be one theory paper, one practical and one viva-voce examination.
3. **Organon of Medicine with Homoeopathic Philosophy.** There shall be one theory paper, one practical and one viva-voce examination.
4. **Homoeopathic Materia Medica.** There shall be one theory paper, one practical and one viva-voce examination.

III BHMS:

1. **Organon Medicine, Principles of Homoeopathic Philosophy and Psychology.** There shall be one theory paper, one practical and one viva-voce examination.
2. **Surgery.** There shall be two theory papers, one practical and one viva-voce examination.

examination. The practical Examination shall consist of clinical examination and oral. In the clinical examination the students shall be **examined on his skill on the surgical instruments, bandages and general measures related to surgery, scope of Homoeopathic therapeutics** and examination and diagnosis of surgical disease through clinical examination X-ray and other common diagnostic techniques.

3. **Obstetrics & Gynaecology including infant care.** There shall be two theory papers, one practical and one viva-voce examination. The practical examination shall consist of clinical examination and oral. In the clinical examination the students shall be examined on his skill on the specimens, models, instruments and general appliances related to Obstetrics, scope of Homoeopathic therapeutics and examination and diagnosis of Gynaecological disease through clinical examination, X-ray and other common diagnostic techniques.
4. **Homoeopathic Materia Medica.** There shall be one theory paper, one bedside practical and one viva-voce examination. The bedside examination shall be on two acute cases with special reference to their nosological diagnosis & therapeutic diagnosis from Homoeopathic point of view.

IV BHMS:

1. **Practice of Medicine** including Paediatrics, Psychiatry and Dermatology. There shall be two theory papers one bedside practical and one viva-voce examination. The practical examination shall consist of clinical examination and oral. In the clinical examination the students shall be examined on his skill on the nosological and therapeutic diagnosis, through clinical examination, X-ray and other common diagnostic techniques and detailed case takings on long and short cases.
2. **Repertory.** There shall be one theory paper, one practical and one viva-voce examination. The practical examination shall consist of the Homoeopathic principles on case taking of one long case and one short case and the methods of arriving the reportorial totality, through case analysis and actual repertorisation. The skill of finding rubrics from Kent and Bonninghausam Repertories shall be considered for the oral examination.
3. **Homoeopathic Materia Medica.** There shall be two theory papers, one bedside practical and one viva-voce examination. The bedside examination shall be one long case and one short case with special reference to their nosological diagnosis and therapeutic diagnosis from Homoeopathic point of view. The case reports of the students carried out during the course shall be considered for the oral examination.
4. **Organon of Medicine with Homoeopathic Philosophy:-**There shall be two theory papers one practical and one viva-voce examination. The practical examination consist of two theory papers and one practical examination. The practical examination shall be on the Homoeopathic orientation of cases in relation to miasmatic diagnosis, general management, posology, second prescription etc.
5. **Community Medicine.** There shall be one theory paper, one practical and one viva-voce examination. The practical examination shall be on spotting and identification of specimen and matters related to the community oriented problems.

6. Distribution of Marks

a. Distribution of Marks for internal assessment is given in Tables V to VIII. Particulars of subjects, number of papers, duration and distribution of marks for the University examinations are given in Tables IX to XII.

b. Topic wise distribution of marks is theory is given in concerned subjects. These are suggestive. Some variations may occur.

6.1. Internal Assessment:

Table V: - Distribution of Marks for Internal Assessment for I BHMS

	Anatomy	Physiology including Biochemistry	Homoeopathic Pharmacy
Theory Max. Marks	200	200	100
Internal assessment	40	40	20
Practical Max Marks	100	100	50
Internal assessment	20	20	10
Viva Voce Max Marks	100	100	50
Internal assessment	20	20	10

Table VI : - Distribution of Marks for Internal Assessment for II BHMS

	Pathology	Forensic Medicine and Toxicology	Homoeopathic Materia Medica	Organon with Philosophy
Theory Max. Marks	200	100	100	100
Internal assessment	40	20	20	20
Practical Max Marks	100	50	50	50
Internal assessment	20	10	10	10
Viva Voce Max Marks	100	50	50	50
Internal assessment	20	10	10	10

Table VII : - Distribution of Marks for Internal Assessment for III BHMS

	Surgery	Gynaecology and Obstetrics	Homoeopathic Materia Medica	Organon with Philosophy
Theory Max. Marks	200	200	100	100
Internal	40	40	20	20

assessment				
Practical Max Marks	100	100	50	50
Internal assessment	20	20	10	10
Viva Voce Max Marks	100	100	50	50
Internal assessment	20	20	10	10

Table VIII : - Distribution of Marks for Internal Assessment for IV BHMS

	Practice of Medicine	Homoeopathic Materia Medica	Organon of Medicine with Philosophy	Repertory	Community Medicine
Theory Max. Marks	200	200	200	100	100
Internal assessment	40	40	40	20	20
Practical Max Marks	100	100	100	50	50
Internal assessment	20	20	20	10	10
Viva Voce Max Marks	100	100	100	50	50
Internal assessment	20	20	20	10	10

6.2. Particulars of each subject with full marks and minimum number of marks required for passing in each year in the University examinations.

Table: IX - I BHMS Examination

Subject	Written		Practical	Viva Voce	Practical & Viva	Total	
	Full marks	Pass marks	Full marks	Full marks	Pass marks	Full marks	Pass marks
Homoeopathic Pharmacy	100	50	50	50	50	200	100
Anatomy	200	100	100	100	100	400	200
Physiology	200	100	100	100	100	400	200

Table: X - II BHMS Examination

Subject	Written		Practical	Viva Voce	Practical & Viva Voce	Total	
	Full marks	Pass marks	Full marks	Full marks	Pass Marks	Full marks	Pass marks

Pathology	200	100	50	50	50	300	150
Forensic Medicine and Toxicology	100	50	50	50	50	200	100
Homoeopathic Materia Medica	100	50	50	50	50	200	100
Organon of Medicine with Homoeopathic Philosophy	100	50	50	50	50	200	100

Table: XI - III B.H.M.S. Examination

Subject	Written		Practical	Viva Voce	Practical & Viva Voce	Total	
	Full marks	Pass marks				Full marks	Pass marks
Surgery	200	100	100	100	100	400	200
Gynaecology and Obstetrics	200	100	100	100	100	400	200
Homoeopathic Materia Medica	100	50	50	50	50	200	100
Organon of Medicine with Homoeopathic Philosophy	100	50	50	50	50	200	100

Table: XII - IV BHMS examination

Subject	Written		Practical	Viva Voce	Practical & Viva Voce	Total	
	Full marks	Pass marks				Full marks	Pass marks
Practice of Medicine	200	100	100	100	100	400	200
Homoeopathic Materia Medica	200	100	100	100	100	400	200
Organon of Medicine with Homoeopathic Philosophy	200	100	50	50	50	300	150
Repertory	100	50	50	50	50	200	100
Community Medicine	100	50	50	50	50	200	100

7.1. Criteria for pass in a subject

A candidate to be declared as pass in any subject, shall secure separately, in Theory and Practicals / Clinicals including Viva-voce examination, not less than 50% of maximum marks prescribed for the University examination.

A candidate who has passed in a subject or subjects need not appear in that subject(s) in the subsequent examination if he/she has failed in other subject or subjects.

7.2. Criteria for pass in I year, II year, III year and IV year BHMS examination

To consider as pass in BHMS examination, a candidate has to pass in all the prescribed subjects of the University examination for the concerned year.

8. Facility to keep term:

Notwithstanding with forgoing regulations, the student shall be allowed to keep term on the following conditions:

- a) The candidate must pass First BHMS examination in all the subjects at least one term (6Months) before he is allowed to appear in Second year Examination
- b) The candidate must pass the second year BHMS Examination at least one term (6months) before he is allowed to appear Third year BHMS examination.
- c) The candidate must pass The Third year BHMS Examination at least one term (6months) before he is allowed to appear Fourth year BHMS Examination.

9. Number of Attempts

If a candidate fails to pass in all the subjects within four chances I or II or III BHMS examination, he/she shall be required to prosecute a further course of study of all the subjects and in all parts for one year to the satisfaction of the head of the college and appear for examination in all the subjects.

Provided that if a student appearing for the Fourth BHMS examination, has only one subject to pass at the end of prescribed chances, he shall be allowed to appear at the next examination in that particular subject and shall complete the examination with this special chance.

10. Declaration of Class:

- a. A candidate having appeared in all the subjects in the same examination and passed that examination in the first attempt and secures 75% of marks or more of grand total marks prescribed will be declared to have passed the examination with distinction.

- b. A candidate having appeared in all the subjects in the same examination and passed that examination in the first attempt and secures 65% of marks or more but less than 75% of grand total marks prescribed will be declared to have passed the examination in First Class.
- c. A candidate having appeared in all the subjects in the same examination and passed that examination in the first attempt and secures 50% of marks or more but less than 65% of grand total marks prescribed will be declared to have passed the examination in Second Class.
- d. A candidate passing a university examination in more than one attempt shall be placed in Pass class irrespective of the percentage of marks secured by him/her in the examination.

[Please note fraction of percentage of marks should not be rounded off for clauses (a), (b) and (c)]

11. Results and Re-Admission to Examination

(i) The examination body shall ensure that the results of the examination are published at the maximum within one month of the last date of practical /clinical examination so that students can complete the course in 5 ½ yrs. after admission

(ii) Candidates who have passed in one or more subjects need not appear in that subject or those subjects again in the subsequent examinations if the candidate passes the whole examination within four chances including the original examination.

(iii) A candidate who appears at First B.H.M.S. examination, Second B.H.M.S. examination, Third B.H.M.S. examination or Fourth B.H.M.S. examination but fails to pass in the subject or subjects shall be re-admitted to the examination in the subject or subjects (theory and practical or clinical including oral or practical or clinical wherein he has failed).

(iv) Special classes, seminars, demonstration, practical, tutorials etc, shall be arranged for the repeaters in the subject in which they have failed before they are allowed to appear at the next examinations, in which attendance shall be compulsory.

(v) If a candidate fails to pass in all the subjects within four chances in examinations, he shall be required to prosecute a further course of studying all the subjects and in all parts for one year to the satisfaction of the head of the college and appearing for examination in all the subjects.

Provided that if a student appearing for the Fourth BHMS examination has only one subject to pass at the end of prescribed chances, he shall be allowed to appear at the next examination in that particular subject and shall complete the examination with this special chance.

(vi) The University may under exceptional circumstances, partially or wholly cancel any examination conducted by it under intimation to the Central Council of Homoeopathy and arrange for conducting re- examination in those subjects within a period of thirty days from the date of such cancellation.

(vii) The University shall have the discretion to award grace marks at the maximum to ten marks in total if a student fails in one or more subjects.

12. Examiners –

i) No person other than the holder of qualification prescribed for the teaching staff in the Homoeopathy Central Council (Minimum Standards Requirement of Homoeopathic Colleges and attached Hospitals) Regulations, 2013 (as amended from to time) shall be

appointed as an Internal or External examiner or paper-setter or moderator for the B.H.M.S. Degree Course:

Provided that:-

(a) No such person shall be appointed as an examiner unless he has at least three years continuous regular teaching experience in the subject concerned, gained in a degree level Homoeopathic Medical College.

(b) Internal examiners shall be appointed from amongst the teaching staff of the Homoeopathic Medical College to which the candidate or student belongs.

(ii) The criteria for appointing the Chairman or paper-setter or moderator shall be as follows.

Namely:-

(1) Chairperson: Senior most person from amongst the examiners or paper-setters appointed for theory and oral or practical or clinical examinations shall be appointed as Chairman and the eligibility qualification for the Chairman shall be the same as for appointment of a Professor.

(2) Paper-setter : A Professor or Associate Professor or Reader shall be appointed as a paper-setter:

Provided that an Assistant Professor or Lecturer with three years experience as an examiner shall be eligible to be appointed as Paper-setter.

13. General Guidelines for Admission to Examination and Scheme of Examination

(i) The University shall ensure that the minimum number of hours for lecture/demonstration/practical/seminar etc. in the subjects in each BHMS examination as specified in respective regulations are followed before allowing any Homoeopathic Medical College to send the students for University examination :

(ii) The University shall ensure that the students of the Homoeopathic Medical Colleges, who do not fulfill the Homoeopathy (MSR) Regulations, are not sent for the University Examination.

(iii) 75% (Seventy five percent) attendance at the minimum in each of the subjects (in theory and practical including clinical) for appearing in the University examinations shall be compulsory.

(iv) Each theory paper shall be of three hours duration.

(v) The Practical / Viva Voce examination shall be completed immediately after the theory examination.

(vi) That the examining body shall hold examinations on such date and time as the examining body may determine. The theory and practical examination shall be held in the premises of the Homeopathic Medical College

(vii) There shall be a regular examination and a supplementary examinations in a year

(viii) For non-appearance in an examination for any reason, a candidate shall not have any liberty for availing additional chance to appear in that examination.

14. Migration or transfer of students from on college of another:

(a) Migration from one college to other is not a right of a student.

(b) Migration of students from the Homoeopathic College to another Homoeopathic college in India shall be considered by the Central Council of Homoeopathy only in exceptional cases on extreme compassionate grounds, provided following criterias are fulfilled. Routine migration on other grounds shall not be allowed;

(c) Both the colleges, i.e. one at which the student is studying at present and one to which migration is sought are recognised as per provisions of Homoeopathy Central Council Act.

(d) The applicant shall have passed First B.H.M.S. examination.

(e) The applicant shall submit his/her application in the prescribed format for migration, complete in all respect, to the principal of his college within a period of one month of passing (declaration of result) the I BHMS examinations.

(f) The applicant shall submit an affidavit stating that he shall pursue twelve months of prescribed study before appearing at II B.H.M.S examination at the transferee college, which he is seeking transfer and the transfer shall be effective only after receipt of the affidavit.

(g) Migration during internship training shall be allowed on extreme compassionate grounds, provided that such migration shall be allowed only with the mutual consent of the concerned Colleges, where both the college, i.e. one at which the student is studying at present and one to which migration is sought are recognized as per provisions of Homoeopathy Central Council Act.

Note 1:

a) All applications for migration shall be referred to Central Council of Homoeopathy by college authorities. No Institution or University shall allow migrations directly without the approval of the Central Council.

b) The Central Council of Homoeopathy reserves the right not to entertain any application except under the following compassionate grounds, namely :-

i. death of a supporting guardian:

ii. illness of candidate causing disability supported by medical grounds certified by a recognized hospital;

iii. disturbed conditions as declared by concerned Government in the area where the college is situated.

c) A student applying for transfer on compassionate ground shall apply in relevant format and in complete manner with requisite documents.

15. INTERNSHIP TRAINING

1. (i) Each candidate shall be required to undergo Compulsory Rotating Internship of one year, after passing the final BHMS Examinations, to the satisfaction of the Principal of the Homoeopathic College. Thereafter only, the candidate shall be eligible for the award of Degree of Bachelor of Homoeopathic Medicine and Surgery (B.H.M.S) by the University.

(ii) All parts of the internship training shall be undertaken at the hospital attached to the College, and in cases where such hospital cannot accommodate all of its students for Internship then candidates/Students shall be informed in writing by the college and it shall be the responsibility of the College to ensure that each of such students is put on internship training in a Homoeopathic Hospital or dispensary run by Government or local bodies.

(iii) To enable the State Board /Council of Homeopathy to grant provisional registration of minimum of one year to each candidate to undertake the internship, the University concerned shall issue a Provisional Passed Certificate on passing the final BHMS examination to each successful candidate.

Provided that in the event of shortage or unsatisfactory work, the period of compulsory internship and the provisional registration shall be accordingly extended by the State Board/Council.

(iv) Full registration shall only be given by the State Board if the BHMS degree awarded by the University concerned is a recognized medical qualification as per Section 13(1) of the HCC Act, and the Board shall award registration to such candidates who produce certificate of completion or compulsory rotating internship of not less than one year duration from the Principal of College, where one has been a bonafide student which shall also declare that the candidate is eligible for it.

(v) The internee students shall not prescribe the treatment including medicines, and, each of them shall work under the direct supervision of Head of Department concerned and /or a resident Medical Officer. No intern student shall issue any medico-legal document under his/her signatures.

2. The internship training shall be regulated by the Principal in consultation with concerned Heads of Departments and the R.M.O. as under :-

(i) Each internee student shall be asked to maintain a record of work which is to be constantly monitored by the Head of concerned Department and/or Resident Medical Officer under whom the internee is posted. The scrutiny of record shall be done in an objective way to update the knowledge, skill and aptitude of internee.

(ii) (a) The stress during the internship training shall be on case taking, analysis and evaluation of symptoms, nosological and miasmatic diagnosis. Totality of symptoms, repertorisation and management of sick people based on principles of Homoeopathy:

(b) The Principal or Head of the College in consultation with heads of concerned clinical departments (including Organon of Medicine, Materia Medica and Repertory) shall make, medical units having integration of teaching faculty of concerned departments to regulate internship training to be given to each student.

(c) Weekly seminars shall be conducted wherein interns in rotation be given a chance to present their cases for discussion an concerned teachers in conduct of weekly seminars.

(iii) Rotation of intern students shall be as under:

(a) Practice of Medicine - 8 Months, wherein, internee will be rotated in each Psychology, Respiratory, Gastro-intestinal, Endocrinology, Skin and V.D., Locomotor, Cardiology, Pediatrics sections.

(b) Surgery - 1 month.

(c) Obstetrics & gynecology - 2 Months [1 month each (including reproductive & child health care)].

(d) Community Medicine (including PHC/CHC) - 1 month.

(iv) Each internee shall be exposed to clinic pathology work to acquire skill in taking samples and doing routine blood-examination. Student shall be trained to correlate laboratory findings with diagnosis and management of sick people.

(v) Each internee shall be given opportunities to learn the diagnostic techniques like x-rays, Ultrasonography, E.C.G., Spirometer and other forthcoming techniques and co-relate their findings with diagnosis and management of cases.

(vi) Each internee student shall be given adequate knowledge about issuing of medico-legal certificates including medical and fitness certificates, death certificates, birth certificates, court producers and all of such legislation's be discussed which were taught in curriculum of Forensic Medicine.

(vii) Each internee shall maintain record of 40 acute and 25 chronic cases complete in all manner including follow up in Practice of Medicine, record of 5 antenatal check - up and 3 delivery cases attended by him/her in department of Obstetrics and 3 cases of Gynecology; records of 5 surgical cases assisted by him (and demonstration of knowledge of dressings) in Surgery department, and records of knowledge gained in Primary Health Centres, Community Health Centres and various health programmes.

(viii) Each interne shall be given a liberty to choose an elective assignment on any subject, and complete out-put shall be furnished in writing by the internee in respect of elective assignment to the Principal of the College within internship duration.

(ix) Each intern shall be posted on duty in such manner that each of them attend at least 15 days in O.P.D. and 15 days in I.P.D. in each month (except for duty in Community Medicine) and attend the other parts of duty including self-preparation in Library.

(x) Each intern shall be posted to learn importance of maintaining statistics and records, intern-student shall also be familiarized with research methodology.

3. (i). Each internee shall have not less than 80% of attendance during the internship training.

(ii). Each internee shall be on duty of at least 6 hours per day during the Compulsory Internship Training.

(iii). Each internee shall not avail more than ten days of leave during each posting.

16. EDUCATIONAL TOUR

Components

Number of Students.

Name of teacher accompanying students.

What the tour is about - an overview.

Prerequisites – What knowledge the students must know before going for tour

How it will be organized;

Approaches to teaching or learning and assessment;

Aim and Objectives:

1. To provide the basic knowledge of practical aspects of Pharmacy /FMT/Community Medicine by exposure of students to Pharmaceutical Labs and HPL/district courts/hospitals / PC/I.D. Hospitals units/sewage treatment plants/water purification plants / milk dairies, as the case may be.

2. To inspire students for their involvement in study during the said visits to learn the related procedures.

3. To provide the platform for evaluation of their skill and knowledge by interactive methodology.

4. To infuse confidence amongst students about homoeopathy, its future and their career.

5. To provide interaction between students, induce decision making skills and to motivate them for better vision about their future.

6. To improve cognitive skills (thinking and analysis)

7. To improve communication skills (personal and academic).

Learning outcomes

1. To be more than a wish list objectives, need to be realistic, pragmatic, understandable and achievable.

2. The focus should be on what students will be able to do or how will show that they know, and how this will help in their career and individual growth.

3. Knowledge - we want the students to have by the end of the course.

4. Skills - we want the students to master by the end of the course.

5. Attitude - we want students to demonstrate at the ends of the course.

Note: It shall be an essential part of the journal on the subject a viva-voice can be put in respect of it.

Resources:

1. Essential and recommended text books.
2. Journals and other readings.
3. Equipment and apparatus.

Visit record:

1. Places visited with photograph
2. Programmes organized during visit.
3. Summary

Assignment or project report.

1. Description of assignment.
2. Due dates of assignments.
3. Preparation method for the project report
 - (i) Purpose
 - (ii) Schedule
 - (iii) Places visited.
 - (iv) Details of visit
 - (v) Summary of achievements or leanings.

Section – V: COURSE DESCRIPTION

1) ANATOMY:

Introduction

I (a) Instructions in Anatomy be so planned as to present a general working knowledge of the structure of the human body;

(b) The amount of detail which a student is required to memorize should be reduced to the minimum;

(c) Major emphasis should be laid on functional anatomy of the living subject rather than on the static structures of the cadaver, and on general anatomical positions and broad relationship of the viscera, muscles, blood vessels, nerves and lymphatics and study of the cadaver is only the means to achieve this;

(d) Students should not be burdened with minute anatomical details which have no clinical significance.

II Though dissection of the entire body is essential for the preparation of the student of his clinical studies, the burden of dissection can be reduced and much saving of time can be effected, if considerable reduction of the amount of topographical details is made and the following points,

(1) Only such details as have professional or general educational value for the medical students.

(2) The purpose of dissection is to give the student an understanding of the body in relation to its function, and the dissection should be designed to achieve this goal.

(3) Normal radiological anatomy may also form part of practical or clinical training and the structure of the body should be presented linking functional aspects.

(4) Dissection should be preceded by a course of lectures on the general structure of the organ or the system under discussion and then its function. In this way anatomical and physiological knowledge can be presented to students in an integrated form and the instruction of the whole course of anatomy and physiology made more interesting, lively and practical or clinical.

(5) A good part of the theoretical lectures on anatomy can be transferred to tutorial classes with demonstrations.

(6) Student should be able to identify anatomical specimen & structures displayed in the dissections.

(7) Lectures or demonstrations on the clinical and applied anatomy should be arranged in the later part of the course and it should aim at demonstrating the anatomical basis of physical signs and the value of anatomical knowledge to the students.

(8) Seminars and group discussions to be arranged periodically with a view of presenting the subject in an integrated manner.

(9) More stress on demonstrations and tutorials should be given. Emphasis should be laid down on the general anatomical position and broad relations of the viscera, muscles, blood vessels, nerves and lymphatics.

(10) There should be joint seminars with the departments of Physiology and Biochemistry which should be organized once a month.

(11) There should be a close correlation in the teaching of gross Anatomy, Histology, Embryology and Genetics and the teaching of Anatomy, Physiology including Biochemistry shall be integrated.

Course goal

Human Anatomy is the study of the normal structures of the human body. It is broadly divided into gross anatomy and histology. Gross anatomy deals with the macroscopic study of the normal structures of the human body which includes general anatomy and regional anatomy. Histology deals with the microscopic study of tissues.

The general purpose of a course in anatomy for the undergraduate students of Homeopathy is to provide a comprehensive knowledge of the gross and microscopic structure and development of human body, so as to present a basis for understanding the clinical correlation of organs or structures involved and the anatomical basis for the disease presentations. This course provides *the students with the fundamental knowledge of human body structure and its correlation with the functions. This knowledge is aimed at application for clinical practice. The students will be able to recall, identify, recognize and correlate basic knowledge of structural and functional anatomy acquired through lectures/ tutorials/ dissection of the cadaver or virtual dissection/ demonstration of prepared dissected specimens before the pillars of sound clinical knowledge are laid upon to complement homeopathic principles and practices.*

Dissection is limited to main anatomical structures which have clinical value and significance so as to give students a clear understanding of their normal structures, positions and relations in normal human body. Demonstration of prepared dissected specimens is used to aid lectures and tutorials.

Course objectives

At the end of this module, the student will be able to:

- Illustrate the normal disposition, clinically relevant interrelationship and functional anatomy of various structures in the body
- identify and locate structures of the body and mark topography of living anatomy
- recognize basic and systemic microscopic structures of the human body
- Identify, recognize and describe the normal morphology of various organ systems
- Correlate the knowledge of general anatomy with regional anatomy
- Correlate structures of the human body with functional Radiological anatomy
- Identify anatomical basis of physical signs in clinical and applied anatomy
- Establish close co-relation in the knowledge of Gross Anatomy, Histology, Embryology & Genetics
- To integrate the knowledge of Anatomy with Physiology including Biochemistry.

A. THEORY - 200 HOURS

A complete course of human anatomy with general working knowledge of different anatomical parts of the body.

The curriculum includes the following, namely:-

1. General Anatomy- 15 Hours

Sl. No.	Topics	Component			Hours Allotted
		Must Know	Desirable To	Nice To	

			Know	Know	
1	Cell				
	Modern concept of cell	Cell components	Cell division types with significance	Applied anatomy	1
2	Tissues				
(i)	Basic tissues	Definition & Types	Functional correlation	Applied anatomy	1
(ii)	Descriptive terms in anatomy	Anatomical planes, Anatomical terms of position & movement	Terms used in Embryology		1
(iii)	General Osteology	Classification of bones, Terms used in osteology, Ossification: Definition, centers & laws of ossification	Functions of bone, Parts of growing long bone, Blood supply of long bone & Applied aspect	Types of ossification & Epiphysis	2
(iv)	General Arthrology	Joint: Definition, Classification, Synovial joint: Parts of Typical synovial joint & types	Fibrous & Cartilaginous joints, Blood & nerve supply of joint	Kinesiology	2
(v)	General Myology	Muscle tissue: Definition, types & Parts of the Skeletal muscle	Classification of Skeletal muscle	Actions of Skeletal muscles	1
(vi)	General Angiology	Types of blood vessels: Arteries, Capillaries, Veins & Sinusoids	Anastomosis, End artery & Applied aspect	Nerve supply of blood vessels	1
(vii)	General Neurology	Parts of the nervous system, Neuron, Neuroglia, Nerve: Definition & types- Cranial & Spinal	Classification of neurons, Nuclei, Ganglia & Synapse	Autonomic nervous system: Parts & functions	2
(viii)	Skin & its derivatives & Fasciae	Skin: Structure, appendages, Fasciae: Superficial	Functions of Skin & Dermatomes	Applied aspect of Skin & Appendages	2

		& deep, modifications & functions			
3	Genetics				
	Introduction, terminology, DNA & RNA	Mendelian laws of inheritance, Structure & function of Chromosomes	Protein biosynthesis, Genetic disorders & Karyotyping	Genetic code, Inheritance-Homoeopathic perspective	2

2. Developmental Anatomy (Embryology) - 15 Hours

Sl. No.	Topics	Component			Hours Allotted
		Must Know	Desirable To Know	Nice To Know	
1	Gametogenesis: Spermatogenesis & Oogenesis	Formation & maturation of Gametes	Structure of Spermatozoon & Ovarian follicle	Abnormalities in Gamete formation	1
2	Formation of germ layers	Fertilization, Implantation, Cleavage, Morula & Blastocyst, Formation of bilaminar germ disc, Prochordal plate, Primitive streak, Intra-embryonic mesoderm & Formation of trilaminar germ disc	Decidua: Parts, Trophoblastic stages of differentiation, Fetal membranes: Amnion, Chorion & Connecting stalk	In vitro fertilization, Types of Implantation & Abnormal implantation	2
3	Development of embryonic disc	Formation of Notochord, Neural tube & Neural crest, Primitive gut: Formation, parts & derivatives	Intra-embryonic mesoderm & its subdivisions, Derivatives of Ectoderm, Endoderm & Mesoderm	Allantoic diverticulum & Urachus	2
4	Placenta	Placenta: Formation,	Placental circulation	Placenta previa, Amniocentesis	1

		functions & features	& Placental barrier		
5	Development of Abdominal organs, Respiratory system & body cavities	Formation of Gastrointestinal tract, Development of Liver, Gall bladder, Pancreas & Spleen	Tracheobronchial diverticulum & Lung bud	Intraembryonic coelom & cavities derived from it	3
6	Development of Urogenital system	Development of Kidneys, Testis & Ovary		Development of Uterus, vagina & Fallopian tubes	2
7	Development of Cardiovascular system	Development of Heart	Congenital anomalies of Heart	Development of main blood vessels	2
8	Development of Nervous system	Development of Brain & Spinal cord	Neural crest & its derivatives		2

3. Regional Anatomy:

3.1. Head, Neck, Face & Brain- 50 Hours

Sl. No.	Topics	Component			Hours Allotted
		Must Know	Desirable To Know	Nice To Know	
(a)	Osteology				
(i)	Skull	Anatomical position, Exterior of views of skull, major foramina & structures passing through them, Interior of skull & cranial fossae	Fontenellae: Significance, age estimation & Sex differences of Skull & Muscle attachments	Ossification of Skull & Fractures of skull	3
(ii)	Mandible	Identification & Anatomical position	Dental formula & Ossification	Sex & age estimation	1
(iii)	Hyoid bone		Parts & muscle attachments	Applied anatomy	1
(iv)	Cervical vertebrae	Identification & parts of Typical cervical vertebrae	Atypical cervical vertebrae	Applied anatomy	1

(b)	Syndesmology				
	Temporo-mandibular joint	Articulation, ligaments, blood, nerve supply & lymphatic drainage	Movements & muscles responsible	Factors influencing the stability	1
(c)	Myology				
(i)	Fasciae of the neck	Layers and attachments	Spaces & derivatives		1
(ii)	Triangles of the Neck	Anterior & Posterior Triangles Boundaries, divisions & contents		Muscles of back of Neck	1
(iii)	Muscles of face	Names, nerve supply & actions	Applied anatomy		1
(iv)	Muscles of the Head & Neck	Origin, insertion, nerve supply & action of Muscles of mastication & Extra-ocular muscles	Origin, insertion, nerve supply & action of Sternocleidomastoid	Muscles of the Larynx, Pharynx & Soft palate	1
(d)	Angiology				
	Blood vessels of the Head, Neck & Brain	Origin, parts, course, relations, branches/ tributaries of Subclavian, Common, Internal & External carotid arteries and External & internal Jugular vein, Venous drainage of Scalp & Face Names & Classification of Dural venous sinuses & Blood supply of the brain	Origin, parts, course, relations, branches/ tributaries of Facial, Lingual, Middle meningeal, Maxillary, Vertebral artery, Pterygoid plexus of veins, Emissary veins	Superior thyroid, & Occipital arteries, Retro mandibular vein, Lymphatic drainage of Head and Neck	4

(e)	Neurology				
	Cranial nerves	Origin, nuclei, course, branches, distribution & applied anatomy of Occulomotor, Trochlear, Abducent, Trigeminal, Facial, Glossopharyngeal, Vagus & Hypoglossal nerves	Origin, nuclei, course, branches, distribution & applied anatomy of, Lingual, Chorda tympani, Recurrent laryngeal nerve, Phrenic nerve	Spinal accessory nerve, Cervical plexus & Parasympathetic Ganglia	4
(f)	Splanchnology				
(i)	Scalp	Extent and layers	Blood, nerve supply & lymphatic drainage	Clinical correlation	1
(ii)	Lachrymal apparatus	Structures forming the lachrymal apparatus	Blood, nerve supply & lymphatic drainage	Development	1
(iii)	Pituitary gland	Location, features, relations & connections with Hypothalamus	Blood, nerve supply & lymphatic drainage	Development	1
(iv)	Thyroid gland	Location, features & relations	Blood, nerve supply & lymphatic drainage	Functions & Development	1
(v)	Parathyroid gland	Location & features	Blood, nerve supply & lymphatic drainage	Functions & Development	1
(vi)	Parotid gland	Location, External features & relations, Parotid duct	Structures present within, blood, nerve supply and lymphatic drainage	Parotid sheath & Development	1
(vii)	Submandibular gland	Parts their features, relations & Submandibular duct	Blood, nerve supply & lymphatic drainage	Development	1
(viii)	Sublingual gland	Location & external features	Blood, nerve supply & lymphatic	Development	1

			drainage		
(ix)	Nose	External features, Cavity & Nasal septum	Blood, nerve supply & lymphatic drainage	Development	1
(x)	Para nasal air sinuses	Names, classification & features	Blood, nerve supply & lymphatic drainage	Development	1
(xi)	Tooth	Deciduous & permanent teeth, Parts and structure	Blood, nerve supply & lymphatic drainage	Functions	1
(xii)	Tongue	External features & muscles	Blood, nerve supply & lymphatic drainage	Functions, Development	1
(xiii)	Soft Palate	Morphology & muscles	Blood, nerve supply & lymphatic drainage	Development	1
(xiv)	Tonsil	Location & features, Tonsillar fossa & Tonsillar bed	Blood, nerve supply & lymphatic drainage	Development	1
(xv)	Pharynx	Location, relations & subdivisions	Blood, nerve supply & lymphatic drainage	Important features of subdivisions	1
(xvi)	Larynx	Location, extent, cartilages & cavity	Blood, nerve supply & lymphatic drainage	Rima glottis, Phonation	1
(xvii)	Trachea (cervical part)	Extent, structure & relations	Blood, nerve supply & lymphatic drainage	Applied anatomy	1
(xviii)	Central Nervous System	Introduction, Parts of the brain & Meninges of the brain	Ventricles of the brain and circulation of Cerebro spinal fluid	Base of the brain & Applied anatomy	1
(xix)	Spinal cord	External features & Internal Structure	Arterial supply & venous drainage	Applied anatomy	1
(xx)	Medulla oblongata	External features & internal structure	Blood supply	Applied anatomy	1
(xxi)	Pons	External features & internal	Blood supply	Applied anatomy	1

		structure			
(xxii)	Mid brain	External features & internal structure	Blood supply	Applied anatomy	1
(xxiii)	Cerebellum	External features, Subdivisions: anatomical, functional & Intracerebellar nuclei	Structure of cerebellar cortex & Cerebellar peduncles	Blood supply & Applied anatomy	1
(xxiv)	Fourth Ventricle	Boundaries of the fourth ventricle	Floor of the fourth ventricle	Choroid plexus	1
(xxv)	Diencephalon: Thalamus	Parts of diencephalon & External features of thalamus	Parts & nuclei	Functions	1
(xxvi)	Hypothalamus	Boundaries & subdivisions	Connections	Functions	1
(xxvii)	Third Ventricle	Boundaries	Recesses	Choroid plexus	1
(xxviii)	Cerebrum	External features & lobes	Functional areas of cerebral cortex	Limbic system	1
(xxix)	Cerebrum: White matter	Types of nerve fibers	Corpus callosum & Internal capsule	Fornix	1
(xxx)	Lateral ventricle	Parts & boundaries	Choroid plexus & Choroid fissure		1
(g)	Radiographic anatomy: Introduction to the study of X-Ray, CT & MRI of the Head, Neck & Brain region				1
(h)	Surface anatomy and Applied anatomy (Clinical significance) of each of the topic shall be covered without undue importance to minute & less significant anatomical details.				

3.2. Thorax- 20 Hours

Sl. No.	Topics	Component			Hours Allotted
		Must Know	Desirable To Know	Nice To Know	
(a)	Osteology				
	Bones of thorax	General features of Sternum, Typical ribs & Typical thoracic vertebrae	General features of Atypical ribs & Atypical thoracic	Applied anatomy, Ossification & muscle	3

			vertebrae	attachments	
(b)	Syndesmology				
	Joints of the thorax	Names & articulation	Clinical importance		1
(c)	Myology				
	Muscles of thorax	Origin, insertion, nerve supply & action of Intercostal muscles	Origin, insertion, nerve supply & action of Diaphragm	Applied anatomy	1
(d)	Angiology				
	Blood vessels of thorax	Origin, parts, course, relations, branches/ tributaries of Ascending, arch & descending thoracic aorta, Superior venacava & Azygos venous system	Origin, parts, course, branches of Internal thoracic artery & Thoracic duct	Applied anatomy & Lymphatic drainage of thorax	3
(e)	Neurology				
	Nerves in thorax	Formation of Phrenic nerve	Applied anatomy of Phrenic nerve	Thoracic part of sympathetic nervous system	1
(f)	Splanchnology				
(i)	Trachea (thoracic part)	Extent & relations	Blood, nerve supply & lymphatic drainage	Applied anatomy	1
(ii)	Lungs	External features, relations, Bronchial tree & Broncho-pulmonary segments	Blood, nerve supply & lymphatic drainage	Applied anatomy	2
(iii)	Pleura	Definition, parts & recess	Blood & nerve supply	Applied anatomy	1
(iv)	Mediastinum	Definition, Subdivisions, boundaries & contents	Applied anatomy		1
(v)	Heart	Chambers of the heart: External, internal features &	Valves of the heart & Applied	Conducting system	3

		blood supply	anatomy		
(vi)	Pericardium	Definition, parts & sinuses of pericardium	Blood & nerve supply	Applied anatomy	1
(vii)	Oesophagus	External features, course & blood supply	Constriction & Nerve supply	Applied anatomy	1
(g)	Radiographic anatomy: Introduction to the study of X-Ray, CT& MRI of the Thoracic region				1
(h)	Surface anatomy and Applied anatomy (Clinical significance) of each of the topic shall be covered without undue importance to minute & less significant anatomical details.				

3.3. Abdomen & Pelvis- 40 Hours

Sl. No.	Topics	Component			Hours Allotted
		Must Know	Desirable To Know	Nice To Know	
(a)	Osteology				
	Bones of the Abdomen & Pelvis	General features of Lumbar vertebrae, Sacrum, Male & Female pelvis	Applied anatomy, Pelvis- Sex differences	Ossification, Types of Pelvis & pelvimetry	4
(b)	Syndesmology				
	Joints of the back	Lumbosacral joint- Articulation	Applied anatomy	Sacroiliac joint	1
(c)	Myology				
(i)	Abdomen & Pelvis	Origin, insertion, nerve supply & action of the muscles of Anterior abdominal wall & Psoas major	Rectus sheath & Inguinal canal	Applied anatomy	2
(ii)	Perineum	Definition, divisions, Ischiorectal fossa	Superficial, deep perineal pouches & Pelvic Diaphragm	Muscles & nerves	2
(d)	Angiology				
	Blood vessels of	Origin, parts, course, relations, branches/	Origin, parts, course,	Applied anatomy,	4

	the Abdomen & Pelvis	tributaries of Abdominal aorta, Portal vein & Inferior venacava	relations, branches of Coeliac trunk, Superior, Inferior mesenteric & Internal iliac arteries	Lymphatic drainage of Abdomen & pelvis	
(e)	Neurology				
	Study of the main nerves in abdomen & pelvis			Autonomic nerve plexuses	1
(f)	Splanchnology				
(i)	Abdominal cavity	Quadrants & contents			1
(ii)	Peritoneum	Definition, parts & reflection, Greater & lesser omentum	Omental bursa, Mesentery, Peritoneal pouches in pelvis	Functions & applied anatomy	2
(iii)	Scrotum Testis & Penis	Gross anatomy, Layers/ Coverings	Blood, nerve supply & lymphatic drainage	Applied anatomy, Development	2
(iv)	Stomach	Parts, important relations and interior	Blood, nerve supply & lymphatic drainage	Applied anatomy	2
(v)	Small intestine	Parts, main features of Duodenum	Differences between Jejunum & Ileum	Applied anatomy	2
(vi)	Large intestine	Parts, main features of Caecum, appendix & Applied anatomy	Blood, nerve supply & lymphatic drainage	Marginal artery	1
(vii)	Spleen	Location, external features, ligaments & relations	Blood, nerve supply & lymphatic drainage	Applied anatomy	1

(viii)	Liver & Gall bladder	External features, Lobes/ Parts, Ligaments & Bile duct	Blood, nerve supply & lymphatic drainage	Cystic duct	1
(ix)	Pancreas	Parts and their relations	Blood, nerve supply & lymphatic drainage	Duct system, Development	1
(x)	Kidney	Morphology, structure on coronal section & Blood supply	Nerve supply, Lymphatic drainage & Applied anatomy	Horse shoe kidney, Polycystic kidney	2
(xi)	Ureter	Extent	Course & constrictions	Blood supply	1
(xii)	Suprarenal glands	Location & morphology	Relations & Applied anatomy	Blood, nerve supply & lymphatic drainage	1
(xiii)	Urinary bladder	Morphology, Trigone of the urinary bladder & blood supply	Relations & Applied anatomy	Micturition reflex	1
(xiv)	Male & female urethrae	Extent & course parts of the male urethra	Relations & Applied anatomy		1
(xv)	Prostate	Location, morphology	Relations & Applied anatomy	Blood, nerve supply & lymphatic drainage	1
(xvi)	Ductus deferens, Seminal vesicle		Relations	Applied anatomy	1
(xvii)	Rectum & anal canal	Morphology, blood, nerve supply & applied anatomy	Applied anatomy		2
(xviii)	Vaginal & Ovary, Uterus & Uterine tube	Morphology, blood, nerve supply & Applied anatomy	Relations, ligaments & Supports of uterus		2

(g)	Radiographic anatomy: Introduction to the study of X-Ray, CT & MRI of the Abdomen & Pelvis	1
(h)	Surface anatomy and Applied anatomy (Clinical significance) of each of the topic shall be covered without undue importance to minute & less significant anatomical details.	

3.4. Upper Extremity- 20 Hours

Sl. No.	Topics	Component			Hours Allotted
		Must Know	Desirable To Know	Nice To Know	
(a)	Osteology				
	Bones of the upper extremity	General features of Clavicle, Scapula, Humerus, Radius & Ulna	Articulated hand & Applied anatomy	Ossification & muscle attachments	5
(b)	Syndesmology				
	Shoulder, Elbow & Wrist joint	Articulation, ligaments & muscles responsible for movements	Applied anatomy	First Carpo-metacarpal joint, MP & IP joints	3
(c)	Myology				
(i)	Muscles of upper extremity	Origin, insertion, nerve supply & action of Pectoralis major, Trapezius, Lattismus dorsi, Deltoid, Biceps, Brachialis, Triceps, Flexor digitorum superficialis & profundus, Extensor digitorum	Origin, insertion, nerve supply & action of Brachioradialis, Intrinsic muscles of the hand, Formation & applied anatomy of Rotator cuff	Thenar & Hypothenar muscles	2
(ii)	Axilla & Cubital fossa	Definition, boundaries & contents	Applied anatomy		1
(iii)	Hand	Flexor retinaculum, Palmar aponeurosis	Other flexors & extensor muscles		1
(d)	Angiology				
	Blood vessels of the upper	Origin, parts, course, relations, branches/ tributaries & applied	Origin, parts, course, relations, branches/	Anastomosis around the elbow,	2

	extremity	anatomy of Axillary, Brachial, Radial & Ulnar artery, Cephalic & Median Cubital vein	tributaries & applied anatomy of Profunda brachii artery, Superficial, deep palmar arch & Basilic vein	shoulder & Lymphatic drainage of upper limb	
(e)	Neurology				
	Brachial plexus	Formation & branches	Relations & applied anatomy	Variations	4
	Nerves of the upper extremity	Origin, root value, course, branches, distribution, applied anatomy of Median, Ulnar & Radial nerve	Origin, root value, course, branches, distribution, applied anatomy of Axillary & musculocutaneous nerve		
(f)	Splanchnology				
	Mammary gland	Gross anatomy, structure blood supply & lymphatic drainage	Applied anatomy		1
(g)	Radiographic anatomy: Introduction to the study of X-Ray, CT & MRI of the Upper Extremity				1
(h)	Surface anatomy and Applied anatomy (Clinical significance) of each of the topic shall be covered without undue importance to minute & less significant anatomical details.				

3.5. Lower Extremity- 20 Hours

Sl. No.	Topics	Component			Hours Allotted
		Must Know	Desirable To Know	Nice To Know	
(a)	Osteology				
	Bones of the lower extremity	General features of Hip bone, Femur, Patella, Tibia & Fibula	Articulated foot & Applied anatomy	Ossification & muscle attachments	5
(b)	Syndesmology				
	Hip, Knee & Ankle joint	Articulation, ligaments & muscles responsible for movement	Applied anatomy	Subtalar joint	3
	Arches of the foot	Types & formation	Applied anatomy		

(c)	Myology				
(i)	Muscles of lower extremity	Origin, insertion, nerve supply & action of Gluteus maximus, Quadriceps femoris, Sartorius, Adductor magnus, Hamstring muscles, Tibialis anterior & Calf muscles	Origin, insertion, nerve supply & action of Gluteus medius, minimus & Tensor fascia latae	Adductor, Peroneal muscles & Muscles of the sole of the foot	2
(ii)	Femoral triangle, Adductor canal & Popliteal fossa	Definition, boundaries & contents	Applied anatomy		1
(iii)	Thigh, Ankle & foot	Fascia lata & modifications Plantar aponeurosis	Applied anatomy Extensor, perineal & flexor retinacula		1
(d)	Angiology				
	Blood vessels of the lower extremity	Origin, parts, course, relations, branches/ tributaries & applied anatomy of Femoral, Popliteal, Posterior Tibial & Dorsalis pedis artery, Great saphenous, short saphenous vein & Popliteal vein	Origin, parts, course, relations, branches/ tributaries & applied anatomy of Profunda femoris, Anterior Tibial, Obturator artery & Plantar arch	Lymphatic drainage of lower limb	2
(e)	Neurology				
(i)	Lumbar & Sacral plexus	Formation & branches	Relations & applied anatomy		2
(ii)	Nerves of the lower extremity	Origin, root value, course, branches, distribution & applied anatomy of Femoral, Sciatic & Common peroneal nerve	Origin, root value, course, branches, distribution & applied anatomy of Obturator & Tibial nerve		3
(f)	Radiographic anatomy: Introduction to the study of X-Ray, CT & MRI				1

	of the Lower Extremity	
(g)	Surface anatomy and Applied anatomy (Clinical significance) of each of the topic shall be covered without undue importance to minute & less significant anatomical details.	

4. Special Senses- 5 Hours

Sl. No.	Topics	Component			Hours Allotted
		Must Know	Desirable To Know	Nice To Know	
(a)	Ear	Parts of the ear & ear ossicles	Mastoid antrum, Eustachian tube & Applied anatomy		3
(b)	Eye	Coats of the eye & chambers of the eye	Optic pathway & Applied anatomy		2

5. Histology (Microanatomy) - 15 Hours

Sl. No.	Topics	Component			Hours Allotted
		Must Know	Desirable To Know	Nice To Know	
(a)	Epithelial tissue	Definition & Classification	Area of distribution	Urothelium	1
(b)	Connective tissue	Types of Connective tissue, Bone & Cartilage	General Connective tissue & Adipose tissue		1
(c)	Muscle tissue	Skeletal & Cardiac muscle	Smooth muscle		1
(d)	Blood vessels	Artery and vein			1
(e)	Glands	Serous, Mucous & Mixed			1
(f)	Lymphoid tissue	Lymph node & Spleen	Thymus & Tonsil		1
(g)	Skin	Thin & thick Skin			1
(h)	Respiratory system	Trachea & Lung			1
(i)	Digestive	Basic structure of GIT,			1

	system	Liver & Gall bladder			
(j)	Urinary system	Kidney			1
(k)	Male reproductive system	Testis & Prostate			1
(l)	Female reproductive system	Ovary & Uterus			1
(m)	Endocrine glands	Thyroid, Pancreas & Suprarenal gland			1
(n)	Central Nervous System	Cerebrum & Cerebellum			1
(o)	Embryonic tissue	Placenta & Umbilical cord			1

B. PRACTICAL- 275 HOURS

Dissection of whole body, demonstration of dissected parts. Identification of histological slides related to tissues and organs. Students shall maintain practical or clinical journal and dissection cards.

1. Upper Extremity- 38 Hours

Sl. No.	Topics	Component			Hours Allotted
		Must Know	Desirable To Know	Nice To Know	
(a)	Introduction	Parts & muscular compartments	Dermatomes		2
(b)	Osteology				
	Demonstration of the bones of the upper limb	Anatomical position, Parts & features	Joints formed		8
(c)	Surface anatomy				
	Demonstration & palpation	Surface land marks in upper extremity & back	Anatomical snuffbox (boundaries)	Triangle of auscultation & Lumbar triangle of Petit	2
	Surface marking of the	Axillary, Brachial, Radial & Ulnar			

	main blood vessels & nerves	arteries, Median, Ulnar, Radial & Axillary nerves			
	Palpation of blood Vessels	Axillary, Brachial & Radial arteries		Palpation of Axillary group of lymph nodes	
(d)	Dissection including Syndesmology				
	Dissection, demonstration of functional compartments in Arm, Fore arm, Hand & Back	Skin, superficial fascia, deep fascia, muscles, blood vessels & nerves of the compartment	Inter-muscular spaces & modifications of deep fascia: Palmar aponeurosis, Retinacula & Spaces of hand		24
	Dissection, demonstration of articulating surfaces & movements of joints	Shoulder joint, Elbow joint, Radioulnar joints & Wrist joint		1 st Carpo-metacarpal joint, MP & IP joints	
(e)	Radiographic anatomy: Demonstration of X-Ray, CT & MRI of the Upper Extremity.				2

2. Lower Extremity- 40 Hours

Sl. No.	Topics	Component			Hours Allotted
		Must Know	Desirable To Know	Nice To Know	
(a)	Introduction	Parts & muscular compartments	Dermatomes		2
(b)	Osteology				
	Demonstration of the bones of the lower limb	Anatomical position, Parts & features	Joints formed		8
(c)	Surface anatomy				
	Demonstration & palpation	Surface land marks in lower extremity			2
	Surface	Femoral, Popliteal,			

	marking of the main blood vessels & nerves	Anterior & Posterior Tibial & Dorsalis pedis arteries, Sciatic, Tibial & Common peroneal nerves			
	Palpation of blood Vessels	Femoral, Popliteal, Posterior Tibial & Dorsalis pedis arteries		Palpation of Inguinal & Popliteal group of lymph nodes	
(d)	Dissection including Syndesmology				
	Dissection, demonstration of functional compartments in Thigh, Gluteal region, Leg & Foot	Skin, superficial fascia, deep fascia, muscles, blood vessels & nerves of the compartment	Modifications of deep fascia: Plantar aponeurosis, Retinacula & Layers of Sole		26
	Demonstration of articulating surfaces & movements of joints	Hip, Knee, Ankle & joints of Foot			
(e)	Radiographic anatomy: Demonstration of X-Ray, CT & MRI of the Lower Extremity.				2

3. Thorax- 35 Hours

Sl. No.	Topics	Component			Hours Allotted
		Must Know	Desirable To Know	Nice To Know	
(a)	Introduction	Walls, mediastinum & viscera	Dermatomes		2
(b)	Osteology				
	Demonstration of the bones of the thorax	Anatomical position, Parts & features	Joints formed		4
(c)	Surface anatomy				
	Demonstration	Surface land marks in			4

	& palpation	thorax			
	Surface marking of the main viscera	Pleura, Lungs & Heart	Arch of aorta & Superior venacava	Thoracic duct	
(d)	Dissection including Syndesmology				
	Dissection, demonstration	Thoracic cavity, Pleura, Lungs, Mediastinum, Heart & Pericardium,	Wall of the thorax, Structures in superior & posterior Mediastina		22
(e)	Radiographic anatomy: Demonstration of X-Ray, CT & MRI of the Thorax.				3

4. Abdomen & Pelvis- 54 Hours

Sl. No.	Topics	Component			Hours Allotted
		Must Know	Desirable To Know	Nice To Know	
(a)	Introduction	Anterior abdominal wall, abdominal & pelvic cavity & containing viscera	Dermatomes		2
(b)	Osteology				
	Demonstration of the bones of the abdomen & pelvis	Anatomical position, Parts & features	Joints formed		4
(c)	Surface anatomy				
	Demonstration & palpation	Quadrants of the abdominal cavity, surface land marks in Abdomen & Pelvis			4
	Surface marking of the main viscera	Stomach, Spleen, Liver & Gall bladder, Caecum, Appendix & Kidney	Pancreas & Duodenum	Abdominal aorta & Inferior venacava	
(d)	Dissection including Syndesmology				
	Dissection, demonstration	Walls of abdomen, Male & female external genitalia, Peritoneum, Liver,	Suprarenal glands & Perineum	Lumbosacral joint, Sacroiliac joint	42

		Stomach, Spleen, Pancreas, Duodenum, Small intestine, Large intestine, Kidney, Urinary bladder, Prostate gland, Uterus, Uterine tube & Ovary		&Sacro-coccygeal joint	
(e)	Radiographic anatomy: Demonstration of X-Ray, CT & MRI of the Abdomen & Pelvis.				2

5. Head, Neck, Brain & Bulbus oculi- 78 Hours

Sl. No.	Topics	Component			Hours Allotted
		Must Know	Desirable To Know	Nice To Know	
(a)	Introduction	Parts	Dermatomes		2
(b)	Osteology				
	Demonstration of the different views of the skull	Identification of the bones, foramina & features	Sutures	Fontenellae	16
	Mandible, Hyoid bone & Cervical vertebrae	Parts & features	Attachments		
(c)	Surface anatomy				
	Demonstration & palpation	Surface land marks in head & neck	External jugular vein		6
	Surface marking of the main blood vessels & glands	Common carotid artery, External carotid artery & Thyroid gland		Palpation of Cervical group of lymph nodes	
(d)	Dissection including Syndesmology				
	Dissection, demonstration	Scalp, temple & face Side of neck: Anterior & posterior triangles, Deep dissection of neck: Thyroid gland, Contents of carotid	Cranial cavity: Dural folds & venous sinuses, Orbit: contents of the orbit, Deep dissection		50

		sheath, Demonstration of sagittal section of mouth, tongue pharynx, larynx, Nose: Nasal septum & lateral wall, Ear & Eye ball, Brain & Spinal cord: Parts of the brain, sulci & gyri of the cerebral cortex	of face: Facial nerve, facial artery & Lacrimal apparatus, Parotid region, Temporal & infra temporal fossa: Muscles of Mastication & Maxillary artery, Submandibular region & Temporo-mandibular joint		
(e)	Radiographic anatomy: Demonstration of X-Ray, CT & MRI of the Head, Neck, Brain.				4

6. Histology & Embryology-30 Hours

Sl. No.	Topics	Component			Hours Allotted
		Must Know	Desirable To Know	Nice To Know	
(a)	Epithelial tissue	Definition & Classification	Area of distribution	Urothelium	2
(b)	Connective tissue	Types of Connective tissue, Bone & Cartilage	General Connective tissue & Adipose tissue		2
(c)	Muscle tissue	Skeletal & Cardiac muscle	Smooth muscle		2
(d)	Blood vessels	Artery and vein			2
(e)	Glands	Serous, Mucous & Mixed			2
(f)	Lymphoid organs	Lymph node & Spleen	Thymus & Tonsil		2
(g)	Skin	Thin & thick Skin			2
(h)	Respiratory system	Trachea & Lung			2

(i)	Digestive system	Basic structure of GIT, Liver & Gall bladder			2
(j)	Urinary system	Kidney			2
(k)	Male Reproductive system	Testis & Prostate			2
(l)	Female Reproductive system	Ovary & Uterus			2
(m)	Endocrine glands	Thyroid, Pancreas & Suprarenal gland			2
(n)	Nervous tissue	Cerebrum & Cerebellum			2
(o)	Embryonic tissue	Placenta & Umbilical cord			2

C. EXAMINATION:

1. **Theory:** The written papers in Anatomy shall be two papers,

TYPES OF QUESTIONS WITH MARKS-

Type of Questions	Marks per Question	No. of Questions	Total
Long Essays (LE)	10	02	20
Short Essays (SE)	05	10	50
Short Answers (SA)	03	10	30
Total		22	MAXIMUM MARKS- 100

The distribution of chapter wise marks in written paper may be as follows*:

1.1 Paper-I (Max. Marks- 100)

Blue Print of Question Paper- I						
Sl. No.	Topic	Hours Allotted	Long Essay 10 Marks	Short Essay 5 Marks	Short Answer 3 Marks	Weightage of Marks
1	General Anatomy	15	-	3	2	21

2	Head, Neck & Face	35	1	3	2	31
3	Brain & Special senses	20	-	1	3	14
4	Upper Extremity	20	1	2	1	23
5	Embryology	15	-	1	2	11

1.2 Paper- II (Max. Marks- 100)

Blue Print of Question Paper- II						
Sl. No.	Topic	Hours Allotted	Long Essay 10 Marks	Short Essay 5 Marks	Short Answer 3 Marks	Weightage of Marks
1	Thorax	20	1	1	2	21
2	Abdomen	23	1	3	2	31
3	Pelvis	17	-	2	2	16
4	Lower Extremity	20	-	3	2	21
5	Histology	15	-	1	2	11

*- 80 % of the questions shall be from the Must Know area and 20 % shall be from the Desirable to Know area of the Curriculum.

LAYOUT OF ANATOMY QUESTION PAPER - I

Type of Question	Question No.	Topics
Long Essay 10 Marks	1	Head, Neck & Face
	2	Upper Extremity
Short Essay 5 Marks	3	Gen. Anatomy
	4	
	5	
	6	Brain & Special senses
	7	Embryology
	8	Head, Neck & Face
	9	
	10	
	11	Upper Extremity
	12	

Short Answer 3 Marks	13	Gen. Anatomy
	14	
	15	Brain & Special senses
	16	
	17	
	18	Embryology
	19	
	20	Head, Neck & Face
	21	
	22	Upper Extremity

LAYOUT OF ANATOMY QUESTION PAPER - II

Type of Question	Question No.	Topics
Long Essay 10 Marks	1	Thorax
	2	Abdomen
Short Essay 5 Marks	3	Pelvis
	4	
	5	Lower Extremity
	6	
	7	
	8	Histology
	9	Thorax
	10	Abdomen
	11	
	12	
Short Answer 3 Marks	13	Pelvis
	14	
	15	Lower Extremity
	16	
	17	Histology
	18	
	19	Thorax
	20	

	21	Abdomen
	22	

2. Practical including Viva voce or oral examination includes the following:

Distribution of marks

Maximum marks: **200 Marks**

1. Knowledge of dissected parts- 20
marks
 2 Specimens (1 above & 1 below Diaphragm) as mentioned in the Annexure- I
 Draw & label- 2 X 5 Marks = 10 Marks
 Discussion on any one- 10 Marks
2. Viscera- 20
marks
 2 Specimens (1 above & 1 below Diaphragm) as mentioned in the Annexure- I
 Draw & label- 2 X 5 Marks = 10 Marks
 Discussion on any one- 10 Marks
3. Bones- 20
marks
 2 Specimens (1 above & 1 below Diaphragm) as mentioned in the Annexure-I
 Draw & label- 2 X 5 Marks = 10 Marks
 Discussion on any one- 10 Marks
4. Surface Anatomy (Procedural skill & Discussion)
10 marks
5. Spotting 20
marks
 1 X-Ray, 2 Histology slides & 1 Embryology model or chart as mentioned in the Annexure- I
 Identification- 1 Mark
 Anatomical significance- 4 Marks
6. Maintenance of Practical record (Journal) & Dissection card 10
marks
7. Viva voce (Oral) (100 marks)
 General Anatomy, Embryology, Histology, Radiographic Anatomy
 20 marks

Head, Neck, Face, Brain & Special senses
20 marks

Thorax
20 marks

Abdomen & Pelvis
marks 20

Upper & Lower Extremity
marks 20

MARKS DISTRIBUTION-

Subject	Theory		Practical & Oral				Grand Total	
	Max. Marks	Pass Marks	Max. Practical Marks	Max. Oral Marks	Total Practical & Oral	Pass Marks	Max. Marks	Pass Marks
Anatomy	200	100	100	100	200	100	400	200

List of recommended books –

Basic Books

- Garg K, (2013). *B.D. Chaurasia's Human Anatomy Regional & Applied, Dissection & Clinical. Upper limb & Thorax*. Ed. 6. CBS Publishers & Distributors Pvt Ltd, New Delhi.
- Garg K, (2013). *B.D. Chaurasia's Human Anatomy Regional & Applied, Dissection & Clinical. Lower limb & Abdomen*. Ed. 6. CBS Publishers & Distributors Pvt Ltd, New Delhi
- Garg K, (2013). *B.D. Chaurasia's Human Anatomy Regional & Applied, Dissection & Clinical. Head, Neck & Brain*. Ed. 6. CBS Publishers & Distributors Pvt Ltd, New Delhi
- Singh V. (2008). *General Anatomy*. Ed. 2. Elsevier; New Delhi
- Garg K, Indira Bahl, MohiniKaul. (2014) *Textbook of Histology*. Ed. 5. CBS Publishers & Distributors Pvt Ltd, New Delhi
- Halim A. (2011) *Surface and Radiological Anatomy*. Ed. 3. CBS Publishers & Distributors Pvt Ltd, New Delhi
- Khurana A, Khurana I, Garg K (2014). *B.D. Chaurasia's Dream Human Embryology*, Ed. 2 (Reprint). CBS Publishers & Distributors Pvt Ltd, New Delhi
- Loukas M, Benninger B, Tubbs R S. (2013) *Gray's Clinical Photographic Dissector of Human Body*. Elsevier; Philadelphia
- Romanes G J. (1986) *Cunningham's Manual of Practical Anatomy. Upper & Lower limb*. Ed. 15. Oxford Medical Publisher; Oxford
- Romanes G J. (1986) *Cunningham's Manual of Practical Anatomy. Abdomen & Pelvis*. Ed. 15. Oxford Medical Publisher; Oxford
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Annexure- I

List of structures topic wise to be kept for Practical Examination-

1. Knowledge of dissected parts-

Above Diaphragm	Below Diaphragm
Upper Extremity- Axilla & Cubital fossa	Lower Extremity- Femoral triangle, Adductor canal & Popliteal fossa
Thorax- Para sagittal section of Heart & Mediastinum	
Head, Neck, Brain & Bulbus oculi- Cranial fossae, Anterior & posterior Triangle of Neck & Sagittal section of Brain	Abdomen & Pelvis- Sagittal section of Male & Female Pelvis

2. Viscera-

Above Diaphragm	Below Diaphragm
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Thorax- Lungs, Heart, Trachea & Oesophagus	Abdomen & Pelvis- Stomach, Small intestine, Large intestine with vermiform Appendix, Spleen, Liver, Gall bladder, Pancreas, Kidney, Urinary bladder, Prostate, Uterus & Ovary
Head, Neck, Brain & Bulbus oculi- Brain, Thyroid gland, Parotid gland & Tongue	

3. Bones-

Above Diaphragm	Below Diaphragm
Upper Extremity- Clavicle, Scapula, Humerus, Radius & Ulna	Lower Extremity- Hip bone, Femur, Patella, Tibia & Fibula
Thorax- Sternum, Typical ribs & Typical thoracic vertebrae	Abdomen & Pelvis- Lumbar vertebrae, Sacrum, Male & Female pelvis
Head, Neck, Brain & Bulbus oculi- Skull, Mandible & Typical Cervical vertebrae	-

4. Surface Anatomy-

Above Diaphragm	Below Diaphragm
Upper Extremity- Surface land marks, Axillary, Brachial, Radial & Ulnar arteries, Median, Ulnar, Radial & Axillary nerves	Lower Extremity- Surface land marks, Femoral, Popliteal, Anterior & Posterior Tibial & Dorsalis pedis arteries, Sciatic, Tibial & Common peroneal nerves
Thorax- Surface land marks, Pleura, Lungs & Heart	Abdomen & Pelvis- Surface land marks in Abdomen & Pelvis, Quadrants of the abdominal cavity, Stomach, Spleen, Liver, Caecum, Appendix & Kidney
Head, Neck, Brain & Bulbus oculi- Surface land marks, Common carotid artery, External carotid artery & Thyroid gland	

5. Spotting-

Radiographic Anatomy	Histology	Embryology
Upper Extremity- X-Ray of Shoulder region including Clavicle & Humerus- AP view, Elbow including Radius &	Simple & stratified Epithelium, Bone, Cartilage, Skeletal muscle, Cardiac muscle, Artery, Vein, Serous gland, Mucous gland, Mixed	Models/ Charts of Development of Ovarian follicle, Fertilized Ovum, Spermatogenesis, Cell to Embryo (Blastula, Gastrula,

<p>Ulna- AP view, Wrist & Hand- AP view.</p> <p>Thorax- X-Ray of Chest- PA, AP, Lateral & Oblique view, Thoracic spine- AP & Lateral view.</p> <p>Head, Neck, Brain & Bulbus oculi- X-Ray of Skull- AP, Lateral & PA view, Cervical spine- AP & Lateral view.</p> <p>Lower Extremity- X-Ray of Hip with Femur- AP view, Knee- AP & lateral view, Ankle with Tibia & Fibula- AP & lateral view.</p> <p>Abdomen & Pelvis- X-Ray of Plain Abdomen- AP view, Pelvis- AP view, Lumbosacral spine- AP & Lateral view.</p>	<p>gland, Lymph node, Spleen, Thin skin, Thick skin, Trachea, Lung, Oesophagus, Stomach, Small Intestine, Large Intestine, Liver, Gall bladder, Kidney, Testis, Prostate, Ovary, Uterus, Thyroid gland, Pancreas, Suprarenal gland, Cerebrum, Cerebellum, Placenta, Umbilical cord.</p>	<p>Morula, Blastocyst), Formation of Notochord, Amnion, Chorion & Chromosomes.</p>
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2) PHYSIOLOGY INCLUDING BIOCHEMISTRY

Introduction

The purpose of a course in physiology is to teach the functions, processes and inter-relationship of the different organs and systems of the normal disturbance in disease and equip the student with normal standards of reference for use while diagnosing and treating deviations from the normal.

To a homoeopath the human organism is an integrated whole of body life and mind and though life includes all the chemico-physical processes it transcends them. There can be no symptoms of disease without vital force animating the human organism and it is primarily the vital force which is deranged in disease.

Physiology shall be taught from the stand point of describing physical processes underlying them in health. There should be close cooperation between the various departments while teaching different systems. There should be joint courses between the two departments of anatomy and physiology so that there is maximum coordination in the teaching of these subjects.

Seminars should be arranged periodically and lecturers of anatomy, physiology and biochemistry should bring home the point to the students that the integrated approach is more meaningful.

Objectives -

Knowledge

At the end of the course the student will be able to:

- Explain the normal functioning of all the organ systems of the body and their interactions.
- Narrate the contribution of each organ system to the maintenance of homeostasis.
- Elucidate the physiological aspects of normal growth and development.
- Describe the physiological response and adaptations to environmental stresses.
- List the physiological principles underlying pathogenesis and treatment of disease.
- Describe the basic and clinical aspects of enzymology and regulation of enzymatic activity;
- Explain the process of digestion and assimilation of nutrients and consequences of malnutrition;
- Discuss the integration of various aspects of metabolism, and their regulatory pathways;

Skills

At the end of the course the student will be able to:

- Perform experiments designed either primarily for the study of physiological phenomena or for assessment of function.
- Analyse and interpret experimental/investigative data critically.
- Distinguish between normal and abnormal data derived as a result of tests which he/she has performed and observed in the laboratory.
- Make use of conventional techniques/ instruments to perform biochemical analysis relevant to clinical screening and diagnosis, analyse and interpret investigative data

Distribution of teaching – learning hours

Theory:

Physiology	:	150 hrs.
Biochemistry	:	50 hrs
Total	:	200hrs

Practical:

Physiology	:	150 hrs.
Biochemistry	:	50 hrs
Total	:	200 hrs.

<u>Tutorial including Group discussion, Seminar</u>	:	<u>75 hrs</u>
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<u>TOTAL</u>	:	<u>475 hrs.</u>
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Distribution of Contents:

Sl.No	Topic	Timing	Must Know	Desirable to Know	Nice to Know
1	General Physiology and Biophysical science	5 HRS	Cell membrane composition, structure and its functions. Constituents of cytoplasm	The cell and its differentiation. Tissues and organs of the body	RNA and DNA with its significance
			<p>Types of transport across cell membrane.</p> <p>Transport mechanisms as passive and active and difference between them.</p> <p>List and description of the passive transport processes. Simple diffusion of respiratory gases through lipid film.</p> <p>Proton pumps , Secondary active transport: sodium-glucose co-transport (SGLT), sodium amino acid co-transport, sodium-hydrogen exchangers (NHE), sodium-calcium exchangers (NCX), Na/2Cl/K symport (NKCC)</p> <p>Endocytosis- its types & mechanism</p>	Primary active transport sodium-potassium pump, calcium pumps - plasma membrane calcium pumps (PMCA) and Sarco/endoplasmic reticulum calcium pumps (SERCA) and its significance	Diffusion of ions through ion channels. Sodium, potassium, calcium and chloride channels. Regulation of protein channels - Non-gated channels, voltage-gated channels, ligand-gated channels and mechanogated channels Facilitated diffusion - Glucose transporters (GluTs) Differences between channel and carrier-mediated transport processes, State Fick's

				law of diffusion
			<p>Homoeostasis - concept and maintenance of internal environment</p> <p>Regulation of Acid base balance by buffer system (in kidneys & lungs)</p> <p>Maintenance of acid base balance in Blood</p> <p>'Anion gap' and its physiological significance</p>	<p>Volatile & Non volatile acids, metabolic acidosis & alkalosis</p>
			<p>Different body fluid compartments, composition, tissue fluids, measurements of different body fluids, measurement of water balance, ECF & ICF volume & values</p>	<p>Dehydration and replacement of body fluid loss</p> <p>Describe edema and its causes in terms of Starling's forces*</p> <p>Difference between tonicity and osmolarity**</p> <p>Starling's forces that govern fluid exchange across the membranes separating the various compartments**</p>
				<p>Biophysical processes – filtration, adsorption, osmosis, osmotic pressure, hydrotrophy, colloid,</p> <p>Donnan equilibrium, surface tension, absorption and assimilation,</p>
	Blood	16	<p>Composition, and functions of blood</p> <p>Plasma proteins –</p>	<p>Significance of Albumin to Globulin ratio</p> <p>Acute Phase Proteins</p> <p>Serum</p>

2		<p>classification, properties and function, values, methods of separation</p> <p>Plasmapheresis & its clinical significance</p>	<p>Difference between plasma & serum</p>	<p>Albumin levels with specific examples of disease conditions, Causes of oedema in Kwashiorkor , Liver failure, glomerulonephritis and filariasis in relation to albumin</p>
		<p>RBC – morphology, variations, functions, erythropoiesis- definition, site, stem cells, stages with diagram and factors influencing, life span and fate of RBC's</p> <p>Conditions where RBC increase & decrease</p> <p>Role of Erythropoietin</p>	<p>physiological variations of the normal RBC count</p> <p>Difference between reticulocyte & erythrocyte</p> <p>Reticulocyte count and its significance*</p> <p>Erythrocyte sedimentation rate-its values , variations & significance</p> <p>4. Polycythemia</p> <p>Define Polycythemia rubra vera, Types of Polycythemia , relative polycythemia</p>	<p>sites of erythropoiesis with age</p> <p>RBC in Malaria</p> <p>Extrinsic & Intrinsic factors in formation of RBC</p> <p>Packed cell volume (Haematocrit value)</p> <p>(RBC indices)* - MCV, MCH, MCHC, Color index*</p> <p>Effects of polycythemia</p>

	Hemoglobin – synthesis, types, derivatives, fate and iron metabolism	3 Reduced hemoglobin* and carbon monoxide poisoning*, Methaemoglobin* Applied physiology - cyanosis*. Abnormal hemoglobins. r ole of Hb in gas transport Haemolysis and Fragility of Red blood cells	sickle cell anemia & Thalassemia iron overload role of phototherapy in treating infants with jaundice due to hemolysis cyanosis. jaundice
	4. Anaemia Define anemia Classify anemia based on etiology and morphology, major symptoms and signs		
	WBC – classification and morphology and functions of neutrophils, eosinophils, basophils, mast cells; Lymphocytes , monocytes Leucopoiesis	Differential count Conditions in which total leucocyte counts is increased or decreased, each type of WBC are increased or decreased	Arneth count & its significance Diapedesis and opsonisation
	RES	Classification Functions	Tissue macrophages
	Immunity –definition, classification, mechanism Immunization & its types	T and B cells – its types immunoglobuli	Cytokines & types Define

			ns & their mechanism and state their functions humoral immunity Antigens and its mechanism in maintenance of immunity	Allergy
		Platelets – structure, life span, values	Properties, functions & formation of platelets	causes and effects of thrombocytopenia. Dengue Fever Role of platelets in hemostasis
		Hemostasis- definition and stages and coagulation of blood – clotting factors, intrinsic and extrinsic mechanism and anticoagulants, procoagulants	Anti coagulants anticoagulating and fibrinolytic mechanisms in the body Prothrombin Time Bleeding time Clotting time Bleeding disorders Role of calcium in coagulation	Clot and its retraction Thrombosis and Embolism Vitamin-k Von willebrand's disease Plasmin
		Blood volume Measurement Regulation	Variations	Hyper and hypovolemia
		Blood groups Blood transfusion – indication, types, modes and	Erythroblastosis Fetalis, state preventive	minor blood group systems

			hazards Rh system of blood grouping, Rh incompatibility	measure and treatment for the same. Blood banking	
			Spleen	functions	Splenomegal y
			Lymphatic system and lymph Lymphatic circulation	formation and composition of lymph functions of lymph and lymph nodes	pathophysiol ogy of lymphedema
3	Cardiovasc ular system	20 HRS	1. Physiological anatomy with respect to its chambers, valves, input and output vessels, AV ring and electrical discontinuity, Conducting system, Coronary supply	Difference between systemic and pulmonary circulation	Junctional tissues Pacemaker Functions of syncitium of heart
			2.Properties of cardiac muscle including conductive system of heart	Starling's law & its importance	Action potential of cardiac muscle Refractory period Difference between cardiac and skeletal muscles
			Cardiac cycle – definition, time duration, phases, volume and pressure changes in atria, ventricles, aorta, pulmonary artery and jugular vein. and	End diastolic volume, end systolic volume, ejection fraction.	3 Arrythmias – types Fibrillation and flutter Current of injury Effects of changes in

		electrolyte concentration on heart
Heart sounds-types	Normal character, causes	. Abnormal heart sounds -Cardiac Murmur
4. ECG – definition, recording, leads, waves, segments, intervals and significance and vector analysis	Clinical uses of ECG	Calculate rate from a normal ECG tracing
5. cardiac output – definition, values determination of COP, factors influencing, variations, Fick’s principle	Heart Block-types	Cardiac catheterisation
6. Arterial blood pressure-def, variations, factors, the short-term (neural and hormonal) and long term (renal) mechanisms regulating blood pressure	Measurement of blood pressure Hypertension hypotension	venous and capillary pressure Role of renin Korotkoff’s sounds
8. Heart rate - Regulation Reflexes(Marey’s, Bain-Bridge reflex)	Tachycardia bradycardia	
Pulse-types	Abnormal pulse	

			9.Regional circulation	Coronary Cerebral Renal circulation Pulmonary Splanchnic Cutaneous circulation Fetal circulation	Cushing reflex
			Cardiovascular adjustment during exercise	the effects of exercise on the cardiovascular system, mild to moderate and high intensity exercise on the blood pressure and heart rate in a normal subject haemorrhage- types & shock – Stages, Manifestations,	Definition of Angina, Ischemia and Myocardial infarction or heart attack. The major ECG changes in: Myocardial ischemia; Myocardial infarction**
			Hemodynamics	Types of blood flow Factors maintaining volume of blood flow Wind kessel effect	Velocity of blood flow- def, factors maintaining Circulation time- def and condition altering it Theories of autoregulation
			Respiratory system	16 HRS	Functional Anatomy and functions of respiratory

			<p>system.*- the parts of the respiratory tract, the functions of nose and Paranasal sinuses</p> <p>Difference between conducting zone and respiratory zone</p> <p>The structure of alveolus & alveolar capillary membrane</p> <p>Non-Respiratory functions of lung* physiological mechanism of protective reflexes -cough, sneeze and gag reflexes*</p> <p>The Normal Respiratory Rate</p>	
		<p>Pulmonary circulation: Characteristic features, measurement and regulation of pulmonary blood flow</p>		<p>Normal rate of pulmonary blood flow & normal range of pulmonary blood pressures,</p>

			special features of pulmonary circulation, pulmonary veins, pulmonary vascular resistance, its response to hypoxia (hypoxic vasoconstriction in pulmonary circulation)
		<p>Mechanics of Respiration:</p> <p>Recoil Of Lungs And Chest Wall</p> <p>The Changes In Alveolar And Intra Pleural Pressures During Respiration</p> <p>Lung Compliance And its Relation To Clinical Conditions In Which It Is Altered</p> <p>Work of breathing – utilization of energy</p>	<p>Define Inspiration & Expiration*</p> <p>The Movements Of Chest Wall And The Changes In Chest Wall dimensions produced By Respiratory Muscles*</p> <p>The Values Of Intra Alveolar Pressure, Intra Pleural Pressure*</p>
		<p>Pulmonary Function Tests:</p> <p>Lung volumes and capacities: the normal values and their physiological variations</p>	<p>The Muscles Of Inspiration, Expiration & Accessory Muscles Of Respiration</p> <p>Clinical Conditions In Which Work Of Breathing Is increased**</p> <p>Respiratory distress syndrome**</p> <p>Respiratory cycle and transpulmonary pressure</p>
			<p>The Sites Of Air Way Resistance In Obstructive</p>

			<p>normal subject using a spirometer Discuss the physiological significance of the Residual volume & functional residual capacity with its methods of measurement</p> <p>Peak expiratory flow & state its normal value*</p>	<p>Lung Diseases**.</p> <p>The forced expiratory spirogram and FEV1, FVC and the FEV1/FVC ratio and its variations in obstructive and restrictive lung diseases.**</p> <p>Interpretion of altered values of absolute lung volumes, peak expiratory flow and FEV1/FVC ratio in restrictive and obstructive lung diseases**</p>
		<p>Ventilation – types, measurement</p>	<p>Define minute ventilation, Dead space- types & its measurement *</p> <p>Regional differences in perfusion, ventilation & V/Q ratio in the lungs*</p>	<p>effect of breathing through a tube** (increased anatomical dead space) Alveolar air, inspired air, Expired air.</p>

			<p>Gas Exchange*- normal composition of atmospheric, tracheal and alveolar air*, the normal partial pressures of gases in blood entering and leaving lung oxygen uptake and carbon-dioxide elimination by lungs and the normal rates , respiratory exchange ratio and state its normal value, State the physiological causes for normal alveolar- arterial oxygen difference, Discuss gas exchange during exercise*. Fick's law of diffusion</p>	<p>Respiratory quotient**</p>
		<p>Transport of oxygen - forms of oxygen transport in blood hemoglobin's affinity for oxygen oxygen-hemoglobin dissociation curve and the</p>	<p>Bohr effect*</p>	<p>oxygen diffusion affection in cases of respiratory membrane</p>

		<p>factors affecting it and the physiological advantages of the curve</p> <p>oxygen carrying capacity of blood</p> <p>oxygen content of blood & % oxygen saturation of hemoglobin hypoxemia and hypoxia</p> <p>Transport of Carbon dioxide: forms of carbon dioxide transport in blood Explain the role of chloride shift and Haldane effect</p>		thickening**.
		<p>Control of Respiration: location and functions of the respiratory centres in brain; chemical control of respiration; the role of peripheral and central chemoreceptors; the feedback control of ventilation to regulate gas exchange & maintain normal levels of arterial blood gases and pH.</p>		
		<p>Disturbances of respiration: hypercapnoea and hypocapnoea , asphyxia</p>	<p>The physiological basis of types of hypoxia with examples*</p> <p>cyanosis and conditions in which it occurs and may not occur*</p> <p>physiological basis of oxygen therapy as treatment for</p>	<p>Biot's breathing**</p> <p>Kussmauls breathing**</p> <p>Oxygen toxicity**</p>

				<p>the different types of hypoxias*</p> <p>Cheyne-stokes breathing, its causes*.the effect of apnoea & hyperventilation on respiration; and the effect of speech & cough on respiration*.</p>	
			<p>Effects Of Exercise - effects of exercise on the respiratory system and the physiological basis of these effects</p> <p>oxygen debt</p>		
			<p>Physiological adaptations in special environments - physiological effects of zero gravity , the physiological basis of Caisson's disease & Nitrogen narcosis , ,physiological adaptations occurring at high altitude</p>		Artificial respiration-types **
5	Digestive system	12 HRS		<p>Physiological anatomy of GI tract and Accessory organs of Digestive system *</p> <p>Neural control of G.I function.</p> <p>* Location and components of the enteric</p>	

			<p>nervous system. The functions of the Myenteric plexus and Meissner's plexus Effect of the autonomic nervous system on the enteric nervous system</p>	
		Saliva: Composition, Functions, control of secretion.		<p>Xerostomia* * Conditioned salivary secretion**</p>
		Gastric juice: Composition, mechanism of secretion, functions, regulation of secretion, different phases of gastric secretion, Role of chief cells and parietal cells, experimental evidences	<p>mucosal barrier*, peptic ulcer*, Gastric glands and their cells</p>	<p>.Gastrectomy**, Dumping Syndrome**, gastric function tests (to be taught in Biochemistry) pernicious anemia and give the reason for the same**. Zollinger Ellison Syndrome Pepsin, Gastrin Intrinsic</p>

				factor Chyme
			Small intestine*: Properties, Composition & regulation of secretion and functions of intestinal juice.	Brunners glands
			Large intestine*: Functions and formation of faeces State the importance of dietary fiber	Megacolon Difference between constipation and diarrhea
			Movements of GI tract: Mastication*, deglutition*, gastric motility and emptying* - The process of mixing of food in the stomach, The factors influencing gastric motility and gastric emptying, intestinal peristalsis* - state the stimuli and factors which influence peristalsis 'segmentation	Pathophysiology of diarrheal disease** Gastro-esophageal reflux disorder(GERD)** , Achalasia** Act of belching** Gastro-colic reflex**

				contractions' and 'propulsive contractions' and their functions, mechanism of vomiting paralytic ileus, defecation	
			Pancreatic juice: Composition, properties, functions, regulation, applied physiology-pancreatitis		CCK-PZ, Secretin** Pancreatic function tests** Steatorrhea* *
			Liver & Gall Bladder: functions of liver The composition and functions of Bile Factors regulating bile secretion Function of Gall Bladder The process of Entero-hepatic circulation		
			G.I. Hormone - source; functions and regulation of secretion of Gastrin, Cholecystokinin and Secretin		
			Digestion & Absorption: Carbohydrates, Proteins And Lipids		
6	Renal physiology and skin	12 HRS	Functional anatomy of kidney and urinary tract, nephron-structure, parts, function, types, diagram, Juxtaglomerular apparatus-cells,		Surface area of Glomerular Capillaries**. Renin**

		<p>Functions of kidney(Excretory & non-excretory)</p>		
		<p>Glomerular filtration and renal blood flow -</p> <p>Describe the following factors affecting glomerular filtration, Pressures determining GFR</p> <p>the factors determining and regulating renal blood flow</p> <p>the mechanisms of autoregulation of renal blood flow and Glomerular filtration rate.</p> <p>the role of the Juxtaglomerular apparatus in the autoregulation of GFR and RBF (TG feedback) and the regulation of blood pressure via the Renin-AT-Aldosterone axis.(Functions of juxta glomerular apparatus)</p>		<p>Tm values**</p> <p>Splay**</p>
		<p>Formation of Urine -.</p> <p>Tubular functions: reabsorption, secretion, PCT: The reabsorption of sodium, chloride and water in the proximal tubule The important sodium transporters in PCT – sodium-glucose cotransporter (SGLT), sodiumaminoacid co-transporter and sodium-hydrogen exchanger (NHE) in the luminal border, sodium-potassium pump in the basolateral border.</p> <p>The mechanism of glomerulotubular balance</p>	<p>Types of thresholds*</p>	<p>The mechanism of action of Loop diuretics (Furosemide) as due to blockade of Na/2Cl/K transporter*</p> <p>The mechanism of diuretics action of thiazide and amiloride**</p>

The renal handling of glucose, bicarbonate and amino acids in the PCT
The role of Carbonic anhydrase, the sodium-hydrogen exchanger in luminal border, and the bicarbonate transporter in basolateral border in bicarbonate reabsorption in the PCT

Functioning of the Loop of Henle (LOH)

Permeability characteristics of the two limbs of loop of Henle.

The role of the Na/2Cl/K transporter and the sodium potassium pump in the thick ascending limb (TAL)

The function of the Function of LOH in the creation of hyperosmolar medullary interstitium (MI) by the following two mechanisms:

- i. Active transport of salt in TAL segment
- ii. Counter current multiplication of the active transport

The role of the vasa recta in maintaining the hyperosmolarity of the medullary interstitium by counter-current exchange

Functioning of the Distal Convoluted tubules (DCT):
The regulated reabsorption of sodium (aldosterone-dependent) via Epithelial sodium channels (ENaC) and

	<p>Na/Cl symporter in luminal border</p> <p>The regulated secretion of potassium (aldosterone-dependent) via potassium channels in Luminal border</p> <p>The generation of bicarbonate in the distal tubule,</p> <p>Phosphate and ammonia as urinary buffers</p> <p>Functioning of the Collecting duct (CD): The role of aquaporins in water absorption in the collecting duct.</p> <p>The role of ADH in regulated water absorption.</p> <p>The role of the hyperosmolarity of the medullary interstitium (created by the Loop of Henle) in producing a gradient for water reabsorption in the collecting duct. The role of ADH in urea absorption from the collecting duct, enhancing the hyperosmolarity of Medullary Interstitium.</p>	
	<p>Acidification of urine in Acid base balance - the different buffer systems in the body</p> <p>The role of the kidney in regulation of acid base balance</p> <p>Concentration of urine by different mechanisms</p>	<p>Discuss the features of hyperaldosteronism and the occurrence of metabolic alkalosis in the same**</p>
	<p>5. Renal function test,</p>	

			Abnormal Constituents Of Urine		
			6.Micturition – its nervous control	Cystometrogram*-recording of intravesical pressure	Higher center regulation of micturition* * Abnormalities of micturition* *
				Dialysis-Types* Mechanism of artificial kidney*	
				Renal failure-Types & abnormalities	
			Skin- Structure, diagram and functions	Glands of skin* Sebum & its composition*	Triple response** Piloerection**
			8.Body temperature and regulation of body temperature – its mechanism,factors		Types of sweating** Fever- its classification ,signs & symptoms** Heat stroke**
7	Endocrinology	16 HRS		General organization of endocrine glands & control system Define a	

			<p>hormone Classification and list the hormones based on chemical nature the target organs for each hormone The General mechanism of negative and positive feedback regulation of hormone release The General mechanism of action of hormones including their receptors and second messengers</p>	
		<p>Hypothalamus : the relationship between hypothalamus and pituitary including the hypothalamohypophyseal tract and the hypothalamohypophyseal portal circulation List the various releasing and inhibiting hormones released by the hypothalamus</p>		
		<p>Pituitary Gland - List the various hormones secreted by the anterior and posterior pituitary.</p>		<p>List the causes and describe features of</p>

		<p>Growth hormone: List the important actions of growth hormone, its effects on growth and metabolism the regulation of growth hormone secretion</p> <p>List the important stimuli that can increase or decrease growth hormone secretion</p> <p>Abnormalities of growth hormone secretion: the physiological basis and important features of conditions resulting from abnormal secretion of growth hormone, like gigantism, acromegaly and pituitary dwarfism</p> <p>Prolactin: the actions of prolactin and regulation of prolactin secretion, List the features of excess Prolactin secretion</p> <p>Antidiuretic hormone (ADH) : List the important actions of ADH and Facultative water reabsorption List the physiological stimuli that regulate ADH secretion List the important factors that increase or decrease ADH secretion features of Diabetes Insipidus</p> <p>Oxytocin -List the important actions of oxytocin List the stimuli for its secretion , regulation of secretion of Oxytocin</p> <p>FSH& LH – Functions &</p>	<p>panhypopituitarism and syndrome of inappropriate hypersecretion of antidiuretic hormone (SIADH) **</p>
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		regulation of secretion		
		<p>Thyroid Gland -List the important steps involved in the synthesis of thyroid hormones, the transport of thyroid hormones</p> <p>The mechanism of action of thyroid hormones</p> <p>The important actions of thyroid hormones</p> <p>The regulation of thyroid hormone secretion</p> <p>List the causes for and the features of Hyposecretion and hypersecretion of thyroid hormones, The physiological basis for Simple Goitre, List the differences between dwarfism and cretinism</p> <p>the important thyroid function tests and its clinical use</p> <p>Calcitonin - Mention the gland and cells secreting Calcitonin</p> <p>List the actions of calcitonin on calcium metabolism</p>		
		<p>Parathyroid Gland - Mention the target cells of parathyroid hormone</p> <p>List the major actions of parathyroid hormone</p> <p>the regulation of secretion of parathyroid hormone</p> <p>List the causes of and features of hypoparathyroidism/tetany</p> <p>Differentiate between Tetanus and Tetany</p> <p>List the features of primary hyperparathyroidism</p> <p>List the causes for secondary</p>		

		<p>hyperparathyroidism</p> <p>Vitamin D- the sources of Vitamin D. the important actions of vitamin D. role as an immunomodulator. the regulation of vitamin D synthesis. List the features of vitamin D deficiency in children and in adults – Rickets and Osteomalacia</p> <p>Calcium Homeostasis - The normal level of serum calcium The role of bones and its cells in calcium homeostasis The organs and hormones involved in calcium homeostasis and their roles</p>		
		<p>Adrenal Gland Adrenal Cortex: List the hormones secreted by the different layers of the adrenal cortex</p> <p>Glucocorticoids: List the important glucocorticoids The mechanism of action of glucocorticoids List the major actions of glucocorticoids The regulation of glucocorticoid secretion List the causes of and the features of excess Glucocorticoid secretion</p> <p>Mineralocorticoids: List the important mineralocorticoids The mechanism of action of mineralocorticoids on its target cells The important actions of</p>		<p>Adrenaline effects on CNS & Blood pressure</p> <p>Adrenal sex hormones - Exogenous steroids **</p>

		<p>mineralocorticoids</p> <p>List the physiological stimuli that regulate mineralocorticoid secretion</p> <p>The regulation of mineralocorticoid secretion</p> <p>List the features of primary hyperaldosteronism or Conn's syndrome</p> <p>Adrenal insufficiency: List the causes of and describe features of Addison's disease</p> <p>Adrenal medulla: List the physiological effects of epinephrine and nor-epinephrine on various systems of the body</p> <p>List the factors that regulate the secretion of adrenal medullary hormones List the features of Phaeochromocytoma</p>	
		<p>Endocrine Pancreas: List the cells of the Islets of Langerhans and mention the hormone secreted by each</p> <p>Insulin: The steps in biosynthesis of Insulin and the origin of the C-peptide (Connecting peptide) The physiological stimulus for Insulin secretion</p> <p>The activation of islets by its physiological stimulus resulting in</p> <p>Insulin secretion</p> <p>List the target cells of Insulin and the cells that do not require insulin action for glucose uptake</p>	<p>Diabetes Mellitus: Insulin deficiency leading to high blood sugar level the pathophysiological effects of high blood sugar and insulin deficiency**</p> <p>Type I and Type II Diabetes Mellitus and their</p>

			<p>The mechanism of action of Insulin on its receptor</p> <p>List the important actions of insulin</p> <p>List the various factors that regulate insulin secretion</p> <p>Features of hypersecretion of Insulin and Hypoglycemia</p> <p>Glucagon : List the important actions of glucagon</p>		<p>complications **</p> <p>Hypoglycemia : List the feature of hypoglycemia and the counter regulatory hormones</p> <p>List the hormones that raise blood sugar level</p>
			<p>Atrial natriuretic peptide (ANP) List the important actions of ANP</p> <p>List the physiological stimuli for ANP secretion</p> <p>Mention the role of hypothalamus and melatonin on circadian rhythm</p>	<p>Pineal gland *</p> <p>Thymus gland*</p>	
8	Reproductive system	8 HRS	<p>1. Male reproductive system – testis and its hormones,</p>	<p>cryptorchidism *, male hypogonadism and hypergonadism *, Stages of spermatogenesis and its factors regulating them*</p> <p>Source, synthesis, metabolism and functions of androgen &</p>	<p>Serotoli cells*</p> <p>Infertility**</p>

			testosterone prostate gland and its functions* seminal vesicles and its functions*, semen- qualities, composition and ejection mechanism in fertilization*	
		Female reproductive system: ovary, oogenesis, ovulation, corpus luteum, ovarian hormones – oestrogen, progesterone, relaxin, its functions, control of ovarian functions by hypothalamic and pituitary hormones.	Menopause and changes*.	Fertility control-by different methods**
		Menstrual cycle: ovarian cycle, uterine cycle, hormonal basis	Pregnancy- changes, maintenance of pregnancy by hormones*: Fertilization, implantation, Placenta, placental hormones, parturition- role of hormones.*	Abnormaliti es of menstruatio n** Fetoplacenta l unit** HCG** Pregnancy tests**
			Lactation* Mechanism, hormonal regulation and the development of	Composition and advantages of breast milk**

				mammary glands	
				Fetal circulation*	
9	Central nervous system	25 HRS	Organization of nervous system, Classification of nervous system and the components of the following divisions: CNS, PNS Somatic NS, Autonomic NS Morphology of different types of neurons with structure, diagram, the process of myelination and its significance. Define the terms 'nuclei' and 'ganglia'.		
			Properties of Nerve fibres- Resting membrane potential (RMP) of a nerve cell. 'receptor or generator potential' in a sensory receptor 'Action potential' and the currents responsible for the different phases of the action potential in the neuron. Process of transmission of action potential in unmyelinated and myelinated neurons. Factors affecting conduction velocity in a nerve.		Nerve fibres: Classification Ehringer & Gasser's classification of peripheral nerve fibres** Node of Ranvier** Saltatory conduction*
			Nerve Injury, Degeneration And Regeneration Of Injured Fibres		
			Neuroglia-definition, classification and Properties	Basal ganglia: components, connections, functions, applied	

			Physiology*.	
		<p>Synapse – Definition,types,structure and functions. Define the terms electrical & chemical synapse Description of the morphological features of a chemical synapse – pre and post synaptic neurons ‘excitatory or inhibitory post-synaptic potentials (EPSP and IPSP)’ in a synapse List the morphological types of chemical synapse – axosomatic, axodendritic and axoaxonic and its properties</p>	<p>Properties of synapse*: One-way conduction Synaptic delay Convergence and Divergence of synapses Spatial summation Temporal summation Define the term synaptic spasticity Describe the differences between Pre-synaptic and post-synaptic inhibition. Define the term Pre-synaptic facilitation.</p>	<p>Bell-Magendie law** Synaptic fatigue**</p>
		<p>Receptors: classification,List the properties,Define generator potential or receptor potential,mechanism of sensory transduction</p>	<p>Neurotransmitters*–Definition, criteria for neuro transmission, Classification, Transport and release ,Important Nuero transmitters- o GABA o Glycine o Dopamine o Serotonin or 5-HT</p>	<p>Nueromodulators**</p>

		o Acetylcholine o Noradrenalin,	
	Reflex action: definition, reflex arc, Classification, Stretch reflex – definition, muscle spindle (details with innervation, role of gamma motor neurons) role of supra spinal control – in brief, functions of stretch reflex (regulation of muscle tone) inverse stretch reflex. Polysynaptic reflexes: withdrawal reflex.		Babinski sign** Clonus-types**
	Sensory system: touch, pain, temperature, vibration, sensory cortex		Gate control theory** Dermatome* * Leminnsci**
	Physiology of Pain: types, visceral pain, pain inhibiting mechanism, gating of pain, opioids, analgesia, hyperalgesia, thalamic syndrome		Referred pain**, Phantom limb pain**
	Tracts- Ascending and descending tracts – pyramidal & extrapyramidal tracts, details of each tracts – (situation & extent in spinal cord, origin, course & termination, collaterals, somatotopic arrangement, functions, applied aspect, tests) Define the term 'Sensory and Motor homunculus'. Sensation, pathway from	Spinal cord- white matter and grey matter with nuclei , Tabis dorsalis*, syringomyelia*, section of anterior root & posterior root.	Definiton – paralysis and describe the types (hemiplegia, paraplegia, monoplegia ,Hemiparesis , quadriparesis & paraparesis) **

	<p>head, face region.</p> <p>Description of the features and physiological basis of upper motor neuron lesion and lower motor neuron lesion, differences between UMN & LMN lesions.</p>	<p>Brown-Sequard syndrome**</p> <p>Multiple sclerosis**</p> <p>Disc prolapsed**</p>
	<p>Cerebral cortex Identify the major somatic and special sensory, motor & association areas in the cortex.</p> <p>Recognize the somatotopy of the motor and somatic sensory areas (homunculi)</p> <p>Recognize the phenomena of hemispheric specialization (dominance), handedness.</p> <p>Define the role of corpus callosum – inter-hemispheric transfer of information.</p>	<p>Hominuculus**</p> <p>Kaluvrbucy syndrome**</p>
	<p>Muscle tone, posture, equilibrium, regulation of muscle tone & posture, vestibular apparatus</p> <p>Proprioceptors</p>	<p>Golgi tendon reflex</p>
		<p>Cerebellum: structure, parts, connections, functions, cerebellar function tests.</p> <p>Features of cerebellar lesion**</p> <p>(Nystagmus Dysarthria Dysmetria Ataxia Adiadochokinesia)</p>
	<p>Limbic system- the</p>	<p>Papez</p>

	components of Limbic system, the Functions of the limbic system. The central role of amygdala		circuit**
	Autonomic nervous system: organization and functions		EEG** Blocks & Rythms**
	Hypothalamus: structure & functions		Narcolepsy,c atalepsy,circ adian rhythm Reward and punishment centres
	Thalamus, List the groups of thalamic nuclei. outline of connections of thalamus, function		Thalamic syndrome
	Physiology of sleep and wakefulness Sleep-types,theories and its mechanism.		Disorders of Sleep**
	Higher functions of the brain: learning & memory, speech-types Define the role of Wernicke's & Broca's areas in language & speech Define aphasia and state the site of lesion in motor and sensory aphasia		Alzheimers disease** Dementia** Retrograde amnesia** Aphasia**
	Define brain stem and its parts		Red nucleus
	Define reticular formation, functions, ascending reticular activating system		
	20. Cerebrospinal fluid- Definition, formation,		

			properties, composition, circulation, absorption and functions BBB and significance		
10	Special senses	10 HRS	<p>Vision :</p> <p>List Of The Structures Within The Eyeball.</p> <p>The Extraocular Muscles And their Functions.</p> <p>The Functions Of Iris, Ciliary Body, Intra-Ocular Muscles, Lens, Aqueous Humor, Vitreous Body And Optic Nerve. The Formation And Drainage Of Aqueous Humor.</p>	<p>Functions of lacrimal gland*, rhodopsin*</p> <p>The Normal Range Of Intraocular Pressure* , Glaucoma and its types*, Cataract and its symptoms*</p>	<p>Theories of colour vision & hearing</p> <p>**List the extraocular muscles and describe their actions**</p> <p>Nyctalopia**</p> <p>Blind spot**</p>
			<p>Optics of eye:</p> <p>List the structures through which light passes before falling on the retina the important refracting surfaces of the eye and the extent of contribution of each to image formation.</p> <p>State that the image formed on the retina is inverted and diminished in size.</p> <p>the role of crystalline lens in focusing the light rays and the changes that happen while focusing a near object – accommodation reflex</p> <p>List the common refractive errors – Myopia, hypermetropia, presbyopia and astigmatism</p> <p>Describe the cause for the refractive errors and their correction</p>		
			<p>Retina:</p> <p>List the retinal cells contributing to the visual pathway. (photoreceptors, bipolar cells and ganglion</p>		

		<p>cells)optic disc, macula lutea and fovea as important structural features in the retina</p> <p>Classification of photoreceptors – Rods and cones major structural and functional differences between rods and cones . Describe the distribution of rods and cones in the retina.</p> <p>Snellen’s chart</p> <p>Light & Dark adaptation - changes that happen during dark and light adaptation.</p>		
		<p>Colour vision:</p> <p>Name the types of photoreceptors responsible for colour vision, Classification of cones based on their spectral sensitivity List the types of colour blindness</p> <p>The use of Ishihara’s chart to check for colour blindness</p>		
		<p>Optic pathway:</p> <p>The optic pathway from the photoreceptors to the visual cortex and the visual field defects produced by lesions at various levels of the pathway</p>		
		<p>Pupillary reflexes: the pupillary light reflex pathway Difference between direct and consensual pupillary light reflexes, the accommodation reflex pathway</p> <p>List the features of Horner’s syndrome</p> <p>Argyll-Robertson pupil</p>		
		<p>Eye movements: Name of the cranial nerves innervating the extraocular muscles ,</p>		

			Assessment of normal eye-movements		
			Hearing : Functional anatomy of the ear, List different parts of the ear. Mention functions of outer ear Structure of middle ear & the role of middle ear in impedance matching List structures within the inner ear and specify their functions the importance of attenuation reflex	Sound Localization*, Pitch Discrimination*, Deafness*.	
			Structure and Functions of cochlea: the 'travelling wave theory' of hearing the function of basilar membrane in frequency discrimination - 'Place principle' of hearing Processing of auditory signals		
			Describe the auditory pathway		
			Assessment of hearing: Define an audiogram, conductive hearing loss and sensory neural hearing loss, the principle of Rinne's and Weber's test		
			Vestibular Apparatus: Functional anatomy of vestibular apparatus, List the structures which make up vestibular apparatus and their functions, Mechanism of stimulation vestibular hair cells: the mechanism of stimulation of otolith organs - deflection of hair cells using gravitational force/inertial force of otolith membrane the mechanism of stimulation of semicircular canals - deflection of hair cells using inertial force of		

			<p>endolymph</p> <p>Vestibular pathway: The connections of vestibular nucleus to the cortex and cerebellum</p> <p>The Projections Through Vestibulospinal Tracts</p> <p>The Functions Of Vestibular System - Maintenance Of Balance, Equilibrium And Posture</p>		
			<p>Smell: The arrangement of olfactory sensory neuron within the olfactory epithelium ,List the types of cells within the olfactory bulb</p> <p>The Connections Of Olfactory Sensory Neurons With Cells In The Olfactory Bulb,The Olfactory Pathway From The Olfactory Sensory Neurons To The Cortex</p>		Abnormalities of olfactory and taste sensation**
			<p>Taste: The Arrangement Of Taste Cells Within Taste Buds And Organization Of Taste Buds Within Papillae.</p> <p>List the four basic qualities of taste sensation</p> <p>Test For The Four Basic Qualities Of Taste Sensation</p> <p>The taste pathway from the anterior two-third and posterior one- third of the tongue to the gustatory cortex</p>		
11	Nerve muscle physiology	8 HRS		<p>Functional anatomy of skeletal muscle*.-the structure of sarcomere ,</p> <p>actin filament, myosin filament, I band, A band, H</p>	<p>Myohemoglobin**</p> <p>Fibrillation and fasciculation **</p>

				<p>band, Z line and sarcomere</p> <p>Structure and function of the sarco-tubular system</p> <p>Functions of contractile and regulatory proteins involved in muscle contraction *,</p> <p>Composition of muscle, muscle mass, muscle fiber*</p> <p>Types of smooth muscles and mechanism of contraction*.</p> <p>EMG *</p> <p>Compare structural differences and similarities between skeletal, cardiac and smooth muscle*, similarities and differences in the mechanism of contraction of skeletal, cardiac and smooth muscle *</p>
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		<p>Properties of skeletal muscles , simple muscle curve</p> <p>Frank-Starling law</p>	<p>Contractions and types- Isotonic & isometric contraction*</p> <p>Chronaxie, rheobase and utilization time*</p>	<p>Rigor mortis, tetanus, fatigue.</p>
		<p>Mechanism of muscle contraction and relaxation, molecular basis of muscle contraction, contracture, rigor mortis, , motor unit, events involved in excitation contraction coupling. Calcium transporters in muscle cells, effects of pre and after load. Thermal and Chemical changes during muscle contraction</p>		
		<p>Neuron: Structure in brief</p> <p>Neuromuscular junction - the structure of the neuromuscular junction, Diagram</p> <p>events involved in neuromuscular transmission</p>	<p>Myasthenia gravis*</p> <p>Muscular Dystrophy**</p>	<p>Neuromuscular blockers**Motor unit significance*</p>

Bio Chemistry

Sl No	Topic	Time	Must Know	Desirable to Know	Nice to Know
1	Introduction to Biochemistry	1hr	Define Biochemistry. scope in clinical practice of Homeopathy		
2	Carbohydrates Chemistry		Definition, Classification with suitable examples	functions of Carbohydrates Mucopolysaccharides disaccharides and polysaccharides Invert sugar	
3	Lipids Chemistry		classification	Functions of Lipids Biological importance of triacyl glycerol, phospholipids, glycolipids, fatty acids (PUFA), prostaglandin steroids and lipoproteins. Ketosis and Ketonemia	

				<p>Brown fat.</p> <p>Prostaglandins</p> <p>Lungs surfactants</p> <p>Rancidity</p>	
4	<p>proteins</p> <p>Chemistry</p>		<p>Definition, classification of amino acids</p>	<p>Biologically important peptides- classification, properties</p> <p>Biological importance of proteins.</p> <p>Structural organization of proteins</p> <p>Denaturation of Proteins</p> <p>essential amino acids</p>	
					<p>Semi essential amino acids</p>
6	<p>Enzymes</p>		<p>Classification with suitable examples.</p> <p>General properties of Enzymes</p>	<p>Enzyme Inhibition with examples</p> <p>Different mechanisms of Enzyme Action.</p> <p>Diagnostic Enzymes with Clinical Significance, Diagnostic Enzymes in Myocardial infarction</p> <p>Isoenzymes</p>	

				Proenzymes Digestive Enzymes Mention the Factors affecting enzyme activity. Competitive Enzyme Inhibition	
7	Biological Oxidation		Respiratory Chain (Mitochondrial Electron Transport Chain Oxidative Phosphorylation and sites ATP synthesis	Biological Oxidation Respiratory Chain role of Inhibitor and Uncouplers	
8	Vitamins		Define Vitamins. Classify Vitamins. daily requirement General properties of Vitamins The Sources, RDA, Biochemical functions and Deficiency manifestations of Vitamin A.,D and C	functions and Deficiency manifestations of Niacin Thiamine, folic acid Cynocobalamin Vitamin B12, pyridoxine. Vit E. Absorption of Vit B12. Pernicious Anemia Antivitamines Walds Visual Cycle Antioxidants with examples hypervitaminosis.	
9	Carbohydrate		digestion and absorption of carbohydrates	Synthesis and break down of	Pentose phosphate

	Metabolism			<p>Glycolysis, Citric acid cycle</p> <p>Gluconeogenesis, HMP shunt pathway</p> <p>Metabolism of Glycine.</p> <p>Blood sugar level and its regulation, oral GTT and glycosuria, Biochemistry of diabetes mellitus</p>	pathway
10	Lipid Metabolism		Digestion and absorption of Lipids	<p>Beta oxidation, biosynthesis of saturated fatty acids only, cholesterol biosynthesis, transport (role of HDL & LDL)</p> <p>Excretion, Adipose tissue metabolism</p> <p>Ketogenesis</p> <p>Ketolysis and Ketosis</p>	<p>Cholesterol biosynthesis.</p> <p>Fatty acid synthesis</p> <p>Lipolysis and re-esterification, fatty liver and atherosclerosis.</p>
11	Protein Metabolism		digestion and absorption of Proteins	<p>Fate of amino acid in the body (Deamination, Transamination, Transdeamination, Decarboxylation)</p> <p>Fates of ammonia (Urea cycle, glutamine formation),</p>	<p>Pathways of synthesis and catabolism of amino acids other than aromatic and sulphur-containing amino acids</p> <p>Purine and pyrimidine</p>

					<p>synthesis. Synthesis of phospholipids, prostaglandins and the related molecules. Metabolism of aromatic and sulphur containing amino acids and their inborn errors.</p> <p>Uronic acid pathway</p>
12	Mineral Metabolism		Study of (i) Calcium and phosphorous (ii) sodium, potassium & chloride	Study of; (iii) magnesium, copper & iodine; (iv) Iron, (v) manganese, selenium, zinc & fluoride. Their importance in body in brief.	
11	Water and electrolyte			Water and electrolyte balance and imbalance. Acid base balance and imbalance	
12	Function tests		Function tests - (i) Liver function tests, (ii) Kidney function tests (iii) gastric function test		

Practical skills

Competencies at the end of practicals in Physiology and Biochemistry:

- Use and handle microscope for methodical focusing
- Recognise importance of chemical laboratory hazards and safety measures in laboratory practice
- Perform laboratory procedures accurately with documentation of results

Objectives:

At the end of the course in physiology and biochemistry, the student will be able to:

- Collect and store specimens for various laboratory tests
- Perform with accuracy and reliability basic haematological estimations
- Perform complete urine examination
- Document and present laboratory values of common investigations

Sl. No	Topic	Time	Must Know	Desirable to Know
1	<u>Haematology</u>	80	<ol style="list-style-type: none"> 1. Study of compound microscope 2. Introduction to haematology 3. Collection of blood sample 4. Estimation of haemoglobin 5. Hemocytometry 6. Total RBC count 7. Total leucocytes count 8. Preparation and examination of blood smear 9. Differential Leucocyte count 10. Determination of erythrocyte sedimentation rate (demonstration) 11. Determination of blood group (<i>demonstration</i>) 12. Determination of bleeding time and clotting time 	<ol style="list-style-type: none"> 1. Absolute eosinophil count 2. Platelet count 3. Reticulocyte count 4. Determination of hematocrit (demonstration) 5. Determination of Blood indices (demonstration) 6. Osmotic fragility of red cells (demonstration)

2	Human experiments	60	<ol style="list-style-type: none"> 1. General examination 2. Respiratory system – clinical examination, <ol style="list-style-type: none"> a. spirometry, b. stethography 3. Gastrointestinal system – clinical examination 4. Cardiovascular system – blood pressure recording, radial pulse, , clinical examination <ol style="list-style-type: none"> a. ECG 5. Nerve muscle physiology – Mosso's ergography, handgrip dynamometer (demonstration) 6. Nervous system – clinical examination 7. Special senses – Clinical examination 	Reproductive system – diagnosis of pregnancy (demonstration)
3	Biochemistry	60	<ol style="list-style-type: none"> 1. Demonstration of uses of instruments or equipment 2. Qualitative analysis of carbohydrates and proteins (Analysis of lipid is presently not done) 3. Normal characteristics of urine 4. Abnormal constituents of urine 5. Demonstration practical 	<ol style="list-style-type: none"> 1. Qualitative estimation of glucose, total proteins, uric acid in blood 2. Liver function test 3. Kidney function test 4. Lipid profile 5. Interpretation and discussion of results of biochemical tests
4	Tutorials/seminar/ inter departmental symposium	75		

B.

Theory Examination

Types of question	No. Of questions	Marks per question	Total
Long Essays	02	10	20
Short essays	10	05	50
Short Answers	10	03	30

Question Paper Blueprint for Paper 1

Sl No	Topic	Must Know	Desirable to Know	Long Essay	Short Essay	Short Answer	Total Marks
1	General Physiology and Biophysical science	3	3	0	0	2	6
2	Body Fluids and RE System	3	3	0	0	2	6
3	Blood	15	3	1	1	1	20
4	Cardiovascular system	15	3	1	1	1	20
5	Respiratory System	15	6	0	3	2	20
6	Renal Physiology	10	6	0	2	2	15
7	Skin and Regulation of Body Temperature	10	0	0	2	0	5
8	Nerve muscle physiology	5	0	0	1	0	8
Total		76	24	2	10	10	100

Question Paper Layout for Paper 1

Long Essay

: 2 X 10 = 20 Marks

1	Blood
2	CVS

Short Essay

: 10 X 5 = 50 Marks

3	Blood
4	CVS
5	Respiratory system
6	
7	
8	Renal physiology
9	
10	Skin and regulation of body temperature
11	
12	Nerve muscle physiology

Short Answer

: 10 X 3 = 30 Marks

13	General physiology and biophysical sciences
14	
15	Body fluids and RE System
16	
17	Blood
18	CVS
19	Respiratory system
20	
21	Renal physiology
22	

Question Paper Blueprint for Paper 2

Sl No	Topic	Must Know	Desirable to Know	Long Essay	Short Essay	Short Answer	Total Marks
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1	Digestive System and Metabolism	10	5	0	3	0	15
2	Endocrinology	10	5	1	1	0	15
3	Reproductive System	5	6	0	1	2	10
4	Central Nervous System	13	3	0	2	2	20
5	Special Senses	8	3	0	1	2	10
6	Biochemistry	20	6	1	2	2	25
7	Nutrition	6	0	0	0	2	5
Total		72	28	2	10	10	100

Question Paper Layout for Paper 2

Long Essay

: 2 X 10 = 20 Marks

1	Endocrinology
2	Biochemistry

Short Essay

: 10 X 5 = 50 Marks

3	Digestive system
4	
5	
6	Reproductive system
7	CNS
8	
9	Special senses
10	Endocrinology
11	Biochemistry
12	

Short Answer

: 10 X 3 = 30 Marks

13	CNS
14	

15	
16	Special senses
17	
18	Reproductive system
19	
20	Nutrition
21	
22	Biochemistry

Practical skills

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Objectives:

At the end of the course in physiology and biochemistry, the student will be able to:

- Collect and store specimens for various laboratory tests
- Perform with accuracy and reliability basic haematological estimations
- Perform complete urine examination
- Document and present laboratory values of common investigations

Sl. No	Topic	Time	Must Know	Desirable to Know
1	Haematology	80	Study of compound microscope Introduction to haematology Collection of blood sample Estimation of haemoglobin Hemocytometry Total RBC count Total leucocytes count Preparation and examination of blood smear Differential Leucocyte count	Absolute eosinophil count Platelet count Reticulocyte count Determination of hematocrit (demonstration) Determination of Blood indices (demonstration) Osmotic fragility of red cells (demonstration)

			<p>Determination of erythrocyte sedimentation rate (demonstration)</p> <p>Determination of blood group (demonstration)</p> <p>Determination of bleeding time and clotting time</p>	
2	Human experiments	60	<p>General examination</p> <p>Respiratory system – clinical examination: spirometry, stethography</p> <p>Gastrointestinal system – clinical examination</p> <p>Cardiovascular system – blood pressure recording*, radial pulse,* clinical examination: ECG</p> <p>Nerve muscle physiology – Mosso’s ergography, handgrip dynamometer (demonstration)</p> <p>Nervous system – clinical examination reflexes*</p> <p>Special senses – Clinical examination</p> <p>Body temperature*</p>	<p>Reproductive system – diagnosis of pregnancy (demonstration)</p>
3	Biochemistry	60	<p>Demonstration of uses of instruments or equipment</p> <p>Qualitative analysis of carbohydrates and proteins (Analysis of lipid is presently not done)</p> <p>Normal characteristics of urine</p> <p>Abnormal constituents of urine</p>	<p>Qualitative estimation of glucose, total proteins, uric acid in blood</p> <p>Liver function test</p> <p>Kidney function test</p> <p>Lipid profile</p> <p>Interpretation and discussion of results of</p>

			Demonstration practical	biochemical tests
4	Tutorials/seminar/inter departmental symposium: 75 hours			

Practical Examination: Maximum Marks (including Viva): 200 Marks

2.2.1. Haematology (any one): 15 marks			Time
1.	Hemoglobin estimation, RBC total count, bleeding time, clotting time, WBC total count/differential	Procedural skills: 5 marks Practical skills: 5 marks Discussion: 5 marks	25 to 30 minutes
2.	Examination of urine for chemical constituents (any one): 15 marks		
	(Glucose, Albumin, Ketone Bodies, Bile Salt, Bile Pigments)	Practical skills: 5 marks Identification of glucose and Protein in a given solution: 5marks Discussion 5 marks	
2.2.2	Spotters (any six – three from physiology and three from biochemistry): 30 marks		
	Hb Pipette; Albuminometer; Neubauer counting chamber; RBC pipette; Sahli's Hbmeter; Urinometer; WBC pipette; Westergren tube; Wintrobe tube; Tuning fork; ECG machine; Glucometer; Stethograph; Sphygmomanometer-mercury and dial type; Snellen chart; Ischiara color plates; Dynamometer; Knee hammer; Tonometer; Thermometer - mercury /digital		Identification: 1 Description: 2 Uses : 3 3 minutes for each spotting
2.2.1. Clinical or Applied Physiology: 20 Marks			
	Examination of Blood pressure, Pulse, Temperature, Reflexes	Procedural Skills 05 marks Practical Skills 05 maks Discussion 10 marks	
2.2.4	Journal or Practical record	Physiology: 10 Marks	
		Biochemistry: 10 Marks	
2.2.5	Viva voce (oral)	50 Marks	

Basic Books

- Ambika Shanmugam (2012) *Fundamentals of Biochemistry for Medical students*, 7th edition Lippincott Williams & Wilkins. Philadelphia
- Chaudhuri SK (2006). *Concise Medical Physiology*, 5th Edition New Central Book Agency (P) Ltd, Kolkatta
- Hall JE (2010). *Guyton and Hall Textbook of Medical Physiology*, 12th edition. Saunders. Philadelphia
- Rama Rao (2002) *Text book of Biochemistry*, UBS Publishers & Distributors Pvt. Ltd., New Delhi
- Sembulingum and Prema Sembulingam (2012). *Essentials of Physiology*, 6th edition Jaypee Brothers medical publishers, New Delhi

Reference Books

- Bickley LS (2009). *Bates' Guide to Physiology Examination And History Taking* illustrated 10th edition J.B. Lippincott Com, Philadelphia
- Bijlani (2004). *Understanding Medical Physiology* 3rd edition Jaypee Brothers Medical Publishers, New Delhi
- Chatterjee CC (2007). *Human Physiology Vol I & II*. Medical Allied Agency, Kolkatta
- Chatterjee MN & Shinde R (2005) *Textbook of Medical Biochemistry* 6th edition Jaypee Brothers, New Delhi
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Appendix – Checklist for practical skills

Blood Pressure Measurement Procedure

Observation	Yes	No
Performed beginning tasks- CONSENT		
Cleaned earpieces of stethoscope.		

Positioned subject sitting or lying.		
Made sure the room was quiet		
Selected the appropriate size cuff and applied it directly over the skin, above the elbow.		
Positioned the stethoscope over the brachial artery.		
Inflated the cuff per the instructor's direction.		
Identified the systolic and diastolic measurements while deflating the cuff.		
Deflated the cuff in a timely manner.		
Re-measured, if necessary, to determine the accuracy (waited one minute if using the same arm or use the other arm, if appropriate).		
Recorded blood pressure measurement to be compared with the blood pressure recorded by the evaluator.		
Performed completion tasks.		

Discussion

- Importance of positioning the subject
- When is systolic identified?
- When is diastolic identified?
- What are the precautions taken while recording the blood pressure?
- What are the different methods of recording blood pressure?
- Korotkoff sounds and their cause
- Physiological variations in blood pressure
- Advantages and disadvantages of palpatory method
- Auscultatory gap

Procedure for measuring Radial Pulse

Observation	Yes	No
Performed beginning tasks		
Positioned resident, sitting or lying down.		
Located radial pulse at wrist.		
Placed fingers over radial artery. Student does this first, then evaluator		

locates pulse on opposite wrist.		
Determined whether to count for 30 seconds or 60 seconds.		
Counted pulsations for 30 seconds and multiplied the count by 2; or for one minute if irregular beat. Student must tell when to start and end count.		
Recorded the pulse rate within + or - two beats per minute of pulse rate recorded by evaluator.		

Discussion

- Radial pulse definition
- Radial pulse examination by three fingers
- Normal radial pulse rate
- Apical pulse and radial pulse difference
- Carotid pulse vs radial pulse
- Radial pulse characteristics
- Where is the radial pulse located

Procedure for measurement of Body Temperature

Observation	Yes	No
Selects appropriate site and thermometer type.		
“Zeroes” or shakes down glass thermometer as needed.		
Inserts thermometer in sheath or uses thermometer designated only for the patient.		
Inserts in chosen route/site.		
Oral: Places thermometer tip under the tongue in the posterior sublingual pocket (right or left of frenulum). Asks patient to keep lips closed.		
Rectal: Lubricates thermometer; uses rectal thermometer; inserts 1 to 1.5 inches (2.5–3.7 cm) in an adult; 0.9 inches (2.5 cm) for a child, and 0.5 inch (1.5 cm) for infant		
Axillary: Dries axilla; Places thermometer tip in the middle of the axilla; lowers patient’s arm.		
Tympanic membrane: Positions the patient’s head to one side and straighten the ear canal.		
For an adult, pulls the pinna up and back. 2) For a child, pull the pinna down and back		

Leaves glass thermometer recommended time (oral 3– 5 min, rectal 2 min, axillary 6–8 min).		
Holds rectal thermometer securely in places; does not leave patient unattended.		
Leaves electronic thermometer until it beeps.		
Reads temperature. Holds glass thermometer at eye level to read.		
Shakes down (as needed) and cleans or stores thermometer		

Discussion

- Where is body temperature measured?
- What are Fahrenheit and Celsius?
- What is normal body temperature?
- What is a fever?
- Several different types of thermometers
- How to take an ear (tympanic) temperature

Test for Reflexes

No	Observation	Yes	No
Deep Tendon Reflexes: Using the patella hammer			
	<p>The patella hammer should be held nearer the end.</p> <p>The movement as the tendon is being struck with the hammer should be delivered from the wrist.</p> <p>The head of the hammer should be allowed to fall with gravity on the intended forefinger or muscle tendon</p> <p>An observation of the rapidity and strength of muscle contraction / jerk is observed.</p> <p>A comparison is made with the opposite side,</p>		
	Results are reported as: Normal / present Increased / brisk Decreased / absent.		
Biceps Jerk (C5, C6)			
	<p>Forefinger of one hand is placed on the biceps tendon</p> <p>The biceps tendon is struck by the patella hammer.</p> <p>An observation is made of contraction of biceps with flexion of the forearm at the elbow followed by prompt relaxation.</p> <p>For the corresponding biceps tendon (furthest away from the examiner's side) the thumb of the hand may be substituted for</p>		

	the forefinger		
Brachioradialis (Supinator) Jerk (C5, C6)			
	<p>The patient's elbow is flexed and pronated.</p> <p>The student places two fingers over the lower end of the patient's radius just above the wrist.</p> <p>The tendon of the brachioradialis is struck on examiner's two fingers placed over this area.</p> <p>An observation is made of contraction of the brachioradialis with flexion of the elbow</p>		
Triceps Jerk (C7, C8)			
	<p>Student supports the wrist with one hand as the forearm is pronated and resting across the patient's body</p> <p>The triceps tendon is struck with the tendon hammer.</p> <p>An observation is made of the triceps contracting with elbow extension</p>		
Knee Jerk (L3, L4)			
	<p>Student slides his arms under the patient's slightly flexed knees and supports them.</p> <p>The tendon hammer is struck over the infrapatellar tendon.</p> <p>An observation is made of Quadriceps contracting causing extension of the knee</p>		
Ankle Jerk (S1, S2)			
	<p>Patient's foot is held in mid position at the ankle, whilst the student bends the knee, externally rotates the hip and holds the foot dorsiflexed.</p> <p>The Archilles tendon is struck with the tendon hammer.</p> <p>An observation is made of Plantar flexion of the foot</p>		
Superficial Reflexes			
	<ol style="list-style-type: none"> 1. The patient's skin is stroked with an object that is moderately sharp but should not injure the skin (e.g. with the end of the reflex hammer). 2. The skin response is observed and 3. Compared to the opposite side and 4. Graded 		

	Grading of superficial reflexes (upper abdominal: Normal / Absent; Lower abdominal: Normal / Absent; Plantar: Down going / Up going)		
Upper Abdominal			
	<ul style="list-style-type: none"> • The student strokes the skin just above and on either side of the patient's umbilicus using the object chosen for the examination. • The skin response is observed i.e. the umbilicus moving up and toward area being stroked • A comparison is made of the two sides 		
Lower Abdominal			
	<ul style="list-style-type: none"> • The skin below the umbilicus is similarly stroked with an instrument as in 2a above • The skin response is observed i.e. the umbilicus moving down • A comparison is made of the two sides. 		
Plantar Reflex (Babinski) (L5, S1, S2)			
	<ul style="list-style-type: none"> • The patient's foot should be dorsi flexed at 90 degrees to the ankle. • The student strokes the lateral aspect of the patient's sole with a blunt instrument such as a car key before • Curving the stroke inwards towards the M.T. P. and ending at the toes • An observation is made of the response of the toes i.e. plantar flexion (down going) of the toes 		

Discussion for testing Reflexes

1. Response after the stimulus
2. Afferent / efferent paths involved
3. Centre /spinal segments involved
4. Applied physiology

3) HOMOEOPATHIC PHARMACY

Introduction

Instruction in Homoeopathic Pharmacy should be so planned as to present general working knowledge of an industry and dispensing various preparation. Major emphasis should be laid on evolution and relationship of Homoeopathic Pharmacy to Organon and Materia Medica, the concept of drug Proving and Dynamisation.

Objectives:

After completing the course in homoeopathic pharmacy, the student will be able to:

Recall the basic principles of Homoeopathic Pharmacy.

1. Describe the evolution of the various aspects of Homoeopathic Pharmacy and its future projections.
2. Discuss the scientific and logical basis of the principles and practice of dynamisation.
3. Describe the techniques of drug proving.
4. Enumerate the methods of quality testing, storing, dispensing.
5. State laws relating to Pharmaceutical industry in general and Homoeopathy in particular.

Theory (100 Hours)

Instruction in Homoeopathic Pharmacy should be so planned as to present general working knowledge of an industry and dispensing various preparation. Major emphasis should be laid on evolution and relationship of Homoeopathic Pharmacy to Organon and Materia Medica, the concept of drug Proving and Dynamisation. The curriculum of Homoeopathic Pharmacy is described as follows:

Sl. No	Topic	Time allotted	Must know	Desirable to know	Nice to know
General Concepts and Orientation: 16 hrs					
1	History of Pharmacy with emphasis on emergence of Homoeopathic Pharmacy	2 hrs	<ul style="list-style-type: none"> • Definition of Pharmacy • History of Pharmacy – primitive period, period before 13th century & period after 13th century • Definition of Homoeopathic Pharmacy • Homoeopathic Pharmacy is an art & science • Sources of Homoeopathic Pharmacy • Branches of Pharmacy 	Compare & contrast Homoeopathic Pharmacy with other schools of Pharmacy (Allopathic, Ayurveda, Siddha, & Unani Pharmacy)	Other branches of Pharmacy- Hospital Pharmacy, Clinical Pharmacy, Theoretical Pharmacy etc. Spagyric Pharmacy Aspects of pharmacy- doctrinal aspects & technical

					aspect Relationship of Hom. Pharmaceutic s with allied sciences
2	Official HomoeopathicPh armacopoeia (German, Britain, USA,India)	3 hrs	<ul style="list-style-type: none"> • Definition of Hom. Pharmacopoeia • Objectives of Hom. Pharmacopoeia • Types of Hom. Pharmacopoeias • General plan of pharmacopoeias (monograph) • Official Hom. Pharmacopoeia (German, Britain, USA,India) 	<ul style="list-style-type: none"> • Functions of Homoeopathi c Pharmacopoe ia • History & development of HPI • Unofficial Homoeopathi c Pharmacopoi ea with examples 	<ul style="list-style-type: none"> • History & developme nt of pharmacop oeia • FHP
3	Important terminologies like scientific names, common names, synonyms	1 hr	Definition of scientific names, common names, synonyms	<ul style="list-style-type: none"> • Demerits of common names • Advantages & disadvantages of scientific names or botanical name 	Meaning of hyponyms, typonyms, invalid names
4	Definitions in Homoeopathic pharmacy	1 hr	Pharmaceutics, Pharmacologist Pharmacomania, Pharmacophilia Pharmacophobia, Pharmacopraxy Pharmacology, Pharmacognosy, Drug, Medicine, Remedy, Mother Tincture, Mother Solution, Mother Substance, Polychrest Remedy, Deep Acting Remedy, Long Acting & Short Acting Remedy, Therapeutics, Complementary Remedy,	--	Pharmacogenetics Pharmacogra phy, Pharmacopsy chosis, Pharmacokin etics, Pharmacothe rapy, Pharmacoped ics, Pharmacopho re, Pharmacopoll axy, Characteristic

			Inimical Remedy, Antidote, Active Principle, Alkaloid, Glycosides, Resinoids, Tannins, Resins		s Symptoms, Common Symptoms, Concomitant Symptom, Clinical symptom
5	Components of pharmacy	6 hrs	<ul style="list-style-type: none"> • Parts of pharmacy – identification, collection, combining etc. • Relationship between Hom. Pharmacy and Materia Medica, Organon of Medicine & National Economy • Scope of Homoeopathic Pharmacy • Specialty and originality of Homoeopathic Pharmacy • Definition of Pharmacist • Qualities & functions of Pharmacist 	--	--
6	Weights & measurements	2 hrs	Different systems for weights & measures - Metric system, Imperial system (British) & Apothecary's system (USA) with their fundamental units	Domestic/ household measures with their equivalents in imperial system & metric system - 1 drop, 1 tea spoonful, dessert spoonful, table spoon, tea cupful, tumblerful	<ul style="list-style-type: none"> • Relations of metric system with other systems • Standard drop measure
7	Nomenclature of Homoeopathic drugs with their anomalies	1 hr	--	Introduction to Binomial system of nomenclature	Anomalies & errors in the nomenclature of Homoeopathi c medicines
II. Raw Materials: Drug and Vehicle - 21 hrs					

1	Sources of drugs (taxonomic classification with reference to utility)	4 hrs	<p>Different sources of Homoeopathic drugs Vegetable kingdom, Animal kingdom, Mineral kingdom, Nosodes, Sarcodes, Imponderabilia, Synthetic source, with reference to their clinical utility</p> <p>1. Vegetable kingdom (Morphological classification): Drugs prepared from whole plant, roots & rhizome, stem, leaves, flowers, fruits, seeds, bark, wood, extract & other plant constituents</p> <p>2. Animal kingdom: Drugs prepared from whole living animal, whole dried animal, different parts, and secretion of animal, including ophiotoxins</p> <p>3. Mineral kingdom & Chemicals Drugs prepared from acids, elements, compounds, minerals, mineral spring water</p> <p>4. Nosodes Definition & examples for nosodes prepared from human, animal & plant</p> <p>5. Sarcodes Definition & examples of sarcodes prepared from hormones, extracts & whole endocrine gland, including Lacs</p> <p>6. Imponderabilia Definition & examples for natural & artificial source.</p>	<ul style="list-style-type: none"> • Taxonomic classification of plant drugs with examples (Bentham & Hooker classification) • Classification of animal drugs with examples Non vertebrate Phylum- arthropoda, porifera, coelenterata, annelida, mollusca, echinodermata Vertebrate Class- osteichthes, amphibian, reptilian, aves, mammalia 	<ul style="list-style-type: none"> • Different sources of Homoeopathic drugs – Allergodes & Isodes • Classification & preparation of nosodes per HPI • Bowel nosodes • Tissue remedies • Bach flower remedies
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			7. Tautopathic or synthetic source Definition& examples		
2	Collection of drug substances	2 hrs	<ul style="list-style-type: none"> • General rules for collecting plant drug substances • Particular rules for collecting whole plant & its various parts • General rules for collecting animal drug substances • Rules for collecting mineral drugs, sarcodes, nosodes, imponderabilia • Preservation of drugs – raw materials & finished products 	Rules for Collection of snake venoms	Collection of Cantharis, Bufo rana, Apis mel
3	Vehicles	10 hrs	<ul style="list-style-type: none"> • Definition of vehicle • Properties of an ideal vehicle • Uses or utility of vehicles • Sugar of milk – sources, preparation, purification (Stapf's process), properties, uses & impurities • Globules– source & preparation, properties & uses • Tablets–preparation & properties & advantages • Purifiedwater – preparation, properties, uses & demerits, impurities present in water • Ethyl Alcohol – sources, preparation, properties, advantages & disadvantages, precautions in preserving alcohol, uses & impurities of alcohol, varieties of 	<ul style="list-style-type: none"> • Classification of vehicles with examples • Lanolin • Starch- source &uses 	<ul style="list-style-type: none"> • Source, preparation , properties and uses of cane sugar • Preparation , properties, uses & advantages of cones • Solvent ether – source, properties & uses • Almond oil • Sesame oil • Chaulmoogra oil • Sandalwood oil • Lavender oil • Rosemary oil • Soap – source, varieties &

			<p>alcohol with their strength, uses & conversions to different varieties of alcohol</p> <p>Proof spirit (alcoholometry) – definition & significance</p> <ul style="list-style-type: none"> • Glycerine–source, properties and uses • Simple syrup (syrup simplex) – source, preparation & uses • Olive oil –source, properties & uses • Vaseline (soft paraffin) – source, varieties & uses • Waxes –definition, varieties & uses 		<p>uses</p> <ul style="list-style-type: none"> • Spermaceti • Isinglass • Prepared lard
4	Homoeopathic pharmaceutical instruments and appliances	5 hrs	Features & uses of: mortar & pestle, water bath, microscope, porcelain dish, percolator, macerator, hot air oven, pycnometer, balances, chopping board, knife, press & sieves	Crucible, pill tiles, hydrometer, alcoholometer, lactometer, desiccator, various glassware	--
III. Homoeopathic Pharmaceutics: 31 hrs					
1	Mother tincture and its preparation	6 hrs	<ul style="list-style-type: none"> • Definition of mother tincture • Different classes of preparation of Homoeopathic medicines according to old method with examples • Drug power of mother tinctures and other preparations according to old method • Utility of drug power of mother tincture, solution & substance • Peculiarities of new 	<ul style="list-style-type: none"> • Difference between allopathic mother tincture & homoeopathic mother tincture • Difference between old method and new method of mother tincture preparation • Disadvantages of old method 	Tincture triturates

			<p>method of mother tincture preparation</p> <ul style="list-style-type: none"> • Importance of moisture content of plant • Definition of maceration, percolation, menstruum, merc, magma, digestion • Procedure of maceration • Diagrammatic description of percolator • Procedure of percolation <ul style="list-style-type: none"> - Preparation of percolator(tow) - Preparation of drug substances for percolation - Actual process of preparation of mother tincture 	<p>of mother tincture preparation</p> <ul style="list-style-type: none"> • Mechanism of percolation – different forces acting during percolation like gravitational force, capillary force, osmotic pressure & surface tension • Difference between percolation and maceration 	
2	Various scales used in Homoeopathic pharmacy	5 hrs	<ul style="list-style-type: none"> • Different scales (ratio) used in Hom. Pharmacy- decimal scale, centesimal scale & fifty millesimal scale • Decimal scale: inventor, principle, designation & application (utility) of the scale • Preparation of potencies under decimal scale – liquid potency and solid potency • Centesimal scale: inventor, principle, designation & application (utility) of the scale • Preparation of potencies under centesimal scale – liquid potency and solid 	<ul style="list-style-type: none"> • Relation between decimal scale and centesimal scale • Difference between centesimal potency and fifty millesimal potency 	Background of fifty millesimal scale of potentisation

			<p>potency</p> <ul style="list-style-type: none"> • Fifty millesimal scale: inventor, principle, designation • Reasons why Hahnemann arrived at the concept of fifty millesimal scale (disadvantages of centesimal scale) • Preparation of fifty millesimal potency – liquid & solid • Dispensing & Administration of fifty millesimal potency • Advantages & disadvantages of fifty millesimal potency 		
3	Drug dynamization or potentization	4 hrs	<ul style="list-style-type: none"> • Definition of Potentization • Objectives (benefits) of Potentization • Process of Potentization – trituration & succussion • Definition & procedure of trituration • Precaution to be taken during trituration • Merits & demerits of trituration • Conversion of trituration into liquid potency (jumping potency/ fluxion potency) • Definition of straight potency • Definition of high fluxion potency • Single vial & multiple vial method • Definition of back potency & its utility • Definition, procedure & utility of succussion 	<ul style="list-style-type: none"> • Difference between potency and dilution • Advantages of succussion over trituration 	<ul style="list-style-type: none"> • History & development of the theory of dynamization • Post-Hahnemannian potentization
4	External	4 hrs	<ul style="list-style-type: none"> • List of external 	<ul style="list-style-type: none"> • Hahnemannia 	<ul style="list-style-type: none"> • Glycerol of

	application (focus on scope of Homoeopathic lotion, glycerol, liniment and ointment)		<p>application used in Homoeopathy</p> <ul style="list-style-type: none"> • Different vehicles used as bases for external application • Glycerol: definition, preparation, uses and examples • Liniment (embrocations): definition, preparation, uses and examples • Lotion: definition, preparation, uses and examples • Ointment: definition, methods for preparation of ointments (mechanical incorporation method & fusion method), uses and examples 	<p>n view on external application with reference to Organon</p> <ul style="list-style-type: none"> • Types of external application – liquid and solid/semisolid 	<p>starch (glycerol amyli)</p> <p>Other external application like poultice (cataplasms), fomentations, opodeldocs, cerates, plasters, suppositories, mulliein oil</p>
5	Doctrine of signature	1 hr	<ul style="list-style-type: none"> • Definition • Examples 	Utility of this theory in Homoeopathy	History of doctrine of signature
6	Posology (focus on basic principles; related aphorisms)	5 hrs	<ul style="list-style-type: none"> • Definition of Posology. • Various kinds of doses. • Definition of Homoeopathic Posology • Principles of Homoeopathic Posology with reference to Organon • Special emphasis on minimum dose • Factors responsible for selection of potency • Reasons for applying only one single simple medicinal substance at a time • Repetition of doses 	Difference between Allopathic and Homoeopathic concept of doses	--
7	Prescription writing (including abbreviations)	2 hrs	<ul style="list-style-type: none"> • Definition of Prescription • Principles of writing an ideal prescription (norms, forms, legibility, accuracy, 	Writing model prescription based on cases	--

			reliability) • Different parts of a prescription • Precaution to be taken while writing a prescription • Utility of prescription • Abbreviation with meaning- Agit, Aqua dist, BD, BID, Cap., D, d, Ft., Ft.mist, Ft.pulv, Ft.solut, Gr, Gtt, HS, Lot, M, m, mist, OD, Oz, QID, SOS, Stat, TID, Vac ven		
8	Concept of placebo	1 hr	• Synonyms • Definition • Utility of placebo	--	Hahnemannian view regarding placebo (related aphorisms)
9	Pharmaconomy – routes of Homoeopathic drug administration	1 hr	• Definition of Pharmaconomy • Various routes or channels of administration of Homoeopathic medicines	--	--
10	Dispensing of medicines	1 hr	• Different dosage forms • Dispensing of mother tincture, liquid potencies and powder triturates • Different vehicles used for dispensing medicine • Advantages & disadvantages of dispensing in solid & liquid form • Plussing method	Reference to Organon	--
11	Basics of adverse drug reactions and pharmacovigilance	1 hr	• Meaning of drug reaction • Drug interactions • Antidotes • Inimicals • Definition of pharmacovigilance	Medication errors – overdose, misuse & abuse of a drug as well as drug	• Incompatible remedies • Drug safety with special reference to HPI • Hazards

			<ul style="list-style-type: none"> • Importance of pharmaco-vigilance 	<p>exposure during pregnancy & breastfeeding</p>	<p>associated with use of external applications & other pharmaceutical products</p> <ul style="list-style-type: none"> • Adverse event reporting <p>Risk management</p>
IV. Pharmacodynamics: 14 hrs					
1	Homoeopathic pharmacodynamics	3 hrs	<ul style="list-style-type: none"> • Definition of pharmacology • Branches of pharmacology • Definition of pharmacodynamics • Procedure for ascertaining disease producing power <ul style="list-style-type: none"> a) Homoeopathic drug proving b) Toxicological findings c) Laboratory experiments • Drug action on healthy human being (three fold action on human being) <ul style="list-style-type: none"> - chemical action, mechanical action, & dynamic action • Dynamic effects on healthy human being according to Hahnemann - primary action & secondary action 	<ul style="list-style-type: none"> • Dynamic effects on healthy human being according to Carol Dunham - generic action & specific action • Difference between Homoeopathic pharmacodynamics & that of old school 	<ul style="list-style-type: none"> • Definition of dynamic power with examples • Relative merits and demerits of employing excessive large dose, moderate dose and infinitesimal dose
2	Drug proving (related aphorisms 105-145 of Organon of medicine) and merits & demerits	5 hrs	<ul style="list-style-type: none"> • Definition of drug proving • Pre-requisites (essentials) of drug proving • Reference of Organon • Objectives of drug 	<ul style="list-style-type: none"> • Drug proving team • Single blind method & double blind method 	<ul style="list-style-type: none"> • History of drug proving • Recent advances in drug proving

	of proving on humans and animals		proving <ul style="list-style-type: none"> • Criteria for selection of provers • Types of provers – ideal prover, best prover & idiosyncratic prover • Merits and demerits of proving on animals • Merits and demerits of proving on sick persons • Merits of proving on healthy human beings • Methods of preparation of drugs for proving • Dose and mode of administration of drugs during proving • Recording of symptoms during proving including importance of day book • Precautions to be taken during proving – regarding medicine & prover • Conditions when medicine is to be considered to have been thoroughly proved 		(Homoeopathic pathogenetic trial/ HPT) Methodological flaws in Hahnemannian drug-proving
3	Pharmacological action, study of drugs listed in Appendix-A	6 hrs	<ul style="list-style-type: none"> • Definition of drug action • Principles of drug action • Definition of physiological action • Physiological action of 30 drugs 	Classification of drugs according to their pharmacological actions	--
V. Quality Control: 11 Hrs					
1	Standardization of Homoeopathic medicines, raw materials & finished products	8 hrs	<ul style="list-style-type: none"> • Introduction & definition • Objectives of quality control in Homoeopathy • Sampling & Official sample • Methods of standardization 	--	Standardization of vehicles & finished products
2	Good manufacturing practices;	2 hrs	<ul style="list-style-type: none"> • Definition of GMP • Guidelines for GMP • Ideal Homoeopathic manufactory 	--	<ul style="list-style-type: none"> • Sieving • Mixing • Extraction

	industrial pharmacy		<ul style="list-style-type: none"> • Standard operating procedures • Important lab methods such as dilution, solution, sedimentation, precipitation, crystallization, decantation, filtration, sublimation, moisture content estimation 		<ul style="list-style-type: none"> • Drying • Sterilization • Pulverizing • Marketing & finance Administration of Pharmaceuticals
3	Homoeopathic pharmacopoeia laboratory-functions & activities, relating to quality control of drugs.	1 hr	<ul style="list-style-type: none"> • Fixation of raw material standards • Finished product standards 	HPL publications	<ul style="list-style-type: none"> • Verification of standards • Drug testing of survey samples • Drug testing of referred samples • Collection of medicinal plants Reference nosode collection

VI. Legislations pertaining to Pharmacy: 7 Hrs

1	The Drugs and Cosmetics Act, 1940 (23 of 1940) (in reaction to Homoeopathy);	Definition of Drugs, Cosmetics & Homoeopathic medicine	--	Schedule M1
2	Drugs and Cosmetics Rules, 1945 (in relation to Homoeopathy)	Provisions governing Sales, Manufacture & Labelling of Homoeopathic drugs	--	--
3	Poisons Act, 1919(12 of 1919)	--	Poisons Act, 1919 (12 of 1919)	--
4	The Narcotic Drugs and Psychotropic Substances Act, 1985 (61 of 1985)	--	The Narcotic Drugs and Psychotropic Substances Act, 1985 (61 of 1985)	--
5	Drugs and Magic Remedies (Objectionable Advertisement)	Drugs and Magic Remedies (Objectionable Advertisement) Act, 1954	--	--

	Act, 1954 (21 of 1954)	(21 of 1954)		
6	Medicinal and Toilet Preparations (Excise Duties) Act, 1955 (16 of 1955)	Medicinal and Toilet Preparations (Excise Duties) Act, 1955 (16 of 1955)	--	--

Practical Skills to be performed: 70 Hours

After completing the course in Pharmacy, the student will be able to –

1. Identify the drug substances as per the list provided.
2. Perform laboratory procedures like sublimation, distillation, decantation, filtration, crystallisation
3. Perform purity tests for sugar of milk, distilled water and ethyl alcohol
4. Determine specific gravity of distilled water and ethyl alcohol.
5. Estimate moisture content of drug substance using water bath.
6. Prepare dispensing alcohol and dilute alcohol from strong alcohol.
7. Identify the appropriate vehicles for preparing and potentising the medicine.
8. Prepare medicines as per the specifications in Homoeopathic Pharmacopeia of India
9. Prepare external applications like lotion, glycerol, liniment, ointment.
10. Prepare mother tincture by the process of maceration and percolation.
11. Estimate the size of globules.
12. Medicate globules and prepare doses with sugar of milk and distilled water.
13. Write prescriptions as per the standard formula.
14. Dispense medicines as per the prescription.
15. Explain to the patients and attendants the dosage and method of taking homeopathy medicines.
16. Explain to the patients and attendants the do's and don'ts for taking homeopathy medicines.

No	Topic	Time
1.	Estimation of size of globules	2 Hr
2.	Medication of globules and preparation of doses with sugar of milk and distilled water	2 Hr
3.	Purity test of sugar of milk, distilled water and ethyl alcohol	6 Hrs
4.	Determination of specific gravity of distilled water and ethyl alcohol.	2 Hrs
5.	Preparation of dispensing alcohol and dilute alcohol from strong alcohol.	2 Hrs
6.	Trituration of one drug each in decimal and centesimal scale.	4 Hrs
7.	Succussion in decimal scale from Mother Tincture to 6X potency.	2 Hrs
8.	Succussion in centesimal scale from Mother Tincture to 3C potency.	2 Hrs
9.	Conversion of Trituration to liquid potency: Decimal scale 6X To 8X potency.	1 Hrs
10.	Conversion of Trituration to liquid potency: Centesimal scale 3C to 4C potency.	1 Hrs
11.	Preparation of 0/ 1 potency (LM scale) of 1 Drug	2 Hrs

12.	Preparation of external applications –lotion glycerol, liniment, ointment	8 Hrs
13.	Laboratory methods – sublimation, distillation, decantation, filtration, crystallisation	8 Hrs
14.	Writing of prescription	2 Hrs
15.	Dispensing of medicines	2 Hrs
16.	Process of taking minims.	2 Hrs
17.	Identification of drugs(listed in Appendix B)- i) Macroscopic and Microscopic characteristic of drug substances – minimum 05 drugs; ii)Microscopic study of trituration of two drugs (up to 3X potency)	4 Hrs 2 Hrs
18.	Estimation of moisture content using water bath.	2 Hrs
19.	Preparation of mother tincture – maceration and percolation	4Hrs.
20.	Collection of 30 drugs for herbarium	
21.	Visit to Homoeopathic Pharmacopoeia Laboratory & visit to a large scale manufacturing unit of Homoeopathic medicines (GMP compliant). (Students shall keep detailed visit reports as per Proforma at Annexure B)	

C. Demonstration

1. General instructions for practical or clinical in pharmacy
2. Identification & use of Homoeopathic pharmaceutical instruments & appliances & their cleaning – **10 hrs**
3. Estimation of moisture content using water bath
4. Preparation of mother tinctures – maceration & percolation

D. Appendices

Appendix – A: List of Drugs included in the Syllabus of Pharmacy for study of Pharmacological action

1.	Aconite nap	16.	Glonine
2.	Adonis vernalis	17.	Hydrastis can
3.	Allium cepa	18.	Hyoscynamusnig
4.	Argentum nit	19.	Kali bich
5.	Arsenic alb	20.	Lachesis
6.	Belladonna	21.	Lithium carb
7.	Cactus G	22.	Mercuriuscor
8.	Cantharis	23.	Naja tri
9.	Cannabis ind	24.	Nitric acid
10.	Cannabis sat	25.	Nux vomica
11.	Cinchonna of	26.	Passifloraincarnata
12.	Coffea crud	27.	Stannum met
13.	Crataegus	28.	Stramonium
14.	Crotalus hor	29.	Symphytum
15.	Gelsemium	30.	Tabacum

APPENDIX – B: List of Drugs for Identification

I. Vegetable Kingdom

1.	Aegle folia	14.	Holerrhena antidysentrica
2.	Anacardium orientale	15.	Hydrocotyle
3.	Andrographis penniculata	16.	Justisia adhatoda
4.	Calendula offic	17.	Lobelia inflata
5.	Cassia sophera	18.	Nux vomica
6.	Cinchonna off	19.	Ocimum
7.	Cocculus indicus	20.	Opium
8.	Coffea cruda	21.	Rauwolfia serpentine
9.	Colocynth citrallus	22.	Rheum
10.	Crocus sativa	23.	Saraca indica
11.	Croton tig	24.	Senna (cassia acutifolia)
12.	Cynodon dact	25.	Stramonium met
13.	Ficus religiosa	26.	Vinca minor

II. Chemicals or Minerals

1.	Acetic acid	7.	Carbo veg (charcoal)
2.	Alumina	8.	Graphites
3.	Argentum metallicum	9.	Natrum mur
4.	Argentum nitricum	10.	Silicea
5.	Arsenic alb	11.	Sulphur
6.	Calcarea carb	12.	

III. Animal Kingdom

1.	Apis mellifica	4.	Sepia
2.	Blatta orientalis	5.	Tarentula cubensis
3.	Formica rufa		

Note:

- Each student shall maintain practical or clinical record or journal and herbarium file separately.
- College authority shall facilitate the students in maintaining record as per Appendix-C.

E. Examinations:

1. Theory (100 marks)

Types of questions with Marks

Type of Questions	No. of Questions	Marks per Question	Total
Long Essays (LE)	02	10	20
Short Essays (SE)	10	05	50
Short Answers (SA)	10	03	30
MAXIMUM MARKS			100

Question Paper Blueprint

No.	Topic	Marks	Question type
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I. General Concepts and Orientation			
1.	History of pharmacy with emphasis on emergence of Homoeopathic Pharmacy.	10	5 + 5 (2 SE)
2.	Official Homoeopathic Pharmacopoeia (Germany, Britain, U.S.A, India)		
3.	Important terminologies like scientific names, common names, synonyms.		
4.	Definitions in Homoeopathic Pharmacy.		
5.	Components of Pharmacy.		
6.	Weights and measurements.		
7.	Nomenclature of Homoeopathic drugs with their anomalies.		
II. Raw Material : Drugs and Vehicles			
1	Source of drugs (taxonomic classification, with reference to utility)	26	10 + 5 + 5 + 3 + 3 (1 LE + 2 SE + 2 SA)
2	Collection of drug substances		
3	Vehicles		
4	Homoeopathic Pharmaceutical Instruments and appliances		
III. Homoeopathic Pharmaceutics			
1.	Mother tincture and its preparation – old and new methods.	36	10 + 5 + 5 + 5 + 5 + 3 + 3 (1 LE + 4 SE + 2 SA)
2.	Various scales used in Homoeopathic Pharmacy		
3.	Drug dynamisation or potentisation		
4.	External applications (focus on scope of Homoeopathic lotion, glycerol, liniment and ointment).		
5.	Doctrine of Signature		
6.	Posology (focus on basic principles; related aphorisms of Organon of medicine).		
7.	Prescription (including abbreviations)		
8.	Concept of placebo		
9.	Pharmaconomy - routes of Homoeopathic drug administration.		
10.	Dispensing of medicines		
11.	Basics of adverse drug reactions and pharmaco – vigilance		
IV. Pharmacodynamics			
1.	Homoeopathic Pharmacodynamics	08	5 + 3 (1 SE + 1 SA)
2.	Drug Proving (related aphorism 105-145 of organon of medicine) and merits and de-merits of Drug Proving on Humans and Animals		
3.	Pharmacological study of drugs listed in Appendix –A		
V. Quality Control			
1.	Standardization of Homoeopathic medicines, raw materials and finished product	09	3 + 3 + 3 (3 SA)
2.	Good manufacturing practices; industrial pharmacy.		

3.	Homoeopathic pharmacopoeia laboratory – functions and activities , relating to quality control of drugs		
VI. Legislation pertaining to Pharmacy			
1.	The Drugs and Cosmetics Act, 1940 (23 of 1940) (in reaction to Homoeopathy)	11	5 + 3 + 3 (1 SE + 2 SA)
2.	Drugs and Cosmetics Rules, 1945 (in relation to Homoeopathy)		
3.	Poisons Act, 1919(12 of 1919)		
4.	The Narcotic Drugs and Psychotropic Substances Act, 1985 (61 of 1985)		
5.	Drugs and Magic Remedies (Objectionable Advertisement) Act, 1954 (21 of 1954)		
6.	Medicinal and Toilet Preparations (Excise Duties)Act, 1955 (16 of 1955)		
	Total		100

Question Paper Layout

Long Essay

: 2 X 10 = 20 Marks

1	Raw material: drug and vehicles
2	Homoeopathic pharmaceuticals

Short Essay

: 10 X 5 = 50 Marks

3	General concepts and orientation
4	
5	Raw material: drug and vehicles
6	
7	Homoeopathic pharmaceuticals
8	
9	
10	
11	Pharmacodynamics
12	Legislation pertaining to pharmacy

Short Answer : 10 X 3 = 30 Marks

13	
14	Raw material: drug and vehicles

15	Homoeopathic pharmaceuticals
16	
17	Pharmacodynamics
18	Quality control
19	
20	
21	Legislation pertaining to pharmacy
22	

Practical (including Viva): 100 Marks

No	Skill	Marks
1	Specimens: 2 Marks X 5 Specimen Identification: 1 Mark Description: 1 Mark	10
2	Spotters: 2 Marks X 5 Specimen Identification: 1 Mark Description	10
3	Experiment Procedural Skills: 5 Marks Practical Skills: 5 Marks Discussion: 5 Marks	15
4	Practical Record Book	10
5	Herbarium documentation	05
Viva voce		50

List of Specimen for identification

I. Vegetable Kingdom

1.	Aegle folia	14.	Holerrhena antidysentrica
2.	Anacardium orientale	15.	Hydrocotyle
3.	Andrographis penniculata	16.	Justisia adhatoda
4.	Calendula officinalis	17.	Lobelia inflata
5.	Cassia sophera	18.	Nux vomica
6.	Cinchonna off	19.	Ocimum
7.	Cocculus indicus	20.	Opium
8.	Coffea cruda	21.	Rauwolfia serpentine
9.	Colocynth citrallus	22.	Rheum
10.	Crocus sativa	23.	Saraca indica
11.	Croton tig	24.	Senna (cassia acutifolia)
12.	Cynodon dact	25.	Stramonium met
13.	Ficus religiosa	26.	Vinca minor

II. Chemicals or Minerals

1.	Acetic acid	7.	Carbo veg (charcoal)
2.	Alumina	8.	Graphites
3.	Argentum metallicum	9.	Natrum mur
4.	Argentum nitricum	10.	Phosphorus
5.	Arsenic alb	11.	Silicea
6.	Calcarea carb	12.	Sulphur

III. Animal Kingdom

1.	Apis mellifica	4.	Sepia
2.	Blatta orientalis	5.	Tarentula cubensis
3.	Formica rufa		

List of Spotters for Identification

Sl. no	Spotter	Sl No	Spotter
1	Crucible with lid	13	Hydrometer
2	Porcelain dish	14	Alcoholometer
3	Tripod stand with wire gauze	15	Lactometer
4	Pyknometer	16	Leather pad
5	Spatula	17	Desiccator
6	Ointment slab	18	Pipette
7	Percolator	19	Burette
8	Macerator	20	Funnel
9	Hot Air Oven	21	Conical flask
10	Water bath- Copper/Electric	22	Round/Flat bottom flask
11	Mortar	23	Volumetric flask
12	Pestle	24	Measuring cylinder

RECOMMENDED BOOKS

Basic Books

- Banerjee DD (2nd reprint edition, 2012). *Augmented Textbook of Homoeopathic Pharmacy*. B Jain Publishers, New Delhi
- Goel, Sumit (1st edition, 2002). *Art and Science of Homoeopathic Pharmacy*. Leo Enterprises, Ahmedabad
- Mandal & Mandal (3rd edition, 2012). *A Textbook of Homoeopathic Pharmacy*. New Central Book Agency, Kolkata

Reference Books

- Banerjee SK & Sinha N. (Reprint edition, 1993). *A Treatise on Homoeopathic Pharmacy*. B Jain Publishers, New Delhi
- Govt. of India, Ministry of Health & Family Welfare, New Delhi (1971 to 2006). *Homoeopathic Pharmacopoeia of India (1-9 Vol.)*
- Hughes R (Reprint edition, 1999). *A Manual of Pharmacodynamics*. B Jain Publishers, New Delhi
- Wartikar M J (1st reprint edition, 2002). *A Textbook of Homoeopathic Pharmacy*. Vidyarthi Griha Prakashan, Pune.

Organon Of Medicine with Homoeopathic Philosophy I BHMS-

Annual Objectives:

At the end of 1st year, the student shall be able to,

1. Outline the identity of homeopathic physician.
 2. Recall the basic principles of homeopathy.
 3. List the pioneers of homeopathy.
 4. State the contributions of C.V.Boenninghausen, J.T.Kent, C. Hering, Rajendra Lal Dutta, M.L.Sircar.
 5. Differentiate between inductive and deductive logic in the context of understanding of fundamentals of Homoeopathy
 6. Discuss patient asin the dimensions of a person, disposition, state of mind and body withreference to the study of disease process and its causes with homoeopathic approach in therapeutics
 7. Correlate the writings in Homoeopathy with Psychology.
 8. Correlate the laws of physics and chemistry with homeopathic principles.
1. Content distribution as per the list of topics, time allotted for each topic, distribution for ‘Must know’, ‘Desirable to know’ and ‘Nice to know’ and the probable weightage.

Course content

Theory: ---Time Allotted 35 Hours

Sl. no	Topic	Time	Table 1			Marks	Type of questions
			Must Know	Desirable to know	Nice to know		
1	Introductory lectures:	10 hrs				10	
1.1	Evolution of medical practice of the ancients:	1 hr					5/3
	Prehistoric medicine			Concept of disease and treatment			
	Greek medicine			Concept of disease and treatment of Hippocrates	Aristotle and his contributions		
	Chinese medicine				Concept of disease and treatment		
	Indian medicine				Concept of disease and treatment		
	Renaissance			Status of practice			

				of medicine	
	Tracing the empirical, rationalistic and vitalistic thoughts			empirical, rationalistic and vitalistic thoughts	
1.2	Short history of Hahnemann's life, his contributions and discovery of Homoeopathy, situation leading to discovery of Homoeopathy	2 hr	discovery of Homoeopathy, situation leading to discovery of Homoeopathy	Short history of Hahnemann's life, his contributions	10/5/3
1.3	Brief Life history and contributions of early pioneers of Homoeopathy like: C. V. Boenning-hausen J.T. Kent C. Hering RajendraLal Dutta M. L. Sircar			Conversion to Homoeopathy and contributions Conversion to Homoeopathy and contributions Conversion to Homoeopathy and contributions Conversion to Homoeopathy and contributions Conversion to Homoeopathy and contributions	5/3
1.4	History and Development of Homoeopathy in :	1 hr		Introduction of Homoeopathy to Govt. patronage	5/3

	India		India, Development of Homoeopathy in India	
	USA, European Countries			Introduction and development of Homoeopathy
1.5	Fundamental principles of Homoeopathy	2 hrs	Law of Similarars, Law of simplex, Law of minimum. Theory of Vital force. Theory of chronic Diseases. Doctrine of drug dynamisation Doctrine of Drug proving	10/5/3
1.6	Basic concept of Health, Disease and Cure: 2 hrs			
1.6.1	Health: Hahnemann's concept and modern concept		Health: Hahnemann's concept and modern concept	5/3
1.6.2	Disease: Hahnemann's concept and modern concept		Disease: Hahnemann's concept and modern concept	5/3
1.6.3	Cure : Hahnemann's concept and		Cure : Hahnemann's concept and	5/3

	modern concept		modern concept			
1.7	Different editions & construction of Hahnemann's Organon of Medicine	1 hr	6 th editions of Organon, year of publication, number of Aphorisms; Changes from the previous edition,	Translators.		5/3
2	Preliminary lectures on inductive and deductive logic(with reference to philosophy book of Stuart close chapter 3 i.e. Schools of philosophy and 16 i.e. The Logic of Homoeopathy)	10 hrs	Definition of Logic, Formal & Material Logic Utility of Logic, Introduction to Induction, Mill's methods of Induction Syllogism – Definition, nature and scope. Introduction to Deduction	Inductive process , Inductive leap Scientific Induction. Deductive process Mill's deductive method 3. Schools of philosophy 16. The Logic of Homoeopathy	15	10/5/3
3	Psychology: 7 hrs				15	10/5/3
3.1	Basics of Psychology		Definition of Psychology Scope of Psychology			3/5
3.2	Study of behavior and intelligence		Definition Intelligence I.Q and mental age Definition of behavior	Behaviourism Gestalt Psychology Psycho analysis	Structuralism Functionalism	3/5
3.3	Basic concepts of Sensations		Definition	Absolute threshold		3/5

			Difference threshold	
			Weber's law	
3.4	Emotion, Motivation, Personality Conflict, Anxiety, Frustration, Depression, Fear, Psychosomatic Manifestations	Emotion: Definition; Types Motivation: Definition of Need, drive and motive. Personality: Definition, theories, Types.	Motivation: Natural/ artificial. Needs/ goals Conflict : Definition and types Anxiety : Definition and types Frustrations: Definition and sources Depression: Fear: Definition. Psychosomatic manifestations definition and its understanding	3/5/10
3.5	Dreams		Dream concept and analysis	3
4	Aphorisms 1 to 28 from Organon of Medicine: 8 hrs			10
		Aph 1 – physicians mission, restoration of health, sick, cure Aph 2 – ideal cure, comprehensible principles	Theoretical medicine	10/5/3

Aph3- requisite knowledge of the physician		cito, tito, et jacunde
Knowledge of disease		
Knowledge of medicine		
Knowledge of application of	Obstacles to cure	
drug knowledge to the disease knowledge		
Judicious employment of medicine		
True practitioner of healing art		
Aph 4 – preserver of health		
Aph 5, 7, 8		Homoeopathic
Aph 6 - unprejudiced observer		Prophylaxis
Aph 7 – totality of symptoms	– causes of diseases – exciting, fundamental and maintaining causes	Physical constitution
Symptom.		Cessat causa
Totality of symptom&		cessat effect
Portrait of disease		
Aph 9 – 18 qualities of vital force, role of vital force in health, disease and cure, dynamic influence		Statement of Hufeland
Aph 26 - 28 –		

	nature's law	Materia peccans
	Aph 19-25	
	Examples of nature's law	
Homoeopathic		Homoeopathic For assignments
Prophylaxis		Prophylaxis

Note: There shall be no examination at the end of first BHMS

2. Blueprint of question paper, for each QP

Note: There shall be no examination at the end of first BHMS

However the topics learned in first year will be assessed at the end of second BHMS with following distribution of marks

Blue print will have to be indicated, as the questions will be drawn as per this template in the subsequent exam.

3. Question paper layout to show which question number will represent which chapter (s)

Note: There shall be no examination at the end of first BHMS

However the topics learned in first year will be assessed at the end of second BHMS with following distribution of marks

4. Scheme of examination with the distribution of marks as per the competency priority.

Note: There shall be no examination at the end of first BHMS

However the topics learned in first year will be assessed at the end of second BHMS with following distribution of marks

5. List of books classified as basic and advanced.

References

Basic:

- Hahnemann S (1995 year of publication). *Organon of Medicine Sixth Edition*. B. Jain publishers (P) limited, New Delhi
- Mangal SK (1998 year of publication). *Educational Psychology*. Tandon Publications, Ludhiana
- Stuart Close. *The Genius of Homoeopathy*. B. Jain publishers (P) limited, New Delhi
- Boericke G (1995 year of publication). *A comprehensive principles of homoeopathy*. World Homoeopathic links, New Delhi.

Advanced:

- Haehl R (1995 year of publication). *Samuel Hahnemann-His life & work*. B. Jain publishers (P) limited, New Delhi
 - B.K.Sarkar. *Organon Of Medicine (5th&6th edition) with commentary*. M.Bhattacharya&Co.Pvt.Ltd., Kolkata-700001
 - Munn NL (year of publication). *Introduction of Psychology*. Oxford & IBH publishing House, Bombay
 - Piot JH (year of publication). *Science of Logic*. Publisher, Place of Publication
- Dandapani S (year of publication). *A textbook of Advanced Educational Psychology*. Anmol Publications Pvt.Ltd. New Delhi.

Materia Medica

First BHMS

Annual Objectives

At the end of 1st year, the student shall be able to,

1. Define the terms 'Materia Medica' & 'Homoeopathic Materia Medica'.
2. Enumerate the sources of Homoeopathic Materia Medica.
3. Describe the basic concept for construction of various Materia Medica.
4. Explain the construction of Homoeopathic Materia Medica.
5. List the types of Homoeopathic Materia Medica.
6. Classify Homoeopathic Materia Medica
7. Discuss the scope & limitations of Homoeopathic Materia Medica.

Course content

Theory: ---30 Hours Table 1

SI No	Topic	Hou rs	Must Know	Desirable to know	Nice to know	Mark s
1	Basics of Materia Medica Definition of Materia Medica Basic concept of Materia Medica Basic construction of Materia Medica	6	Definition of Materia Medica Basic concept of Materia Medica	List types of Materia Medica Basic construction of Materia Medica- Comparison with Homoeopathic Materia Medica	Application of other Materia Medica.	11 marks
2	Definition of Homoeopathic Materia Medica.	2	Definition of Homoeopathic Materia Medica according to different authors	Difference between Homoeopathic Materia Medica & Other Materia Medica		3 marks
3	Basic concept and construction of Homoeopathic Materia Medica. -	8	Basic concept of Homoeopathic Materia Medica. Construction of Materia Medica. (Drug Proving, Selection of Drug substance, Provers, Evolution of Symptoms, Primary & Secondary action, Drug record)	Evolution of Homoeopathic Materia Medica	Various provers & history of proving of drugs.	10 marks

4	Classification of Homoeopathic Materia Medica.	6	Classification of Homoeopathic Materia Medica. Types of various Materia Medica.	Utility & their applications in various areas		11 marks
5	Sources of Homoeopathic Materia Medica	4	Human proving. Animal experimentation, clinical proving, doctrine of signature, toxicological source.	Chemical source	Empirical & plant source	10 marks
6	Scope and limitations of Homoeopathic Materia Medica	4	List the Scope and limitations of Homoeopathic Materia Medica			5 marks

Note: There shall be no examination at the end of first BHMS

The distribution of chapter wise marks in theory paper may be as follows:

Sl no	Topic	Marks	Source	Question Types
	1. Basic concept of Materia Medica	3	Table -1	1SA
	Basic construction of Materia Medica	5		1SE
	Definition of Materia Medica	3		1SA
	Definition of homoeopathic Materia Medica.	3		1SA
	Basic concept and construction of Materia Medica	10		1LE
	Classification of Homoeopathic Materia Medica	11		1SE, 2SA
	Sources of Homoeopathic Materia Medica	10		2SE
	Scope and limitation of Homoeopathic Materia Medica	5		1SE

References

Definition of Materia Medica:

- <http://www.medicinenet.com/script/main/art.asp?articlekey=26068>

Basics of Materia Medica:

- https://en.wikipedia.org/wiki/Materia_medica

Construction of Materia Medica:

- Mondal TC (2015). *Text book of Homoeopathic Materia Medica Vol 1. 2nd Ed.* Books & Allied (p) Ltd, Kolkata
- Mohanty, Niranjana (2009). *All in one Homoeopathic Materia Medica.* Jain Publishers (P) Limited, Delhi
- Rai, Azad (2008). *Scholar's Manual of Homoeopathic Materia Medica.* B. Jain Publishers. New Delhi

Forensic Medicine and Toxicology

II BHMS

Instructions;

- a) Medico legal examination in the statutory duty of every registered medical practitioner, whether he is in private practice or engaged in Government sector and in the present scenario of growing consumerism in the medical practice, the teaching of Forensic Medicine and Toxicology to the students is highly essential.
- b) This learning shall enable the students to be well informed about medico legal responsibility in the medical practice and he shall also be able to make observations and infer conclusions by logical deductions to set enquire on the right track in criminal matters and connected medico legal problems.
- c) The students shall also require knowledge of laws in relation to medical practice, medical negligence and codes of medical ethics and they shall also be capable of identification, diagnosis and treatment of the common poisonings in their acute and chronic state and also dealing with their medico legal aspects.
- d) For such purposes, students shall be taken to visit district courts and hospitals to observe court proceedings and post-mortem as per Annexure 'B'.

General Objectives

At the end of this course in the Forensic medicine & Toxicology students will be able to:

- Describe the medico legal framework in our country so as to relate the duties and responsibilities of homeopathic practitioner in this context.
- Demonstrate basic knowledge of relevant sections of penal code.
- Demonstrate awareness of inquest, legal and court procedures applicable to medico-legal and medical practice.
- Identify the medico-legal cases, carryout medical examination in such cases and prepare medico-legal report as per the legal provisions.
- Demonstrate awareness of code of ethics, duties & rights of medical practitioner, duties towards patients, society, punishment on violation of code of ethics, various forms of medical negligence, duties towards his / her professional colleagues.
- Diagnose the cases of acute & chronic poisoning and carry out medico legal duties.

Distribution of content

Forensic Medicine

Sl No	Topic	Hours	Must know	Desirable to know	Nice to know
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1	Introduction Medical law & ethics	4hrs	Definition of forensic medicine, medical jurisprudence, medical ethics, medical etiquette forensic pathology. Functions of CCH, meaning of penal erasure or professional death sentence , reasons for awarding it, warning notice, duties of medical practitioner, privileged communication meaning with examples, professional secrecy meaning with examples, definition of professional negligence or malpraxis, infamous conduct, contributory negligence, vicarious liability, objects of medical records, definition of consent, types of consent, informed consent, locoparentis, malingering	Provisions under The workmen’s Compensation Act 1923, COPRA, Transplantation of Human organs Act.. Rules of consent. definition & types of euthanasia,	History of forensic medicine in India. Medical indemnity insurance.
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2	Legal procedure	4hrs	Inquest definition, police inquest, magistrate inquest, courts of law & their powers, cognisable offences (as per S2(c) Cr. P. C) summons, definition of conduct money, medical evidence types, types of documentary evidence, dying declaration, chain of custody, common , expert, hostile witness, procedure of record of evidence.	Coroner's inquest, medical examiner system, exceptions to oral evidence, dying deposition, conduct & duties of doctor in the witness box.	Jury, Conduct & duties of doctor at the scene of crime.
3	Identification	7hrs	Definition of identification, need for identification, meaning of corpus delicti, identification data, determination of Race, cephalic index formula, need for determination of sex, sex chromatin/ barr body definition, intersex definition & types, differences between male skull & female skull, male & female pelvis, male & female mandible, male & female femur, differences between permanent & temporary teeth, determination of age from teeth, medico legal importance of age, rule of Haase, anthropometry, finger print definition, ridges types, techniques of	age determination on the basis of appearance of carpal bones, poroscopy definition,, stature determination, technique of superimposition, DNA finger printing, biological stains	Foot prints, lip prints, Changes in symphysis pubis & skull with age,

			<p>finger printing, types of finger print, medico legal importance of finger prints, scars- definition, characters, medicomlegal importance.</p> <p>Tattoo marks- definition dyes used, complication, ,duration, & erasure of tattoo & medico legal importance.</p> <p>Medico legal importance of eyes, hair & teeth</p> <p>Difference between animal & human hair, Medullary index of bones</p> <p>Age determination as a whole</p> <p>Age determination of foetus.</p>		
4	Death & its medico legal importance.	13hrs	<p>Death & its types, medico legal aspects of death, Brain death, modes of death, manner of death, classification of cause of death, signs of death- immediate, early, late & their medico legal importance, methods to preserve the dead body.</p> <p>Asphyxial death – asphyxia definition, causes & types of asphyxia, stages of asphyxia, signs of asphyxia, mechanism & pathophysiology of drowning, post mortem changes in asphyxia.</p>	<p>Definition of thanatology ,</p> <p>, Sexual asphyxia.</p> <p>Trench foot &</p>	<p>Presumption of death, presumption of Survivorship</p>

			<p>Hanging, strangulation, throttling – definition, types, causes of death, fatal period, post mortem appearance medico legal aspects.</p> <p>Definition of suffocation, smothering, gagging, overlaying, choking, traumatic asphyxia. post mortem changes, medico legal aspects</p> <p>Drowning – definition, types, causes of death, post mortem changes medico legal aspects</p> <p>Starvation – types, symptoms, fatal period, factors influencing the fatal period, cause of death, post mortem changes.</p>	<p>immersion foot, frost bite development, local effects, medico legal importance.</p> <p>Heat cramps, heat prostration.</p> <p>Heat stoke – clinical feature, post mortem changes.</p>	
5	Injury & its medico legal importance	8hrs	<p>Injury – definition, classification</p> <p>Abrasion – definition, types, age of abrasion, medico legal importance</p> <p>Contusions – definition, factors modifying size & shape, age of bruise, patterned bruising difference between true & artificial bruise, hypostasis & bruise, medico legal aspect</p> <p>Laceration – definition, types, characters, medico legal importance</p> <p>Incised wound – definition,</p>	<p>Ante mortem & post mortem abrasion, differential diagnosis.</p> <p>Ricochet bullet, dum dum bullet, tandem bullet</p>	<p>Firearm definition , parts of firearm & cartridge, constituent of primer &</p>

			<p>characters, medico legal importance, age of incised wound, chop wound. Stab wound – definition, characters, medico legal importance. Defence & self inflicted wound</p> <p>Fire arm injuries, character of entry wound in contact, close range, short range, long range distance, Difference between entrance & exit wound. Suicidal, homicidal, accidental firearm injuries.</p> <p>Regional injuries – types of fracture skull, coup & contre coup lesion, difference between drunkenness & concussed, lucid interval.</p> <p>Thermal injury – Burns – Wilsons degree of burns, rule of nine, causes of death, post mortem appearance, difference between ante mortem & post mortem burns, dry heat, moist heat differences</p>	<p>Post concussion syndrome, definition of axonal injury, Extra dural , sub dural, sub arachonoid, .intra cerebral haemorrhage – definition & causes</p> <p>Whip lash injury, railway spine, punch drunk injury, primary impact, secondary impact & secondary injuries in traffic accidents.</p> <p>Joule burns, flash or spark burns, filigree burns, curling ulcer, bone pearl.</p>	<p>Classification of firearms.’</p> <p>lightening</p>
6	Forensic psychiatry	3hrs	<p>Definition of delusion, delirium, illusion, hallucination, impulse, phobia & medico legal importance, classification of insanity, differences</p>	<p>Diagnosis of insanity, admission to mental asylum, Provision under The Mental health Act, Psychosis & neurosis differences,</p>	

			between real & feigned insanity, lucid interval, mental disorder & responsibility.		
7	Post mortem examination	2hrs	Autopsy – definition., objects, rules, types of skin incision, Exhumation	Evisceration techniques, external & internal examination of adult, foetus, skeletal remains. Negative & obscure autopsy	
8	Impotency & sterility	2hrs	Definition of impotence, sterility, Sterilization definition , artificial insemination definition, legal problems. surrogate motherhood, situation where question of impotency & sterility arises. Legitimacy & paternity.	Causes of impotence and sterility in male & female, test tube baby.	
9	Virginity, defloration, pregnancy & delivery	3hrs	Definition of virgin, defloration & differences, types of hymen, causes of rupture of hymen, medico legal aspects Superfecundation, superfoetation, Legitimacy definition, medico legal aspects of legitimacy.	Presumptive, probable & confirmatory signs, pseudocyesis, Signs of recent & remote delivery in living & dead.	
10	Abortion & infanticide	2hrs	Legal definition of abortion, criminal abortion, difference between natural & criminal abortion, Methods of procuring criminal abortion, Legal definition of infanticide, , criminal causes of	Precipitate labour , Causes of natural abortion,	Dead birth signs,

			death infant, viability of foetus, stillborn definition, Battered baby syndrome, Cot death.		
11	Sexual offences	2hrs	Define sexual offences, classify sexual offences, define Rape as per S375 & 376 IPC, define statutory Rape, Marital Rape, rape trauma syndrome, Define indecent assault as per S354, adultery, Paedophilia, paraphilia.	Examination of rape victim & accused, sexual perversion	

Toxicology

Sl No	Topic	Hours	Must know	Desirable to know	Nice to know
1	General consideration	5hrs	Definition of Toxicology, poison, clinical toxicology and antidote characters of ideal homicidal and suicidal poison, classification of poison as per the mode of action, routes of administration of poison, fate of poison in the body, routes of elimination of poison from the body, actions of poison, causes or factors modifying action of poisons, types of poisoning, diagnosis of poisoning in living and dead subjects,		

			reasons for failure to detect poison in the body, duties of medical practitioner in a case of suspected poisoning, treatment of poisoning, types of antidotes and its uses, universal antidote constituent and its uses, preservation of viscera & other materials & preservatives to be used.		
2	Clinical toxicology				
	Corrosive poisons- Inorganic, mineral acids & alkalis	3hrs	Sulphuric acid, hydrochloric acid, nitric acid, oxalic acid, carbolic acid & caustic alkalis- action, signs & symptoms, fatal dose, fatal period, causes of death, post mortem finding, circumstances or medico legal of poisoning.	Complications.	
3	Irritant poisons- Metallic poisons	3hrs	Arsenic, lead – action, signs & symptoms, fatal dose, fatal period, post mortem findings, circumstances of poisoning. Differentiate arsenic poisoning from cholera	physical & chemical properties of different arsenic & lead compounds. Signs & symptoms of iron poisoning. Mercury poisoning signs & symptoms & medico legal aspect	Treatment of arsenic , lead poisoning & mercury poisoning
	Inorganic non metallic	2hrs	Phosphorus- action, signs & symptom, fatal dose, fatal	types of phosphorus & where it is used.	Treatment of phosphorus poisoning.

			period, post mortem findings, circumstances of poisoning.		Iodine poisoning.
	Irritant mechanical poison		Powdered glass, needles, hair etc- signs & symptoms, post mortem findings, medico legal aspects. Treatment of mechanical poisoning.		
	Agricultural poisons	2hrs	Organophosphorus compounds action signs & symptoms, fatal period, diagnosis, causes of death, post mortem findings, prophylaxis, medico legal aspects.	Organochlorines – endrin, DDT – signs & symptoms, post mortem findings, circumstances of poisoning. Fluorides sources, signs & symptoms.	Treatment of organophosphorus & organochlorines poisoning. Carbamates (baygon)- signs & symptoms.
	Asphyxiants	1hr	Carbon monoxide & carbon dioxide – action sources, signs & symptoms, post mortem findings, circumstances of poisoning & treatment.		Hydrogen sulphide poisoning War gases.
	CNS Depressants	3hrs	Ethyl alcohol – action, signs & symptoms, fatal dose, fatal period, post mortem findings, medico legal aspects, hazards of alcohol, define drunkenness	Examination of a drunkard, widmark formula, methyl alcohol poisoning.	Common clinical syndromes in chronic alcoholic, treatment.
			Opium – alkaloids, action signs & symptoms, fatal dose, fatal period, diagnosis of post mortem findings, medico legal importance		Differential diagnosis Treatment

				Barbiturates – signs & symptoms, medico legal aspects.	
	Deliriant poisons	3hrs	Datura , Hyasymus & Belladonna- action, signs & symptoms, fatal dose, fatal period, post mortem findings, medico legal aspects,		Treatment of these poisoning.
			Cannabis Indica – action, sources or forms in which it is used, signs & symptoms, fatal dose, fatal period, circumstances of poisoning.		Treatment
			Cocaine – action, signs & symptom, fatal dose, fatal period, post-mortem findings, circumstances of poisoning.		Treatment
	Spinal poisons	1hr	Nux vomica – action, signs & symptoms, fatal dose, fatal period, difference between strchynine poisoning & tetanus, circumstances of poisoning,		Treatment of nux poisoning. Conium poisoning Curare poisoning.
	Cardiac poisons	2hrs	Digitalis, aconite, tobaccum -action, signs & symptoms, fatal dose, fatal period, post mortem findings, circumstances of poisoning. Nerium odorum (white & yellow) – signs & symptoms, fatal dose, fatal		Treatment of these poisoning.

			period, post mortem findings, circumstances of poisoning.		
	Organic irritants Animal poisons	2hrs	Differences between poisonous snakes from non poisonous snakes, action of venom, signs & symptoms, post mortem findings, circumstances of poisoning, first aid treatment	Differences between cobra, krait & viper. Snake venom characteristic features,	Treatment
			Scorpions – action, signs & symptoms, post mortem findings,	.Cantharides – signs & symptoms, post mortem findings, circumstances of poisoning. Bees & Wasps – signs & symptoms	Treatment
	Vegetable poisons	1hr	Ricinus communis, Abrus precator ius, capsicum , calotropis, anacardium – action, physical charecteristics, alkaloids, signs & symptoms, post mortem findings, circumstances of poisoning. Treatment in capsicum, anacardium, calotropis ricinus communis poisoning.	Ergot – signs & symptoms, post mortem findings.	Treatment abrus precatarius poisoning. Treatment in ergot poisoning.
	Miscellaneous poisons			Analgesics & anti pyretics poison – signs & symptoms, .food poison	Anti-histamines, anti-depressants tranquilisers poisons – signs & symptoms.

Forensic medicine - 50hrs
Toxicology – 28 hrs

Legislation relating to medical profession – 2hrs

Must know	Desirable to know
<ul style="list-style-type: none"> • The Homoeopathy Central Council Act 1973 (59 of 1973) • The Consumer Protection Act, 1986 (68 of 1986) • The Workmen’s compensation Act, 1923 (8 of 1923) • The Employees State Insurance Act, 1948 (34 of 1948) • The Medical termination of pregnancy Act, 1971 (34 of 1971) • The Indian Evidence Act, 1872 (1 of 1872) • The Personal Injuries Act, 1963 (37 of 1963) • The Homoeopathic Practitioners (Professional Conduct, Etiquette & Code of Ethics) regulations, 1982 • The Clinical Establishment (registration & Regulation) Act, 2010 (23 of 2010) 	<ul style="list-style-type: none"> • The Prohibition of Child Marriage Act, 2006 (6 of 2007) • The Drugs and Cosmetics Act, 1940 (23 of 1940) and the rules made therein • The Drugs and Magic Remedies (objectionable Advertisements) Act, 1954 (21 of 1954) • The Transplantation of Human Organs Act, 1994 (42 of 1994) • The Pre- natal Diagnostic Techniques (regulation & prevention of Misuse) Act, 1994 (57 of 1994) • The Drugs Control Act , 1950 (26 of 1950) • The Medicine & Toiletry Preparations (Excise Duties) Act, 1955 (16 of 1955) • The Indian Penal Code (45 of 1860) & the Criminal Procedure Code (2 of 1974) (relevant provision) • The persons with Disabilities (Equal Opportunities, Protection of Rights & Full participation), Act 1995 (1 of 1996) • The Mental Health Act, 1987 (14 of 1987)

Question Paper Blueprint

Sl No	Chapter	Marks
Forensic Medicine		69
1	Introduction, Forensic psychiatry, Acts	08
2	Legal procedures, post mortem examination	08
3	Abortion & infanticide	08
4	Impotence, virginity, Pregnancy. Delivery	08
5	Sexual offences	03
6	Death & its medico legal importance	10 / 05 / 03
7	Injury & its medico legal importance	10 / 05 / 03
8	Identification	10 / 05 / 03
Toxicology		31
Total marks		100

Types of question with marks.

Types of question	No. of question	Marks per question	Total
Long Essay	02	10	20
Short Essay	10	5	50
Short answers	10	3	30

Maximum Marks

100

Question paper layout

Long essay

1. Death & its medico legal importance, Identification, Injuries & its medico legal importance
2. Toxicology

Short essay

1. Legal procedure. Post mortem examination
2. Abortion. Infanticide
3. Impotence; virginity; pregnancy; delivery
4. Death and its medico legal importance
5. Injuries and their medico legal importance
6. Identification
7. Introduction; Forensic psychiatry; Acts
8. Toxicology
9. Toxicology
10. Toxicology

Short answers

1. Sexual offences,
2. Introduction; Forensic psychiatry; Acts
3. Abortion; infanticide
4. Legal procedure; Post mortem examination
5. Death and its medico legal importance
6. Injury and their medico legal importance
7. Identification
8. Impotence; virginity; pregnancy; delivery
9. Toxicology
10. Toxicology

Practical

Practical Examination Scheme:

Competencies to be tested –

- Identifying medico legal cases & its management.
- Issuing medical reports & medico- legal Reports.
- Diagnosing poisoning cases & medical & legal duties in such cases.

Objectives

The students will be able to –

- Prepare medico legal report of an injured person due to mechanical violence.
- Preserve and despatch of the exhibits in a suspected case of poisoning.
- Estimate the age of a person for medico legal purposes.
- Examine and draw opinion from examination of skeletal remains.
- Identify and draw medico-legal inferences from various specimens of injuries e.g. abrasion, contusion, etc.
- Identify and describe weapons commonly used and explain their medico-legal importance.
- Identify and draw medico-legal inference from common poisons.

1. Demonstration / Identification -

- Weapons - 5hrs
- Organic & inorganic plants – 5hrs
- Poisonous plants - 5hrs
- Charts, diagrams, photographs, models, x – ray films of medico legal importance – 5hrs
- Record of incidences reported in newspapers or magazines & their explanation of medico legal importance – 5hrs
- Attending demonstration of ten medico legal autopsies – 10hrs

2. Certificate writing – 5hrs

Must know	Desirable to know	Nice to know
Sickness certificate	Injury certificate	Rape certificate
Physical fitness certificate	Certificate for alcohol consumption	Chemical Analyser (Regional Forensic Laboratory)
Death certificate	Birth Certificate	
Post –mortem examination report		

Examination:**1. Theory:**

Number of papers	– 01
Forensic medicine	- 69 marks
Toxicology	- 31 marks
Total Marks	- 100

2. Practical - 50 marks**3. Viva voce or oral - 50 marks****Practical division of marks –**

Sl No	Skill	Marks
1	Practical record / journal	10
2	Certificate writing	5
3	Instruments- one spotter	5
4	Weapons - one spotter	5
5	Inorganic poisons - one spotter	5
6	Charts, diagrams, photographs, models, x-ray films of medico- legal importance	5
7	Poisonous plants / vegetable poisons - one spotter	5
8	Animal poisons - one spotter	5
9	Bones / Specimens - one spotter	5

Each spotter / specimen division of marks (where ever is applicable)

- Identification - 1mark
- Medico legal importance – 2marks
- Discussion - 2marks

Recommended Books

Basic –

1. Reddy KSN, Murthy OP (2015). *The essential of Forensic Medicine & Toxicology* (33rd Edition). Jaypee Brothers Medical Publishers. New Delhi.
2. Reddy KSN (2014). *Synopsis of Forensic Medicine & toxicology* (28th edition). Jaypee Brothers Medical Publishers. New Delhi
3. Parikh CK (2012). *Parikh's Text book of Medical Jurisprudence, Forensic Medicine & Toxicology* (6th edition). CBS Publishers & distributors. New Delhi.
4. Central Council of Homoeopathy, New Delhi. 1973. CCH Regulations and Acts, Govt. of India.

Reference –

1. Francis C. M. (2004). *Medical Ethics* (2nd edition), Jaypee Brothers, New Delhi.
2. Govindiah D (2009) *Colour Atlas of Forensic Medicine* (2nd edition) Jaypee brothers Medical Publishers. New Delhi.
3. Mathiharan. K & Amrit K Patnaik (2012). *Modi A Text book Of Medical Jurisprudence & Toxicology* (24th edition). Lexis Nexis Butterworth's India.
4. Mukherjee JB (2011). *J. B. Mukherjee's Forensic Medicine & Toxicology* (4th edition). Academic Publishers, Kolkata
5. Nagesh Kumar G. Rao (2007). *Practical Forensic medicine* (3rd edition). Jaypee brothers Medical Publishers. New Delhi.
6. Nagesh Kumar G. Rao (2010). *Text book of Forensic medicine & Toxicology* (2nd edition). Jaypee brothers Medical Publishers. New Delhi.
7. Pillay V. V (2013). *Modern Medical Toxicology* (4th edition). Jaypee brothers medical publishers. New Delhi.

Materia Medica II BHMS

Annual Objectives

At the end of 2nd year BHMS the student shall be able to

- Describe the science & philosophy of Homoeopathic Materia Medica
- List different ways of studying Homoeopathic Materia Medica
- List the scope & limitations of Homoeopathic Materia Medica
- Recall the remedy relationship of various drugs
- Compare & contrast the drugs listed below
- Describe the theory, history, concept & principles of Biochemic System of Medicine
- Recall the drug pictures of the medicines listed in Appendix – I

Course content

A) Theory – 100 Hours

Table – 2

No of Hours: 13

Sl No.	Topic	Hrs	Must Know	Desirable to know	Nice to know
1	Science and philosophy of Materia Medica	2Hrs	Describe the science and philosophy of Materia Medica		
2	Different ways of studying Homoeopathic Materia Medica	2 Hrs	Describe different ways of studying Homoeopathic Materia		

			Medica		
3	Scope and limitation of Homoeopathic Materia Medica	2 Hrs	List the Scope and limitations of Homoeopathic Materia Medica		
4	Concordance or remedy relationships	2 Hrs	Define the different terminologies related to remedy relationships with examples.		
5	Comparative Homoeopathic Materia Medica ,namely comparative study of symptoms,drug pictures, drug relationships	2 Hrs	Justify comparison of drugs.		
6	Theory of biochemic system of medicines, its history, concepts and principles according to Dr, Wilhelm H. Schuessler .Study of 12 biochemic medicines.(tissue remedies)	3 Hrs	Describe the Theory of biochemic system of medicines its principles according to Dr Wilhelm schuessler List 12 tissue salts	Compare & Contrast Homoeopathic & Biochemic system of medicine	Its history

Template – 1, for studying Major remedies

Sl No.	Topic		Must Know	Desirable to know	Nice to know
1	Drug list of Appendix – I		Sphere of action & pathogenesis Physical constitution, Thermals Ailments from/Causations Mental symptoms Characteristic symptoms Particular symptoms under the following headings - Location - Sensation - Modalities - Concomitants General Modalities	Common name, Family, Source, Alkaloids Clinical indications Comparison Relation ship	Part used, Preparation, Collection, Prover, Habitat Diathesis, Temperament Miasmatic Background Therapeutic application

(List of major remedies to be focused as per the template)

Appendix – I

The following Major drugs mentioned below shall be taught according to the Template – 1

No of Hours: 74

1	Aconite napellus	14	Calcarea sulphurica*	27	Ledum palustre
2	Aloes socotrina	15	Chamomilla	28	Lycopodium clavatum
3	Antimonium crudum	16	Cina	29	Natrum muriaticum*
4	Antimonium tartaricum	17	Cinchona officinalis	30	Natrum sulphuricum *
5	Apis mellifica	18	Colchicum autumnale	31	Nux vomica
6	Argentum nircum	19	Colocynthis	32	Pulsatilla
7	Arnica Montana	20	Dulcamara	33	Rhustoxicodendron
8	Arsenicum album	21	Ferrum phosphoricum*	34	Silicea *
9	Baptisia tictora	22	Gelesmium	35	Spongia tosta
10	Bryonia alba	23	Hepar sulphuricum	36	Sulphur
11	Calcarea carb	24	Ipecachuna	37	Thuja occidentalis
12	Calcarea flour*	25	Kali phosphoricum *		
13	Calcarea phosphoric*	26	Kali sulphuricum *		

Appendix – 1a

The following minor remedies will be learnt with focus on points given against the respective remedies

No. of Hours: 13

Sl no	Topic	Focus area
1	Aethusa cynapium	Baby, cholera, epilepsy
2	Allium cepa	Nasal symptoms, colic, Neuralgia, cough, Menses
3	Aurum tryphyllum	Respiratory
4	Bellis perrenis	Injuries & Characteristic symptoms
5	Calendula officinalis	Injuries
6	Drosera	Respiratory complaints
7	Euphrasia	Eye, fever, menses
8	Hypericum	Injuries, asthma
9	Kali muriaticum*	Catarrhal manifestations & Characteristic symptoms
10	Magnesium phosphoricum*	Colic, Neuralgia
11	Natrum phosphoricum*	Gastro intestinal & Characteristic symptoms
12	Ruta graveolens	Injuries , rectal & Characteristic symptoms
13	Symphytum officinale	Injuries & Characteristic symptoms

*These drugs are to be taught both as Biochemic & Homoeopathic drugs

B) Practicals (including clinical, tutorial & seminars :

Scheme of Examination:

i) Theory : 100 Marks., Duration : 3Hours

Distribution of Marks

i) Topics of First BHMS – 50 Marks

ii) Topics of Second BHMS – 50 Marks

Types of questions with marks

Type of Questions	No. of Questions	Marks per Question	Total Marks
Long Essays	02	10	20
Short Essays	10	05	50
Short Answers	10	03	30
Maximum Marks			100

Distribution of Marks

Topics	Marks	Question type	Source
From I BHMS	50	1 LE, 5 SE, 5 SA	Table 1
From II BHMS	50	1 LE, 5 SE, 5 SA	Table 2, appendix 1, 1a

Question paper Blueprint

The distribution of chapter wise marks in theory paper may be as follows:

Sl no	Topic	Marks	Source	Question Type
	Science and philosophy of Materia Medica	5	Table 2	1SE
	Different ways of studying Homoeopathic Materia Medica	5	Table 2	1SE
	Concordance or remedy relationships	3	Table 2	1SA
	Theory of biochemic system of medicines, its history, concepts and principles	5	Table 2	1SE
	Major remedies	20	Appendix 1	1LE, 2 SE
	Minor remedies	12	Appendix 1a	4SA

Question paper Layout:

I Long Essay

10X 2 = 20

1. From I BHMS topic.
2. From II BHMS topic.

II. Short Essay

5X 10 = 50

3. From I BHMS topic
4. From I BHMS topic
5. From I BHMS topic
6. From I BHMS topic
7. From I BHMS topic
8. From II BHMS topic
9. From II BHMS topic
10. From II BHMS topic
11. From II BHMS topic
12. From II BHMS topic

III. Short Answer

3X 10 = 30

13. From I BHMS topic
14. From I BHMS topic
15. From I BHMS topic
16. From I BHMS topic

17. From I BHMS topic
18. From II BHMS topic
19. From II BHMS topic
20. From II BHMS topic
21. From II BHMS topic
22. From II BHMS topic

Practicals including viva- voce or orals
Practicals: 50 Marks Max Time: 1 Hour
Distribution of marks:

Case	Case taking	Case analysis	Remedy selection	Total
Long	15	10	05	30
Short	05	03	02	10
Journal				10
Viva				50
Total				100

References

- Allen HC (2013). *Allens key note rearranged & classified with leading remedies of the materia medica & Bowel Nosodes*. 10th Ed. B. Jain publishers (P) limited, New Delhi
- Boericke & Dewey (2010 reprint). *The twelve tissue remedies of Schussler*. 6th Ed. B. Jain publishers (P) limited, Delhi
- Burt WH (1996 reprint). *Physiological Materia Medica*. 3rd Ed. B. Jain publishers (P) limited, New Delhi
- Dubey SK (2015 reprint). *Text book of Materia Medica*. Books & Allied (p) Ltd, Kolkata
- Kent JT (2014 reprint). *Lectures on Homoeopathic Materia Medica*. B. Jain publishers (P) limited, New Delhi
- Mondal TC (2015). *Text book of Homoeopathic Materia Medica Vol 1*. 2nd Ed. Books & Allied (p) Ltd, Kolkata
- Mohanty, Niranjana (2009). *All in one Homoeopathic Materia Medica*. Jain publishers (P) limited, Delhi
- Tyler ML (2012 reprint). *Homoeopathic drug pictures*. B. Jain publishers (P) limited, New Delhi

II BHMS

OBG

Annual Objectives

After completing the course of Gynaecology & Obstetrics in II BHMS the student will be able to -

- Recall the normal structure & function of female reproductive system
- Provide a holistic care for a healthy pregnancy, safe delivery and motherhood.

- Describe gynaecological problems and explain their therapeutic solutions.

At the end of the course, the learner will be able to –

1. Knowledge

- Outline the anatomy, physiology and patho-physiology of reproductive system
- Detect normal pregnancy, labor, puerperium and manage the problems related to them
- Identify common gynecological diseases and mention their therapeutic approach.
- During ANC check-up advise the mother about ‘HIGH-RISK’ pregnancy & complications
- Motivate couple to implement family planning measures

2. Skill

- Examine a pregnant woman, identify high risk pregnancies and make appropriate referrals
- Conduct normal delivery, recognize complications and provide post natal care
- Resuscitate new born and recognize congenital abnormalities

3. Communication

- Interact with the mother to remove FEAR & false notions about pregnancy
- Counsel a couple on the use of various available contraceptive devices

Distribution of Contents

Gynecology

Sl No	Chapter	Time	Must Know	Desirable to Know	Nice to Know	Weightage
1	Anatomy of female reproductive organs	2 HR	Internal genitalia, pelvic muscles, pelvic floor & fascia.		External genitalia, urinary bladder & rectum	5 marks
	Blood vessels, lymphatics of pelvic organs	1 HR			Pelvic blood vessels, lymphatics & Pelvic nerves	
	Congenital malformation of female genital organs	4 HR S	Uterine anomalies types, clinical features & diagnosis. Vaginal abnormalities types & clinical features.	Treatment of uterine anomalies.	Abnormality of ovary & fallopian-tube.	

	Development of genital organs & gonads.	2 HR S			Development of external & internal genitalia Development of ovary, sources & descent	
2	Puberty & menopause	6 HR S	Puberty- define morphological genital organ changes & Tanners' classification. Precocious puberty- define, causes. Menopause- define, clinical features diagnosis & treatment.	Diagnosis of precocious puberty. Delayed puberty define & causes. Abnormal menopause & artificial menopause		5 marks
	Neuro-endocrinology in relation to reproduction	2 HR S	Ovarian hormones & its functions. Importance of hypothalamo-pituitary ovarian axis.		Hypothalamus, pituitary, thyroid & adrenal functions	
	Menstruation	3 HR	Ovulation- define, causes & hormonal effects.	Definition, stages of menstruation. Formation & maturation of GF & corpus-luteum.	An-ovular menstruation	
3	Examination of gynecological patient	3 HR S	Detailed history, gynecological & vaginal examination. Indications of laparoscopy, hysteroscopy & culdoscopy.	Methods of examination of vagina & cervix. Colposcopy, x-ray, u/sonography indications.	Culdocentesis, endometrial sampling.	5 Marks
	Inter-sex	2 HR S		Etiology, clinical feature of female, male inter-sex.	Diagnosis & management of inter-sex.	

4	Uterine displacements	5 HR S	Define degrees causes, signs & symptoms of retroversion. Genital prolapse- etiology, types degrees of prolapse, clinical features, diagnosis & D/D.	Prevention and management of retroversion	Types of operation in prolapse. Supports of vagina. Fixed retroversion. Chronic-inversion define, causes types, C/F	10 marks
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Obstetrics

Sl No	Chapter	Time	Must Know	Desirable to Know	Nice to Know	Weightage
1.	Anatomy of reproductive organs	1 HR			External & internal genitalia, ureter pelvic muscles & fascia	5 marks totally
	Fundamentals of reproduction	2 HR S	Gametogenesis, Ovulation, fertilization, Implantation, Trophoblast, deciduas, chorion&chorio-villi			
	Placenta & membranes	2 HR S	Placental functions, amniotic fluid & amnion	Development, structure & placental circulation	Umbilical cord	
	The fetus				Fetal physiology & fetal circulation	
	Physiological changes during pregnancy	3 HR S	Genital organs, breasts, weight gain, cutaneous changes, hematological changes	Metabolic changes	Systemic changes	

	Endocrinology in relation to reproduction	1 HR S		Maturation of graafian follicle & maintenance of corpus luteum after fertilization Hormones of placenta	Changes of endocrinal gland during pregnancy	
	Fetus-in-utero	4 HR	Lie, presentation, Attitude, Denominator Position. Methods of obstetrics examination- abdominal with grips, engagement		Internal examination Ultra-sonography inferences Vaginal examination	
	Fetal skull & maternal pelvis	1 HR	Fetal skull-areas, sutures, fontanelles& diameters. Moulding, Caput-succedaneum. False & true pelvis. Pelvis-shape, plane & diameter		True pelvis-inclination, cavity & outlet. Mid-pelvis	
2	Diagnosis of pregnancy	6 HR S	1 st , 2 nd & 3 rd trimester— Subjective & Objective, D/D of pregnancy. Estimation of gestational age & EDD.	Chronological appearance of symptoms & sign of pregnancy		20 marks
	Antenatal care	4 HR S	Antenatal care— Aims, objective & advice	Minor ailments in pregnancy	Ante-natal assessment of fetal well-being Pre-conception visit, risk & education	

	Normal-labor	10 HR S	Definition of normal & abnormal labor. Causes of labor, Diagnosis of labor False & True labor pains. Stages of labor. Mechanism of labor	Events in 1 st , 2 nd & 3 rd stages of labor. Management of labor	Physiology of labor, clinical course of labor	
	Normal puerperium	6 HR S	Definition, involution of uterus. Lochia. Management of normal puerperium. Post-natal care.	Physiological changes at puerperium, lactation & its physiology. Management of ailments		
3.	Care of new born	5 HR S	New born infant—define physical features at birth & immediate care of new born Breast feeding advantage & contra-indications	Breast feeding difficulties	Infant feeding types & principles	5 marks
4	Vomiting in pregnancy	3 HR S	Simple vomiting & hyperemesis gravidarum—etiology, clinical course & management		Pathology & biochemical changes	5 marks
	Induction of labour	2 hrs	Definition, indications & contra-indications	Low rupture & high rupture of membranes indications	Methods of induction	

Organon of Medicine

SECOND BHMS

Annual objectives (for each year, if the subject is spread over different years)

Second BHMS- Organon of Medicine with Homoeopathic Philosophy

Annual Objectives:

At the end of 2nd year, the student shall be able to,

- Relate the person in wider dimensions to assess the factors responsible for genesis and maintenance of illness i.e. Fundamental cause, Predisposing Cause, Maintaining Cause and one-sided diseases.
 - Document the details of a case to by interacting with a patient and attendants.
 - Identify the evolution of illness in a person.
 - Recognise the characteristic features of a person and his / her illness.
 - Analyse the case to project what is to be cured and what is curable.
 - Classify and evaluate symptoms to develop the prescriptive totality.
 - Determine the susceptibility.
6. Content distribution as per the list of topics, time allotted for each topic, distribution for ‘Must know’, ‘Desirable to know’ and ‘Nice to know’ and the probable weightage.

II BHMS SYLLABUS

Total number of teaching Hours:

Theory: 160 hrs

Practicals/clinical/seminars/ tutorials: 60 hrs.

Theory course content.

1. Aphorisms 29 to 104 including footnotes of Organon of Medicine (5th & 6th Editions translated by R.E.Dudgeon & W Boericke)

Time allotted: 60 hrs

Marks allotted : 30 marks.

No.	Topic	Time allotted	Must Know	Desirable to know	Nice to know	Total marks allotted	Type of questions	
1.	Aphorisms 29 to 104 including footnotes of Organon of Medicine (5 th & 6 th Editions translated by R.E.Dudgeon & W Boericke): 60 hrs						30	
	Aph.29	2 hrs	Explanation of therapeutic law of nature / modus operandi of homoeopathic cure				5/3	
	Aph30,33	3 hrs	Conditional force – f.n.15					

		Disease	f.n.16		5/3
		Unconditional force-Medicine	f.n.17		
		Concept of susceptibility			
Aph34,35	3 hrs	Artificial morbific agent-medicine	f.n.19	f.n.18	3
		Natural morbific agent miasms		f.n.20-31	
Aph36-42	5hrs	What happens when 2 dissimilar diseases meet	f.n.32	f.n.33-37	
		3 possibilities with example.	f.n.38		10/5
Aph43-46	3 hrs	What happens when 2 similar disease meet			10/5/3
		Examples			
Aph47-51	2 hrs	Artificial morbific agent	Fn 56	F,n.58-59	5/3
		Happy –go-lucky			
		Operation (Aph51)			
Aph 52-62	10 hrs	Methods of treatment	Aph 61	f.n.60,64,65	5/3
		Allopathy	Brousseau's method		
		Homoeopathy	Blood letting		
		Heteropathy	Leeching		
		Isopathy (f.n.63)	Warm bath		
		Antipathy			
		Enatipathic	Rational medicine f.n.62		
		Palliation	Venesection		

Setons
 Emetics
 Purgatives
 Plasters
 Cauterization
 f.n.66

Aph.63 - 68	4 hrs	Primary and secondary action of drugs Def with examples Efficacy of Homeopathic System f.n. 67 suspended animation mongrel sect			10/5/3
Aph. 69	1hr	Hurtfulness of antipathic mode of treatment with examples	f.n. 68 f.n. 69 f.n. 70		5/3
Aph 70	2 hr	Summary of doctrinal part of organon of medicine			5/3
Aph. 71	1 hr	Three points necessary for cure			5/3
Aph. 72 - 82	12hrs	Hahnemann's classification of disease General survey of disease Acute	Hahnemann's conception of miasms Pathological consideration Hahnemann's theory of	f.n. 71-75	10/5/3

		Chronic	chronic diseases and bacteriology	
		Acute miasms	Psora	
			Sycosis --- characteristic	
			Syphilitic symptoms	
			f.n. 74,76,77,78,79, 80	
Aph. 83- 104	12 hrs	Case taking	Accessory symptoms (aph.95)	10/5/3
		Def.		
		Qualities of physician	Hypochondriac patient, indolent patient	
		Introduction to the physician for investigation and tracing the picture of disease		
		Out line of case taking		
		Investigation of acute and chronic diseases		
		Investigation of epidemic and sporadic		
		Genus epidemicus		
		Totality of symptoms		
		f.m. 80-90		

2. Homoeopathic philosophy: 100 hours 20

2.1 Chapters of philosophy books of J.T.Kent,

Stuart close & H.A.
 Roberts related to
 Aphorisms 29- to
 be changed to 104
 of organon of
 Medicine
 (1 -104)

20

a	J.T.Kent,	40hrs			
	Chapter 1. The sick.	2	Understanding the sick & sickness (aph.1)	Def. between Allopathic and homo. approach to sickness	5/3
	Chapter 2. The highest ideal of cure.	2	Ideal cure (aph. 2) Rapid Gentle Permanent restoration Comprehensible principles Hering's law of direction of cure		10/5/3
	Chapter 3. What the physician must perceive.	3		What is curable in disease? What is curative in medicine?	5
	Chapter 4. Fixed principles.	2		Fixed principles Law & government from centre	3

Chapter 5. Discrimination As To Maintaining External Causes And Surgical Cases.	2	Maintaining cause Surgical cause		3
Chapter 6. The Unprejudiced Observer	2	Unprejudiced Observer	Physical diagnosis	3
Chapter 7. Indisposition and the removal of their cause	1	Indisposition: Definition with examples		3
Chapter 8. Simple Substance.	4	Qualities of simple substance	What do you mean by Influx	10/5/3
Chapter 9. Disorder First In Vital Force.	2	Disorder first in VF		3
Chapter 10. Materialism in medicine	1		Materialism in medicine	3
Chapter 11, Sickness and cure in dynamic plane.	2	Role of VF in health diseases & cure		10/5/3
Chapter 12 The removal of totality of symptoms is the removal of the cause		Removal of cause		
Chapter 13. The Law Of Similar.	1		Law of similar	5

Chapter 14. Susceptibility.	3	Susceptibility Influx		10/5/3
Chapter 15. Protection From Sickness.	2	Protection from sickness		5
Chapter 16. Oversensitive Patients	2	Oversensitive Patients	Mongrelism	5/3
Chapter 17. The Science And The Art.	2	Science – Knowledge of diseases Knowledge of medicine (aph. 71) Art – Application	The Science & the art Purpose of diagnosis. Acute miasm & chronic miasm Pathognomic symptom	3
Chapter 23, 24, 25, 26. The Examination Of The Patient	3	Examination of the patient		5/3
Chapter 27. Record Keeping	1		Record keeping (aph. 103, 105)	5/3
Chapter 31. Characteristics	1		Specific remedy	3
Chapter 32, 33. The Value Of Symptoms	2	The value of symptoms: Nature of Symptom Grades of symptom		5/3
b Stuart Close	15 hrs			
Chapter 8: General Pathology Of Homeopathy		Theory of chronic disease	Doctrine of Latency Metastasis	Toxicol ogical theory of disease

	5	Relation of bacteriology of Homoeopathy			5
				Theory of bacteriology	
				acc to modern medicine.	
				Idiosyncrasy and drug disease	
				Law of cause and effect.	
Chapter 9: Cure and Recovery		Relation of cure to disease.	End products of disease (ultimates)		
	3	The object of treatment	Requirements of cure		
		Difference between cure and recovery.			10/5/3
		Direction of cure			
Chapter11: Symptomatology	4	Definition & types of Symptoms	Day Book Record keeping	BTPB	
		Totality of symptoms			10/5/3
		Types of modalities			
		Types of aggravation			
Chapter12: Examination of the Patient			Understanding the method of conducting an examination of case, as to discover the	Clinical History	

		3		symptoms for use in prescribing.	5
c	H.A.Roberts	25 hrs			
	Chapter 3. Vital force		What is life? Trinity of life	Effect of suppressive treatment in disease	5
		2	cause of disease		
	Chapter4. Vital force as expressed in functions.	3	Role of vital force in health, disease, cure and recovery	Definition of health, disease, dyscrasia	10/5/3
	Chapter5. Vital energy in its universal application.	2	Concept of vital energy Influence of vital energy on growth	Mathematical law of least action	3
	Chapter6. Homoeopathy and the fundamental laws.	2	Law of cure, action, quality and dose ,quantity Law of disease development		5
	Chapter8. Taking the case.	3		Difference between acute and chronic case	5
	Chapter9. Analysis of the case.	3	Types of symptoms Totality Genus epidemicus	Importance of different types of symptoms	5
	Chapter11. The chief complaint and the auxiliary symptoms in their relation to the case.	2	Importance of chief complaints and auxiliary symptoms	Key note prescribing	5/3
	Chapter17. Susceptibility.	3	Susceptibility in health disease and cure Concept of vaccum	Susceptibility and posology	10/5/3

Chapter18. Suppression.	2	Ways of suppression and definition Homoeopathy and suppression		5/3
Chapter19. The law of palliation	1	Definition and types of palliation Importance of homoeopathic palliation	Clinical cases	5/3
Chapter20. Temperaments.	2	Definition and types	Can we depend on tempera ments	5/3
2.2 Symptomatology: Details regarding Symptomatology are to be comprehended by referring to the relevant aphorisms of Organon of Medicine and chapters of the books on Homoeopathic Philosophy.	4	Classification& types of symptoms Value of symptoms		5/3
2.3 Causations: Thorough comprehension of the evolution of diseases, taking into account pre disposing, fundamental, exciting and	4	Evolution of disease, classification of disease Fundamental,		5/3

	maintaining causes.		exciting and maintaining cause – aph 5 and 7	
	Case Taking		Hahnemanns case taking aph-83-104	Case taking- stuart close,H A Roberts and J T Kent
2.4	The purpose of Homoeopathic case taking is not merely collection of symptoms, but comprehending the patient as a whole with correct appreciation of the factors responsible for genesis and maintenance of illness. Hahnemann's concept & method of case taking as stated in Organon of Medicine is to be stressed upon.	6		
	Case processing: This includes,		Analysis of symptoms	Miasmatic diagnosis
2.5	i. Analysis of symptoms		Evaluation of symptoms	
	ii. Evaluation of symptoms	6	Totality of symptoms	
	iii. Miasmatic diagnosis			5/3
	iv. Totality of symptoms.			

Practicals: ---Time Allotted 60 Hours

Table 2a

The learner will be able to –

- Interact with patient and attendants to record the case history.
- Sift symptoms in the case.
- Analyse the case to categorise as per Hahnemann's Classification of Diseases.
- Indicate the status of case as per Dake's Hypothesis.
- Analyse the symptoms in relation to the disease diagnosis.
- Evaluate symptoms as per the School of Philosophy.

- Develop the prescriptive totality.

Sl. No.	TOPIC	Time	Must Know	Desirable to Know	Nice to Know	Marks
1.	Case taking	15	Case taking			20
			<ul style="list-style-type: none"> • Procedure • extent and clarity • sequence 			10
						5
						5
2.	Case processing	15	Analysis of symptoms			15
			Evaluation of symptoms			5
			Totality of symptoms			5
						5
3.	Record/Journal(10 acute & 10 chronic cases)	20				5
4.	Case discussion	10	Case presentation			10

7. Blueprint of question paper, for each QP

Blue print of Question paper:

Theory Paper (No of papers 01)

1. Max Marks:100 marks
2. From 1st year syllabus: 40 marks
 - a. Logic - 15 marks
 - b. Psychology - 15 marks
 - c. Fundamentals of homoeopathy and aphorisms – 10 marks
3. From 2nd year syllabus: 60 marks
 - a. Fundamentals of homoeopathy and aphorisms – 40 marks
 - b. Homoeopathic Philosophy – 20marks

Clarify the question distribution from each component. Which chapter will get 10 marks question, which topics will be for 5 and 3 marks.

8. Question paper layout to show which question number will represent which chapter (s)

Question paper Layout:
Specify the topics also for each question

QP Code

I Long Essay

10X 2 = 20

1. From I BHMS topic.-life history of Hahnemann/Logic/ psychology/ fundamental principles/ aphorism1 to 28
2. From II BHMS topic.- Aphorism-29-104(36-46/63-68/72-82/83-104)

II. Short Essay

5X 10 = 50

3. From I BHMS topic-Aphorism-1 to28/basic concepts/ introductory lectures
4. From I BHMS topic-Fundamental principles/basic concepts/ different editions
5. From I BHMS topic-Logic/ psychology/aphorisms 1to28.
6. From I BHMS topic-Logic/ psychology/introductory lectures
7. From II BHMS topic-Aphorisms-29-70
8. From II BHMS topic- Aphorisms-71-82
9. From II BHMS topic- Lectures from-Kent
10. From II BHMS topic- Lectures from-Stuart close
11. From II BHMS topic- Lectures from-Roberts
12. From II BHMS topic- Aphorism83-104

III. Short Answer

3X 10 = 30

13. From I BHMS topic- Aphorism-1 to28/basic concepts/ introductory lectures
14. From I BHMS topic- Fundamental principles/basic concepts/ different editions
15. From I BHMS topic- Logic/ psychology/aphorisms 1to28.
16. From II BHMS topic- Aphorisms-29-70
17. From II BHMS topic-Aphorism-71-82
18. From II BHMS topic-Aphorism-71-82
19. From II BHMS topic-Aphorism-83-104
20. From II BHMS topic- Aphorism-83-104
21. From II BHMS topic- Lectures from-Kent/ Roberts
22. From II BHMS topic- Lectures from-Kent/ Close

Practicals including viva- voce or orals
Practicals: 50 Marks Max Time: 1 Hour

Distribution of marks:

Case	Case taking	Case analysis	Case presentation	Total
Long	15	10	05	30
Short	05	03	02	10
Journal				10
Viva				50
Total				100

9. List of books classified as basic and advanced.

References- II BHMS

Basic:

- Samuel Hahnemann. *Organon of Medicine Sixth Edition*. B. Jain publishers (P) limited, New Delhi
- Garth Boericke. *A Comprehensive principles of Homoeopathy*. World Homoeopathic links, Post Box 5775, New Delhi.
- J.T.Kent. *Lectures on Homoeopathic Philosophy*. B. Jain publishers (P) limited, New Delhi
- H.A.Roberts. *Principles and Practice of Homoeopathy*. B. Jain publishers (P) limited, New Delhi
- Stuart Close. *The Genius of Homoeopathy*. B. Jain publishers (P) limited, New Delhi

Advanced:

- B.K.Sarkar. *Organon Of Medicine (5th&6th edition) with commentary*. M.Bhattacharya&Co.Pvt.Ltd., Kolkata-700001
- Elizabeth Hubbard. *A brief study course in Homoeopathy*. B. Jain publishers (P) limited, New Delhi

Pathology

II BHMS

Introduction:

a) Pathology & microbiology shall be taught in relation to the concept of miasms as evolved by Samuel Hahnemann & further developed by J T Kent, H.A. Robert, J.H. Allen & other stalwarts, with due reference to Koch's postulate, correlation with immunity, susceptibility & thereby emphasizing homoeopathic concept of evolution of disease & cure;

b) Focus will be given on the following points, namely:-

(1) Pathology in relation with Homoeopathy Materia Medica

(2) Correlation of miasms & pathology

(3) Characteristic expressions of each miasm

(4) Classification of symptoms & diseases according to pathology

(5) Pathological findings of diseases; their interpretation, correlation & usage in the management of patients under homoeopathic treatment

(c) To summarise, all the topics in the general and systemic pathology and microbiology should be correlated, at each juncture, with homoeopathic principles so that the importance of pathology in Homoeopathic system could be understood by the students

Objectives

The students of BHMS shall demonstrate the basics of knowledge, skills and attitudes that are relevant to the principles of pathology and microbiology, so as to integrate these essentials to perform as general homeopathic practitioner.

(A) Knowledge

At the end of course of study in Pathology and Microbiology, students will be able to:

1. Demonstrate knowledge and understanding of the scientific basis of diseases.
2. Explain cellular aspects of pathological processes

3. Develop a comprehensive knowledge of the role of susceptibility and immunity in evolution of disease
4. Correlate the knowledge of aetiology, pathogenesis, structural and functional expression of disease in relation to homeopathic concept of morbidity.
5. Recall the methods of disinfection and sterilisation relevant to prevention and control of community acquired infections and hospital infections
6. Recommend appropriate laboratory investigations for the diagnosis of common clinical conditions

(B)Skills

At the end of course of study in Pathology and Microbiology, students will be able to:

1. Use the correct method of collecting and handling of clinical samples from patients for use in the laboratory.
2. Perform the basic clinico-pathologic procedures as per NABL guidelines
3. Interpret pathological, microbiological investigations for prophylactic and therapeutic purposes

Distribution of learning content

A. Theory:

(a)General pathology:50 hours

Sl no	Topic	Hou rs allotted	Must know	Desirable to know	Nice to know
1	Cell injury	8 hrs	Cell injury-Definition, acquired causes Hydropic change: Definition, aetiology, pathogenesis, morphology Hyaline change: Intracellular and extracellular hyaline examples Mucoïd change: Epithelial and connective tissue mucin examples	Pathogenesis of ischaemic and hypoxic injury Effects of radiation: Mechanism of cell injury by ionizing radiation Pathogenesis of Ischaemia-Reperfusion injury	

			<p>Necrosis: Definition, Types, Aetiology, Morphology</p> <p>Apoptosis in physiologic and pathologic processes</p> <p>Gangrene: Definition</p> <p>Dry gangrene & Wet gangrene: Aetiology, Morphologic features</p> <p>Fatty change in liver: Aetiology, Pathogenesis, Morphologic features</p> <p>Pathologic calcification: Dystrophic calcification: Two types of causes, pathogenesis</p> <p>Metastatic calcification: Aetiology, pathogenesis, sites of metastatic calcification</p>	<p>Gas gangrene: Aetiology, Morphologic features</p> <p>Differences between dystrophic and metastatic calcification</p>	
	Cellular adaptation	2 hrs	<p>Atrophy, Hyperplasia, Hypertrophy, Metaplasia: Definition, Types with examples</p> <p>Dysplasia: Definition</p> <p>Cytologic changes with common examples</p>	Differences between Metaplasia and Dysplasia	
2.	Inflammation and repair	12 hrs	<p>Inflammation: Definition, Causes, Signs, Types</p> <p>Acute inflammation: Vascular events</p> <p>Cellular events</p> <p>Chemical mediators of inflammation: List of chemical mediators, Source, Functions of mediators</p> <p>Inflammatory cells: Functions</p> <p>Factors determining variation in inflammatory</p>	<p>Systemic effects of acute inflammation</p> <p>Pyrexia: Definition,</p>	

			<p>response</p> <p>Morphologic types of acute inflammation with examples</p> <p>Outcome of acute inflammation</p> <p>Chronic inflammation: Definition, Causes, General features, Types</p> <p>Giant cells: Types, Examples</p> <p>Granuloma: Definition, Pathogenesis, description</p> <p>Regeneration: Cell cycle and different types of cells</p> <p>Healing & Repair: Definition</p> <p>Repair: Processes involved in repair</p> <p>Wound healing: Healing by First intention and Second intention</p>	<p>Pathogenesis</p> <p>Differences between Primary and Secondary union of wounds</p> <p>Factors influencing wound healing</p> <p>Complications of wound healing</p> <p>Healing of Fracture, Nervous tissue, Muscle, Mucosal surface, Solid epithelial organ</p>	
3.	Thrombosis	2 hrs	<p>Thrombosis: Definition, Pathogenesis</p> <p>Morphologic features of thrombi</p> <p>Origin of thrombi-Cardiac, Arterial, Venous with examples</p> <p>Fate of thrombus</p>	<p>Differences between Arterial and Venous thrombi</p>	
	Embolism	1 hr	<p>Embolism: Definition, Types</p> <p>Sources of arterial thromboembolism</p> <p>Sources of venous thromboembolism</p>	<p>Pulmonary thromboembolism: Definition, Aetiology, consequences</p>	<p>Fat embolism, Air embolism, Decompression sickness, Amniotic fluid embolism, Atheroembolism, Tumour embolism</p>

4.	Oedema	2 hrs	Oedema: Definition, Types of oedema Pathogenesis of oedema with examples of oedema by each mechanism	Differences between transudate and exudates Renal oedema Differences between Nephrotic oedema and Nephritic oedema Cardiac oedema: Pathogenesis	Pulmonary oedema, Cerebral oedema
5.	Disorders of metabolism	2hr	Disorders of bilirubin metabolism Disorders of calcium metabolism	Disorder of purine metabolism	Disorders of carbohydrate metabolism Disorders of lipid metabolism
6.	Ischaemia	1hr	Ischaemia: Definition, Effects, Aetiology, Factors determining severity of ischaemic injury		
7.	Haemorrhage	1hr	Haemorrhage: Definition, Aetiology, Effect of haemorrhage	Definitions of relevant terms used	
8.	Shock	2 hrs	Shock: Definition, Classification and Aetiology General pathogenesis of shock Stages of shock: Pathogenesis, effects	Clinical features of shock Complications of shock	Morphologic features of shock in organs
9.	Hyperaemia	2hrs	Active hyperaemia: Definition, Examples Passive hyperaemia: Local venous congestion, Systemic venous congestion		Morphology of CVC of organs: Liver, Lungs, Spleen, Kidney
10.	Infarction	2 hrs	Infarction: Definition, Aetiology, Types Pathogenesis of process of infarction Gross and microscopic appearance of infarcts		Infarcts of different organs
11.	Amyloidosis	1 hr	Amyloidosis :Definition, Classification,	Pathogenesis of amyloidosis	

12.	Hyperlipidaemia and lipidosis	1 hr	Major classes of lipoproteins and their role		Lipidosis: Gaucher's disease etc.,
13.	Disorders of pigmentation		List of endogenous pigments and exogenous pigments		Disorders of melanin pigmentation Inhaled pigments, Ingested pigments, Injected pigments Haemosiderosis Porphyrias
14.	Neoplasia	10 hrs	Neoplasia: Definition, Basic components of neoplasia, Classification of tumours Characteristics of tumours Spread of tumours: Local invasion Metastasis: List routes of metastasis Grading of cancer: Definition, Broder's grading Staging of cancer: Definition, TNM staging Carcinogenesis: Definition, Types Basic concept of molecular pathogenesis of cancer	Differences between Benign and malignant tumours Lymphatic spread Haematogenous spread: common sites Examples of transcoelomic spread Predisposing epidemiological factors: Pathological diagnosis of cancer: Exfoliative cytology, FNAC	Mechanism and biology of invasion and metastasis Chemical carcinogenesis Physical carcinogenesis Viral carcinogenesis Tumour-Host inter-relationship Effect of tumour on host
15.	Immunity, Infection and Hospital infection	1 hour	Classification of diseases of immune system Infection: <i>Refer to infection component in the same syllabus</i>	Hospital infection: Definition, Sources, Aetiology, Routes of transmission, Common hospital acquired infections	

Sl	Topic	Hou	Must know	Desirable to know	Nice to know
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No		rs			
(b) Systemic pathology: 50 Hrs					
1.	Mal-nutrition and deficiency diseases	4 hrs	Protein-Energy Malnutrition: Definition Conditions resulting from vitamin deficiencies	Contrasting features of Kwashiokar and Marasmus	
2.	Diseases of cardiovascular system	5 hrs	Heart failure :Definition, Aetiology, Types Ischaemic heart disease: Definition Aetiopathogenesis Angina pectoris-Definition, Clinical patterns Acute Myocardial Infarction- Aetiopathogenesis Rheumatic fever: Definition Bacterial endocarditis: Definition, Aetiology, Clinical forms Pericarditis: Definition, Classification	Causes of right-sided & left sided heart failure	Classifications of congenital heart diseases
3.	Diseases of blood vessels and lymphatics	3 hrs	Atherosclerosis: Definition, Risk factors Varicosities: Definition, Aetiology Thrombophlebitis: Definition, clinical effects Lymphangitis: Definition, Types Lymphoedema: Definition, Types, aetiology	Aneurysms: Definition, Classification	Pathogenesis of atherosclerosis
4.	Diseases of kidney and lower urinary tract	6 hrs	Acute renal failure: Definition, Aetiopathogenesis Chronic renal failure: Definition, Aetiopathogenesis Glomerular diseases: Definition, Clinicopathologic	Clinical features of acute and chronic renal failure Acute Post-Streptococcal GN-Aetiopathogenesis Chronic pyelonephritis: Definition, types Hypertension Aetiology,	Cystic diseases of kidney Specific types of glomerular diseases Acute tubular necrosis diseases: Thrombotic

			<p>classification,</p> <p>Acute nephritic syndrome and Nephrotic syndrome: Causes, Features</p> <p>Acute pyelonephritis: Definition, Aetiopathogenesis</p> <p>Renal vascular diseases: Hypertension-Definition, Clinical and ,Aetiological classifications</p> <p>Nephrolithiasis: Definition, types of urinary calculi</p>	Pathogenesis	microangiopathy, Renal cortical Hydronephrosis: Definition, aetiology
5.	Diseases of male reproductive system and prostate	1 hr	<p>Definitions of Orchitis, Epididymitis, Balanoposthitis</p> <p>Prostatitis: Definition, Types</p> <p>Chronic prostatitis: Types</p>	Benign nodular hyperplasia: Morphology	
6.	Diseases of the female genitalia and breast	2 hrs	<p>Definition of Bartholin's adenitis</p> <p>Vaginitis: Causes</p> <p>Cervicitis: Types</p> <p>Definition of Salpingitis, Pelvic Inflammatory Disease</p> <p>Acute mastitis and Breast abscess-pathogenesis</p>	<p>Endometritis and Myometritis: Types and Causes</p> <p>Fibroadenoma: Morphology</p>	
7.	Diseases of Eye, ENT and Neck	1 hr	<p>Definition of Stye, Chalazion, Endophthalmitis, Conjunctivitis</p> <p>Ear: Otitis media- Definition, Types</p> <p>Definitions of Acute rhinitis, Allergic rhinitis, Sinusitis, Tonsillitis, Quinsy</p>		

8.	Diseases of the respiratory system	6 hrs	<p>Pneumonia: Definition, Pathogenesis, Classification</p> <p>Bronchopneumonia and Chronic bronchitis: Definition, Aetiology</p> <p>Emphysema: Definition, Types</p> <p>Bronchial asthma :Definition, types</p> <p>Bronchiectasis :Definition, types</p> <p>Pleuritis or pleurisy: Definition, Types</p>	<p>Hydrothorax, Haemothorax, Chylothorax</p> <p>Pneumothorax: Definition, Types, Aetiology</p> <p>Lung abscess: Definition, Types, Aetiopathogenesis</p>	Acute respiratory distress syndrome
9.	Diseases of oral cavity and salivary glands	1 hr	<p>Stomatitis: Definition, Aetiology</p> <p>Glossitis: Definition, Types</p> <p>Sialadenitis: Definition, Types, aetiology</p>		
10.	Diseases of G.I system	4 hrs	<p>Acute gastritis: Definition, Aetiopathogenesis</p> <p>Chronic gastritis: Clinicopathologic classification</p> <p>Duodenal ulcer and gastric ulcer – Pathogenesis</p> <p>Appendicitis: Definition, Aetiopathogenesis,</p> <p>Peritonitis: Aetiology</p>	Differences between duodenal ulcer and gastric ulcer in terms of pathologic changes, clinical features	<p>Intestinal obstruction: Causes</p> <p>Intussusception: Definition</p> <p>Volvulus: Definition</p> <p>Distinguishing features of Crohn's disease and Ulcerative Colitis</p>
11.	Diseases of liver, gall bladder and biliary ducts	4 hrs	<p>Pathophysiologic classification of jaundice</p> <p>Alcoholic liver disease: Outline of ethanol metabolism</p> <p>Cholangitis: Definition, Types</p> <p>Cholecystitis: Definition, Types, Aetiopathogenesis</p>	<p>Portal venous obstruction: Causes</p> <p>Acute hepatitis: Phases, Microscopic appearance</p> <p>Cirrhosis: Pathogenesis, Classification</p>	Portal hypertension
12.	Diseases of pancreas [including	2 hrs	<p>Definition-Acute and chronic pancreatitis</p> <p>Diabetes mellitus:</p>	Acute and chronic pancreatitis: Aetiopathogenesis	Complications of diabetes mellitus

	diabetes mellitus]		Definition, Classification	Diabetes mellitus: Pathogenesis of type I and type II DM	
13.	Diseases of haemopoetic system, bone marrow and blood	4 hrs	Anaemia: Definition, Classification Iron deficiency anaemia: Aetiology, Pathogenesis Haemolytic anaemia: Classification Acute myeloid leukaemia: Classification, Thrombocytopenia: Definition, Aetiology	Iron deficiency anaemia: Laboratory findings Laboratory evaluation of haemolysis Acute myeloid leukaemia and chronic myeloid leukaemia: Laboratory findings	Sideroblastic anaemia Megaloblastic anaemia Pernicious anaemia Acquired haemolytic anaemia Thalassaemias Aplastic anaemia
14.	Diseases of glands	2 hrs	Thyrotoxicosis: Aetiology, Cretinism: Aetiopathogenesis, Goiter: Pathogenesis, Aetiology		Hypopituitarism Hyperpituitarism
15.	Diseases of the skin, soft tissue and nervous system	1 hr	Dermatoses: Various types with common examples Acute pyogenic meningitis: Definition	Squamous cell carcinoma: Predisposing condition Basal cell carcinoma: Gross appearance Acute pyogenic meningitis: Aetiopathogenesis	Viral meningitis and tuberculous meningitis Bacterial and viral encephalitis
17.	Diseases of musculo-skeletal system	3 hrs	Pyogenic osteomyelitis: Sequence of pathologic changes Osteoporosis: Definition, Types Osteoarthritis: Definition, Types	Rheumatoid arthritis: Aetiopathogenesis Osteosarcoma: Types Gout: Types, Pathogenesis	Myasthenia gravis, Muscular dystrophies
18.	Leprosy	1 hr		Classification of leprosy Mode of transmission	Differences between lepromatous and tuberculoid
(c)	Microbiology 45 hrs				
(I)	General topics:				

1.	Introduction	5 hrs	Differentiating features of eukaryotes and prokaryotes Natural history of microbial diseases		
2.	History and scope of medical microbiology				Contributions of Antony von Leeuwenhoek, Louis Pasteur, Robert Koch, Paul Ehrlich in microbiology
3.	Normal bacterial flora		Anatomical location and role of normal bacterial flora		
4.	Pathogenicity of micro-organisms		<i>As per the bacteria listed in bacteriology component in the same syllabus</i>		
5.	Diagnostic microbiology		Smear: Definition, steps in preparing a smear Types of stains Differential staining-Procedures, Principles		
II	Immunology: 10 hrs				
1.	Development of immune system		T cell maturation B cell maturation		
2.	The innate immune system		Mechanisms of innate immunity		
3.	Non-specific defense of the host		Innate immunity: Types	Host factors in innate immunity	
4.	Acquired immunity		Active immunity: Definition, Types, Mechanism Natural active immunity Artificial active immunity: Vaccines Passive immunity: Definition, Types	Differences between Active and Passive immunity Local immunity Herd immunity	

5.	Cells of immune system		Natural killer cells- Functions in immune response Functions of Neutrophils, Eosinophils, Basophils, Macrophages		
	T cells and Cell mediated immunity		T cells: Classification	Induction and scope of cell mediated immunity	
	B cells and Humoral immunity		Humoral immune response		
6.	The complement system		Complement system: Definition, Properties, Components	Activation and Biologic functions	
7.	Antigen		Antigen: Definition, Types Antigenic determinant: Definition	Factors determining antigenicity	
	Antibody		Antibody: Definition, Functions Immunoglobulin: Definition, Classes, Functions		
	Antigen-antibody reactions (Anaphylactic and Atopic)		Characteristics of Ag-Ab reaction Definition: Antibody titre, sensitivity, specificity, Serology	Precipitation reactions: Types Applications of Agglutination reactions	
	Drug allergies			Mechanism of Type I & Type II hypersensitivity reactions	
8.	Hypersensitivity		Hypersensitivity: Definition, Types	Mechanism of Type III and Type IV hypersensitivity reactions	
9.	Immunodeficiency		Immunodeficiency diseases: Definition, Types		Primary immunodeficiency Secondary immunodeficiency

10.	Autoimmunity		Autoimmunity: Definition, Clinical types with examples		Mechanisms of autoimmunity
11.	Transplantation				Types of transplant
12.	Blood group antigens			Haemolytic disease of new-born due to Rh-D incompatibility	Blood transfusion reactions
13.	Clinical aspect of immunopathology		Refer Hypersensitivity, Immunodeficiency, Autoimmunity topics		
III Bacteriology: 30 hrs					
1.	Bacterial structure, growth and metabolism	6 hrs	Bacteria: Definition, classification, Structure Bacterial spores: Definition, Shape and position of spores Growth requirements of bacteria Bacterial growth: Generation time, Bacterial count	Differences between gram positive and gram negative cell wall	Structure of bacterial spore Sporulation Bacterial growth curve-Phases
2.	Bacterial genetics and bacteriophage		Definition of genes, codon, plasmids, Conjugation Bacteriophage: Refer to virology component in the same syllabus		
3.	Identification and cultivation of bacteria	2 hrs	List of Phenotypic and genotypic characteristics to identify bacteria Culture media: Definition, Types	Culture media: Basal media, Special medias, Anaerobic culture media	
4.	Gram positive aerobic and facultative anaerobic cocci:	2 hrs	Streptococcus pyogenes: Antigenic structure, Virulence factors	Pathogenesis of Streptococcus pyogenes Serological tests for diagnosis of non suppurative complications	
		2 hrs	Staphylococcus aureus: Antigenic structure & Virulence factors	Staphylococcal diseases Laboratory diagnosis	

		1 hr	Pneumococcus [Streptococcus pneumonia]: Antigenic structure, Pathogenesis		
5.	Gram positive anaerobic cocci	1 hr			Peptostreptococci Peptococcus
6.	Gram negative aerobic cocci	1 hr		Neisseria meningitides, Neisseria gonorrhoea and Moraxella, Kingella: Pathogenesis	Neisseria meningitides, Neisseria gonorrhoea, Moraxella, Kingella: Laboratory diagnosis
7.	Gram positive aerobic bacilli	1 hr		Corynebacterium diphtheriae: Pathogenesis	
				Bacillus anthracis: Human anthrax	
		2 hrs	Mycobacterium tuberculosis: Antigenic structure	Primary and secondary tuberculosis, Laboratory diagnosis of tuberculosis	
		1 hr		Mycobacterium leprae: Uses of lepromin test[Reaction]	
					Actinomycetes. Nocardia
		1 hr	Organism of enterobacteriac group:	Escherichia coli: clinical syndromes	Laboratory diagnosis of urinary tract infection
		1 hr	Shigella: List of species of Shigellae	Pathogenesis: Bacillary dysentery	Laboratory diagnosis
		2 hr	Enteric fever: Definition	Salmonella typhi: Pathogenesis of typhoid fever	Clinical course of typhoid fever, Laboratory diagnosis
8.	Gram positive anaerobic	1 hr		Clostridium perfringens: Pathogenesis	Laboratory diagnosis

	bacilli				
		1 hr	Tetanus: Definition	Clostridium tetani: Pathogenesis	Clinical manifestation of tetanus Laboratory diagnosis of tetanus
		1 hr	Botulism: Definition	Clostridium botulinum: Pathogenesis	Lactobacillus: Pathogenicity
9.	Gram negative anaerobic bacilli	1 hr			Bacteroides fragilis Fusobacterium
10.	Others like:	1 hr	Cholera: Definition	Vibrio cholera: Pathogenesis	Laboratory diagnosis of Cholera
					Yersinia pestis: Pathogenesis
		2 hrs		Treponema pallidum: Pathogenesis	Treponemal tests for syphilis
					Leptospira interrogans Mycoplasma pneumonia Rickettsiae prowazekii Chlamydiae ,Pasteurella
IV Fungi and Parasites: 25 hrs					
1.	Fungi	2 hrs	Fungi: Classification	Mycoses: Definition, Types	
2.	Protozoa:	3 hrs	Entamoeba histolytica: Morphology, Methods of reproduction, Life cycle	Intestinal lesions Differences between Amoebic dysentery and Bacillary dysentery	Laboratory diagnosis of Intestinal amoebiasis
			Giardia intestinalis: Morphology, Life cycle Giardiasis: Definition		
					Cryptosporidium

		1 hr			parvum Trichomonas vaginalis Toxoplasma gondii Trypanosome brucei
		3 hrs	List of plasmodium species Human cycle of P.vivax, P.falciparum, P.malariae, P.ovale	Characteristic fever caused by plasmodium species	Laboratory diagnosis of malaria – examination of a blood film
		2 hrs	Leishmania donovani: Morphology, Life cycle Leishmaniasis: Definition		Laboratory diagnosis of Kala azar
3.	Helminths				
	Cestodes	2 hr	Taenia saginata and Taenia solium – Morphology, Life cycle, Cysticercus bovis, Cysticercus cellulosae	Pathogenesis of Cysticercosis	Laboratory diagnosis
		2 hr	Echinococcus granulosus: Morphology, Life cycle		Structure of Hydatid cyst Laboratory diagnosis of hydatid disease
	Trematodes (flukes)	2 hrs		Schistosoma haematobium Schistosoma mansoni, Paragonimus westermani: Morphology, Life cycle Bilharziasis, Paragonimiasis: Definition	Pathogenesis and Laboratory diagnosis of S.haematobium S.mansoni, P.westermani
	Nematodes	2 hrs	Ancylostoma duodenale: Morphology, Features of eggs, Life cycle Ancylostomiasis: Definition	Pathogenesis	Laboratory diagnosis
		2 hrs	Ascaris lumbricoides: Morphology, Life cycle, Features of fertilized egg Ascariasis :Definition	Pathogenesis	Laboratory diagnosis

		1 hr	Enterobius vermicularis: Morphology, Life cycle Enterobiasis: Definition	National Institute of Health Swab – Parts and Uses	
		2 hrs	Wuchereria Bancroft: Life cycle	Pathogenesis	Laboratory diagnosis
		1 hr		Trichuris trichiura: Morphology, Life cycle Trichuriasis: Definition	Laboratory diagnosis of Trichiuriasis Strongyloides stercoralis Brugia malayi Onchocerca volvulus,Loa Loa Dracunculus medinensis
(V)	Virology 20 hrs				
1.	Introduction	2 hrs	General properties of viruses Classification of DNA and RNA viruses		
2.	Nature and classificatio n of viruses				
3.	Morphology and replication of viruses	2 hrs	Size of viruses, structure Viral replication		
4.	DNA viruses				
(i)	Parvo virus	1 hr			Parvo virus
(ii)	Herpes virus		Herpes simplex type1 and type 2 pathogenesis	Clinical features of Herpes virus infection	Cytomegalovirus Epstein Barr virus
(iii)	Hepadna virus	3 hrs	Hepatitis A virus: Pathogenesis, Hepatitis C virus: Mode of infection	Mode of transmission of Hepatitis B virus	Laboratory diagnosis of Hepatitis B virus infection
(iv)	Papova virus	1 hr	Papilloma virus: Pathogenesis		
(v)	Adeno virus				Clinical syndromes
(vi)	Pox virus	1 hr	Molluscum contagiosum;		Variola virus

			Clinical features		
5.	RNA virus				
(a)	Orthomyxo virus	1 hr	Influenza virus: Pathogenesis	Clinical features	Laboratory diagnosis
(i)	Enterovirus	1 hr	Polio virus: Pathogenesis Poliomyelitis: Definition	Poliomyelitis: Clinical features	
(ii)	Rhino virus	1 hr	Rhino virus: Pathogenesis, Clinical syndromes		
(b)	Paramyxovirus		Rubeola [Measles]: Pathogenesis, Definition	Clinical features	Laboratory diagnosis
			Mumps virus: Pathogenesis, Mumps: Definition	Clinical features	Laboratory diagnosis
(c)	Rhabdovirus	1 hr	Rabies virus: Pathogenesis	Rabies: Phases of clinical spectrum	Laboratory diagnosis
(d)	Rubella virus		German measles: Clinical features		
(f)	Retrovirus	3 hrs	Human immunodeficiency virus: Routes of transmission Specific tests: Antibody detection-screening and confirmatory tests Nonspecific tests: Immunological tests	Pathogenesis of HIV infection Stages of infection with HIV	
(h)	Dengue virus Chikungunya virus	1 hr	Dengue virus: Classic dengue fever Chikungunya virus: Vector	Dengue haemorrhagic fever Chikungunya virus: Clinical features	Laboratory diagnosis
(i)	Miscellaneous virus				
	Arena virus Rota virus , Corona virus, Yellow fever virus	1 hr		Clinical features	
(iv)	Bacteriophages	1 hr	Bacteriophage: Definition, Types of life cycle	Role and Significance	
VI	Clinical microbiology: 3 hrs				
1.	Clinically		<i>As per the Bacteria and</i>		

	important micro-organisms		Viruses listed in appropriate chapters in this syllabus		
2.	Immunoprophylaxis		Immunoprophylaxis: Definition Artificial active immunity: Definition Vaccines: Definition Examples for Bacterial & Viral vaccines Artificial passive immunity: Definition	Live and Killed vaccines: Features	Attenuation of live vaccines Antibiotic sensitivity test
VII Diagnostic procedures in microbiology: 2 hrs					
1.	Examination of blood and stool		Preparation of thin and thick blood film Microscopic examination of stool for E. histolytica, for Helminthic infections	Examination of blood for malarial parasites	Examination of blood for microfilariae
2.	Immunological examination		As per the immunology topics in this syllabus		
3.	Culture methods			Culture methods: Streak, Stroke, Stab, Pour plate culture methods	Methods of Anaerobiosis
4.	Animal inoculation and Antimicrobial chemotherapy				Animal inoculation, Antimicrobial chemotherapy
VII I Infection and disease: 5 hrs					
1.	Pathogenicity: mechanism and control.		Types and sources of infection, Modes of transmission of infection Definition :Pathogenicity, virulence Determinants of virulence		
2.	Disinfection and Sterilisation		Definition of terms ,List of agents of sterilization, Flaming, Pasteurization	Hot air oven: Parts, uses, procedure of sterilisation Autoclave: Parts, Uses,	Types of filters, Uses of filtration

			Uses of UV radiation and Ionizing radiation in sterilization Characteristics of disinfectant Uses of phenol derivatives, Methyl alcohol, Iodine, Chlorine, Formaldehyde, Glutaraldehyde, Ethylene oxide	procedure of sterilisation	
3.	Microbial pathogenicity		<i>As per the Bacteria listed in appropriate chapters in this syllabus</i>		
(d)	Histopathology:		Observation of histopathological features with the help of slides of common pathological conditions from each system	Observation of gross pathological specimens for each system	Histopathological techniques, e.g. fixation, embedding, sectioning and staining by common dyes and stains Frozen sections and their importance Electron microscopy, Phase contrast microscopy

Blueprint of pathology question paper

Sl no	Paper I:Section A	Topics: General pathology – 50 marks	Must know Lower cognitive	Must know Higher cognitive	Desirable to know Higher cognitive
1.	Cell injury		-	-	5
2.	Cellular adaptation		-	5	-
3.	Inflammation & Repair, Thrombosis		-	10	-
4.	Oedema		-	5	-
5.	Shock, Ischaemia		5	-	-
6.	Neoplasia		-	-	5
7.	Haemorrhage, Embolism		3	-	-
8.	Hyperlipidemia, Disorders of pigmentation		-	3	

9.	Disorders of metabolism, Hospital infection		-	3	-
10.	Hyperaemia, Immunity		3	-	-
11.	Amyloidosis, Infarction		-	3	-
Sl no	Paper I:Section B	Systemic pathology – 50 marks			
1.	Mal-nutrition and deficiency diseases, Diseases of glands		-	5	-
2.	Diseases of cardiovascular system		-	-	5
3.	Diseases of blood vessels and lymphatics, Diseases of nervous system		3	-	-
4.	Diseases of kidney and lower urinary tract		-	10	-
5.	Diseases of the respiratory system		-	5	-
6.	Diseases of the G.I. System		-	-	5
7.	Diseases of liver, gall bladder and biliary ducts		-	3	-
8.	Diseases of the pancreas[including diabetes mellitus],Diseases of eye, ENT, and neck, Leprosy		3	-	-
9.	Diseases of the haemopoetic system, bone marrow and blood		-	5	-
10.	Diseases of male reproductive system and prostate, Diseases of female genitalia and breast, Diseases of the skin and soft tissue		3	-	-
11.	Diseases of the musculo-skeletal system, oral cavity		-	3	-
			20	60	20
			Total weightage		100 marks

Sl no	Paper II:Section A	Topics	Must know Lower cognitive	Must know Higher cognitive	Desirable to know Higher cognitive
1.	Bacterial structure, growth & metabolism, Identification & cultivation of bacteria		-	5	-
2.	Gram positive aerobic & facultative anaerobic cocci		-	10	-
	Gram positive aerobic bacilli, Gram positive anaerobic bacilli		-	--	5

3.	Nematodes: Ancylostoma. duodenale, Ascaris. lumbricoides, Wuchereria bancrofti	-	5	-
4.	Protozoa: Entamoeba histolytica, Plasmodium species	-	5	-
6.	Others like: Vibrio.cholera, Treponema. pallidum, Gram negative aerobic cocci,Bacterial genetics	-	-	5
7.	Fungi	3	-	-
8.	Cestodes	3	-	-
9.	Trematodes	-	3	-
10.	Protozoa: Leishmania.donovani ,Giardia intestinalis	-	3	-
11.	Nematodes: Enterobius .vermicularis, T.trichiura	3	-	-
Sl no	Paper II;Section B			
1.	Nature and classification of viruses	3	-	-
2.	Morphology and replication of viruses	3	-	-
3.	DNA viruses: Hepadna viruses	3	-	-
4.	Miscellaneous virus: Rota virus, Bacteriophage DNA viruses: Herpes virus, Papova virus, Adenovirus, Pox virus		3	-
5.	RNA viruses: Rhino virus, Rubella virus, Dengue virus, Chikungunya virus	-	3	-
6.	RNA viruses: Orthomyxo virus, Paramyxovirus, Entero virus, Rhabdovirus, Retro virus	-	5	-
7.	Hypersensitivity, Immunodeficiency, Autoimmunity, Blood group antigens, Antigen-Antibody reactions	-	-	5
8.	Normal bacterial flora, Introduction, Diagnostic microbiology, Humoral immunity, Cell mediated immunity, Acquired immunity	-	-	5
9.	Culture methods, Examination of blood and stool	-	5	-
10.	Immunoprophylaxis	-	5	-
11.	Microbiological control & mechanism of	-	10	

	pathogenicity: Pathogenicity mechanism & control, Disinfection and Sterilisation			
		18	62	20
	Total weightage			100 marks

QUESTION PAPER LAYOUT

PAPER I			
	SECTION A		SECTION B
Q.1	Inflammation & Repair, Thrombosis	Q.1	Diseases of kidney and lower urinary tract
Q.2	Cell injury	Q.2	Malnutrition and deficiency diseases, Diseases of glands
Q.3	Cellular adaptation	Q.3	Diseases of Haemopoietic system, bone marrow & blood
Q.4	Oedema	Q.4	Diseases of cardiovascular system
Q.5	Shock, Ischaemia	Q.5	Diseases of respiratory system
Q.6	Neoplasia	Q.6	Diseases of G.I. system
Q.7	Haemorrhage, Embolism	Q.7	Diseases of liver, gall bladder & biliary ducts
Q.8	Hyperlipidemia, Disorders of pigmentation	Q.8	Diseases of pancreas (including diabetes mellitus), Diseases of Eye, ENT and neck, Leprosy
Q.9	Disorders of metabolism, Hospital infection	Q.9	Diseases of blood vessels & lymphatics, Diseases of nervous system
Q.10	Hyperaemia, Immunity	Q.10	Diseases of male reproductive and prostate, Diseases of female genitalia and breast, Diseases of skin and soft tissue
Q.11	Amyloidosis, Infarction	Q.11	Diseases of musculoskeletal system, Diseases of oral cavity & salivary glands

PAPER II			
	SECTION A		SECTION B
Q.1	Gram positive aerobic bacilli	Q.1	Microbiological control & mechanism of pathogenicity: Pathogenicity mechanism & control, Disinfection and Sterilisation
Q.2	Bacterial structure, growth & metabolism, Identification &	Q.2	Immunoprophylaxis

	cultivation of bacteria		
Q.3	Gram positive anaerobic bacilli, Gram positive aerobic & facultative anaerobic cocci	Q.3	Culture methods, Examination of blood and stool
Q.4	Others like: Vibrio. cholera, Treponema. pallidum, Gram negative aerobic cocci, Bacterial genetics	Q.4	Normal bacterial flora, Introduction, Diagnostic microbiology, Humoral immunity, Cell mediated immunity, Acquired immunity
Q.5	Nematodes: Ancylostoma. duodenale, Ascaris.lumbricoides, Wuchereria bancrofti	Q.5	Hypersensitivity, Immunodeficiency, Autoimmunity, Blood group antigens, Antigen-Antibody reactions
Q.6	Protozoa: Entamoeba histolytica, Plasmodium species	Q.6	RNA viruses: Orthomyxo virus, Paramyxovirus, Enterovirus, Rhabdovirus, Retro virus
Q.7	Fungi	Q.7	Nature and classification of viruses
Q.8	Cestodes	Q.8	DNA viruses: Hepadna viruses
Q.9	Trematodes	Q.9	Morphology and replication of viruses
Q.10	Protozoa: Leishmania. donovani, Giardia intestinalis	Q.10	Miscellaneous virus: Rota virus, Bacteriophage DNA viruses: Herpes virus, Papova virus, Adenovirus, Pox virus
Q.11	Nematodes: Enterobius .vermicularis, T.trichiura	Q.11	RNA viruses: Rhino virus, Rubella virus, Dengue virus, Chikungunya virus

Competencies at the end of practicals in pathology and microbiology:

- Use and handle microscope for methodical focusing
- Recognise importance of chemical laboratory hazards and safety measures in laboratory practice
- Perform laboratory procedures accurately with logical interpretation of results
- Interpret the laboratory results in relation to the signs and symptoms
- Indicate the probable morbidity status in the context of laboratory report

Objectives:

At the end of the course in pathology, the student will be able to:

- Collect and store specimens for various pathological tests
- Perform with accuracy and reliability basic haematological estimations
- Perform complete urine examination
- Interpret abnormal laboratory values of common diseases

B.	Practical or	80 hrs			
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	clinical:				
(1)	Clinical and chemical pathology	18 hrs	Estimation of Haemoglobin Blood grouping, ESR TC-RBC, WBC Differential counts	Bleeding time Clotting time Staining of thick and thin films	Blood examination for parasites
(2)	Urine examination	12 hrs	Physical, Chemical, Microscopic		Quantity of albumin and sugar
(3)	Examination of Faeces	4 hrs	Physical and Microscopic for ova and protozoa		Chemical (occult blood)
(4)		12 hrs	Use of microscope Gram and Acid fast stains Acid fast stains of pus and sputum	Methods of sterilisation: Using hot air oven, Autoclave, Flaming	Motility preparation Gram positive and negative cocci and bacilli Special stains for Corynebacterium
(5)	Preparation of common culture media	2 hrs	Nutrient agar		Blood agar, Robertson's Cooked Meat media and Macconkey's media
(6)	Widal Test demonstration	1 hr			Widal test demonstration
(7)	Exposure to latest equipment	2 hrs			Auto-analyzer, cell counter, glucometer
(8)	Histopathology				
(a)	Histopathology	12 hrs	(a) Demonstration of common slides from each system: Acute appendicitis, Chronic appendicitis, Granulation tissue, , TB lymph node, TB lungs, Fatty liver, Colloid goiter Fibroadenoma breast, Basal cell Ca,		

			Squamous cell Ca, Squamous papilloma, Osteosarcoma bone		
(b)		12 hrs	Demonstration of gross pathological specimens		
(c)	Practical or clinical demonstration of histopathologic al techniques	2 hr			Fixation Embedding
(d)	Sectioning, staining by common dyes and stains Frozen section and its importance	2 hrs			Sectioning, staining by common dyes and stains Frozen section and its importance
(e)	Electron microscopy Phase contrast microscopy	1 hr			Electron microscopy Phase contrast microscopy

2. Practical including vivo voce or oral

2.1.Marks 100

2.2.Distribution of marks

2.2.1	Haematology			Total marks	Time
a.	Haemoglobin estimation	Procedural and Practical skills	2	5	25 to 30 minutes
b.	WBC count				
c.	RBC count	Discussion	3		
d.	ESR				
e.	Differential count				
f.	Peripheral smear				
g.	Blood group				
	Any one of the above				

2.	Examination of urine				
	Physical properties Chemical properties: i. Albumin ii. Blood iii. Glucose iv. Ketone bodies iv. Bile pigments v. Bile salts Any one of the above	Procedural and Practical skills Discussion	2 3	5	10 to 15 minutes
3.	Microbiology and Parasitology				
a. b. c. d.	Gram staining Acid fast staining Stool examination for ova and cyst Urine microscopic: i. Casts ii. pus cells iii. RBC'S iv. Epithelial cells v. Crystals Any one of the above	Procedural and Practical skills Discussion	2 3	5	20 to 25 minutes
2.2.2	Spotters			Total marks	Time
	Incubator ,Hot air oven, Autoclave, Petridish, pH comparator, NIH swab, Widal test rack, Fine biopsy needles, ESR tubes and stand, Haemometers, Haemocytometers, Water bath, UV	For appliances: Identification Description Uses For specimen: Identification Description	1 2 2 2 3	5 X 4 = 20	3 minutes for each spotting

	lamp, Urinometer, Calorimeter, Medias - Deep, Slant, Plate, Pathological specimens Any two appliances of the above and any two specimens				
2.2.1	Histopathological slides Acute appendicitis Chronic appendicitis Granulation tissue TB lymph node TB lungs Fatty liver Colloid goiter Fibroadenoma breast Basal cell Ca Squamous cell Ca Squamous papilloma Osteosarcoma bone Any two slides of the above	Identification Description	2 3	5 X 2 = 10	3 minutes for each slide
2.2.4	Journal or Practical record	-----	----	05	
2.2.5	Viva voce (oral) Including 5 marks for interpretation of routine pathological reports	-----	----	50	

Total -----100 marks

Scheme of examination:

PAPER-I
SECTION A

Types of questions	Number of questions	Marks per question	Total marks
Long essay	1	10	10
Short essays	5	5	25
Short answers	5	3	15
		Total marks	50 marks
SECTION B			
Types of questions	Number of question	Marks per question	Total marks
Long essay	1	10	10
Short essays	5	5	25
Short answers	5	3	15
		Total marks	50 marks
		Grand total	100 marks

PAPER-II			
SECTION A			
Types of questions	Number of questions	Marks per question	Total marks
Long essay	1	10	10
Short essays	5	5	25
Short answers	5	3	15
		Total marks	50 marks
SECTION B			
Types of questions	Number of question	Marks per question	Total marks
Long essay	1	10	10
Short essays	5	5	25
Short answers	5	3	15
		Total marks	50 marks
		Grand total	100 marks

Examination:

Theory:

Number of papers – 02

Marks: Paper I – 100; Paper II – 100

Contents:

Paper – I: Section A – General Pathology ----- 50 marks

Section B – Systemic Pathology ----- 50 marks

Paper II: Section A –Bacteriology ----- 25 marks

Fungi and Parasites ----- 25 marks

Section B- Virology ----- 20 marks

Clinical microbiology and Diagnostic procedures----- 10 marks

Microbiology control and Mechanism of pathogenicity----- 10 marks

General topics and Immunopathology ----- 10 marks

Basic books:

- Ananta Narayan. (2013) *Text book of Microbiology* [9th edition]. Orient Longman Bangalore,
- Boyd William. (2013) *A Textbook of Pathology*. [10th edition] Varghese Publishing House, Mumbai
- Chakraborty P. (2013) *A Textbook of Microbiology* [3rd edition]. New Central book agency (p) ltd, Kolkata,
- Chakraborty P, Chakraborty G. (2010) *Practical Pathology*. [2nd edition]. New Central book agency (p) ltd, Kolkata,
- Chatterjee KD. (2011) *Parasitology, protozoology and Helminthology*. [13th edition]. Chatterjee medical publishers, Kolkata,
- Cotran, Kumar, Robbins. (2001) *Robbins Pathologic Basis of Disease*. [5th edition] Prism books (Pvt) Ltd. Bangalore,
- Curran R.C. (2000) *Colour atlas of histopathology*. [4th edition]. ELBS
- Gillies & Dodds (Revised by R.R. Gillies) (1984) *Bacteriology Illustrated* [5th edition]. Longman Group (FE Ltd),
- Govan, Macfarlane, Callander. (2011) *Pathology Illustrated*, [7th edition]. Longman Singapore Publishers (pvt) Ltd
- Hahnemann S. (2009) *Organon of Medicine*. [6th edition], B. Jain publishers pvt Ltd, New Delhi
- Hahnemann S. (2005) *Theory of chronic diseases*. B.Jain publishers pvt Ltd, New Delhi
- Harsh Mohan. (2015) *Text book of pathology* [7th edition]. Jaypee Brothers, New Delhi
- Karyakarte R, Damle A. (2012) *Medical parasitology* [3rd edition] .BOOKS & ALLIED (P) Ltd, Kolkata,
- Sood R. (2006) *Textbook of Medical Laboratory Technology*. [1st edition].Jaypee medical, New Delhi

Advanced books:

- Bain. BJ, Bates I, Laffan MA. (2006) *Dacie and Lewis Practical Haematology*. [11th edition].Churchill Livingstone
- Damjanov I, Linder J. (1995) *Anderson's pathology vol I, II*. [10th edition].CRS press,

- Delves PJ, Martin SJ, et al. (2014) *Essential Immunology* [12th edition], Chichester, West Sussex
- Deodhare S. (2008) *Y.M. Bhendes. General pathology & pathology of systems [part I & part II]*. [6th edition]. Popular Prakashan Mumbai, 2008
- Kawthalkar SM. (2010) *Essential of Clinical Pathology*. [1st edition]. Jaypee medical, New Delhi
- Stanley RS. (1983) *Lynch's Medical Laboratory Technology*. [4th edition]. Saunders's,
- Rubin E, Farber J L. (1999) *Pathology* [3rd edition]. Lippincott Williams & Wilkins, 1999
- Talbot IC. (1996) *Walter & Israel General pathology* [7th edition]. Elsevier Health Science,

II B.H.M.S - SURGERY

Annual objectives

At the end of the II year BHMS student should able to,

1. Interact with patient and his / her attendants to record a surgical case.
2. Conduct necessary clinical examination to arrive at a general surgical diagnosis.
3. Identify the general surgical conditions which can be managed with homeopathy for curative / palliative outcomes.
4. Identify general surgical conditions, which have to be referred for surgical interventions.
5. Provide appropriate pre- / post-surgical homeopathic management.

Content distribution: Theory 80 Hours

S. No	Topic	Hours	Must Know	Desirable to Know	Nice to Know
A. General Surgery					
1	Introduction to surgery and basic Surgical principles	3	Introduction to surgery and basic Surgical principles		
2	Fluid , electrolytes acid base balance	3	Electrolyte balance (Na, K, Mg, Ca), Acidosis, alkalosis	Acid base balance,	Anatomy of body fluids, Normal exchange of fluid and electrolyte Parentral fluid therapy,
3	3.1 Haemorrhage	7	Source, types, classification of haemorrhage, clinical features, Homoeopathic treatment.	Management - Rest, Pressure and packing from outside.	Operative treatment, blood transfusion
Acute infections					
	3.4 Boil		Definition, clinical features, Homoeopathic therapeutics. drainage of pus	Special investigations, Treatment.	

	3.5 Abscess		Definition, types, pathology, clinical features Homoeopathic therapeutics.	Special investigations	
	3.6 Carbuncle		Definition, sites, types, pathology, clinical features, Homoeopathic therapeutics.	Special investigations	Operative treatment
4	4.1 Cellulitis	3	Definition, pathology, clinical features, general management, Homoeopathic therapeutics.		Operative treatment
	4.2 Erysipelas		Definition, pathology, clinical features, general management, Homoeopathic therapeutics.		Operative treatment
6. Tumors, Cysts, Ulcers, Sinus and Fistula: 8 Hours					
6.	Tumors		Tumours-Definition Types, Clinical features & Examination of Papiloma, Fibroma, Myoma, Lipoma, Haemangioma, Lymphangioma, Neuromas, Neurofibroma Homoeopathic therapeutics	Homoeopathic therapeutics.	
			Malignant- Pathology, spread, Types, clinical features,	Aetiology, Origin, Examinations, Homoeopathic therapeutics.	
			Melanoma- Benign and malignant melanoma- Pathology, Types, clinical features,	Differential diagnosis, Examinations, Homoeopathic therapeutics.	
			Sarcoma- Types, Diagnosis, Cysts,- Definition, clinical features, Dermoid cyst & Sebaceous cyst Definition, , clinical features,	Classification, Homoeopathic therapeutics. Classification, Homoeopathic therapeutics.	

	Ulcer		Definition, type, pathology, clinical features, general management and homoeopathic therapeutics		
	Sinus and fistula		Definition, type, clinical features, general management and homoeopathic therapeutics		
Injuries of Various Types					
	Head Injury: 8				
	7.1 Fracture of the base of the skull		Clinical features of closed & open fracture	Mechanism, Types of fractures	Importance of skull fracture
	7.2 Injury to the brain		types of brain injury,	Mechanism of head injury, pathology.	Secondary pathologies of cerebral compression
	7.3 Intracranial Haemorrhage		Clinical features of Intracerebral haemorrhage, subdural and extradural haemorrhage.	Level of consciousness	
	7.4 Preliminary management of head injuries		Non-surgical treatment, Indications for surgery, Homoeopathic therapeutics.	Early and Late complications of head injury.	Special investigation,
8	8.1 Wounds, Tissue repairs, Scars & Wound Infections	5	Definition, Types of Wounds, Homoeopathic therapeutics	Regeneration, Repair, Inflammation, Epithelialisation, Granulation tissue formation, Wound contraction,	
	8.2 Healing of skin wounds		Definition, Types, complications, Treatment, Homoeopathic therapeutics		
9. Special Infections					
	9.1 Syphilis	3		Definition, Stages, Pathology, clinical features	

	9.2 Leprosy			Definition, Pathology, clinical features	
	9.3 AIDS			Definition, Pathology, clinical features Diagnosis	
10	Burns	3	Definition, Types, assessment, clinical features, Homoeopathic therapeutics	Pathology, Complications	Skin grafting
11	Shock	5	Definition, Types Clinical features, General management. Homoeopathic therapeutics		Fluid replacement
12	Mal-Nutrition	2	Malnutrition definition, effects of malnutrition, Homoeopathic therapeutics	Types	Nutrition requirement , Assessment of malnutrition
13	Preoperative & Postoperative Care	3	Homoeopathic approach in Preoperative & Postoperative Care		
14	Fundamentals of examination of patient with surgical problems, common symptoms in surgical cases	5	Pain , vomiting, stools,		
	Physiotherapy measures	5			
Dentistry: 10 Marks					
	Teeth Morphology	1	Arrangement of teeth	Dental formula	Anatomy & physiology of teeth & gums, milestones
	Caries of Tooth	2	Definition, aetiology, clinical features & general management homoeopathic therapeutics		
	Abscess & Fistula	1	Definition, aetiology, clinical features & homoeopathic		

			therapeutics		
	Diseases of Gums	2	Definition, aetiology clinical features & homoeopathic therapeutics		
	Apthous ulcer & Glossitis	1	Definition, aetiology , clinical features, homoeopathic therapeutics		
	Cleft Palate & cleft palate	1	Definition, clinical features	aetiology, hom therapeutics	Manageme nt
	Ca Cheek	1	Definition, aetiology, clinical features & general management	Hom. therapeutics	Operative treatment
	Root canal treatment	1			Definition, aetiology, clinical features & Manageme nt,
	Injury to Maxilla & Mandible	1	Definition, clinical features & homoeopathic therapeutics	Management	Operative procedure
	Silolithiasis & Silography	1	Definition, aetiology, clinical features & Management, homoeopathic therapeutics	Procedure of Sialography	
Diseases of Blood Vessels					
	Raynaud's disease & Buerger's diseases	1	Aetio-pathogenesis, clinical features, general management & Homoeopathic therapeutics	Special investigations	Operative procedure
	Gangrene	1	Definition, types, causes, clinical features, general management & Homoeopathic therapeutics	Special investigations	Operative treatment
	Diseases of vein Varicose vein & Deep venous thrombosis	1	clinical features, general management & Homoeopathic therapeutics	Aetiology, Special investigations, complications	Operative treatment
	Pulmonary embolism	1 hr	Pathophysiology , clinical features	Special investigations	
	Diseases of lymphatics,	1		clinical features & homoeopathic	Definition, general

	Lymphangitis, Lymph oedema			therapeutics	managemen t
	Hodgkins disease	1 hr	Definition, clinical features, staging & homoeopathic therapeutics	Pathology, special investigations, general management	Operative treatment
	Diseases of peripheral nerves	1			Tumours, injuries to peripheral nerves

II year B.H.M.S – Clinical Topics (60 HRS)

S. No.	Topics	Hours
1	Surgical History taking	5
2	Special symptoms & signs	2
3	Investigations - routine & Special	4
4	Sterilization	2
5	Anti sepsis in Surgery	1
6	Pre operative investigations	1
7	Pre operative care.	1
8	Post operative care	1
9	Suture Material & Suturing of various types	2
10	Dressings and Plasters (Bandaging)	2
11	Use of common instruments for Examination.	2
12	Basics of general surgical procedures	2
13	Anaesthesia - Introduction & its types	1
14	Management of Shock	1
15	Management of Acute Haemorrhage	2
16	Case Demonstration	5
17	Examination of Swelling	2
18	Examination of Ulcer	2
19	Examination of Perivascular Diseases and Gangrene	1
20	Examination of Sinus & Fistula	1
21	Management of Wound	2
22	Abscess & Incision & Drainage	1
23	Examination of Varicose Veins	1
24	Examination of Lymphatic System	1
25	Examination of Peripheral Nerve Lesions	1
26	Examination of injuries about individual joints	2
27	Examination of Head Injuries	2

28	Procedure of X ray taking.	1
29	Procedure of Barium meal x rays	2
30	Procedure for IVP & Urethrogram	2
31	X Ray Demonstration	5
Total Hours		60

III Year Community Medicine

To achieve the above objectives students shall acquire knowledge and skills in III and IV BHMS

Course objective of III BHMS

The learner should be able to:-

- Recall the historical development of medicine from pre historical to present.
- Discuss the concepts of health & disease as per the principles of homoeopathy.
- Discuss nutritional disorders & their prevention.
- Describe the effects of environment on health.
- Describe various occupational health hazards & its prevention.
- Discuss the role of preventive medicine in pediatrics & geriatrics.

SL.NO	TOPIC	MUST KNOW	DESIRABLE TO KNOW	NICE TO KNOW	HOURS	MARKS
1	Man and Medicine.	<ul style="list-style-type: none"> • Changing concepts in public health. 	<ul style="list-style-type: none"> • Greek, Roman and their contribution to world • Sanitary awakening • Rise of public health 	<ul style="list-style-type: none"> • Primitive medicine • Indian medicine • Chinese medicine • Egyptian medicine 	1	3

2	Concept of Health & Disease in conventional medicine & homoeopathy	<ul style="list-style-type: none"> • Definition of Health • Determinants of health • Indicators of health. • Concept of prevention & control • Modes of intervention 	<ul style="list-style-type: none"> • Disease classification. • Health service philosophies. • Concept of disease & causation. • Natural history of disease. • Dimensions of health. • Changing pattern of disease 	<ul style="list-style-type: none"> • Ecology of health • Difference between homoeopathic and Allopathic system of treatment • International classification of disease 	2	5
3	Nutrition and Health	<ul style="list-style-type: none"> • Food in relation to Health & disease. • Nutritional deficiencies & Nutritional survey. • Balanced diet. 	<ul style="list-style-type: none"> • Definition. • Classification of food. • Food adulteration. • Food additives. • Food fortification • Pasteurization of milk 	<ul style="list-style-type: none"> • Food standards • Nutrition policy 	8	10
4	Environment and Health.	<ul style="list-style-type: none"> • Disinfection and Sterilization • Air-borne diseases. • Comfort zone. • Disposal of waste • Vector borne disease 	<ul style="list-style-type: none"> • Physical exercise and taking care of health. • Air pollution-prevention and control • Noise prevention and control • Humidity and 	<ul style="list-style-type: none"> • Meteorological environment. • Light • Medical Entomology. • Insecticides. 	8	10

			Temperatu re <ul style="list-style-type: none"> • Sanitation of fairs and festivals • Methods of disposal of Refuse. • Excreta disposal. • Sewage treatment 			
5	Water	<ul style="list-style-type: none"> • Water borne diseases and its Prevention. • Safe water. 	<ul style="list-style-type: none"> • Hardness of water. • Chlorination of water. • Purification of water 	<ul style="list-style-type: none"> • Fluorosis 	10	5
6	Occupational health	<ul style="list-style-type: none"> • Occupational Hazards • Prevention of Occupational diseases • Benefits of employees. 	<ul style="list-style-type: none"> • ESI. Act • Factories Act 	-	3	5
7	Preventive medicine in Pediatrics and Geriatrics.	<ul style="list-style-type: none"> • Feeding of infants. • Child health problems • Low birth weight. • Growth chart & Neonatal care. • Health problems of the aged and their prevention. 	<ul style="list-style-type: none"> • Rights of women & children. • Life style & healthy ageing. 	<ul style="list-style-type: none"> • National policy for children. • Health status of aged in India. 	3	5

Materia Medica

III BHMS

Annual Objectives

At the end of III BHMS the student shall be able to □

1. Describe the concept of Constitution, Temperament and Diathesis in the context of the listed medicines
2. List the cluster themes of Acids, Carbon, Kali, Ophidea, Mercury and Spider group of remedies.
3. Describe the group features of the listed remedy groups
4. Compare and contrast the group characteristics among the listed remedy groups
5. Describe the concept of Nosodes
6. Describe the concept of Mother Tincture; illustrate the clinical application of mother tinctures.

Course content

Theory: 120Hrs

Table 3 A 14 Hrs

Sl no	Topic	Hrs	Must know	Desirable to know	Nice to know
1	Concept of Nosodes	2Hrs	Definition, Types, list the names of nosodes used, General Indications & contraindications of nosodes	Evolution of nosode.	History of nosodes
2	Concept of Constitution, Temperament & Diathesis	4Hrs	Definition, Types, characteristics, importance of constitution, temperaments & diathesis.	Evolution, Comparative study of constitution, temperament & Diathesis, Clinical Application of all these	Historical Background
3	Concept of Mother Tinctures	2Hrs`	Definition, List of mother tinctures used in practice with indications	Clinical application	
4	Group Study Acid; Carbon; Kali; Ophidia; Mercurius; Spider	6Hrs	Introduction, sphere of action, ailments from, mentals, general characteristics, list of remedies in the group & general modalities.	Compare & Contrast study, Clinical Application	Historical Background

Appendix –2

The following major remedies mentioned below shall be learnt according to the given template

Template 2

Sl No	Topic	Hrs	Must Know	Desirable to know	Nice to know
1	Medicines as per list of Appendix – 2	76 hours	Sphere of action & pathogenesis Physical constitution, Thermals Ailments from/Causations Mental symptoms Characteristic symptoms Particular symptoms under the following headings <ul style="list-style-type: none"> - Location - Sensation - Modalities - Concomitants General Modalities Clinical indications Relation ship	Diathesis, Temperament Miasmatic Background Therapeutic application Comparison	Common name, Family, Source, Alkaloids Part used, Preparation, Collection, Prover, Habitat
List of major remedies: Appendix – 2					
1. Agaricus 2. Alumina 3. Ammonium carb 4. Arsenic iod 5. Anacardium 6. Aurum met 7. Baryta carb 8. Belladona 9. Borax 10. Bovista 11. Cannabis indica 12. Carbo veg			13. Conium 14. Crotalus, 15. Ferrum met 16. Graphites 17. Ignatia 18. Kali bich 19. Kali carb 20. Kreosote 21. Lachesis 22. Naja 23. Natrum carb 24. Nitric acid		25. Nux moschata 26. Opium 27. Petroleum 28. Phosphoric acid 29. Phosphorus 30. Picric acid 31. Platina 32. Secale Cor 33. Sepia 34. Staphysagria 35. Stramonium 36. Syphilinum 37. Veratrum alb
Appendix – 2a: The following remedies shall be learnt with focus on points given against the respective remedies (30 hours)					
No	Remedy	Focus area			
1	Acetic acid	GIT, Fever & Debility, Dropsy			
2	Actea spicata	Rheumatism			

3	Agnus castus	Mind, Genitals- male & female.
4	Ambra grisea	Nervous affections ,Mind and Female
5	Ammonium mur	Constitution, Respiratory, Female & guiding symptoms.
6	Apocyanum	Dropsy, GIT
7	Asafoetida	Mind, GIT, Bones
8	Benzoic acid	Urogenitals system, Gout
9	Berberis vulgaris	Urinary & GIT
10	Bismuth	GIT & Mind
11	Bromium	Respiratory, Glands
12	Bufo rana	Mind &Nervous system, Convulsions, Genitourinary
13	Cactus	Heart, Fever &guiding symptoms
14	Caladium	Genitals &guiding symptoms
15	Calcarea ars	Convulsions &guiding symptoms
16	Camphora	GIT &guiding symptoms
17	Cannabis sativa	Urogenital, mentals &guiding symptoms
18	Cantharis	Urinary system, Skin&guiding symptoms
19	Chelidonium	GIT, Respiratory&guiding symptoms
20	Croton tig	GIT & Skin
21	Cyclamen	Female Genitals &guiding symptoms
22	Digitalis	Heart&guiding symptoms
23	Dioscorea	GIT, &guiding symptoms
24	Equisetum	Urinary
25	Helleborus	Mind, Head, CNS
26	Hyoscyamus	CNS, Mind, Cough
27	Kali brom	Nervous system and Skin
28	Moschus	Mind, GIT
29	Murex	Female, mentals and guiding symptoms
30	Muriatic acid	Debility, GIT, Typhoid
31	Oxalic acid	Mind, Urinary and guiding symptoms
32	Phytolacca	Joints, Glands, Throat and Female
33	Podophyllum	GIT, fever & guiding sympyoms
34	Selenium	Male and Guiding symptoms
35	Sulphuric acid	Debility, GIT and Guiding symptoms
36	Tabacum	GIT, Eye, Vertigo and Urinary
37	Taraxacum	Tongue and GIT
38	Tarentula cubens	Skin and Mind
39	Terebinthina	Urinary and GIT
40	Theridion	Vertigo, Air sickness
41	Thlaspi bursa pastoris	Female and guiding symptoms

Scheme of Examination:

- i) Theory : 100 Marks., Duration : 3Hours

Distribution of Marks

Topics	Marks	Question type	Source
From II BHMS	50	1 LE, 5 SE, 5 SA	Table 2, Appendix 1, 1a

From III BHMS	50	1 LE, 5 SE, 5 SA	Table 3, Appendix 2, 2a
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Types of questions with marks

Type of Questions	No. of Questions	Marks per Question	Total Marks
Long Essays	02	10	20
Short Essays	10	05	50
Short Answers	10	03	30
Maximum Marks			100

Question Paper Blueprint

The distribution of chapter wise marks in theory paper may be as follows:

Sl no	Topic	Marks	Source	Question Type
1	Concept of Nosodes	5	Table 3	1SE
2	Concept of Constitution, Temperament & Diathesis; Concept of Mother Tinctures	6	Table 3	2SA
3	Group Study – Acid,; Carbon; Kali; Ophidia; Mercurius	8	Table 3	1SE, 1SA
4	Major remedies	20	Appendix 2	1LE, 2SE
5	Minor remedies	11	Appendix 2a	1SE, 2SA

Question Paper Layout:

Long Essays

(10×02=20)

1. Topic from II BHMS topic
2. Topic from III BHMS topic

Short Essays

(5×10=50)

3. From II BHMS topic
4. From II BHMS topic
5. From II BHMS topic
6. From II BHMS topic
7. From II BHMS topic
8. From III BHMS topic
9. From III BHMS topic
10. From III BHMS topic
11. From III BHMS topic
12. From III BHMS topic

Short Answers

(3×10=30)

13. From II BHMS topic
14. From II BHMS topic
15. From II BHMS topic
16. From II BHMS topic
17. From II BHMS topic
18. From III BHMS topic
19 From III BHMS topic
20. From III BHMS topic
21. From III BHMS topic
22. From III BHMS topic

Practicals or clinical – 75Hrs

During the third year, students should be posted to hospital where they should be able to –

- Take cases of acute & chronic patients
- Process the case taken
- Assess the miasmatic presentation of the case
- Differentiate the medicine
- Selection medicine, potency
- Decide repetition schedule

Each student shall maintain a journal having record of ten cases during the clinical posting.

Practicals including Viva voce (Max marks 100)

1. Distribution of marks

Case	Case taking	Case analysis	Miasm analysis	Remedy differentiation	Remedy selection	Total
Long	08	05	05	07	05	30
Short	03	02	00	03	02	10
Journal						10
Viva						50
Total						100

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MEDICINE

III B.H.M.S.: 80 Hours

Annual Objectives:

- Correlate the health disturbances with basics of Anatomy, Physiology and Biochemistry
- Demonstrate awareness of the social-psychological, cultural, economic and environmental factors affecting health and disease.
- Discuss the scope and limitations of homoeopathy in a given case
- Identify medical emergencies and take appropriate measures

Sl No	Topics	Hours	Must Know	Desirable to Know	Nice to Know
I	Respiratory Diseases: 23hrs				
1	Upper respiratory tract infections	2	Definition, Aetio-pathogenesis, C/F, Investigations, D/D & Hom		Rhinoscopy
2	Bronchial Asthma	2	Definition, Etiopathogenesis, Pathology, C/F, Investigations, D/D & Hom	Pulmonary Function test	

3	Chronic Obstructive Lung Disease	2	therapeutics Definition, Etiopathogenesis , Pathology, C/F, Investigations, D/D, Complications & Hom	
4	Pneumonia	2	therapeutics Definition, Etiopathogenesis , Pathology, Types, C/F, Investigations, D/D, Complications &Hom	
5	Bronchiectasis	2	therapeutics Definition, Etiology, Pathology, C/F, Investigations &Hom	D/D
6	Lung abscess	1	therapeutics Definition, Etiopathogenesis , C/F, Investigations, Complications &Hom	D/D
7	Pulmonary Tuberculosis	2	therapeutics Definition, Etiopathogenesis , C/F, D/D, Diagnosis, Complications &Hom	Epidemiology
8	Tropical pulmonary eosinophilia	1	therapeutics Definition, Etiopathogenesis , C/F, D/D, Diagnosis, Complications & Hom	Epidemiology
9	Occupational Lung Disorders	2	therapeutics Definition, Etiopathogenesis , C/F, Diagnosis & Hom	D/D & Complications

10	Sarcoidosis	1	therapeutics	Definition, Etiopathogenesis, C/F, D/D, Diagnosis, Complications & Hom therapeutics	
11	Pulmonary Thromboembolism	1	Definition, Etiopathogenesis, C/F, Diagnosis, Complications & Hom therapeutics	D/D & General management	
12	Pleurisy & Pleural Effusion	1	Definition, Etiopathogenesis, C/F, D/D, Diagnosis, Complications & Hom therapeutics		Pleural Tapping
13	Pneumothorax	1	Definition, Etiopathogenesis, C/F, D/D, Diagnosis, Complications & Hom therapeutics	General management	Surgical management
14	Bronchial carcinomas	2	Definition, Etiology, Pathology, C/F, D/D, Diagnosis, Complications & Hom therapeutics		
15	Interstitial lung diseases	1		Definition, Etiopathogenesis, C/F, D/D, Diagnosis, Complications & Hom therapeutics	
16	Cystic fibrosis of lung				Basics/Associated syndromes.
II. Diseases of Digestive System & Peritoneum: 23 hrs					
1	Disorders of Mouth & Salivary glands	2	Definition, Etiopathogenesis, C/F, D/D, Diagnosis, Complications		Imaging studies

2	Esophageal disorders(GERD, ACHLASIA)	2	& Hom therapeutics	Definition, Etiopathogenesis, C/F, D/D, Diagnosis, Complications & Hom therapeutics	Dietary management
3	Peptic Ulcers	2	Definition, Etiopathogenesis, Pathology, Types, C/F, Investigations, Complications, D/D, General management & Hom therapeutics	Dietary management	Endoscopic changes, & Surgical management
4	Gastritis	2	Definition, Etiopathogenesis, Pathology, Types, C/F, Investigations, Complication, D/D, General management & Hom therapeutics	Dietary management	Endoscopic changes
5	GI Bleeding	1		Causes, Manifestations, D/D, Complications & Hom therapeutics	
6	Diarrhoea	1	Definition, Etiopathogenesis, C/F, Investigations, Complications, General management & Hom therapeutics	Dietary management	Endoscopic changes & Sigmoidoscopy
7	Constipation	1	Definition, Etiopathogenesis, C/F, Investigations, Complications, General	Dietary management	Endoscopic changes & Sigmoidoscopy

8	Malabsorption Syndrome	2	management & Hom therapeutics	Definition, Etiopathogenesis, Pathology, Types, C/F, Investigations, Complication, D/D, General management & Hom therapeutics	Intestinal Biopsy & Dietary management
9	Irritable Bowel Syndrome	2	Definition, Etiopathogenesis, C/F, Investigations, Complication, D/D, General management & Hom therapeutics	Dietary management	
10	Inflammatory Bowel Diseases	2	Definition, Etiopathogenesis, Pathology, Types, C/F, Investigations, Complications, D/D & Hom therapeutics	Dietary management	Sigmoidoscopy
11	Abdominal Tuberculosis	1		Definition, Etiopathogenesis, Pathology, C/F, Investigations, Complications, D/D & Hom therapeutics	
12	Peritonitis	1	Definition, Etiopathogenesis, C/F, Investigations, Complications, D/D & Hom therapeutics		Enzyme study
13	Neoplasia of the bowel	2	Definition, Etiology, Pathology, Types, C/F, Investigations,		Imaging studies

14	Anorectal disorders	1	Complications, D/D & Hom therapeutics	Definition, Etiology, Pathology, C/F, Investigations, Complications, D/D& Hom therapeutics
15	Diverticulitis	1		Definition, Etiopathogenesis, C/F, Investigations, Complications, D/D & Hom therapeutics

III. Diseases concerning Liver, Gall-bladder & Pancreas: 17hrs

1	Viral Hepatitis	2	Definition, Etiopathogenesis , C/F, Investigations, Complications, D/D & Hom therapeutics	Serological studies	
2	Alcoholic Liver Diseases	2	Definition, Causes, Types, Pathology, C/F, Investigations, Complications, D/D & Hom therapeutics	Liver transplantation	
3	Cirrhosis of Liver	2	Definition, Causes, Types, Pathology, C/F, Investigations, Complications D/D & Hom therapeutics	Histological changes	
4	Portal Hypertension	1	Definition, Etiopathogenesis , C/F, Investigations, Complications & Hom therapeutics		
5	Liver Failure	1		Definition, Etiopathogenesis, C/F, Invest, Complications	Liver transplantation

6	Liver abscess	1		& Hom Therapeutics Definition, Causes, Pathology, C/F, Investigations, C omplications & Hom therapeutics	
7	Gallstones	1	Definition, Etiopathogenesis , C/F, D/D, Investigations, Complications & Hom therapeutics		
8	Cholecystitis	1		Definition, Etiopathogenesi s, C/F, D/D, Investigations, Complications & Hom therapeutics	
9	Pancreatitis	1		Definition, Etiopathogenesi s, Types, C/F, Investigations, Complications, D/D& Hom therapeutics	
10	LFT	1	Reference ranges and interpretations.		
11	Ascites	1	Definition, Etiopathogenesis , C/F, D/D, Investigations, Complications & Hom therapeutics		
12	Pregnancy and Liver Diseases				Consequences
13	Parasitic Diseases of the Liver	1		Types, Etiopathogenesi s, Pathology, C/F, Diagnosis, prognosis, Hom therapeutics	Diagnostics and treatment
14	Inherited	1		Types, Causes,	

	Metabolic Disorder of the Liver			Pathology, C/F, Diagnosis, Prognosis & Hom therapeutics
15	Hepatocellular carcinoma	1	Types, Etiology, Pathology, C/F, Diagnosis, Prognosis & Hom therapeutics	

IV. Genetic factors(co-relating diseases with concept of chronic miasms): 05 hrs

1	Down's Syndrome	1	Definition, Causes, C/F & Diagnosis	Concept of Scope & Miasm & Hom Therapeutics. Hom & Genetic Testing/ counselling
2	Turner's & Klinfilter's Syndrome	1	Definition, Causes C/F & Diagnosis	Concept of Scope & Miasm & Hom Therapeutics. Hom & Genetic Testing/ counselling
3	Cystic fibrosis & Huntington's disease & Marfan's syndrome	2		Etiopathogenesis, C/F, Diagnosis, Concept of Miasm & Hom therapeutics. Scope & limitations of Hom & Genetic Testing/ counselling
4	Poly cystic kidney disease	1		Etiopathogenesis, C/F & Diagnosis, Concept of Miasm & Hom therapeutics. Scope & limitations of Hom & Genetic Testing/ counselling

V. Immunological factors in disease with concept of susceptibility (Including HIV, Hepatitis-B): 05 hrs

1	Homoeopathic relation of immunity & Susceptibility	1	Homoeopathic relation of immunity & Susceptibility	
2	Hypersensitivity reactions	1	Types & manifestations of Hypersensitivity reactions	
3	Autoimmune diseases	1		Types & manifestations of Autoimmune diseases & Autoantibody studies
4	HIV	1	Etiopathogenesis	

			, C/F, Complications & Diagnosis with miasmatic & Homoeopathic management	
5	Hepatitis-B	1	Etiopathogenesis , C/F, Complications& Diagnosis with miasmatic & Homoeopathic management	
6	Transplantations			Basic considerations and host tissue defences.

VI. Disorders due to Chemical & Physical agents & to Climatic & environmental factors: 02 hrs

1	Diseases due to Chemical & Physical agents	1	Etio- pathogenesis & Manifestations of diseases due to Chemical & Physical agents
2	Disease due to Climatic & Environmental factors	1	Etio- pathogenesis& Manifestations of disease due to Climatic &Environmental factors

VII. Disorders of Water & Electrolyte balance: 05 hrs

1	Hypo & Hypernatraemia	1	Causes, Manifestations, Diagnosis General management & Hom Therapeutics	Scope & Limitations of Homoeopathy
2	Hypo & Hyperkalaemia	1	Causes, Manifestations, Diagnosis General management&H om Therapeutics	Scope & Limitations of Homoeopathy
3	Hypo & Hyperphosphatae mia	1	Causes, Manifestations Diagnosis,	Scope & Limitations of Homoeopathy

				General management & Hom Therapeutics
4	Metabolic Acidosis Alkalosis	&	1	Causes, Manifestations, Diagnosis, General management & Hom Therapeutics
5	Respiratory Acidosis Alkalosis	&	1	Causes, Manifestations, Diagnosis, General management & Hom Therapeutics

Gynaecology and Obstetrics

III BHMS

Introduction

1. (a) Homoeopathy adopts the same attitude towards this subject as it does towards Medicine & Surgery, but while dealing with Gynaecology and Obstetrics cases, a Homoeopathic physician must be trained in special clinical methods of investigation for diagnosing local conditions and individualising cases, the surgical intervention either as a life saving measure or for removing mechanical obstacles, if necessary, as well as their management by using homoeopathic medicines & other auxiliary methods of treatment.

(b) Pregnancy is the best time to eradicate genetic dyscrasias in women and this should be specially stressed, & students shall also be instructed in the care of new born.

(c) The fact that the mother & child form a single biological unit and that this peculiar close physiological relation-ship persists for at-least the first two years of the child's life should be particularly emphasised.

2. A course of instructions in the principles and practice of Gynaecology and Obstetrics & infant hygiene, care including the applied anatomy & physiology of pregnancy and labour will be given.

3. Examination & investigations in gynaecological and obstetrical cases shall be stressed and scope of Homoeopathy in this subject shall be taught in detail.

4. The study shall start in Second BHMS & shall be completed in the Third BHMS & the examination will be held in Third BHMS.

Distribution of hours

Year		II BHMS	III BHMS	
	Total hours	140	225	
Time	Theory	Gynaecology	30	70
		Obstetrics	45	70
		Care of new born / Infant care	05	10
	Clinical	60Hours (Three months clinical posting in OPD & IPD)	75 Hours (Three months clinical posting in OPD & IPD)	

II BHMS

Annual Objectives

After completing the course of Gynaecology & Obstetrics in II BHMS the student will be able to -

- Recall the normal structure & function of female reproductive system
- Provide a holistic care for a healthy pregnancy, safe delivery and motherhood.
- Describe gynaecological problems and explain their therapeutic solutions.

At the end of the course, the learner will be able to –

4. Knowledge

- Outline the anatomy, physiology and patho-physiology of reproductive system
- Detect normal pregnancy, labor, puerperium and manage the problems related to them
- Identify common gynecological diseases and mention there therapeutic approach.
- During ANC check-up advice the mother about 'HIGH-RISK' pregnancy & complications
- Motivate couple to implement family planning measures

5. Skill

- Examine a pregnant woman, identify high risk pregnancies and make appropriate referrals
- Conduct normal delivery, recognize complications and provide post natal care
- Resuscitate new born and recognize congenital abnormalities

6. Communication

- Interact with the mother to remove FEAR & false notions about pregnancy
- Counsel a couple on the use of various available contraceptive devices

Distribution of Contents

Gynecology

Sl No	Chapter	Time	Must Know	Desirable to Know	Nice to Know	Weightage
1	Anatomy of female reproductive organs	2 HR	Internal genitalia, pelvic muscles, pelvic floor & fascia.		External genitalia, urinary bladder & rectum	5 marks
	Blood vessels, lymphatics of pelvic organs	1 HR			Pelvic blood vessels, lymphatics & Pelvic nerves	
	Congenital malformation of female genital organs	4 HR S	Uterine anomalies types, clinical features & diagnosis. Vaginal abnormalities types & clinical features.	Treatment of uterine anomalies.	Abnormality of ovary & fallopian-tube.	
	Development of genital organs & gonads.	2 HR S			Development of external & internal genitalia Development of ovary, sources & descent	
2	Puberty & menopause	6 HR S	Puberty- define morphological genital organ changes & Tanners' classification. Precocious puberty- define, causes. Menopause- define, clinical features diagnosis & treatment.	Diagnosis of precocious puberty. Delayed puberty define & causes. Abnormal menopause & artificial menopause		5 marks
	Neuro-endocrinology in relation to reproduction	2 HR S	Ovarian hormones & its functions. Importance of hypothalamo-pituitary ovarian axis.		Hypothalamus, pituitary, thyroid & adrenal functions	

	Menstruation	3 HR	Ovulation- define, causes & hormonal effects.	Definition, stages of menstruation. Formation & maturation of GF & corpus-luteum.	An-ovular menstruation	
3	Examination of gynecological patient	3 HR S	Detailed history, gynecological & vaginal examination. Indications of laparoscopy, hysteroscopy & culdoscopy.	Methods of examination of vagina & cervix. Colposcopy, x-ray, u/sonography indications.	Culdocentesis, endometrial sampling.	5 Marks
	Inter-sex	2 HR S		Etiology, clinical feature of female, male inter-sex.	Diagnosis & management of inter-sex.	
4	Uterine displacements	5 HR S	Define degrees causes, signs & symptoms of retroversion. Genital prolapse- etiology, types degrees of prolapse, clinical features, diagnosis & D/D.	Prevention and management of retroversion	Types of operation in prolapse. Supports of vagina. Fixed retroversion. Chronic-inversion define, causes types, C/F	10 marks

Obstetrics

Sl No	Chapter	Time	Must Know	Desirable to Know	Nice to Know	Weightage
1.	Anatomy of reproductive organs	1 HR			External & internal genitalia, ureter pelvic muscles & fascia	5 marks totally

Fundamentals of reproduction	2 HR S	Gametogenesis, Ovulation, fertilization, Implantation, Trophoblast, deciduas, chorion&chorio-villi		
Placenta & membranes	2 HR S	Placental functions, amniotic fluid & amnion	Development, structure & placental circulation	Umbilical cord
The fetus				Fetal physiology & fetal circulation
Physiological changes during pregnancy	3 HR S	Genital organs, breasts, weight gain, cutaneous changes, hematological changes	Metabolic changes	Systemic changes
Endocrinology in relation to reproduction	1 HR S		Maturation of graafian follicle & maintenance of corpus luteum after fertilization Hormones of placenta	Changes of endocrinal gland during pregnancy
Fetus-in-utero	4 HR	Lie, presentation, Attitude, Denominator Position. Methods of obstetrics examination- abdominal with grips, engagement		Internal examination Ultra-sonography inferences Vaginal examination

	Fetal skull & maternal pelvis	1 HR	Fetal skull-areas, sutures, fontanelles & diameters. Moulding, Caput-succedaneum. False & true pelvis. Pelvis-shape, plane & diameter		True pelvis-inclination, cavity & outlet. Mid-pelvis	
2	Diagnosis of pregnancy	6 HR S	1 st , 2 nd & 3 rd trimester— Subjective & Objective, D/D of pregnancy. Estimation of gestational age & EDD.	Chronological appearance of symptoms & sign of pregnancy		20 marks
	Antenatal care	4 HR S	Antenatal care— Aims, objective & advice	Minor ailments in pregnancy	Ante-natal assessment of fetal well-being Pre-conception visit, risk & education	
	Normal-labor	10 HR S	Definition of normal & abnormal labor. Causes of labor, Diagnosis of labor False & True labor pains. Stages of labor. Mechanism of labor	Events in 1 st , 2 nd & 3 rd stages of labor. Management of labor	Physiology of labor, clinical course of labor	
	Normal puerperium	6 HR S	Definition, involution of uterus. Lochia. Management of normal puerperium. Post-natal care.	Physiological changes at puerperium, lactation & its physiology. Management of ailments		

3.	Care of new born	5 HR S	New born infant-define physical features at birth & immediate care of new born Breast feeding advantage & contra-indications	Breast feeding difficulties	Infant feeding types & principles	5 marks
4	Vomiting in pregnancy	3 HR S	Simple vomiting & hyperemesis gravidarum—etiology, clinical course & management		Pathology & biochemical changes	5 marks
	Induction of labour	2 hrs	Definition, indications & contra-indications	Low rupture & high rupture of membranes indications	Methods of induction	

III BHMS

Annual Objectives

After completing the course of Gynaecology & Obstetrics in third BHMS, the student will be able to -

- *To assess the relationship & Care of mother & foetus during Ante-natal, intra-natal & the complication to mother, foetus during & after pregnancy with its management.*
- *Recall the various disorders & diseases of female genitalia, its diagnosis & therapeutic management.*
- *To detect, control, treat and prevent a number of disease conditions encountered in women through homoeopathic treatment.*
- *To provide appropriate education to the students in Gynecology & Obstetrics to become competent physicians.*

Gynaecology

Sl No	Chapter	Time	Must Know	Desirable to Know	Nice to Know	Weightage
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5	Pelvic infections	4 HR S	<p>Acute pelvic infections define, mode of spread, C/F, investigations diagnosis, D/D & complications.</p> <p>Chronic pelvic infections- C/ F, investigations, D/D & management.</p> <p>Genital TB mode of spread, C/F investigations,D/D.</p>	Treatment of chronic PID, Tuberculosis & Cervical TB		10 marks
	Sexually transmitted diseases	4 HR S	<p>Acute & chronic gonorrhoea clinical features diagnosis & treatment.</p> <p>Syphilis C/F & diagnosis.</p> <p>AIDS clinical features causative organisms, diagnosis & prevention</p>	<p>Chlamydial infections clinical features & diagnosis.</p> <p>Chancroid & Granuloma inguinale causes & clinical features</p>	<p>Bacterial vaginitis C/F & diagnosis.</p> <p>Herpes genitalia clinical features & diagnosis.</p> <p>Molluscum contagiosum & scabies</p>	
	Infection of the individual organs	5 HR S	<p>Classify vulvitis due to specific infection.</p> <p>Acute Bartholinitis C/F & causation.</p> <p>Bartholin abscess clinical features.</p> <p>Vaginal infection- vulvo-vaginitis in childhood, C/F & investigation.</p> <p>Moniliasis & Trichomoniasis causes, C/F, mode of transmission & diagnosis</p>	<p>Vulvitis due to sensitive reaction & urinary contamination...</p> <p>Bartholin cyst clinical features</p> <p>Senile vaginitis clinical features & diagnosis.</p>	<p>Chlamydial vaginitis.</p> <p>Nonspecific vaginitis & toxic shock syndrome.</p>	

6	Dysmenorrhoea & other disorders of menstruation	4 HR S	Define dysmenorrhoea, types, etiology clinical features & management of primary & secondary dysmenorrhoea. Membranous dysmenorrhoea. Premenstrual syndrome causes clinical features, diagnosis & treatment	Ovarian dysmenorrhoea Ovular pain	Pelvic congestion syndrome	15 Marks
	Abnormal menstrual bleeding	4 HR S	Menorrhagia, metrorrhagia, oligomenorrhoea, hypomenorrhoea-- definition & causes. DUB define, classify, clinical features, investigations & general management	Common causes of abnormal vaginal bleeding	Surgical management— uterine curette, endometrial ablation.	
	Amenorrhoea	3 HR S	Definition, types, causes & investigations of primary & secondary amenorrhoea	Management & treatment of primary & secondary amenorrhoea		
7	Infertility	6 HR S	Definition, causes of male & female infertility. Investigation of male infertility-routine & in-depth evaluation. Female investigations for ovarian factors-BBT	Treatment of male & female infertility- Assisted reproductive techniques— IVF, GIFT & MIST Other investigations endometrial biopsy, cervical mucus study,	Tubo-plasty, hydro-tubation	10 marks

				HCG & sonography		
8	Benign lesion of vulva & vagina	1 HR S			Squamous cell hyperplasia-clinical-feature. Vulval ulcer types. Vulval dystrophy-etiology & types. Lichen sclerosis C/F & diagnosis. Types of vulval & vaginal cysts.	10 Marks
	Benign lesion of cervix	4 HR S	Cervical erosion—definition, etiology, clinical features & diagnosis.	Management of cervical erosion. Types of cervical cysts.	Elongation of cervix- causes & symptoms. Ectropion cervical tear	
	Benign lesions of uterus	4 HR S	Fibroid types, clinical features, investigations, treatment & D/D	Secondary changes in fibroid, Polyps-- types, clinical features,	Cervical fibroid.	
	Benign lesions of ovary	4 HR S	Non-neoplastic causes—follicular cyst, corpus luteal cyst & lutein cyst. Dermoid cyst – Origin, signs & symptoms. D/D of ovarian tumor	Classification of ovarian tumor Mucinous cyst, serous cyst—origin & causes. Complication of ovarian tumor	Torsion of ovarian pedicle-Clinical features & diagnosis. Parovarian cyst	
9	Endometriosis & Adenomyosis	3 HR S	Endometriosis-definition, sites, clinical features diagnosis complication Adenomyosis-	Pathology & treatment of endometriosis.	Endometriosis at special sites. Stromal endometriosis clinical features	5 marks

			causes. Clinical features.			
10	Special topics	6 HR S	<p>Abnormal vaginal discharge-causes</p> <p>Leucorrhoea causes & diagnosis.</p> <p>Pruritus vulvae-define etiology & general treatment.</p> <p>Pelvic pain, types, causes & investigations. Post-menopausal bleeding-causes & investigations.</p> <p>Vaginismus, Dyspareunia definition, causes & treatment</p>	<p>Pruritus vulvae-mechanism of itching, special investigation.</p> <p>Management of acute & chronic pain.</p> <p>Low backache causes.</p> <p>Fibro-adenoma of breasts.</p> <p>Hirsutism-define causes.</p> <p>Galactorrhoea definition & causes.</p>	<p>Common causes of vaginitis & AVD</p> <p>Trapped ovarian syndrome</p> <p>Ca breasts causes & clinical features</p> <p>Abdomino-pelvic lump causes...</p>	5 marks
11	Genital malignancy	6 HR S	<p>CA cervix-etiology, predisposing risk factors, mode of spread, diagnosis, D/D & complications, prevention.</p> <p>Endometrial cancer etiology & clinical feature. Granulosa tumor of the ovary causes & clinical features.</p>	<p>Planning & management of CA cervix</p> <p>Staging & treatment of endometrial CA</p> <p>CA Cervix - staging procedure by FIGO.</p>	<p>Vulval malignancy, etiology, clinical feature, diagnosis & D/D.</p> <p>Chorio-carcinoma define</p>	10 marks

12	Urinary problems in gynecology	3 HR S	Genuine stress incontinence define, causes & C/F & D/D Definition etiology & symptoms of sensory & Motor urge incontinence. Retention of urine causes & management.	Physiology of micturition storage & voiding of urine. Dysuria causes	Investigation & treatment of GSI. Frequency of urination causes Urethral caruncle- define, signs/symptoms.	5 marks
	Genital fistula	3 HR S	Definition, Types of genital fistula Vesico-vaginal fistula definition causes C/F & prevention.	Recto-vaginal fistula definition, causes & treatment	Investigation & treatment of VVF	
	Genital tract injuries	2 HR S	Complete perineal tear (CPT) define, etiology clinical feature & prevention	Nature of coital injuries	Treatment of (CPT) Instrumental injuries, types & management	
13	Contraception	3 HR S	Methods of contraception- indications & uses. Vasectomy advantages & complications.	Indications of sterilization		5 marks
	Chemotherapy caused complications	1 HR S		Radiation reactions and their treatment		

Obstetrics

Sl No	Chapter	Time	Must Know	Desirable to Know	Nice to Know	Weightage
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5.	Hemorrhage in pregnancy	9 HR S	<p>Abortion, classification. Threatened, inevitable, missed, septic & recurrent abortion with clinical features, complications & general management. Indications of MTP & its complication. Ectopic pregnancy—etiology, C/F & diagnosis.</p> <p>Hydatidiform mole—etiology, C/F, investigations, D/D & complications</p>	Complete & incomplete abortion.	<p>Methods of termination of pregnancy.</p> <p>Ectopic pregnancy—mode of termination, investigations, & management.</p> <p>Cornual & cervical pregnancy.</p> <p>Ectopic-pregnancy—management.</p> <p>Abdominal pregnancy</p>	20 marks
	Multiple-pregnancy, hydramnios & placental abnormalities	5 HR S	<p>Twins-Varieties, etiology, diagnosis & complications.</p> <p>Hydramnios— Definition, etiology, clinical features & complications.</p> <p>Oligo-hydramnios- definition diagnosis & complication.</p>	<p>Definition of placenta succenturiata, circumvallate placenta, Battledore placenta & placenta marginata—its clinical significance</p>	<p>Management of hydramnia.</p> <p>Complication of multi-fetal pregnancy & mono chorionic twins.</p> <p>Management during labor</p>	

	4 HR S	<p>Pre-eclampsia-definition, classification types, clinical-features complications & conservative management.</p> <p>Eclampsia-Causes, clinical features D/D</p>	<p>Eclampsia-management</p> <p>Gestational hypertension</p>	<p>Pre-eclampsia, etio-pathogenesis, patho-physiology</p> <p>Chronic & essential hypertension in pregnancy</p> <p>Eclampsia – Complications</p> <p>Acute fulminating pre-eclampsia.</p>	
Ante-partum hemorrhage	4 HR S	<p>Definition, causes of APH. Placenta previa - definition, types clinical features, D/D, Complications.</p> <p>Distinguish placenta praevia&abruptio placenta.</p> <p>Abruptia placenta— Definition, varieties, classify clinical features & D/D.</p>	<p>Diagnosis of placenta praevia. Management & treatment.</p> <p>Abruptio placenta - prognosis & management.</p> <p>Couvelaire uterus.</p>	<p>Causes of placenta praevia& Clinical confirmation.</p> <p>Abruptio placenta-etiology pathogenesis & treatment</p>	
Abnormalities of puerperium	4 HR S	<p>Puerperal pyrexia-define</p> <p>Puerperal pyrexia-define causes, clinical features, treatment</p> <p>Breast complications-mastitis clinical features & treatment</p>	<p>Puerperal pyrexia-pathology & prophylaxis.</p> <p>Breast engorgement cracked nipples-causes & treatment</p>	<p>Puerperal venous thrombosis & embolism</p> <p>Sub-involution-define & clinical features</p>	

6.	Medical & surgical illness complicating pregnancy	3 HR S	<p>Anemia in pregnancy- Classification.</p> <p>Iron deficiency anemia –clinical features, complications of severe anemia.</p> <p>Gestational diabetes- types, effects of diabetes on the mother & fetus.</p> <p>Causes of retention of urine in pregnancy</p>	Management of diabetes during pregnancy	<p>Sickle-cell anaemia, platelet disorders.</p> <p>Heart disease & TB, jaundice, thyroid, syphilis, asthma epilepsy in pregnancy</p> <p>Megaloblastic anemia-causes clinical features & complications.</p>	5 marks
	Gynecological disorders during pregnancy	2 HR S	Fibroid in pregnancy-clinical features & diagnosis.		Ovarian tumor, Retroverted uterus & prolapsed	
7.	Pre-term labor, rupture of membranes, IUD of fetus & post-maturity	4 HR S	<p>Pre-term labor-define, etiology diagnosis.</p> <p>PROM-define & diagnosis</p> <p>Post term pregnancy-define, etiology, diagnosis & complication</p> <p>IUD- define, etiology clinical features</p>		<p>Management of pre-term labor, PROM & post term pregnancy</p> <p>Management of Intra uterine death.</p> <p>IUD - investigations & complication.</p>	5 marks
	Special cases	2 HR S	<p>Elderly prime-complications</p> <p>Grand multipara-complications</p> <p>Bad obstetric history-define</p>		<p>Pregnancy with H/O previous caesarian section, pregnancy in Rh-ve women</p> <p>Obesity, its effect on pregnancy & labor</p>	

	Contracted pelvis	4 HR S	Cephalo-pelvis- disproportion-define, diagnosis	Munro- kerrs classification of contracted pelvis	Define-etiology & diagnosis. Pelvimetry- clinical & radio- pelvimetry. CPD- management, trial labor	
8.	Abnormal uterine contraction	2 HR	Constriction ring- diagnosis & treatment. Difference between constriction & retraction ring	Cervical dystocia-types Precipitate labor	Uterine inertia- types & diagnosis	10 Marks
	Mal-position, mal- presentation & cord prolapsed	5 HR S	Breech presentation types, clinical features etiology & diagnosis.	Face & brow presentation- its course in labor. Compound presentation= etiology & diagnosis.	Management of labor in Breech presentation, vaginal breech delivery, assisted breech delivery. Management of complicated breech delivery. Cord presentation & cord prolapsed.	
	Prolonged labor, obstructed labor & dystocia	3 HR S	Prolonged labor- define causes with diagnosis Obstructed labor- define, causes, clinical features.	Obstructed labor-effect on mother & fetus.	Treatment of prolonged & obstructed labor. Dystocia caused by fetal anomalies.	

9	Complication of 3rd stage labor	5 HR S	Post-partum types, causes & diagnosis. Management of true post-partum hemorrhage Secondary PPH- causes & management Retained placenta, define causes	Management of 3 rd stage bleeding Placenta-accreta-diagnosis Inversion of uterus-varieties & etiology	Retained placenta – management Management of placenta accreta& inversion of uterus	10 marks
	Injuries to birth canal	2 HR	Injuries to perineum-causes & management		Injuries to cervix, vagina. Pelvic hematoma. Rupture of uterus	
10	Low birth weight baby	4 HR S	Preterm baby-define, etiology complication. IUGR-Define, types, etiology diagnosis & complications.		Management of pre-term baby. Management of IUGR	5 marks
	Disease of fetus & the new born	6 HR S	Asphyxia neonatrum- etiology, clinical features & management. Jaundice in new born-causes. Infections of new born-ophthalmianeonatrum causes prevention & treatment	Injuries of new born-causes & prevention Causes of diarrhea and vomiting in new- born.	Respiratory distress in new-born. Hemolytic disease of new born. Hemorrhagic diseases. Congenital malformation of new born	
11	Medico-legal aspects in Obstetrics	2 HR	Measure to minimize medico-legal problems			5

12	Population dynamics & control of conception	2 HR	Methods of contraception & its advantages. Sterilization in male & female-its indications & contra-indications	Advantages & disadvantages of IUCD	IUCD-complication & methods of insertion. Combined oral contraceptive pills	marks 5 Marks
	Prenatal Diagnostic Techniques Act 1994	1 HR	Abnormalities & reasons detected by the technique			
	Operative obstetrics	2 HR S	Indications of D&E, D&C, Suction evacuation, hysterotomy. Episiotomy-types & indications. Version definition & types. Caesarian section - definition, indications, types	Forceps-types & varieties. Classical caesarean section-merits & demerits with complication	Destructive operations Decapitation. Ventouse-indications & advantages	
	Safe mother-hood & obstetrics care	1 HR		Still births & maternal mortality-definition & causes	Safe motherhood & obstetric care.	
	Special topics in obstetrics	1 HR	Fetal distress High risk pregnancy		Shock in obstetrics Acute renal failure	
	Reproductive & child health care	1 HR		Prenatal & maternal mortality & morbidity		

Homoeopathic Therapeutics

Following organ affinity remedies (with specific sphere of action on genitalia) to be given preference along with Polychrests of II, III, IV BHMS:

- Aurum Muriaticum Natronatum
- Caulophyllum
- Cimicifuga Racemosa
- Colocynthis
- Ficus Religiosa
- Fraxinus Americana
- Gossypium
- Hamamelis Virginica
- Millefolium
- Oophorinum
- Pituitary gland
- Sabina
- Thlaspi Bursa Pastoris
- Trillium Pendulum
- Ustilago Maydis
- Viburnum Opulus

Practical or Clinical

Learning Objectives

Skills to be acquired by students

- Knowledge skills
- Communication with the patients
- Counseling & Analytical skills
- Management & Diagnosis.

Competence acquired at the end of the course:

- Individualizing every case from Homoeopathic perspective for therapeutic application.
- Assess Mother-to-Be regarding genetic dyscrasia for prescribing homoeopathic medicines.
- Provide quality maternal care by diagnosis of diseases during ANC check-up with homoeopathic remedies & manage accordingly.
- Prevention of diseases encountered by women during adolescence, child-bearing period pre-post menopause & menopausal period with prior treatment on homoeopathic principles.
- Advice& counselling for a safe & planned family by advocating family planning methods.
- Identify High risk Pregnancy, MTP& pure surgical cases for referral.

Objectives for clinicals

- Demonstrate the appropriate knowledge, skills and attitudes in order to perform specialist assessment of patients by means of clinical history taking and physical examination in a logical manner.
- Manage the problem&communicate with patient in different clinical situations.
- Define the patterns of symptoms in women presenting with obstetric and gynecological problems
- Justify the importance of psychological factors for patients and their relatives.
- Assess Benign, pre-malignant & malignant conditions with prognosis of each case.

Obtain information from the patient and her family, by

- Performing complete and directed interviews with women at different stages of reproductive life.
- Performing general and specific physical examination on the woman
- Inspection and palpation of the external genitalia;
- Performing obstetric examination like digital, using speculum etc
- inspection and palpation for breast examination

Analysis, interpretation of information and decision-making

- Assess the patient and from the information obtained, formulate diagnostic hypotheses and differential diagnoses for the most prevalent medical conditions in gynecology and obstetrics;
- Indicate appropriate additional obstetric tests for each case, taking into consideration the context and the

available resources.

- Request obstetric ultrasound images;
- Request prenatal examinations;
- Request routine examinations of blood, urine, specific examination like culture swab, Diagnostic D&C etc.
- Indicate appropriate complementary examinations within gynecology for each case taking into consideration the context and the available resources:
- Request screening examinations for breast and cervical cancer;
- Request imaging examinations and laboratory tests suitable for various benign diseases of the uterus and ovaries.

Practical or clinical classes shall be provided on the following topics both in II and IIIBHMS

Gynecological case taking: 20 Hours

- Art of case-taking- structured format.
- Elicit history of present complaint
- Details of present & past menstrual history
- Interpret investigations required in the case
- Assess the provisional diagnosis of the case
- List the homoeopathic remedies.

Obstetrical case taking: 30 Hours

- Elicit history of previous pregnancy, delivery puerperium
- Discuss history of abortions, operative intervention etc.
- Elicit abdominal findings-grips, presentation, position & PV findings.
- View the duration & stages of labor.
- Mention the type of delivery-pre-term, term vaginal or operative.

Gynecological examination of the patient: 20 hours.

- History & examination of female pelvic organ.
- Observe insertion & removal of IUCD.
- Observe minor gynecological procedures like D&C, D&E etc.

Obstetrical examination -antenatal, intra& postnatal care: 30 hours

- Art of case taking-Assist the process of normal labour& observe abnormal labour.
- Observe episiotomies, tubectomy procedures & application of forceps.
- Observe operative procedures like classical caesarean section.
- Watch the process of immediate care of new born.

Bedside training: 10 hours

- Demonstrate individual cases at bed-side & discuss the case in groups.

Adequate grasp over homoeopathic principle's and management: 10 hours

- Application of organ affinity remedies & polychrest.
- Miasmatic approach in study of the case to prescribe a remedy.

Identification of instruments and models: 15 hours.

- Identify the instruments& assesses its importance.
- Note the specimen/models.

Instruments of importance: a) Speculum b) Female catheter c) Single & Multiple toothed vulsellum. d) Uterine curette e) Cervical dilators f) Forceps- Ovum Haemostatic, sponge holding etc. g) Uterine

forceps -Kocher's, Allis, Lanes etc. h) Doyen's retractor & Ring k) Uterine sound

i) Pelvimeter j) Pessary-Hodge-Smith

Record of ten cases each in Gynecology and Obstetrics

Scheme of Examination

Theory: No of papers – 02 Marks: Paper I – 100, Paper II - 100

Contents

Paper I- Gynecology and homoeopathic therapeutics

Paper II – Obstetrics, infant care and homoeopathic therapeutics

Practical including viva –voce or oral

2.1 Marks – 200

2.2 Distribution of Marks

a) One long case	30
b) Practical records, case records, Journal	30
c) Identification of instruments, Models and specimens	40
d) Viva voce (Oral)	100

200

Question Paper Blueprint

Paper I - Gynaecology

Sl No	Chapters	Must Know			Desirable to know	
1	Anatomy of female genitalia	-	-	1 SA	-	
	Congenital malformation		1SE		1SA	
2	Puberty & Menopause		2SE		1SA	
	Neuro-endocrinology		1SE			
	Menstruation			1SA	1SE	
3	Examination of gynaecological patient		1SE		1SA	
	Inter-sex				1SA	
4	Uterine displacements	1LE	1SE			
5	Pelvic infections	1LE	1SE		1SA	
	STD		2SE	1SA	1SE	

	Infections of individual organs		2SE	1SA		1SA
6	Dysmenorrhoeas & other disorders	1LE	2SE	1SA		1SA
	Amenorrhoea		2SE	1SA	1SE	
	Abnormal menstrual bleeding	1LE	1SE			1SA
7	Infertility		2SE	2SA	1SE	1SA
8	Benign lesions of cervix	1LE			1SE	
	Benign lesion of uterus		2SE	1SA	1SE	1SA
	Benign lesion of ovary		2SE	1SA		1SA
9	Endometriosis & Adenomyosis		1SE	1SA		1SA
10	Special topics		2SE	2SA	1SE	1SA
11	Genital malignancy	1LE	1SE	1SA	1SE	1SA
12	Urinary problems in gynecology		2SE		1SE	
	Genital fistula		1SE	1SA		1SA
	Genital tract injuries		1SE			1SA
13	Contraception		1SE	1SA	1SE	
	Chemotherapy caused complications					1SA

PaperII - Obstetrics

Sl No	Chapters	Must Know			Desirable to Know	
1	Fundamentals of reproduction		1SE	1SA		
	Placenta & membranes		1SE			1SA
	Fetus-in utero		1SE	1SA		
	Physiological changes during pregnancy		1SE			
	Endocrinology in pregnancy				1SE	
	Fetal skull & maternal pelvis		1SE	1SA		
2	Ante natal care		1SE			1SA
	Diagnosis of pregnancy	1LE	1SE			1SA
	Normal labor	1LE	1SE	1SA	1SE	
	Normal puerperium		1SE		1SE	
	Vomiting pregnancy		1SE			1SA
3	Induction of labour		1SE			1SA
4	Hemorrhage in pregnancy	1LE	1SE	1SA		1SA
	Multiple pregnancy	1LE	1SE	1SA	1SE	1SA
	Ante partum hemorrhage	1LE	2SE	1SA	1SE	1SA
	Hypertensive disorders in pregnancy	1LE	1SE			1SA
	Abnormalities of puerperium		1SE	1SA		1SA
5	Medical & surgical illness in pregnancy		1SE	1SA		1SA
	Gyneco- disorders during pregnancy		1SE			
6	Preterm labor, PROM, Post maturity		1SE	1SA		
	Special cases		1SE	1SA		
	Contracted pelvis			1SE		
7	Abnormal uterine contraction		1SE	1SA		1SA
	Malpresentation, mal-position & cord	1LE			1SE	1SA
	Prolonged, Obstructed labour, dystocia		1SE			1SA
8	Complication of 3 rd stage labour	1LE	1SE	1SA		1SA

	Injuries to birth canal	1SE			
9	Care of New Born	1SE	1SA	1SE	
	Low birth weight Baby	1SE	1SA		
	Diseases of fetus& New-born	1SE	1SA		1SA
10	Population dynamics	2SE	1SA		1SA
	Medico-legal aspects of Obstetrics	1SE			
	Pre Diagnostic Techniques Act		1SA		
11	Operative obstetrics	1SE	1SA	1SE	1SA
	Safe motherhood & obstetrics care		1SA		
	Special topics in obstetrics	1SE			
	Reproductive & child health care				1SA

Question Paper Layout

Paper – I: Gynaecology& Obstetrics

Long essay (2 x 10 marks)	
1	Pelvic infections, Sexually transmitted diseases, Infection of the individual organs, Dysmenorrhea& other disorders of menstruation, Abnormal menstrual bleeding, Amenorrhea
2	Displacement of uterus, Infertility, Benign lesion of cervix, Benign lesions of uterus, Benign lesions of ovary, Genital malignancy
Short essay (10 x 5 marks)	
3	Pelvic infection, STD, Anatomy of female reproductive organs
4	Infection of individual organs, Benign lesions of ovary, Puberty & menopause,
5	Dysmenorrhea,Genital malignancy, Neuro-endocrinology in relation to reproduction
6	Abnormal menstrual bleeding, Menstruation
7	Amenorrhea, Examination of gynecological patient
8	Displacement of uterus, Endometriosis & Adenomyosis
9	Infertility, Special topics
10	Benign lesion of vulva & vagina, Urinary problems in gynecology

11	Benign lesion of cervix, Genital fistula, Genital tract injuries
12	Benign lesions of uterus , Contraception
Short Answers (10x 3 marks) –	
13	Congenital malformations of FGT, Puberty & menopause
14	Pelvic infections, STD, Menstruation
15	Infections of individual organs, Abnormal uterine bleeding, Amenorrhea
16	Displacement of uterus, Infertility, Chemotherapy caused complications.
17	Benign lesion of vulva & vagina, Benign lesion of cervix
18	Benign lesions of uterus, Benign lesions of ovary
19	Adenomyosis, Genital malignancy
20	Special topics, Urinary problems in gynecology, Anatomy of reproductive organs
21	Genital fistula, Genital tract injuries
22	Contraception, Inter-sex

Paper – II: Gynaecology and Obstetrics

Long essay (2 x 10 marks)	
1	Diagnosis of pregnancy, Antenatal care, Normal-labor, Normal puerperium, Complication of 3rd stage labor, Multiple pregnancy, Hydramnia& placental abnormalities
2	Vomiting in pregnancy, Hemorrhage in pregnancy, Hypertensive disorders in pregnancy, Ante-partum hemorrhage, Abnormalities of puerperium
Short essay (10 x 5 marks)	
3	Multiple-pregnancy, hydramnia& placental abnormalities, Diagnosis of pregnancy, Antenatal care
4	Ante-partum hemorrhage, Medical & surgical illness complicating pregnancy, Care of new born infant
5	Physiological changes during pregnancy, Gynecological disorders during pregnancy, Low birth weight baby
6	Normal-labor, Pre-term labor, rupture of membranes, IUD of fetus & post-

	maturity, Disease of fetus & the new born
7	Complication of 3rd stage labor, Special cases, Endocrinology in relation to reproduction
8	Vomiting in pregnancy, Contracted pelvis
9	Hemorrhage in pregnancy, Abnormal uterine contraction
10	Hypertensive disorders in pregnancy, Mal-position, mal-presentation & cord prolapsed
11	Normal puerperium, Prolonged labor, obstructed labor & dystocia
12	Abnormalities of puerperium, Induction of labor
Short Answers (10x 3 marks) –	
13	Anatomy of reproductive organs, Multiple-pregnancy, hydramnia & placental abnormalities, Diagnosis of pregnancy, Antenatal care
14	Fundamentals of reproduction, Ante-partum hemorrhage, Medical & surgical illness complicating pregnancy, New born infant
15	Placenta & membranes, Physiological changes during pregnancy, Gynecological disorders during pregnancy, Low birth weight baby, Injuries to birth canal
16	Fetus-in-utero, Normal-labor, Pre-term labor, rupture of membranes, IUD of fetus & post-maturity, Disease of fetus & the new born
17	Fetal skull & maternal pelvis, Complication of 3rd stage labor, Special cases, Endocrinology in relation to reproduction
18	Population dynamics & control of conception, Vomiting in pregnancy, Contracted pelvis, Emergency Obstetrics care
19	Operative obstetrics, Hemorrhage in pregnancy, Abnormal uterine contraction
20	Safe mother-hood & obstetrics care, Hypertensive disorders in pregnancy, Mal-position, mal-presentation & cord prolapsed
21	Special topics in obstetrics, Normal puerperium, Prolonged labor, obstructed labor & dystocia
22	Radiology in obstetrics, Abnormalities of puerperium, Induction of labor

Blue print for Clinical Examination

- a. One long case: GY/ OBS case taking: 30 marks

- Structured format 05
- examination- abdominal findings grips, position of foetus& PV findings Physical 04
- F/H,/details of previous pregnancy, abortion Elicit past & 03
- interventions, type of delivery- Term/ pre-term etc Operative 03
- choice of investigations Discuss the 04
- interpret the provisional diagnosis Formulate & 05
- remedies Discuss the 05
- attitude towards the patient Observe the 04

b. Practical records, case records, journals: 30 Marks

Through Continuous assessment of cases which are recorded during
course of II & III year in OPD & IPD.

- cases Gynaecology 10
- cases Antenatal 10
- cases Labour case 05
- cases Obstetrics 05

Identification of any Two Instruments; One Model, One Specimen: 40 Marks

- instrument/ Model / specimen Name the 02
- uses & importance Discuss its 03
- symptoms related to the model/ instrument List 2 03
- provisional diagnosis Mention the 02

Recommended Books

Basic Books

- Burnet, JC (Jan 2009 Reprint) *Organ Diseases of woman* (edition unknown) B. Jain Publishers. New Delhi
- Cowperthwaite A.C.(2014 Reprint)*A Textbook of Gynecology* (Reprint edition), B. Jain Publishers New Delhi
- Cowperthwaite A.C.(2013 Reprint)*Disorders of menstruation (reprint edition)*, B. Jain Publishers New Delhi
- Dawn C.S.(1995)*A Textbook of Gynecology and contraception (12 revised edition)*Smt. Arati Dawn Sagar Publishers .New Delhi

- Dawn C.S. (2004)*Textbook of Obstetrics and Neonatology (16th edition)* Smt. Arati Dawn- Sagar publication New Delhi
- Dutta DC (2015)*Text book of Obstetrics (8th edition)*Jaypee Brothers Medical Publishers (P) Ltd New Delhi.
- Dutta DC. (2013)*Text book of Gynecology(6th revised edition)*.Jaypee Brothers Medical Publishers (P) Ltd New Delhi.
- Guernsey H.N (2005 Reprint) *The Application of the principles and practice of homoeopathy to Obstetrics (1st edition)*, B. Jain Publishers.
- Howkins& Bourne's (2015)Shaws' Text Book of *Gynecology (15th edition)* Elsevier Health Science
- Leavitt Sheldon (2015 Reprint)*Homoeopathic therapeutics as applied to obstetrics*. B. Jain Publishers. New Delhi
- Marsden JH. (1995 Reprint) *Practical handbook of Gynecology with therapeutic hints*. B. Jain Publishers. New Delhi
- Minton. (2005 Reprint)*Uterine therapeutics*. B. Jain Publishers. New Delhi
- Mudaliar, Menon(2015)*Clinical obstetrics (12th edition)*Orient Blackswanpvt Ltd.
- Ruddock. E. H (1921)*The Ladies manual of Homoeopathic Treatment (11th edition)*. B. Jain Publishers. New Delhi
- Sharma A.K. (1998)*Guide to Gynecology (1st edition)*. B. Jain Publishers New Delhi
- Wood, James (2011 Reprint) *Clinical Gynecology* B. Jain .New Delhi

Reference Books

- Conant CM. (2010 Reprint) *An obstetric mentor*.B. Jain Publishers. New Delhi
- Farrington EA. (2013 Reprint)*Clinical Materia-Medica (re print edition)*B Jain publishers. New Delhi
- G H G Jahr (2004 Reprint) *Diseases of females & Infants at the Breasts (Reprint edition)* B Jain Publishers NewDelhi.
- Hoyne Temple S (2010 Reprint)*Clinical Therapeutics (2nd edition)*. B Jain Publishers. New Delhi
- Jahr C. (2015 Reprint)*Therapeutic Guide 40 yrs practice (reprint edition)*. B Jain Publishers. New Delhi
- Jeffcott (2014)*Principles of Gynecology(8th edition no)* Butter world & Co Publishers Ltd-London
- Kandpal AK, Bhagat T, Jain R. (2004)*Text book of Obstetrics & Gynecology including neonatology with Homoeopathic Therapeutics (1st edition)*. B-Jain Publishers. New Delhi
- Kulkarni S(2009) *Gynecologic& Obstetrics (Reprint edition)* B Jain publishers. New Delhi
- Lilienthal S. (2012 Reprint)*Homoeopathic Therapeutics (2nd revised edition)* B Jain Publishers. New Delhi
- Purandare C N. (2006)*Dysfunctional uterine bleeding (1st edition)*Jaypee Publishers Ltd. New Delhi
- Robert P (1986) *Holland & Brews Manual of Obstetrics (14th edition)* Churchill Livingstone Pvt Ltd New Delhi.
- Sabaratnam AK. (2011)*Essentials of Obstetrics (2nd edition)*.Jaypee Publications. New Delhi
- Salhan S. (2011) *Text book of Obstetrics and Gynecology (1st edition)* Jaypee Publishers Ltd. New Delhi
- Sheila Balakrishnan. (2013)*Text book of Obstetrics(2nd edition)*Paras Medical Publishers .New Delhi

- Verma S.P. (2001) *Practical handbook of Gynecology with therapeutics(Reprint edition)*. B Jain publishers New Delhi

Organon THIRD YEAR BHMS

10. Annual objectives (for each year, if the subject is spread over different years)

Annual Objectives

At the end of III BHMS the student shall be able to

1. Correlate the knowledge of basic sciences with homoeopathic philosophy.
 2. Describe the evolution of disease.
 3. Illustrate the miasmatic expressions in the case.
 4. Recognize the most similar medicine.
 5. Assess the level of susceptibility and relate it to selection of potency.
11. Content distribution as per the list of topics, time allotted for each topic, distribution for ‘Must know’, ‘Desirable to know’ and ‘Nice to know’ and the probable weightage.

III BHMS

Total number of teaching Hours:

Theory: 100 hrs

Practicals/clinical/seminars/ tutorials: 75 hrs.

Theory course content:

1. Hahnemann’s Prefaces and Introduction to Organon of Medicine.

Total time allotted-5 hrs

Marks allotted: 5marks

Sl No.	Topic	Time allotted	Must Know	Desirable to know	Nice to know	Total marks allotted	Type of questions
a	Prefaces to organon of medicine	1hrs	Authors preface to 1 to 6 th edition of organon Introduction to 6 th edition of organon-James Krauss			3	3

Introduction part of 6th edition of organon of Medicine

Rational medicine. Tollecausum, Prima causa morbid,

State of medicine before and during Hahnemann.

b

Review of medicine

4hrs

Treatment by derivation imitation.

Repellant remedies

Dusa natura ministry nature

Law of similia in day to day life mixtures in

Law of similia as explained by people before Hahnemann.

Prescription

Aphorisms 105 to 294 including footnotes of Organon of Medicine (5th & 6th Editions translated by R.E.Dudgeon & W Boericke): 50 hrs							30
1.	Aphorisms 105 to 294 including footnotes of Organon of Medicine (5 th & 6 th Editions translated by R.E.Dudgeon & W Boericke)	50hrs					30
	Aphorism 105-145	5	Aphorism 105-107 Investigating the pathogenetic power of medicine Aphorism 108-111 Medicine must be proved on healthy human beings. Aphorism 112-114	Albert von Haller Aphorism 115 Alternating action of medicine Aphorism 118-120			10/5/3

			<p>Primary action and secondary action</p> <p>Aphorism 116-117</p> <p>Idiosyncrasies</p> <p>Aphorism 121-140</p> <p>Mode of proceeding when we make trial of them on other persons</p> <p>Aphorism 142-</p> <p>Investigations of pure effects of medicine in disease is different</p> <p>Aphorism 143-145</p> <p>Investigations of pure effects of medicine on healthy person to form materia medica</p>	<p>Surrogate</p> <p>Aphorism 141-</p> <p>The experiments of healthy physician with medication on himself are best ,</p>			
	Aphorism 146-147	1	Aphorism 146-147- Specific remedy, Mongrel sect				3
	Aphorism 148-150	1	148 Modus operandi of Homoeopathic cure	Aphorism 149 cure in chronic case			5/3

		1		Aphorism 150			
		1		Indispositio n			
	Aphorism 151-156	2	Aphorism 151-156 (Characteristic symptoms)				5/3
	Aphorism 157-161	2	Aphorism 157-161 Homoeopathic aggravation				5/3
	Aphorism 162-171	2	Aphorism 162-171 Rules for treatment when the supply to known medicine is too small to allow a perfect homoeopathic to be discovered (accessory symptoms)				5/3
	Aphorism 172-184	3	Aphorism 172-184 Rules for treatment of disease with few symptoms (one sided diseases)				10/5/3
	Aphorism 185-203	3	Aphorism 185-203 Local maladies and there treatment				10/5/3
	Aphorism 204-209	3	Aphorism 204-209 Preliminary				10/5/3

			investigation miasm				
	Aphorism 210-230	5	Aphorism 210-230 Mental diseases and there treatment	Jumping potencies			10/5/3
	Aphorism 231-258	3 2 1	Aphorism 231-234 Intermittent and alternating diseases Aphorism 235-256 Intermittent fevers	Aphorism 257, 258. Favorite remedies			10/5/3
	Aphorism 259-263	2	Aphorism 259-263 Diet in acute disease, regimen in chronic disease				5/3
	Aphorism 264-272	2 2	Aphorism 264-269 Selection of genuine medicine. & Preparation Aphorism 270- 272 New method of dynamization				5/3
	Aphorism 273-283	2	Aphorism 275-283 Danger of too large doses	Aphorism 273- 274 Law of single			5/3
	Aphorisms 284-294	1		Aphorism 284 Roots of			5/3

		1		administrati on of medicine			
		1		Aphorism 285			
		1		External application of remedies			
		2		Aphorism 286-287			
		2		Electricity			
		2		Galvanism, mineral magnet			
		2		Aphorism 288-289			
		2		Animal magnetism, mesmerism			
				Aphorism 290- 294			
				Massage, water bath as remedial agents			

Homoeopathic philosophy: 40 hrs

20

3 Chapters of philosophy books of J.T.Kent, Stuart close & H.A. Roberts related to Aphorisms 29- to be changed to 104 of organon of Medicine. (1 -104)

20

A	Lectures on Homoeopathic philosophy- J.T.Kent	14			
1	Chapter-28 The Study of proving	1		The Study of proving	5/3
2	Chapter-2 Idiosyncrasy	2	Idiosyncrasy- Definition, type Susceptibility & idyiosyncrasy		5/3
3	Chapter-30 Individualisation	2	Individualisation-		
4	Chapter-34 Homoeopathic aggravation	2	Homoeopathic aggravation- Aphorisms 154 to 160		10/5/3
5	Chapter-35 Prognosis after observing the action of the remedy	3	Prognosis after observing the action of the remedy		10/5/3
6	Chapter-36 Second prescription	3	Second prescription- Definition, types		10/5/3
7	Chapter-37 Difficult and incurable cases	1		Difficult and incurable cases- Definition and treatment.	10/5/3
B	The genius of Homoeopathy – Stuart Close	10			

1	Chapter-34 Susceptibility reaction and immunity	3	Susceptibility, reaction and immunity - definitions, degrees of susceptibility conservation of susceptibility	Law of least plus	10/5/3
2	Chapter-10 Indisposition and second best remedy	1		Indispositio n - Definition and example, second best remedy- Placebo	5/3
3	Chapter-13 Homoeopathic Posology	3	Homoeopathic Posology- Definition Types of drug action Choosing the potency Repetition of dose Effect of remedy Law of dosage		10/5/3
4	Chapter-14 Potentiation infinitesimal dose	2	Potentiation Definition	Law of least action How a potentiatise	5/3

				d medicine different from other drugs?	
				Scientific foundation of Potentiatio n.	
5	Chapter-15 The drug potential	1			The drug potential 5/3
C	The Principle and Art of cure by Homoeopathy- Herbert Robert.	16			
1	Chapter-7 Our remedies why they act	2			Our remedies why they act 3
2	Chapter-10 Law of cure	1	Law of cure- Relation between drug and disease.	Action of drugs Difference between isopathy and Homoeopat hy.	5/3
3	Chapter-12 The dynamic action of drugs	2	The dynamic action of drugs Three reasons for aggravation. Difference between dilution and potentization. Relation between dynamis and	Applicatio n of law of mathemati cs to principle of Homoeop athy	5/3

		Homoeopathic dosage			
4	Chapter-13 The dose	2	The dose- Harmfulness of large doses, Benefits of minimum dose	Arndt- Schulz law of action and reaction. Law of least action	5/3
5	Chapter-14 Remedy reaction	1		Remedy reaction	5/3
6	Chapter-15 Drug proving	1		Drug proving: Doctrine of signature, Definition of drug, medicine and remedy. Law of proving	5
7	Chapter-16 The second prescription	1	The second prescription- Definition, types		10/5/3
8	Chapter-17 Susceptibility	1		Susceptibili ty	5/3
9	Chapter-18 Suppression	2	Suppression- Definition, types, explanation with examples. Danger of suppression		5/3

10	Chapter-19 Law of palliation	1	Law of palliation- definition, conditions where palliation is justifiable with examples.	3
11	Chapter-21 Local applications	1	Local applications- Disadvantages of local applications.	5/3
12	Chapter-34 The deflected current	1	The deflected current	5/3

Practical: 75 hours (Practical/clinical/tutorial/seminar)

Sl no.		hrs	Must Know	Desirable to know	Nice to know
		75 hrs			
1	Case taking		Case taking		
2	Case processing		Analysis of symptoms	Miasmatic diagnosis	
			Evaluation of symptoms		
			Totality of symptoms		
3	Record/Journal(10 acute & 10 chronic cases)				

12. Blueprint of question paper, for each QP

BLUE PRINT

Organon of medicine: 1 to 294: 60 marks

Homoeopathic philosophy: 40 marks

13. Question paper layout to show which question number will represent which chapter (s).

Question paper layout

Long essay

1. III BHMS aphorisms (105 to 283).
2. III BHMS philosophy (Kent, Close, Roberts).
(Kent: Idiosyncrasy, 12 observation, second prescription)
(Close: susceptibility, Posology)
(Roberts: Second prescription, Susceptibility, Suppression, Law of palliation, Local application)

Short Essays

3. II BHMS aphorisms (29 to 70)
4. II BHMS aphorisms (71 to 104)
5. III BHMS aphorisms (105 to 145)
6. III BHMS aphorisms (146 to 170)
7. III BHMS aphorisms (171 to 230)
8. III BHMS aphorisms (231 to 282)
9. III BHMS aphorisms (283 to 294)
10. III BHMS Kent's Philosophy (Idiosyncrasy, 12 observation, second prescription Individualization)
11. III BHMS Close's Philosophy (Susceptibility, Indisposition & second best remedy, Posology, Potentiation)
12. III BHMS Roberts's Philosophy (The dynamic action of drugs, The dose, remedy reaction, drug proving, second prescription, Susceptibility, suppression)

Short Answers:

13. I BHMS aphorisms (1 to 8)
14. IBHMS aphorisms (9 to 28)
15. III BHMS aphorisms (105 to 145)
16. III BHMS aphorisms (146 to 170)
17. III BHMS aphorisms (283 to 294)
18. III BHMS Kent's Philosophy (Difficult & incurable cases, Idiosyncrasy, 12 observation, second prescription Individualization)
19. III BHMS Close's Philosophy (Susceptibility, Indisposition & second best remedy)
20. III BHMS Close's Philosophy (Posology, Potentiation)

- Carrol Dunham. *Homoeopathy- The Science of Therapeutics*. B. Jain publishers (P) limited, New Delhi
- H.A.Roberts. *Principles and Practice of Homoeopathy*. B. Jain publishers (P) limited, New Delhi
- Staurt Close. *The Genius of Homoeopathy*. B. Jain publishers (P) limited, New Delhi
- Elizabeth Hubbard. *A brief study course in Homoeopathy*. B. Jain publishers (P) limited, New Delhi
- W.M.Boericke. *A compend of the principles of Homoeopathy*. B. Jain publishers (P) limited, New Delhi
- R.E.Dudgeon. *Lectures on the theory & practice of Homoeopathy*. B. Jain publishers (P) limited, New Delhi
- Samuel Hahnemann. *Chronic Diseases*. B. Jain publishers (P) limited, New Delhi
- J.H.Allen. *The chronic miasm Psora, Pseudo-psora & sycosis*. B. Jain publishers (P) limited, New Delhi
- Banerjee. *Chronic Diseases-Its cause & cure*. B. Jain publishers (P) limited, New Delhi

Advanced:

- Dr. E.S. Rajendran. *New Lights(Lectures on Homoeopathic Philosophy)*. Mohna Publications, Calicut
- Phyllis Speight. *A comparision of the chronic miasms, psora, pseudopsora and sycosis and syphilis*. B. Jain publishers (P) limited, New Delhi
- Dr S.K . Banerjee. *Miasmatic Diagnosis practical tips with clinical comparisons*. B. Jain publishers (P) limited, New Delhi
- Dr. E.S. Rajendran. *The Nucleus (Lectures on Chronic Diseases and Miasms)*. Mohna Publications, Calicut

Repertory Third BHMS'

A student shall be able to:

1. Describe the importance of case taking and record keeping.
2. Interview and document the case (both acute and chronic) according to Hahnemannian concept.
3. Explain the views of various authors in case taking like Kent, Roberts, Boenninghausen and Boger.
4. Discuss the difficulties in case taking, as in one sided diseases, paediatric etc.
5. Develop the totality of symptoms and reportorial totality.
6. State the definition, purpose, and various terminologies used in the repertory.
7. Justify that the repertorisation is not the end but means to arrive at simillimum together with Materia Medica based on sound principles of philosophy.
8. Describe the philosophy, construction, adaptability and limitations of Kent, Boger and Boenninghausen's Repertories.

TOTAL THEORY = 50hrs

Sl No	Topic	Time	Must Know	Desirable to Know	Nice to Know	Weightage

1	Repertory definition, need scope and limitations	3 hrs.	<p>Definition of Repertory</p> <p>Derivation of word repertory</p> <p>Need of Repertory</p> <p>Scope & limitation of Repertory</p> <p>Terms and languages of Repertory</p> <p>Conversion of symptoms into rubrics for repertorization using different repertories</p> <p>Relation of Repertory with Organon & Materia Medica</p>	<p>Definition according to various authors</p> <p>History of Repertory</p>	Based on different authors	5
2	Classification of Repertories	2	<p>Types of Classification</p> <p>Based on form</p> <p>Based on Philosophy</p>	Based on Era (Pre Kentian Post Kentian)		3
3	Gradation of Remedies by different authors	1	<p>Gradation of Remedies by different authors</p> <p>Philosophy behind gradation of remedies</p>			3
4	Method of repertorisation Techniques of repertorisation	2	<p>Method of repertorisation</p> <p>Techniques of repertorisation</p>	Miasmatic assessment		5
5	Case taking Steps of	25	<p>Pre requisites of repertorisation</p> <ul style="list-style-type: none"> • Case taking 	Symptomatology	<p>Life history of Dr. Kent</p> <p>Contributions of</p>	30

	<p>repertorisation</p> <p>Case processing</p> <ul style="list-style-type: none"> • Analysis & evaluation of symptoms • Miasmatic assessment • Totality of symptoms or conceptual image of the patient. • Repertorial totality • Selection of rubrics • Repertorial technique & results <p>Repertorial analysis</p>		<p>Dr. Hahnemann's instructions for taking the case.</p> <ul style="list-style-type: none"> • Difficulties in taking chronic case • Difficulties in taking the case in an unconscious individual and in paediatrics • Recording and interpretation • Defining the problem\ • Classification of symptoms • Analysis & evaluation of symptoms • Totality of symptoms or conceptual image of the patient. <p>Steps of repertorisation</p> <ul style="list-style-type: none"> • Selection of Repertory • Selection of rubrics • Repertorial totality <p>Repertorization and analysis of</p>	<p>Importance of pathology in disease diagnosis and individualization in relation to study of Repertory</p>	<p>Dr Kent</p> <p>Hoffmann's criticism to Kent's repertory</p> <p>Kent's repertory as a Golden repertory for time immemorial</p> <p>Different revisions of Kent's repertory e.g.</p> <p>Dr. Kunzli</p> <p>Dr. Shivraman</p> <p>Dr. R.P. Patel</p> <p>Dr. Piere Schmidt & Dr. DewanHarishchand</p>	
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			result			
6	Study of Different repertories Kent,BTPB,BBC R <ul style="list-style-type: none"> • History • Philosophical background • Structure • Concept of repertorisation • Adaptability. • Scope and Limitations 	9	<ul style="list-style-type: none"> • History of Kent Repertory • Philosophical Background • Concept of totality • Plan & Construction • Cross references • Scope & adaptability • Limitations 	Different editions of Kent's repertory		
7	Study of Different repertories BTPB <ul style="list-style-type: none"> • History • Philosophical background • Structure • Concept of repertorisation • Adaptability. • Scope and Limitations 	4	<ul style="list-style-type: none"> • History of BTPB • Philosophical Background • Concept of totality • Plan & Construction • Cross references • Scope & adaptability • Limitations 		life history of Dr. C. M. Boger Studies on philosophy of healing by Dr. C. M. Boger How to use Boger's repertory by Bhanu Desai Various methods to use Boger's repertory	22
8	Study of Different repertories BBCR <ul style="list-style-type: none"> • History • Philosophical background • Structure 	4	<ul style="list-style-type: none"> • Introduction to BBCR with history of BBCR • Philosophical background • Concept of totality 			

<ul style="list-style-type: none"> • Concept of repertorisation • Adaptability. • Scope and Limitations 		<ul style="list-style-type: none"> • Plan & Construction • Cross reference • Adaptability 			
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PRACTICAL HOURS = 25hrs

- 05 cases of Surgery, Gynecology and Obstetrics worked out by using Kent’s Repertory.
- Rubrics hunting from Kent’s and Boenninghausen’s Repertory.

Surgery **III BHMS**

Introduction

Homoeopathy as a science need clear application on part of the physician to decide about the best course of actions required to restore the sick, to the health. Knowledge about surgical disorders is required to be grasped so that homoeopathic physician is able to:

1. diagnose common surgical conditions.
2. institute homoeopathic medical treatment wherever possible
3. Organise pre and post-operative homoeopathic medicine care as total or partial responsibility but with the consent of a surgeon.

The conceptual clarity and data base needed for above is possible only by an effective coordination of the care of the patient. it will also facilitate the physician in individualising the patient necessary for homoeopathic treatment and management. for the above conceptual clarity and to achieve the aforesaid objectives and effective coordination between the treating surgeons and homoeopathic physicians is required keeping in view the holistic care of the patient.

It will also facilitate the physician individualising the patient, necessary for homoeopathic treatment and management.

The study shall start in second BHMS and complete in third BHMS. Examinations shall be conducted in third BHMS.

General objectives

At the end of competing the course of surgery, the student will be able to –

Knowledge

1. Describe the structural and functional basis, principles of diagnosis and management of common surgical problems in adults and children
2. Plan laboratory tests for surgical conditions and interpret their results
3. Diagnose and manage common surgical conditions
4. Identify abnormal conditions of eye
5. Diagnose common disease conditions of ear, nose and throat
6. Plan the disposal of biomedical waste
7. Explain the role of homeopathy as conservative or complimentary therapy in the management of common surgical conditions

Skills

1. Perform relevant surgical examinations
2. Identify and diagnose various radiological changes in common surgical diseases
3. Perform common surgical procedures at the primary care level
4. Perform techniques of splinting, plaster and immobilisation as primary care in fractures
5. Remove foreign bodies from ear and nose
6. Perform anterior and posterior nasal packing to control epistaxis.
7. Organise pre and post-operative homoeopathic medicine care as total or partial responsibility but with the consent of a surgeon.

Communication

1. Identify the phase of disease where conservative treatment must end and referral to surgery has to be made
2. Counsel and guide patients and relatives regarding need, implications and problems of surgery in individual patients

III B.H.M.S

Annual Objectives

At the end of the III year BHMS student should able to,

1. Interact with patient and his / her attendants to record a surgical case in the systemic areas and the specialities of ENT, Ophthalmology, and Dentistry.
2. Conduct necessary clinical examination to arrive at a surgical diagnosis in the systemic areas and the specialities of ENT, Ophthalmology, and Dentistry.
3. Identify the specific surgical conditions which can be managed with homeopathy for curative / palliative outcomes.
4. Identify specific surgical conditions, which have to be referred for surgical interventions.
5. Provide appropriate pre- / post-surgical homeopathic management.

Theory: 150 Hours

Content distribution

S. No	Topic	Hours	Must Know	Desirable to Know	Nice to Know
Diseases of Glands					
	Parotid gland, parotitis, Pleomorphic adenoma	1	Definition, clinical features, & homoeopathic therapeutics	general management	
	Sialolithiasis	1	Aetiology, clinical features, & homoeopathic therapeutics	Composition of stone, management	Operative procedure
	Thyroid Goitre	2	Classification, clinical features, investigations, management & homoeopathic therapeutics	Pathology	
Diseases of hand					
	Hand, Deformities, Dupuytren's contracture & De-Quervain's disease	1	Clinical features, pathology homoeopathic therapeutics	Aetiology, management	
	Carpal tunnel syndrome & ganglion	1	Causes, clinical features pathology & homoeopathic therapeutics	management	Operative treatment

	Foot swelling, madura foot ulcer, ingrowing nail	1	clinical features & aetiology homoeopathic therapeutics		
	Corn & callosities	1	Clinical features & aetiology homoeopathic therapeutics		
Diseases of lungs					
	Injuries of chest, Traumatic pneumothorax, Surgical emphysema	1	Clinical features, general management & homoeopathic therapeutics	Aetio-pathogenesis	
	Diseases of chest Empyema thoracic, lung abscess	1	Aetio-pathogenesis, clinical features & homoeopathic therapeutics, Draining procedures	general management	
	Carcinoma of lung	1	Aetiology, clinical features, investigations, general management & homoeopathic therapeutics	Pathology, staging	Operative procedure
	Pleural effusion	1	Aetiology, types clinical features, investigations, & homoeopathic therapeutics	General management	
Diseases of breast					
	Breast Fibroadenoma of breast & Mastitis	1	clinical features, aetiology, investigations & homoeopathic therapeutics	pathogenesis,	Operative procedure
	Carcinoma of breast	1	Aetiology, pathology, clinical features, stagings, investigations, & homoeopathic therapeutics	Incidence, general management	Operative procedure
Diseases of Gastro Intestinal System					
	Oesophagus Reflux oesophagitis	1 hr	clinical features, pathology, general management & homoeopathic therapeutics	Aetiology, investigations	
	Hiatus hernia	1 hr	Definition, Types, clinical features & homoeopathic therapeutics	investigations, management	Operative procedure
	Carcinoma of oesophagus	1	Aetio-pathogenesis, mode of spread, clinical features, investigations, & general management	Incidence, hom therapeutics	Operative treatment
	Achalasia cardia, Congenital pyloric stenosis	1	clinical features, homoeopathic therapeutics	Aetio-pathogenesis, investigations	Operative procedures
	Peptic ulcer	2	Definition, types, aetio-pathogenesis, clinical features, investigations, complications & hom therapeutics	general management	Operative procedures

	Carcinoma of stomach	1	Aetio-pathogenesis, mode of spread, clinical features, investigations, general management	Incidence, Staging, hom therapeutics	Operative procedures
	Pancreas, Pancreatitis	2	Definition, types, aetio-pathogenesis, clinical features, investigations, & hom therapeutics	Differential diagnosis, complications, general management	
	Carcinoma of pancreas	1	Aetio-pathogenesis, mode of spread, clinical features, investigations	Incidence, staging, hom therapeutics	
	Colon Ulcerative colitis	1	Aetio-pathogenesis, clinical features, investigations & homoeopathic therapeutics	Differential diagnosis, complications, general management	
	Crohn's disease	1	Aetio-pathogenesis, clinical features, investigations, general management & hom therapeutics	Differential diagnosis Complications, general management	
	Intestine Intestinal obstruction	1	Definition, classification, aetio-pathogenesis, clinical features, investigations, differential diagnosis	Complications, hom therapeutics, general management	Operative procedure
	Volvulus	1	Definition, types, clinical features, differential diagnosis, investigations, general management	Complications, hom therapeutics	Operative procedure
	Intussusception	1	Definition, types, clinical features, investigations, general management,	Complications, hom therapeutics	Operative procedure
	Meckels diverticulum	1	Definition, clinical features, investigations, complications, general management	hom therapeutics	
	Appendix Appendicitis	2	Definition, types, aetio-pathogenesis, clinical features, investigations, complications, differential diagnosis & hom therapeutics	General management	Operative procedure
	Rectum& Anus Haemorrhoids	1	Definition, types, aetiology, clinical features, differential diagnosis, hom therapeutics	Pathogenesis, complications	Operative procedure
	Prolapse of rectum	1	Definition, types, aetiology,	pathogenesis,	Operative

			clinical features, differential diagnosis, hom therapeutics	complications	procedure
	Pilonidal sinus Fissure in ano	1	Definition ,clinical features, investigations, complications, hom therapeutics	pathogenesis, differential diagnosis	<u>Operative procedure</u>
	Anorectal abscess	1	Definition, types, aetiopathogenesis, clinical features, investigations, hom therapeutics	investigations,	Incision & drainage
	Fistula in ano	1	Definition, types, clinical features, general management & hom therapeutics	aetio-pathogenesis, investigations	Operative procedure
	Carcinoma of rectum	1	Aetio-pathogenesis, mode of spread, clinical features, investigations & general management	Incidence, Staging, hom therapeutics	Operative procedure
Diseases of liver, spleen, gall bladder & bile duct					
	Liver Pyogenic liver abscess & Amoebic liver abscess	1	clinical features, Aetio-pathogenesis, general management, homoeopathic therapeutics		
	Hydatid cyst	1	Aetio-pathogenesis, clinical features, investigations, general management	Homoeopathic therapeutics	
	Portal hypertension	1	Definition, types, clinical features, investigations, hom therapeutics	aetio-pathogenesis, general management	Operative procedures
	Carcinoma of liver	1	Incidence, Aetio-pathogenesis, mode of spread, clinical features, general management	investigations, hom therapeutics	Operative treatment
	Spleen Rupture of spleen	1	Aetio-pathogenesis clinical features, investigations, general management	Hom therapeutics	
	Hypersplenism	1	Aetio-pathogenesis, clinical features, Hom therapeutics	General management	
	Gall bladder Gall stones	1	Aetio-pathogenesis, types, clinical features, investigations, hom therapeutics	Complications, general management	
	Cholecystitis	1	Definition, types, aetio-pathogenesis, clinical features, investigations, Differential Diagnosis, hom therapeutics	complications, general management	Operative procedure
	Choledocholithiasis	1	Classifications- clinical features, investigations, hom	pathogenesis, general	Operative treatment

			therapeutics	management	
	Carcinoma of gall bladder	1	Aetio-pathogenesis, mode of spread, clinical features, investigations , general management	Incidence, hom. therapeutics	Operative treatment
	Inguinal hernia	1	Definition, Types, clinical features, hom therapeutics	differential diagnosis ,hom therapeutics	Operative procedure
	Femoral hernia	1	Definition, Types, clinical features, hom therapeutics	, differential diagnosis, hom therapeutics	
	Ascitis	1	Definition, aetiology, clinical features & general management	Homoeopathic therapeutics	Ascitic fluid tapping
	Peritonitis	1	Definition, aetiology, clinical features & general management	Homoeopathic therapeutics	
Diseases of Cardiovascular system					
	Chronic pericarditis	1	Definition, types, pathology, diagnosis, primary aid	Complications, Homoeopathic therapeutics	
	Congenital disorders Atrial septal defect & atrial septal defect	1	Aetiology, clinical features, investigations, general management	Complications, management, hom therapeutics	Operative treatment
	Acquired heart diseases Mitral stenosis& mitral regurgitation	1	Aetiology, clinical features, investigations, general management	Homoeopathic therapeutics	Operative treatment, management
Diseases of Uro Genital system					
	Kidney Renal stones	1	Aetiology, types, clinical features, investigations & hom therapeutics	Complications, pathogenesis ,general management	Operative treatment
	Tuberculosis	1	Aetiology, clinical features, investigations, hom therapeutics	General management	
	Vesical calculus	1	Aetiology, clinical features, investigations, hom therapeutics	Pathogenesis ,general management	Operative treatment
	Cystitis	1	Aetiology, clinical features, investigations, hom therapeutics	Complications, general management	
	Pyelonephritis	1	Aetio-pathogenesis, types, clinical features, investigations, & hom therapeutics	Complications, general management	

	Hydronephrosis	1	Aetio-pathogenesis, clinical features, investigations, general management	Complications, hom. therapeutics,	
	Haematuria	1	Clinical features, investigations, general management &HOM THERAPEUTICS	Aetiology, types	
	Retention of urine & Anuria	1	Aetiology, clinical features, investigations, hom therapeutics	general management	
	Prostate Benign prostatic hypertrophy	1	clinical features, investigations, complications, hom therapeutics	Aetio-pathogenesis, general management	Operative procedure
	Baleno proctitis & priapism	1	Aetiology, clinical features, investigations, hom therapeutics	General management	
	Carcinoma of prostate	1	Aetiopathogenesis, Clinical features, mode of spread, investigations, general management	Incidence, hom. therapeutics	Operative procedure
	Phimosis & paraphimosis	1	Clinical features, complications, general management	hom therapeutics	Operative procedure
	Variocele	1	Aetio-pathogenesis, clinical features, investigations, complications, hom therapeutics	general management	Operative procedures
	Hydrocele	1	Aetio-pathogenesis, clinical features, investigations, complications, hom therapeutics	general management	
	Haematocele& pyocele	1	Aetio-pathogenesis, clinical features, investigations, complications, hom therapeutics	General management	
	Urethra Urethral stricture	1	Aetiopathogenesis, clinical features, investigations, complications, general management	hom therapeutics	
	Ureter calculi	1	Aetiology, clinical features, investigations, hom therapeutics	General management	
	Testis Undescended testis & torsion of testis	1	Clinical features aetio, pathogenesis, investigations, general management	complications, hom therapeutics	

	Epispadias & hypospadias	1	clinical features, investigations,	Aetio-pathogenesis, complications	general management
Diseases of bones					
	Osteomyelitis & Brodie's Abscess	1	Definition, aetiology, Clinical features, Complications, Investigations & homoeopathic therapeutics	Management	
	Osteoma	1	Definition, Clinical features, Complications, Investigations & homoeopathic therapeutics	Aetiology,	Management
	Osteosarcoma & Ewing's Tumour	1	Definition, Aetiology, Clinical features, Complications, Investigations & homoeopathic therapeutics	Interpretations of investigations,	Management
	Pott's Diseases (Tuberculosis of Spine)	1	Definition, aetiology, Clinical features, Complications, Investigations, homoeopathic therapeutics	Management	
	Head Injury	1	Definition & General principles Clinical features, clinical examination, Healing & investigation, homoeopathic therapeutics	Special Investigations	
	Paget's disease - Osteitis deformans	1	Definition, aetiology, Clinical features, Investigations, homoeopathic therapeutics	Complications, management	Management
	Disc Prolapse (PID)	1	Definition, aetiology, Clinical features, pathogenesis, Complications, Investigations & homoeopathic therapeutics	Complications, Management	Operative treatment
	Cervical spondylosis & Lumbar spondylosis	1	Definition aetiology, pathogenesis, Clinical features, investigations, homoeopathic therapeutics	Complications, Management	Operative treatment
	Ankylosing Spondylosis	1	Definition, aetiology, pathogenesis, Clinical features, investigations homoeopathic therapeutics	Complications, Management	Operative treatment
	Spina Bifida	1	Definition, aetiology, Clinical features, investigations homoeopathic therapeutics	Complications, Management	Operative treatment
	General principles of Fracture	1	Definition & General principals Clinical features, clinical examination, Healing & investigation, hom. therapeutics	Complications, Management & Treatment,	Congenital Deformities

Fracture of neck of femur.	1	Definition, Clinical features, Complications, Investigations, management	homoeopathic therapeutics	Operative treatment
Fracture of Tibia	1	Definition, Clinical features, Complications, Investigations, management	homoeopathic therapeutics	Operative treatment
Supracondylar fracture of Humerus	1	Definition, Clinical features, Complications, Investigations, management	homoeopathic therapeutics	Operative treatment
Colle's Fracture	1	Definition, Clinical features, Complications, Investigations, management	homoeopathic therapeutics	Operative treatment
Pott,s Fracture (Ankle)	1	Definition, Clinical features, Complications, Investigations, management	homoeopathic therapeutics	Operative treatment
Dislocation of Shoulder Joint	1	Definition, Clinical features, Complications, Investigations, management	homoeopathic therapeutics	Operative treatment
Dislocation of Hip joint	1	Definition, Clinical features, Complications, Investigations, management		
Rheumatoid Arthiritis	1	Definition, Aetiology, Clinical features, Complications, homoeopathic therapeutics	Investigations & Management	
Osteoarthritis	1	Definition, aetiology, Clinical features, Complications, homoeopathic therapeutics	Investigations & Management	
Osteoporosis	1	Definition, aetiology, Clinical features, Complications, homoeopathic therapeutics	Management	
Paget's disease	1	Definition, aetiology, Clinical features, Complications, homoeopathic therapeutics	Management	
Tenosynovitis & Achillis Tendinitis	1	Definition, aetiology, Clinical features & investigations, homoeopathic therapeutics	Complications, & Management	
Calcaneal Spur & Chronic Bursitis	1	Definition, aetiology, Clinical features, investigations & homoeopathic therapeutics	Complications, & Management	
Injury to Nerves. Cervical Plexus : Radial Nerve	1	Definition, aetiology, Clinical features, investigations & homoeopathic therapeutics	Complications & Management	
Median Nerve - Carpal Tunnel Syndrome	1	Definition, aetiology, Clinical features, investigations & homoeopathic therapeutics	Complications, management	Management
Sciatic Nerve - Sciatica	1	Definition, aetiology, Clinical features, investigations &	Complications, management	

			homoeopathic therapeutics		
Diseases of Ear					
					Applied anatomy and physiology of ear
	Acute Otitis Externa	1	Definition, types, clinical features & homoeopathic therapeutics	Differential diagnosis, management	
	Wax & otomycosis	1	Definition, clinical features homoeopathic therapeutics	general management	Operative procedure
	Acute suppurative otitis media	1	Aetiology, clinical features, Investigations, complications, general treatment & homoeopathic therapeutics	Pathology, differential diagnosis	Operative treatment
	Chronic otitis media	1	Types, aetiology, clinical features, complications homoeopathic therapeutics	Pathology, Investigations, differential diagnosis	Operative treatment
	Mastoiditis & mastoid abscess	1	Types aetiology, clinical features, homoeopathic therapeutics	, pathology	Operative treatment
	Otosclerosis , Otorrhoea & aural polyp	1	Aetiology clinical features, homoeopathic therapeutics	general management	
	Earache	1	Aetiology, clinical features, investigations, & homoeopathic therapeutics	general management	
	Deafness	1	Definition, types, causes, diagnosis, & homoeopathic therapeutics	Investigations	
	Vertigo	1	Definition, causes, investigations, & homoeopathic therapeutics		
	Tinnitus & Meniers disease	1	Aetiology clinical features, investigations& homoeopathic therapeutics		
Diseases of Nose					
					Applied anatomy & applied physiology of nose & paranasal sinuses

	Deviated nasal septum	1	Aetiology, pathology, clinical features, & homoeopathic therapeutics	differential diagnosis, general management Complications	Operative procedure
	Rhinitis	2	Definition, classification, clinical features, homoeopathic therapeutics	general management	
	Nasal polyp	1	Definition, types, clinical features & homoeopathic therapeutics	aetiology, pathology, investigations	Operative treatment
	Sinusitis	1	Definition, types, clinical features, homoeopathic therapeutics	aetiology, pathology, general management	Operative treatment
	Epistaxis	1	Definition, causes, clinical features, homoeopathic therapeutics	general management	
Diseases of throat					
					Applied anatomy and applied physiology of pharynx, larynx, tracheobronchial tree, oesophagus
	Tonsillitis	1	Definition, types, clinical features, investigations & homoeopathic therapeutics	Aetiology, pathology	Operative treatment
	Adenoid	1	Definition, causes, clinical features, & homoeopathic therapeutics	general management	Operative treatment
	Pharyngeal abscess	1	Definition aetiology, clinical features, investigations & homoeopathic therapeutics	pathology	
	Cervical swellings	1	clinical features and homoeopathic therapeutics	Differential diagnosis,	
	Laryngitis	1	classification, aetiology, clinical feature, & homoeopathic therapeutics	general management	
	Pharyngitis	1	classification, aetiology, clinical feature, & homoeopathic therapeutics		
	Hoarseness	1	Causes, investigations, & homoeopathic therapeutics	Mechanism of hoarseness	

	Dysphagia	1	Causes, clinical features, differential diagnosis s& homoeopathic management	Investigations, general management,	
	Carcinoma of tongue	1	Aetiopathogenesis, clinical features, investigations, general management	Hom. therapeutics	
Diseases of Eye					
	Applied anatomy and physiology of eye				Anatomy of eye, Functions of glands of eyelids
	Blepharitis	2	Definition, Types, Clinical signs & homoeopathic therapeutics	Aetiology, General treatment	
	Hordeolum		Definition, Types, Symptoms, Clinical signs, homoeopathic therapeutics	Predisposing factors, management	
	Chalazion		Definition, Clinical signs, Course of chalazion & hom therapeutics	Pathology	Operative treatment
	Ptosis		Definition, Causes, Types, Symptoms, Clinical signs, homoeopathic therapeutics		
	Anatomy & History of lacrimal drainage system	2			Anatomy of lacrimal gland & Passage
	Tears		Definition, Content, Drainage of tears	Definition, content, draining of tears	
	Watering of eye		Types, Causes		
	Dacryocystitis		Definition, Classification, Clinical signs, homoeopathic therapeutics	Aetiology, Pathology, complications	
	Errors of refractions	1	Definition, Types, Symptoms of each types	Criteria for diagnosis (Ophthalmoscope & Retinoscopy), Treatment	Operative procedure
	Conjunctivitis	2	Definition, Classification, Symptoms, Complications, & homoeopathic therapeutics	Aetiology, Pathology, Criteria for diagnosis,	

	Ophthalmia Neonatrum	1	Definition, Causes, Mode of infection, Clinical picture, homoeopathic therapeutics	Pathology, Criteria for Diagnosis, general management &	
	Trachoma		Definition, Mode of infection, Symptoms, homoeopathic therapeutics	Aetiology, Stages, Criteria for diagnosis, general management	
	Pterygium		Definition, Symptoms, Treatment & homoeopathic therapeutics	Aetiology	
	Corneal Ulcer	1	Definition, Classification, Symptoms, Clinical signs, homoeopathic therapeutics,	Aetiology, Pathology, Complications, general treatment	
	Keratitis		Definition, Types, Symptoms, & homoeopathic therapeutics	Aetiology, Pathology, general treatment	
	Scleritis	1	Definition, Symptoms, Clinical signs, & homoeopathic therapeutics	Aetiology, Pathology, Complications, general management	
	Iritis and Iridocyclitis	1	Definition, Symptoms, Clinical signs, hom. therapeutics	Aetiology, pathology	Complications
	Cataract	2	Definition, Classification, Symptoms, Clinical signs, hom therapeutics	Aetiology	Operative treatment
	Glaucoma	2	Definition, Classification, Aetiology, Symptoms, Clinical signs	Criteria for diagnosis, Hom therapeutics	Operative treatment
	Retinitis	1	Definition, Symptoms, Clinical signs	Aetiology	
	Retinopathy		Definition, Symptoms	Aetiology, Pathology,	Operative treatment
	Optic Nerve Atrophy	1		Causes	
	Squint	1	Definition, Classification, Symptoms	Aetiology, Criteria for	

				diagnosis, Treatment	
	Diplopia	1	Definition, Types & Causes		
	Nystagmus		Types, Symptoms	Definition, Aetiology,	
	Injuries	1		Types	

- Review of diseases of blood vessels, lymphatics and peripheral nerves – 2 hours
- Review of dentistry topics – 2 hours

III year B.H.M.S – Clinical Topics (75 HRS)

S. No.	Topics	Hours
1	Investigation of Intra Cranial Space-Occupying Lesions	1
2	Examination of Spinal Injuries	2
3	Examination of the Hand	1
4	Examination of Foot	1
5	Examination of the Head & Face	2
6	Examination of Palate, Cheek, Tongue & Floor of the Mouth	2
7	Examination of the Salivary Glands	1
8	Examination of Neck	1
9	Examination of Thyroid Gland	1
10	Examination of injuries to Chest	1
11	Examination of Breast	2
12	Examination of a case of Dysphagia	2
13	Examination of Acute Abdomen	2
14	Examination of Chronic Abdominal Conditions	2
15	Examination of Abdominal Lump	2
16	Examination of Rectal Case	2
17	Examination of Urinary case	2
18	Examination of a case of Hernia	2
19	Examination of Inguino-scrotal swelling	2
20	Examination of Male external Genitalia	1
21	Diseases of Muscles, Tendons and Fasciae	2
22	Examination of Diseases of Bones	2
23	Examination of Bone & Joint Disease	3
24	X - Ray Demonstration	7
25	ENT History Taking	1
26	Tonsillitis	1
27	DNS	1

28	Sinusitis	1
29	Nasal polyp	1
30	Otitis Media - Acute & Chronic	2
31	Acute Mastoiditis	1
32	Epistaxis	1
33	Laryngitis/ Hoarseness of Voice	1
34	Ophthalmology Clinical History Taking	1
35	Errors of Refraction	1
36	Conjunctivitis	1
37	Cataract	1
38	Glaucoma	1
39	Hardeolum Externa / Interna	1
40	Apthous Ulcers, Ranula & Epulis	1
41	Caries of Tooth	1
42	Deafness	1
43	Case demonstration	10
Total Hours		75

Surgery Question Paper Blueprint

Paper I (includes General Surgery and its homoeopathic therapeutics)

Sl No	Topics	Question Type	Marks
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Section 1: (Surgery Proper) 50 Marks

1	Fluid, electrolytes & acid base balance	1 SE	05
2	Haemorrhage, Haemostasis & Blood transfusion	1 SE, 1 SA	08
3	Tumours, cyst, ulcer, sinus & fistula	1 LE	10
4	Injuries of various types, preliminary management of head injury; Wounds, tissue repair, scar & wound infection	1 SE, 2 SA	11
5	Special infections	1 SA	03
6	Burn	1 SE	05
7	Shock	1 SE	05
8	Pre and Post-operative care	1 SA	03

Section 2: (Homoeopathic Therapeutics) 50 Marks

1	Haemorrhage, Haemostasis & Blood transfusion	1 SE	05
2	Acute infections, Boil, Abscess, Carbuncle, Cellulitis & Erysipelas	2 SA	06
3	Tumours, cyst, ulcer, sinus & fistula	1 SE, 1 SA	08
4	Injuries of various types, preliminary management of head injury; Wounds, tissue repair, scar & wound infection	1 LE, 1 SE	15
5	Special infections	1 SE	05
6	Burn	1 SE	05
7	Shock	1 SA	03
8	Malnutrition	1 SA	03
Total			100

Paper II (includes Systemic Surgery, ENT, Ophthalmology, Dentistry and their Homoeopathic Therapeutics)

Sl No	Topics	Question Type	Marks
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Section 1: (Surgery Proper) 50 Marks

1	Systemic Surgery	1 LE, 2 SE, 1 SA	23
2	ENT	1 SE, 2 SA	11
3	Ophthalmology	2 SE, 1 SA	13
4	Dentistry	1 SA	03

Section 2: (Homoeopathic Therapeutics) 50 Marks

1	Systemic Surgery	1 LE, 2 SE, 2 SA	26
2	ENT	2 SE	10
3	Ophthalmology	1 SE, 1 SA	08
4	Dentistry	2 SA	06

Question Paper Layout

**Paper I: Section 1
Long Essay**

: 1 x 10 = 10 Marks

1 Tumours, cyst, ulcer , sinus & fistula

Short Essay : **5 X 5 = 25 Marks**

2 Fluid, electrolytes & acid base balance

3 Haemorrhage, Haemostasis & Blood transfusion

4 Injuries of various types, preliminary management of head injury; Wounds, tissue repair, scar & wound infection

5 Burns

6 Shock

Short Answer : **5 X 3 = 15 Marks**

7 Haemorrhage, Haemostasis & Blood transfusion

8 Injuries of various types, preliminary management of head injury; Wounds, tissue repair, scar & wound infection

9

10 Special infections

11 Pre and Post-operative care

Paper I: Section 2

Long Essay : **1 x 10 = 10 Marks**

12 Injuries of various types, preliminary management of head injury; Wounds, tissue repair, scar & wound infection

Short Essay : **5 X 5 = 25 Marks**

13 Haemorrhage, Haemostasis

14 Tumours, cyst, ulcer , sinus & fistula

15 Injuries of various types, preliminary management of head injury; Wounds, tissue repair, scar & wound infection

16 Special infections

17 Burns

Short Answer : **5 X 3 = 15 Marks**

18 Acute infections, Boil, Abscess, Carbuncle, Cellulitis & Erysipelas

19

20 Tumours, cyst, ulcer , sinus & fistula

- 21 Shock
- 22 Malnutrition

Paper II: Section 1

Long Essay : 1 x 10 = 10 Marks

- 1 Diseases of alimentary canal

Short Essay : 5 X 5 = 25 Marks

- 2 Diseases of bones , cranium , vertebral column , fractures & dislocations
- 3 Diseases of urogenital system
- 4 Diseases of Throat
- 5 Ophthalmology
- 6 Ophthalmology

Short Answer : 5 X 3 = 15 Marks

- 7 Diseases of blood vessels, lymphatics , & peripheral nerves
- 8 Diseases of Nose
- 9 Diseases of Ear
- 10 Ophthalmology
- 11 Dentistry

Paper II: Section 2

Long Essay : 1 x 10 = 10 Marks

- 12 Diseases of liver , spleen , gall bladder , bile duct

Short Essay : 5 X 5 = 25 Marks

- 13 Diseases of thorax & abdomen
- 14 Diseases of joints, muscles , tendons , & fascia
- 15 Diseases of Throat
- 16 Diseases of Nose
- 17 Ophthalmology

Short Answer : 5 X 3 = 15 Marks

- 18 Diseases of glands

- 19 Diseases of urogenital system
- 20 Ophthalmology
- 21 Dentistry
- 22 Dentistry

Scheme of Examination

1. Theory:

1.1 Number of papers – 02

1.2 Marks: Paper I – 100
Paper II – 100

1.3 Contents

1.3.1 Paper I

Section 1 – General Surgery – 50 Marks

Section 2 – Homoeopathic Therapeutics relating to General Surgery – 50 Marks

1.3.2 Paper II

Section 1 – Systemic Surgery – 25 Marks

ENT – 10 Marks

Ophthalmology – 10 Marks

Dentistry – 5 Marks

Section 2 – Homoeopathic Therapeutics relating to

Systemic Surgery – 25 Marks

ENT – 10 Marks

Ophthalmology – 10 Marks

Dentistry – 5 Marks

2. Practical including viva voce or oral:

2.1 Marks – 200

2.2 Distribution of Marks:

Case presentation (One Long Case) 40 Marks							
Case taking	Surgical examination	Diff Diagnosis	Diagnosis	Diff Remedial Diagnosis	Remedial Diagnosis	Management	Total
08	07	05	05	05	05	05	40
Identification of Instruments, X-rays (three instruments and three X Rays)							30
Instruments:				X Rays			
Identification – 1 mark				Identification – 1 mark			
Holding in position – 2 marks				Identification of parts – 2 marks			
List of uses – 2 marks				Diagnosis – 2 marks			
Practical records, case records or journal							30
Viva							100
Total							200

Basic Books

1. Bhargava KB, Bhargava SK, Shah TM. (2011) *A Short Textbook of ENT Diseases*. Jain Book Depot; New Delhi
2. Bhat SM. (2013) *SRB's Manual of Surgery*. 4th ed, Jaypee brothers medical publishers; New Delhi
3. Chatterjee BM, Agarwal LP. (2010) *Handbook of Ophthalmology*. 6th ed. India: CBS Publishers & Distributors.
4. Das S. A (2014) *Concise Textbook of Surgery*. 8th ed. S Das's Publications;
5. Das S. A (2011) *Manual on Clinical Surgery*. 10th ed. India: S Das's Publications.
6. Dewey WA. (1998 reprint) *Practical Homoeopathic Therapeutics*. 3rd ed. B jain publishers. New Delhi
7. Dhingra PL, Dhingra S. (2013) *Diseases of Ear, Nose and Throat: Head and Neck Surgery*, 6th ed. UK: Elsevier Health Sciences.
8. Kulkarni S. (2009) *Surgery and Homoeopathic Therapeutics*. B jain publishers; New Delhi.
9. Lilienthal S. (1985 reprint) *Homoeopathic Therapeutics*. B jain publishers; New Delhi.
10. Lumley J (1997) *Hamilton Bailey's Demonstration of Physical Signs in Clinical Surgery*, 18th Ed. Reed Educational and Professional Publishing Ltd and Hamilton Bailey (Medical Works) Ltd.
11. Maheshwari J. (2001) *Essential Orthopaedics*. 4th ed, Jaypee brothers medical publishers, New Delhi.
12. Verma SP. (2006 reprint) *Handbook of Surgery with Therapeutic Hints*. B Jain publishers; New Delhi.

Reference Books

1. Berridge EW. (2001 reprint) *Complete Repertory of Eye*. B Jain publishers; New Delhi.
2. Bhowmik A. A (2005) *First Handbook of Medical Instruments*. 3rd ed. B I Publications.
3. Das S. A (2007) *Practical Guide to Operative Surgery*. 6th ed. India: S Das's Publications; 2007.
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5. Hamblen DL, Simpson HRW. (2009) *Adam's Outline of Orthopaedics*. 14th ed. Churchill Livingstone; 2009
6. Norton AB. (2006). *Ophthalmic diseases and their Homoeopathic Therapeutics*. 6th ed. B Jain Publishers; New Delhi.

Community Medicine

IVBHMS

Course Objectives

At the end of the Community Medicine course the learner/student shall be able to

- Recognize a community health problem and apply the clinical skills and manage the problem using homeopathic principles.
- Identify determinants of health and disease, and use the knowledge for prevention, control of diseases and promote good health in the community.
- Identify, prioritize, manage and report diseases of public health importance at the appropriate levels.
- Outline the process of epidemics / outbreak investigation and manage them with homeopathic approach.

- Participate in screening of diseases at individual and community level.
- Promote community participation for disease prevention and control; promotion of health and implement national health programmes
- Factor in epidemiological principles while conducting studies /research; collect, collate, analyze and report public health problems.

SL .N O	TOPIC	MUST KNOW	DESIRABLE TO KNOW	NICE TO KNOW	HOUR S	MARKS
1	Epidemiology.	<ul style="list-style-type: none"> Principles and Methods of Epidemiology. Association and causation Infectious disease epidemiology Immunization Disinfection Investigation of epidemics Screening of disease Communicable and non communicable diseases : their description, etiology, clinical features mode of spread and method of prevention and control Homoeopathic management. 	<ul style="list-style-type: none"> Scope of community medicine in Non-communicable diseases. 	<ul style="list-style-type: none"> Protozoan & Helminthes diseases -life cycle of protozoon. Complications. 	44	20
2	Bio Statistics	<ul style="list-style-type: none"> Elementary statistical methods 	<ul style="list-style-type: none"> Sources of health information Registration of Vital events Sample size calculation Presentation of data. 	<ul style="list-style-type: none"> Tests of significance. Statistical averages. 	5	5
3	Health Education and Communication.	<ul style="list-style-type: none"> Types of Communication. 	<ul style="list-style-type: none"> Communication process Principles of health Education. Content of health education 	<ul style="list-style-type: none"> Administration & Organization 	5	3

4	Family Planning	<ul style="list-style-type: none"> • Scope of family planning. • Family planning methods 	<ul style="list-style-type: none"> • Demographic trends • Population control • MTP Act • PNDT Act 	<ul style="list-style-type: none"> • Demographic cycle. • National population policy 	5	5
5	Health care of community	<ul style="list-style-type: none"> • Levels of health care. • Notifiable diseases • Health Management Information System 	<ul style="list-style-type: none"> • Primary health centre • Millennium Development Goals (MDG) • Sustainable Development Goals (SDG) 	<ul style="list-style-type: none"> • Health policies 	5	3
6	International Health.	-	<ul style="list-style-type: none"> • Red cross • W.H.O. • UNICEF. 	<ul style="list-style-type: none"> • WHO regional organizations. • CARE. 	2	3
7	Mental health.	<ul style="list-style-type: none"> • Preventive aspects of Mental illness. 	<ul style="list-style-type: none"> • Causes of mental illness. • Rehabilitation. 	<ul style="list-style-type: none"> • Treatment of mental illness. • Characteristics of mentally healthy person. 	2	-
8	Maternal and child health.	<ul style="list-style-type: none"> • Recent trends in MCH care. • Antenatal care • Intranatal and postnatal • Neonatal care Low birth weight baby <ul style="list-style-type: none"> • Feeding of infants • Growth and development 	<ul style="list-style-type: none"> • Causes of Neonatal deaths in India. • Indicators of MCH care 	<ul style="list-style-type: none"> • Congenital Malformations. • Indicators of MCH care. 	5	5
9	School health services.	<ul style="list-style-type: none"> • Objectives of school health services. 	<ul style="list-style-type: none"> • School health services • Behavioral problems. • 	<ul style="list-style-type: none"> • Child labor act. • Prevention of handicapping conditions • Juvenile delinquency 	2	3
10	National Health programs of	List and objectives of all National health programmes in India.	<ul style="list-style-type: none"> • National health programs (based on the 	-	5	5

	India including Rashtriya Bal Chikitsa Karyakram		current policy)			
11	Hospital waste management.	<ul style="list-style-type: none"> • Categories of Biomedical waste. • Health hazards of healthcare waste 	<ul style="list-style-type: none"> • Colour coding. 		5	
12	Disaster management.		<ul style="list-style-type: none"> • Disaster and its Impact and response. • Rehabilitation. • Types of disasters • Causes of disaster 	<ul style="list-style-type: none"> • International agencies providing rehabilitation 	5	
13	Study of Aphorisms of Organon of medicine and other Homoeopathic Literatures, relevant to above topics including prophylaxis.	<ul style="list-style-type: none"> • Genus Epidemicus. • Prophylaxis 	<ul style="list-style-type: none"> • Indisposition. • Diet and regimen. 	Aphorism 4, 5, 9, 100 to 107, 210 to 230.	5	5

PRACTICALS = 100 hours

Learning Objectives

Skill acquired by a student

- Interviewing skills
- Communications
- Leadership
- Team building
- Managerial
- Analytical skills

Competencies acquired at the end of course

- Screen various diseases
- Outbreak investigation
- Notification of notifiable diseases and prophylaxis administration
- Spot mapping
- Nutritional assessment
- Antenatal and post natal care
- Advice on family planning
- Health education and Health promotion at family and community

- Conducting health camps at schools and community
- Occupational health assessment
- Assess environmental risk factors and its prevention
- Calculating various health indicators
- Health survey and basic statistical analysis

SL.NO	TOPIC	MUST KNOW	DESIRABLE TO KNOW	NICE TO KNOW	HOURS	MARKS
1.	Food additives; Food fortification; Food toxicants.	<ul style="list-style-type: none"> • Food toxicants • Food adulteration. • Identify common food adulterants • Illustrate to test food adulterants 	Food fortification. <ul style="list-style-type: none"> • Illustrate home based methods of food fortification 	Food additives <ul style="list-style-type: none"> • Identify common food additives. • Illustrate to test few common additives. 	10	
2.	Balanced diet.	Balanced diet <ul style="list-style-type: none"> • Prescribe balance diet for adults (male & female) • Prescribe balanced diet for (lactating mothers, pregnant women, children according to age, geriatric age group) Prescribe diet for nutritional disorders (overnutrition and under nutrition and other common 	<ul style="list-style-type: none"> • Classification of food • RDA of diet. • Calculate energy consumption units for individual, family and community. 		8	

		illness. Calculate individual nutritive value for common food items.				
3.	Survey of Nutritional status of school children, Pollution and Water Purification.	<ul style="list-style-type: none"> • Malnutrition. • Assessment of Malnutrition. • Nutritional assessment • Anthropometric measurements • Advice appropriate diet and homeopathic management of the conditions. • Health and hygiene status assessment of school children and suggest appropriate corrective measures and homeopathic management. • Awareness and important ways for preventing water borne diseases. • Water borne diseases. 	<p>Identify common water pollutants and preventive measures</p> <p>Water Purification. Illustrate and perform basic domestic water purification methods (eg alum, charcoal etc)</p>	-	10	
4.	Medical Entomology.	<ul style="list-style-type: none"> • Vector borne diseases. <p>Identify common vectors, their</p>	<ul style="list-style-type: none"> • Insecticides. <p>Identify common insecticides, method of</p>	<ul style="list-style-type: none"> • Morphological appearance. • Life cycle. 	6	

		habitat/breeding points, its control its control.	preparation, uses, hazards and personal protective measures.			
5.	Family planning and contraception.	<ul style="list-style-type: none"> • Contraceptive devices Identify contraceptive devices Its application, Demonstrate the application using mannequins. Demonstrate counseling for family planning methods for eligible couples.	<ul style="list-style-type: none"> • Use of contraceptive devices. 	-	6	
6.	Demography.	<ul style="list-style-type: none"> • Calculation of vital statistics. Design and conduct demographic survey in nearby population. Analyze the data and represent the reports using basic statistical methods. Minimum 15 households.	<ul style="list-style-type: none"> • Health survey 	-	4	
7.	Disinfection.	<ul style="list-style-type: none"> • Types of disinfection. • Identify common disinfectants. • Uses of common disinfecting agents. • Methods of use (<ul style="list-style-type: none"> • Hospital disinfection. 	-	2	

		hospital and household)				
8.	Insecticides.	<ul style="list-style-type: none"> • Different Insecticides • Identify common insecticides . • Uses of common insecticides agents. Methods of use 	<ul style="list-style-type: none"> • Uses. • Precautions. 	• Contraindications	4	

Field visits -50 Hours.

- Milk dairy-Desirable to know. **Total – 5 hrs (Quality check, Milk processing, and distribution,)**
- Primary health center- Must know. **Total – 5 hrs (check list based on Indian Public Health Standards)**
- Infectious Disease Hospital –Must know. **Total – 5 hrs (isolation, prevention and treatment)**
- Industrial visit. -Desirable to know.**Total – 12 hrs (Checklist based on Occupational safety and Health assessment)**
- Sewage treatment plant- Desirable to know. **Total – 5 hrs (Checklist Process and treatment)**
- Water Purification Unit- Desirable to Know.**Total – 5 hrs (Storage, Purification, Disinfection and supply)**
- School Health Program **8 hrs (Health screening and checkup for school children)**
- Old age home **5 hrs (Health screening and discussion)**

Field visit / postings

Each student shall visit, 2 anganwadi, 2 Sub Centers, 2 Primary Health Centers, 2 Community health centers, one Rural Hospital, etc amongst which one each will be AYUSH collocated centers as well as one

tertiary care hospital. Students visiting shall observe the functioning, services, infrastructure, statutory and regulatory compliance.

Objectives

- Describe the social determinants/ factors that contribute to medical problems of community and patients attending the respective centers.
- Describe the services and facilities provided at the centre
- Describe existing health care services available at the centre and compare it with Indian Public health Standards.
- Study the health problems of the community.
- Participate in health education and immunization programs
- Participate in healthcare delivery at the community level.

Activity

Each student shall be allotted cases in the community to take history, visit family, diagnose the problems and perform community diagnosis; develop appropriate intervention.

Checklist

- Observe the principles of SC/PHC/CHC/RH/ Tertiary care hospital.
- Population the centre caters to
- Demography of the population
- Services at the respective centre
 - Medical Care (OPD, 24 hours emergencies, Referral services, In-patient services)
 - Maternal and Child Health Care including Family planning (Antenatal care, Intranatal care, Post Natal care, New Born care, Care of Child, Family welfare services, MTP).
 - Management of Reproductive tract infections/ STD
 - Nutritional Services
 - School Health Program
 - Immunization
 - Health Education and Behaviour Change Communication

- Implementation of National Health Programs
- Mainstreaming of AYUSH
- Referral services
- Basic Laboratory and Diagnostic services
- Monitoring and supervision
- Infrastructure
 - Building
 - Facilities
 - Water and sanitation
 - Safety and Infection control
 - Drugs/Pharmacy
 - Dietary facilities
 - Waste Management
 - Transport facilities
 - Cold chain and supply chain
- Human resources
- Statuary and Regulatory compliance.

Infectious Diseases Hospital

Students visiting Infectious Disease Hospital shall observe the functioning, services, infrastructure, statuary and regulatory compliance.

- Services
 - OPD services
 - IPD services
 - Treatment
 - Prevention and control
 - Rehabilitation

- Infection control services
- Airborne infections
- Water borne infection
- Nosocomial infections
- Counseling services
- Health education and BCC activities
- Infrastructure
 - Isolation/quarantine facilities and requirements
 - Laboratory (collection, tests and report dissemination)
 - Waste management
- Statuary and compliance
 - Health worker safety

Industrial visit

Student visiting industry shall observe various types of industry and assess the hazards associated with the respective industry and surrounding environment. They should also assess occupational health of the employees and plan prevention and treatment based on homeopathic principles. Students must visit at least one industry, its desirable to visit different types of industries (such as garment factory, sugar factory, chemical factory, cement factory, Information technology, agriculture etc) so that they can identify, compare and manage various occupational health issues associated with respective industry.

Prerequisite : Students shall be aware of all occupational health problems, standards and policies understanding, occupational health assessment.

- Identity occupational health hazards of respective industry.
- Assessment of environment (building, ventilation, temperature, humidity, noise, cleanliness, overcrowding, pollution and surrounding area)
- Safety measures and personal protection
- Working condition
- Human relations among employees and employers

- Facilities – for employes to work effectively
 - Health facilities
 - Benefits provided under ESI Act

Activity: Observe and document

Interview few employees for occupational health assessment , and suggest homeopathic management if required (even if patients are not interested, atleast for learning purpose mention homeopathic management in records)..

Milk diary

Student shall make a visit to milk diary and observe its functions and process

- Environment
- Milk collection process
- Quality check, (and tests)
- Milk processing
- Packing and Distribution

School Visit

- School environment
 - Building
 - Safety measures
 - Student and class room ratio
- Facilities
 - Physical facilities
 - Light, Water, sanitation, ventilation
 - Seating facilities
 - Waste disposal
- Services
 - Nutritional services (midday meals)

- Health education
- Health checkup

Activity

- Each student shall examine atleast 10 students
- Nutritional and health assessment and plan management according to the findings

Oldage homes

- Home Environment
- Facilities
- Services

Activity

Health assessment and homeopathic management

Sewage treatment plant

- Steps of sewage treatment
- Process
- Distribution of purified water
- Disposal of sludge

Water Purification

- Storage
- Purification
- Disinfection
- Distribution /supply

QUESTION PAPER BLUE PRINT

Question Number	Topics	Marks
1	Nutrition and Health Environment and health	10
2	Epidemiology	10
3	Concept of health and disease	5
4	Water	5
5	Occupational health	5
6	Preventive medicine in pediatric and geriatric	5
7	Biostatistics	5
8	Demography and family planning	5
9	Maternal Child Health	5
10	National Health Programmes in India	5
11	Disaster management/	5
12	Hospital waste/	5
13	Man and medicine	3
14	Health education and health communication	3
15	Health care of the community	3
16	International health	3
17	School health services	3
18	Occupational health	3
19	Epidemiology	3
20	Hospital waste/	3
21	Homoeopathic concept in community medicine	3
22	Epidemiology	3

Reference Books

Basic Books

- K.Park, Park's Textbook of Preventive and Social Medicine, 23rd Edition, M/s Banarasidas Bhanot Publishers, New Delhi, 2015.
- MC Gupta and BK Mahajan, Textbook of Preventive and Social Medicine, 3rd Edition, Jaypee Publishers, New Delhi, 2005
- A.H.Suryakantha, Community Medicine with Recent Advances, 3rd Edition, Jaypee Publishers, New Delhi,
- Hahnemann .S , Organon of Medicine,6th Edition, B.Jain Publishers, New Delhi, Reprint 2010

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- J. Kishore NATIONAL HEALTH PROGRAMS OF INDIA National Policies and Legislations Related to Health, Century Publications, 11th Edition.
- DK. Mahabalaraju, Essentials of Community Medicine Practicals, 1st Edition, Jaypee Publishers, New Delhi, 2012
- Mangala Subramanian, Handbook of Community Medicine, 1st Edition, Jaypee Publishers, New Delhi, 2012
- Sunder Lal , Adarsh , Pankaj, Textbook of Community Medicine: Preventive and Social Medicine, 2nd Edition, CBS Publishers and Distributors, New Delhi
- Oxford Textbook of Public Health by from Oxford University Press, USA
- A Comprehensive textbook of Community Medicine, Mathur
- Principles & Practice of Community Medicine, Asma Rahim, Jaypee Publications
- Homeopathy for all

- Kate Birch , Homeopathic Preventive Medicine,
- Where there is no doctors
- Text Book of Public Health and Community Medicine, 2009. Published by the Dept of Community Medicine, AFMC Pune in collaboration with WHO India
- Balaram jana, Textbook of Preventive Medicine, B Jain Publishers, New Delhi, 2014

Relevant websites

- <http://www.mohfw.nic.in>
- www.idsp.nic.in
- www.ncdc.gov.in
- www.nrhm.gov.in
- www.tbcindia.nic.in
- www.nvbdc.gov.in
- www.nhp.gov.in
- www.nacoonline.in
- <https://data.gov.in>
- www.who.int.
- All Health related policy documents of India
- All operational and training modules of all Health Programs
- Technical Report Series of WHO

Materia Medica

IV BHMS

Annual Objectives:

At the end of completing the fourth BHMS, the students will be able to –

- Describe the concept of Constitution, Temperament and Diathesis in the context of the listed medicines
- Describe the personality types, miasmatic trends and therapeutic utility of the medicines listed

- List the cluster themes of Acids, Carbon, Kali, Ophidea, Mercury and Spider group of remedies.
- Describe the group features of the listed remedy groups
- Compare and contrast the group characteristics among the listed remedy groups
- Describe the concept of Nosodes
- Describe the concept of Mother Tincture and illustrate the clinical application of mother tinctures.

Sl No	Topic	Hours	Must Know	Desirable to Know	Nice to Know
1. Sarcodes					
			Definition, Indications		
2. Major remedies Template 3					
			Sphere of action & pathogenesis Physical constitution, Thermals Ailments from/Causations Mental symptoms Characteristic symptoms Particular symptoms under the following headings <ul style="list-style-type: none"> - Location - Sensation - Modalities - Concomitants General Modalities Clinical indications Comparison Relation ship	Diathesis, Temperament Miasmatic Background Therapeutic application	Common name, Family, Source, Alkaloids Part used, Preparation, Collection, Prover, Habitat
1	Carbo animalis.	14	Sanicula aqua	27	Asteria reb
2	Fluoric acidum	15	Sabadilla off	28	Iodium
3	Magnesium carb	16	Sambucus nigra	29	Argentum met
4	Magnesium mur	17	Lithium carb	30	Cuprum met
5	Anthracinum	18	Cocculus indicus	31	Plumbum met
6	Bacillinum	19	Lillium tig	32	Zincum met
7	Lac can	20	Sabina	33	Mercurius sol
8	Lyssin	21	Cicuta virosa	34	Mercurius cor
9	Medorrhinum	22	Ranunculus bulbosa	35	Causticum
10	Psorinum	23	Coffea cruda	36	Carcinosin
11	Pyrogenium	24	Glonine	37	Stannum met
12	Mezereum	25	Sanguinaria can		
13	Abrotanum	26	Spigelia		
3. Minor Remedies appendix 3a					
	Topic	Focus Area			
1	Carbolic acid.	General characteristics, GIT & female			
2	Cundurango.	GIT & general characteristics			

3	Hydrastis can	General characteristics, GIT female & respiratory
4	Raphanus sat	Mind, GIT
5	Lac defloratum	Head & GIT
6	Vaccinium	General characteristics
7	Variolinum	Skin
8	Hydrocotyle as	Skin & female
9	Radium brom	General characteristics, Skin, & GIT
10	Urtica urens	Skin, female & General characteristics,
11	Vinca minora	Skin, Head
12	Rheum	Child, GIT
13	Acalypha indica	GIT, Respiratory
14	Corrallium r	Respiratory , Skin
15	Lobelia inflata	Respiratory, GIT, Head
16	Mephites	Respiratory , Head
17	Rumex crispus	GIT, respiratory & skin
18	Squilla	Respiratory
19	Baryta mur	General characteristics, , CVS
20	Cretagus	General characteristics, , CVS
21	Rauwolfia	Heart, CVS
22	Caulophyllum	Mind, female & joints
23	Crocus sativus	General characteristics, , Mind, Female & Hemorrhage
24	Abies canadensis	General characteristics & GIT
25	Abies nigra	General characteristics & GIT
26	Helonias	General characteristics & female
27	Trillium p	CFemale & general characteristics
28	Viberinum op	Female & general characteristics
29	Rhododendron	Extremities & general characteristics
30	Clematis erecta	Urogenitals
31	Sabal serrulata	Urogenitals
32	Sarsaparilla	Urogenitals, skin &GIT
33	Mellilotus	Head, Hemorrhages
34	Millefolium	Head, Hemorrhages & female.
35	Vertrum viride	Head, CVS
36	Capsicum	General characteristics, , Mind, GIT,
37	Cedron	Head, Fever
38	Eupetorium perf	General characteristics, Head, Respiratory S, Fever
39	Abroma a	Urinary S
40	Calatropis g	Skin
41	Carica papaya	GIT & female
42	Cassia sophera	Extremities, Respiratory
43	Ficus r	Hemorrhage & female.
44	Jonosia asoka	Female
45	Justicea a	Respiratory
46	Occinum sanctum	Respiratory
47	Syzigium jamb	Urinary , skin

48	Ratanhia	Rectal symptoms
49	Colloninsonia c	GIT
50	Antimonium ars	Respiratory
51	Sticta pulm	Respiratory & Extremities
52	Thyroidinum	General characteristics, , Heart, Urinary & Skin
53	Adonis vern	Heart
54	Kalmia lat	Heart, Extremities
55	Physostigma	Eyes, Head, Nervous affections
56	Merc cynatus	Throat
57	Merc dulcis	Throat, GIT, Ear
58	Merc sulph	Respiratory
59	Bacillus No 7	General characteristics
60	Dysenery Co	General characteristics
61	Gaertner	General characteristics
62	Morgon Pure	General characteristics
63	Morgen Gaertner	General characteristics
64	Propeus B	General characteristics
65	Sycotic B	General characteristics
66	Aesculus hip	GIT, extremities
67	Adrenalinum	General characteristics
68	Artimesia vulg	Head & General characteristics
69	Avena sativa	General characteristics & weakness
70	Blatta orien	Respiratory
71	Cardus mar	GIT
72	Ceonathus	Abdomen
73	Chininum ars	Head, GIT, Heart, Fever
74	Choletrinum	Abdomen
75	Coca e	Respiratory S, Head, GIT
76	Diphtherinum	Throat, Respiratory S
77	Erigeron	Female
78	Malandrinum	Skin
79	Menyanthes	Head
80	Onosmodium	Head, Eyes
81	Passiflora	Mind, Nervous affections
82	Ustilago	Female
83	Valeriana o	Mind, GIT, Extremities
84	X-ray	Head, Skin

4. Group Study: Table 4

Baryta; Calcarea; Magnesia; Natrum; Compositae family; Ranunculaceae family; Solanaceae family		Introduction, sphere of action, ailments from, mentals, general characteristics, list of remedies in the group & general modalities. Clinical Application	Compare & Contrast study.	Historical Background
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Practicals or clinical – 75Hrs

During the fourth year, students should be posted to hospital where they should be able to –

- Take cases of acute & chronic patients
- Process the case taken
- Assess the miasmatic presentation of the case
- Differentiate the medicine
- Selection medicine, potency
- Decide repetition schedule

Each student shall maintain a journal having record of ten acute & ten chronic cases during the clinical posting.

Scheme of Examination;

1.Theory; 200 marks. Two theory papers 3 Hrs each

Distribution of Marks

Paper 1

Topics	Marks	Question type	Source
From I BHMS	11	1 SE, 2SA	
From II BHMS	26	1 LE, 2 SE, 2 SA	Table 2, appendix 1, 1a
From III BHMS	63	1 LE, 7 SE, 6 SA	Table 3, appendix 2, 2a

Paper II from Final year syllabus

Topics	Marks	Question type	Source
Major drugs	50	1LE, 5SE, 5SA	Appendix 3
Minor drugs	37	5SE, 4 SA	Appendix 3a
Group remedies	10	1LE	Table 4
Sarcodes	3	1 SA	From Sarcode topic in IV BHMS

Types of questions with marks

Type of Questions	No. of Questions	Marks per Question	Total Marks
Long Essays	02	10	20
Short Essays	10	05	50
Short Answers	10	03	30
Maximum Marks			100

Question Paper Layout: Paper 1

Long Essays**(10×02=20)**

1. Topic from II BHMS syllabus
2. Topic from III BHMS syllabus

Short Essays**(5×10=50)**

3. From I BHMS topic
4. From IIBHMS topic
5. From II BHMS topic
6. From III BHMS topic
7. From IIIBHMS topic
8. From IIIBHMS topic
9. From III BHMS topic
10. From III BHMS topic
11. From III BHMS topic
12. From III BHMS topic

Short Answers**(3×10=30)**

13. From I BHMS topic
14. From I BHMS topic
15. From IIBHMS topic
16. From II BHMS topic
17. From III BHMS topic
18. From IIIBHMS topic
19. From III BHMS topic
20. From III BHMS topic
21. From III BHMS topic
22. From III BHMS topic

Question Paper Layout: Paper II**Long Essays****(10×02=20)**

1. Topic from Major medicines
2. Topic from Group remedies

Short Essays**(5×10=50)**

3. From Major drugs

4. From Major drugs
5. From Major drugs
6. From Major drugs
7. From Major drugs
8. From Minor drugs
9. From Minor drugs
10. From Minor drugs
11. From Minor drugs
12. From Minor drugs

Short Answers

(3×10=30)

13. From Major drugs
14. From Major drugs
15. From Major drugs
16. From Major drugs
17. From Major drugs
18. From Minor drugs
19. From Minor drugs
20. From Minor drugs
21. From Minor drugs
22. From Sarcodes

Practical including Viva Voce (Max marks 200)

1. Record both acute and chronic case history in proper sequence
2. Erect a proper totality of the patient.
3. Differentiate the Basic and Determine symptoms in a given case history.
4. Differentiate between the probable remedies for a given patient.

Distribution of marks

Case	Case taking	Case analysis	Miasm analysis	Remedy differentiation	Remedy selection	Total
Long	16	10	10	14	10	50
Short	08	08	04	06	04	30
Journal						20

Viva						100
Total						200

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- Boericke & Dewey (2010 reprint). *The twelve tissue remedies of Schussler. 6th Ed.* B. Jain publishers (P) limited, Delhi
- Burt WH (1996 reprint). *Physiological Materia Medica. 3rd Ed.* B. Jain publishers (P) limited, New Delhi
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- Phatak SR (2002). *Materia medica of Homoeopathic Medicines. 2nd Ed.* B. Jain publishers (P) limited, New Delhi
- Singh, Yaduveer (2004 reprint). *Miracles of Mother Tinctures: With Therapeutic Hints and Treatment of Diseases.* Jain publishers (P) limited, New Delhi
- Tyler ML (2012 reprint). *Homoeopathic drug pictures.* B. Jain publishers (P) limited, New Delhi

Organon

IV BHMS

Theory course content: In addition to the syllabus of First BHMS, Second BHMS and Third BHMS, the following shall be covered:

Sl. No.	Topic	Time allotted	Must Know	Desirable to know	Nice to know	Total marks allotted	Type of questions
1	Evolution of medical practice of			Greek	Prehistoric		

ancients
 (Prehistoric, Medicine, Greek medicine, Chinese medicine, Hindu Medicine and renaissance) and tracing the empirical, rationalistic and vitalistic Thoughts.

medicine **medicine**

Hindu medicine **Chinese medicine**

Renaissance

2	Revision of Hahnemann's Organon of Medicine (1-294) including Footnotes	55hrs	Aph 1 to 70 Aph 71 to 104		
		5hrs	Aph 105 to 145 Aph 146 to 294		
		5 hrs			
		30 hrs			
				100	10/5/3

Total time allotted- 75 hrs

Marks allotted: 50

Homoeopathic Philosophy: Philosophy Books of Stuart Close, J. T. Kent; H.A. Roberts, Richard Hughes and C. Dunham: 75 Hours	50	
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a	Topics from Lectures on homoeopathic philosophy by Stuart Close	20		15	
	Chapter1	2			
	The psychological point of view			The psychological point of view	5/3
	Chapter 2	2	Relation of science		5/3

General interpretations		and art		
Chapter 4		Disease per se		
The Scope Of Homoeopathy.		Tangible end products of disease.		
		Primary and secondary symptoms		10/5/3
	3	Dake's postulates		
Chapter5		Unity of medicine meaning, importance.	Therapeutic Nihilism	Medical scologists
The Unity Of Medicine.	3	& individualistic approach of Homoeopathy		10/5/3
Chapter 6		Definitions of life, Health, disease.		Matter and force.
Life Health And Disease	3	Nature of disease.		10/5/3
Chapter 8		Theory of chronic diseases.		10/5/3
General pathology of Homoeopathy	6	The doctrine of latency.		
		The identity of Psora & tuberculosis		
		Metastasis.		
		Idiosyncrasy and drug disease.		
		Relation of bacteria to Homoeopathy		
Chapter17			The development of Hahnemann philosophy in the 6 th edition	5/3
The Development Of Hahnemannian Philosophy	1			

b.	Topics from Lectures on homoeopathic philosophy by J.T.Kent	10		15 Includi ng chapter s from II &III BHMS
	Chapter18		Characteristics	10/5/3
	Chronic diseases – Psora	2	Nature Stages	
	Chapter19	2	Characteristics	10/5/3
	Chronic diseases – Psora(continued)		Nature Stages	
	Chapter20	2	Characteristics	10/5/3
	Chronic diseases - Syphilis		Nature Stages	
	Chapter21	2	Characteristics	10/5/3
	Chronic diseases – Sycosis		Nature Stages	
	Chapter22		Pathognomonic symptoms.	
	Disease and drug study in general	2	Anamnesis Images of the disease	5/3
c	Topics from Lectures on homoeopathic philosophy by H.A.Roberts	25		10 Includi ng chapter s from II &III

Chapter1 what has homoeopathy to offer the young man?	2	Qualities of homoeopathic physician. Homoeopathy is founded upon principles		5/3
Chapter2 Introduction to the study of Homoeopathy	2	Concept of disease. Concept of totality of symptoms. Inductive methods of reasoning.	Treatment of emergencies such as poisoning, asphyxia etc.	5/3
Chapter3 Vital Force	1	Trinity of life mind body & spirit Dynamic force of remedies.		5/3
Chapter4 Vital Force as expressed in Functions: In Health, In disease, In recovery ,in cure	2	Vital Force as expressed in Functions: In Health, In disease, In recovery ,in cure		10/5/3
Chapter5Vital energy in its universal applications	1	Vital energy Law of least action	3 forms of action of vital force	5/3
Chapter20 Temperaments	2	4classical temperaments. Role of proving Prescribing on temperament in keynote prescribing.		5/3
Chapter22 Disease classification	1	Psora :meaning	Classification of diseases History of classification Linnaeus plant kingdom Cuvier animal kingdom.	10/5/3
Chapter23 Disease classification:		Symptoms of psora		5/3

Psora	1			
Chapter24 Psora or deficiency?	2	Why psora is called deficiency miasm	List of antipsorics	5/3
Chapter25 Some manifestations of Latent Psora.	1		Some manifestations of Latent Psora.	5/3
Chapter26, Disease classification; the syphilitic stigma	1	What is syphilitic stigma		5/3
Chapter27 Disease classification; the syphilitic stigma.(continued)	1		Manifestation of Tubercular.	5/3
Chapter28 Syphilis.	1	Symptoms of syphilis		5/3
Chapter29 Disease classification Sycosis.	1	Manifestations of sycosis.		5/3
Chapter30 Sycosis-overconstruction	1	Why sycosis is referred to overconstruction		5/3
Chapter31 Disease Classification a summary	1		Summary of disease classification treatment of mixed miasmatic disease	5/3
Chapter32 Homoeopathic therapeutic in the field of endocrinology	2	Endocrine imbalance and Homoeopathic management.		5/3

Chapter33 The phenomenological view point.	1		Phenomenolog ical view point of disease & cure	5/3
Chapter35 Modern medication and homoeopathic principles	1	Modern medication and homoeopathic principles.		5/3
d Topics from Lectures on homoeopathic philosophy by Richard Hughes	10			5
Chapter1,2,3 Organon	3	Principles of homoeopathy Similia similibus curantur	Organon , disease and drug action.	5/3
Chapter4 The Knowledge of Disease.	1	Evolution of editions of organon.	Tolle causam. Fever, inflammation, Neurosis.	5/3
Chapter5 The Knowledge of Medicines	1	Empirical way of drug proving. Pseudo rational and rational way of drug proving.	Clinical materia medica and common materia medica	5/3
Chapter6	1			5/3
“Similia Similibus” Chapter7,8	2	Law of homoeopathy.		5/3
The Selection Of The Similar Remedy.		Generic similarity Specific similarity.		
Chapter9 , 10 The Administration Of The Similar Remedy	2	Individual similarity Administration of Singly, rarely, Constitutionally.		
		Administration of		5/3

Minutely doses.

e **Topics from Lectures on homoeopathic philosophy by**

C. Dunham

5

10

Chapter1

Homoeopathy science of therapeutics.

2

Therapeutics (science of).
Nature & limits of hygiene and therapeutics.

5/3

Chapter2

Antagonism between homoeopathy and Allopathy.

2

Antagonism between Allopathy and homoeopathy from different points of view

Rational methods and specifics.

5/3

Chapter3

Relation of pathology to therapeutics.

2

Nature of disease.
Seat of disease.

Curative treatment.
Palliative treatment.

Physiological anatomy
Pathological anatomy

5/3

Chapter4

Primary and secondary symptoms of drugs as guides in determining the dose.

2

Primary symptoms.
Secondary symptoms
Its significance in determine the dose.

5/3

Chapter5

The dose of drug proving.

1

Factors deterring the dose in drug proving

Action of drugs chemical, mechanical, dynamic.
Generic Specific.
Central Specific.
Idiosyncrasy.

5/3

Chapter6 &7
Alternation of remedies no 1.

1

Difference between alternation and succession.

Views of various authors on alternation

5/3

Chronic diseases: 45 Hours

50 Marks

4.1

Hahnemann's Theory of Chronic

25

Factors that led to the development of theory of chronic diseases.

Antipsoric medicines.

25

10/5/3

diseases

Nature of chronic disease.

Review of evolution of psora.

Symptoms of Psora, Latent Psora. Sycosis. Syphilis.

Cure of chronic disease

Diet and regimen

Bacterial and their relation to pathology.

Scrofula and its miasmatic basis.

20

10/5/3

Secondary diseases.

Stomach symptoms of psora and pseudo psora

Basic symptoms of psora

History and philosophy of psora and pseudo psora.

15

Idiosyncrasies. Miasms and relation to abnormal growths.

Miasm, suppression of.

Miasm and their relationships to pathology.

Miasm, ways in which suppression takes place.

Predispositions, Psora Sycosis

4.2 J.H.Allen's The Chronic Miasms-Psora and pseudo psora; Sycosis.

b,c

4 a	Emphasis should be given on the way in which each miasmatic state evolves and the characteristic expressions are manifested at various levels and attempt should be made to impart a clear understanding of Hahnemann's theory of Chronic Miasms.	2	Emphasis should be given on the way in which each miasmatic state evolves and the characteristic expressions are manifested at various levels and attempt should be made to impart a clear understanding of Hahnemann's theory of Chronic Miasms.
4 b	The characteristics of the miasms need to be explained in the light of knowledge acquired from different branches of medicine.	2	The characteristics of the miasms need to be explained in the light of knowledge acquired from different branches of medicine.
4 c	Teacher should explain clearly therapeutic implications of theory of chronic miasms in practice and this will entail a comprehension of evolution of natural disease from miasmatic angle , and it shall be correlated with applied materia medica.	1	Teacher should explain clearly therapeutic implications of theory of chronic miasms in practice and this will entail a comprehension of evolution of natural disease from miasmatic angle , and it shall be correlated with applied materia medica.

B: Practical or clinical:

- a) The student shall maintain practical records of patients treated in the outpatient department and in patient department of the attached hospital.

- b) The following shall be stresses upon in the case records, namely:-
1. Receiving the case properly (case taking) without distortion of the patient’s expressions.
 2. Nosological diagnosis;
 3. Analysis and evaluation of symptoms, miasmatic diagnosis and portraying the totality of symptoms;
 4. Individualization of the case for determination of similimum, prognosis, general management including diet and necessary restrictions on mode of life of the individual patients.
 5. State of susceptibility to formulate comprehensive plan of treatment.
 6. Order of evaluation of the characteristic features of the case would become stepping stone for the repertorial totality;
 7. Remedy selection and posology.
 8. Second prescription.

Note: 1) each student has to maintain records of twenty thoroughly worked cases (10 chronic and 10 acute cases)

2) Each student shall present at least one case in the departmental symposium or seminar.

Examination:

A. Theory -200 Marks.

There shall be two papers of 100 marks each.

Paper I –Aphorism 1-145 - 30 marks.
Aphorism 146-294- 70 marks.

Paper II – Chronic diseases - 50 marks.
Homoeopathic philosophy - 50 marks.

Types of questions with marks

Type of Questions	No. of Questions	Marks per Question	Total Marks
Long Essays	02	10	20
Short Essays	10 out of 12	05	50
Short Answers	10	03	30
MAXIMUM MARKS			100

B. Practical -100 Marks.

Case taking and case processing of a long case 60 marks

Case taking and case processing of a short case 20 marks
 Practical record book 20 Marks.

C. Viva-voce (Oral) examination - 100 Marks.

Marks Distribution

Subject	Theory		Max Practical Marks	Practical & Oral		Pass Marks	Grand Total	
	Max Marks	Pass Marks		Max Oral Marks	Total Practical & Oral Marks		Max Marks	Pass Marks
Organon Of Medicine , Principles Of Homoeopathic Philosophy And Psychology	200	100	100	100	200	100	400	200

Question paper layout

Paper 1

Max marks: 100

- | | | |
|------------|-----------------------|---------|
| I | Long essay | 10x2=20 |
| 1 | Aphorism 1 to 145 | |
| 2 | Aphorism 146 to 294 | |
| II | Short Essays | 5x10=50 |
| 3 | Aphorism 1 to 104 | |
| 4 | Aphorism 105 to 145 | |
| 5 | Aphorism 151 to 161 | |
| 6 | Aphorism 172 to 184 | |
| 7 | Aphorism 185 to 203 | |
| 8 | Aphorism 204 to 258 | |
| 9 | Aphorism 259 to 263 | |
| 10 | Aphorism 264 to 272 | |
| 11 | Aphorism 273 to 282 | |
| 12 | Aphorism 284 to 294 | |
| III | Short Answers: | 3x10=30 |
| 13 | Aphorism 1 to 70 | |
| 14 | Aphorism 71 to 104 | |
| 15 | Aphorism 105 to 145 | |
| 16 | Aphorism 146 to 150 | |

- 17 Aphorism105 to 145
- 18 Aphorism162 to 171
- 19 Aphorism172 to 203
- 20 Aphorism204 to 271
- 21 Aphorism273to 282
- 22 Aphorism283 to 294

Paper 2

Max marks 100

I Long essay

10x2= 20

- 1. Homoeopathic philosophy of Kent, Close & Roberts
- 2. Hahnemann's Theory of Chronic diseases

II Short Essay

5 X 10 = 50

- 3. Homoeopathic philosophy of Kent, Close & Roberts
- 4. Homoeopathic philosophy of Kent, Close & Roberts
- 5. Homoeopathic philosophy of Roberts
- 6. Topics from Allen
- 7. Topics from Allen
- 8. Topics from Richard Hughes
- 9. Questions from 4 a,4b,or 4c
- 10. Hahnemann's Theory of Chronic diseases
- 11. Hahnemann's Theory of Chronic diseases
- 12. Topics from Carol Dunham

III Short Answer

3 X 10 = 30

- 13. Homoeopathic philosophy of Kent, & Close
- 14. Homoeopathic philosophy of Kent,& Close
- 15. Homoeopathic philosophy of Kent, & Close
- 16. Homoeopathic philosophy of Kent, Close & Roberts
- 17. Homoeopathic philosophy of Roberts
- 18. Topics from Allen
- 19. Topics from Allen
- 20. Topics from Allen
- 21. Hahnemann's Theory of Chronic diseases
- 22. Hahnemann's Theory of Chronic diseases

References- III BHMS & IV BHMS

Basic

- Samuel Hahnemann. *Organon of Medicine Sixth Edition*. B. Jain publishers (P) limited, New Delhi
- Garth Boericke. *A Comprehensive principles of homoeopathy*. World Homoeopathic links, Post Box 5775, New Delhi.
- J.T.Kent. *Lectures on Homoeopathic Philosophy*. B. Jain publishers (P) limited, New Delhi
- B.K.Sarkar. *Organon Of Medicine (5th & 6th edition)with commentary*. M.Bhattacharya&Co.Pvt.Ltd., Kolkata-700001
- Carrol Dunham. *Homoeopathy- The Science of Therapeutics*. B. Jain publishers (P) limited, New Delhi
- H.A.Roberts. *Principles and Practice of Homoeopathy*. B. Jain publishers (P) limited, New Delhi
- Staurt Close. *The Genius of Homoeopathy*. B. Jain publishers (P) limited, New Delhi
- Elizabeth Hubbard. *A brief study course in Homoeopathy*. B. Jain publishers (P) limited, New Delhi
- W.M.Boericke. *A compend of the principles of Homoeopathy*. B. Jain publishers (P) limited, New Delhi
- R.E.Dudgeon. *Lectures on the theory & practice of Homoeopathy*. B. Jain publishers (P) limited, New Delhi
- Samuel Hahnemann. *Chronic Diseases*. B. Jain publishers (P) limited, New Delhi
- J.H.Allen. *The chronic miasmPsora, Pseudo-psora&sycosis*. B. Jain publishers (P) limited, New Delhi
- Banerjee. *Chronic Diseases-Its cause & cure*. B. Jain publishers (P) limited, New Delhi

Advanced:

- Dr. E.S. Rajendran. *New Lights(Lectures on Homoeopathic Philosophy)*. Mohna Publications, Calicut
- Phyllis Speight. *A comparison of the chronic miasms, psora, pseudopsora and sycosis and syphilis*. B. Jain publishers (P) limited, New Delhi
- Dr S..K . Banerjee. *Miasmatic Diagnosis practical tips with clinical comparisons*. B. Jain publishers (P) limited, New Delhi
- Dr. E.S. Rajendran. *The Nucleus (Lectures on Chronic Diseases and Miasms)*. Mohna Publications, Calicut

Practice of Medicine IV BHMS

Instructions

I (a) Homoeopathy has a distinct approach to the concept of disease

(b)It recognizes an ailing individual by studying him as a whole rather than in terms of sick parts and emphasizes the study of the man, his state of health, state of illness.

II The study of the above concept of individualization is essential with the a following background so that the striking features which are characteristic to the individual become clear, in contrast to the common picture of the respective disease conditions, namely:-

- (1)correlations of the disease condition with basics of anatomy, physiology and biochemistry and pathology.
- (2) knowledge of causation, manifestations, diagnosis(including differential diagnosis), prognosis and management of disease.
- (3) application of knowledge of organon of medicine and homoeopathic philosophy in dealing with the disease conditions.
- (4)comprehension of applied part.
- (5)sound clinical training at bedside to be able to apply the knowledge and clinical skill accurately.

- (6)adequate knowledge to ensure that rational investigations are utilized.
- III(a)The emphasis shall be on study of man in respect of health, disposition, diathesis, diseases, taking all predisposing and precipitating factors, i.e. fundamental cause, maintaining cause and exciting cause;
- (b)Hahnemann’s theory of chronic miasms provides us an evolutionary understanding of the chronic disease: psora, sycosis, syphilis and acute manifestations of chronic diseases and evolution of the natural disease shall be comprehended in the light of theory of chronic miasms.
- IV(a)The teaching shall include homoeopathic therapeutics or management in respect of all topics and clinical methods of examination of patient as a whole will be given due stress during the training;
- (b)A thorough study of the above areas will enable a homoeopathic physician to comprehend the practical aspects of medicine;
- (c)He shall be trained as a sound clinician with adequate ability of differentiation, sharp observation and conceptual clarity about disease by taking help of all latest diagnostic techniques, viz. X-ray, ultrasound, electrocardiogram, and commonly performed laboratory investigations;
- (d)Rational assessment of prognosis and general management of different diseases conditions are also to be focused.
- V. Study of subject – The study of the subject will be done in two years in Third B.H.M.S and Fourth B. H. M. S, but examination shall be conducted at the end of Fourth B.H.M.S.

Course Objectives

At the end of the course of studies in practice of medicine the student shall be able to:

- Apply the scientific basis of the normal structure, development, function and relationships among the major organ systems of the body to concepts of health and disease.
- Acquire clinical proficiency in detailed history taking keeping in mind the scientific and artistic approach, physical examination & differential diagnosis.The effective use of medicine’s evolving diagnostic and procedural capabilities including therapeutic modalities.
- Interpret the results of investigation to know the pace of the disease and its progress.
- Understand the evolution of disease about its causation, manifestations, maintenance and prognosis.
- Make plan of treatment including general measures, auxiliary measures, diet and regimen.
- Understand the scope and limitations of homoeopathy in a given case.
- Identification of medical emergencies and take appropriate measures.
- Organize health education, medical care in the community, at secondary level of health system and play the assigned role in the national health programs aimed at the health of the affected community groups.

COURSE CONTENTS:

To achieve the above said objectives, the following would be the syllabus with the basic knowledge of applied anatomy and applied physiology.

Course of Study -2 years6months (III &IV B.H.M.S.).

Examination to be conducted at the end of the IV B.H.M.S.

IV B.H.M.S.: 200 Hours

Annual Objectives:

- Diagnose and manage common health problems of individual and the community.
- Practice promotive, preventive, curative and rehabilitative medicine in respect to the commonly encountered health problems.
- Apply knowledge of Homoeopathic Therapeutics in clinical practice.

Sl	Topics	Hour	Must Know	Desirable to	Nice to Know
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No	s		Know		
I. Nutritional & Metabolic Diseases: 06 hrs					
1	Protein Energy Malnutrition	1	Definition, Etiopathogenesis, Types, C/F, Investigations & Hom Therapeutics.	Complications	Dietary management
2	Fat soluble vitamins	1	C/F of Deficiency and Hypervitaminosis & Diagnosis.	Daily requirement & Role of Hom in deficiency disorders	
3	Water Soluble vitamins	1	C/F of Deficiency and Hypervitaminosis & Diagnosis.	Daily requirement & Role of Hom in deficiency disorders	
4	Obesity	1	Types, Complications & Hom management	Nutritional Assessment	
5	Wilson's disease/Haemochromatosis/porphyrias.	1		Definition, Etiopathogenesis, C/F, Investigations & Complications	Copper metabolism & Iron metabolism
6	Amyloidosis	1		Definition, Etiopathogenesis, Types, C/F & Investigations.	complications
II. Diseases of Hematopoietic system: 15 hrs					
1	Anemia	1	Definition, Causes, Classification, C/F, Investigations, Complications, General management & Hom Therapeutics		Parenteral therapy
2	Iron deficiency anemia	1	Definition, Etiopathogenesis, C/F, Investigations, Complications, General management		Iron metabolism

3	Megaloblastic anemia	1	&Hom Therapeutics Definition, Etiopathogenesis, C/F, Investigations, Complications & Hom Therapeutics		Metabolism of Vit B12 & Folate metabolism
4	Aplastic anemia	1	Definition, Etiopathogenesis, C/F, Investigations, Complications &Hom Therapeutics		Scope & limitations of
5	Hemolytic anemia/thalassemia	2	Definition, Etiopathogenesis, C/F, Investigations, Complications &Hom Therapeutics		Blood transfusion, Scope & limitations of Homoeopathy
6	Leukemia	2	Definition, Etiopat hogenesis, Types, C/F, Investigations, Complications, D/D, & Hom Therapeutics		Bone marrow Transplantation
7	Lymphomas / Burkitt's lymphoma	2	Definition, Etiopathogenesis, Types C/F, Investigations, Complications & Hom Therapeutics	Staging (TNM)	Scope & limitations of Homoeopathy
8	Disorders due to deficiency of Clotting factors	1	Definition, Etiopathogenesis, C/F, & Investigations of Hemophilia-A, Hemophilia-B & Von- wilbrand disease & Hom Therapeutics		Scope & limitations of Homoeopathy
9	Platelet Disorders	1	Definition, Types, Etiopathogenesis,		

10	Multiple myelomas.	1	C/F, Investigations, Complications & Home Therapeutics. Definition, Types, Etiopathogenesis, C/F, Investigations & Complications & Home Therapeutics.	Staging (TNM)	
11	Hypersplenism	1		Definition, Etiopathogenesis, C/F, Investigations, Complications & Home Therapeutics.	
12	Polycythemia vera	1		Definition, Etiopathogenesis, C/F, Investigations, Complications & Home Therapeutics.	
III. Endocrinal Diseases: 12 hrs					
1	Disorders of Growth hormone	1	Etiopathogenesis, S/S & Investigations of GH Deficiency & Excess	Homoeopathic Therapeutics	
2	Diabetes insipidus	1	Etiopathogenesis, S/S, Investigations & Home Therapeutics.		
3	Goitre	1	Definition, Types, Etiopathogenesis, C/F, Investigations, D/D & Home Therapeutics		
4	Hypothyroidism	1	Definition, Etiopathogenesis, C/F, Investigations, D/D,	Congenital hypothyroidism	Hormonal assay

5	Hyperthyroidism	2	Complications &Hom Therapeutics Definition, Etiopathogenesis, C/F, Investigations, D/D, Complications &Hom Therapeutics		Radioactive iodine ablation/ Basics of CA Thyroid.
6	Hypo & Hyper Parathyroidism	1	Definition, Etiopathogenesis, C/F, Investigations&H om Therapeutics		Calcium metabolism
7	Disorders of Adrenal Gland	2	Definition, types, Etiopathogenesis, C/F, Investigations & Hom Therapeutics		Functions of Glucocorticoids
8	Diabetes Mellitus	3	Definition, Causes,Classificat ion, Pathogenesis, C/F, Investigations, Complications, General management & Hom Therapeutics	GTT & Hb1ac	

IV. Infectious Diseases: 20 hrs

1	Bacterial infections- Typhoid Fever, Bacillary Dysentery, Cholera, Diphtheria, Brucellosis, Tuberculosis, Pertusis, Tetanus, Septicemia,	10	Definition, Etiopathogenesis, C/F, Investigations, Complications & Hom Therapeutics	Vaccination.	Culture study of bacteria
2	Viral infections - Herpes infections, Swine flu,	5	Definition, Etiopathogenesis,, C/F,	Vaccination.	Serological studies

	Japanese Encephalitis, Rabies, Mumps, Measles, Rubella, Poliomyelitis.		Investigations, Complications & Hom Therapeutics	
3	Parasitic infestations: Amoebiasis, giardiasis,	2	Definition, Etiopathogenesis, C/F, Investigations, Complications & Hom Therapeutics	
4	Fungal infections – Madura foot, cryptococcosis	1		Definition, Etiopathogenesis, C/F, Investigations, Complications & Hom Therapeutics
5	Spirochetes – syphilis, leptospirosis.	2	Definition, Etiopathogenesis, C/F, Investigations, Complications & Hom Therapeutics	
V. Diseases of Cardiovascular System: 24hrs				
1	Acute circulatory failure (shock)	1	Definition, Etiopathogenesis, Types, C/F, Investigations, D/D, General management & Hom Therapeutics	Complications
2	Heart failure	2	Definition, Etiopathogenesis, Types, C/F, Investigations, D/D, Complications General management & Hom Therapeutics	
3	Ischemic heart disease	3	Definition, Etiopathogenesis, Types, C/F,	Complications, CABG, PTCA, Stent&

				Investigations, D/D, Complications, General management & Hom Therapeutics		Stress tests.
4	Acute Rheumatic fever		2	Definition, Etiopathogenesis, Pathology,C/F, D/D, Investigations, Complications, General management &Hom Therapeutics		
5	Valvular heart diseases		4	Definition, Etiopathogenesis, Types, Hemodynamics, C/F, Investigations, D/D, General management &Hom Therapeutics	Complications	Surgical management
6	Infective Endocarditis		1	Definition, Etiopathogenesis, Types, C/F, Investigations, D/D, General management&Ho m Therapeutics	Complications	
7	Hypertension		2	Definition, Etiopathogenesis, Types, C/F, Investigations,Ge neral management & Hom Therapeutics		
8	Cardiomyopathies		1		Definition, Etiopathogenesi s, Types, C/F, Investigations& Hom Therapeutics	
9	Arrhythmias		1	Definition,Etiopat	ECG Changes	

				hogenesis, Types, C/F, General management & Hom Therapeutics		
10	Cor-pulmonale and pulmonary hypertension.	1	Definition, Etiopathogenesis, C/F, Investigations, Complications, General management & Hom Therapeutics	Scope & limitation of Homoeopathy		
11	Congenital heart diseases- ASD, VSD, COA, PDA, TOF	4	Definition, Etiopathogenesis, Haemodynamics, C/F, Investigations, Complications, General management & Hom Therapeutics	Scope & limitation of Homoeopathy & Surgical management		
12	Diseases of Pericardium	2	Definition, Etiopathogenesis, Types, C/F, Investigations, General management & Hom Therapeutics	D/D		Pericardiocentesis
VI. Diseases of Urogenital tract: 14 hrs						
1	Urinary Tract Infections	2	Definition, Types, Etiopathogenesis, C/F, Investigations, Complications, General management & Hom Therapeutics			Culture & sensitivity.
2	Nephrotic Syndrome	1	Definition, Etiopathogenesis, C/F, Investigations, General management & Hom			

3	Glomerulopathies	4	Therapeutics Definition, Etiopathogenesis, Pathology, Types, C/F, Investigations, General management & Hom	
4.	Renal failure	4	Therapeutics Definition, Types, Etiopathogenesis, C/F, Investigations, Complications &Hom	Dialysis –types & indications. Renal Transplantation
5	Nephrolithiasis/o bstructive uropathy.	2	Therapeutics Definition, Etiopathogenesis, Types, C/F, Investigations, General management & Hom	Surgical intervention
6	Tumors of Genito urinary tract	1	Therapeutics	Types, Causes, Pathology, C/F, Investigations, Complications& Hom Therapeutics.

VII. Diseases of Central Nervous System & Peripheral Nervous System: 28hrs

1	Headache	2	Definition, Etiopathogenesis, Types, C/F, D/D, General management&Ho m Therapeutics	Investigations & Complications of secondary headache
2	Epilepsy	2	Definition, Etiopathogenesis, Classification, C/F, Investigations,D/ D, Complications, General management&Ho m Therapeutics	EEG

3	Cranial nerves disorders	2	Causes, C/F, Investigations, D/D, General management & Hom Therapeutics of Trigeminal neuralgia, Facial nerve palsy, Bulbar / Pseudo bulbar palsy	Causes, C/F, General management & Hom Therapeutics of other cranial nerve lesions.	
4	Meningitis-bacterial, viral	2	Definition, Etiopathogenesis, C/F, Investigations D/D, general management & Hom Therapeutics		
5	Viral infections of CNS	1		Definition, Etiopathogenesis, C/F, Investigations, D/D, Complications & Hom Therapeutics	
6	Neurosyphilis	1	Definition, Etiopathogenesis, C/F, Investigations, Complications, General management & Hom Therapeutics		
7	Movement disorders	1		Causes & Manifestations of different types of movement disorders	
8	Parkinsonism	2	Definition, Etiopathogenesis, C/F, Investigations, General management		Degenerative pathology of Basal ganglia

9	Myasthenia gravis	1	&Hom Therapeutics Definition, Etiopathogenesis, C/F, Investigations, General management	
10	Peripheral Neuropathies	2	&Hom Therapeutics Definition, Etiopathogenesis, Classification, C/F, General management	Nerve conduction studies
11	Cerebellar disorders	1	&Hom Therapeutics Definition, Etiopathogenesis, Classification, C/F, Investigations, D/D, General management & Hom	Scope & limitation of Homoeopathy
12	Motor Neuron diseases	1	Therapeutics Definition, Etiopathogenesis, Types, C/F, Investigations, General management & Hom	Scope & limitation of Homoeopathy
13	Disorders of muscles (muscular dystrophies)	1	Therapeutics Definition, Etiopathogenesis, Types, C/F, Investigations, General management & Hom	Scope & limitation of Homoeopathy
14	Cerebrovascular diseases	3	Therapeutics Definition, Etiopathogenesis, Types, C/F, Investigations, D/D, Complications,	MRI study

			General management & Hom Therapeutics		
15	Alzheimer's diseases	1	Definition, Etiopathogenesis, C/F, D/D, Investigations & Hom Therapeutics		
16	Coma	1	Definition, Causes, levels of consciousness, Complications, Clinical approach, General management & Hom Therapeutics	Scope & limitation of Homoeopathy	
17	Multiple sclerosis	1	Definition, Etiopathogenesis, C/F, Investigations, D/D, Complications, General management & Hom Therapeutics	Scope & limitation of Homoeopathy	
18	Spinal cord diseases (syringomyelia, brown sequard syndrome, cauda equina syndrome)	2	Definition, Etiopathogenesis, C/F, Investigations, D/D, Complications, General management & Hom Therapeutics	Scope & limitation of Homoeopathy	
19	Tumors of CNS	1	Definition, Causes, Pathology, C/F, Investigations, D/D, Complications, General management & Hom		

VIII. Psychiatric Disorders: 16hrs

1	Basic considerations of Psychiatry	2	Clinical approach, Classification, Psychotherapy and Hahnemannian classification	
2	Organic Brain syndromes Delirium and dementia	2	Etiopathogenesis, C/F, General management, & Hom Therapeutics	
3	Mood disorders	2	Etiology, Types, C/F, Diagnosis, General management & Hom Therapeutics	
4	Schizophrenia	2	Definition, Causes, Types, C/F, General management & Hom Therapeutics	
5	Anxiety disorders	2	Definition, Causes, Classification, C/F, General management & Hom Therapeutics	
6	Somatoform disorders	2	Definition, Causes, Types, C/F, General management & Hom Therapeutics	
7	Personality disorders	2	Definition, Causes, Types, C/F, General management & Hom Therapeutics	
8	Substance Abuse	2	Effects of alcohol, dependence and withdrawal, Manifestations and Homoeopathic Therapeutics of	

General
management &
Hom
Therapeutics

Cannabis,
opioids &
nicotine abuse

IX. Diseases of Locomotor System(connective tissue, Bones& joint disorders): 15hrs

1	Osteoarthritis	1	Definition, Etiopathogenesis, C/F, Investigations, General management, & Hom Therapeutics	Complications	Joint exercise & Arthroscopy
2	Rheumatoid arthritis	2	Definition, Etiology, Pathology, Immunopathogen esis, C/F, Investigations, General management, & Hom Therapeutics	Complications	
3	Gout	1	Definition, Etiopathogenesis, C/F, Investigations, General management, & Hom Therapeutics		Metabolism of Purine
4	Ankylosing Spondylitis	1	Definition, Etiopathology, C/F, Investigations, General management, & Hom Therapeutics	Complications	
5	Reiter's Syndrome	1		Definition, Etiopathogenesi s, C/F, Investigations & Hom management	
6	Systemic Lupus Erythematosus	1	Definition, Etiopathogenesis, C/F,		ANA profile

				Investigations, Complications, General management & Hom Therapeutics		
7	Systemic Vasculitis		1		Definition Etiopathogenesis, C/F, Investigations, General management & Hom Therapeutics	
8	Sjogren's Syndrome & Behcet's disease		1		Definition, Etiopathogenesis, S/S, Investigations & Hom Therapeutics	
9	Rickets & Osteomalacia		1	Definition, Etiopathogenesis, C/F, Investigations, General management & Hom Therapeutics	Vit D Dosage and Complications	
10	Osteoporosis		1	Definition, Etiopathogenesis, C/F, Investigations, General management & Hom Therapeutics		Bone density study
11	Paget's disease		1		Definition, Etiopathogenesis, C/F, Complications & Investigations & Hom Therapeutics	Scope & limitations of Homoeopathy
12	Cervical lumbar Spondylosis	And	2	Definition, Etiopathology, C/F, Investigations,		MRI study

			Complications, General management, & Hom Therapeutics
13.	Osteomyelitis	1	Definition, Etiopathology, Types, C/F, Investigations, General management & Hom Therapeutics

X. Diseases of Skin & Sexually Transmitted Diseases: 17hrs

1	Bacterial infections	1	Etiopathogenesis, S/S, Investigations, General management & Hom Therapeutics
2	Fungal infections	1	Etiopathogenesis, S/S, Investigations, General management & Hom Therapeutics
3	Viral infection	1	Etiopathogenesis, S/S, Investigations, General management & Hom Therapeutics
4	Scabies	1	Etiopathogenesis, S/S, Investigations, General management & Hom Therapeutics
5	Eczema	2	Definition, Etiopathogenesis, Types, S/S, Investigations, General management &

6	Acne	1	Hom Therapeutics Definition, Etiopathogenesis, Types, S/S, Investigations, General management & Hom
7	Urticaria and Angioedema	1	Therapeutics Definition, Etiopathogenesis, S/S, Investigations, General management & Hom
8	Psoriasis	2	Therapeutics Definition, Etiopathogenesis, Types, S/S, Complications, Investigations, General management & Hom
9	Lichen Planus	1	Therapeutics Definition, Etiopathogenesis, S/S, Investigations, Complications & Hom
10	Pigment disorders	1	Therapeutics Definition, Etiopathogenesis, Types, S/S, Investigations & Hom Therapeutics of Hypopigmentation disorders
11	Hair & Nail disorders	1	Therapeutics Etiopathogenesis, S/S & Investigations of Hair & Nail disorders
12	Syphilis/	3	Therapeutics Definition, Types,

	HIV/Gonorrhoea		Etiopathogenesis, S/S, Investigations, Complication &Hom Therapeutics	
13	Vesiculo bullous disorders	1	Definition, Etiopathogenesis, S/S, Investigations, Complications, General management & Hom Therapeutics	
XI. Tropical diseases: 10hrs				
1	Malaria	1	Definition, Etiopathogenesis, S/S, Investigations, Complications, D/D, General management & Hom Therapeutics	Epidemiology
2	Chikungunya	1	Definition, Etiopathogenesis, S/S, Investigations, Complications, D/D, General management & Hom Therapeutics	Epidemiology
3	Dengue	1	Definition, Etiopathogenesis, S/S, Investigations, Complications, D/D, General management & Hom Therapeutics	Epidemiology
4	Leprosy	1	Definition, Etiopat hogenesis, S/S, Investigations, Complications, D/D, General Therapeutics	Epidemiology

			management & Hom Therapeutics		
5	Ankylostomiasis	1		Definition, Etiopathogenesis, S/S, Investigations, Complications, D/D, General management & Hom Therapeutics	Epidemiology
6	Elephantiasis	1	Definition, Etiopathogenesis, S/S, Investigations, Complications, D/D, General management & Hom Therapeutics		Epidemiology
7	Schistosomiasis	1		Definition, Etiopathogenesis, S/S, Investigations, Complications, D/D, General management & Hom Therapeutics	
8	Leishmaniasis	1		Definition, Etiopathogenesis, S/S, Investigations, Complications, D/D, General management & Hom Therapeutics	
9	Trachoma	1		Definition, Etiopathogenesis, S/S, Investigations, Complications, D/D, General management & Hom Therapeutics	

10	Chagas Disease	1	Definition, Etiopathogenesis, S/S, Investigations, Complications, D/D, General management & Hom Therapeutics
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XII. Paediatric disorders: 18hrs

1	Disorders of Growth & Development (Failure to thrive, Enuresis, Autistic, MR and delayed milestones)	4	Causes, C/F, General management & Hom Therapeutics	
2	Behavioral disorders(ADHD)	1	Causes, C/F, General management & Hom Therapeutics	
3	Diseases of New born infants(Neonatal jaundice & Neonatal seizures)	2	Etiopathogenesis, Manifestations, Diagnosis & Homoeopathic therapeutics	
4	Hydrocephalus	1	Etiopathogenesis, Types C/F, General management & Hom Therapeutics	
5	Immunity & Immunization	2	General & Homoeopathic concept of Immunity, Immunization Schedule & Homoeopathic Prophylaxis	Vaccine types
6	Diarrhoeal Disorders in Children	2	Etiopathogenesis, Manifestation, Diagnosis, D/D General management & Homoeopathic	

			Therapeutics	
7	Indian childhood Cirrhosis	1		Etiopathogenesis, Manifestation, Diagnosis, Complications & Homoeopathic Therapeutics
8	Cerebral Palsy	1	Etiopathogenesis, Manifestation, Diagnosis & Homoeopathic Therapeutics	
9	Convulsive disorders in Children	1	Etiopathogenesis, Manifestation, Diagnosis & Homoeopathic Therapeutics	
10	Common Helminthic infection(Ascaris Lumbricoides, Enterobiusvermicularis & Echinococcosis)	2	Etiopathogenesis, Manifestation, Diagnosis & Homoeopathic Therapeutics	
11	Inborn errors of metabolism (Aminoaciduria, Lysosomal storage disorders)	1		Etiopathogenesis, Manifestation, Diagnosis & Homoeopathic Therapeutics

XIII. Geriatric Disorders: 05hrs

1	Geriatric care	1	General approach, Geriatric counseling, Reassurance	
2	Common Geriatric problems (Depression, Dementia & Insomnia)	2	Causes, S/S, General management & Hom Therapeutics	
3	Gait disorders	1	Causes, S/S, General management & Hom Therapeutics	
4	Elder abuse	1	Causes, S/S,	

General
management &
Hom
Therapeutics

Assignment:

Sl.No	Symptom/signs	Must Know	Desirable to Know	Nice to Know
1	Pain	Abdominal pain- <u>Peptic ulcer</u> , <u>appendicitis</u> , <u>gallstones</u> , <u>Crohn's disease</u> , <u>diverticulitis</u> , <u>ectopic pregnancy</u> , <u>food poisoning</u> , <u>GERD</u> (acid reflux), <u>irritable bowel syndrome</u> , <u>kidney stones</u> , Pancreatitis Cardiac disorders – MI, Angina, Pericarditis, Myocarditis, Cardiomyopathy Lung disorders - Pulmonary embolism, Pleurisy, TB Psychogenic cause - Panic attacks. Injuries in general	abdominal aortic aneurysm, <u>twisted bowel</u> (sigmoid volvulus), Collapsed lungs, Inflammation of lung tissue, Herpes infection.	
2	Fever	TB, Typhoid, Malaria, Pneumonia, Rheumatic fever, , Viral fever, Infective endocarditis, Septicaemia, Dengue fever, Swine Flu, Meningitis, Hepatitis	Lymphadenopathy, SLE, Septic arthritis, Pelvic inflammatory disease, otitis media, Peritonitis,	Ophthalmological, Dermatological, Immunological, Allergic
3	Cough with expectoration & Haemoptysis	Pulmonary TB, COPD, Allergic bronchitis, Bronchial Carcinoma, Pneumonia, Foreign body in air passage, Pulmonary embolism, Left-side heart failure, Pleural effusion	Bronchiectasis, Lung abscess, Pulmonary oedema,	Goodpasture's syndrome, Systemic coagulopathy or use of anticoagulants or thrombolytic agents, Psychogenic cough
4	Dyspnoea and Tachypnoea	MI, Angina, Lt heart failure, Arrhythmia, Pulmonary oedema, Bronchial asthma, COPD Pneumonia, Pulmonary	Intertial lung disease, Psychogenic, Post nasal drip, Pulmonary	Other infections of Resp system, Gastro oesophageal

		embolism, Pneumothorax, hypertension, reflux, Anemia, Obesity, Bronchial Cardiac myopathy carcinoma, Sleepapnoea, Metabolic acidosis		
5	Cyanosis	Lt to Rt shunt, Fallot's Tetralogy, Coarctation of aorta, Low cardiac output, COPD, Aspiration, Pneomothorax, Pulmonary oedema, Respiratory distress syndrome, Pneumonia, Seizures, Apnoea, Asphyxia, Meabolic acidosis,	Pulmonary stenosis, Pleural effusion, Hypogycemia, Hypothermia, Sepsis	Pulmonary atresia, Polycythemia, Tracheo-oesophageal fistula
6	Dysuria, Ologuria, Nocturia, Polyuria, Incontinence and Enuresis	Diabetes mellitus, UTI, Prostate abnormalities, Bladder Carcinoma, STD, Cystitis, Urethritis, Neurological disorders	Interstitial Cystitis, Kidney infection, Vaginitis, Detrosur instability	Drug related, Schistosomiasis
7	Oedema and Anasarca	Liver failure(Cirrhosis), Renal failue(Hypoalbuminaemia), PEM, Rt sided heart failure, malnutrition, Hypothyroidism, Lymphatic obstruction	Eclampsia of pregnancy, Lupus nephritis	Capillary leak syndrome
8	Anorexia, Nausea and Vomiting	Malignancies, Functional dyspepsia, Peptic ulcer, Gastritis, IBS, Gastric cancer, Gall stones, Reflux oesophagitis, Diabetic ketoacidosis	Alcohol related dyspepsia, Renal tubular acidosis, Hypercalcaemia	Adrenocortical insufficiency, Other rare causes of acidosis or alkalosis
9	Constipation and Diarrhoea	Diet, Stress, Medication, Inadequate fluid intake, endocrine disorder (e.g.diabetes, thyroid or parathyroid disease) or rarely cancer, IBS, IBD, AIDS	Neuromuscular disorder, Fecal impaction, Coeliac disease	

10	Jaundice and Hepatomegaly	Venoocclusive disease, Malaria, <u>Viral hepatitis</u> , <u>Hepatic amoebiasis</u> , <u>Typhoid</u> , Biliary cirrhosis, Hepatocellular carcinoma, CCF	Q fever, Leukemia, <u>Infectious mononucleosis</u> , hemolytic anemia	
11	Weight loss and Weight gain	AIDS, Diabetes mellitus, Malignancies, malnutrition, TB, Hyper & Hypothyroidism, Peptic ulcer, Depression, Ulcerative colitis, Antipsychotics	Coeliac disease, COPD, Dementia, Substance abuse	Dental problems
12	Fainting, Syncope and Seizures	Neurological conditions like infections, Epilepsy, Brain injury, Tumors, Stroke. Blood pressure irregularities, Psychological conditions, Diabetes, High fever, Hypoglycemia	Cardiovascular conditions like heart rhythm abnormalities, blocked vessels	
13	Headache, Dizziness and Vertigo	Migraine, Tension headache, Sinusitis, <u>Meniere Disease</u> , <u>Brain Tumor</u> , <u>Ear Infection (Otitis Media)</u> , Motion sickness	Alcoholism, Multiple sclerosis, Acoustic neuroma	Medications, Arsenic poisoning
14	Paralysis, movement disorders and Disorders of gait	Parkinsonism, Stroke, Multiple sclerosis, Spinal cord injury, GB syndrome, Motor neuron disease, Head injury, peripheral neuropathy, alcohol intoxication	Spina bifida, Brain tumor, Friedreich's ataxia,	Botulism
15	Pallor and Bleeding	Anemia, Shock, Leukemia, TB, Menstrual problems, Clotting factor deficiency, Platelet abnormalities, Hemorrhoids, Peptic ulcer,	Hypothyroidism, Scurvy, DIC, Threatened abortion	
16	Enlargement of Spleen and	Infections like AIDS, Malaria,	Infections	Mononucleosis

	lymph nodes	<p>Tuberculosis</p> <p>Blood cancers (<u>lymphoma</u>, <u>leukemia</u>, <u>myelofibrosis</u>);</p> <p><u>Liver disease</u> (<u>cirrhosis</u> due to chronic <u>hepatitis B</u>, chronic <u>hepatitis C</u>, <u>fatty liver</u>, long standing <u>alcohol abuse</u>);</p> <p>Abnormal blood flow and congestion (splenic vein thrombosis, portal vein obstruction, <u>congestive heart failure</u>);</p>	<p>(<u>mononucleosis</u>, bacterial endocarditis, leishmania); <u>sickle cell anemia</u>, <u>thalassemia</u>, spherocytosis, SLE, RA</p>
17	Joint pains	<p><u>Osteoarthritis</u>, <u>Rheumatoid arthritis</u>, <u>Bursitis</u>, <u>Gout</u>, Strains, Sprains and Injuries</p>	<p>Viral infections, Psoriatic arthritis, Chlamydia, Gonorrhea, SLE, Ankylosing spondylitis</p> <p>Lyme disease</p>

Practical / Clinical:

Objectives:

The student shall be able to:

- To elicit a relevant focused history from patients with increasingly complex issues and in increasingly challenging circumstances
- To record the history accurately and synthesise this with relevant clinical examination, establish a problem list based on pattern recognition including differential diagnosis and formulate a management plan that takes account of likely clinical evolution.
- Identify, organise, and record accurately the information needed to appropriately address the patient's problem/condition.
- To perform focused, relevant and accurate clinical examination in patients with increasingly complex issues and in increasingly challenging circumstances
- To relate physical findings to history in order to establish diagnosis and formulate a management plan.
- To prescribe, review and monitor appropriate therapeutic interventions relevant to clinical practice including non-medication based therapeutic and preventative indications.
- To develop the ability to formulate a diagnostic and therapeutic plan for a patient according to the clinical information available
- To develop the ability to prioritise the diagnostic and therapeutic plan
- To be able to communicate a diagnostic and therapeutic plan appropriately.
- Communicate with patients, family, and community in rural health care settings and other cultural/ethnic settings.

Each student shall submit of twenty complete case records – 10 in III BHMS & 10 in IV BHMS

III BHMS: 75hours - In outpatient department and inpatient department in different wards or department.
 IV BHMS: 180hours - In outpatient department and inpatient department respectively for case taking, analysis, evaluation and provisional prescription just for case presentation on ten cases per month.
 The examination procedure will include one long case and one short case to be prepared. During clinical training, each student will get adequate exposure to:

- Comprehensive case taking following Hahnemann’s instructions;
- Physical examinations(general, systemic & regional);
- Laboratory investigations required for diagnosis of disease conditions;
- Differential diagnosis and provisional diagnosis and interpretation of investigation reports;
- Selection of similitum and general management.

SCHEME OF EXAMINATION

Subject	Theory		Practical and oral			Grand total		
	Max marks	Pass marks	Max practical marks	Max oral marks	Total	Pass marks	Max marks	Pass marks
Practice of Medicine	200	100	100	100	200	100	400	200

A. Theory: 200 Marks

There shall be two papers, each carrying 100 marks and each paper of three hours duration. Both the papers are inclusive of therapeutics. The distribution of chapter wise marks in written paper may be as follows:

Type of Questions	No. of Questions	Marks per Question	Total
Long Essays	02	10	20
Short Essays	10	05	50
Short Answers	10	03	30
Maximum Marks			100

Paper I

Sl No	Topic	Marks
1	Respiratory diseases	34
2	Diseases of digestive system & peritoneum	34
3	Diseases concerning liver, gall –bladder and pancreas	16
4	Genetic factors(co-relating diseases with the concept of chronic miasms)	05
5	Immunological factors in disease with concept of susceptibility(including HIV, Hepatitis B)	03
6	Disorders due to chemical and physical agents and to climatic and environmental Factors	03
7	Disorders of Water and electrolyte balance	05

Paper II

Sl No	Topic	Marks
1	Nutritional and Metabolic diseases	03
2	Diseases of haemopoietic system	08
3	Endocrinal diseases	05
4	Infectious diseases	08
5	Diseases of Cardiovascular system	13
6	Diseases of urogenital tract	08
7	Diseases of the Central Nervous system and peripheral nervous system	18
8	Psychiatric disorders	05
9	Diseases of the locomotor system (connective tissue, bones & joints disorders)	08
10	Diseases of Skin & sexually transmitted diseases	08
11	Tropical diseases	05
12	Paediatric disorders	08
13	Geriatric disorders	03
	Total	100

Question Paper Blueprint**Practice of Medicine – Paper I**

Sl No	Topic	Hours	Marks	LE	SE	SA
1	Respiratory diseases	23hrs	34	1	3	3
2	Diseases of digestive system & peritoneum	23hrs	34	1	3	3
3	Diseases concerning liver, gall-bladder and pancreas	17hrs	16		2	2
4	Genetic factors(co-relating diseases with the concept of chronic miasms)	05 hrs	05		1	
5	Immunological factors in diseases with concept of susceptibility (including HIV, Hepatitis B)	05hrs	03			1
6	Disorders due to Chemical & Physical agents & to Climatic & environmental factors	02hrs	03			1
7	Water & Electrolyte balance – disorders of	05hrs	05		1	
	Total	80 hrs	100	20	50	30

Practice of Medicine – Paper II

Sl No	Topic	Hours	Marks	LE	SE	SA
1	Nutritional & Metabolic diseases	06hrs	03			1
2	Diseases of Haemopoietic System	15hrs	08		1	1
3	Endocrine diseases	12hrs	05		1	
4	Infectious diseases	20hrs	08		1	1
5	Diseases of cardiovascular system	24hrs	13	1		1
6	Diseases of urogenital tract	14hrs	08		1	1
7	Diseases of central nervous system & peripheral nervous system	28hrs	18	1	1	1

8	Psychiatric disorders	16hrs	05		1	
9	Diseases of locomotor system (connective tissue, bones and joint disorders)	15hrs	08		1	1
10	Disease of skin and sexually transmitted diseases	17hrs	08		1	1
11	Tropical diseases	10hrs	05		1	
12	Pediatric disorders	18hrs	08		1	1
13	Geriatric disorders	05hrs	03			1
	Total	200 hrs	100	20	50	30

Layout of Question Paper

Paper 1

Long Essay:

2X 10 = 20

1.	Respiratory diseases
2.	Diseases of Digestive System and Peritoneum

Short Essays:

5x 10 = 50

3.	Respiratory diseases
4.	
5.	
6.	Diseases of digestive system & peritoneum
7.	
8.	
9.	Diseases concerning liver, gall-bladder and pancreas
10.	
11.	Genetic factors(co-relating diseases with the concept of chronic miasms)
12.	Disorders of Water & Electrolyte balance

Short Answers:

3X10 = 30

13.	Respiratory diseases
14.	
15.	
16.	Diseases of digestive system & peritoneum
17.	
18.	
19.	Diseases concerning liver, gall-bladder and pancreas
20.	
21.	Immunological factors in diseases with concept of susceptibility (including HIV, Hepatitis B)
22.	Disorders due to Chemical & Physical agents & to Climatic & environmental factors

Paper 2

Long Essay:

2X 10 = 20

1.	Diseases of cardiovascular system
2.	Diseases of central nervous system & peripheral nervous system

Short Essays:**5x 10 = 50**

1.	Diseases of Haemopoietic System
2.	Endocrine diseases
3.	Infectious diseases
4.	Diseases of urogenital tract
5.	Diseases of central nervous system & peripheral nervous system
6.	Psychiatric disorders
7.	Diseases of locomotor system (connective tissue, bones and joint disorders)
8.	Disease of skin and sexually transmitted diseases
9.	Tropical diseases
10.	Pediatric disorders

Short Answers:**3X10 = 30**

11.	Diseases of Haemopoietic System
12.	Infectious diseases
13.	Diseases of cardiovascular system
14.	Diseases of urogenital tract
15.	Diseases of central nervous system & peripheral nervous system
16.	Diseases of locomotor system (connective tissue, bones and joint disorders)
17.	Disease of skin and sexually transmitted diseases
18.	Pediatric disorders
19.	Geriatric disorders
20.	Nutritional & Metabolic diseases

B – Practical including viva voce or oral:

Marks: 200

Distribution of marks;	Marks
One long case	40
One short case	20
Practical/Journal record	15
Identification of specimens (X-ray, ECG, etc)	25
Viva voce (oral)	100
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Total	200

Case	Case taking	Case analysis including Lab report analysis	Differential Diagnosis	Diagnosis	Reperto-risation	Prescription and dosage	Total
Long	10	10	05	05	05	05	40
Short	04	04	04	03	02	01	20
Journal							10
Identification of specimen (X-ray, ECG, etc.)							30
Viva							100
Total							200

Recommended books

Basic books

- Alagappan R. (2014) Manual of Practical Medicine. 5th edition. Jaypee Brothers Medical Publishers (P) Ltd; New Delhi
- Boon Nicholas A, Colledge Nickie R, Walker Brain R, Hunter John AA. (2006) Davidson's Principles and Practice of Medicine. 20th edition. Churchill Livingstone; Edinburgh.
- Dewey WA. (1991 Reprint) Practical Homoeopathic Therapeutics. B. Jain Publishers (P)Ltd; New Delhi.
- Ghai OP, Paul VK, Bagga Arvind. Ghai (2001) Essential Pediatrics. 7th edition. CBS Publishers and Distributors Pvt Ltd; New Delhi.
- Golwalla AF, Golwalla SA. (2014) Golwalla's Medicine for Students. 24th edition. The National Book depot; Mumbai.
- Hoyne TS. (1993 Reprint). Clinical Therapeutics. B. Jain Publishers (P) Ltd; New Delhi.
- Lilienthal S. (2005 Reprint) Homoeopathic Therapeutics. B. Jain Publishers (P) Ltd; New Delhi
- Munjal YP. (2012) API Text book of Medicine. 9th edition. Jaypee Brothers Medical Publishers (P) Ltd; M.umbai
- Ogilvie Colin, Evans CC. (1997) Chamberlain's Symptoms and Signs in Clinical Medicine. 12th edition. Butterworth-Heinemann; Oxford.
- Raue CG. (1885) Special Pathology and Diagnostics with Therapeutic Hints. 3rd edition. F. E. Boericke Hahneman Publishing House; Philadelphia.
- Swash Michael, Glynn Michael. (2008) Hutchison's Clinical Methods. 22nd edition.: Saunders; Edinburgh

Reference Books

- Baehr Bernhard. (1875) The Science of Therapeutics Boericke and Tafel; New York
- Bickley Lynns. (2002) Bate's Guide to Physical Examination and History taking. 8th edition.: Lippincott Williams and Wilkins; Philadelphia
- Blackwood AL. (2001 Reprint) Diseases of the Heart. B. Jain Publishers (P) Ltd; New Delhi.
- Borland Douglas M. (1997 Reprint) Children's Types. 2nd edition. Indian Books and Periodical Publishers; New Delhi.
- Braunwald E, Fauci AS, Kaper DL, Hauser SL, Longo DL, Jameson JL. (2001) Harrison's Principles of Internal Medicine. 15th edition. MC Graw Hill; New York.
- Burtn JL.(1985) Essentials of Dermatology. 3rd edition. Churchill Livingstone; Edinburgh
- Gatchell Charles. (2015) Diseases of the Lungs. Book on Demand Ltd; New Delhi.
- Neatby EA and Stonham TG. (2001 Reprint) A Manual of Homoeopathic Therapeutics. 2nd edition. B. Jain Publisher (P) Ltd; New Delhi.
- Riskey Fernando. (1995) Psychiatry and Homoeopathy. 1st edition. B. Jain Publisher (P) Ltd; New Delhi.
- Sadock BJ, Sadock VA. (2016) Kaplan and Sadock's Synopsis of Psychiatry. 10th edition.: Lippincott Williams and Wilkins; Philadelphia
- Tiwari Shashikant. (1998) Homeopathy and Childcare. B. Jain Publishers (P) Ltd; New Delhi.
- Vandenburg MW. (2002 Reprint) Therapeutics of Respiratory System. B. Jain Publisher (P) Ltd; New Delhi.

- Warrell DA, Cox TM, Firth JD, Jr Benz, J Edward. (2003) Oxford Text Book of Medicine. 4th edition. Oxford University Press; New York.
- Woodward WA. (1993 Reprint) Constitutional Therapeutics. B. Jain Publishers (P) Ltd; New Delhi

Repertory IV BHMS

A student shall be able to:

1. Explain the definition, pre and post-repertorization requisites.
2. Compare the Basic Repertories like Kent, Boger and Boenninghausen's Repertories.
3. Describe the scope of Clinical and regional repertories and their utility in clinical practice.
4. Apply modern methods of repertorisation including use of computer.

TOTAL THEORY=100hrs

Sl No	Topic	Time	Must Know	Desirable to Know	Nice to Know	Weightage
1	Comparative study of different repertories Kent/BTPB/BBCR/Synoptic Key	47	<ul style="list-style-type: none"> • History of KENT/BTPB/BBCR • Philosophical Background • Concept of totality • Plan & Construction • Cross references • Scope & adaptability • Limitations Comparative study of different repertories Kent/BTPB/BBCR/Synoptic Key			10
2	Card repertories & other mechanical aided repertories: History, types & use	1			Card repertories & other mechanical aided repertories History, types & use	

3	Concordance repertories – Gentry & Knerr repertory	2		Knerr Repertory	Gentry's Repertory	5
4	Clinical repertories including Regional Repertories-O.E. Boericke etc	10	Boericke's Repertory	J.H. Clarke Clinical repertory Allen's fever Bell's Diarrhoea Minton's uterine therapeutics	Prescriber Berridge Eye Morgan's urinary organs Douglas skin Rheumatic Remedies by H.A. Roberts	5
5	An introduction to modern thematic repertories <ul style="list-style-type: none"> • Synthetic. • Synthesis • Murphy's Repertory • Complete repertory 	15	Synthetic repertory / Synthesis / Murphy's Repertory: Introduction	Phatak Repertory Complete Repertory	Thematic Repertory by Mirili	5
6	Role of computers in repertorisation & different soft wares.	25	Introduction to Computer software HOMPATH	RADAR	Complete Dynamics, MAC Repertory, ISIS Open Source Repertories, Stimulare	5

Question Paper Blueprint

Topic		Hours	Marks	Question type
I. Introduction To Repertory				
1.	Definition of Repertory			

2.	Derivation of word repertory	3	5	1 S E 1 SA
3.	Need of Repertory			
4.	Scope & limitation of Repertory			
5.	Terms and languages of Repertory			
6.	Conversion of symptoms into rubrics for repertorisation using different repertories			
7.	Relation of Repertory with Organon & Materia Medica			
8	History of Repertory			
II. Classification of Repertories				
1	Types of Classification	2	5	1 SE
2	Based on form			
3	Based on Philosophy			
4	Based on Era (Pre Kentian Post Kentian)			
III. Gradation of Remedies by different authors		1	3	1 SA
1	Gradation of Remedies by different authors			
2	Philosophy behind gradation of remedies			
IV. Method of repertorisation, Techniques of repertorisation				
1	Method of Repertorisation	2	5	1 SE
2	Technique of Repertorisation			
3	Miasmatic Assessment			
V. Case taking; Steps of repertorisation; Case processing; Analysis & evaluation of symptoms; Miasmatic assessment; Totality of symptoms or conceptual image of the patient; Repertorial totality; Selection of rubrics; Repertorial technique & results; Repertorial analysis				
1	Case taking	14	30	1 LE 2 SE 3 SA
2	Difficulties in taking chronic case			
3	Recording and interpretation			
4	Defining the problem			
5	Classification of symptoms			
6	Analysis & evaluation of symptoms			
7	Totality of symptoms or conceptual image of the patient			
8	Selection of Repertory			

9	Selection of rubrics			
10	Repertorial totality			
11	Repertorization and analysis of result			
VI. Study of Different repertories Kent for history, philosophical background, structure, concept of repertorisation, adaptability, scope and limitations and cross references		10 hrs	22	1 LE 2 SE 1 SA
VII. Study of Different repertories BTPB for history, philosophical background, structure, concept of repertorisation, adaptability, scope and limitations		8 hrs.		
VIII. Study of Different repertories BBCR for history, philosophical background, structure, concept of repertorisation, adaptability, scope and limitations and cross references		10 hrs.		
IX. Comparative study of different repertories Kent/BTPB/BBCR/Synoptic Key		47	10	1 LE 2 SE 3 SA
X. Concordance repertories – Knerr repertory.		2	5	1SE 1SA
XI. Clinical repertories-O.E. Boericke, Clarke’s Clinical Repertory, Allen’s Fever, Bell’s Diarrhoea, Minton’s Uterine Therapeutics,		10	5	1 SE+1SE 1SA+1SA+SA
XII. An introduction to modern thematic repertories: Synthetic, Synthesis, Murphy’s Repertory, Complete repertory, Phatak Repertory		15hrs	5	1SE+ 1SE 1SA+1SA+1SA
XII. Role of computers in repertorisation& different software programs.		25hrs	5	1SE 1SA
Total		150 hrs.	100 marks	

Question Paper Layout

LONG ESSAY:

2X 10 = 20

23. CASE TAKING (Hahnemann’s Instructions to case taking)
24. REPERTORY PROPER (Study of Repertories KENT/BOGER/BTPB)

SHORT ESSAYS:

5x 10 = 50

25. CASE TAKING (Difficulties in taking chronic case)
26. CASE TAKING (Analysis & evaluation of symptoms)
27. REPERTORY PROPER (Classification of Repertories)
28. REPERTORY PROPER (methods & Techniques of Repertorization)
29. REPERTORY PROPER (Knerr Repertory)
30. REPERTORY PROPER (Computer Repertories RADAR & HOMPAT))
31. REPERTORY PROPER (Modern Repertory Synthesis/ Synthetic/ Murphy)
32. REPERTORY PROPER (Boericke Repertory)
33. REPERTORY PROPER(Study of Repertories KENT/BOGER/BTPB)
34. REPERTORY PROPER (Cross references)

SHORT ANSWERS:

3X10 = 30

35. CASE TAKING (Case recording)
36. CASE TAKING (Totality of symptoms or conceptual image of the patient)
37. CASE TAKING (Symptomatology)
38. REPERTORY PROPER (Introduction To repertory)
39. REPERTORY PROPER (Introduction to Repertory)
40. REPERTORY PROPER (clinical Repertory minton/ Allen’s fever/ Clarke Clinical)
41. REPERTORY PROPER (Bell’s Diarrhoea)
42. REPERTORY PROPER (Gradation of Medicines by different authors)
43. REPERTORY PROPER(Study of Repertories KENT/BOGER/BTPB)
44. REPERTORY PROPER (terms and language of repertories(rubrics)

Practical Training: 150hrs

Clinical / Repertorisation Skills to be demonstrated in 25 Case studies

- 05 acute & 05 chronic from Medicine / Surgery / OBG in Kent’s Repertory
- 05 cases of Medicine from BTPB
- 05 cases of Medicine from BBCR
- 05 cases to be cross-checked on repertories using any homoeopathy software.

Exam Pattern

Clinical / Practical 40 Marks:

- Long Case 30 Marks
- Short case 10 Marks

Case	Case taking	Case analysis	Repertorisation	Result and drug selection	Total
Long	10	10	05	05	30
Short	04	03	02	01	10
Journal					10
Total					50

Practical record 10 Marks,

Viva Voce 50 Marks.

Recommended Books:

Allen.T.F (2013 Reprint). *Boenninghausen's Therapeutic Pocket Book*. B Jain Publishers, New Delhi

Boericke W &Boericke OE. (2001 Reprint) *Pocket Manual of Homoeopathic Materia Medica & Repertory*. B Jain Publishers, New Delhi

Boger C.M. (1993 Reprint) *Boenninghausen's Characteristics and Repertory*. B Jain Publishers, New Delhi

Boger C.M. (2000 Reprint) *Synoptic key of Materia Medica*. B Jain Publishers, New Delhi

BogerC.M(1993 Reprint) *Studies of philosophy of healing*. B Jain Publishers, New Delhi

Bradford, TW. (2001 Reprint) *Lesser writing of CMF Von Boenninghausen*. B Jain Publishers, New Delhi

Kent J.T. (2000 reprint) *Repertory of the Homoeopathic Materia Medica*. B Jain Publishers, New Delhi

Kent J.T. (1998 Reprint) *Lesser writing*. B Jain Publishers, New Delhi

Knerr CB. (2010) *Repertory of Hering's Guiding symptoms of our Materia Medica*. B Jain Publishers, New Delhi

Tyler M.L and Weir J. (2000 Reprint) *Repertorising*. B Jain Publishers, New Delhi

Reference books

- Allen H C (1998 Reprint) *Therapeutics of fever*. B Jain Publishers, New Delhi
- Allen W (2011 Reprint) *Intermittent Fevers*. B Jain Publishers, New Delhi
- Bell J. (2007 Reprint) *The Homoeopathic Therapeutics of Diarrhoea, Dysentery, Cholera, Cholera Morbus, Cholera Infantum*, B Jain Publishers, New Delhi
- Clarke J.H. (2005 Reprint) *Clinical Repertory*. B Jain Publishers, New Delhi
- Dhawale M.L (2011) *Principles and Practice of Homoeopathy*. ICR Publications. Mumbai
- Dhawale M.L. (1998) *ICR Symposium volume 3, Area D*. ICR Publications. Mumbai
- Gunavante S M. (2001 reprint) *Introduction to Homoeopathic Prescribing*. B. Jain, New Delhi
- Master FJ. (2007) *Perceiving the rubrics of Mind*. B. Jain, New Delhi

- Minton H. (1987 reprint) *Uterine Therapeutics*. B Jain Publishers, New Delhi
- Munir AR. (2016). *Alchemy of homeopathic methodology-fundamentals of repertory study*. Hi Line Publishers, Bengaluru.
- Phatak S.R. (2002) *A Concise Repertory*. B. Jain, New Delhi
- Tiwari SK. (2015) *Essentials of Repertorisation*. (fifth edition) B. Jain, New Delhi