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 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 Shanthi Manthram (Bhadram Kanamhi Shrunuyanaddev…), 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.
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 Homeopathy 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.

RAJIV GANDHI UNIVERSITY OF HEALTH SCIENCES, KARNATAKA

4th 'T' Block, Jayanagar, Bangalore - 560041

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</table>
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.
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.

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.

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.

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

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 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 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 undergraduate 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.

<table>
<thead>
<tr>
<th>Class</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>I BHMS</td>
<td>1 year</td>
</tr>
<tr>
<td>II BHMS</td>
<td>1 year</td>
</tr>
<tr>
<td>III BHMS</td>
<td>1 year</td>
</tr>
<tr>
<td>IV BHMS</td>
<td>1 ½ year</td>
</tr>
<tr>
<td>INTERNSHIP</td>
<td>1 year</td>
</tr>
</tbody>
</table>

(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 1 Year)

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

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

Second Year BHMS (Duration 1 Year)

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

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

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**

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

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**

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

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 onwards 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) at least 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:

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

17
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 HAFL 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**

<table>
<thead>
<tr>
<th></th>
<th>Anatomy</th>
<th>Physiology including Biochemistry</th>
<th>Homoeopathic Pharmacy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Theory Max. Marks</strong></td>
<td>200</td>
<td>200</td>
<td>100</td>
</tr>
<tr>
<td>Internal assessment</td>
<td>40</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td><strong>Practical Max Marks</strong></td>
<td>100</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>Internal assessment</td>
<td>20</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td><strong>Viva Voce Max Marks</strong></td>
<td>100</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>Internal assessment</td>
<td>20</td>
<td>20</td>
<td>10</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th></th>
<th>Pathology</th>
<th>Forensic Medicine and Toxicology</th>
<th>Homoeopathic Materia Medica</th>
<th>Organon with Philosophy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Theory Max. Marks</strong></td>
<td>200</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Internal assessment</td>
<td>40</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td><strong>Practical Max Marks</strong></td>
<td>100</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Internal assessment</td>
<td>20</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td><strong>Viva Voce Max Marks</strong></td>
<td>100</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Internal assessment</td>
<td>20</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th></th>
<th>Surgery</th>
<th>Gynaecology and Obstetrics</th>
<th>Homoeopathic Materia Medica</th>
<th>Organon with Philosophy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Theory Max. Marks</strong></td>
<td>200</td>
<td>200</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Internal</td>
<td>40</td>
<td>40</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>assessment</td>
<td>Practical Max Marks</td>
<td>100</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>------------</td>
<td>---------------------</td>
<td>-----</td>
<td>-----</td>
<td>----</td>
</tr>
<tr>
<td>Internal assessment</td>
<td>20</td>
<td>20</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Viva Voce Max Marks</td>
<td>100</td>
<td>100</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Internal assessment</td>
<td>20</td>
<td>20</td>
<td>10</td>
<td>10</td>
</tr>
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</table>

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

<table>
<thead>
<tr>
<th>Theory Max. Marks</th>
<th>Practice of Medicine</th>
<th>Homoeopathic Materia Medica</th>
<th>Organon of Medicine with Philosophy</th>
<th>Repertory</th>
<th>Community Medicine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theory Max. Marks</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Internal assessment</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Practical Max Marks</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Internal assessment</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Viva Voce Max Marks</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Internal assessment</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Subject</th>
<th>Written</th>
<th>Practical</th>
<th>Viva Voce</th>
<th>Practical &amp; Viva</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Full marks</td>
<td>Pass marks</td>
<td>Full marks</td>
<td>Full marks</td>
<td>Pass marks</td>
</tr>
<tr>
<td>Homoeopathic Pharmacy</td>
<td>100</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>200</td>
</tr>
<tr>
<td>Anatomy</td>
<td>200</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>400</td>
</tr>
<tr>
<td>Physiology</td>
<td>200</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>400</td>
</tr>
</tbody>
</table>

Table: X - II BHMS Examination

<table>
<thead>
<tr>
<th>Subject</th>
<th>Written</th>
<th>Practical</th>
<th>Viva Voce</th>
<th>Practical &amp; Viva</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Full marks</td>
<td>Pass marks</td>
<td>Full marks</td>
<td>Full marks</td>
<td>Pass Marks</td>
</tr>
<tr>
<td>Homoeopathic Pharmacy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anatomy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physiology</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subject</td>
<td>Written</td>
<td>Practical</td>
<td>Viva Voce</td>
<td>Practical &amp; Viva Voce</td>
<td>Total</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>---------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------------------</td>
<td>-------</td>
</tr>
<tr>
<td></td>
<td>Full marks</td>
<td>Pass marks</td>
<td>Full marks</td>
<td>Pass marks</td>
<td>Full marks</td>
</tr>
<tr>
<td>Surgery</td>
<td>200</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>400</td>
</tr>
<tr>
<td>Gynaecology and Obstetrics</td>
<td>200</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>400</td>
</tr>
<tr>
<td>Homoeopathic Materia Medica</td>
<td>100</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>200</td>
</tr>
<tr>
<td>Organon of Medicine with Homoeopathic Philosophy</td>
<td>100</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>200</td>
</tr>
<tr>
<td>Practice of Medicine</td>
<td>200</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>400</td>
</tr>
<tr>
<td>Homoeopathic Materia Medica</td>
<td>200</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>400</td>
</tr>
<tr>
<td>Organon of Medicine with Homoeopathic Philosophy</td>
<td>200</td>
<td>100</td>
<td>50</td>
<td>50</td>
<td>300</td>
</tr>
<tr>
<td>Repertory</td>
<td>100</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>200</td>
</tr>
<tr>
<td>Community Medicine</td>
<td>100</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>200</td>
</tr>
</tbody>
</table>
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:
Not withstanding 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 n 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 intern 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 be made 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/LD. 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

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Topics</th>
<th>Component</th>
<th>Hours Allotted</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Must Know</td>
<td>Desirable To</td>
</tr>
<tr>
<td>1</td>
<td>Cell</td>
<td>Modern concept of cell</td>
<td>Cell components</td>
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<tr>
<td>2</td>
<td>Tissues</td>
<td>(i) Basic tissues</td>
<td>Definition &amp; Types</td>
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<tr>
<td></td>
<td>(ii) Descriptive terms in anatomy</td>
<td>Anatomical planes, Anatomical terms of position &amp; movement</td>
<td>Terms used in Embryology</td>
</tr>
<tr>
<td></td>
<td>(iii) General Osteology</td>
<td>Classification of bones, Terms used in osteology, Ossification: Definition, centers &amp; laws of ossification</td>
<td>Functions of bone, Parts of growing long bone, Blood supply of long bone &amp; Applied aspect</td>
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<tr>
<td></td>
<td>(iv) General Arthrology</td>
<td>Joint: Definition, Classification, Synovial joint: Parts of Typical synovial joint &amp; types</td>
<td>Fibrous &amp; Cartilaginous joints, Blood &amp; nerve supply of joint</td>
</tr>
<tr>
<td></td>
<td>(v) General Myology</td>
<td>Muscle tissue: Definition, types &amp; Parts of the Skeletal muscle</td>
<td>Classification of Skeletal muscle</td>
</tr>
<tr>
<td></td>
<td>(vi) General Angiology</td>
<td>Types of blood vessels: Arteries, Capillaries, Veins &amp; Sinusoids</td>
<td>Anastomosis, End artery &amp; Applied aspect</td>
</tr>
<tr>
<td></td>
<td>(viii) Skin &amp; its derivatives &amp; Fasciae</td>
<td>Skin: Structure, appendages, Fasciae: Superficial</td>
<td>Functions of Skin &amp; Dermatomes</td>
</tr>
<tr>
<td>Component</td>
<td>Must Know</td>
<td>Desirable To Know</td>
<td>Nice To Know</td>
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<tr>
<td>3 Genetics</td>
<td>Introduction, terminology, DNA &amp; RNA</td>
<td>Mendelian laws of inheritance, Structure &amp; function of Chromosomes</td>
<td>Protein biosynthesis, Genetic disorders &amp; Karyotyping</td>
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</tbody>
</table>

2. Developmental Anatomy (Embryology) - 15 Hours

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Topics</th>
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<th>Desirable To Know</th>
<th>Nice To Know</th>
<th>Hours Allotted</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Gametogenesis: Spermatogenesis &amp; Oogenesis</td>
<td>Formation &amp; maturation of Gametes</td>
<td>Structure of Spermatozoan &amp; Ovarian follicle</td>
<td>Abnormalities in Gamete formation</td>
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<td>2</td>
<td>Formation of germ layers</td>
<td>Fertilization, Implantation, Cleavage, Morula &amp; Blastocyst, Formation of bilaminar germ disc, Prochordal plate, Primitive streak, Intra-embryonic mesoderm &amp; Formation of trilaminar germ disc</td>
<td>Decidua: Parts, Trophoblastic stages of differentiation, Fetal membranes: Amnion, Chorion &amp; Connecting stalk</td>
<td>In vitro fertilization, Types of Implantation &amp; Abnormal implantation</td>
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<td>4</td>
<td>Placenta</td>
<td>Placenta: Formation, Placental circulation</td>
<td>Placenta previa, Amniocentesis</td>
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<td>Sl. No.</td>
<td>Topics</td>
<td>Component</td>
<td>Hours Allotted</td>
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<td>functions &amp; features</td>
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<td></td>
<td>&amp;Placental barrier</td>
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<td>5</td>
<td>Development of Abdominal organs, Respiratory system &amp; body cavities</td>
<td>Formation of Gastrointestinal tract, Development of Liver, Gall bladder, Pancreas &amp; Spleen</td>
<td>Intraembryoniccoelom &amp; cavities derived from it</td>
<td>3</td>
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<tr>
<td></td>
<td></td>
<td>Tracheobronchial diverticulum &amp; Lung bud</td>
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<tr>
<td>6</td>
<td>Development of Urogenital system</td>
<td>Development of Kidneys, Testis &amp; Ovary</td>
<td>Development of Uterus, vagina &amp; Fallopian tubes</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Development of Cardiovascular system</td>
<td>Development of Heart</td>
<td>Development of main blood vessels</td>
<td>2</td>
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<tr>
<td>8</td>
<td>Development of Nervous system</td>
<td>Development of Brain &amp; Spinal cord</td>
<td>Neural crest &amp; its derivatives</td>
<td>2</td>
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</table>

3. Regional Anatomy:

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

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Topics</th>
<th>Component</th>
<th>Hours Allotted</th>
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</thead>
<tbody>
<tr>
<td>(a)</td>
<td>Osteology</td>
<td>Component</td>
<td></td>
</tr>
<tr>
<td>(i)</td>
<td>Skull</td>
<td>Anatomical position, Exterior of views of skull, major foramina &amp; structures passing through them, Interior of skull &amp; cranial fossae</td>
<td>Fontenellae: Significance, age estimation &amp; Sex differences of Skull &amp; Muscle attachments</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>Ossification of Skull &amp; Fractures of skull</td>
</tr>
<tr>
<td>(ii)</td>
<td>Mandible</td>
<td>Identification &amp; Anatomical position</td>
<td>Dental formula &amp; Ossification</td>
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<td></td>
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<td></td>
<td>Sex &amp; age estimation</td>
</tr>
<tr>
<td>(iii)</td>
<td>Hyoid bone</td>
<td>Parts &amp; muscle attachments</td>
<td>Applied anatomy</td>
</tr>
<tr>
<td>(iv)</td>
<td>Cervical vertebrae</td>
<td>Identification &amp; parts of Typical cervical vertebrae</td>
<td>Atypical cervical vertebrae</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Applied anatomy</td>
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<tr>
<td>(b)</td>
<td><strong>Syndesmology</strong></td>
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<tr>
<td></td>
<td>Temporomandibular joint Articulation, ligaments, blood, nerve supply &amp; lymphatic drainage Movements &amp; muscles responsible Factors influencing the stability</td>
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<table>
<thead>
<tr>
<th>(c)</th>
<th><strong>Myology</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>(i)</td>
<td>Fasciae of the neck Layers and attachments Spaces &amp; derivatives</td>
</tr>
<tr>
<td>(ii)</td>
<td>Triangles of the Neck Anterior &amp; Posterior Triangles Boundaries, divisions &amp; contents</td>
</tr>
<tr>
<td>(iii)</td>
<td>Muscles of face Names, nerve supply &amp; actions</td>
</tr>
<tr>
<td>(iv)</td>
<td>Muscles of the Head &amp; Neck Origin, insertion, nerve supply &amp; action of Muscles of mastication &amp; Extra-ocular muscles Origin, insertion, nerve supply &amp; action of Sternocleidomastoid</td>
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</table>

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<thead>
<tr>
<th>(d)</th>
<th><strong>Angiology</strong></th>
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<tbody>
<tr>
<td></td>
<td>Blood vessels of the Head, Neck &amp; Brain Origin, parts, course, relations, branches/tributaries of Subclavian, Common, Internal &amp; External carotid arteries and External &amp; internal Jugular vein, Venous drainage of Scalp &amp; Face Names &amp; Classification of Dural venous sinuses &amp; Blood supply of the brain</td>
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<tr>
<td>(e)</td>
<td>Neurology</td>
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<tr>
<td>Cranial nerves</td>
<td>Origin, nuclei, course, branches, distribution &amp; applied anatomy of Occulomotor, Trochlear, Abducent, Trigeminal, Facial, Glossopharyngeal, Vagus &amp; Hypoglossal nerves</td>
</tr>
<tr>
<td></td>
<td>Origin, nuclei, course, branches, distribution &amp; applied anatomy of, Lingual, Chorda tympani, Recurrent laryngeal nerve, Phrenic nerve</td>
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<tr>
<td></td>
<td>Spinal accessory nerve, Cervical plexus &amp; Parasympathetic Ganglia</td>
</tr>
<tr>
<td>(f)</td>
<td>Splanchnology</td>
</tr>
<tr>
<td>(i)</td>
<td>Scalp</td>
</tr>
<tr>
<td>(ii)</td>
<td>Lachrymal apparatus</td>
</tr>
<tr>
<td>(iii)</td>
<td>Pituitary gland</td>
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<td>(iv)</td>
<td>Thyroid gland</td>
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<td>(v)</td>
<td>Parathyroid gland</td>
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<td>(vi)</td>
<td>Parotid gland</td>
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<tr>
<td>(vii)</td>
<td>Submandibular gland</td>
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<td>(viii)</td>
<td>Sublingual gland</td>
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<td>(ix)</td>
<td>Nose</td>
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<tr>
<td>(x)</td>
<td>Para nasal air sinuses</td>
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<tr>
<td>(xi)</td>
<td>Tooth</td>
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<td>(xii)</td>
<td>Tongue</td>
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<td>(xiii)</td>
<td>Soft Palate</td>
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<td>(xiv)</td>
<td>Tonsil</td>
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<td>(xv)</td>
<td>Pharynx</td>
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<tr>
<td>(xvi)</td>
<td>Larynx</td>
</tr>
<tr>
<td>(xvii)</td>
<td>Trachea (cervical part)</td>
</tr>
<tr>
<td>(xviii)</td>
<td>Central Nervous System</td>
</tr>
<tr>
<td>(xix)</td>
<td>Spinal cord</td>
</tr>
<tr>
<td>(xx)</td>
<td>Medulla oblongata</td>
</tr>
<tr>
<td>(xxi)</td>
<td>Pons</td>
</tr>
<tr>
<td>(xxii)</td>
<td>Mid brain</td>
</tr>
<tr>
<td>(xxiii)</td>
<td>Cerebellum</td>
</tr>
<tr>
<td>(xxiv)</td>
<td>Fourth Ventricle</td>
</tr>
<tr>
<td>(xxv)</td>
<td>Diencephalon: Thalamus</td>
</tr>
<tr>
<td>(xxvi)</td>
<td>Hypothalamus</td>
</tr>
<tr>
<td>(xxvii)</td>
<td>Third Ventricle</td>
</tr>
<tr>
<td>(xxviii)</td>
<td>Cerebrum</td>
</tr>
<tr>
<td>(xxix)</td>
<td>Cerebrum: White matter</td>
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<tr>
<td>(xxx)</td>
<td>Lateral ventricle</td>
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<tr>
<td>(g)</td>
<td>Radiographic anatomy: Introduction to the study of X-Ray, CT &amp; MRI of the Head, Neck &amp; Brain region</td>
</tr>
<tr>
<td>(h)</td>
<td>Surface anatomy and Applied anatomy (Clinical significance) of each of the topic shall be covered without undue importance to minute &amp; less significant anatomical details.</td>
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</table>

### 3.2. Thorax- 20 Hours

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Topics</th>
<th>Component</th>
<th>Hours Allotted</th>
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</thead>
<tbody>
<tr>
<td>(a)</td>
<td>Osteology</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bones of thorax</td>
<td>General features of Sternum, Typical ribs &amp; Typical thoracic vertebrae</td>
<td>General features of Atypical ribs &amp; Atypical thoracic</td>
</tr>
<tr>
<td>(b) Syndesmology</td>
<td>vertebrae</td>
<td>attachments</td>
<td></td>
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</tr>
<tr>
<td>Joints of the thorax</td>
<td>Names &amp; articulation</td>
<td>Clinical importance</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(c) Myology</th>
<th>vertebrae</th>
<th>attachments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Muscles of thorax</td>
<td>Origin, insertion, nerve supply &amp; action of Intercostal muscles</td>
<td>Origin, insertion, nerve supply &amp; action of Diaphragm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(d) Angiology</th>
<th>vertebrae</th>
<th>attachments</th>
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<tbody>
<tr>
<td>Blood vessels of thorax</td>
<td>Origin, parts, course, relations, branches/tributaries of Ascending, arch &amp; descending thoracic aorta, Superior vena cava &amp; Azygos venous system</td>
<td>Origin, parts, course, branches of Internal thoracic artery &amp; Thoracic duct</td>
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<table>
<thead>
<tr>
<th>(e) Neurology</th>
<th>vertebrae</th>
<th>attachments</th>
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</thead>
<tbody>
<tr>
<td>Nerves in thorax</td>
<td>Formation of Phrenic nerve</td>
<td>Applied anatomy of Phrenic nerve</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(f) Splanchnology</th>
<th>vertebrae</th>
<th>attachments</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Trachea (thoracic part)</td>
<td>Extent &amp; relations</td>
<td>Blood, nerve supply &amp; lymphatic drainage</td>
</tr>
<tr>
<td>(ii) Lungs</td>
<td>External features, relations, Bronchial tree &amp; Bronchopulmonary segments</td>
<td>Blood, nerve supply &amp; lymphatic drainage</td>
</tr>
<tr>
<td>(iii) Pleura</td>
<td>Definition, parts &amp; recess</td>
<td>Blood &amp; nerve supply</td>
</tr>
<tr>
<td>(iv) Mediastinum</td>
<td>Definition, Subdivisions, boundaries &amp; contents</td>
<td>Applied anatomy</td>
</tr>
<tr>
<td>(v) Heart</td>
<td>Chambers of the heart: External, internal features &amp;</td>
<td>Valves of the heart &amp; Applied Conducting system</td>
</tr>
<tr>
<td>Sl. No.</td>
<td>Topics</td>
<td>Component</td>
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</tr>
<tr>
<td>(a)</td>
<td>Osteology</td>
<td>Bones of the Abdomen &amp; Pelvis</td>
</tr>
<tr>
<td>(b)</td>
<td>Syndesmology</td>
<td></td>
</tr>
<tr>
<td>(i)</td>
<td>Abdomen &amp; Pelvis</td>
<td>Origin, insertion, nerve supply &amp; action of the muscles of Anterior abdominal wall &amp; Psoas major</td>
</tr>
<tr>
<td>(ii)</td>
<td>Perineum</td>
<td>Definition, divisions, Ischiorectal fossa</td>
</tr>
<tr>
<td>(d)</td>
<td>Angiology</td>
<td>Blood vessels of</td>
</tr>
</tbody>
</table>

3.3. Abdomen & Pelvis- 40 Hours
<table>
<thead>
<tr>
<th>(e)</th>
<th>Neurology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study of the main nerves in abdomen &amp; pelvis</td>
<td>Autonomic nerve plexuses</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(f)</th>
<th>Splanchnology</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i)</td>
<td>Abdominal cavity</td>
</tr>
<tr>
<td>Quadrants &amp; contents</td>
<td>1</td>
</tr>
<tr>
<td>(ii)</td>
<td>Peritoneum</td>
</tr>
<tr>
<td>Definition, parts &amp; reflection, Greater &amp; lesser omentum</td>
<td>Omental bursa, Mesentery, Peritoneal pouches in pelvis</td>
</tr>
<tr>
<td>(iii)</td>
<td>Scrotum Testis &amp; Penis</td>
</tr>
<tr>
<td>Gross anatomy, Layers/ Coverings</td>
<td>Blood, nerve supply &amp; lymphatic drainage</td>
</tr>
<tr>
<td>(iv)</td>
<td>Stomach</td>
</tr>
<tr>
<td>Parts, important relations and interior</td>
<td>Blood, nerve supply &amp; lymphatic drainage</td>
</tr>
<tr>
<td>(v)</td>
<td>Small intestine</td>
</tr>
<tr>
<td>Parts, main features of Duodenum</td>
<td>Differences between Jejunum &amp; Ileum</td>
</tr>
<tr>
<td>(vi)</td>
<td>Large intestine</td>
</tr>
<tr>
<td>Parts, main features of Caecum, appendix &amp; Applied anatomy</td>
<td>Blood, nerve supply &amp; lymphatic drainage</td>
</tr>
<tr>
<td>(vii)</td>
<td>Spleen</td>
</tr>
<tr>
<td>Location, external features, ligaments &amp; relations</td>
<td>Blood, nerve supply &amp; lymphatic drainage</td>
</tr>
<tr>
<td>(viii)</td>
<td>Liver &amp; Gall bladder</td>
</tr>
<tr>
<td>(ix)</td>
<td>Pancreas</td>
</tr>
<tr>
<td>(x)</td>
<td>Kidney</td>
</tr>
<tr>
<td>(xi)</td>
<td>Ureter</td>
</tr>
<tr>
<td>(xii)</td>
<td>Suprarenal glands</td>
</tr>
<tr>
<td>(xiii)</td>
<td>Urinary bladder</td>
</tr>
<tr>
<td>(xiv)</td>
<td>Male &amp; female urethrae</td>
</tr>
<tr>
<td>(xv)</td>
<td>Prostate</td>
</tr>
<tr>
<td>(xvi)</td>
<td>Ductus deferens, Seminal vesicle</td>
</tr>
<tr>
<td>(xvii)</td>
<td>Rectum &amp; anal canal</td>
</tr>
<tr>
<td>(xviii)</td>
<td>Vaginal &amp; Ovary, Uterus &amp; Uterine tube</td>
</tr>
</tbody>
</table>
### Radiographic anatomy
Radiographic anatomy: Introduction to the study of X-Ray, CT & MRI of the Abdomen & Pelvis

### Surface anatomy
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

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

<table>
<thead>
<tr>
<th>Topics</th>
<th>Component</th>
<th>Hours Allocated</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Brachial plexus</strong></td>
<td>Formation &amp; branches</td>
<td>Relations &amp; applied anatomy</td>
</tr>
<tr>
<td><strong>Nerves of the upper extremity</strong></td>
<td>Origin, root value, course, branches, distribution, applied anatomy of Median, Ulnar &amp; Radial nerve</td>
<td>Origin, root value, course, branches, distribution, applied anatomy of Axillary &amp; musculocutaneous nerve</td>
</tr>
</tbody>
</table>

### Splanchnology

<table>
<thead>
<tr>
<th>Topics</th>
<th>Component</th>
<th>Hours Allocated</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mammary gland</strong></td>
<td>Gross anatomy, structure blood supply &amp; lymphatic drainage</td>
<td>Applied anatomy</td>
</tr>
</tbody>
</table>

### Radiographic anatomy: Introduction to the study of X-Ray, CT & MRI of the Upper Extremity | 1 |

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

### Lower Extremity- 20 Hours

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Topics</th>
<th>Component</th>
<th>Hours Allocated</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Osteology</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a)</td>
<td><strong>Bones of the lower extremity</strong></td>
<td>General features of Hip bone, Femur, Patella, Tibia &amp; Fibula</td>
<td>Articulated foot &amp; Applied anatomy</td>
</tr>
</tbody>
</table>

<p>| <strong>Syndesmology</strong> | | | |
| (b) | <strong>Hip, Knee &amp; Ankle joint</strong> | Articulation, ligaments &amp; muscles responsible for movement | Applied anatomy | Subtalar joint | 3 |
| | <strong>Arches of the foot</strong> | Types &amp; formation | Applied anatomy | |</p>
<table>
<thead>
<tr>
<th>(c)</th>
<th>Myology</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i)</td>
<td>Muscles of lower extremity</td>
</tr>
<tr>
<td>(ii)</td>
<td>Femoral triangle, Adductor canal &amp; Popliteal fossa</td>
</tr>
<tr>
<td>(iii)</td>
<td>Thigh, Ankle &amp; foot</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(d)</th>
<th>Angiology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood vessels of the lower extremity</td>
<td>Origin, parts, course, relations, branches/tributaries &amp; applied anatomy of Femoral, Popliteal, Posterior Tibial &amp; Dorsalis pedis artery, Great saphenous, short saphenous vein &amp; Popliteal vein</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(e)</th>
<th>Neurology</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i)</td>
<td>Lumbar &amp; Sacral plexus</td>
</tr>
<tr>
<td>(ii)</td>
<td>Nerves of the lower extremity</td>
</tr>
</tbody>
</table>

| (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**

<table>
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<tr>
<th>Sl. No.</th>
<th>Topics</th>
<th>Component</th>
<th>Hours Allotted</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><strong>Must Know</strong></td>
<td><strong>Desirable To Know</strong></td>
</tr>
<tr>
<td>(a)</td>
<td>Ear</td>
<td>Parts of the ear &amp; ear ossicles</td>
<td>Mastoid antrum, Eustachian tube &amp; Applied anatomy</td>
</tr>
<tr>
<td>(b)</td>
<td>Eye</td>
<td>Coats of the eye &amp; chambers of the eye</td>
<td>Optic pathway &amp; Applied anatomy</td>
</tr>
</tbody>
</table>

5. **Histology (Microanatomy) - 15 Hours**

<table>
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<tr>
<th>Sl. No.</th>
<th>Topics</th>
<th>Component</th>
<th>Hours Allotted</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><strong>Must Know</strong></td>
<td><strong>Desirable To Know</strong></td>
</tr>
<tr>
<td>(a)</td>
<td>Epithelial tissue</td>
<td>Definition &amp; Classification</td>
<td>Area of distribution</td>
</tr>
<tr>
<td>(b)</td>
<td>Connective tissue</td>
<td>Types of Connective tissue, Bone &amp; Cartilage</td>
<td>General Connective tissue &amp; Adipose tissue</td>
</tr>
<tr>
<td>(c)</td>
<td>Muscle tissue</td>
<td>Skeletal &amp; Cardiac muscle</td>
<td>Smooth muscle</td>
</tr>
<tr>
<td>(d)</td>
<td>Blood vessels</td>
<td>Artery and vein</td>
<td></td>
</tr>
<tr>
<td>(e)</td>
<td>Glands</td>
<td>Serous, Mucous &amp; Mixed</td>
<td></td>
</tr>
<tr>
<td>(f)</td>
<td>Lymphoid tissue</td>
<td>Lymph node &amp; Spleen</td>
<td>Thymus &amp; Tonsil</td>
</tr>
<tr>
<td>(g)</td>
<td>Skin</td>
<td>Thin &amp; thick Skin</td>
<td></td>
</tr>
<tr>
<td>(h)</td>
<td>Respiratory system</td>
<td>Trachea &amp; Lung</td>
<td></td>
</tr>
<tr>
<td>(i)</td>
<td>Digestive</td>
<td>Basic structure of GIT,</td>
<td></td>
</tr>
<tr>
<td>Sl. No.</td>
<td>Topics</td>
<td>Component</td>
<td>Hours Allotted</td>
</tr>
<tr>
<td>--------</td>
<td>-------------------------------</td>
<td>-----------------------------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Must Know</strong></td>
<td><strong>Desirable To Know</strong></td>
</tr>
<tr>
<td>(a)</td>
<td>Introduction</td>
<td>Parts &amp; muscular compartments</td>
<td>Dermatomes</td>
</tr>
<tr>
<td>(b)</td>
<td>Osteology</td>
<td>Demonstration of the bones of the upper limb</td>
<td>Anatomical position, Parts &amp; features</td>
</tr>
<tr>
<td>(c)</td>
<td>Surface anatomy</td>
<td>Demonstration &amp; palpation of surface marks in upper extremity &amp; back</td>
<td>Anatomical snuffbox (boundaries)</td>
</tr>
</tbody>
</table>
### (d) Dissection including Syndesmology

<table>
<thead>
<tr>
<th>Dissection, demonstration of functional compartments in Arm, Forearm, Hand &amp; Back</th>
<th>Skin, superficial fascia, deep fascia, muscles, blood vessels &amp; nerves of the compartment</th>
<th>Inter-muscular spaces &amp; modifications of deep fascia: Palmar aponeurosis, Retinacula &amp; Spaces of hand</th>
<th>24</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissection, demonstration of articulating surfaces &amp; movements of joints</td>
<td>Shoulder joint, Elbow joint, Radioulnar joints &amp; Wrist joint</td>
<td>1st Carpo-metacarpal joint, MP &amp; IP joints</td>
<td></td>
</tr>
</tbody>
</table>

### (e) Radiographic anatomy: Demonstration of X-Ray, CT & MRI of the Upper Extremity.

2

## 2. Lower Extremity - 40 Hours

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Topics</th>
<th>Component</th>
<th>Hours Alotted</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>Introduction</td>
<td>Parts &amp; muscular compartments, Dermatomes</td>
<td>2</td>
</tr>
<tr>
<td>(b)</td>
<td>Osteology</td>
<td>Anatomical position, Parts &amp; features, Joints formed</td>
<td>8</td>
</tr>
<tr>
<td>(c)</td>
<td>Surface anatomy</td>
<td>Surface land marks in lower extremity</td>
<td>2</td>
</tr>
</tbody>
</table>
### 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

### 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 | |

### Radiographic anatomy: Demonstration of X-Ray, CT & MRI of the Lower Extremity.

### 3. Thorax- 35 Hours

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Topics</th>
<th>Component</th>
<th>Hours Allotted</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>Introduction</td>
<td>Walls, mediastinum &amp; viscera</td>
<td>Dermatomes</td>
</tr>
<tr>
<td>(b)</td>
<td>Osteology</td>
<td>Anatomical position, Parts &amp; features</td>
<td>Joints formed</td>
</tr>
<tr>
<td>(c)</td>
<td>Surface anatomy</td>
<td>Demonstration</td>
<td>Surface land marks in</td>
</tr>
</tbody>
</table>
& palpation thorax

<table>
<thead>
<tr>
<th>Surface marking of the main viscera</th>
<th>Pleura, Lungs &amp; Heart</th>
<th>Arch of aorta &amp; Superior venacava</th>
<th>Thoracic duct</th>
</tr>
</thead>
<tbody>
<tr>
<td>(d) Dissection including Syndesmology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissection, demonstration</td>
<td>Thoracic cavity, Pleura, Lungs, Mediastinum, Heart &amp; Pericardium,</td>
<td>Wall of the thorax, Structures in superior &amp; posterior Mediastina</td>
<td>22</td>
</tr>
<tr>
<td>(e) Radiographic anatomy: Demonstration of X-Ray, CT &amp; MRI of the Thorax.</td>
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4. Abdomen & Pelvis- 54 Hours

<table>
<thead>
<tr>
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<th>Topics</th>
<th>Component</th>
<th>Hours Allotted</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Must Know</td>
<td>Desirable To Know</td>
</tr>
<tr>
<td>(a)</td>
<td>Introduction</td>
<td>Anterior abdominal wall, abdominal &amp; pelvic cavity &amp; containing viscera</td>
<td>Dermatomes</td>
</tr>
<tr>
<td>(b)</td>
<td>Osteology</td>
<td>Anatomical position, Parts &amp; features</td>
<td>Joints formed</td>
</tr>
<tr>
<td>(c)</td>
<td>Surface anatomy</td>
<td>Quandrants of the abdominal cavity, surface land marks in Abdomen &amp; Pelvis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Demonstration &amp; palpation</td>
<td>Stomach, Spleen, Liver &amp; Gall bladder, Caecum, Appendix &amp; Kidney</td>
<td>Pancreas &amp; Duodenum</td>
</tr>
<tr>
<td></td>
<td>Surface marking of the main viscera</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(d)</td>
<td>Dissection including Syndesmology</td>
<td>Walls of abdomen, Male &amp; female external genitalia, Peritoneum, Liver, Suprarenal glands &amp; Perineum</td>
<td>Lumbosacral joint, Sacroiliac joint</td>
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</tbody>
</table>
### Radiographic anatomy


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

<table>
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<tr>
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<th>Topics</th>
<th>Component</th>
<th>Hours Allotted</th>
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<tbody>
<tr>
<td>(a)</td>
<td><strong>Introduction</strong></td>
<td>Parts</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dermatomes</td>
<td></td>
</tr>
<tr>
<td>(b)</td>
<td><strong>Osteology</strong></td>
<td>Identification of the bones, foramina &amp; features</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sutures</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Fontenellae</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Demonstration of the different views of the skull</td>
<td>Mandible, Hyoid bone &amp; Cervical vertebrae</td>
<td>Parts &amp; features</td>
</tr>
<tr>
<td>(c)</td>
<td><strong>Surface anatomy</strong></td>
<td>Surface land marks in head &amp; neck</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>External jugular vein</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Demonstration &amp; palpation</td>
<td>Common carotid artery, External carotid artery &amp; Thyroid gland</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Palpation of Cervical group of lymph nodes</td>
<td></td>
</tr>
<tr>
<td>(d)</td>
<td><strong>Dissection including Syndesmology</strong></td>
<td>Scalp, temple &amp; face Side of neck: Anterior &amp; posterior triangles, Deep dissection of neck: Thyroid gland, Contents of carotid</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Dissection, demonstration</td>
<td>Cranial cavity: Dural folds &amp; venous sinuses, Orbit: contents of the orbit, Deep dissection</td>
<td></td>
</tr>
<tr>
<td>Sl. No.</td>
<td>Topics</td>
<td>Component</td>
<td>Must Know</td>
</tr>
<tr>
<td>--------</td>
<td>-------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>(a)</td>
<td>Epithelial tissue</td>
<td>Definition &amp; Classification</td>
<td>Area of distribution</td>
</tr>
<tr>
<td>(b)</td>
<td>Connective tissue</td>
<td>Types of Connective tissue, Bone &amp; Cartilage</td>
<td>General Connective tissue &amp; Adipose tissue</td>
</tr>
<tr>
<td>(c)</td>
<td>Muscle tissue</td>
<td>Skeletal &amp; Cardiac muscle</td>
<td>Smooth muscle</td>
</tr>
<tr>
<td>(d)</td>
<td>Blood vessels</td>
<td>Artery and vein</td>
<td></td>
</tr>
<tr>
<td>(e)</td>
<td>Glands</td>
<td>Serous, Mucous &amp; Mixed</td>
<td></td>
</tr>
<tr>
<td>(f)</td>
<td>Lymphoid organs</td>
<td>Lymph node &amp; Spleen</td>
<td>Thymus &amp; Tonsil</td>
</tr>
<tr>
<td>(g)</td>
<td>Skin</td>
<td>Thin &amp; thick Skin</td>
<td></td>
</tr>
<tr>
<td>(h)</td>
<td>Respiratory system</td>
<td>Trachea &amp; Lung</td>
<td></td>
</tr>
</tbody>
</table>
### Digestive system
Basic structure of GIT, Liver & Gall bladder

### Urinary system
Kidney

### Male Reproductive system
Testis & Prostate

### Female Reproductive system
Ovary & Uterus

### Endocrine glands
Thyroid, Pancreas & Suprarenal gland

### Nervous tissue
Cerebrum & Cerebellum

### Embryonic tissue
Placenta & Umbilical cord

C. **EXAMINATION:**

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

**TYPES OF QUESTIONS WITH MARKS-**

<table>
<thead>
<tr>
<th>Type of Questions</th>
<th>Marks per Question</th>
<th>No. of Questions</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long Essays (LE)</td>
<td>10</td>
<td>02</td>
<td>20</td>
</tr>
<tr>
<td>Short Essays (SE)</td>
<td>05</td>
<td>10</td>
<td>50</td>
</tr>
<tr>
<td>Short Answers (SA)</td>
<td>03</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>22</strong></td>
<td>MAXIMUM MARKS- <strong>100</strong></td>
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</table>

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

1.1 **Paper-I** (Max. Marks- 100)

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Topic</th>
<th>Hours Allotted</th>
<th>Long Essay 10 Marks</th>
<th>Short Essay 5 Marks</th>
<th>Short Answer 3 Marks</th>
<th>Weightage of Marks</th>
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</thead>
<tbody>
<tr>
<td>1</td>
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<td>15</td>
<td>-</td>
<td>3</td>
<td>2</td>
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</table>
### DO ANATOMY QUESTION PAPER - II

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Topic</th>
<th>Hours Allotted</th>
<th>Long Essay 10 Marks</th>
<th>Short Essay 5 Marks</th>
<th>Short Answer 3 Marks</th>
<th>Weightage of Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Thorax</td>
<td>20</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>21</td>
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<tr>
<td>2</td>
<td>Abdomen</td>
<td>23</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>31</td>
</tr>
<tr>
<td>3</td>
<td>Pelvis</td>
<td>17</td>
<td>-</td>
<td>2</td>
<td>2</td>
<td>16</td>
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<tr>
<td>4</td>
<td>Lower Extremity</td>
<td>20</td>
<td>-</td>
<td>3</td>
<td>2</td>
<td>21</td>
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<tr>
<td>5</td>
<td>Histology</td>
<td>15</td>
<td>-</td>
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<td>2</td>
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</table>

*- 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

<table>
<thead>
<tr>
<th>Type of Question</th>
<th>Question No.</th>
<th>Topics</th>
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<tbody>
<tr>
<td>Long Essay 10 Marks</td>
<td>1</td>
<td>Head, Neck &amp; Face</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Upper Extremity</td>
</tr>
<tr>
<td>Short Answer 3 Marks</td>
<td>13</td>
<td>Gen. Anatomy</td>
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<td>15</td>
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<td></td>
<td>16</td>
<td>Brain &amp; Special senses</td>
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<tr>
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<td>18</td>
<td>Embryology</td>
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<tr>
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<tr>
<td></td>
<td>20</td>
<td>Head, Neck &amp; Face</td>
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### LAYOUT OF ANATOMY QUESTION PAPER - II

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<tr>
<td></td>
<td>2</td>
<td>Abdomen</td>
</tr>
<tr>
<td>Short Essay 5 Marks</td>
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<td>Pelvis</td>
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<tr>
<td>Short Answer 3 Marks</td>
<td>13</td>
<td>Pelvis</td>
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<td></td>
<td>15</td>
<td>Lower Extremity</td>
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<td></td>
<td>17</td>
<td>Histology</td>
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<td>19</td>
<td>Thorax</td>
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<td></td>
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</tbody>
</table>
2. **Practical including Viva voce or oral examination includes the following:**

Distribution of marks
Maximum marks: **200 Marks**

1. Knowledge of dissected parts—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
   - 20 marks

2. Viscera—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
   - 20 marks

3. Bones—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
   - 20 marks

4. Surface Anatomy (Procedural skill & Discussion)
   - 10 marks

5. Spotting 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
   - 20 marks

6. Maintenance of Practical record (Journal) & Dissection card marks
   - 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
20 marks

Upper & Lower Extremity
20 marks

MARKS DISTRIBUTION-

<table>
<thead>
<tr>
<th>Subject</th>
<th>Theory</th>
<th>Practical &amp; Oral</th>
<th>Grand Total</th>
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<tbody>
<tr>
<td>Anatomy</td>
<td>200</td>
<td>100</td>
<td>100</td>
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</tbody>
</table>

List of recommended books –

Basic Books

Reference books

- Singh V. (2014) *Anatomy of Upper limb & Thorax*. Ed. 2. Elsevier; New Delhi
- Singh V. (2014) *Anatomy of Abdomen & Lower limb*. Ed. 2. Elsevier; New Delhi

Annexure- I

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

1. Knowledge of dissected parts-

<table>
<thead>
<tr>
<th>Above Diaphragm</th>
<th>Below Diaphragm</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Upper Extremity</strong></td>
<td><strong>Lower Extremity</strong></td>
</tr>
<tr>
<td>Axilla &amp; Cubital fossa</td>
<td>Femoral triangle, Adductor canal &amp; Popliteal fossa</td>
</tr>
<tr>
<td><strong>Thorax</strong></td>
<td></td>
</tr>
<tr>
<td>Para sagittal section of Heart &amp;</td>
<td></td>
</tr>
<tr>
<td>Mediastinum</td>
<td></td>
</tr>
<tr>
<td><strong>Head, Neck, Brain &amp; Bulbus oculi</strong></td>
<td><strong>Abdomen &amp; Pelvis</strong></td>
</tr>
<tr>
<td>Cranial fossae, Anterior &amp; posterior</td>
<td>Sagittal section of Male &amp; Female Pelvis</td>
</tr>
<tr>
<td>Triangle of Neck &amp; Sagittal section</td>
<td></td>
</tr>
<tr>
<td>of Brain</td>
<td></td>
</tr>
</tbody>
</table>

2. Viscera-

<table>
<thead>
<tr>
<th>Above Diaphragm</th>
<th>Below Diaphragm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 3. Bones-

<table>
<thead>
<tr>
<th>Above Diaphragm</th>
<th>Below Diaphragm</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Upper Extremity</strong>-</td>
<td><strong>Lower Extremity</strong>-</td>
</tr>
<tr>
<td>Clavicle, Scapula, Humerus, Radius &amp; Ulna</td>
<td>Hip bone, Femur, Patella, Tibia &amp; Fibula</td>
</tr>
<tr>
<td><strong>Thorax</strong>-</td>
<td><strong>Abdomen &amp; Pelvis</strong>-</td>
</tr>
<tr>
<td>Sternum, Typical ribs &amp; Typical thoracic vertebrae</td>
<td>Lumbar vertebrae, Sacrum, Male &amp; Female pelvis</td>
</tr>
<tr>
<td><strong>Head, Neck, Brain &amp; Bulbus oculi</strong>-</td>
<td>-</td>
</tr>
<tr>
<td>Skull, Mandible &amp; Typical Cervical vertebrae</td>
<td>-</td>
</tr>
</tbody>
</table>

### 4. Surface Anatomy-

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

### 5. Spotting-

<table>
<thead>
<tr>
<th>Radiographic Anatomy</th>
<th>Histology</th>
<th>Embryology</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Upper Extremity</strong>-</td>
<td>Simple &amp; stratified Epithelium, Bone, Cartilage, Skeletal muscle, Cardiac muscle, Artery, Vein, Serous gland, Mucous gland, Mixed</td>
<td>Models/ Charts of Development of Ovarian follicle, Fertilized Ovum, Spermatogenesis, Cell to Embryo (Blastula, Gastrula,</td>
</tr>
</tbody>
</table>
**Ulna-** AP view,  
**Wrist & Hand-** AP view.

**Thorax-**  
X-Ray of Chest- PA, AP, Lateral & Oblique view,  
Thoracic spine - AP & Lateral view.


**Lower Extremity-**  
X-Ray of Hip with Femur- AP view, Knee- AP & lateral view,  
Ankle with Tibia & Fibula- AP & lateral view.

**Abdomen & Pelvis-**  
X-Ray of Plain Abdomen- AP view, Pelvis- AP view,  
Lumbosacral spine- AP & Lateral view.

<table>
<thead>
<tr>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morula, Blastocyst), Formation of Notochord, Amnion, Chorion &amp; Chromosomes.</td>
</tr>
</tbody>
</table>
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 standpoint 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 : 200 hrs.

Practical:

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

Tutorial including Group discussion, Seminar : 75 hrs.

TOTAL : 475 hrs.

Distribution of Contents:
<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Topic</th>
<th>Timing</th>
<th>Must Know</th>
<th>Desirable to Know</th>
<th>Nice to Know</th>
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<tbody>
<tr>
<td>1</td>
<td>General Physiology and Biophysical science</td>
<td>5 HRS</td>
<td>Cell membrane composition, structure and its functions. Constituents of cytoplasm</td>
<td>The cell and its differentiation. Tissues and organs of the body</td>
<td>RNA and DNA with its significance</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>Types of transport across cell membrane. Transport mechanisms as passive and active and difference between them.</td>
<td>Primary active transport sodium-potassium pump, calcium pumps - plasma membrane calcium pumps (PMCA) and Sarco/endoplasmic reticulum calcium pumps (SERCA) and its significance</td>
<td>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</td>
</tr>
<tr>
<td>Homoeostasis - concept and maintenance of internal environment</td>
<td>law of diffusion</td>
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<tr>
<td>Regulation of Acid base balance by buffer system (in kidneys &amp; lungs)</td>
<td>Volatile &amp; Non volatile acids, metabolic acidosis &amp; alkalosis</td>
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<td>Maintenance of acid base balance in Blood</td>
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<td>‘Anion gap’ and its physiological significance</td>
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<td>Different body fluid compartments, composition, tissue fluids, measurements of different body fluids, measurement of water balance, ECF &amp; ICF volume &amp; values</td>
<td>Dehydration and replacement of body fluid loss</td>
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<td></td>
<td>Describe edema and its causes in terms of Starling’s forces*</td>
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<td></td>
<td>Difference between tonicity and osmolarity**</td>
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<td>Starling’s forces that govern fluid exchange across the membranes separating the various compartments**</td>
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<td>Biophysical processes – filtration, adsorption, osmosis, osmotic pressure, hydrotropy, colloid,</td>
<td>Donnan equilibrium, surface tension, absorption and assimilation,</td>
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<td>Blood</td>
<td>Composition, and functions of blood</td>
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<td>Plasma proteins –</td>
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<td>Significance of Albumin to Globulin ratio</td>
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<tr>
<td></td>
<td>Acute Phase Proteins</td>
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<td></td>
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<tr>
<td></td>
<td>Serum</td>
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<tr>
<td>Classification, properties and function, values, methods of separation</td>
<td>Difference between plasma &amp; serum</td>
<td>Albumin levels with specific examples of disease conditions, Causes of oedema in Kwashiorkor, Liver failure, glomerulonephritis and filariasis in relation to albumin</td>
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<td>Plasmapharesis &amp; its clinical significance</td>
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<tr>
<td>RBC – morphology, variations, functions, erythropoiesis-definition, site, stem cells, stages with diagram and factors influencing, life span and fate of RBC’s</td>
<td>Physiological variations of the normal RBC count</td>
<td>Sites of erythropoiesis with age</td>
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<tr>
<td>Conditions where RBC increase &amp; decrease</td>
<td>Difference between reticulocyte &amp; erythrocyte</td>
<td>RBC in Malaria</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Role of Erythropoietin</td>
<td>Reticulocyte count and its significance*</td>
<td>Extrinsic &amp; Intrinsic factors in formation of RBC</td>
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<tr>
<td></td>
<td>Erythrocyte sedimentation rate-its values, variations &amp; significance</td>
<td>Packed cell volume</td>
<td></td>
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</tr>
<tr>
<td>4. Polycythemia</td>
<td>4. Polycythemia</td>
<td>(Haematocrit value)</td>
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<td></td>
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</tr>
<tr>
<td>Define Polycythemia rubra vera, Types of Polycythemia, relative polycythemia</td>
<td>Define Polycythemia rubra vera, Types of Polycythemia, relative polycythemia</td>
<td>(RBC indices)* - MCV, MCH, MCHC, Color index*</td>
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<td>Effects of polycythemia</td>
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<tr>
<td>Hemoglobin – synthesis, types, derivatives, fate and iron metabolism</td>
<td>3 Reduced hemoglobin* and carbon monoxide poisoning*, Methaemoglobin* Applied physiology - cyanosis*. Abnormal hemoglobins. role of Hb in gas transport Haemolysis and Fragility of Red blood cells</td>
<td>sickle cell anemia &amp; Thalassemia iron overload role of phototherapy in treating infants with jaundice due to hemolysis cyanosis. jaundice</td>
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<tr>
<td>4. Anaemia Define anemia Classify anemia based on etiology and morphology, major symptoms and signs</td>
<td>Differential count Conditions in which total leucocyte counts is increased or decreased, each type of WBC are increased or decreased</td>
<td>Arneth count &amp; its significance Diapedesis and opsonisation</td>
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<tr>
<td>WBC – classification and morphology and functions of neutrophils, eosinophils, basophils, mast cells; Lymphocytes, monocytes Leucopoiesis</td>
<td>RES Classification Functions</td>
<td>Tissue macrophages</td>
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<td>Immunity – definition, classification, mechanism Immunization &amp; its types</td>
<td>T and B cells – its types immunoglobulins</td>
<td>Cytokines &amp; types Define</td>
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<td>Platelets – structure, life span, values</td>
<td>Properties, functions &amp; formation of platelets</td>
<td>causes and effects of thrombocytopenia. Dengue Fever Role of platelets in hemostasis</td>
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<td>Hemostasis- definition and stages and coagulation of blood – clotting factors, intrinsic and extrinsic mechanism and anticoagulants, procoagulants</td>
<td>Anti coagulants anticlotting and fibrinolytic mechanisms in the body Prothrombin Time Bleeding time Clotting time Bleeding disorders Role of calcium in coagulation</td>
<td>Clot and its retraction Thrombosis and Embolism Vitamin-k Von willebrand’s disease Plasmin</td>
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<td>Blood volume Measurement Regulation</td>
<td>Variations</td>
<td>Hyper and hypovolemia</td>
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<td>Blood groups Blood transfusion – indication, types, modes and</td>
<td>Erythroblastosis Fetalis, state preventive</td>
<td>minor blood group systems</td>
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<td>Hazards</td>
<td>Measure and treatment for the same. Blood banking</td>
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<td>Rh system of blood grouping, Rh incompatibility</td>
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<td>Spleen</td>
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<td>Lymphatic system and lymph</td>
<td>Formation and composition of lymph functions of lymph and lymph nodes</td>
<td>Pathophysiology of lymphedema</td>
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<td>Lymphatic circulation</td>
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<th>3</th>
<th>Cardiovascular system</th>
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<td>1. Physiological anatomy with respect to its chambers, valves, input and output vessels, AV ring and electrical discontinuity, Conducting system, Coronary supply</td>
<td>Difference between systemic and pulmonary circulation</td>
<td>Junctional tissues  Pacemaker  Functions of syncitium of heart</td>
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<td>2. Properties of cardiac muscle including conductive system of heart</td>
<td>Starling’s law &amp; its importance</td>
<td>Action potential of cardiac muscle  Refractory period  Difference between cardiac and skeletal muscles</td>
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<td>Cardiac cycle – definition, time duration, phases, volume and pressure changes in atria, ventricles, aorta, pulmonary artery and jugular vein. and</td>
<td>End diastolic volume, end systolic volume, ejection fraction.</td>
<td>3 Arrhythmias – types  Fibrillation and flutter  Current of injury  Effects of changes in</td>
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<td>Electrolyte concentration on heart</td>
<td>Heart sounds-types</td>
<td>Normal character, causes, Abnormal heart sounds - Cardiac Murmur</td>
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<td>4. ECG – definition, recording, leads, waves, segments, intervals and significance and vector analysis</td>
<td>Clinical uses of ECG</td>
<td>Calculate rate from a normal ECG tracing</td>
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<td>5. Cardiac output – definition, values determination of COP, factors influencing, variations, Fick's principle</td>
<td>Heart Block-types</td>
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<td>6. Arterial blood pressure – definition, variations, factors, the short-term (neural and hormonal) and long term (renal) mechanisms regulating blood pressure</td>
<td>Measurement of blood pressure, Hypertension, Hypotension</td>
<td>Venous and capillary pressure, Role of renin, Korotkoff's sounds</td>
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<td>9. Regional circulation</td>
<td>Coronary Cerebral Renal circulation Pulmonary Splanchnic Cutaneous circulation Fetal circulation</td>
<td>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 &amp; shock – Stages, Manifestations,</td>
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<td>Hemodynamics</td>
<td>Types of blood flow Factors maintaining volume of blood flow Wind kessel effect</td>
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system.*‐ the
parts of the
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tract, the
functions of
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Difference
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The structure
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Non‐
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mechanism of
protective
reflexes ‐cough,
sneeze and gag
reflexes*
The Normal
Respiratory
Rate
Pulmonary circulation:
Characteristic features,
measurement and regulation
of pulmonary blood flow

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Normal rate
of
pulmonary
blood flow &
normal
range of
pulmonary
blood
pressures,


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<th>Mechanics of Respiration:</th>
<th>Define Inspiration &amp; Expiration*</th>
<th>The Muscles Of Inspiration, Expiration &amp; Accessory Muscles Of Respiration</th>
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<td>The Movements Of Chest Wall And The Changes In Chest Wall dimensions produced By Respiratory Muscles*</td>
<td>Clinical Conditions In Which Work Of Breathing Is increased**</td>
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<td>The Changes In Alveolar And Intra Pleural Pressures During Respiration</td>
<td>The Values Of Intra Alveolar Pressure, Intra Pleural Pressure*</td>
<td>Respiratory distress syndrome**</td>
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<td>Lung Compliance And its Relation To Clinical Conditions In Which It Is Altered</td>
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<td>Respiratory cycle and transpulmonary pressure</td>
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<td>Work of breathing – utilization of energy</td>
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<td>Pulmonary Function Tests:</td>
<td>Recording of the Spirogram with a diagram * the lung volumes and capacities of a</td>
<td>The Sites Of Air Way Resistance In Obstructive</td>
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<td>Lung volumes and capacities: the normal values and their physiological variations</td>
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special features of pulmonary circulation, pulmonary veins, pulmonary vascular resistance, its response to hypoxia (hypoxic vasoconstriction in pulmonary circulation)
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<th>Ventilation – types, measurement</th>
<th>Define minute ventilation, Dead space-types &amp; its measurement * Regional differences in perfusion, ventilation &amp; V/Q ratio in the lungs*</th>
<th>effect of breathing through a tube** (increased anatomical dead space) Alveolar air, inspired air, Expired air.</th>
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<tr>
<td>normal subject using a spirometer Discuss the physiological significance of the Residual volume &amp; functional residual capacity with its methods of measurement Peak expiratory flow &amp; state its normal value*</td>
<td>Lung Diseases**. The forced expiratory spirogram and FEV1, FVC and the FEV1/FVC ratio and its variations in obstructive and restrictive lung diseases.** Interpretation of altered values of absolute lung volumes, peak expiratory flow and FEV1/FVC ratio in restrictive and obstructive lung diseases**</td>
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<tr>
<td>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</td>
<td>Respiratory quotient**</td>
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<td>Transport of oxygen - forms of oxygen transport in blood hemoglobin's affinity for oxygen oxygen-hemoglobin dissociation curve and the Bohr effect*</td>
<td>oxygen diffusion affection in cases of respiratory membrane</td>
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<td>Factors affecting it and the physiological advantages of the curve</td>
<td>Oxygen carrying capacity of blood</td>
<td>Oxygen content of blood &amp; % oxygen saturation of hemoglobin hypoxemia and hypoxia</td>
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<td>Transport of Carbon dioxide: forms of carbon dioxide transport in blood</td>
<td>Explain the role of chloride shift and Haldane effect</td>
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<tr>
<td>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 &amp; maintain normal levels of arterial blood gases and pH.</td>
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<td>Disturbances of respiration: hypercapnoea and hypocapnoea, asphyxia</td>
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<td>The physiological basis of types of hypoxia with examples* cyanosis and conditions in which it occurs and may not occur* physiological basis of oxygen therapy as treatment for Biot's breathing** Kussmauls breathing** Oxygen toxicity**</td>
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thickening**.
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<th>Module</th>
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<tr>
<td>5</td>
<td>Digestive system</td>
<td>12 HRS</td>
<td><strong>Physiological adaptations in special environments</strong> - physiological effects of zero gravity, the physiological basis of Caisson's disease &amp; Nitrogen narcosis, physiological adaptations occurring at high altitude</td>
</tr>
</tbody>
</table>

The different types of hypoxias*
Cheyne-stokes breathing, its causes*.the effect of apnoea & hyperventilation on respiration; and the effect of speech & cough on respiration*. 

**Effects Of Exercise - effects of exercise on the respiratory system and the physiological basis of these effects oxygen debt**

**Artificial respiration-types**

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<th>Module</th>
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<tbody>
<tr>
<td>5</td>
<td>Digestive system</td>
<td>12 HRS</td>
<td><strong>Physiological anatomy of GI tract and Accessory organs of Digestive system</strong> * Neural control of G.I function. * Location and components of the enteric</td>
</tr>
<tr>
<td>Topic</td>
<td>Saliva: Composition, Functions, control of secretion.</td>
<td>Gastric juice: Composition, mechanism of secretion, functions, regulation of secretion, different phases of gastric secretion, Role of chief cells and parietal cells, experimental evidences</td>
<td>Xerostomia*</td>
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<td>mucosal barrier*, peptic ulcer*, Gastric glands and their cells</td>
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<td>Conditioned salivary secretion**</td>
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<td>.Gastrectomy**, Dumping Syndrome**, gastric function tests (to be taught in Biochemistry)</td>
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<td>Zollinger Ellison Syndrome</td>
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<td>Small Intestine*</td>
<td>Brunner's Glands</td>
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<tr>
<td>Properties, Composition &amp; regulation of secretion and functions of intestinal juice.</td>
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<tr>
<th>Large Intestine*</th>
<th>Megacolon</th>
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<tr>
<td>Functions and formation of faeces. State the importance of dietary fiber.</td>
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</table>

| 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.' |

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<td>Convolutions’ and ‘propulsive contractions’ and their functions, mechanism of vomiting paralytic ileus, defecation</td>
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<tr>
<td>Pancreatic juice: Composition, properties, functions, regulation, applied physiology-pancreatitis</td>
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<tr>
<td>Liver &amp; 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</td>
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<td>G.I. Hormone - source; functions and regulation of secretion of Gastrin, Cholecystokinin and Secretin</td>
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<td>Digestion &amp; Absorption: Carbohydrates, Proteins And Lipids</td>
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<td>Renal physiology and skin</td>
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<td>Functions of kidney (Excretory &amp; non-excretory)</td>
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<td><strong>Glomerular filtration and renal blood flow</strong></td>
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<td>Describe the following factors affecting glomerular filtration, Pressures determining GFR</td>
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<td>the factors determining and regulating renal blood flow</td>
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<td>the mechanisms of autoregulation of renal blood flow and Glomerular filtration rate.</td>
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<td>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)</td>
<td>Tm values** Splay**</td>
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<td><strong>Formation of Urine</strong></td>
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<tr>
<td>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. The mechanism of glomerulotubular balance</td>
<td>Types of thresholds* The mechanism of action of Loop diuretics (Furosemide) as due to blockade of Na/2Cl/K transporter* * The mechanism of diuretics action of thiazide and amiloride**</td>
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</table>
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
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<td>Na/Cl symporter in luminal border</td>
<td>The regulated secretion of potassium (aldosterone-dependent) via potassium channels in Luminal border</td>
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<td>The generation of bicarbonate in the distal tubule,</td>
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<td>Phosphate and ammonia as urinary buffers</td>
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<td>Functioning of the Collecting duct (CD)</td>
<td>The role of aquaporins in water absorption in the collecting duct.</td>
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<td>The role of ADH in regulated water absorption.</td>
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<td>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.</td>
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<td>The role of ADH in urea absorption from the collecting duct, enhancing the hyperosmolarity of Medullary Interstitium.</td>
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<td>Functioning of urine in Acid base balance</td>
<td>The different buffer systems in the body</td>
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<td>The role of the kidney in regulation of acid base balance</td>
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<td>Concentration of urine by different mechanisms</td>
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<td>5. Renal function test,</td>
<td>Discussed the features of hyperaldosteronism and the occurrence of metabolic alkalosis in the same**</td>
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<td>6. Micturition – its nervous control</td>
<td>Abnormal Constituents Of Urine</td>
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| 6. Micturition – its nervous control | Cystometrygram* - recording of intravesical pressure | Higher center regulation of micturition* *
|                                      |                               | Abnormalities of micturition* * |
| Dialysis-Type*                      |                               | Renal failure- Types & abnormalities |
| Mechanism of artificial kidney*     |                               |                                         |
| 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 **
<p>|                                        |                               | Heat stroke ** |
| **| | | |
| Endocrinology | 16 HRS | General organization of endocrine glands &amp; control system |
| **| | Define a |</p>
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<th>Classification</th>
<th>Hormone Release Mechanism</th>
<th>Hypothalamus: the relationship between hypothalamus and pituitary gland. List the various releasing hormones released by the hypothalamus.</th>
<th>Pituitary Gland: List the various hormones secreted by the anterior and posterior pituitary.</th>
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<td>List the various releasing and inhibiting hormones released by the hypothalamus.</td>
<td>List the various hormones secreted by the anterior and posterior pituitary.</td>
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<td>The General mechanism of action of hormones including their receptors and second messengers.</td>
<td>List the causes and describe features of hormones based on their chemical nature.</td>
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<td>The General mechanism of feedback regulation of hormone release in the target organs.</td>
<td>List the causes and describe features of hormones based on their chemical nature.</td>
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<td>The General mechanism of negative and positive feedback regulation of hormone release in the target organs.</td>
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<td>Growth hormone: List the important actions of growth hormone, its effects on growth and metabolism the regulation of growth hormone secretion List the important stimuli that can increase or decrease growth hormone secretion 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 Prolactin: the actions of prolactin and regulation of prolactin secretion, List the features of excess Prolactin secretion 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 Oxytocin -List the important actions of oxytocin List the stimuli for its secretion, regulation of secretion of Oxytocin FSH&amp; LH – Functions &amp;</td>
<td>panhypopituitarism and syndrome of inappropriate hypersecretion of antidiuretic hormone (SIADH) **</td>
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<td>Thyroid Gland</td>
<td>Parathyroid Gland</td>
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<td><strong>List the important steps involved in the synthesis of thyroid hormones, the transport of thyroid hormones</strong></td>
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<td><strong>The mechanism of action of thyroid hormones</strong></td>
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<td><strong>The regulation of thyroid hormone secretion</strong></td>
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<td><strong>List the causes for and the features of Hyposecretion and hypersecretion of thyroid hormones.</strong></td>
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<td><strong>The physiological basis for Simple Goitre.</strong></td>
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<td><strong>List the differences between dwarfism and cretinism.</strong></td>
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<td><strong>The important thyroid function tests and its clinical use</strong></td>
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<td><strong>Calcitonin - Mention the gland and cells secreting Calcitonin.</strong></td>
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<td><strong>List the actions of calcitonin on calcium metabolism.</strong></td>
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<td><strong>Parathyroid Gland - Mention the target cells of parathyroid hormone.</strong></td>
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<tr>
<td><strong>List the major actions of parathyroid hormone.</strong></td>
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<tr>
<td><strong>The regulation of secretion of parathyroid hormone.</strong></td>
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<td><strong>List the causes of and features of hypoparathyroidism/tetany.</strong></td>
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<td><strong>Differentiate between Tetanus and Tetany.</strong></td>
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<td><strong>List the features of primary hyperparathyroidism.</strong></td>
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<td><strong>List the causes for secondary</strong></td>
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</table>
hyperparathyroidism
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
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

| Adrenal Gland Adrenal Cortex: List the hormones secreted by the different layers of the adrenal cortex
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
Mineralocorticoids: List the important mineralocorticoids The mechanism of action of mineralocorticoids on its target cells The important actions of | Adrenaline effects on CNS & Blood pressure
Adrenal sex hormones - Exogenous steroids ** |
mineralocorticoids
List the physiological stimuli that regulate mineralocorticoid secretion
The regulation of mineralocorticoid secretion
List the features of primary hyperaldosteronism or Conn’s syndrome
Adrenal insufficiency: List the causes of and describe features of Addison’s disease
Adrenal medulla: List the physiological effects of epinephrine and nor-epinephrine on various systems of the body
List the factors that regulate the secretion of adrenal medullary hormones
List the features of Phaeochromocytoma

<table>
<thead>
<tr>
<th>Mineralocorticoids</th>
<th>Endocrine Pancreas: List the cells of the Islets of Langerhans and mention the hormone secreted by each</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Insulin: The steps in biosynthesis of Insulin and the origin of the C-peptide (Connecting peptide) The physiological stimulus for Insulin secretion The activation of islets by its physiological stimulus resulting in Insulin secretion List the target cells of Insulin and the cells that do not require insulin action for glucose uptake</td>
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<tr>
<td>Diabetes Mellitus: Insulin deficiency leading to high blood sugar level the pathophysiological effects of high blood sugar and insulin deficiency** Type I and Type II Diabetes Mellitus and their...</td>
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<tr>
<td><strong>The mechanism of action of Insulin on its receptor</strong>&lt;br&gt;<strong>List the important actions of insulin</strong>&lt;br&gt;<strong>List the various factors that regulate insulin secretion</strong>&lt;br&gt;<strong>Features of hypersecretion of Insulin and Hypoglycemia</strong>&lt;br&gt;<strong>Glucagon : List the important actions of glucagon</strong></td>
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<tr>
<td>Atrial natriuretic peptide (ANP) <strong>List the important actions of ANP</strong>&lt;br&gt;List the physiological stimuli for ANP secretion&lt;br&gt;Mention the role of hypothalamus and melatonin on circadian rhythm</td>
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<tr>
<td>8</td>
<td>Reproductive system</td>
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<tr>
<td>Female reproductive system: ovary, oogenesis, ovulation, corpus luteum, ovarian hormones – oestrogen, progesterone, relaxin, its functions, control of ovarian functions by hypothalamic and pituitary hormones.</td>
<td>Menopause and changes*.</td>
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<tr>
<td>Menstrual cycle: ovarian cycle, uterine cycle, hormonal basis</td>
<td>Pregnancy-changes, maintenance of pregnancy by hormones*: Fertilization, implantation, Placenta, placental hormones, parturition-role of hormones.*</td>
</tr>
<tr>
<td>Lactation* Mechanism, hormonal regulation and the development of breast milk**</td>
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<td>9</td>
<td>Central nervous system</td>
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<tr>
<td>Synapse – Definition, types, structure and functions. Define the terms electrical &amp; chemical synapse</td>
<td>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.</td>
</tr>
<tr>
<td>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</td>
<td>List the morphological types of chemical synapse – axosomatic, axodendritic and axoaxonic and its properties</td>
</tr>
<tr>
<td>List the morphological types of chemical synapse – axosomatic, axodendritic and axoaxonic and its properties</td>
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</tr>
<tr>
<td>Receptors: classification, List the properties, Define generator potential or receptor potential, mechanism of sensory transduction</td>
<td>Neurotransmitters*: Definition, criteria for neuro transmission, Classification, Transport and release, Important Neurotransmitters- o GABA o Glycine o Dopamine o Serotonin or 5-HT</td>
</tr>
<tr>
<td>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.</td>
<td>Babinski sign** Clonus types**</td>
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<tr>
<td>Sensory system: touch, pain, temperature, vibration, sensory cortex</td>
<td>Gate control theory** Dermatome* * Leminnsci**</td>
</tr>
<tr>
<td>Physiology of Pain: types, visceral pain, pain inhibiting mechanism, gating of pain, opioids, analgesia, hyperalgesia, thalamic syndrome</td>
<td>Referred pain**, Phantom limb pain**</td>
</tr>
<tr>
<td>Tracts- Ascending and descending tracts – pyramidal &amp; extrapyramidal tracts, details of each tracts – (situation &amp; extent in spinal cord, origin, course &amp; 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 &amp; posterior root.</td>
<td>Definition – paralysis and describe the types (hemiplegia, paraplegia, monoplegia, Hemiparesis, quadriparesis &amp; paraparesis)**</td>
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<tr>
<td>Topic</td>
<td>Relevant Terms</td>
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<td>----------------------------------------------------------------------</td>
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</tbody>
</table>
| head, face region. Description of the features and physiological basis of upper motor neuron lesion and lower motor neuron lesion, differences between UMN & LMN lesions. | Brown-Sequard syndrome**  
Multiple sclerosis**  
Disc prolapsed** |
| Cerebral cortex Identify the major somatic and special sensory, motor & association areas in the cortex. Recognize the somatotopy of the motor and somatic sensory areas (homunculi) Recognize the phenomena of hemispheric specialization (dominance), handedness. Define the role of corpus callosum – inter-hemispheric transfer of information. | Hominuculus**  
Kaluvrbucy syndrome** |
| Muscle tone, posture, equilibrium, regulation of muscle tone & posture, vestibular apparatus Proprioceptors | Golgi tendon reflex |
| Cerebellum: structure, parts, connections, functions, cerebellar function tests. | Features of cerebellar lesion**  
(Nystagmus  
Dysarthria  
Dysmetria  
Ataxia  
Adiadochokinesia) |
<p>| Limbic system- the | Papez |</p>
<table>
<thead>
<tr>
<th>Components of Limbic system, the Functions of the limbic system. The central role of amygdala</th>
<th>circuit**</th>
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</thead>
<tbody>
<tr>
<td>Autonomic nervous system: organization and functions</td>
<td>EEG** Blocks &amp; Rythms**</td>
</tr>
<tr>
<td>Hypothalamus: structure &amp; functions</td>
<td>Narcolepsy, Cataplexy, Circadian rhythm Reward and punishment centres</td>
</tr>
<tr>
<td>Thalamus, List the groups of thalamic nuclei. Outline of connections of thalamus, function</td>
<td>Thalamic syndrome</td>
</tr>
<tr>
<td>Physiology of sleep and wakefulness Sleep-types, theories and its mechanism.</td>
<td>Disorders of Sleep**</td>
</tr>
<tr>
<td>Higher functions of the brain: learning &amp; memory, speech-types Define the role of Wernicke’s &amp; Broca’s areas in language &amp; speech Define aphasia and state the site of lesion in motor and sensory aphasia</td>
<td>Alzheimers disease** Dementia** Retrograde amnesia** Aphasia**</td>
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<tr>
<td>Define brain stem and its parts</td>
<td>Red nucleus</td>
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<tr>
<td>Define reticular formation, functions, ascending reticular activating system</td>
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<td>20. Cerebrospinal fluid- Definition, formation,</td>
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<td>10</td>
<td>Special senses</td>
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</table>

| Optics of eye: |
| 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. State that the image formed on the retina is inverted and diminished in size. the role of crystalline lens in focusing the light rays and the changes that happen while focusing a near object – accommodation reflex List the common refractive errors – Myopia, hypermetropia, presbyopia and astigmatism Describe the cause for the refractive errors and their correction |

<p>| Retina: |
| List the retinal cells contributing to the visual pathway. (photoreceptors, bipolar cells and ganglion |</p>
<table>
<thead>
<tr>
<th>Cells</th>
<th>Optic disc, macula lutea and fovea as important structural features in the retina</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
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<tr>
<td>Snellen’s chart</td>
<td>Light &amp; Dark adaptation - changes that happen during dark and light adaptation.</td>
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<td>Colour vision:</td>
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<tr>
<td>Name the types of photoreceptors responsible for colour vision, Classification of cones based on their spectral sensitivity</td>
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<tr>
<td>List the types of colour blindness</td>
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<td>The use of Ishihara’s chart to check for colour blindness</td>
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<tr>
<td>Optic pathway:</td>
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<tr>
<td>The optic pathway from the photoreceptors to the visual cortex and the visual field defects produced by lesions at various levels of the pathway</td>
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<tr>
<td>Pupillary reflexes: the pupillary light reflex pathway</td>
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<td>Difference between direct and consensual pupillary light reflexes, the accommodation reflex pathway</td>
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<tr>
<td>List the features of Horner’s syndrome</td>
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<td>Argyll-Robertson pupil</td>
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<td>Eye movements: Name of the cranial nerves innervating the extraocular muscles,</td>
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<tr>
<td>Describe the auditory pathway.</td>
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<tr>
<td>Assessment of hearing: Define an audiogram, conductive hearing loss and sensory neural hearing loss, the principle of Rinne’s and Weber’s test</td>
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<tr>
<td>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</td>
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<tr>
<td>Topic</td>
<td>Details</td>
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<tr>
<td>Vestibular pathway</td>
<td>The connections of vestibular nucleus to the cortex and cerebellum</td>
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<td>The Projections Through Vestibulospinal Tracts</td>
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<td>The Functions Of Vestibular System - Maintenance Of Balance, Equilibrium And Posture</td>
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<tr>
<td>Smell</td>
<td>The arrangement of olfactory sensory neuron within the olfactory epithelium, List the types of cells within the olfactory bulb</td>
</tr>
<tr>
<td>Taste</td>
<td>The Arrangement Of Taste Cells Within Taste Buds And Organization Of Taste Buds Within Papillae. List the four basic qualities of taste sensation Test For The Four Basic Qualities Of Taste Sensation The taste pathway from the anterior two-third and posterior one-third of the tongue to the gustatory cortex</td>
</tr>
<tr>
<td>Nerve muscle physiology</td>
<td>8 HRS</td>
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</table>
band, Z line and sarcomere

Structure and function of the sarco-tubular system

Functions of contractile and regulatory proteins involved in muscle contraction *, Composition of muscle, muscle mass, muscle fiber*

Types of smooth muscles and mechanism of contraction*. EMG *

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 *
<table>
<thead>
<tr>
<th>Properties of skeletal muscles, simple muscle curve</th>
<th>Frank-starling law</th>
<th>Contractions and types-Isotonic &amp; isometric contraction*</th>
<th>Chronaxie, rheobase and utilization time*</th>
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<tbody>
<tr>
<td>Rigor mortis, tetanus, fatigue.</td>
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<tr>
<th>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</th>
</tr>
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</table>

| Neuron: Structure in brief |
| Neurromuscular junction - the structure of the neuromuscular junction, Diagram events involved in neuromuscular transmission |
| Myasthenia gravis* |
| Muscular Dystrophy** |
| Neuromuscular blockers** |
| Motor unit significance* |
## Bio Chemistry

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Topic</th>
<th>Time</th>
<th>Must Know</th>
<th>Desirable to Know</th>
<th>Nice to Know</th>
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<tbody>
<tr>
<td>1</td>
<td>Introduction to Biochemistry</td>
<td>1hr</td>
<td>Define Biochemistry, scope in clinical practice of Homeopathy</td>
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<td>2</td>
<td>Carbohydrates Chemistry</td>
<td></td>
<td>Definition, Classification with suitable examples</td>
<td>functions of Carbohydrates Mucopolysaccharides disaccharides and polysaccharides</td>
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<td>Invert sugar</td>
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<td>3</td>
<td>Lipids Chemistry</td>
<td></td>
<td>classification</td>
<td>Functions of Lipids Biological importance of triacyl glycerol, phospholipids,</td>
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<td>glycolipids, fatty acids (PUFA), prostaglandin steroids and lipoproteins. Ketosis</td>
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<td>and Ketonemia</td>
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<td>4</td>
<td>proteins</td>
<td>Definition, classification of amino acids</td>
<td>Brown fat. Prostaglandins Lungs surfactants Rancidity</td>
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<td>Chemistry</td>
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<td>6</td>
<td>Enzymes</td>
<td>Classification with suitable examples. General properties of Enzymes</td>
<td>Enzyme Inhibition with examples Different mechanisms of Enzyme Action. Diagnostic Enzymes with Clinical Significance, Diagnostic Enzymes in Myocardial infarction Isoenzymes</td>
<td>Semi essential amino acids</td>
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<td>7</td>
<td><strong>Biological Oxidation</strong></td>
<td>Respiratory Chain (Mitochondrial Electron Transport Chain) Oxidative Phosphorylation and sites ATP synthesis</td>
<td>Biological Oxidation Respiratory Chain role of Inhibitor and Uncouplers</td>
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<td>9</td>
<td><strong>Carbohydrate</strong></td>
<td>digestion and absorption of carbohydrates</td>
<td>Synthesis and break down of Pentose phosphate</td>
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<tr>
<td>Metabolism</td>
<td>Glycolysis, Citric acid cycle, Gluconeogenesis, HMP shunt pathway, Metabolism of Glycine, Blood sugar level and its regulation, oral GTT and glycosuria, Biochemistry of diabetes mellitus</td>
<td>pathway</td>
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<tr>
<td>10 Lipid Metabolism</td>
<td>Digestion and absorption of Lipids, Beta oxidation, biosynthesis of saturated fatty acids only, cholesterol biosynthesis, transport (role of HDL &amp; LDL) Excretion, Adipose tissue metabolism Ketogenesis Ketolysis and Ketosis</td>
<td>Cholesterol biosynthesis, Fatty acid synthesis, Lipolysis and re-esterificatio n, fatty liver and atherosclerosis</td>
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<tr>
<td>11 Protein Metabolism</td>
<td>digestion and absorption of Proteins, Fate of amino acid in the body (Deamination, Transmination, Transdeaminatio n,Decarboxylatio n) Fates of ammonia (Urea cycle, glutamine formation),</td>
<td>Pathways of synthesis and catabolism of amino acids other than aromatic and sulphur-containing amino acids Purine and pyrimidine</td>
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<tr>
<td>12</td>
<td>Mineral Metabolism</td>
<td>Study of (i) Calcium and phosphorous (ii) sodium, potassium &amp; chloride</td>
<td>Study of; (iii) magnesium, copper &amp; iodine; (iv) Iron, (v) manganese, selenium, zinc &amp; fluoride. Their importance in body in brief.</td>
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<td>11</td>
<td>Water and electrolyte</td>
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<td>Water and electrolyte balance and imbalance. Acid base balance and imbalance</td>
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<tr>
<td>12</td>
<td>Function tests</td>
<td>Function tests - (i) Liver function tests, (ii) Kidney function tests (iii) gastric function test</td>
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</table>

**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

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Topic</th>
<th>Time</th>
<th>Must Know</th>
<th>Desirable to Know</th>
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<tbody>
<tr>
<td>1</td>
<td>Haematology</td>
<td>80</td>
<td>1. Study of compound microscope</td>
<td>1. Absolute eosinophil count</td>
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<td>2. Introduction to haematology</td>
<td>2. Platelet count</td>
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<td>3. Collection of blood sample</td>
<td>3. Reticulocyte count</td>
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<td>4. Estimation of haemoglobin</td>
<td>4. Determination of hematocrit (demonstration)</td>
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<td>5. Hemocytometry</td>
<td>5. Determination of Blood indices (demonstration)</td>
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<td>6. Total RBC count</td>
<td>6. Osmotic fragility of red cells (demonstration)</td>
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<td>7. Total leucocytes count</td>
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<td>8. Preparation and examination of blood smear</td>
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<td>9. Differential Leucocyte count</td>
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<td>10. Determination of erythrocyte sedimentation rate (demonstration)</td>
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<td>11. Determination of blood group (demonstration)</td>
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<td>12. Determination of bleeding time and clotting time</td>
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</tbody>
</table>
| 2 | Human experiments | 60 | 1. General examination  
2. Respiratory system – clinical examination,  
   a. spirometry,  
   b. stethography  
3. Gastrointestinal system – clinical examination  
4. Cardiovascular system – blood pressure recording, radial pulse, , clinical examination  
   a. ECG  
5. Nerve muscle physiology – Mosso'sergography, handgrip dynamometer (demonstration)  
6. Nervous system – clinical examination  
7. Special senses – Clinical examination |
| 3 | Biochemistry | 60 | 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 |
| 4 | Tutorials/seminar/inter departmental symposium | 75 | 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 |

B.
### Theory Examination

<table>
<thead>
<tr>
<th>Types of question</th>
<th>No. Of questions</th>
<th>Marks per question</th>
<th>Total</th>
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<tbody>
<tr>
<td>Long Essays</td>
<td>02</td>
<td>10</td>
<td>20</td>
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<td>Short essays</td>
<td>10</td>
<td>05</td>
<td>50</td>
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<td>Short Answers</td>
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### Question Paper Blueprint for Paper 1

<table>
<thead>
<tr>
<th>Sl No</th>
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<th>Must Know</th>
<th>Desirable to Know</th>
<th>Long Essay</th>
<th>Short Essay</th>
<th>Short Answer</th>
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<tr>
<td>1</td>
<td>General Physiology and Biophysical science</td>
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<td>0</td>
<td>0</td>
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<td>6</td>
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<td>2</td>
<td>Body Fluids and RE System</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>Blood</td>
<td>15</td>
<td>3</td>
<td>1</td>
<td>1</td>
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<td>20</td>
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<td>4</td>
<td>Cardiovascular system</td>
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<td>15</td>
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<td>6</td>
<td>Renal Physiology</td>
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<td>7</td>
<td>Skin and Regulation of Body Temperature</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>8</td>
<td>Nerve muscle physiology</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>8</td>
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### Question Paper Layout for Paper 1

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<tr>
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<th>Marks per question</th>
<th>Total</th>
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<tr>
<td>Long Essays</td>
<td>02</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Short essays</td>
<td>10</td>
<td>05</td>
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<td>Short Answers</td>
<td>10</td>
<td>03</td>
<td>30</td>
</tr>
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### Long Essay

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Blood</td>
</tr>
<tr>
<td>2</td>
<td>CVS</td>
</tr>
</tbody>
</table>

**: 2 X 10 = 20 Marks**

### Short Essay

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Blood</td>
</tr>
<tr>
<td>4</td>
<td>CVS</td>
</tr>
<tr>
<td>5</td>
<td>Respiratory system</td>
</tr>
<tr>
<td>6</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Renal physiology</td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Skin and regulation of body temperature</td>
</tr>
<tr>
<td>11</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Nerve muscle physiology</td>
</tr>
</tbody>
</table>

**: 10 X 5 = 50 Marks**

### Short Answer

<table>
<thead>
<tr>
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<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>General physiology and biophysical sciences</td>
</tr>
<tr>
<td>14</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Body fluids and RE System</td>
</tr>
<tr>
<td>16</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Blood</td>
</tr>
<tr>
<td>18</td>
<td>CVS</td>
</tr>
<tr>
<td>19</td>
<td>Respiratory system</td>
</tr>
<tr>
<td>20</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Renal physiology</td>
</tr>
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</table>

**: 10 X 3 = 30 Marks**

---

### Question Paper Blueprint for Paper 2

<table>
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<tr>
<th>Sl No</th>
<th>Topic</th>
<th>Must Know</th>
<th>Desirable to Know</th>
<th>Long Essay</th>
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<th>Short Answer</th>
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<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Topic</td>
<td>10</td>
<td>5</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>---</td>
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<td>---</td>
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</tr>
<tr>
<td>1</td>
<td>Digestive System and Metabolism</td>
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<td>5</td>
<td>0</td>
<td>3</td>
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</tr>
<tr>
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<td>Endocrinology</td>
<td>10</td>
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<td>1</td>
<td>1</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>3</td>
<td>Reproductive System</td>
<td>5</td>
<td>6</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>Central Nervous System</td>
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<td>2</td>
<td>20</td>
</tr>
<tr>
<td>5</td>
<td>Special Senses</td>
<td>8</td>
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<td>2</td>
<td>10</td>
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<tr>
<td>6</td>
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<td>1</td>
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<td>Nutrition</td>
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<td>0</td>
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</table>

**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. 
8. CNS
9. Special senses
10. Endocrinology
11. 
12. Biochemistry

**Short Answer**: 10 X 3 = 30 Marks

13. CNS
14. CNS
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

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Topic</th>
<th>Time</th>
<th>Must Know</th>
<th>Desirable to Know</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Haematology</strong></td>
<td>80</td>
<td>Study of compound microscope</td>
<td>Absolute eosinophil count</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Introduction to haematology</td>
<td>Platelet count</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Collection of blood sample</td>
<td>Reticulocyte count</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Estimation of haemoglobin</td>
<td>Determination of hematocrit (demonstration)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Hemocytometry</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Total RBC count</td>
<td>Determination of Blood indices (demonstration)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Total leucocytes count</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Preparation and examination of blood smear</td>
<td>Osmotic fragility of red cells (demonstration)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Differential Leucocyte count</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>2</td>
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</tr>
<tr>
<td>3</td>
<td>Biochemistry</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| 2 | Human experiments |   |   |
|   |   | 60 |   |
|   | General examination |   |   |
|   | Respiratory system – clinical examination: spirometry, stethography |   |   |
|   | Gastrointestinal system – clinical examination |   |   |
|   | Cardiovascular system – blood pressure recording*, radial pulse,* clinical examination: ECG |   |   |
|   | Nerve muscle physiology – Mosso’s ergography, handgrip dynamometer (demonstration) |   |   |
|   | Nervous system – clinical examination reflexes* |   |   |
|   | Special senses – Clinical examination |   |   |
|   | Body temperature* |   |   |
|   |   |   |   |
| 3 | Biochemistry |   |   |
|   |   | 60 |   |
|   | Demonstration of uses of instruments or equipment |   |   |
|   | Qualitative analysis of carbohydrates and proteins (Analysis of lipid is presently not done) |   |   |
|   | Normal characteristics of urine |   |   |
|   | Abnormal constituents of urine |   |   |
|   |   |   |   |
| 4 |   |   |   |
| 5 |   |   |   |
| 6 |   |   |   |

Determination of erythrocyte sedimentation rate (demonstration)

Determination of blood group (demonstration)

Determination of bleeding time and clotting time

General examination

Respiratory system – clinical examination: spirometry, stethography

Gastrointestinal system – clinical examination

Cardiovascular system – blood pressure recording*, radial pulse,* clinical examination: ECG

Nerve muscle physiology – Mosso’s ergography, handgrip dynamometer (demonstration)

Nervous system – clinical examination reflexes*

Special senses – Clinical examination

Body temperature*

Demonstration of uses of instruments or equipment

Qualitative analysis of carbohydrates and proteins (Analysis of lipid is presently not done)

Normal characteristics of urine

Abnormal constituents of urine

Reproductive system – diagnosis of pregnancy (demonstration)

Qualitative estimation of glucose, total proteins, uric acid in blood

Liver function test

Kidney function test

Lipid profile

Interpretation and discussion of results of
### Practical Examination: Maximum Marks (including Viva): 200 Marks

#### 2.2.1. Haematology (any one): 15 marks

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Time</th>
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</thead>
<tbody>
<tr>
<td>Hemoglobin estimation, RBC total count, bleeding time, clotting time, WBC total count/differential</td>
<td>25 to 30 minutes</td>
</tr>
<tr>
<td>Procedural skills: 5 marks</td>
<td></td>
</tr>
<tr>
<td>Practical skills: 5 marks</td>
<td></td>
</tr>
<tr>
<td>Discussion: 5 marks</td>
<td></td>
</tr>
</tbody>
</table>

#### 2.2.2. Examination of urine for chemical constituents (any one): 15 marks

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Glucose, Albumin, Ketone Bodies, Bile Salt, Bile Pigments)</td>
<td>25 to 30 minutes</td>
</tr>
<tr>
<td>Practical skills: 5 marks</td>
<td></td>
</tr>
<tr>
<td>Identification of glucose and Protein in a given solution: 5marks</td>
<td></td>
</tr>
<tr>
<td>Discussion 5 marks</td>
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</table>

#### 2.2.2. Spotters (any six – three from physiology and three from biochemistry): 30 marks

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Identification</th>
<th>Description</th>
<th>Uses</th>
<th>Time per spotting</th>
</tr>
</thead>
<tbody>
<tr>
<td>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</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3 minutes</td>
</tr>
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</table>

#### 2.2.4. Clinical or Applied Physiology: 20 Marks

<table>
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<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examination of Blood pressure, Pulse, Temperature, Reflexes</td>
<td>25 to 30 minutes</td>
</tr>
<tr>
<td>Procedural Skills 05 marks</td>
<td></td>
</tr>
<tr>
<td>Practical Skills 05 marks</td>
<td></td>
</tr>
<tr>
<td>Discussion 10 marks</td>
<td></td>
</tr>
</tbody>
</table>

#### 2.2.5. Journal or Practical record: 10 Marks

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physiology: 10 Marks</td>
<td>25 to 30 minutes</td>
</tr>
<tr>
<td>Biochemistry: 10 Marks</td>
<td></td>
</tr>
</tbody>
</table>

#### Viva voce (oral): 50 Marks
Basic Books


Reference Books


Appendix – Checklist for practical skills

**Blood Pressure Measurement Procedure**

<table>
<thead>
<tr>
<th>Observation</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performed beginning tasks- CONSENT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cleaned earpieces of stethoscope.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Observation</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performed beginning tasks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positioned resident, sitting or lying down.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Located radial pulse at wrist.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Placed fingers over radial artery. Student does this first, then evaluator</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Observation</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selects appropriate site and thermometer type.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>”Zeroes” or shakes down glass thermometer as needed.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inserts thermometer in sheath or uses thermometer designated only for the patient.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inserts in chosen route/site.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral: Places thermometer tip under the tongue in the posterior sublingual pocket (right or left of frenulum). Asks patient to keep lips closed.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>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</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Axillary: Dries axilla; Places thermometer tip in the middle of the axilla; lowers patient’s arm.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tympanic membrane: Positions the patient’s head to one side and straighten the ear canal.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>For an adult, pulls the pinna up and back. 2) For a child, pull the pinna down and back</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>No</th>
<th>Observation</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deep Tendon Reflexes: Using the patella hammer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The patella hammer should be held nearer the end.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The movement as the tendon is being struck with the hammer should be delivered from the wrist.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The head of the hammer should be allowed to fall with gravity on the intended forefinger or muscle tendon.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>An observation of the rapidity and strength of muscle contraction / jerk is observed.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A comparison is made with the opposite side.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Results are reported as: Normal / present Increased / brisk Decreased / absent.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Biceps Jerk (C5, C6)

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Forefinger of one hand is placed on the biceps tendon.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The biceps tendon is struck by the patella hammer.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>An observation is made of contraction of biceps with flexion of the forearm at the elbow followed by prompt relaxation.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>For the corresponding biceps tendon (furthest away from the examiner’s side) the thumb of the hand may be substituted for</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<tr>
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**Brachioradialis (Supinator) Jerk (C5, C6)**

- The patient’s elbow is flexed and pronated.
- The student places two fingers over the lower end of the patient’s radius just above the wrist.
- The tendon of the brachioradialis is struck on examiner’s two fingers placed over this area.
- An observation is made of contraction of the brachioradialis with flexion of the elbow

**Triceps Jerk (C7, C8)**

- Student supports the wrist with one hand as the forearm is pronated and resting across the patient’s body
- The triceps tendon is struck with the tendon hammer.
- An observation is made of the triceps contracting with elbow extension

**Knee Jerk (L3, L4)**

- Student slides his arms under the patient’s slightly flexed knees and supports them.
- The tendon hammer is struck over the infrapatellar tendon.
- An observation is made of Quadriceps contracting causing extension of the knee

**Ankle Jerk (S1, S2)**

- 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.
- The Archilles tendon is struck with the tendon hammer.
- An observation is made of Plantar flexion of the foot

**Superficial Reflexes**

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
- 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
- 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)
- 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:

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Topic</th>
<th>Time allotted</th>
<th>Must know</th>
<th>Desirable to know</th>
<th>Nice to know</th>
</tr>
</thead>
</table>
| 1 | History of Pharmacy with emphasis on emergence of Homoeopathic Pharmacy | 2 hrs | • 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 |
<table>
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<th>aspect Relationship of Hom. Pharmaceutics with allied sciences</th>
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</table>
| 2 | Official Homoeopathic Pharmacopoeia (German, Britain, USA, India) | 3 hrs | - Definition of Hom. Pharmacopoeia  
- Objectives of Hom. Pharmacopoeia  
- Types of Hom. Pharmacopoeias  
- General plan of pharmacopoeias (monograph)  
- Official Hom. Pharmacopoeia (German, Britain, USA, India)  
- Functions of Homoeopathic Pharmacopoeia  
- History & development of HPI  
- Unofficial Homoeopathic Pharmacopoeia with examples  
- History & development of Pharmacopoeia  
- FHP |
| 3 | Important terminologies like scientific names, common names, synonyms | 1 hr | - Definition of scientific names, common names, synonyms  
- Demerits of common names  
- Advantages & disadvantages of scientific names or botanical name |
| 4 | Definitions in Homoeopathic pharmacy | 1 hr | Pharmacaceutics, Pharmacologist Pharmacomania, Pharmacophobia Pharmacophobias, 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 Pharmacography, Pharmacopsychosis, Pharmacokinetics, Pharmacotherapy, Pharmacopedics, Pharmacophore, Pharmacopollaxy, Characteristic |
| 5 | Components of pharmacy | 6 hrs | • 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 | s Symptoms, Common Symptoms, Concomitant Symptom, Clinical symptom |
|---|---|---|---|
| 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, tablespoon, teaspoon, teacupful, tumblerful | • 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 Homoeopathic medicines | |

II. Raw Materials: Drug and Vehicle - 21 hrs
| 1 | Sources of drugs (taxonomic classification with reference to utility) | 4 hrs | Different sources of Homoeopathic drugs
Vegetable kingdom, Animal kingdom, Mineral kingdom, Nosodes, Sarcodes, Imponderabilia, Synthetic source, with reference to their clinical utility

1. **Vegetable kingdom** (Morphological classification):
   Drugs prepared from whole plant, roots & rhizome, stem, leaves, flowers, fruits, seeds, bark, wood, extract & other plant constituents

2. **Animal kingdom**: 
   Drugs prepared from whole living animal, whole dried animal, different parts, and secretion of animal, including ophiotoxins

3. **Mineral kingdom & Chemicals**
   Drugs prepared from acids, elements, compounds, minerals, mineral spring water

4. **Nosodes**
   Definition & examples for nosodes prepared from human, animal & plant

5. **Sarcodes**
   Definition & examples of sarcodes prepared from hormones, extracts & whole endocrine gland, including Lacs

6. **Imponderabilia**
   Definition & examples for natural & artificial source. | • Taxonomic classification of plant drugs with examples (Benthem & Hooker classification)
• Classification of animal drugs with examples **Non vertebrate Phylum**– arthropoda, porifera, coelenterata, annelida, mollusca, echinodermata
• **Vertebrate Class**– osteichthes, amphibian, reptilian, aves, mammalia | • Different sources of Homoeopathic drugs – Allergodes & Isodes
• Classification & preparation of nosodes per HPI
• Bowel nosodes
• Tissue remedies
• Bach flower remedies |
| 2 | Collection of drug substances | 2 hrs | - 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 | - 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  
- **Purified water** – 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 |  
- Classification of vehicles with examples  
- Lanolin  
- Starch- source & uses  
- 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 &  |
alcohol with their strength, uses & conversions to different varieties of alcohol
Proof spirit (alcoholometry) – definition & significance
• 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

| 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 | • 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 | • 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 |
<table>
<thead>
<tr>
<th>2</th>
<th>Various scales used in Homoeopathic pharmacy</th>
<th>5 hrs</th>
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<tbody>
<tr>
<td></td>
<td>method of mother tincture preparation</td>
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<td></td>
<td>- Importance of moisture content of plant</td>
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<td>- Definition of maceration, percolation, menstruum, merc, magma, digestion</td>
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<td></td>
<td>- Procedure of maceration</td>
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<td>- Diagrammatic description of percolator</td>
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<td>- Procedure of percolation</td>
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<td>- Preparation of percolator (tow)</td>
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<td>- Preparation of drug substances for percolation</td>
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<td>- Actual process of preparation of mother tincture</td>
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<td>of mother tincture preparation</td>
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<td></td>
<td>- Mechanism of percolation – different forces acting during percolation like gravitational force, capillary force, osmotic pressure &amp; surface tension</td>
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<td></td>
<td>- Difference between percolation and maceration</td>
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<th>Various scales used in Homoeopathic pharmacy</th>
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<td>Different scales (ratio) used in Hom. Pharmacy - decimal scale, centesimal scale &amp; fifty millesimal scale</td>
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<tr>
<td></td>
<td><strong>Decimal</strong> scale: inventor, principle, designation &amp; application (utility) of the scale</td>
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<td>Preparation of potencies under decimal scale – liquid potency and solid potency</td>
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<td><strong>Centesimal</strong> scale: inventor, principle, designation &amp; application (utility) of the scale</td>
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<td></td>
<td>Preparation of potencies under centesimal scale – liquid potency and solid potency</td>
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<td>Relation between decimal scale and centesimal scale</td>
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<td>Difference between centesimal potency and fifty millesimal potency</td>
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<td>Background of fifty millesimal scale of potentisation</td>
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</table>
| 3 | Drug dynamization or potentization | 4 hrs | - 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 succession | - Difference between potency and dilution  
- Advantages of succussion over trituration | - History & development of the theory of dynamization  
- Post-Hahnemannian potentization |
| 4 | External | 4 hrs | - List of external | - Hahnemanna  
- Glycerol of |
| 5 | Doctrine of signature | 1 hr | • Definition  
• Examples | Utility of this theory in Homoeopathy | History of doctrine of signature |
| 6 | Posology (focus on basic principles; related aphorisms) | 5 hrs | • 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 | • Definition of Prescription  
• Principles of writing an ideal prescription (norms, forms, legibility, accuracy, | Writing model prescription based on cases | -- |
| 8 | Concept of placebo | 1 hr | - Synonyms  
- Definition  
- Utility of placebo | Hahnemannia n 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 pharmaco-vigilance | 1 hr | - Meaning of drug reaction  
- Drug interactions  
- Antidotes  
- Inimicals  
- Definition of pharmaco-vigilance | Medication errors – overdose, misuse & abuse of a drug as well as drug  
- Incompatible remedies  
- Drug safety with special reference to HPI  
- Hazards | -- |
### Importance of Pharmaco-vigilance

- Exposure during pregnancy & breastfeeding
- Associated with use of external applications & other pharmaceutical products
- Adverse event reporting
- Risk management

### IV. Pharmacodynamics: 14 hrs

| 1 | Homoeopathic pharmacodynamics | 3 hrs | Definition of pharmacology
| Branches of pharmacology
| Definition of pharmacodynamics
| Procedure for ascertaining disease producing power
| a) Homoeopathic drug proving
| b) Toxicological findings
| c) Laboratory experiments
| Drug action on healthy human being (three fold action on human being)
| – chemical action, mechanical action, & dynamic action
| Dynamic effects on healthy human being according to Hahnemann – primary action & secondary action

| 2 | Drug proving (related aphorisms 105-145 of Organon of medicine) and merits& demerits | 5 hrs | Definition of drug proving
| Pre-requisites (essentials) of drug proving
| Reference of Organon
| Objectives of drug

| 3 | Dynamic effects on healthy human being according to Carol Dunham – generic action & specific action
| Difference between Homoeopathic pharmacodynamics & that of old school

| 4 | Definition of dynamic power with examples
| Relative merits and demerits of employing excessive large dose, moderate dose and infinitesima l dose

| 5 | History of drug proving
| Recent advances in drug proving
<table>
<thead>
<tr>
<th>of proving on humans and animals</th>
<th>proving</th>
<th>(Homoeopathic pathogenetic trial/ HPT) Methodologic al flaws in Hahnemannian drug-proving</th>
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<tbody>
<tr>
<td></td>
<td>• Criteria for selection of provers</td>
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<td>• Types of provers – ideal prover, best prover &amp; idiosyncratic prover</td>
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<td>• Merits and demerits of proving on animals</td>
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<td>• Merits and demerits of proving on sick persons</td>
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<td>• Merits of proving on healthy human beings</td>
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<tr>
<td></td>
<td>• Methods of preparation of drugs for proving</td>
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<td>• Dose and mode of administration of drugs during proving</td>
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<td>• Recording of symptoms during proving including importance of day book</td>
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<td>• Precautions to be taken during proving – regarding medicine &amp; prover</td>
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<td>• Conditions when medicine is to be considered to have been thoroughly proved</td>
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<td>3 Pharmacological action, study of drugs listed in Appendix-A</td>
<td>6 hrs</td>
<td>Classification of drugs according to their pharmacological actions</td>
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<tr>
<td></td>
<td>• Definition of drug action</td>
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<td>• Principles of drug action</td>
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<td>• Definition of physiological action</td>
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<td>• Physiological action of 30 drugs</td>
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<td>V. Quality Control: 11 Hrs</td>
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<tr>
<td>1 Standardization of Homoeopathic medicines, raw materials &amp; finished products</td>
<td>8 hrs</td>
<td>Standardization of vehicles &amp; finished products</td>
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<tr>
<td></td>
<td>• Introduction &amp; definition</td>
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<td></td>
<td>• Objectives of quality control in Homoeopathy</td>
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<td>• Sampling &amp; Official sample</td>
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<td>• Methods of standardization</td>
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<td>2 Good manufacturing practices;</td>
<td>2 hrs</td>
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<td>• Definition of GMP</td>
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<td>• Guidelines for GMP</td>
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<td>• Ideal Homoeopathic manufactory</td>
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<td>• Sieving</td>
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<td>• Mixing</td>
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<td>• Extraction</td>
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</table>
| **industrial pharmacy** | • Standard operating procedures  
• Important lab methods such as dilution, solution, sedimentation, precipitation, crystallization, decantation, filtration, sublimation, moisture content estimation | • Drying  
• Sterilization  
• Pulverizing  
• Marketing & finance Administration of Pharmaceuticals |

| 3 | Homoeopathic pharmacopoeia laboratory-functions & activities, relating to quality control of drugs. | 1 hr | • Fixation of raw material standards  
• Finished product standards | HPL publications | • Verification of standards  
• Drug testing of survey samples  
• Drug testing of referred samples  
• Collection of medicinal plants Reference nosode collection |

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<tr>
<th><strong>VI. Legislations pertaining to Pharmacy: 7 Hrs</strong></th>
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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.

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<tr>
<th>No</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1</td>
<td>Estimation of size of globules</td>
<td>2 Hr</td>
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<tr>
<td>2</td>
<td>Medication of globules and preparation of doses with sugar of milk and distilled water</td>
<td>2 Hr</td>
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<td>3</td>
<td>Purity test of sugar of milk, distilled water and ethyl alcohol</td>
<td>6 Hrs</td>
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<td>4</td>
<td>Determination of specific gravity of distilled water and ethyl alcohol</td>
<td>2 Hrs</td>
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<tr>
<td>5</td>
<td>Preparation of dispensing alcohol and dilute alcohol from strong alcohol</td>
<td>2 Hrs</td>
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<tr>
<td>6</td>
<td>Trituration of one drug each in decimal and centesimal scale.</td>
<td>4 Hrs</td>
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<tr>
<td>7</td>
<td>Succussion in decimal scale from Mother Tincture to 6X potency.</td>
<td>2 Hrs</td>
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<tr>
<td>8</td>
<td>Succussion in centesimal scale from Mother Tincture to 3C potency.</td>
<td>2 Hrs</td>
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<tr>
<td>9</td>
<td>Conversion of Trituration to liquid potency: Decimal scale 6X To 8X potency</td>
<td>1 Hrs</td>
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<tr>
<td>10</td>
<td>Conversion of Trituration to liquid potency: Centesimal scale 3C to 4C potency</td>
<td>1 Hrs</td>
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<tr>
<td>11</td>
<td>Preparation of 0/1 potency (LM scale) of 1 Drug</td>
<td>2 Hrs</td>
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</table>
12. Preparation of external applications – lotion glycerol, liniment, ointment  
13. Laboratory methods – sublimation, distillation, decantation, filtration, crystallisation  
14. Writing of prescription  
15. Dispensing of medicines  
17. Identification of drugs (listed in Appendix B)-  
   i) Macroscopic and Microscopic characteristic of drug substances – minimum 05 drugs;  
   ii) Microscopic study of triturations of two drugs (up to 3X potency)  
18. Estimation of moisture content using water bath.  
19. Preparation of mother tincture – maceration and percolation  
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

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Aconite nap</td>
<td>16.</td>
<td>Glonine</td>
</tr>
<tr>
<td>2.</td>
<td>Adonis vernalis</td>
<td>17.</td>
<td>Hydrastis can</td>
</tr>
<tr>
<td>3.</td>
<td>Allium cepa</td>
<td>18.</td>
<td>Hyoscyamus nig</td>
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<tr>
<td>5.</td>
<td>Arsenic alb</td>
<td>20.</td>
<td>Lachesis</td>
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<td>7.</td>
<td>Cactus G</td>
<td>22.</td>
<td>Mercurius scor</td>
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<tr>
<td>8.</td>
<td>Cantharis</td>
<td>23.</td>
<td>Naja tri</td>
</tr>
<tr>
<td>12.</td>
<td>Coffea crud</td>
<td>27.</td>
<td>Stannum met</td>
</tr>
<tr>
<td>13.</td>
<td>Crataegus</td>
<td>28.</td>
<td>Stramonium</td>
</tr>
<tr>
<td>14.</td>
<td>Crotalus hor</td>
<td>29.</td>
<td>Symphytum</td>
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<tr>
<td>15.</td>
<td>Gelsemium</td>
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<td>Tabacum</td>
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</table>
APPENDIX – B: List of Drugs for Identification

I. Vegetable Kingdom

<table>
<thead>
<tr>
<th>No.</th>
<th>Drug Name</th>
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<tbody>
<tr>
<td>1.</td>
<td>Aegle folia</td>
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<tr>
<td>2.</td>
<td>Anacardium orientale</td>
</tr>
<tr>
<td>3.</td>
<td>Andrographis penniculata</td>
</tr>
<tr>
<td>4.</td>
<td>Calendula offic</td>
</tr>
<tr>
<td>5.</td>
<td>Cassia sophera</td>
</tr>
<tr>
<td>6.</td>
<td>Cinchona off</td>
</tr>
<tr>
<td>7.</td>
<td>Cocculus indicus</td>
</tr>
<tr>
<td>8.</td>
<td>Coffea cruda</td>
</tr>
<tr>
<td>9.</td>
<td>Colocynth citrallus</td>
</tr>
<tr>
<td>10.</td>
<td>Crocus sativa</td>
</tr>
<tr>
<td>11.</td>
<td>Croton tig</td>
</tr>
<tr>
<td>12.</td>
<td>Cynodon dact</td>
</tr>
<tr>
<td>13.</td>
<td>Ficus religiosa</td>
</tr>
<tr>
<td>14.</td>
<td>Holerrhena antidysentrica</td>
</tr>
<tr>
<td>15.</td>
<td>Hydrocotyle</td>
</tr>
<tr>
<td>16.</td>
<td>Justisia adhatoda</td>
</tr>
<tr>
<td>17.</td>
<td>Lobelia inflata</td>
</tr>
<tr>
<td>18.</td>
<td>Nux vomica</td>
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<tr>
<td>19.</td>
<td>Ocimum</td>
</tr>
<tr>
<td>20.</td>
<td>Opium</td>
</tr>
<tr>
<td>21.</td>
<td>Rauwolfia serpentine</td>
</tr>
<tr>
<td>22.</td>
<td>Rheum</td>
</tr>
<tr>
<td>23.</td>
<td>Saraca indica</td>
</tr>
<tr>
<td>24.</td>
<td>Senna (cassia acutifolia)</td>
</tr>
<tr>
<td>25.</td>
<td>Stramonium met</td>
</tr>
<tr>
<td>26.</td>
<td>Vinca minor</td>
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</table>

II. Chemicals or Minerals

<table>
<thead>
<tr>
<th>No.</th>
<th>Drug Name</th>
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<tbody>
<tr>
<td>1.</td>
<td>Acetic acid</td>
</tr>
<tr>
<td>2.</td>
<td>Alumina</td>
</tr>
<tr>
<td>3.</td>
<td>Argentum metallicum</td>
</tr>
<tr>
<td>4.</td>
<td>Argentum nitricum</td>
</tr>
<tr>
<td>5.</td>
<td>Arsenic alb</td>
</tr>
<tr>
<td>6.</td>
<td>Calcarea carb</td>
</tr>
<tr>
<td>7.</td>
<td>Carbo veg (charcoal)</td>
</tr>
<tr>
<td>8.</td>
<td>Graphites</td>
</tr>
<tr>
<td>9.</td>
<td>Natrum mur</td>
</tr>
<tr>
<td>10.</td>
<td>Silicea</td>
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<tr>
<td>11.</td>
<td>Sulphur</td>
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</table>

III. Animal Kingdom

<table>
<thead>
<tr>
<th>No.</th>
<th>Drug Name</th>
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<tbody>
<tr>
<td>1.</td>
<td>Apis mellifica</td>
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<td>2.</td>
<td>Blatta orientalis</td>
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<tr>
<td>3.</td>
<td>Formica rufa</td>
</tr>
<tr>
<td>4.</td>
<td>Sepia</td>
</tr>
<tr>
<td>5.</td>
<td>Tarentula cubensis</td>
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</tbody>
</table>

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

E. Examinations:

1. Theory (100 marks)

Types of questions with Marks

<table>
<thead>
<tr>
<th>Type of Questions</th>
<th>No. of Questions</th>
<th>Marks per Question</th>
<th>Total</th>
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<tr>
<td>Long Essays (LE)</td>
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<td>10</td>
<td>20</td>
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<tr>
<td>Short Essays (SE)</td>
<td>10</td>
<td>05</td>
<td>50</td>
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<tr>
<td>Short Answers (SA)</td>
<td>10</td>
<td>03</td>
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MAXIMUM MARKS 100

Question Paper Blueprint

| No. | Topic                  | Marks | Question type |
|-----|------------------------|-------|---------------|              |

137
<table>
<thead>
<tr>
<th>I. General Concepts and Orientation</th>
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<tbody>
<tr>
<td>1. History of pharmacy with emphasis on emergence of Homoeopathic Pharmacy.</td>
<td>10</td>
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<tr>
<td>2. Official Homoeopathic Pharmacopoeia (Germany, Britain, U.S.A, India)</td>
<td></td>
</tr>
<tr>
<td>3. Important terminologies like scientific names, common names, synonyms.</td>
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</tr>
<tr>
<td>4. Definitions in Homoeopathic Pharmacy.</td>
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</tr>
<tr>
<td>5. Components of Pharmacy.</td>
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</tr>
<tr>
<td>6. Weights and measurements.</td>
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<tr>
<td>7. Nomenclature of Homoeopathic drugs with their anomalies.</td>
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<table>
<thead>
<tr>
<th>II. Raw Material : Drugs and Vehicles</th>
<th></th>
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<tbody>
<tr>
<td>1 Source of drugs (taxonomic classification, with reference to utility)</td>
<td>26</td>
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<tr>
<td>2 Collection of drug substances</td>
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</tr>
<tr>
<td>3 Vehicles</td>
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</tr>
<tr>
<td>4 Homoeopathic Pharmaceutical Instruments and appliances</td>
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</table>

<table>
<thead>
<tr>
<th>III. Homoeopathic Pharmaceutics</th>
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<tbody>
<tr>
<td>1. Mother tincture and its preparation – old and new methods.</td>
<td>36</td>
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<tr>
<td>2. Various scales used in Homoeopathic Pharmacy</td>
<td></td>
</tr>
<tr>
<td>3. Drug dynamisation or potentisation</td>
<td></td>
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<tr>
<td>4. External applications (focus on scope of Homoeopathic lotion, glycerol, liniment and ointment).</td>
<td></td>
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<tr>
<td>5. Doctrine of Signature</td>
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<tr>
<td>6. Posology (focus on basic principles; related aphorisms of Organon of medicine).</td>
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<tr>
<td>7. Prescription (including abbreviations)</td>
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<tr>
<td>8. Concept of placebo</td>
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<tr>
<td>10. Dispensing of medicines</td>
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<thead>
<tr>
<th>IV. Pharmacodynamics</th>
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<tr>
<td>1. Homoeopathic Pharmacodynamics</td>
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<tr>
<td>2. Drug Proving (related aphorism 105-145 of organon of medicine) and merits and de-merits of Drug Proving on Humans and Animals</td>
<td></td>
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<tr>
<td>3. Pharmacological study of drugs listed in Appendix –A</td>
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</table>

<table>
<thead>
<tr>
<th>V. Quality Control</th>
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<tbody>
<tr>
<td>1. Standardization of Homoeopathic medicines, raw materials and finished product</td>
<td>09</td>
</tr>
<tr>
<td>2. Good manufacturing practices; industrial pharmacy.</td>
<td></td>
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</tbody>
</table>
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)
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)

Total 11 5 + 3 + 3 (1 SE + 2 SA) 100

Question Paper Layout
Long Essay : 2 X 10 = 20 Marks
1. Raw material: drug and vehicles
2. Homoeopathic pharmaceutics

Short Essay : 10 X 5 = 50 Marks
3. General concepts and orientation
4. Raw material: drug and vehicles
5. Homoeopathic pharmaceutics
6. Pharmacodynamics
7. Legislation pertaining to pharmacy

Short Answer : 10 X 3 = 30 Marks
13. Raw material: drug and vehicles
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<td></td>
<td>Description: 1 Mark</td>
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<tr>
<td>2</td>
<td>Spotters: 2 Marks X 5 Specimen</td>
<td>10</td>
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<tr>
<td></td>
<td>Identification: 1 Mark</td>
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<tr>
<td></td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Experiment</td>
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<td>Procedural Skills: 5 Marks</td>
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<td></td>
<td>Practical Skills: 5 Marks</td>
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<td></td>
<td>Discussion: 5 Marks</td>
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<tr>
<td>4</td>
<td>Practical Record Book</td>
<td>10</td>
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<tr>
<td>5</td>
<td>Herbarium documentation</td>
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<td><strong>Viva voce</strong></td>
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</table>

**List of Specimen for identification**

I. Vegetable Kingdom

<table>
<thead>
<tr>
<th>No</th>
<th>Specimen</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Aegle folia</td>
<td>14. Holerrhena antidysentrica</td>
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<td>Anacardium orientale</td>
<td>15. Hydrocotyle</td>
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<tr>
<td>3</td>
<td>Andrographis penniculata</td>
<td>16. Justisia adhatoda</td>
</tr>
<tr>
<td>4</td>
<td>Calendula officinalis</td>
<td>17. Lobelia inflata</td>
</tr>
<tr>
<td>5</td>
<td>Cassia sophera</td>
<td>18. Nux vomica</td>
</tr>
<tr>
<td>6</td>
<td>Cinchonna off</td>
<td>19. Ocimum</td>
</tr>
<tr>
<td>7</td>
<td>Cocculus indicus</td>
<td>20. Opium</td>
</tr>
<tr>
<td>8</td>
<td>Coffea cruda</td>
<td>21. Rauwolfia serpentine</td>
</tr>
<tr>
<td>9</td>
<td>Colocynth citrallus</td>
<td>22. Rheun</td>
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<td>10</td>
<td>Crocus sativa</td>
<td>23. Saraca indica</td>
</tr>
<tr>
<td>11</td>
<td>Croton tig</td>
<td>24. Senna (cassia acutifolia)</td>
</tr>
<tr>
<td>12</td>
<td>Cynodon dact</td>
<td>25. Stramonium met</td>
</tr>
<tr>
<td>13</td>
<td>Ficus religiosa</td>
<td>26. Vinca minor</td>
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</table>
II. Chemicals or Minerals

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<thead>
<tr>
<th>No.</th>
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<tr>
<td>1.</td>
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<td>3.</td>
<td>Argentum metallicum</td>
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<td>4.</td>
<td>Argentum nitricum</td>
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<td>5.</td>
<td>Arsenic alb</td>
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<td>6.</td>
<td>Calcarea carb</td>
</tr>
<tr>
<td>7.</td>
<td>Carbo veg (charcoal)</td>
</tr>
<tr>
<td>8.</td>
<td>Graphites</td>
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<tr>
<td>9.</td>
<td>Natrum mur</td>
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<td>Phosphorus</td>
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<td>Silicea</td>
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<td>Sulphur</td>
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III. Animal Kingdom

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<thead>
<tr>
<th>No.</th>
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<tbody>
<tr>
<td>1.</td>
<td>Apis mellifica</td>
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<td>3.</td>
<td>Formica rufa</td>
</tr>
<tr>
<td>4.</td>
<td>Sepia</td>
</tr>
<tr>
<td>5.</td>
<td>Tarentula cubensis</td>
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</table>

List of Spotters for Identification

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

RECOMMENDED BOOKS

Basic Books


Reference Books

- Govt. of India, Ministry of Health & Family Welfare, New Delhi (1971 to 2006). *Homoeopathic Pharmacopoeia of India (1-9 Vol.)*
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 homoeopathy.
5. Differentiate between inductive and deductive logic in the context of understanding of fundamentals of Homoeopathy
6. Discuss patient as in the dimensions of a person, disposition, state of mind and body with reference 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

<table>
<thead>
<tr>
<th>Sl. no</th>
<th>Topic</th>
<th>Time</th>
<th>Must Know</th>
<th>Desirable to know</th>
<th>Nice to know</th>
<th>Marks</th>
<th>Type of questions</th>
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<td>1</td>
<td>Introductory lectures: 10 hrs</td>
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<tr>
<td>1.1</td>
<td>Evolution of medical practice of the ancients: 1 hr</td>
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<td></td>
<td>Prehistoric medicine</td>
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<td>Concept of disease and treatment</td>
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<td></td>
<td>Greek medicine</td>
<td></td>
<td>Concept of disease and treatment of Hippocrates</td>
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<tr>
<td></td>
<td>Chinese medicine</td>
<td></td>
<td>Concept of disease and treatment</td>
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<td>Indian medicine</td>
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<td>Renaissance</td>
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<td>Status of practice</td>
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</tbody>
</table>
Tracing the empirical, rationalistic and vitalistic thoughts of medicine

1.2 Short history of Hahnemann’s life, his contributions and discovery of Homoeopathy, situation leading to discovery of Homoeopathy 2 hr Short history of Hahnemann’s life, his contributions 10/5/3

1.3 Brief Life history and contributions of early pioneers of Homoeopathy like: 1 hr

- C. V. Boenninghausen
- J. T. Kent
- C. Hering
- Rajendra Lal Dutta
- M. L. Sircar

Conversion to Homoeopathy and contributions

1.4 History and Development of Homoeopathy in: 1 hr

Introduction of Homoeopathy to Govt. patronage 5/3
Indonesia
Development of Homoeopathy in India

USA, European Countries
Introduction and development of Homoeopathy

1.5 Fundamental principles of Homoeopathy

2 hrs

Law of

Law of

Law of

Law of

Law of

Theory of

Vital force.

Theory of chronic diseases.

Doctrine of drug dynamisation

Doctrine of Drug proving

1.6 Basic concept of Health, Disease and Cure: 2 hrs

1.6.1 Health:

Hahnemann’s concept and modern concept

Hahnemann’s concept and modern concept

1.6.2 Disease:

Hahnemann’s concept and modern concept

Hahnemann’s concept and modern concept

1.6.3 Cure :

Hahnemann’s concept and

Hahnemann’s concept and
<table>
<thead>
<tr>
<th>Section</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.7</strong></td>
<td>Different editions &amp; construction of Hahnemann’s Organon of Medicine. 6th editions of Organon, year of publication, number of Aphorisms; Changes from the previous edition, Translators.</td>
</tr>
<tr>
<td><strong>3</strong></td>
<td>Psychology: 7 hrs. Definition of Psychology Scope of Psychology. Basics of Psychology. Study of behavior and intelligence. Basic concepts of Sensations. 3.1 Basics of Psychology. Definition of Psychology Scope of Psychology. 3.2 Study of behavior and intelligence. Definition of Intelligence, Intelligence LQ and mental age. Definition of behavior. 3.3 Basic concepts of Sensations. Definition of Sensations Absolute threshold.</td>
</tr>
<tr>
<td><strong>10/5/3</strong></td>
<td>15</td>
</tr>
</tbody>
</table>
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.

Difference threshold
Weber’s law

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 Dreams

Dream concept and analysis

3

4 Aphorisms 1 to 28 from Organon of Medicine: 8 hrs

Aph 1 – physicians mission, restoration of health, sick, cure

Aph 2 – ideal cure, comprehensible principles

Theoretical medicine

10 10/5/3

146
Aph3 - requisite knowledge of the physician

Knowledge of disease

Knowledge of medicine

Knowledge of application of drug knowledge to the disease knowledge

Judicious employment of medicine

True practitioner of healing art

Aph 4 – preserver of health

Aph 5, 7, 8

Aph 6 - unprejudiced observer

Aph 7 – totality of symptoms

Symptom.

Totality of symptom &

Portrait of disease

Aph 9 – 18 qualities of vital force, role of vital force in health, disease and cure, dynamic influence

Aph 26 - 28 –

cito, tito, et jacunde

Obstacles to cure

Homoeopathic Prophylaxis

Physical constitution

Cessat causa

cessat effect

Statement of Hufeland
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:


Advanced:

- Munn NL (year of publication). *Introduction of Psychology*. Oxford & IBH publishing House, Bombay
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>
<thead>
<tr>
<th>Sl No</th>
<th>Topic</th>
<th>Hours</th>
<th>Must Know</th>
<th>Desirable to know</th>
<th>Nice to know</th>
<th>Marks</th>
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<tbody>
<tr>
<td>1</td>
<td>Basics of Materia Medica</td>
<td>6</td>
<td>Definition of Materia Medica</td>
<td>List types of Materia Medica</td>
<td>Application of other Materia Medica.</td>
<td>11</td>
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<tr>
<td></td>
<td>Definition of Materia Medica</td>
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<td>Basic concept of Materia Medica</td>
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<tr>
<td></td>
<td>Basic concept of Materia Medica</td>
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<td>Basic construction of Materia Medica</td>
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<td>Basic construction of Materia Medica</td>
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<tr>
<td>2</td>
<td>Definition of Homoeopathic Materia Medica.</td>
<td>2</td>
<td>Definition of Homoeopathic Materia Medica</td>
<td>Difference between Homoeopathic Materia Medica</td>
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<td>3</td>
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<td></td>
<td></td>
<td></td>
<td>according to different authors</td>
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</table>
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


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:

<table>
<thead>
<tr>
<th>Sl no</th>
<th>Topic</th>
<th>Marks</th>
<th>Source</th>
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<tr>
<td>1</td>
<td>Basic concept of Materia Medica</td>
<td>3</td>
<td></td>
<td>1SA</td>
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<tr>
<td></td>
<td>Basic construction of Materia Medica</td>
<td>5</td>
<td></td>
<td>1SE</td>
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<tr>
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<td>Definition of Materia Medica</td>
<td>3</td>
<td></td>
<td>1SA</td>
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<td></td>
<td>Definition of homoeopathic Materia Medica</td>
<td>3</td>
<td></td>
<td>1SA</td>
</tr>
<tr>
<td></td>
<td>Basic concept and construction of Materia Medica</td>
<td>10</td>
<td>Table -1</td>
<td>1LE</td>
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<td></td>
<td>Classification of Homoeopathic Materia Medica</td>
<td>11</td>
<td></td>
<td>1SE, 2SA</td>
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<td></td>
<td>Sources of Homoeopathic Materia Medica</td>
<td>10</td>
<td></td>
<td>2SE</td>
</tr>
<tr>
<td></td>
<td>Scope and limitation of Homoeopathic Materia Medica</td>
<td>5</td>
<td></td>
<td>1SE</td>
</tr>
</tbody>
</table>

References
Definition of Materia Medica:
Basics of Materia Medica:
- https://en.wikipedia.org/wiki/Materia_medica

Construction of Materia Medica:

Forensic Medicine and Toxicology
II BHMS

Instructions:
- 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.
- 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.
- 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.
- 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

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Topic</th>
<th>Hours</th>
<th>Must know</th>
<th>Desirable to know</th>
<th>Nice to know</th>
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</thead>
</table>

151
<p>| 1 | Introduction Medical law &amp; 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 &amp; types of euthanasia, | History of forensic medicine in India. Medical indemnity insurance. |</p>
<table>
<thead>
<tr>
<th>2</th>
<th>Legal procedure</th>
<th>4hrs</th>
<th>Inquest definition, police inquest, magistrate inquest, courts of law &amp; 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.</th>
<th>Coroner’s inquest, medical examiner system, exceptions to oral evidence, dying deposition, conduct &amp; duties of doctor in the witness box.</th>
<th>Jury, Conduct &amp; duties of doctor at the scene of crime.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Identification</td>
<td>7hrs</td>
<td>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 &amp; types, differences between male skull &amp; female skull, male &amp; female pelvis, male &amp; female mandible, male &amp; female femur, differences between permanent &amp; 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</td>
<td>Foot prints, lip prints, Changes in symphysis pubis &amp; skull with age,</td>
<td></td>
</tr>
</tbody>
</table>
finger printing, types of finger print, medico legal importance of finger prints, scars-definition, characters, medicollegal importance. Tattoo marks-definition dyes used, complication, duration, & erasure of tattoo & medico legal importance. Medico legal importance of eyes, hair & teeth Difference between animal & human hair, Medullary index of bones Age determination as a whole Age determination of foetus.

| 4 | Death & its medico legal importance. | 13hrs | 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. Asphyxial death – asphyxia definition, causes & types of asphyxia, stages of asphyxia, signs of asphyxia, mechanism & pathophysiology of drowning, post mortem changes in asphyxia. | Definition of thanatology, Sexual asphyxia. | Presumption of death, presumption of Survivorship |

Trench foot &
| 6 | Forensic psychiatry | 3hrs | Definition of delusion, delirium, illusion, hallucination, impulse, phobia & medico legal importance, classification of insanity, differences | Diagnosis of insanity, admission to mental asylum, Provision under The Mental health Act, Psychosis & neurosis differences, | Classification of firearms. |
| 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 |
| 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, |
### Sexual Offences

<table>
<thead>
<tr>
<th>SL No</th>
<th>Topic</th>
<th>Hours</th>
<th>Must know</th>
<th>Desirable to know</th>
<th>Nice to know</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Sexual Offences</td>
<td>2hrs</td>
<td>Define sexual offences, classify sexual offences, define Rape as per S375 &amp; 376 IPC, define statutory Rape, Marital Rape, rape trauma syndrome, Define indecent assault as per S354, adultery, Paedophilia, paraphilia.</td>
<td>Examination of rape victim &amp; accused, sexual perversion</td>
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</table>

### Toxicology

<table>
<thead>
<tr>
<th>SL No</th>
<th>Topic</th>
<th>Hours</th>
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<th>Desirable to know</th>
<th>Nice to know</th>
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<tr>
<td>1</td>
<td>General consideration</td>
<td>5hrs</td>
<td>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,</td>
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<tr>
<td>2</td>
<td>Clinical toxicology</td>
<td></td>
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<td></td>
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</tbody>
</table>
| 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 findings, circumstances or medico legal of poisoning. | Complications. |
| 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 |
| Inorganic non metallic | 2hrs | Phosphorus- action, signs & symptom, fatal dose, fatal | types of phosphorus & where it is used. |

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.
<table>
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<tr>
<th>Category</th>
<th>Duration</th>
<th>Description</th>
<th>Example</th>
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</thead>
<tbody>
<tr>
<td>Irritant mechanical poison</td>
<td></td>
<td>Powdered glass, needles, hair etc- signs &amp; symptoms, post mortem findings, medico legal aspects. Treatment of mechanical poisoning.</td>
<td>Iodine poisoning.</td>
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<tr>
<td>Asphyxiants</td>
<td>1hr</td>
<td>Carbon monoxide &amp; carbon dioxide – action sources, signs &amp; symptoms, post mortem findings, circumstances of poisoning &amp; treatment.</td>
<td>Hydrogen sulphide poisoning War gases.</td>
</tr>
<tr>
<td>CNS Depressants</td>
<td>3hrs</td>
<td>Ethyl alcohol – action, signs &amp; symptoms, fatal dose, fatal period, post mortem findings, medico legal aspects, hazards of alcohol, define drunkenness</td>
<td>Examination of a drunkard, widmark formula, methyl alcohol poisoning.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Opium – alkaloids, action signs &amp; symptoms, fatal dose, fatal period, diagnosis of post mortem findings, medico legal importance</td>
<td>Differential diagnosis Treatment</td>
</tr>
<tr>
<td>Poison Type</td>
<td>Time</td>
<td>Description</td>
<td>Treatment</td>
</tr>
<tr>
<td>----------------</td>
<td>-------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Deliriant poisons</td>
<td>3hrs</td>
<td>Datura, Hyasymus &amp; Belladonna - action, signs &amp; symptoms, fatal dose, fatal period, post-mortem findings, medico legal aspects.</td>
<td>Treatment of these poisoning.</td>
</tr>
<tr>
<td>Cannabis Indica</td>
<td></td>
<td>- action, sources or forms in which it is used, signs &amp; symptoms, fatal dose, fatal period, circumstances of poisoning.</td>
<td>Treatment</td>
</tr>
<tr>
<td>Cocaine</td>
<td></td>
<td>- action, signs &amp; symptom, fatal dose, fatal period, post-mortem findings, circumstances of poisoning.</td>
<td>Treatment</td>
</tr>
<tr>
<td>Cardiac poisons</td>
<td>2hrs</td>
<td>Digitalis, aconite, tobacsum -action, signs &amp; symptoms, fatal dose, fatal period, post-mortem findings, circumstances of poisoning. Nerium odorum (white &amp; yellow) - signs &amp; symptoms, fatal dose, fatal</td>
<td>Treatment of these poisoning.</td>
</tr>
<tr>
<td>Organic irritants Animal poisons</td>
<td>2hrs</td>
<td>Differences between poisonous snakes from non poisonous snakes, action of venom, signs &amp; symptoms, post mortem findings, circumstances of poisoning, first aid treatment</td>
<td>Differences between cobra, krait &amp; viper. Snake venom characteristic features, Treatment</td>
</tr>
<tr>
<td>Scorpions – action, signs &amp; symptoms, post mortem findings,</td>
<td></td>
<td></td>
<td>Treatment</td>
</tr>
<tr>
<td>Vegetable poisons</td>
<td>1hr</td>
<td>Ricinus communis, Abrus precatorius, capsicum, calotropis, anacardium – action, physical characteristics, alkaloids, signs &amp; symptoms, post mortem findings, circumstances of poisoning. Treatment in capsicum, anacardium, calotropis ricinus communis poisoning.</td>
<td>Ergot – signs &amp; symptoms, post mortem findings. Treatment abrus precatarius poisoning. Treatment in ergot poisoning.</td>
</tr>
<tr>
<td>Miscellaneous poisons</td>
<td></td>
<td>Analgesics &amp; anti pyretics poison – signs &amp; symptoms, food poison</td>
<td>Anti-histamines, anti-depressants tranquillisers poisons – signs &amp; symptoms.</td>
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</table>

**Forensic medicine - 50hrs**  
**Toxicology – 28 hrs**
Legislation relating to medical profession – 2hrs

<table>
<thead>
<tr>
<th><strong>Must know</strong></th>
<th><strong>Desirable to know</strong></th>
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<tbody>
<tr>
<td>• The Consumer Protection Act, 1986 (68 of 1986)</td>
<td>• The Drugs and Cosmetics Act, 1940 (23 of 1940) and the rules made therein</td>
</tr>
<tr>
<td>• The Workmen’s compensation Act, 1923 (8 of 1923)</td>
<td>• The Drugs and Magic Remedies (objectionable Advertisements) Act, 1954 (21 of 1954)</td>
</tr>
<tr>
<td>• The Employees State Insurance Act, 1948 (34 of 1948)</td>
<td>• The Transplantation of Human Organs Act, 1994 (42 of 1994)</td>
</tr>
<tr>
<td>• The Medical termination of pregnancy Act, 1971 (34 of 1971)</td>
<td>• The Pre-natal Diagnostic Techniques (regulation &amp; prevention of Misuse ) Act, 1994 (57 of 1994)</td>
</tr>
<tr>
<td>• The Indian Evidence Act, 1872 (1 of 1872 )</td>
<td>• The Drugs Control Act, 1950 (26 of 1950)</td>
</tr>
<tr>
<td>• The Personal Injuries Act, 1963 (37 of 1963)</td>
<td>• The Medicine &amp; Toiletry Preparations (Excise Duties ) Act, 1955 (16 of 1955)</td>
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<tr>
<td>• The Homoeopathic Practitioners (Professional Conduct, Etiquette &amp; Code of Ethics) regulations, 1982</td>
<td>• The Indian Penal Code (45 of 1860) &amp; the Criminal Procedure Code (2 of 1974) (relevant provision)</td>
</tr>
<tr>
<td>• The Clinical Establishment (registration &amp; Regulation) Act, 2010 (23 of 2010)</td>
<td>• The persons with Disabilities (Equal Opportunities, Protection of Rights &amp; Full participation), Act 1995 (1 of 1996)</td>
</tr>
<tr>
<td>• The Medical termination of pregnancy Act, 1971 (34 of 1971)</td>
<td>• The Mental Health Act, 1987 (14 of 1987)</td>
</tr>
</tbody>
</table>

Question Paper Blueprint

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Chapter</th>
<th>Marks</th>
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<tbody>
<tr>
<td></td>
<td>Forensic Medicine</td>
<td>69</td>
</tr>
<tr>
<td>1</td>
<td>Introduction, Forensic psychiatry, Acts</td>
<td>08</td>
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<tr>
<td>2</td>
<td>Legal procedures, post mortem examination</td>
<td>08</td>
</tr>
<tr>
<td>3</td>
<td>Abortion &amp; infanticide</td>
<td>08</td>
</tr>
<tr>
<td>4</td>
<td>Impotence, virginity, Pregnancy. Delivery</td>
<td>08</td>
</tr>
<tr>
<td>5</td>
<td>Sexual offences</td>
<td>03</td>
</tr>
<tr>
<td>6</td>
<td>Death &amp; its medico legal importance</td>
<td>10 / 05 / 03</td>
</tr>
<tr>
<td>7</td>
<td>Injury &amp; its medico legal importance</td>
<td>10 / 05 / 03</td>
</tr>
<tr>
<td>8</td>
<td>Identification</td>
<td>10 / 05 / 03</td>
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<td></td>
<td>Toxicology</td>
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Types of question with marks.

<table>
<thead>
<tr>
<th>Types of question</th>
<th>No. of question</th>
<th>Marks per question</th>
<th>Total</th>
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<tbody>
<tr>
<td>Long Essay</td>
<td>02</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Short Essay</td>
<td>10</td>
<td>5</td>
<td>50</td>
</tr>
<tr>
<td>Short answers</td>
<td>10</td>
<td>3</td>
<td>30</td>
</tr>
</tbody>
</table>

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

2. Certificate writing – 5hrs

<table>
<thead>
<tr>
<th>Must know</th>
<th>Desirable to know</th>
<th>Nice to know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sickness certificate</td>
<td>Injury certificate</td>
<td>Rape certificate</td>
</tr>
<tr>
<td>Physical fitness certificate</td>
<td>Certificate for alcohol consumption</td>
<td>Chemical Analyser (Regional Forensic Laboratory)</td>
</tr>
<tr>
<td>Death certificate</td>
<td>Birth Certificate</td>
<td></td>
</tr>
<tr>
<td>Post-mortem examination report</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 –

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

Each spotter / specimen division of marks (where ever is applicable)
1. Identification - 1mark
2. Medico legal importance – 2marks
3. Discussion - 2marks

Recommended Books
   Basic –

Reference –

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

<table>
<thead>
<tr>
<th>Sl No.</th>
<th>Topic</th>
<th>Hrs</th>
<th>Must Know</th>
<th>Desirable to know</th>
<th>Nice to know</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Science and philosophy of Materia Medica</td>
<td>2Hrs</td>
<td>Describe the science and philosophy of Materia Medica</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Different ways of studying Homoeopathic Materia Medica</td>
<td>2 Hrs</td>
<td>Describe different ways of studying Homoeopathic Materia</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Topic</td>
<td>Must Know</td>
<td>Desirable to know</td>
<td>Nice to know</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>----------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Scope and limitation of Homoeopathic Materia Medica</td>
<td>List the Scope and limitations of Homoeopathic Materia Medica</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Concordance or remedy relationships</td>
<td>Define the different terminologies related to remedy relationships with examples.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Comparative Homoeopathic Materia Medica, namely comparative study of symptoms, drug pictures, drug relationships</td>
<td>Justify comparison of drugs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Theory of biochemic system of medicines, its history, concepts and principles according to Dr, Wilhelm H. Schuessler. Study of 12 biochemic medicines. (tissue remedies)</td>
<td>Describe the Theory of biochemic system of medicines its principles according to Dr Wilhelm Schuessler. List 12 tissue salts</td>
<td>Compare &amp; Contrast Homoeopathic &amp; Biochemic system of medicine</td>
<td>Its history</td>
<td></td>
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</table>
Appendix – I
The following Major drugs mentioned below shall be taught according to the Template – I

No of Hours: 74

<table>
<thead>
<tr>
<th>No</th>
<th>Drug Name</th>
<th>No of Hours</th>
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<tbody>
<tr>
<td>1</td>
<td>Aconite nappellus</td>
<td>14</td>
</tr>
<tr>
<td>2</td>
<td>Aloes socotrina</td>
<td>15</td>
</tr>
<tr>
<td>3</td>
<td>Antimonium crudum</td>
<td>16</td>
</tr>
<tr>
<td>4</td>
<td>Antimonium tartaricum</td>
<td>17</td>
</tr>
<tr>
<td>5</td>
<td>Apis mellifica</td>
<td>18</td>
</tr>
<tr>
<td>6</td>
<td>Argentum nigrum</td>
<td>19</td>
</tr>
<tr>
<td>7</td>
<td>Arnica Montana</td>
<td>20</td>
</tr>
<tr>
<td>8</td>
<td>Arsenicum album</td>
<td>21</td>
</tr>
<tr>
<td>9</td>
<td>Baptisia tictora</td>
<td>22</td>
</tr>
<tr>
<td>10</td>
<td>Bryonia alba</td>
<td>23</td>
</tr>
<tr>
<td>11</td>
<td>Calcare carb</td>
<td>24</td>
</tr>
<tr>
<td>12</td>
<td>Calcarea flour*</td>
<td>25</td>
</tr>
<tr>
<td>13</td>
<td>Calcarea phosphoric*</td>
<td>26</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No</th>
<th>Drug Name</th>
<th>No of Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>Calcarea sulphurica</td>
<td>27</td>
</tr>
<tr>
<td>15</td>
<td>Chamomilla</td>
<td>28</td>
</tr>
<tr>
<td>16</td>
<td>Cina</td>
<td>29</td>
</tr>
<tr>
<td>17</td>
<td>Cinchona officinalis</td>
<td>30</td>
</tr>
<tr>
<td>18</td>
<td>Colchicum autumnale</td>
<td>31</td>
</tr>
<tr>
<td>19</td>
<td>Colocynthis</td>
<td>32</td>
</tr>
<tr>
<td>20</td>
<td>Dulcamara</td>
<td>33</td>
</tr>
<tr>
<td>21</td>
<td>Ferrum phosphoricum*</td>
<td>34</td>
</tr>
<tr>
<td>22</td>
<td>Gelesmium</td>
<td>35</td>
</tr>
<tr>
<td>23</td>
<td>Hepar sulphuricum</td>
<td>36</td>
</tr>
<tr>
<td>24</td>
<td>Ipecachuna</td>
<td>37</td>
</tr>
<tr>
<td>25</td>
<td>Kali phosphoricum*</td>
<td>38</td>
</tr>
<tr>
<td>26</td>
<td>Kali sulphuricum*</td>
<td>39</td>
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</table>

Appendix – 1a

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

No. of Hours: 13

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

*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: 3 Hours

Distribution of Marks

i) Topics of First BHMS – 50 Marks

ii) Topics of Second BHMS – 50 Marks

Types of questions with marks


<table>
<thead>
<tr>
<th>Type of Questions</th>
<th>No. of Questions</th>
<th>Marks per Question</th>
<th>Total Marks</th>
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<tbody>
<tr>
<td>Long Essays</td>
<td>02</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Short Essays</td>
<td>10</td>
<td>05</td>
<td>50</td>
</tr>
<tr>
<td>Short Answers</td>
<td>10</td>
<td>03</td>
<td>30</td>
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<tr>
<td>Maximum Marks</td>
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### Distribution of Marks

<table>
<thead>
<tr>
<th>Topics</th>
<th>Marks</th>
<th>Question type</th>
<th>Source</th>
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</thead>
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<tr>
<td>From I BHMS</td>
<td>50</td>
<td>1 LE, 5 SE, 5 SA</td>
<td>Table 1</td>
</tr>
<tr>
<td>From II BHMS</td>
<td>50</td>
<td>1 LE, 5 SE, 5 SA</td>
<td>Table 2, appendix 1, 1a</td>
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</tbody>
</table>

### Question paper Blueprint

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

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

### Question paper Layout:

#### I Long Essay

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

#### II. Short Essay

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

13. From I BHMS topic
14. From I BHMS topic
15. From I BHMS topic
16. From I BHMS topic
Practicals including viva-voce or orals
Practicals: 50 Marks Max Time: 1 Hour
Distribution of marks:

<table>
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<tr>
<th>Case</th>
<th>Case taking</th>
<th>Case analysis</th>
<th>Remedy selection</th>
<th>Total</th>
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<tbody>
<tr>
<td>Long</td>
<td>15</td>
<td>10</td>
<td>05</td>
<td>30</td>
</tr>
<tr>
<td>Short</td>
<td>05</td>
<td>03</td>
<td>02</td>
<td>10</td>
</tr>
<tr>
<td>Journal</td>
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<td></td>
<td>10</td>
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<tr>
<td>Viva</td>
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<td>50</td>
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<tr>
<td>Total</td>
<td></td>
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</tbody>
</table>

References
- Allen HC (2013). *Allen's 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
- Mohanty, Niranjan (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 there therapeutic approach.
   • During ANC check-up advice 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

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Chapter</th>
<th>Time</th>
<th>Must Know</th>
<th>Desirable to Know</th>
<th>Nice to Know</th>
<th>Weightage</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Anatomy of female reproductive organs</td>
<td>2 HR</td>
<td>Internal genitalia, pelvic muscles, pelvic floor &amp; fascia.</td>
<td>External genitalia, urinary bladder &amp; rectum</td>
<td></td>
<td>5 marks</td>
</tr>
<tr>
<td></td>
<td>Blood vessels, lymphatics of pelvic organs</td>
<td>1 HR</td>
<td></td>
<td>Pelvic blood vessels, lymphatics &amp; Pelvic nerves</td>
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<td></td>
</tr>
<tr>
<td>Topic</td>
<td>Hours</td>
<td>Details</td>
<td>Marks</td>
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<tr>
<td>Development of genital organs &amp; gonads.</td>
<td>2</td>
<td>Development of external &amp; internal genitalia. Development of ovary, sources &amp; descent.</td>
<td></td>
<td></td>
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<tr>
<td>Puberty &amp; menopause</td>
<td>6</td>
<td>Puberty- define morphological genital organ changes &amp; Tanners’ classification. Precocious puberty- define, causes. Menopause- define, clinical features diagnosis &amp; treatment. Diagnosis of precocious puberty. Delayed puberty define &amp; causes. Abnormal menopause &amp; artificial menopause.</td>
<td>5 marks</td>
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<td></td>
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<tr>
<td>Menstruation</td>
<td>3</td>
<td>Ovulation- define, causes &amp; hormonal effects. Definition, stages of menstruation. Formation &amp; maturation of GF &amp; corpus-luteum. An-ovular menstruation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Examination of gynecological patient</td>
<td>3</td>
<td>Detailed history, gynecological &amp; vaginal examination. Indications of laparoscopy, hysteroscopy &amp; culdoscopy. Methods of examination of vagina &amp; cervix. Colposcopy, x-ray, u/sonography indications. Culdocentesis, endometrial sampling.</td>
<td>5 Marks</td>
<td></td>
<td></td>
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<tr>
<td>Inter-sex</td>
<td>2</td>
<td>Etiology, clinical feature of female, male inter-sex. Diagnosis &amp; management of inter-sex.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uterine displacements</td>
<td>Define degrees causes, signs &amp; symptoms of retroversion. Genital prolapse-etiology, types degrees of prolapse, clinical features, diagnosis &amp; D/D.</td>
<td>Prevention and management of retroversion</td>
<td>Types of operation in prolapse. Supports of vagina. Fixed retroversion. Chronic-inversion define, causes types, C/F</td>
<td>10 marks</td>
<td></td>
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</tbody>
</table>

### Obstetrics

<table>
<thead>
<tr>
<th>SI No</th>
<th>Chapter</th>
<th>Time</th>
<th>Must Know</th>
<th>Desirable to Know</th>
<th>Nice to Know</th>
<th>Weigh tage</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Anatomy of reproductive organs</td>
<td>1 HR</td>
<td>Gametogenesis, Ovulation, fertilization, Implantation, Trophoblast, decidua, chorion&amp;chorio-villi</td>
<td>External &amp; internal genitalia, ureter pelvic muscles &amp; fascia</td>
<td></td>
<td>5 marks totally</td>
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<tr>
<td></td>
<td>Fundamentals of reproduction</td>
<td>2 HR S</td>
<td>Placental functions, amniotic fluid &amp; amnion</td>
<td>Development, structure &amp; placental circulation</td>
<td>Umbilical cord</td>
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<tr>
<td></td>
<td>Placenta &amp; membranes</td>
<td>2 HR S</td>
<td></td>
<td></td>
<td>Fetal physiology &amp; fetal circulation</td>
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</tr>
<tr>
<td></td>
<td>The fetus</td>
<td></td>
<td></td>
<td></td>
<td>Systemic changes</td>
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<tr>
<td></td>
<td>Physiological changes during pregnancy</td>
<td>3 HR S</td>
<td>Genital organs, breasts, weight gain, cutaneous changes, hematological changes</td>
<td>Metabolic changes</td>
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<td></td>
</tr>
<tr>
<td>Endocrinology in relation to reproduction</td>
<td>1 HR S</td>
<td>Maturation of graafian follicle &amp; maintenance of corpus luteum after fertilization</td>
<td>Changes of endocrinal gland during pregnancy</td>
<td></td>
<td></td>
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<td>---------------------------------------------------------------------------------</td>
<td>---------------------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Fetus-in-utero | 4 HR S | 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 S | Fetal skull-areas, sutures, fontanelles & diameters. Moulding, Caput-succedaneum. False & true pelvis. Pelvis-shape, plane & diameter | True pelvis-inclination, cavity & outlet. Mid-pelvis |

| Diagnosis of pregnancy | 6 HR S | 1st, 2nd & 3rd trimester—Subjective & Objective, D/D of pregnancy. Estimation of gestational age & EDD. | Chronological appearance of symptoms & sign of pregnancy |

| 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 | 20 marks |
| 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 1st, 2nd & 3rd stages of labor. Management of labor | Physiology of labor, clinical course of labor |
| 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 |
| Vomiting in pregnancy | 3 HR S | Simple vomiting & hyperemesis gravidarum—etiology, clinical course & management | Pathology & biochemical changes |
| Induction of labour | 2 hrs | Definition, indications & contra-indications | Low rupture & high rupture of membranes indications Methods of induction |

**Organon of Medicine**

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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.

<table>
<thead>
<tr>
<th>Topic No.</th>
<th>Time allotted</th>
<th>Must Know</th>
<th>Desirable to know</th>
<th>Nice to know</th>
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<th>Type of questions</th>
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<tr>
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</table>

Aphorisms 29 to 104 including footnotes of Organon of Medicine (5th & 6th Editions translated by R.E.Dudgeon & W Boericke): 60 hrs

<p>| 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 | 176 |</p>
<table>
<thead>
<tr>
<th>Aph</th>
<th>Duration</th>
<th>Description</th>
<th>Notes</th>
<th>Reference</th>
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<tr>
<td>34,35</td>
<td>3 hrs</td>
<td>Artificial morbific agent-medicine</td>
<td>f.n.19</td>
<td>f.n.18</td>
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<td></td>
<td></td>
<td>Natural morbific agent miasms</td>
<td>f.n.19</td>
<td>f.n.20-31</td>
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<tr>
<td>36-42</td>
<td>5 hrs</td>
<td>What happens when 2 dissimilar diseases meet</td>
<td>f.n.32</td>
<td>f.n.33-37</td>
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<td></td>
<td></td>
<td>3 possibilities with example</td>
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<td>f.n.38</td>
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<td>43-46</td>
<td>3 hrs</td>
<td>What happens when 2 similar disease meet</td>
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<td></td>
<td></td>
<td>Examples</td>
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<tr>
<td>47-51</td>
<td>2 hrs</td>
<td>Artificial morbific agent</td>
<td><strong>F.n 56</strong></td>
<td>F.n.58-59</td>
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<td></td>
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<td>Happy –go-lucky</td>
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<td>Operation (Aph51)</td>
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<tr>
<td>52-62</td>
<td>10 hrs</td>
<td>Methods of treatment Allopathy Homoeopathy Heteropathy Isopathy (f.n.63) Antipathy Enatipathic Palliation</td>
<td>Aph 61</td>
<td>f.n.60,64,65</td>
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<td></td>
<td>Brousseaus method Blood letting Leeching Warm bath Rational medicine f.n.62 Venesection</td>
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<td>Aph.</td>
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<tr>
<td>63 - 68</td>
<td>4 hrs</td>
<td>Primary and secondary action of drugs&lt;br&gt;Def with examples&lt;br&gt;Efficacy of Homeopathic System&lt;br&gt;f.n. 67 suspended animation mongrel sect</td>
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<tr>
<td>69</td>
<td>1 hr</td>
<td>Hurtfulness of antipathic mode of treatment with examples&lt;br&gt;f.n. 68&lt;br&gt;f.n. 69&lt;br&gt;f.n. 70</td>
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<tr>
<td>70</td>
<td>2 hr</td>
<td>Summary of doctrinal part of organon of medicine&lt;br&gt;5/3</td>
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<tr>
<td>71</td>
<td>1 hr</td>
<td>Three points necessary for cure&lt;br&gt;5/3</td>
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<td>72 - 82</td>
<td>12 hrs</td>
<td>Hahnemann’s classification of disease&lt;br&gt;Hahnemann’s conception of miasms&lt;br&gt;General survey of disease&lt;br&gt;Pathological consideration&lt;br&gt;Acute&lt;br&gt;Hahnemann’s theory of</td>
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</table>
Chronic miasms

Acute miasms

chronic diseases and bacteriology

Psora

Sycosis --- characteristic

Syphilitic symptoms

f.n. 74,76,77,78,79, 80

Aph. 83- 104 12 hrs

Case taking Def.

Accessory symptoms (aph.95) 10/5/3

Qualities of physician

Introduction to the physician for investigation and tracing the picture of disease

Hypochondriac patient, indolent patient

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

2.1 Chapters of philosophy books of J.T.Kent,
a J.T. Kent, 40hrs

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Sections</th>
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<tr>
<td>Chapter 1</td>
<td>The sick.</td>
<td>Understanding the sick &amp; sickness (aph.1)</td>
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<td></td>
<td>Def. between Allopathic and homo. approach to sickness</td>
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<tr>
<td>Chapter 2</td>
<td>The highest ideal of cure.</td>
<td>Ideal cure (aph. 2)</td>
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<td>Rapid</td>
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<td>Gentle</td>
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<td>Permanent restoration</td>
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<td>Comprehensible principles</td>
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<td></td>
<td>Hering’s law of direction of cure</td>
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<tr>
<td>Chapter 3</td>
<td>What the physician must perceive.</td>
<td>What is curable in disease?</td>
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<tr>
<td></td>
<td></td>
<td>What is curative in medicine?</td>
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<td>Chapter 4</td>
<td>Fixed principles.</td>
<td>Fixed principles</td>
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<td>Law &amp; government from centre</td>
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</table>
Chapter 5. Discrimination As To Maintaining External Causes And Surgical Cases.

Chapter 6. The Unprejudiced Observer

Chapter 7. Indisposition and the removal of their cause

Chapter 8. Simple Substance.

Chapter 9. Disorder First In Vital Force.

Chapter 10. Materialism in medicine

Chapter 11, Sickness and cure in dynamic plane.

Chapter 12 The removal of totality of symptoms is the removal of the cause

<table>
<thead>
<tr>
<th>Chapter</th>
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<tbody>
<tr>
<td>14</td>
<td>Susceptibility</td>
<td>3</td>
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<tr>
<td>15</td>
<td>Protection From Sickness</td>
<td>2</td>
<td>10/5/3</td>
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<tr>
<td>16</td>
<td>Oversensitive Patients</td>
<td>2</td>
<td>5/3</td>
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<tr>
<td>17</td>
<td>The Science And The Art</td>
<td>2</td>
<td>3</td>
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<tr>
<td>23, 24, 25, 26</td>
<td>The Examination Of The Patient</td>
<td>3</td>
<td>5/3</td>
</tr>
<tr>
<td>27</td>
<td>Record Keeping</td>
<td>1</td>
<td>5/3</td>
</tr>
<tr>
<td>31</td>
<td>Characteristics</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>32, 33</td>
<td>The Value Of Symptoms</td>
<td>2</td>
<td>5/3</td>
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<tr>
<td><strong>b</strong></td>
<td><strong>Stuart Close</strong></td>
<td><strong>15 hrs</strong></td>
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<td>8</td>
<td>General Pathology Of Homeopathy</td>
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<td></td>
<td>Theory of chronic disease</td>
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<td>Doctrine of Latency</td>
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<td>Metastasis</td>
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<td>Toxicological theory of disease</td>
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<td>Chapter 9: Cure and Recovery</td>
<td>Relation of cure to disease.</td>
<td>End products of disease (ultimates)</td>
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<td></td>
<td>The object of treatment</td>
<td>Requirements of cure</td>
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<td></td>
<td>Difference between cure and recovery.</td>
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<td>Direction of cure</td>
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<tr>
<td>Chapter 11: Symptomatology</td>
<td>Definition &amp; types of symptoms</td>
<td>Day Book</td>
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<td>Totality of symptoms</td>
<td>BTPB</td>
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<td></td>
<td>Types of modalities</td>
<td>Record keeping</td>
<td></td>
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<td>Types of aggravation</td>
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</tbody>
</table>

**Chapter 12: Examination of the Patient**
Understanding the method of conducting an examination of case, as to discover the Clinical History
Chapter 3. Vital force
What is life?
Trinity of life
cause of disease

Chapter 4. Vital force as expressed in functions.
Role of vital force in health, disease, cure and recovery
Definition of health, disease, dyscrasia

Chapter 5. Vital energy in its universal application.
Concept of vital energy
Mathematical law of least action
Influence of vital energy on growth

Chapter 6. Homoeopathy and the fundamental laws.
Law of cure, action, quality and dose, quantity
Law of disease development

Chapter 8. Taking the case.
Difference between acute and chronic case

Chapter 9. Analysis of the case.
Types of symptoms
Importance of different types of symptoms
Totality
Genus epidemicus

Chapter 11. The chief complaint and the auxiliary symptoms in their relation to the case.
Importance of chief complaints and auxiliarly symptoms
Key note prescribing

Chapter 17. Susceptibility.
Susceptibility in health disease and cure
Susceptibility and posology
Concept of vaccum

H.A.Roberts  25 hrs

Symptoms for use in prescribing.
Effect of suppressive treatment in disease

Chapter 3.

Vital force

Chapter 4.

Vital force as expressed in functions.

Chapter 5.

Vital energy in its universal application.

Chapter 6.

Homoeopathy and the fundamental laws.

Chapter 8.

Taking the case.

Chapter 9.

Analysis of the case.

Chapter 11.

The chief complaint and the auxiliary symptoms in their relation to the case.

Chapter 17.

Susceptibility.

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| Chapter 18. | Suppression. | 2 Ways of suppression and definition |
| Chapter 19. | The law of palliation | Definition and types of palliation |
| Chapter 20. | Temperaments. | Definition and types |

### 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.

### 2.3 Causations:
Thorough comprehension of the evolution of diseases, taking into account predisposing, fundamental, exciting and classification of disease.
maintaining causes. exciting and maintaining cause – aph 5 and 7

Case Taking

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.

Case processing:

This includes,

2.5

i. Analysis of symptoms

ii. Evaluation of symptoms

iii. Miasmatic diagnosis

iv. Totality of symptoms.

Practicals: ---Time Allotted 60 Hours

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.

Table 2a

<table>
<thead>
<tr>
<th>Analysis of symptoms</th>
<th>Miasmatic diagnosis</th>
</tr>
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<tbody>
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</tbody>
</table>

Page 186
• Develop the prescriptive totality.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>TOPIC</th>
<th>Time</th>
<th>Must Know</th>
<th>Desirable to Know</th>
<th>Nice to Know</th>
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<tr>
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<td>• extent and clarity</td>
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<td>• sequence</td>
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<td>2.</td>
<td>Case processing</td>
<td>15</td>
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<td>Evaluation of symptoms</td>
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<td>Totality of symptoms</td>
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<td>5</td>
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<tr>
<td>3.</td>
<td>Record/Journal(10 acute &amp; 10 chronic cases)</td>
<td>20</td>
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<tr>
<td>4.</td>
<td>Case discussion</td>
<td>10</td>
<td>Case presentation</td>
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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 – 20 marks

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**

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<thead>
<tr>
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<tbody>
<tr>
<td>1. From I BHMS topic.-life history of Hahnemann/Logic/ psychology/ fundamental principles/ aphorism1 to 28</td>
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<tr>
<td>2. From II BHMS topic.- Aphorism-29-104( 36-46/63-68/72-82/83-104)</td>
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<th>II. Short Essay</th>
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<tr>
<td>3. From I BHMS topic-Aphorism-1 to28/basic concepts/ introductory lectures</td>
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<td>8. From II BHMS topic- Aphorisms-71-82</td>
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<td>9. From II BHMS topic- Lectures from-Kent</td>
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<td>10. From II BHMS topic- Lectures from-Stuart close</td>
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<td>11. From II BHMS topic- Lectures from-Roberts</td>
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<td>12. From II BHMS topic- Aphorism83-104</td>
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<td>17. From II BHMS topic- Aphorism-71-82</td>
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<td>18. From II BHMS topic- Aphorism-83-104</td>
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<td>19. From II BHMS topic- Aphorism-83-104</td>
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<td>20. From II BHMS topic- Aphorism-83-104</td>
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<tr>
<td>21. From II BHMS topic- Lectures from-Kent/ Roberts</td>
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<td>22. From II BHMS topic- Lectures from-Kent/ Close</td>
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**Practicals including viva- voce or orals**
Practicals: 50 Marks Max Time: 1 Hour

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<td>Viva</td>
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<tr>
<td>Total</td>
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</tbody>
</table>

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
• 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:
• 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

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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

<table>
<thead>
<tr>
<th>Sl no</th>
<th>Topic</th>
<th>Hours allotted</th>
<th>Must know</th>
<th>Desirable to know</th>
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<tbody>
<tr>
<td>1</td>
<td>Cell injury</td>
<td>8 hrs</td>
<td>Cell injury-Definition, acquired causes</td>
<td>Pathogenesis of ischaemic and hypoxic injury</td>
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<td></td>
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<td>Hydropic change: Definition, aetiology, pathogenesis, morphology</td>
<td>Effects of radiation: Mechanism of cell injury by ionizing radiation</td>
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<td>Hyaline change: Intracellular and extracellular hyaline examples</td>
<td>Pathogenesis of Ischaemia-Reperfusion injury</td>
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<td>Mucoid change: Epithelial and connective tissue mucin examples</td>
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<tr>
<td>Cellular adaptation</td>
<td>2 hrs</td>
<td>Atrophy, Hyperplasia, Hypertrophy, Metaplasia: Definition, Types with examples</td>
<td>Differences between Metaplasia and Dysplasia</td>
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<td>2. Inflammation and repair</td>
<td>12 hrs</td>
<td>Inflammation: Definition, Causes, Signs, Types</td>
<td>Systemic effects of acute inflammation</td>
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<td>Acute inflammation: Vascular events, Cellular events</td>
<td>Pyrexia: Definition,</td>
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<td>Chemical mediators of inflammation: List of chemical mediators, Source, Functions of mediators</td>
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<td>Inflammatory cells: Functions</td>
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<td>Factors determining variation in inflammatory</td>
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<tr>
<td>Response</td>
<td>Morphologic types of acute inflammation with examples</td>
<td>Outcome of acute inflammation</td>
<td>Chronic inflammation: Definition, Causes, General features, Types</td>
<td>Giant cells: Types, Examples</td>
<td>Granuloma: Definition, Pathogenesis, description</td>
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<td>3.</td>
<td>Thrombosis 2 hrs</td>
<td>Thrombosis: Definition, Pathogenesis</td>
<td>Morphologic features of thrombi</td>
<td>Origin of thrombi-Cardiac, Arterial, Venous with examples</td>
<td>Fate of thrombus</td>
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<tr>
<td>Embolism 1 hr</td>
<td>Embolism: Definition, Types</td>
<td>Sources of arterial thromboembolism</td>
<td>Sources of venous thromboembolism</td>
<td>Pulmonary thromboembolism: Definition, Aetiology, consequences</td>
<td>Fat embolism, Air embolism, Decompression sickness, Amniotic fluid embolism, Atheroembolism, Tumour embolism</td>
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</table>
| 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 |
<p>|   |   |   | Infarcts of different organs |
| 11. | Amyloidosis | 1 hr | Amyloidosis :Definition, Classification, |
|   |   |   | Pathogenesis of amyloidosis |</p>
<table>
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<th>Nice to know</th>
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<tr>
<td>12.</td>
<td>Hyperlipidaemia and lipidosi</td>
<td>1 hr</td>
<td>Major classes of lipoproteins and their role</td>
<td>Lipidosis: Gaucher’s disease etc.,</td>
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<td>15.</td>
<td>Immunity, Infection and Hospital infection</td>
<td>1 hour</td>
<td>Classification of diseases of immune system Infection: Refer to infection component in the same syllabus</td>
<td>Hospital infection: Definition, Sources, Aetiology, Routes of transmission, Common hospital acquired infections</td>
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</table>

Sl  Topic  Hou  Must know  Desirable to know  Nice to know
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<thead>
<tr>
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<th>Systemic pathology: 50 Hrs</th>
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<tbody>
<tr>
<td>1.</td>
<td>Malnutrition and deficiency diseases</td>
<td>4 hrs</td>
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<td>2.</td>
<td>Diseases of cardiovascular system</td>
<td>5 hrs</td>
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<td>Diseases of the male reproductive system and prostate</td>
<td>1 hr</td>
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<td>Diseases of the female genitalia and breast</td>
<td>2 hrs</td>
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<td>Diseases of the Eye, ENT and Neck</td>
<td>1 hr</td>
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<td>8.</td>
<td>Diseases of the respiratory system</td>
<td>6 hrs</td>
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<td>9.</td>
<td>Diseases of oral cavity and salivary glands</td>
<td>1 hr</td>
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<tr>
<td>Diabetes mellitus</td>
<td>Definition, Classification</td>
<td>Diabetes mellitus: Pathogenesis of type I and type II DM</td>
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<td>15. Diseases of the skin, soft tissue and nervous system</td>
<td>1 hr Dermatoses: Various types with common examples, Acute pyogenic meningitis: Definition</td>
<td>Squamous cell carcinoma: Predisposing condition, Basal cell carcinoma: Gross appearance, Acute pyogenic meningitis: Aetiopathogenesis</td>
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<tr>
<td>17. Diseases of musculo-skeletal system</td>
<td>3 hrs Pyogenic osteomyelitis: Sequence of pathologic changes, Osteoporosis: Definition, Types, Osteoarthritis: Definition, Types</td>
<td>Rheumatoid arthritis: Aetiopathogenesis, Osteosarcoma: Types, Gout: Types, Pathogenesis</td>
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<td>18. Leprosy</td>
<td>1 hr Classification of leprosy Mode of transmission</td>
<td>Differences between lepromatous and tuberculoid</td>
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</table>

**Microbiology 45 hrs**

**General topics:**
| 1. | Introduction | 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 | 5 hrs |
| 4. | Pathogenicity of microorganisms | *As per the bacteria listed in bacteriology component in the same syllabus* |  |
| 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 |  |
<table>
<thead>
<tr>
<th></th>
<th>Cells of immune system</th>
<th>Natural killer cells - Functions in immune response</th>
<th>Functions of Neutrophils, Eosinophils, Basophils, Macrophages</th>
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</thead>
<tbody>
<tr>
<td>5</td>
<td>T cells and Cell mediated immunity</td>
<td>T cells: Classification</td>
<td>Induction and scope of cell mediated immunity</td>
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<td>B cells and Humoral immunity</td>
<td>Humoral immune response</td>
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<td>6</td>
<td>The complement system</td>
<td>Complement system: Definition, Properties, Components</td>
<td>Activation and Biologic functions</td>
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<td>7</td>
<td>Antigen</td>
<td>Antigen: Definition, Types</td>
<td>Factors determining antigenicity</td>
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<td>Antibody</td>
<td>Antibody: Definition, Functions</td>
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<td>Immunoglobulin: Definition, Classes, Functions</td>
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<td>Antigen-antibody reactions (Anaphylactic and Atopic)</td>
<td>Characteristics of Ag-Ab reaction</td>
<td>Precipitation reactions: Types</td>
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<td>Definition: Antibody titre, sensitivity, specificity, Serology</td>
<td>Applications of Agglutination reactions</td>
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<td>Drug allergies</td>
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<td>Mechanism of Type I &amp; Type II hypersensitivity reactions</td>
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<td>8</td>
<td>Hypersensitivity</td>
<td>Hypersensitivity: Definition, Types</td>
<td>Mechanism of Type III and Type IV hypersensitivity reactions</td>
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<td>9</td>
<td>Immunodeficiency</td>
<td>Immunodeficiency diseases: Definition, Types</td>
<td>Primary immunodeficiency Secondary immunodeficiency</td>
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<td>10. Autoimmunity</td>
<td>Autoimmunity: Definition, Clinical types with examples</td>
<td>Mechanisms of autoimmunity</td>
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<td>11. Transplantation</td>
<td>Haemolytic disease of new-born due to Rh-D incompatibility</td>
<td>Types of transplant</td>
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<td>12. Blood group antigens</td>
<td>Blood transfusion reactions</td>
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<td>13. Clinical aspect of immunopathology</td>
<td>Refer Hypersensitivity, Immunodeficiency, Autoimmunity topics</td>
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</table>

### III Bacteriology: 30 hrs

<p>| 1. Bacterial structure, growth and metabolism | Bacteria: Definition, classification, Structure | Differences between gram positive and gram negative cell wall |
| | Bacterial spores: Definition, Shape and position of spores | Structure of bacterial spore Sporulation Bacterial growth curve-Phases |
| | Growth requirements of bacteria | |
| | Bacterial growth: Generation time, Bacterial count | |
| 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 | List of Phenotypic and genotypic characteristics to identify bacteria | Culture media: Basal media, Special medias, Anaerobic culture media |
| | Culture media: Definition, Types | |
| 4. Gram positive aerobic and facultative anaerobic cocci: | Streptococcus pyogenes: Antigenic structure, Virulence factors | Pathogenesis of Streptococcus pyogenes Serological tests for diagnosis of non suppurative complications |
| | 2 hrs | |
| | Staphylococcus aureus: Antigenic structure &amp; Virulence factors | Staphylococcal diseases Laboratory diagnosis |
| | 2 hrs | |</p>
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<tr>
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<th>Gram positive anaerobic cocci</th>
<th>1 hr</th>
<th>Pneumococcus [Streptococcus pneumonia]: Antigenic structure, Pathogenesis</th>
<th>Peptostreptococci Peptococcus</th>
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<tr>
<td>5.</td>
<td>Gram negative aerobic cocci</td>
<td>1 hr</td>
<td>Neisseria meningitides, Neisseria gonorrhoea and Moraxella, Kingella: Pathogenesis</td>
<td>Neisseria meningitides, Neisseria gonorrhoea, Moraxella, Kingella: Laboratory diagnosis</td>
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<td>6.</td>
<td>Gram positive aerobic bacilli</td>
<td>1 hr</td>
<td>Corynebacterium diphtheriae: Pathogenesis</td>
<td>Bacillus anthracis: Human anthrax</td>
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<td>7.</td>
<td>Gram positive aerobic bacilli</td>
<td>1 hr</td>
<td>Mycobacterium tuberculosis: Antigenic structure</td>
<td>Primary and secondary tuberculosis, Laboratory diagnosis of tuberculosis</td>
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<td>2 hrs</td>
<td>Mycobacterium leprae: Uses of lepromin test [Reaction]</td>
<td>Actinomycetes, Nocardia</td>
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<td>1 hr</td>
<td>Organism of enterobacteriac group:</td>
<td>Escherechia coli: clinical syndromes</td>
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<td>Laboratory diagnosis of urinary tract infection</td>
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<td>1 hr</td>
<td>Shigella: List of species of Shigellae</td>
<td>Pathogenesis: Bacillary dysentery</td>
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<td>Laboratory diagnosis</td>
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<td>2 hr</td>
<td>Enteric fever: Definition</td>
<td>Salmonella typhi: Pathogenesis of typhoid fever</td>
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<td>Clinical course of typhoid fever, Laboratory diagnosis</td>
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<td>Gram positive anaerobic</td>
<td>1 hr</td>
<td>Clostridium perfringens: Pathogenesis</td>
<td>Laboratory diagnosis</td>
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<td>bacilli</td>
<td>1 hr</td>
<td>Tetanus: Definition</td>
<td>Clostridium tetani: Pathogenesis</td>
<td>Clinical manifestation of tetanus</td>
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<td>Botulism: Definition</td>
<td>Clostridium botulinum: Pathogenesis</td>
<td>Lactobacillus: Pathogenicity</td>
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<td>Gram negative anaerobic bacilli</td>
<td>Bacteroides fragilis</td>
<td>Fusobacterium</td>
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<td>Others like:</td>
<td>Cholera: Definition</td>
<td>Vibrio cholera: Pathogenesis</td>
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<td>Laboratory diagnosis of Cholera</td>
<td>Yersinia pestis: Pathogenesis</td>
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<td>Treponema pallidum: Pathogenesis</td>
<td>Treponemal tests for syphilis</td>
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<td>Leptospira interrogans</td>
<td>Mycoplasma pneumonia</td>
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<td>Rickettsiae prowazekii</td>
<td>Chlamydiae, Pasteurella</td>
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<td>IV Fungi and Parasites: 25 hrs</td>
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<td>1.</td>
<td>2 hrs</td>
<td>Fungi: Classification</td>
<td>Mycoses: Definition, Types</td>
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<td>2.</td>
<td>3 hrs</td>
<td>Entamoeba histolytica: Morphology, Methods of reproduction, Life cycle</td>
<td>Intestinal lesions Differences between Amoebic dysentery and Bacillary dysentery</td>
<td>Laboratory diagnosis of Intestinal amoebiasis</td>
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<td>Giardia intestinalis: Morphology, Life cycle</td>
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<td>Giardiasis: Definition</td>
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<td>Crytosporodium</td>
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<td>1 hr</td>
<td>List of plasmodium species</td>
<td>Characteristic fever caused by plasmodium species</td>
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<td>Human cycle of P.vivax, P.falciparum, P.malariae, P.ovale</td>
<td>Laboratory diagnosis of malaria – examination of a blood film</td>
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<tr>
<th>2 hrs</th>
<th>Leishmania donovani: Morphology, Life cycle</th>
<th>Leishmaniasis: Definition</th>
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<td>Laboratory diagnosis of Kala azar</td>
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### 3. Helminths

#### Cestodes

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<tr>
<th>2 hr</th>
<th>Taenia saginata and Taenia solium – Morphology, Life cycle, Cysticercus bovis, Cysticercus cellulosae</th>
<th>Pathogenesis of Cysticercosis</th>
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<td>Laboratory diagnosis</td>
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<tr>
<th>2 hr</th>
<th>Echinococcus granulosus: Morphology, Life cycle</th>
<th>Structure of Hydatid cyst</th>
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<td>Laboratory diagnosis of hydatid disease</td>
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#### Trematodes (flukes)

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<tr>
<th>2 hrs</th>
<th>Schistosoma haematobium Schistosoma mansoni, Paragonimus westermani: Morphology, Life cycle, Bilharziasis, Paragonimiasis: Definition</th>
<th>Pathogenesis and Laboratory diagnosis of S.haematobium S.mansonii, P.westermani</th>
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#### Nematodes

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<tr>
<th>2 hrs</th>
<th>Ancylostoma duodenale: Morphology, Features of eggs, Life cycle</th>
<th>Pathogenesis</th>
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<tr>
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<td>Ancylostomiasis: Definition</td>
<td>Laboratory diagnosis</td>
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<tr>
<th>2 hrs</th>
<th>Ascaris lumbricoides: Morphology, Life cycle, Features of fertilized egg, Ascariasis: Definition</th>
<th>Pathogenesis</th>
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<tr>
<td></td>
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<td>Laboratory diagnosis</td>
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<tr>
<td>(V) Virology 20 hrs</td>
<td>1 hr</td>
<td>Enterobius vermicularis: Morphology, Life cycle Enterobiasis: Definition</td>
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<td>2 hrs Wuchereria Bancroft: Life cycle</td>
<td>Pathogenesis</td>
<td>Laboratory diagnosis</td>
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<tr>
<td>1 hr Trichuris trichiura: Morphology, Life cycle Trichuriasis: Definition</td>
<td>Laboratory diagnosis of Trichiuriasis Strongyloides stercoralis Brugia malayi Onchocerca volvulus, Loa Loa Dracunculus medinensis</td>
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### DNA viruses

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<thead>
<tr>
<th>(i) Parvo virus</th>
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<th>Parvo virus</th>
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<tbody>
<tr>
<td>(ii) Herpes virus</td>
<td>1 hr</td>
<td>Herpes simplex type 1 and type 2 pathogenesis</td>
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<tr>
<td>(iii) Hepadna virus</td>
<td>3 hrs</td>
<td>Hepatitis A virus: Pathogenesis, Hepatitis C virus: Mode of infection</td>
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<tr>
<td>(iv) Papova virus</td>
<td>1 hr</td>
<td>Papilloma virus: Pathogenesis</td>
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<td>(v) Adeno virus</td>
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<td>Clinical syndromes</td>
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<tr>
<td>(vi) Pox virus</td>
<td>1 hr</td>
<td>Molluscum contagiosum;</td>
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### RNA virus

<table>
<thead>
<tr>
<th>(a)</th>
<th>Orthomyxovirus</th>
<th>1 hr</th>
<th>Influenza virus: Pathogenesis</th>
<th>Clinical features</th>
<th>Laboratory diagnosis</th>
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<tbody>
<tr>
<td>(i)</td>
<td>Entero virus</td>
<td>1 hr</td>
<td>Polio virus: Pathogenesis, Polioymyelitis: Definition</td>
<td>Polioymyelitis: Clinical features</td>
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<td>(ii)</td>
<td>Rhino virus</td>
<td>1 hr</td>
<td>Rhino virus: Pathogenesis, Clinical syndromes</td>
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<tr>
<td>(b)</td>
<td>Paramyxovirus</td>
<td>1 hr</td>
<td>Rubeola [Measles]: Pathogenesis, Definition</td>
<td>Clinical features</td>
<td>Laboratory diagnosis</td>
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<td>(c)</td>
<td>Rhabdovirus</td>
<td>1 hr</td>
<td>Mumps virus: Pathogenesis, Mumps: Definition</td>
<td>Clinical features</td>
<td>Laboratory diagnosis</td>
</tr>
<tr>
<td>(d)</td>
<td>Rubella virus</td>
<td>1 hr</td>
<td>Rabies virus: Pathogenesis, Rabies: Phases of clinical spectrum</td>
<td>Laboratory diagnosis</td>
<td></td>
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<tr>
<td>(f)</td>
<td>Retrovirus</td>
<td>3 hrs</td>
<td>Human immunodeficiency virus: Routes of transmission, Specific tests: Antibody detection-screening and confirmatory tests, Nonspecific tests: Immunological tests</td>
<td>Pathogenesis of HIV infection, Stages of infection with HIV</td>
<td></td>
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<tr>
<td>(h)</td>
<td>Dengue virus</td>
<td>1 hr</td>
<td>Dengue virus: Classic dengue fever, Chickungunya virus: Vector</td>
<td>Dengue haemorrhagic fever, Chickungunya virus: Clinical features</td>
<td>Laboratory diagnosis</td>
</tr>
</tbody>
</table>

### Miscellaneous virus

| (i) | 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 | *As per the Bacteria and*
<table>
<thead>
<tr>
<th>VII</th>
<th>Diagnostic procedures in microbiology: 2 hrs</th>
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<tbody>
<tr>
<td>1.</td>
<td>Examination of blood and stool</td>
</tr>
<tr>
<td></td>
<td>Preparation of thin and thick blood film</td>
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<td>Microscopic examination of stool for E. histolytica, for Helminthic infections</td>
</tr>
<tr>
<td></td>
<td>Examination of blood for malarial parasites</td>
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<td>Examination of blood for microfilariae</td>
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<td>2.</td>
<td>Immunological examination</td>
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<td>As per the immunology topics in this syllabus</td>
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<tr>
<td>3.</td>
<td>Culture methods</td>
</tr>
<tr>
<td></td>
<td>Culture methods: Streak, Stroke, Stab, Pour plate culture methods</td>
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<tr>
<td></td>
<td>Methods of Anaerobiasis</td>
</tr>
<tr>
<td>4.</td>
<td>Animal inoculation and Antimicrobial chemotheraphy</td>
</tr>
<tr>
<td></td>
<td>Animal inoculation, Antimicrobial chemotherapy</td>
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<table>
<thead>
<tr>
<th>VII I</th>
<th>Infection and disease: 5 hrs</th>
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<tbody>
<tr>
<td>1.</td>
<td>Pathogenicity: mechanism and control.</td>
</tr>
<tr>
<td></td>
<td>Types and sources of infection, Modes of transmission of infection</td>
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<td></td>
<td>Definition: Pathogenicity, virulence</td>
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<td>Determinants of virulence</td>
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<td>2.</td>
<td>Disinfection and Sterilisation</td>
</tr>
<tr>
<td></td>
<td>Definition of terms, List of agents of sterilization, Flaming, Pasteurization</td>
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<tr>
<td></td>
<td>Hot air oven: Parts, uses, procedure of sterilisation</td>
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<tr>
<td></td>
<td>Autoclave: Parts, Uses, Types of filters, Uses of filtration</td>
</tr>
<tr>
<td>Sl no</td>
<td>Paper I: Section A</td>
</tr>
<tr>
<td>-------</td>
<td>-------------------</td>
</tr>
<tr>
<td>1.</td>
<td>Cell injury</td>
</tr>
<tr>
<td>2.</td>
<td>Cellular adaptation</td>
</tr>
<tr>
<td>3.</td>
<td>Inflammation &amp; Repair, Thrombosis</td>
</tr>
<tr>
<td>4.</td>
<td>Oedema</td>
</tr>
<tr>
<td>5.</td>
<td>Shock, Ischaemia</td>
</tr>
<tr>
<td>6.</td>
<td>Neoplasia</td>
</tr>
<tr>
<td>7.</td>
<td>Haemorrhage, Embolism</td>
</tr>
<tr>
<td>8.</td>
<td>Hyperlipidemia, Disorders of pigmentation</td>
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<td>Paper I:Section B</td>
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</tr>
<tr>
<td>1</td>
<td>Mal-nutrition and deficiency diseases, Diseases of glands</td>
</tr>
<tr>
<td>2</td>
<td>Diseases of cardiovascular system</td>
</tr>
<tr>
<td>3</td>
<td>Diseases of blood vessels and lymphatics, Diseases of nervous system</td>
</tr>
<tr>
<td>4</td>
<td>Diseases of kidney and lower urinary tract</td>
</tr>
<tr>
<td>5</td>
<td>Diseases of the respiratory system</td>
</tr>
<tr>
<td>6</td>
<td>Diseases of the G.I. System</td>
</tr>
<tr>
<td>7</td>
<td>Diseases of liver, gall bladder and biliary ducts</td>
</tr>
<tr>
<td>8</td>
<td>Diseases of the pancreas[including diabetes mellitus], Diseases of eye, ENT, and neck, Leprosy</td>
</tr>
<tr>
<td>9</td>
<td>Diseases of the haemopoetic system, bone marrow and blood</td>
</tr>
<tr>
<td>10</td>
<td>Diseases of male reproductive system and prostate, Diseases of female genitalia and breast, Diseases of the skin and soft tissue</td>
</tr>
<tr>
<td>11</td>
<td>Diseases of the musculo-skeletal system, oral cavity</td>
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Total weightage  
20 60 20 100 marks

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<tr>
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<th>Paper II:Section A</th>
<th>Topics</th>
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<th>Must know Higher cognitive</th>
<th>Desirable to know Higher cognitive</th>
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<td>1</td>
<td>Bacterial structure, growth &amp; metabolism, Identification &amp; cultivation of bacteria</td>
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<td>Gram positive aerobic &amp; facultative anaerobic cocci</td>
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<td>10</td>
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<tr>
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<td>Gram positive aerobic bacilli, Gram positive anaerobic bacilli</td>
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<td>Category</td>
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<tr>
<td>3</td>
<td>Nematodes: Ancylostoma. duodenale, Ascaris. lumbricoides, Wuchereria bancrofti</td>
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<td>5</td>
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<td>4</td>
<td>Protozoa: Entamoeba histolytica, Plasmodium species</td>
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<td>Others like: Vibrio.cholera, Treponema. pallidum, Gram negative aerobic cocci, Bacterial genetics</td>
<td>-</td>
<td>5</td>
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</tr>
<tr>
<td>7</td>
<td>Fungi</td>
<td>3</td>
<td>-</td>
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<tr>
<td>8</td>
<td>Cestodes</td>
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<td>9</td>
<td>Trematodes</td>
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<td>Protozoa: Leishmania. donovani, Giardia intestinalis</td>
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<td>Nematodes: Enterobius. vermicularis, T.trichiura</td>
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**Paper II; Section B**

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<th>Topic</th>
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<tbody>
<tr>
<td>1</td>
<td>Nature and classification of viruses</td>
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<tr>
<td>2</td>
<td>Morphology and replication of viruses</td>
<td>3</td>
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<tr>
<td>3</td>
<td>DNA viruses: Hepadna viruses</td>
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<td>4</td>
<td>Miscellaneous virus: Rota virus, Bacteriophage</td>
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<tr>
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<td>DNA viruses: Herpes virus, Papova virus, Adenovirus, Pox virus</td>
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<td>5</td>
<td>RNA viruses: Rhino virus, Rubella virus, Dengue virus, Chikungunya virus</td>
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<tr>
<td>6</td>
<td>RNA viruses: Orthomyxo virus, Paramyxovirus, Entero virus, Rhabdovirus, Retro virus</td>
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<tr>
<td>7</td>
<td>Hypersensitivity, Immunodeficiency, Autoimmunity, Blood group antigens, Antigen-Antibody reactions</td>
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<tr>
<td>8</td>
<td>Normal bacterial flora, Introduction, Diagnostic microbiology, Humoral immunity, Cell mediated immunity, Acquired immunity</td>
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<tr>
<td>9</td>
<td>Culture methods, Examination of blood and stool</td>
<td>-</td>
</tr>
<tr>
<td>10</td>
<td>Immunoprophylaxis</td>
<td>-</td>
</tr>
<tr>
<td>11</td>
<td>Microbiological control &amp; mechanism of</td>
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</table>
pathogenicity: Pathogenicity mechanism & control, Disinfection and Sterilisation

<table>
<thead>
<tr>
<th></th>
<th>SECTION A</th>
<th>SECTION B</th>
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<tbody>
<tr>
<td>Q.1</td>
<td>Inflammation &amp; Repair, Thrombosis</td>
<td>Q.1</td>
</tr>
<tr>
<td>Q.2</td>
<td>Cell injury</td>
<td>Q.2</td>
</tr>
<tr>
<td>Q.3</td>
<td>Cellular adaptation</td>
<td>Q.3</td>
</tr>
<tr>
<td>Q.4</td>
<td>Oedema</td>
<td>Q.4</td>
</tr>
<tr>
<td>Q.5</td>
<td>Shock, Ischaemia</td>
<td>Q.5</td>
</tr>
<tr>
<td>Q.6</td>
<td>Neoplasia</td>
<td>Q.6</td>
</tr>
<tr>
<td>Q.7</td>
<td>Haemorrhage, Embolism</td>
<td>Q.7</td>
</tr>
<tr>
<td>Q.8</td>
<td>Hyperlipidemia, Disorders of pigmentation</td>
<td>Q.8</td>
</tr>
<tr>
<td>Q.9</td>
<td>Disorders of metabolism, Hospital infection</td>
<td>Q.9</td>
</tr>
<tr>
<td>Q.10</td>
<td>Hyperaemia, Immunity</td>
<td>Q.10</td>
</tr>
<tr>
<td>Q.11</td>
<td>Amyloidosis, Infarction</td>
<td>Q.11</td>
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**PAPER II**

<table>
<thead>
<tr>
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<th>SECTION A</th>
<th>SECTION B</th>
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<tr>
<td>Q.1</td>
<td>Gram positive aerobic bacilli</td>
<td>Q.1</td>
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<tr>
<td>Q.2</td>
<td>Bacterial structure, growth &amp; metabolism, Identification &amp;</td>
<td>Q.2</td>
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**Total weightage 100 marks**

**QUESTION PAPER LAYOUT**

**PAPER I**

**SECTION A**

- Q.1 Inflammation & Repair, Thrombosis
- Q.2 Cell injury
- Q.3 Cellular adaptation
- Q.4 Oedema
- Q.5 Shock, Ischaemia
- Q.6 Neoplasia
- Q.7 Haemorrhage, Embolism
- Q.8 Hyperlipidemia, Disorders of pigmentation
- Q.9 Disorders of metabolism, Hospital infection
- Q.10 Hyperaemia, Immunity
- Q.11 Amyloidosis, Infarction

**SECTION B**

- Q.1 Diseases of kidney and lower urinary tract
- Q.2 Malnutrition and deficiency diseases, Diseases of glands
- Q.3 Diseases of Haemopoietic system, bone marrow & blood
- Q.4 Diseases of cardiovascular system
- Q.5 Diseases of respiratory system
- Q.6 Diseases of G.I. system
- Q.7 Diseases of liver, gall bladder & biliary ducts
- Q.8 Diseases of pancreas (including diabetes mellitus), Diseases of Eye, ENT and neck, Leprosy
- Q.9 Diseases of blood vessels & lymphatics, Diseases of nervous system
- Q.10 Diseases of male reproductive and prostate, Diseases of female genitalia and breast, Diseases of skin and soft tissue
- Q.11 Diseases of musculoskeletal system, Diseases of oral cavity & salivary glands

**PAPER II**

**SECTION A**

- Q.1 Gram positive aerobic bacilli
- Q.2 Bacterial structure, growth & metabolism, Identification &

**SECTION B**

- Q.1 Microbiological control & mechanism of pathogenicity: Pathogenicity mechanism & control, Disinfection and Sterilisation
- Q.2 Immunoprophylaxis
| 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, Entero virus, 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**
<table>
<thead>
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<tbody>
<tr>
<td>(1) Clinical and chemical pathology</td>
<td>18 hrs</td>
<td>Estimation of Haemoglobin</td>
<td>Bleeding time</td>
<td>Blood examination for parasites</td>
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<td>Blood grouping, ESR</td>
<td>Clotting time</td>
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<td></td>
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<td>TC-RBC, WBC</td>
<td>Staining of thick and thin films</td>
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<tr>
<td></td>
<td></td>
<td>Differential counts</td>
<td></td>
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<tr>
<td>(2) Urine examination</td>
<td>12 hrs</td>
<td>Physical, Chemical, Microscopic</td>
<td>Quantity of albumin and sugar</td>
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<td>(3) Examination of Faeces</td>
<td>4 hrs</td>
<td>Physical and Microscopic for ova and protozoa</td>
<td>Chemical (occult blood)</td>
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<td>(4)</td>
<td>12 hrs</td>
<td>Use of microscope</td>
<td>Methods of</td>
<td>Motility preparation</td>
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<td>Gram and Acid fast</td>
<td>sterilisation:</td>
<td>Gram positive and negative</td>
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<td></td>
<td></td>
<td>stains</td>
<td>Using hot air oven, Autoclave, Flaming</td>
<td>cocci and bacilli</td>
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<td>Acid fast stains of pus and sputum</td>
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<td>Special stains for Corynebacterium</td>
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<tr>
<td>(5) Preparation of common culture media</td>
<td>2 hrs</td>
<td>Nutrient agar</td>
<td>Blood agar, Robertson’s Cooked Meat media and Mac conkey’s media</td>
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<td>(6) Widal Test demonstration</td>
<td>1 hr</td>
<td></td>
<td>Widal test demonstration</td>
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<tr>
<td>(7) Exposure to latest equipment</td>
<td>2 hrs</td>
<td></td>
<td>Auto-analyzer, cell counter, glucometer</td>
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<tr>
<td>(8) Histopathology</td>
<td></td>
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<tr>
<td>(a) Demonstration of common slides from each system:</td>
<td>12 hrs</td>
<td>(a) Acute appendicitis, Chronic appendicitis, Granulation tissue, TB lymph node, TB lungs, Fatty liver, Colloid goiter Fibroadenoma breast, Basal cell Ca,</td>
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2. Practical including vivo voce or oral

2.1. Marks 100

2.2. Distribution of marks

<table>
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<td>Haemoglobin estimation</td>
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<td>25 to 30</td>
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<td>b.</td>
<td>WBC count</td>
<td>3</td>
<td>minutes</td>
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<tr>
<td>c.</td>
<td>RBC count</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d.</td>
<td>ESR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e.</td>
<td>Differential count</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f.</td>
<td>Peripheral smear</td>
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<td>g.</td>
<td>Blood group</td>
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<tr>
<td>h.</td>
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2. **Examination of urine**

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<th>Chemical properties:</th>
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<tbody>
<tr>
<td></td>
<td>i. Albumin</td>
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<tr>
<td></td>
<td>ii. Blood</td>
</tr>
<tr>
<td></td>
<td>iii. Glucose</td>
</tr>
<tr>
<td></td>
<td>iv. Ketone bodies</td>
</tr>
<tr>
<td></td>
<td>iv. Bile pigments</td>
</tr>
<tr>
<td></td>
<td>v. Bile salts</td>
</tr>
</tbody>
</table>

*Any one of the above*

| Procedural and Practical skills | 2 | 3 | 5 | 10 to 15 minutes |

3. **Microbiology and Parasitology**

| a. Gram staining | Procedural and Practical skills | 2 | 3 | 5 | 20 to 25 minutes |
| b. Acid fast staining |                       | 2 | 3 | 5 | 20 to 25 minutes |
| c. Stool examination for ova and cyst |
| d. Urine microscopic: |
| i. Casts |
| ii. pus cells |
| iii. RBC'S |
| iv. Epithelial cells |
| v. Crystals |

*Any one of the above*

2.2.2 **Spotters**

<table>
<thead>
<tr>
<th>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</th>
</tr>
</thead>
</table>

**For appliances:**
- Identification 1
- Description 2
- Uses 2

**For specimen:**
- Identification 2
- Description 3

<table>
<thead>
<tr>
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<tr>
<td>5 X 4 = 20</td>
<td>3 minutes for each spotting</td>
</tr>
<tr>
<td>Lamp, Urinometer, Calorimeter, Medias - Deep, Slant, Plate, Pathological specimens</td>
<td>Identification</td>
</tr>
<tr>
<td>---</td>
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</tr>
<tr>
<td><strong>Any two appliances of the above and any two specimens</strong></td>
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</tr>
<tr>
<td>2.2.1 Histopathological slides</td>
<td>Identification</td>
</tr>
<tr>
<td>Acute appendicitis</td>
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</tr>
<tr>
<td>Granulation tissue</td>
<td></td>
</tr>
<tr>
<td>TB lungs</td>
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</tr>
<tr>
<td>Colloid goiter</td>
<td></td>
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<tr>
<td>Basal cell Ca</td>
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<tr>
<td>Squamous papilloma</td>
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<tr>
<td>Any two slides of the above</td>
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</tr>
<tr>
<td>2.2.4 Journal or Practical record</td>
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<tr>
<td>2.2.5 Viva voce (oral)</td>
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<tr>
<td>Including 5 marks for interpretation of routine pathological reports</td>
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Scheme of examination:

<table>
<thead>
<tr>
<th>PAPER-I</th>
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<tbody>
<tr>
<td>SECTION A</td>
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Total ------100 marks
### Types of Questions

<table>
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<th>Marks per question</th>
<th>Total marks</th>
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<tbody>
<tr>
<td>Long essay</td>
<td>1</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Short essays</td>
<td>5</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td>Short answers</td>
<td>5</td>
<td>3</td>
<td>15</td>
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### SECTION B

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<td>10</td>
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<tr>
<td>Short essays</td>
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<td>5</td>
<td>25</td>
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<tr>
<td>Short answers</td>
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**Grand total** 100 marks

### PAPER-II

#### SECTION A

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<td>Short essays</td>
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#### SECTION B

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<th>Total marks</th>
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<tbody>
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<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Short essays</td>
<td>5</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td>Short answers</td>
<td>5</td>
<td>3</td>
<td>15</td>
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<tr>
<td><strong>Total marks</strong></td>
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<td><strong>50 marks</strong></td>
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**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:**


**Advanced books:**


II B.H.M.S - SURGERY

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

<table>
<thead>
<tr>
<th>S. No</th>
<th>Topic</th>
<th>Hours</th>
<th>Must Know</th>
<th>Desirable to Know</th>
<th>Nice to Know</th>
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<tr>
<td>A. General Surgery</td>
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<tr>
<td>1</td>
<td>Introduction to surgery and basic Surgical principles</td>
<td>3</td>
<td>Introduction to surgery and basic Surgical principles</td>
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<td></td>
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<tr>
<td>2</td>
<td>Fluid, electrolytes acid base balance</td>
<td>3</td>
<td>Electrolyte balance (Na, K, Mg, Ca), Acidosis, alkalosis</td>
<td>Acid base balance,</td>
<td>Anatomy of body fluids, Normal exchange of fluid and electrolyte Parenteral fluid therapy,</td>
</tr>
<tr>
<td>3</td>
<td>3.1 Haemorrhage</td>
<td>7</td>
<td>Source, types, classification of haemorrhage, clinical features, Homoeopathic treatment.</td>
<td>Management - Rest, Pressure and packing from outside.</td>
<td>Operative treatment, blood transfusion</td>
</tr>
</tbody>
</table>

Acute infections

| 3.4 Boil | Definition, clinical features, Homoeopathic therapeutics, drainage of pus | Special investigations, Treatment. | | |

219
<p>| 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 | 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 | Tumours-Definition Types, Clinical features &amp; Examination of Papiloma, Fibroma, Myoma, Lipoma, Haemongioma, 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 &amp; Sebaceous cyst Definition, , clinical features, | Classification, Homoeopathic therapeutics. Classification, Homoeopathic therapeutics. |</p>
<table>
<thead>
<tr>
<th>Ulcer</th>
<th>Definition, type, pathology, clinical features, general management and homoeopathic therapeutics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sinus and fistula</td>
<td>Definition, type, clinical features, general management and homoeopathic therapeutics</td>
</tr>
</tbody>
</table>

### Injuries of Various Types

#### Head Injury: 8

<table>
<thead>
<tr>
<th>7.1 Fracture of the base of the skull</th>
<th>Clinical features of closed &amp; open fracture</th>
<th>Mechanism, Types of fractures</th>
<th>Importance of skull fracture</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.2 Injury to the brain</td>
<td>types of brain injury,</td>
<td>Mechanism of head injury, pathology.</td>
<td>Secondary pathologies of cerebral compression</td>
</tr>
<tr>
<td>7.3 Intracranial Haemorrhage</td>
<td>Clinical features of Intracerebral haemorrhage, subdural and extradural haemorrhage.</td>
<td>Level of consciousness</td>
<td></td>
</tr>
<tr>
<td>7.4 Preliminary management of head injuries</td>
<td>Non-surgical treatment, Indications for surgery, Homoeopathic therapeutics.</td>
<td>Early and Late complications of head injury.</td>
<td>Special investigation,</td>
</tr>
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</table>

#### Wounds, Tissue repairs, Scars & Wound Infections: 5

<table>
<thead>
<tr>
<th>8.1 Wounds, Tissue repairs, Scars &amp; Wound Infections</th>
<th>Definition, Types of Wounds, Homoeopathic therapeutics</th>
<th>Regeneration, Repair, Inflammation, Epithelialisation, Granulation tissue formation, Wound contraction,</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.2 Healing of skin wounds</td>
<td>Definition, Types, complications, Treatment, Homoeopathic therapeutics</td>
<td></td>
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</table>

### Special Infections

<table>
<thead>
<tr>
<th>9.1 Syphilis</th>
<th>Definition, Stages, Pathology, clinical features</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<tr>
<td>---</td>
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</tr>
<tr>
<td>9.2</td>
<td>Leprosy</td>
</tr>
<tr>
<td>9.3</td>
<td>AIDS</td>
</tr>
<tr>
<td>10</td>
<td>Burns</td>
</tr>
<tr>
<td>11</td>
<td>Shock</td>
</tr>
<tr>
<td>12</td>
<td>Mal-Nutrition</td>
</tr>
<tr>
<td>13</td>
<td>Preoperative &amp; Postoperative Care</td>
</tr>
<tr>
<td>14</td>
<td>Fundamentals of examination of patient with surgical problems, common symptoms in surgical cases</td>
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</table>

**Dentistry: 10 Marks**

<p>| | | | |</p>
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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Teeth Morphology</td>
<td>Arrangement of teeth</td>
<td>Dental formula</td>
<td>Anatomy &amp;physiology of teeth &amp; gums, milestones</td>
</tr>
<tr>
<td>Caries of Tooth</td>
<td>Definition, aetiology, clinical features &amp; general management homoeopathic therapeutics</td>
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<td></td>
</tr>
<tr>
<td>Abscess &amp; Fistula</td>
<td>Definition, aetiology, clinical features &amp; homoeopathic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diseases of Gums</td>
<td>2</td>
<td>Definition, aetiology, clinical features &amp; homoeopathic therapeutics</td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>---</td>
<td>-------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Apthous ulcer &amp; Glossitis</td>
<td>1</td>
<td>Definition, aetiology, clinical features, homoeopathic therapeutics</td>
<td></td>
</tr>
<tr>
<td>Cleft Palate &amp; cleft palate</td>
<td>1</td>
<td>Definition, clinical features, aetiology, homoeopathic therapeutics, Management</td>
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</tr>
<tr>
<td>Ca Cheek</td>
<td>1</td>
<td>Definition, aetiology, clinical features, Hom. therapeutics, Operative treatment</td>
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<tr>
<td>Root canal treatment</td>
<td>1</td>
<td>Definition, aetiology, clinical features &amp; general management, Definition, aetiology, clinical features &amp; Managemennt,</td>
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<tr>
<td>Injury to Maxilla &amp; Mandible</td>
<td>1</td>
<td>Definition, clinical features &amp; homoeopathic therapeutics, Management, Operative procedure</td>
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<tr>
<td>Silolithiasis &amp; Silography</td>
<td>1</td>
<td>Definition, aetiology, clinical features &amp; Management, homoeopathic therapeutics, Procedure of Sialography</td>
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</table>

### Diseases of Blood Vessels

<p>| Raynaud’s disease &amp; Buergers diseases | 1 | Aetio-pathogenesis, clinical features, general management &amp; Homoeopathic therapeutics, Special investigations, Operative procedure |
| Gangrene | 1 | Definition, types, causes, clinical features, general management &amp; Homoeopathic therapeutics, Special investigations, Operative treatment |
| Diseases of vein Varicose vein &amp; Deep venous thrombosis | 1 | clinical features, general management &amp; Homoeopathic therapeutics, Aetiology, Special investigations, complications, Operative treatment |
| Pulmonary embolism | 1 hr | Pathophysiology, clinical features, Special investigations |
| Diseases of lymphatics | 1 | clinical features &amp; homoeopathic, Definition, general |</p>
<table>
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<tr>
<th>Lymphangitis, Lymph oedema</th>
<th>1 hr</th>
<th>Definition, clinical features, staging &amp; homoeopathic therapeutics</th>
<th>Pathology, special investigations, general management</th>
<th>Operative treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hodgkins disease</td>
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<td></td>
</tr>
<tr>
<td>Diseases of peripheral nerves</td>
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<td>Tumours, injuries to peripheral nerves</td>
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### II year B.H.M.S – Clinical Topics (60 HRS)

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<tr>
<td>2</td>
<td>Special symptoms &amp; signs</td>
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<tr>
<td>3</td>
<td>Investigations - routine &amp; Special</td>
<td>4</td>
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<td>4</td>
<td>Sterilization</td>
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<td>5</td>
<td>Anti sepsis in Surgery</td>
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<td>Pre operative investigations</td>
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<td>7</td>
<td>Pre operative care.</td>
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<tr>
<td>8</td>
<td>Post operative care</td>
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<td>9</td>
<td>Suture Material &amp; Suturing of various types</td>
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<td>10</td>
<td>Dressings and Plasters (Bandaging)</td>
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<tr>
<td>11</td>
<td>Use of common instruments for Examination.</td>
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<tr>
<td>12</td>
<td>Basics of general surgical procedures</td>
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<tr>
<td>13</td>
<td>Anaesthesia - Introduction &amp; its types</td>
<td>1</td>
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<td>Management of Shock</td>
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<td>Management of Acute Haemorrhage</td>
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<td>16</td>
<td>Case Demonstration</td>
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<td>Examination of Swelling</td>
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<td>Examination of Ulcer</td>
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<td>Examination of Perivascular Diseases and Gangrene</td>
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<td>20</td>
<td>Examination of Sinus &amp; Fistula</td>
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<td>21</td>
<td>Management of Wound</td>
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<td>22</td>
<td>Abscess &amp; Incision &amp; Drainage</td>
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<td>23</td>
<td>Examination of Varicose Veins</td>
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<td>24</td>
<td>Examination of Lymphatic System</td>
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<td>25</td>
<td>Examination of Peripheral Nerve Lesions</td>
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<tr>
<td>26</td>
<td>Examination of injuries about individual joints</td>
<td>2</td>
</tr>
<tr>
<td>27</td>
<td>Examination of Head Injuries</td>
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</table>
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.

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<tr>
<th>SL.NO</th>
<th>TOPIC</th>
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<th>DESIRABLE TO KNOW</th>
<th>NICE TO KNOW</th>
<th>HOURS</th>
<th>MARKS</th>
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<tbody>
<tr>
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<td>Man and Medicine.</td>
<td>• Changing concepts in public health.</td>
<td>• Greek, Roman and their contribution to world</td>
<td>• Primitive medicine</td>
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<tr>
<td></td>
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<td>• Sanitary awakening</td>
<td>• Indian medicine</td>
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<td></td>
<td></td>
<td>• Rise of public health</td>
<td>• Chinese medicine</td>
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<td>• Egyptian medicine</td>
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Total Hours 60
<table>
<thead>
<tr>
<th>2</th>
<th>Concept of Health &amp; Disease in conventional medicine &amp; homoeopathy</th>
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<tbody>
<tr>
<td></td>
<td>• Definition of Health</td>
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<td>• Determinants of health</td>
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<td>• Indicators of health.</td>
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<td></td>
<td>• Concept of prevention &amp; control</td>
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<td></td>
<td>• Modes of intervention</td>
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<td></td>
<td>• Disease classification.</td>
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<td>• Health service philosophies.</td>
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<tr>
<td></td>
<td>• Concept of disease &amp; causation.</td>
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<td>• Natural history of disease.</td>
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<td>• Dimensions of health.</td>
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<td>• Changing pattern of disease</td>
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<td>• Ecology of health</td>
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<tr>
<td></td>
<td>• Difference between homoeopathic and Allopathic system of treatment</td>
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<td></td>
<td>• International classification of disease</td>
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<th>Nutrition and Health</th>
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<td>• Food in relation to Health &amp; disease.</td>
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<td>• Nutritional deficiencies &amp; Nutritional survey.</td>
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<tr>
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<td>• Balanced diet.</td>
</tr>
<tr>
<td></td>
<td>• Definition.</td>
</tr>
<tr>
<td></td>
<td>• Classification of food.</td>
</tr>
<tr>
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<td>• Food adulteration.</td>
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<td>• Food additives.</td>
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<td>• Food fortification</td>
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<td>• Pasteurization of milk</td>
</tr>
<tr>
<td></td>
<td>• Food standards</td>
</tr>
<tr>
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<td>• Nutrition policy</td>
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<table>
<thead>
<tr>
<th>4</th>
<th>Environment and Health.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Disinfection and Sterilization.</td>
</tr>
<tr>
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<td>• Air-borne diseases.</td>
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<tr>
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<td>• Comfort zone.</td>
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<tr>
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<td>• Disposal of waste</td>
</tr>
<tr>
<td></td>
<td>• Vector borne disease</td>
</tr>
<tr>
<td></td>
<td>• Physical exercise and taking care of health.</td>
</tr>
<tr>
<td></td>
<td>• Air pollution-prevention and control</td>
</tr>
<tr>
<td></td>
<td>• Noise prevention and control</td>
</tr>
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<td>• Humidity and</td>
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<td>• Meteorological environment.</td>
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<td>• Light</td>
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<td></td>
<td>• Medical Entomology.</td>
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<tr>
<td></td>
<td>• Insecticides.</td>
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</table>
| 5 | Water | - Water borne diseases and its Prevention.  
- Safe water. | - Hardness of water.  
- Chlorination of water.  
- Purification of water | - Fluorosis |
|---|---|---|---|---|
| 6 | Occupational health | - Occupational Hazards  
- Prevention of Occupational diseases  
- Benefits of employees. | - ESI. Act  
- Factories Act | - |
| 7 | Preventive medicine in Pediatrics and Geriatrics. | - Feeding of infants.  
- Child health problems  
- Low birth weight.  
- Growth chart & Neonatal care.  
- Health problems of the aged and their prevention. | - Rights of women & children.  
- Health status of aged in India. |
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

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

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

**Template 2**

<table>
<thead>
<tr>
<th>Sl No</th>
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<tr>
<td>1</td>
<td>Medicines as per list of Appendix – 2</td>
<td>76 hours</td>
<td>Sphere of action &amp; pathogenesis, Physical constitution, Thermals, Ailments, from/Causations, Mental symptoms, Characteristic symptoms, Particular symptoms under the following headings: - Location, - Sensation, - Modalities, - Concomitants, General Modalities, Clinical indications, Relation ship</td>
<td>Diathesis, Temperament, Miasmatic, Background, Therapeutic application, Comparison</td>
<td>Common name, Family, Source, Alkaloids, Part used, Preparation, Collection, Prover, Habitat</td>
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**List of major remedies: Appendix – 2**

<table>
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<tr>
<th>No</th>
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<th>Focus area</th>
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<td>1</td>
<td>Acetic acid</td>
<td>GIT, Fever &amp; Debility, Dropsy</td>
</tr>
<tr>
<td>2</td>
<td>Actea spicata</td>
<td>Rheumatism</td>
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**Appendix – 2a: The following remedies shall be learnt with focus on points given against the respective remedies (30 hours)**

<table>
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<th>No</th>
<th>Remedy</th>
<th>Focus area</th>
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<td>Acetic acid</td>
<td>GIT, Fever &amp; Debility, Dropsy</td>
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<tr>
<td>2</td>
<td>Actea spicata</td>
<td>Rheumatism</td>
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<tr>
<td>No.</td>
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<td>Conditions</td>
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<td>-------------------------------------------------</td>
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<tr>
<td>3</td>
<td>Agnus castus</td>
<td>Mind, Genitals- male &amp; female.</td>
</tr>
<tr>
<td>4</td>
<td>Ambra grisea</td>
<td>Nervous affections, Mind and Female</td>
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<tr>
<td>5</td>
<td>Ammonium mur</td>
<td>Constitution, Respiratory, Female &amp; guiding symptoms.</td>
</tr>
<tr>
<td>6</td>
<td>Apocynum</td>
<td>Dropsy, GIT</td>
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<td>7</td>
<td>Asafoetida</td>
<td>Mind, GIT, Bones</td>
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<td>8</td>
<td>Benzoic acid</td>
<td>Urogenitals system, Gout</td>
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<td>9</td>
<td>Berberis vulgaris</td>
<td>Urinary &amp; GIT</td>
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<td>10</td>
<td>Bismuth</td>
<td>GIT &amp; Mind</td>
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<td>11</td>
<td>Bromium</td>
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<td>12</td>
<td>Bufo rana</td>
<td>Mind &amp;Nervous system, Convulsions, Genitourinary</td>
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<td>13</td>
<td>Cactus</td>
<td>Heart, Fever &amp;guiding symptoms</td>
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<td>14</td>
<td>Caladium</td>
<td>Genitals &amp;guiding symptoms</td>
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<td>15</td>
<td>Calcarea ars</td>
<td>Convulsions &amp;guiding symptoms</td>
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<td>16</td>
<td>Camphora</td>
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<td>17</td>
<td>Cannabis sativa</td>
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<td>GIT, Respiratory&amp;guiding symptoms</td>
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<td>Digitalis</td>
<td>Heart&amp;guiding symptoms</td>
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<td>Dioscorea</td>
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<td>Helleborus</td>
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<td>Hyoscyamus</td>
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<td>Kali brom</td>
<td>Nervous system and Skin</td>
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<td>Debility, GIT, Typhoid</td>
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<td>Oxalic acid</td>
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<td>Phytolacca</td>
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<td>GIT, Eye, Vertigo and Urinary</td>
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<td>Tongue and GIT</td>
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<td>Vertigo, Air sickness</td>
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**Scheme of Examination:**

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

**Distribution of Marks**

<table>
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<th>Question type</th>
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<td>1 LE, 5 SE, 5 SA</td>
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Types of questions with marks

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<td>Short Essays</td>
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<td>05</td>
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Maximum Marks 100

Question Paper Blueprint

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

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<td>Table 3</td>
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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)
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

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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
- Mohanty, Niranjan (2009). *All in one Homoeopathic Materia Medica*. Jain publishers (P) limited, Delhi

**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

<table>
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<tr>
<th>Sl No</th>
<th>Topics</th>
<th>Hours</th>
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<th>Desirable to Know</th>
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Epidemiology
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**II. Diseases of Digestive System & Peritoneum: 23 hrs**

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<td>12</td>
<td>Peritonitis</td>
<td>1</td>
<td>Definition, Etiopathogenesis, C/F, Investigations, Complications, D/D &amp; Hom therapeutics Enzyme study</td>
</tr>
<tr>
<td>13</td>
<td>Neoplasia of the bowel</td>
<td>2</td>
<td>Definition, Etiology, Pathology, Types, C/F, Investigations, Imaging studies</td>
</tr>
</tbody>
</table>
## III. Diseases concerning Liver, Gall-bladder & Pancreas: 17hrs

<table>
<thead>
<tr>
<th>No</th>
<th>Disease</th>
<th>Definition, Etiopathogenesis, C/F, Investigations, Complications, D/D &amp; Hom therapeutics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Viral Hepatitis</td>
<td>Serological studies</td>
</tr>
<tr>
<td>2</td>
<td>Alcoholic Liver Diseases</td>
<td>Liver transplantation</td>
</tr>
<tr>
<td>3</td>
<td>Cirrhosis of Liver</td>
<td>Histological changes</td>
</tr>
<tr>
<td>4</td>
<td>Portal Hypertension</td>
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</tr>
<tr>
<td>5</td>
<td>Liver Failure</td>
<td>Liver transplantation</td>
</tr>
</tbody>
</table>
6 Liver abscess 1 Definition, Causes, Pathology, C/F, Investigations, Complications & Homotherapeutics

7 Gallstones 1 Definition, Etiopathogenesis, C/F, D/D, Investigations, Complications & Homotherapeutics

8 Cholecystitis 1 Definition, Etiopathogenesis, C/F, D/D, Investigations, Complications & Homotherapeutics

9 Pancreatitis 1 Definition, Etiopathogenesis, Types, C/F, Investigations, Complications, D/D & Homotherapeutics

10 LFT 1 Reference ranges and interpretations.

11 Ascites 1 Definition, Etiopathogenesis, C/F, D/D, Investigations, Complications & Homotherapeutics

12 Pregnancy and Liver Diseases 1 Consequences

13 Parasitic Diseases of the Liver 1 Types, Etiopathogenesis, Pathology, C/F, Diagnosis, prognosis, Homotherapeutics

14 Inherited 1 Types, Causes,
<table>
<thead>
<tr>
<th>Sequence</th>
<th>Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Metabolic Disorder of the Liver</td>
<td>Pathology, C/F, Diagnosis, Prognosis &amp; Hom therapeutics</td>
</tr>
<tr>
<td>15</td>
<td>Hepatocellular carcinoma</td>
<td>Types, Etiology, Pathology, C/F, Diagnosis, Prognosis &amp; Hom therapeutics</td>
</tr>
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</table>

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

<table>
<thead>
<tr>
<th>Sequence</th>
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<tbody>
<tr>
<td>1</td>
<td>Down’s Syndrome</td>
<td>Definition, Causes, C/F &amp; Diagnosis</td>
</tr>
<tr>
<td>2</td>
<td>Turner’s &amp; Klinfilter’s Syndrome</td>
<td>Definition, Causes C/F &amp; Diagnosis</td>
</tr>
<tr>
<td>3</td>
<td>Cystic fibrosis</td>
<td>Etiopathogenesis, C/F, Diagnosis, Concept of Miasm &amp; Hom therapeutics</td>
</tr>
<tr>
<td>4</td>
<td>Poly cystic kidney disease</td>
<td>Etiopathogenesis, C/F &amp; Diagnosis, Concept of Miasm &amp; Hom therapeutics</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Title</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>Homoeopathic relation of immunity &amp; Susceptibility</td>
<td>Homoeopathic relation of immunity &amp; Susceptibility</td>
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<tr>
<td>2</td>
<td>Hypersensitivity reactions</td>
<td>Types &amp; manifestations of Hypersensitivity reactions</td>
</tr>
<tr>
<td>3</td>
<td>Autoimmune diseases</td>
<td>Types &amp; manifestations of Autoimmune diseases</td>
</tr>
<tr>
<td>4</td>
<td>HIV</td>
<td>Etiopathogenesis</td>
</tr>
</tbody>
</table>
5 Hepatitis-B

VI. Disorders due to Chemical & Physical agents & to Climatic & environmental factors: 02 hrs
1 Diseases due to Chemical & Physical agents
   Etio-pathogenesis & Manifestations of diseases due to Chemical & Physical agents

2 Disease due to Climatic & Environmental factors
   Etio-pathogenesis & Manifestations of disease due to Climatic & Environmental factors

VII. Disorders of Water & Electrolyte balance: 05 hrs
1 Hypo & Hyponatraemia
   Causes, Manifestations, Diagnosis
   General management & Hom Therapeutics
   Scope & Limitations of Homoeopathy

2 Hypo & Hyperkalaemia
   Causes, Manifestations, Diagnosis
   General management & Hom Therapeutics
   Scope & Limitations of Homoeopathy

3 Hypo & Hyperphosphataemia
   Causes, Manifestations, Diagnosis
   Scope & Limitations of Homoeopathy
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

Gynaecology and Obstetrics

III BHMS
Year | II BHMS | III BHMS
---|---|---
Total hours | 140 | 225

<table>
<thead>
<tr>
<th>Time</th>
<th>II BHMS</th>
<th>III BHMS</th>
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<tbody>
<tr>
<td>Gynaecology</td>
<td>30</td>
<td>70</td>
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<tr>
<td>Obstetrics</td>
<td>45</td>
<td>70</td>
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<tr>
<td>Care of new born / Infant care</td>
<td>05</td>
<td>10</td>
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<tr>
<td>Clinical</td>
<td>60 Hours (Three months clinical posting in OPD &amp; IPD)</td>
<td>75 Hours (Three months clinical posting in OPD &amp; IPD)</td>
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</table>

**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
<table>
<thead>
<tr>
<th>Sl No</th>
<th>Chapter</th>
<th>Time</th>
<th>Must Know</th>
<th>Desirable to Know</th>
<th>Nice to Know</th>
<th>Weigh tage</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Anatomy of female reproductive organs</td>
<td>2 HR</td>
<td>Internal genitalia, pelvic muscles, pelvic floor &amp; fascia.</td>
<td>External genitalia, urinary bladder &amp; rectum</td>
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<td>5 marks</td>
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<td></td>
<td>Blood vessels, lymphatics of pelvic organs</td>
<td>1 HR</td>
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<tr>
<td></td>
<td>Development of genital organs &amp; gonads.</td>
<td>2 HR</td>
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<td></td>
<td>Neuro-endocrinology in relation to reproduction</td>
<td>2 HR</td>
<td>Ovarian hormones &amp; its functions. Importance of hypothalamic pituitary ovarian axis.</td>
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<tr>
<td>Topic</td>
<td>Time</td>
<td>Must Know</td>
<td>Desirable to Know</td>
<td>Nice to Know</td>
<td>Weightage</td>
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<tr>
<td>Ovulation- define, causes &amp; hormonal effects.</td>
<td>3 HR</td>
<td>Definition, stages of menstruation. Formation &amp; maturation of GF &amp; corpus-luteum.</td>
<td>An-ovular menstruation</td>
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<tr>
<td>Etiology, clinical feature of female, male inter-sex.</td>
<td>2 HR S</td>
<td>Diagnosis &amp; management of inter-sex.</td>
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<tr>
<td>Define degrees causes, signs &amp; symptoms of retroversion. Genital prolapse- etiology, types degrees of prolapse, clinical features, diagnosis &amp; D/D.</td>
<td>5 HR S</td>
<td>Prevention and management of retroversion</td>
<td>Types of operation in prolapse. Supports of vagina. Fixed retroversion. Chronic-inversion define, causes types, C/F</td>
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<tr>
<td>External &amp; internal genitalia, ureter pelvic muscles &amp; fascia</td>
<td>5 marks</td>
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<tr>
<td>External &amp; internal genitalia, ureter pelvic muscles &amp; fascia</td>
<td>5 marks</td>
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**Obstetrics**

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<tr>
<th>Sl No</th>
<th>Chapter</th>
<th>Time</th>
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<th>Desirable to Know</th>
<th>Nice to Know</th>
<th>Weightage</th>
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<tbody>
<tr>
<td>1.</td>
<td>Anatomy of reproductive organs</td>
<td>1 HR</td>
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<td>5 marks totally</td>
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<tr>
<td><strong>Fundamentals of reproduction</strong></td>
<td>Gametogenesis, Ovulation, fertilization, Implantation, Trophoblast, decidua, chorion &amp; chorio-villi</td>
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<tr>
<td><strong>Placenta &amp; membranes</strong></td>
<td>Placental functions, amniotic fluid &amp; amnion</td>
<td>Development, structure &amp; placental circulation</td>
<td>Umbilical cord</td>
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<tr>
<td><strong>The fetus</strong></td>
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<td>Fetal physiology &amp; fetal circulation</td>
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<tr>
<td><strong>Physiological changes during pregnancy</strong></td>
<td>Genital organs, breasts, weight gain, cutaneous changes, hematological changes</td>
<td>Metabolic changes</td>
<td>Systemic changes</td>
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<tr>
<td><strong>Endocrinology in relation to reproduction</strong></td>
<td>Maturation of graafian follicle &amp; maintenance of corpus luteum after fertilization</td>
<td>Changes of endocrinal gland during pregnancy</td>
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<tr>
<td><strong>Fetus-in-utero</strong></td>
<td>Lie, presentation, Attitude, Denominator Position. Methods of obstetrics examination - abdominal with grips, engagement</td>
<td>Internal examination Ultra-sonography inferences Vaginal examination</td>
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<tr>
<td>Unit</td>
<td>Topic</td>
<td>Duration</td>
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<td>Questions</td>
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</tr>
<tr>
<td>1</td>
<td><strong>Fetal skull &amp; maternal pelvis</strong></td>
<td>1 HR</td>
<td>1 HR</td>
<td>1 HR</td>
<td>20</td>
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<td>2</td>
<td><strong>Diagnosis of pregnancy</strong></td>
<td>6 HR S</td>
<td>6 HR S</td>
<td>6 HR S</td>
<td>20 marks</td>
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<td>4</td>
<td><strong>Antenatal care</strong></td>
<td>4 HR S</td>
<td>4 HR S</td>
<td>4 HR S</td>
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<td></td>
<td>Antenatal care— Aims, objective &amp; advice</td>
<td></td>
<td></td>
<td>Antenatal care— Aims, objective &amp; advice</td>
<td>Minor ailments in pregnancy</td>
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<td></td>
<td>Ante-natal assessment of fetal well-being</td>
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<td></td>
<td>Pre-conception visit, risk &amp; education</td>
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<tr>
<td>10</td>
<td><strong>Normal-labor</strong></td>
<td>10 HR S</td>
<td>10 HR S</td>
<td>10 HR S</td>
<td>20</td>
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<td></td>
<td></td>
<td>Physiology of labor, clinical course of labor</td>
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<td>6</td>
<td><strong>Normal puerperium</strong></td>
<td>6 HR S</td>
<td>6 HR S</td>
<td>6 HR S</td>
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</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Chapter</th>
<th>Time</th>
<th>Must Know</th>
<th>Desirable to Know</th>
<th>Nice to Know</th>
<th>Weigh tage</th>
</tr>
</thead>
</table>

248
| 5 | **Pelvic infections** | 4 HR S | Acute pelvic infections define, mode of spread, C/F, investigations diagnosis, D/D & complications.
Chronic pelvic infections- C/ F, investigations, D/D & management.
Genital TB mode of spread, C/F investigations,D/D. | Treatment of chronic PID, Tuberculosis & Cervical TB |
|---|---------------------|---|---|---|
| 4 HR S | **Sexually transmitted diseases** | Acute & chronic gonorrhea clinical features diagnosis & treatment.
Syphilis C/F & diagnosis.
AIDS clinical features causative organisms, diagnosis & prevention | Chlamydial infections clinical features & diagnosis.
Chancroid & Granuloma inguinale causes & clinical features | Bacterial vaginitis C/F & diagnosis.
Herpes genitalia clinical features & diagnosis.
Molluscum contagiosum & scabies |
| 4 HR S | **Infection of the individual organs** | Classify vulvitis due to specific infection.
Acute Bartholinitis C/F & causation.
Bartholin abscess clinical features.
Vaginal infection-vulvo-vaginitis in childhood, C/F & investigation.
Moniliasis&Trichomoniasis causes, C/F, mode of transmission & diagnosis | Vulvitis due to sensitive reaction & urinary contamination...
Bartholin cyst clinical features
Senile vaginitis clinical features & diagnosis | Chlamydial vaginitis.
Nonspecific vaginitis & toxic shock syndrome. |
<table>
<thead>
<tr>
<th>6</th>
<th>Dysmenorrhoea &amp; other disorders of menstruation</th>
<th>4 HR S</th>
<th>Define dysmenorrhoea, types, etiology clinical features &amp; management of primary &amp; secondary dysmenorrhoea. Membranous dysmenorrhoea. Premenstrual syndrome causes clinical features, diagnosis &amp; treatment</th>
<th>Ovarian dysmenorrhoea Ovular pain</th>
<th>Pelvic congestion syndrome</th>
<th>15 Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abnormal menstrual bleeding</td>
<td>Menorrhagia, metrorrhagia, oligomenorrhoea, hypomenorrhoea--definition &amp; causes. DUB define, classify, clinical features, investigations &amp; general management</td>
<td>Common causes of abnormal vaginal bleeding</td>
<td>Surgical management—uterine curette, endometrial ablation.</td>
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<tr>
<td>Amenorrhea</td>
<td>Definition, types, causes &amp; investigations of primary &amp; secondary amenorrhea</td>
<td>Management &amp; treatment of primary &amp; secondary amenorrhea</td>
<td></td>
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<tr>
<td>7</td>
<td>Infertility</td>
<td>6 HR S</td>
<td>Definition, causes of male &amp; female infertility. Investigation of male infertility-routine &amp; in-depth evaluation. Female investigations for ovarian factors-BBT</td>
<td>Treatment of male &amp; female infertility-Assisted reproductive techniques—IVF, GIFT &amp; MIST Other investigations endometrial biopsy, cervical mucus study,</td>
<td>Tubo-plasty, hydro-tubation</td>
<td>10 marks</td>
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<tr>
<td>4 HR S</td>
<td>Fibroid types, clinical features, investigations, treatment &amp; D/D</td>
<td>Secondary changes in fibroid, Polyps-- types, clinical features, Cervical fibroid.</td>
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<tr>
<td>3 HR S</td>
<td>Endometriosis-definition, sites, clinical features diagnosis complication Adenomyosis-</td>
<td>Pathology &amp; treatment of endometriosis. Endometriosis at special sites. Stromal endometriosis clinical features</td>
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</tbody>
</table>

251
| 10 | **Special topics** | 6 HR S | Abnormal vaginal discharge-causes
Leucorrhoea causes & diagnosis.
Pelvic pain, types, causes & investigations. Post-menopausal bleeding-causes & investigations.
Vaginismus, Dyspareunia definition, causes & treatment
Pruritus vulvae-mechanism of itching, special investigation.
Management of acute & chronic pain.
Low backache causes.
Fibro-adenoma of breasts.
Hirsutism-define causes.
Galactorrhoea definition & causes.
Common causes of vaginitis & AVD
Trapped ovarian syndrome
Ca breasts causes & clinical features
Abdomino-pelvic lump causes... | 5 marks |
| 11 | **Genital malignancy** | 6 HR S | CA cervix-etiology, predisposing risk factors, mode of spread, diagnosis, D/D & complications, prevention.
Endometrial cancer etiology & clinical feature. Granulosa tumor of the ovary causes & clinical features.
Planning &management of CA cervix
Staging & treatment of endometrial CA
CA Cervix - staging procedure by FIGO.
Vulval malignancy, etiology, clinical feature, diagnosis & D/D.
Chorio-carcinoma define | 10 marks |
<p>|  | Genital fistula | 3 HR S | Definition, Types of genital fistula Vesico-vaginal fistula definition causes C/F &amp; prevention. | Recto-vaginal fistula definition, causes &amp; treatment Investigation &amp; treatment of VVF | |
|  | Genital tract injuries | 2 HR S | Complete perineal tear (CPT) define, etiology clinical feature &amp; prevention | Nature of coital injuries Treatment of (CPT) Instrumental injuries, types &amp; management | |
| 13 | <strong>Contraception</strong> | 3 HR S | Methods of contraception- indications &amp; uses. Vasectomy advantages &amp; complications. | Indications of sterilization | 5 marks |
|  | Chemotherapy caused complications | 1 HR S | | Radiation reactions and their treatment | |</p>
<table>
<thead>
<tr>
<th></th>
<th>Marks</th>
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<tbody>
<tr>
<td><strong>Hemorrhage in pregnancy</strong></td>
<td>9 HRS</td>
</tr>
<tr>
<td><strong>Multiple-pregnancy, hydramnios &amp; placental abnormalities</strong></td>
<td>5 HRS</td>
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<tr>
<td>Topic</td>
<td>Pages</td>
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<tr>
<td>Special cases</td>
<td>2 HR S</td>
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<tr>
<td>Topic</td>
<td>Marks</td>
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<tr>
<td><strong>Contracted pelvis</strong></td>
<td>4 HR</td>
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<tr>
<td><strong>Abnormal uterine contraction</strong></td>
<td>2 HR</td>
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<td><strong>Mal-position, mal-presentation &amp; cord prolapsed</strong></td>
<td>5 HR</td>
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<td><strong>Prolonged labor, obstructed labor &amp; dystocia</strong></td>
<td>3 HR</td>
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<td>10</td>
<td>Injuries to birth canal</td>
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<td>10</td>
<td>Low birth weight baby</td>
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<tr>
<td>11</td>
<td>Medico-legal aspects in Obstetrics</td>
</tr>
<tr>
<td>Topic</td>
<td>Hours</td>
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<td>--------------------------------------------</td>
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<tr>
<td>Population dynamics &amp; control of conception</td>
<td>2 HR</td>
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<td><strong>Prenatal Diagnostic Techniques Act 1994</strong></td>
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<tr>
<td><strong>Safe motherhood &amp; obstetrics care</strong></td>
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</tr>
<tr>
<td><strong>Special topics in obstetrics</strong></td>
<td>1 HR</td>
</tr>
<tr>
<td><strong>Reproductive &amp; child health care</strong></td>
<td>1 HR</td>
</tr>
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</table>
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 MuriaticumNatronatum
- Caulophyllum
- CimicifugaRacemosa
- Colocynthis
- FicusReligiosa
- Fraxinus Americana
- Gossypium
- HamamelisVirginica
- Millefolium
- Oophorinum
- Pituitary gland
- Sabina
- Thlaspi Bursa Pastoris
- Trillium Pendulum
- UstilagoMaydis
- 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 (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 IIIIBHMS

**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 i) Pelvimeter j) Pessary-Hodge-Smith & Ring k) Uterine sound

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**

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<th>Must Know</th>
<th>Desirable to know</th>
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<tr>
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<td>Anatomy of female genitalia</td>
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<td>Congenital malformation</td>
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<td>2</td>
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<td></td>
<td>Neuro-endocrinology</td>
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<td>Examination of gynaecological patient</td>
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<td>4</td>
<td>Uterine displacements</td>
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<td>5</td>
<td>Pelvic infections</td>
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<td>Infections of individual organs</td>
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<td>8</td>
<td>Benign lesions of cervix</td>
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<td>Benign lesion of uterus</td>
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<td>Benign lesion of ovary</td>
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<td>Endometriosis &amp; Adenomyosis</td>
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<td>Genital tract injuries</td>
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<td>13</td>
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<td>Fundamentals of reproduction</td>
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<td>Placenta &amp; membranes</td>
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<td>Fetus-in utero</td>
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<td>Physiological changes during pregnancy</td>
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<td>Endocrinology in pregnancy</td>
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<td>Fetal skull &amp; maternal pelvis</td>
<td>1SE</td>
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<td>1SE</td>
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<td>Induction of labour</td>
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<td>Hemorrhage in pregnancy</td>
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<td>Multiple pregnancy</td>
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<td>Ante partum hemorrhage</td>
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<td>2SE</td>
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<td>Hypertensive disorders in pregnancy</td>
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<td>Abnormalities of puerperium</td>
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<td>1SA</td>
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<td>5</td>
<td>Medical &amp; surgical illness in pregnancy</td>
<td>1SE</td>
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<td>Gyneco-disorders during pregnancy</td>
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<td>6</td>
<td>Preterm labor, PROM, Post maturity</td>
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<td>Special cases</td>
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<td>Contracted pelvis</td>
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<td>Abnormal uterine contraction</td>
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<td>1SA</td>
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<td>Malpresentation, mal-position &amp; cord</td>
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<td>Prolonged, Obstructed labour, dystocia</td>
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<td>Complication of 3rd stage labour</td>
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Question Paper Layout

Paper – I: Gynaecology & Obstetrics

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<tr>
<th>Long essay (2 x 10 marks)</th>
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<tr>
<th>Short essay (10 x 5 marks)</th>
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</table>
### Paper – II: Gynaecology and Obstetrics

| 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 |

### 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


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

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

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

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

Recommended Books

Basic Books


**Reference Books**

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.

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<thead>
<tr>
<th>Sl. No.</th>
<th>Topic</th>
<th>Time allotted</th>
<th>Must Know</th>
<th>Desirable to know</th>
<th>Nice to know</th>
<th>Total marks allotted</th>
<th>Type of questions</th>
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<tr>
<td>a</td>
<td>Prefaces to organon of medicine</td>
<td>1hrs</td>
<td>Authors preface to 1st to 6th edition of organon</td>
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Introduction part of 6th edition of Organon of Medicine

Rational medicine.
Tollecausum, Prima causa morbid, Treatment by derivation imitation.
Dusa natura ministry nature
Law of similia as explained by people before Hahnemann.

Review of medicine 4hrs

State of medicine before and during Hahnemann.
Repellant remedies
Law of similia in day to day life mixtures in
Prescription

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<th>aphorisms 105 to 294 including footnotes of Organon of Medicine (5th &amp; 6th Editions translated by R.E.Dudgeon &amp; W Boericke): 50 hrs</th>
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<tr>
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<td>10/5/3</td>
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<tr>
<td>Aphorism 105-107</td>
<td>Investigating the pathogenetic power of medicine</td>
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<tr>
<td>Albert von Haller</td>
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<tr>
<td>Aphorism 108-111</td>
<td>Medicine must be proved on healthy human beings.</td>
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<tr>
<td>Aphorism 115</td>
<td>Alternating action of medicine</td>
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<td>Aphorism 112-114</td>
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<td>Aphorism 118-120</td>
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<tr>
<td>116-117</td>
<td>Primary action and secondary action</td>
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<td>121-140</td>
<td>Idiosyncrasies</td>
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<td>142-145</td>
<td>Mode of proceeding when we make trial of them on other persons</td>
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<td>143-145</td>
<td>Investigations of pure effects of medicine in disease is different</td>
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<tr>
<td>146-147</td>
<td>The experiments of healthy physician with medication on himself are best</td>
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<tr>
<td>148-150</td>
<td>Investigations of pure effects of medicine on healthy person to form materia medica</td>
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<tr>
<td>146-147</td>
<td>Specific remedy, Mongrel sect</td>
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<tr>
<td>148-150</td>
<td>148 Modus operandi of Homoeopathic cure</td>
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Aphorism 147-148 Specific remedy, Mongrel sect
Aphorism 149 cure in chronic case

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<tr>
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<td>Specific remedy, Mongrel sect</td>
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<tr>
<td>148-150</td>
<td>148 Modus operandi of Homoeopathic cure</td>
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| 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 |
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**Homoeopathic philosophy: 40 hrs**

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)
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**B**  The genius of Homoeopathy – Stuart Close
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<td>Homoeopathic Posology - Definition, Types of drug action, Choosing the potency, Repetition of dose, Effect of remedy, Law of dosage</td>
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different
from other
drugs?

Scientific
foundation
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Potentiatio
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**Chapter-13**

- **The dose**
  - Harmfulness of large doses,
  - Benefits of minimum dose

**Chapter-14**

- **Remedy reaction**

**Chapter-15**

- **Drug proving**
  - Doctrine of signature,
  - Definition of drug, medicine and remedy.

**Chapter-16**

- **The second prescription**
  - Definition, types

**Chapter-17**

- **Susceptibility**

**Chapter-18**

- **Suppression**
  - Definition, types, explanation with examples.
  - Danger of suppression
Law of palliation-
definition, conditions where palliation is justifiable with examples.

Local applications-
Disadvantages of local applications.

The deflected current

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

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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 (Idiosyncracy, 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, Idiosyncracy, 12 observation, second prescription Individualization)
19. III BHMS Close’s Philosophy (Susceptibility, Indisposition & second best remedy)
20. III BHMS Close’s Philosophy (Posology, Potentiation)
21. III BHMS  Roberts’s Philosophy(The law of cure, Thedynamic action of drugs, The dose, remedy reaction, drug proving.)
22. III BHMS  Roberts’s Philosophy(Second prescription, Susceptibility, suppression, law of palliation, local application, deflected current)

14. For practical / clinical component, list the expected competencies that shall be tested.
15. List the objectives as per the competencies
16. Practical / clinical schedule as per the content distribution explained for theory topics.
17. Scheme of examination with the distribution of marks as per the competency priority.

Scheme of Examination:

Theory:  100 Marks.,
   ii)  Duration : 3Hours
Distribution of Marks
   iii)  Organon of medicine: 1 to 294 – 60  Marks
   iv) Homoeopathic philosophy: – 40 Marks

Practicals (Including Viva voce / Orals):  100 Marks.,
   iii)  Duration : 3Hours
Distribution of Marks
   v)  Practical: 50 Marks
      a.  Case taking and case processing :– 40 marks
      b.  Maintenance of Record book :– 10 Marks
   vi)  Viva voce / Orals : 50 Marks

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References- III BHMS &  IV BHMS

Basic

- Samuel Hahnemann. Organon of Medicine Sixth Edition. B. Jain publishers (P) limited, New Delhi
- J.T.Kent. Lectures on Homoeopathic Philosophy. B. Jain publishers (P) limited, New Delhi
• 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
• Stuart 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, Peudo-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

**Reptory**

**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

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285
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**Steps of repertorisation**
- Selection of Repertory
- Selection of rubrics
- Repertorial totality

**Repertorization and analysis of**

- Dr. Hahnemann’s instructions for taking the case.
- 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.

**Importance of pathology in disease diagnosis and individualization in relation to study of Repertory**

**Dr Kent**
- Hoffmann’s criticism to Kent’s repertory
- Kent’s repertory as a Golden repertory for time immemorial
- Different revisions of Kent’s repertory e.g.
  - Dr. Kunzli
  - Dr. Shivraman
  - Dr. R.P. Patel
  - Dr. Pierre Schmidt & Dr. Dewan Harishchand
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Different editions of Kent’s repertory

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
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 completing 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

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### Diseases of lungs

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### Diseases of breast

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### Diseases of Gastro Intestinal System

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### Diseases of liver, spleen, gall bladder & bile duct

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**Diseases of Cardiovascular system**

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**Diseases of Uro Generital system**

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**Diseases of bones**

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**Diseases of Eye**

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- 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)

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<td>Apthous Ulcers, Ranula &amp; Epulis</td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>Caries of Tooth</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>Deafness</td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>Case demonstration</td>
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</tr>
</tbody>
</table>

**Total Hours: 75**

**Surgery Question Paper Blueprint**

**Paper I (includes General Surgery and its homoeopathic therapeutics)**

<table>
<thead>
<tr>
<th>Section 1: (Surgery Proper) 50 Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Fluid, electrolytes &amp; acid base balance</td>
</tr>
<tr>
<td>2 Haemorrhage, Haemostasis &amp; Blood transfusion</td>
</tr>
<tr>
<td>3 Tumours, cyst, ulcer, sinus &amp; fistula</td>
</tr>
<tr>
<td>4 Injuries of various types, preliminary management of head injury; Wounds, tissue repair, scar &amp; wound infection</td>
</tr>
<tr>
<td>5 Special infections</td>
</tr>
<tr>
<td>6 Burn</td>
</tr>
<tr>
<td>7 Shock</td>
</tr>
<tr>
<td>8 Pre and Post-operative care</td>
</tr>
</tbody>
</table>

**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)

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Topics</th>
<th>Question Type</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Section 1: (Surgery Proper) 50 Marks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Systemic Surgery</td>
<td>1 LE, 2 SE, 1 SA</td>
<td>23</td>
</tr>
<tr>
<td>2</td>
<td>ENT</td>
<td>1 SE, 2 SA</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>Ophthalmology</td>
<td>2 SE, 1 SA</td>
<td>13</td>
</tr>
<tr>
<td>4</td>
<td>Dentistry</td>
<td>1 SA</td>
<td>03</td>
</tr>
<tr>
<td></td>
<td>Section 2: (Homoeopathic Therapeutics) 50 Marks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Systemic Surgery</td>
<td>1 LE, 2 SE, 2 SA</td>
<td>26</td>
</tr>
<tr>
<td>2</td>
<td>ENT</td>
<td>2 SE</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>Ophthalmology</td>
<td>1 SE, 1 SA</td>
<td>08</td>
</tr>
<tr>
<td>4</td>
<td>Dentistry</td>
<td>2 SA</td>
<td>06</td>
</tr>
</tbody>
</table>

Question Paper Layout

Paper 1: 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. Special infections

10. 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
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.
<table>
<thead>
<tr>
<th>SL NO</th>
<th>TOPIC</th>
<th>MUST KNOW</th>
<th>DESIRABLE TO KNOW</th>
<th>NICE TO KNOW</th>
<th>HOURS</th>
<th>MARKS</th>
</tr>
</thead>
</table>
| 1     | Epidemiology.          | • 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.                                                                 | • Scope of community medicine in Non-communicable diseases.                                                                                   | • Protozoan & Helminthes diseases - life cycle of protozoon.  
• Complications.                                                                                                                           | 44    | 20    |
| 2     | Bio Statistics.        | • Elementary statistical methods                                                                                                                                        | • Sources of health information  
• Registration of Vital events  
• Sample size calculation  
• Presentation of data.                                                                                                                     | • Tests of significance.  
• Statistical averages.                                                                                                                       | 5     | 5     |
| 3     | Health Education and Communication. | • Types of Communication.  
• Communication process  
• Principles of health Education.  
• Content of health education                                                                                                                  | • Administration & Organization                                                                                                               | 5     | 3     |
| 4 | Family Planning | • Scope of family planning  
- Family planning methods | • Demographic trends  
- Population control  
- MTP Act  
- PNDT Act | • Demographic cycle  
- National population policy | 5 | 5 |
| 5 | Health care of community | • Levels of health care  
- Notifiable diseases  
- Health Management Information System | • Primary health centre  
- Millennium Development Goals (MDG)  
- Sustainable Development Goals (SDG) | • Health policies | 5 | 3 |
| 6 | International Health. | - | • Red cross  
- W.H.O.  
- UNICEF. | • WHO regional organizations  
- CARE. | 2 | 3 |
| 7 | Mental health. | • Preventive aspects of Mental illness.  
- Causes of mental illness.  
- Rehabilitation. | • Treatment of mental illness.  
- Characteristics of mentally healthy person. | 2 | - |
| 8 | Maternal and child health. | • Recent trends in MCH care.  
- Anenatal care  
- Intranatal and postnatal  
- Neonatal care  
- Low birth weight baby  
- Feeding of infants  
- Growth and development | • Causes of Neonatal deaths in India.  
- Indicators of MCH care | • Congenital Malformations.  
- Indicators of MCH care. | 5 | 5 |
| 9 | School health services. | • Objectives of school health services.  
- School health services  
- Behavioral problems.  
- | • 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.  
- National health programs (based on the | - | 5 | 5 |
<p>| | | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>India including Rashtriya Bal Chikitsa Karyakram</strong></td>
<td>current policy)</td>
<td></td>
</tr>
</tbody>
</table>
| 11 | Hospital waste management. | • Categories of Biomedical waste.  
• Health hazards of healthcare waste | • Colour coding. | 5 |
| 12 | Disaster management. | • Disaster and its Impact and response.  
• Rehabilitation.  
• Types of disasters  
• Causes of disaster | • International agencies providing rehabilitation | 5 |
| 13 | Study of Aphorisms of Organon of medicine and other Homoeopathic Literatures, relevant to above topics including prophylaxis. | • Genus Epidemicus.  
• Prophylaxis | • Indisposition.  
• Diet and regimen. Aphorism 4, 5, 9, 100 to 107, 210 to 230. | 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

<table>
<thead>
<tr>
<th>SL.NO</th>
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<th>MUST KNOW</th>
<th>DESIRABLE TO KNOW</th>
<th>NICE TO KNOW</th>
<th>HOURS</th>
<th>MARKS</th>
</tr>
</thead>
</table>
| 1.    | Food additives; Food fortification; Food toxicants. | • Food toxicants  
• Food adulteration.  
• Identify common food adulterants  
• Illustrate to test food adulterants | Food fortification.  
• Illustrate home based methods of food fortification | Food additives  
• Identify common food additives.  
• Illustrate to test few common additives. | 10 | |
| 2.    | Balanced diet. | Balanced diet  
• 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 | Classification of food  
• RDA of diet.  
• Calculate energy consumption units for individual, family and community. | | 8 | |
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>- Malnutrition.</td>
<td>- Insecticides.</td>
</tr>
<tr>
<td></td>
<td>- Assessment of Malnutrition.</td>
<td>- Morphological</td>
</tr>
<tr>
<td></td>
<td>- Nutritional assessment</td>
<td>appearance.</td>
</tr>
<tr>
<td></td>
<td>- Anthropometric measurements</td>
<td>- Life cycle.</td>
</tr>
<tr>
<td></td>
<td>- Advice appropriate diet and homeopathic management of the conditions.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Health and hygiene status assessment of school children and suggest appropriate</td>
<td>Identify common</td>
</tr>
<tr>
<td></td>
<td>corrective measures and homeopathic management.</td>
<td>water pollutants and</td>
</tr>
<tr>
<td></td>
<td>- Awareness and important ways for preventing water borne diseases.</td>
<td>preventive measures</td>
</tr>
<tr>
<td></td>
<td>- Water borne diseases.</td>
<td>Water Purification.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Illustrate and perform</td>
</tr>
<tr>
<td></td>
<td></td>
<td>basic domestic water</td>
</tr>
<tr>
<td></td>
<td></td>
<td>purification methods</td>
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<tr>
<td></td>
<td></td>
<td>( eg alum, charcoal etc)</td>
</tr>
<tr>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Identify common water pollutants and preventive measures</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Water Purification.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Illustrate and perform basic domestic water purification methods ( eg alum, charcoal etc)</td>
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<tr>
<td></td>
<td>habitat/breeding points, its control and its control.</td>
<td>preparation, uses, hazards and personal protective measures.</td>
</tr>
<tr>
<td>5.</td>
<td>Family planning and contraception.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>● Contraceptive devices</td>
<td>● Use of contraceptive devices.</td>
</tr>
<tr>
<td></td>
<td>Identify contraceptive devices</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Its application, Demonstrate the application using mannequins.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Demonstrate counseling for family planning methods for eligible couples.</td>
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<tr>
<td>6.</td>
<td>Demography.</td>
<td></td>
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<tr>
<td></td>
<td>● Calculation of vital statistics.</td>
<td>● Health survey</td>
</tr>
<tr>
<td></td>
<td>Design and conduct demographic survey in nearby population.</td>
<td></td>
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<tr>
<td></td>
<td>Analyze the data and represent the reports using basic statistical methods.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Minimum 15 households.</td>
<td></td>
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<tr>
<td>7.</td>
<td>Disinfection.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>● Types of disinfection.</td>
<td>● Hospital disinfection.</td>
</tr>
<tr>
<td></td>
<td>● Identify common disinfectants.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>● Uses of common disinfecting agents.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>● Methods of use (</td>
<td></td>
</tr>
</tbody>
</table>
| 8.          | Insecticides                                                                 | • Different Insecticides  
• Identify common insecticides.  
• Uses of common insecticides agents.  
Methods of use | • 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, statuary 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

• Statutory 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, it’s 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
  o Health facilities
  o 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, at least 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
  o Building
  o Safety measures
  o Student and class room ratio

• Facilities
  o Physical facilities
  o Light, Water, sanitation, ventilation
  o Seating facilities
  o Waste disposal

• Services
  o Nutritional services (midday meals)
Health education

Health checkup

Activity

- Each student shall examine at least 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
<table>
<thead>
<tr>
<th>Question Number</th>
<th>Topics</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Nutrition and Health</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>Environment and health</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Epidemiology</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>Concept of health and disease</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>Water</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>Occupational health</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>Preventive medicine in pediatric and geriatric</td>
<td>5</td>
</tr>
<tr>
<td>8</td>
<td>Biostatistics</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
<td>Demography and family planning</td>
<td>5</td>
</tr>
<tr>
<td>10</td>
<td>Maternal Child Health</td>
<td>5</td>
</tr>
<tr>
<td>11</td>
<td>National Health Programmes in India</td>
<td>5</td>
</tr>
<tr>
<td>12</td>
<td>Disaster management/</td>
<td>5</td>
</tr>
<tr>
<td>13</td>
<td>Hospital waste/</td>
<td>5</td>
</tr>
<tr>
<td>14</td>
<td>Man and medicine</td>
<td>3</td>
</tr>
<tr>
<td>15</td>
<td>Health education and health communication</td>
<td>3</td>
</tr>
<tr>
<td>16</td>
<td>Health care of the community</td>
<td>3</td>
</tr>
<tr>
<td>17</td>
<td>International health</td>
<td>3</td>
</tr>
<tr>
<td>18</td>
<td>School health services</td>
<td>3</td>
</tr>
<tr>
<td>19</td>
<td>Occupational health</td>
<td>3</td>
</tr>
<tr>
<td>20</td>
<td>Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>21</td>
<td>Hospital waste/</td>
<td>3</td>
</tr>
<tr>
<td>22</td>
<td>Homoeopathic concept in community medicine</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>
Reference Books

Basic Books

- 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,

Reference

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• Text Book of Public Health and Community Medicine, 2009. Published by the Dept of Community Medicine, AFMC Pune in collaboration with WHO India

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• www.idsp.nic.in

• www.ncdc.gov.in

• www.nrhm.gov.in

• www.tbcindia.nic.in

• www.nvbdcp.gov.in

• www.nhp.gov.in

• www.nacoonline.in

• https://data.gov.in

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• 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.

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### 4. Group Study: Table 4

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<td>Solanaceae family</td>
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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

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<th>Topics</th>
<th>Marks</th>
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Paper II from Final year syllabus

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Types of questions with marks

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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 II BHMS topic
5. From III BHMS topic
6. From IIIBHMS 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 II BHMS 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

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### 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

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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
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- 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:

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<th>Nice to know</th>
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ancients medicine medicine

(Prehistoric, Medicine, Greek medicine, Chinese medicine, Hindu Medicine and renaissance) and tracing the empirical, rationalistic and vitalistic Thoughts.

2 Revision of Hahnemann’s Organon of Medicine (1-294) including Footnotes 55hrs

Aph 1 to 70

Aph 71 to 104

Aph 105 to 145

Aph 146 to 294

5 hrs

5 hrs

30 hrs

Total time allotted - 75 hrs

Marks allotted: 50

<table>
<thead>
<tr>
<th>Homoeopathic Philosophy: Philosophy Books of Stuart Close, J. T. Kent; H.A. Roberts, Richard Hughes and C. Dunham: 75 Hours</th>
<th>50</th>
</tr>
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<tbody>
<tr>
<td>a</td>
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<tr>
<td>Topics from Lectures on homoeopathic philosophy by Stuart Close</td>
<td>Including chapters from II &amp; III BHMS</td>
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<table>
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<tbody>
<tr>
<td>Chapter 1</td>
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<td>The psychological point of view</td>
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Chapter 2 2 Relation of science 5/3
<table>
<thead>
<tr>
<th>Chapter</th>
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<tbody>
<tr>
<td>4</td>
<td>The Scope Of Homoeopathy.</td>
<td>Disease per se, Tangible end products of disease, Primary and secondary symptoms, Dake’s postulates</td>
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<td>5</td>
<td>The Unity Of Medicine.</td>
<td>Unity of medicine meaning, importance, &amp; individualistic approach of Homoeopathy</td>
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<td>6</td>
<td>Life Health And Disease</td>
<td>Definitions of life, Health, disease, Nature of disease</td>
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<td>8</td>
<td>General pathology of Homoeopathy</td>
<td>Theory of chronic diseases, The doctrine of latency, The identity of Psora &amp; tuberculosis, Metastasis, Idiosyncrasy and drug disease, Relation of bacteria to Homoeopathy</td>
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<td>17</td>
<td>The Development Of Hahnemannian Philosophy</td>
<td>The development of Hahnemann philosophy in the 6th edition</td>
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### Topics from Lectures on homoeopathic philosophy by J.T. Kent

**Chapter 18**
- **Characteristics**: Chronic diseases – Psora
- **Nature**: 2
- **Stages**: 10/5/3

**Chapter 19**
- **Characteristics**: Chronic diseases – Psora (continued)
- **Nature**: 2
- **Stages**: 10/5/3

**Chapter 20**
- **Characteristics**: Chronic diseases - Syphilis
- **Nature**: 2
- **Stages**: 10/5/3

**Chapter 21**
- **Characteristics**: Chronic diseases – Sycosis
- **Nature**: 2
- **Stages**: 10/5/3

**Chapter 22**
- **Pathognomonic symptoms**: Disease and drug study in general
- **Anamnesis**: 2
- **Images of the disease**: 5/3

### Topics from Lectures on homoeopathic philosophy by H.A. Roberts

**Chapter 25**
- **Pathognomonic symptoms**: Disease and drug study in general
- **Anamnesis**: 2
- **Images of the disease**: 5/3
<table>
<thead>
<tr>
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<tr>
<td>Chapter 1</td>
<td>what has homoeopathy to offer the young man?</td>
<td>Qualities of homoeopathic physician. Homoeopathy is founded upon principles</td>
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<td>Chapter 4</td>
<td>Vital Force as expressed in Functions: In Health, In disease, In recovery, In cure</td>
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<td>Chapter 5</td>
<td>Vital energy in its universal applications</td>
<td>Vital energy 3 forms of action of vital force</td>
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<td>Chapter 20</td>
<td>Temperaments</td>
<td>4 classical temperaments. Role of proving Prescribing on temperament in keynote prescribing.</td>
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<td>Chapter 22</td>
<td>Disease classification</td>
<td>Classification of diseases History of classification Linnaeus plant kingdom Cuvier animal kingdom.</td>
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<thead>
<tr>
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<tr>
<td>Psora</td>
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<tr>
<td>Chapter 24</td>
<td>Why psora is called deficiency miasm</td>
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<td>Psora or deficiency?</td>
<td>List of antipsorics</td>
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<td>Some manifestations of Latent Psora.</td>
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<td>Chapter 26</td>
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<td>What is syphilitic stigma</td>
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<td>Chapter 28</td>
<td>Disease classification; the syphilitic stigma (continued)</td>
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<td>Disease classification; the syphilitic stigma.</td>
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<td>Chapter 30</td>
<td>Disease classification; syphilis.</td>
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<td>Chapter 31</td>
<td>Why sycosis is referred to overconstruction</td>
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<td>Chapter 32</td>
<td>Summary of disease classification treatment of mixed miasmatic disease</td>
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<td>Chapter 33</td>
<td>Endocrine imbalance and Homoeopathic management.</td>
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<tr>
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<tr>
<td>33</td>
<td>The phenomenological viewpoint.</td>
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<td>Phenomenological viewpoint of disease &amp; cure</td>
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<td>Modern medication and homoeopathic principles.</td>
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<td><strong>Topics from Lectures on homoeopathic philosophy by</strong></td>
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<tr>
<td></td>
<td><strong>Richard Hughes</strong></td>
<td></td>
</tr>
<tr>
<td>1, 2, 3</td>
<td><strong>Organon</strong></td>
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<td>Principles of homoeopathy, Similia similibus curantur</td>
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<td>Evolution of editions of organon.</td>
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<td><strong>Organon</strong>, disease and drug action.</td>
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<td><strong>Tolle causam.</strong></td>
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<td></td>
<td>Fever, inflammation, Neurosis.</td>
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<td>4</td>
<td>The Knowledge of Disease.</td>
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<td>Empirical way of drug proving, Pseudo rational and rational way of drug proving.</td>
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<td>5</td>
<td>The Knowledge of Medicines</td>
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<td>Empirical way of drug proving.</td>
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<td>Clinical materia medica and common materia medica</td>
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<td>6</td>
<td><strong>“Similia Similibus”</strong></td>
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<td>7, 8</td>
<td>The Selection Of The Similar Remedy</td>
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<td>Law of homoeopathy.</td>
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<td>Administration of</td>
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<td>Singly, rarely, Constitutionally.</td>
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<td>Administration of</td>
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</table>
Minutely doses.

e  Topics from Lectures on homoeopathic philosophy by

C. Dunham

Chapter 1
Homoeopathy science of therapeutics.

Chapter 2
Antagonism between homoeopathy and Allopathy.

Chapter 3
Relation of pathology to therapeutics.

Chapter 4
Primary and secondary symptoms of drugs as guides in determining the dose.

Chapter 5
The dose of drug proving.

Chapter 6 & 7
Alternation of remedies no 1.

Chronic diseases: 45 Hours

4.1 Hahnemann’s Theory of Chronic

Factors that led to the development of theory of chronic diseases.

Views of various authors on alternation
diseases

Nature of chronic disease.

Review of evolution of psora.


Cure of chronic disease.
Diet and regimen.
Bacterial and their relation to pathology.

Basic symptoms of psora.

History and philosophy of psora and pseudo psora.

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.
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.

The characteristics of the miasms need to be explained in the light of knowledge acquired from different branches of medicine.

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.


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.

<table>
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<tr>
<th>Types of Questions</th>
<th>No. of Questions</th>
<th>Marks per Question</th>
<th>Total Marks</th>
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<tr>
<td>Long Essays</td>
<td>02</td>
<td>10</td>
<td>20</td>
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<tr>
<td>Short Essays</td>
<td>10 out of 12</td>
<td>05</td>
<td>50</td>
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<tr>
<td>Short Answers</td>
<td>10</td>
<td>03</td>
<td>30</td>
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<tr>
<td><strong>MAXIMUM MARKS</strong></td>
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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

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<th>Subject</th>
<th>Theory</th>
<th>Practical &amp; Oral</th>
<th>Grand Total</th>
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<tr>
<td></td>
<td>Max Marks</td>
<td>Max Practical Marks</td>
<td>Pass Marks</td>
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<tr>
<td>Organon Of Medicine, Principles Of Homoeopathic Philosophy And Psychology</td>
<td>200</td>
<td>100</td>
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Question paper layout

Paper 1 Max marks: 100

I Long essay 10x2=20

1 Aphorism1 to 145
2 Aphorism146 to 294

II Short Essays 5x10=50

3 Aphorism 1 to 104
4 Aphorism105 to 145
5 Aphorism 151 to 161
6 Aphorism 172 to 184
7 Aphorism 185 to 203
8 Aphorism 204 to258
9 Aphorism 259 to 263
10 Aphorism 264 to 272
11 Aphorism273to 282
12 Aphorism284 to 294

III Short Answers: 3x10=30

13 Aphorism 1 to 70
14 Aphorism 71to104
15 Aphorism 105 to 145
16 Aphorism146 to 150
17. Homoeopathic philosophy of Kent, Close & Roberts
18. Hahnemann’s Theory of Chronic diseases
19. Homoeopathic philosophy of Kent, Close & Roberts
20. Homoeopathic philosophy of Kent, Close & Roberts
21. Homoeopathic philosophy of Kent, Close & Roberts
22. Homoeopathic philosophy of Kent, Close & Roberts

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
- 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
- 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
- Samuel Hahnemann. *Chronic Diseases*. 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

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 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.
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 years 6 months (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.

<table>
<thead>
<tr>
<th>Sl</th>
<th>Topics</th>
<th>Hour</th>
<th>Must Know</th>
<th>Desirable to</th>
<th>Nice to Know</th>
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<td>Protein Energy Malnutrition 1 Definition, Etiopathogenesis, Types, C/F, Investigations &amp; Hom Therapeutics.</td>
<td>Complications</td>
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<tr>
<td>2</td>
<td>Fat soluble vitamins 1 C/F of Deficiency and Hypervitaminosis &amp; Diagnosis.</td>
<td>Daily requirement</td>
</tr>
<tr>
<td>3</td>
<td>Water Soluble vitamins 1 C/F of Deficiency and Hypervitaminosis &amp; Diagnosis.</td>
<td>Daily requirement</td>
</tr>
<tr>
<td>4</td>
<td>Obesity 1 Types, Complications &amp; Hom management</td>
<td>Nutritional Assessment</td>
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<tr>
<td>5</td>
<td>Wilson’s disease/Haemochromatosis/porphyrias.</td>
<td>Definition, Etiopathogenesis, C/F, Investigations &amp; Complications</td>
</tr>
<tr>
<td>6</td>
<td>Amyloidosis 1</td>
<td>Definition, Etiopathogenesis, C/F, Investigations &amp; Complications</td>
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<td>Anemia 1 Definition, Causes, Classification, C/F, Investigations, Complications, General management &amp; Hom Therapeutics</td>
<td>Parenteral therapy</td>
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<td>2</td>
<td>Iron deficiency anemia 1 Definition, Etiopathogenesis, C/F, Investigations, Complications, General management</td>
<td>Iron metabolism</td>
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<td>Megaloblastic anemia</td>
<td>Definition, Etiopathogenesis, C/F, Investigations, Complications</td>
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<td>&amp; Homoeopathy Therapeutics</td>
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<td>Aplastic anemia</td>
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<td>5</td>
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<td>&amp; Homoeopathy Therapeutics</td>
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<td>D/D, &amp; Homoeopathy Therapeutics</td>
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<td>7</td>
<td>Lymphomas / Burkitt’s lymphoma</td>
<td>Definition, Etiopathogenesis, Types, C/F, Investigations, Complications &amp;</td>
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<td>Homoeopathy Therapeutics</td>
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<td>8</td>
<td>Disorders due to deficiency of Clotting factors</td>
<td>Definition, Etiopathogenesis, C/F, &amp; Investigations of Hemophilia-A,</td>
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<td>Hemophilia-B &amp; Von-Wilbrand disease &amp; Homoeopathy Therapeutics</td>
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<td>Platelet Disorders</td>
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<td>10</td>
<td>Multiple myelomas.</td>
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<td>Polycythemia vera</td>
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<td>Etiopathogenesis, S/S &amp; Investigations of GH Deficiency &amp; Excess</td>
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<td>Definition, Types, Etiopathogenesis, C/F, Investigations, D/D &amp; Hom Therapeutics</td>
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<td>4</td>
<td>Hypothyroidism</td>
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<td>Definition, Etiopathogenesis, C/F, Investigations, D/D, Congenital Hypothyroidism</td>
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**Staging (TNM)**
| 5 | Hyperthyroidism | 2 | 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 & Hom 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, Classification, 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.

3 Parasitic infestations:
   Amoebiasis, giardiasis,

2 Definition, Etiopathogenesis, C/F, Investigations, Complications & Hom Therapeutics

4 Fungal infections
   – Madura foot, cryptococcosis

2 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

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&
<table>
<thead>
<tr>
<th>Topic</th>
<th>Subtopics</th>
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<tbody>
<tr>
<td>Stress tests.</td>
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<tr>
<td>4 Acute Rheumatic fever</td>
<td>Definition, Etiopathogenesis, Pathology, C/F, D/D, Investigations, Complications, General management &amp; Hom Therapeutics</td>
</tr>
<tr>
<td>5 Valvular heart diseases</td>
<td>Definition, Etiopathogenesis, Types, Hemodynamics, C/F, Investigations, D/D, General management &amp; Hom Therapeutics, Complications, Surgical management</td>
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<td>6 Infective Endocarditis</td>
<td>Definition, Etiopathogenesis, Types, C/F, Investigations, D/D, General management &amp; Hom Therapeutics, Complications</td>
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<tr>
<td>7 Hypertension</td>
<td>Definition, Etiopathogenesis, Types, C/F, Investigations, General management &amp; Hom Therapeutics</td>
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<tr>
<td>8 Cardiomyopathies</td>
<td>Definition, Etiopathogenesis, Types, C/F, Investigations &amp; Hom Therapeutics</td>
</tr>
<tr>
<td>9 Arrhythmias</td>
<td>Definition, Etiopathogenesis, Types, C/F, Investigations &amp; Hom Therapeutics, ECG Changes</td>
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</table>
10 Cor-pulmonale and pulmonary hypertension.

11 Congenital heart diseases- ASD, VSD, COA, PDA, TOF

12 Diseases of Pericardium

VI. Diseases of Urogenital tract: 14 hrs
1 Urinary Tract Infections
2 Nephrotic Syndrome
3 Glomerulopathies 4
Therapeutics
Definition, Etiopathogenesis, Pathology, Types, C/F, Investigations, General management & Hom Therapeutics

4. Renal failure 4
Definition, Types, Etiopathogenesis, C/F, Investigations, Complications & Hom Therapeutics
Dialysis – types & indications. Renal Transplantation

5 Nephrolithiasis/obstructive uropathy. 2
Definition, Etiopathogenesis, Types, C/F, Investigations, General management & Hom Therapeutics
Surgical intervention

6 Tumors of Genito urinary tract 1
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 & Hom Therapeutics
Investigations & Complications of secondary headache

2 Epilepsy 2
Definition, Etiopathogenesis, Classification, C/F, Investigations, D/D, Complications, General management & Hom Therapeutics
EEG
<table>
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<td>3</td>
<td>Cranial nerves disorders</td>
<td>Causes, C/F, Investigations, D/D, General management &amp; Hom Therapeutics of Trigeminal neuralgia, Facial nerve palsy, Bulbar / Pseudo bulbar palsy</td>
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<td>4</td>
<td>Meningitis - bacterial, viral</td>
<td>Causes, C/F, General management &amp; Hom Therapeutics of other cranial nerve lesions.</td>
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<td>5</td>
<td>Viral infections of CNS</td>
<td>Definition, Etiopathogenesis, C/F, Investigations D/D, general management &amp; Hom Therapeutics</td>
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<td>6</td>
<td>Neurosyphilis</td>
<td>Definition, Etiopathogenesis, C/F, Investigations, Complications, General management &amp; Hom Therapeutics</td>
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<td>7</td>
<td>Movement disorders</td>
<td>Causes &amp; Manifestations of different types of movement disorders</td>
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<td>8</td>
<td>Parkinsonism</td>
<td>Definition, Etiopathogenesis, C/F, Investigations, General management Degenerative pathology of Basal ganglia</td>
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<td>Myasthenia gravis</td>
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<td>Peripheral Neuropathies</td>
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<td>Cerebellar disorders</td>
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<td>Motor Neuron diseases</td>
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<td>Disorders of muscles (muscular dystrophies)</td>
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<td>Cerebrovascular diseases</td>
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<td>Alzheimer’s diseases</td>
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<td>17</td>
<td>Multiple sclerosis</td>
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<td>Spinal cord diseases</td>
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<td>Tumors of CNS</td>
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<tr>
<th>VIII. <strong>Psychiatric Disorders: 16hrs</strong></th>
<th>Therapeutics</th>
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<tbody>
<tr>
<td><strong>1</strong> Basic considerations of Psychiatry</td>
<td>Clinical approach, Classification, Psychotherapy and Hahnemannian classification</td>
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<tr>
<td><strong>2</strong> Organic Brain syndromes Delirium and dementia</td>
<td>Etiopathogenesis, C/F, General management, &amp; Hom Therapeutics</td>
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<td><strong>3</strong> Mood disorders</td>
<td>Etiology, Types, C/F, Diagnosis, General management &amp; Hom Therapeutics</td>
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<td><strong>4</strong> Schizophrenia</td>
<td>Definition, Causes, Types, C/F, General management &amp; Hom Therapeutics</td>
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<td><strong>5</strong> Anxiety disorders</td>
<td>Definition, Causes, Classification, C/F, General management &amp; Hom Therapeutics</td>
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<td><strong>6</strong> Somatoform disorders</td>
<td>Definition, Causes, Types, C/F, General management &amp; Hom Therapeutics</td>
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<td><strong>7</strong> Personality disorders</td>
<td>Definition, Causes, Types, C/F, General management &amp; Hom Therapeutics</td>
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<td><strong>8</strong> Substance Abuse</td>
<td>Effects of alcohol, dependence and withdrawal, Manifestations and Homoeopathic Therapeutics of</td>
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### IX. Diseases of Locomotor System (connective tissue, Bones & joint disorders): 15hrs

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<th>Management &amp; Therapeutics</th>
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<td>Osteoarthritis</td>
<td>Definition, Etiopathogenesis, C/F, Investigations, General management, &amp; Hom Therapeutics</td>
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<td>Rheumatoid arthritis</td>
<td>Definition, Etiology, Pathology, Immunopathogenesis, C/F, Investigations, General management, &amp; Hom Therapeutics</td>
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<td>Gout</td>
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<td>Ankylosing Spondylitis</td>
<td>Definition, Etiopathology, C/F, Investigations, General management, &amp; Hom Therapeutics</td>
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<td>Reiter’s Syndrome</td>
<td>Definition, Etiopathogenesis, C/F, Investigations &amp; Hom management</td>
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<td>Systemic Lupus Erythematosus</td>
<td>Definition, Etiopathogenesis, C/F,</td>
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<td>No.</td>
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<td>Systemic Vasculitis</td>
<td>1 Definition, Etiopathogenesis, C/F, Investigations, General management &amp; Hom Therapeutics</td>
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<td>Sjogren’s Syndrome &amp; Behcet’s disease</td>
<td>1 Definition, Etiopathogenesis, S/S, Investigations &amp; Hom Therapeutics</td>
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<td>Rickets &amp; Osteomalacia</td>
<td>1 Definition, Etiopathogenesis, C/F, Investigations, General management &amp; Hom Therapeutics</td>
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<td>Osteoporosis</td>
<td>1 Definition, Etiopathogenesis, C/F, Investigations, General management &amp; Hom Therapeutics</td>
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<td>Paget’s disease</td>
<td>1 Definition, Etiopathogenesis, C/F, Complications &amp; Investigations &amp; Hom Therapeutics</td>
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<td>Cervical And lumbar Spondylosis</td>
<td>2 Definition, Etiopathology, C/F, Investigations, MRI study</td>
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<td>Diseases of Skin &amp; Sexually Transmitted Diseases: 17hrs</td>
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<tr>
<td>1</td>
<td>Bacterial infections</td>
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<td>Viral infection</td>
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<td>Scabies</td>
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<tr>
<td>13. Osteomyelitis</td>
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Complications, General management, & Hom Therapeutics
Definition, Etiopathology, Types, C/F, Investigations, General management & Hom Therapeutics

X. Diseases of Skin & Sexually Transmitted Diseases: 17hrs

1. Bacterial infections
   - Etiopathogenesis, S/S, Investigations, General management & Hom Therapeutics
2. Fungal infections
   - Etiopathogenesis, S/S, Investigations, General management & Hom Therapeutics
3. Viral infection
   - Etiopathogenesis, S/S, Investigations, General management & Hom Therapeutics
4. Scabies
   - Etiopathogenesis, S/S, Investigations, General management & Hom Therapeutics
5. Eczema
   - Definition, Etiopathogenesis, Types, S/S, Investigations, General management &
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

2 Chikungunya 1 Definition, Etiopathogenesis, S/S, Investigations, Complications, D/D, General management & Hom Therapeutics

3 Dengue 1 Definition, Etiopathogenesis, S/S, Investigations, Complications, D/D, General management & Hom Therapeutics

4 Leprosy 1 Definition, Etiopathogenesis, S/S, Investigations, Complications, D/D, General Therapeutics
| 5 | Ankylostomiasis | 1 | Definition, Etiopathogenesis, S/S, Investigations, Complications, D/D, General management & Hom Therapeutics |
| 6 | Elephantiasis | 1 | Definition, Etiopathogenesis, S/S, Investigations, Complications, D/D, General management & Hom Therapeutics |
| 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 |
### XII. Paediatric disorders: 18hrs

<table>
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<tr>
<th>1</th>
<th>Disorders of Growth &amp; Development (Failure to thrive, Enuresis, Autistic, MR and delayed milestones)</th>
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<th>Causes, C/F, General management &amp; Hom Therapeutics</th>
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<td>Causes, C/F, General management &amp; Hom Therapeutics</td>
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<td>Diseases of Newborn infants (Neonatal jaundice &amp; Neonatal seizures)</td>
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<td>Etiopathogenesis, Manifestations, Diagnosis &amp; Homoeopathic therapeutics</td>
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<td>Hydrocephalus</td>
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<td>Etiopathogenesis, Types C/F, General management &amp; Hom Therapeutics</td>
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<td>5</td>
<td>Immunity &amp; Immunization</td>
<td>2</td>
<td>General &amp; Homoeopathic concept of Immunity, Immunization Schedule &amp; Homoeopathic Prophylaxis</td>
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<td>6</td>
<td>Diarrhoeal Disorders in Children</td>
<td>2</td>
<td>Etiopathogenesis, Manifestation, Diagnosis, D/D General management &amp; Homoeopathic</td>
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<td>Indian childhood Cirrhosis</td>
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<td>Cerebral Palsy</td>
<td>Etiopathogenesis, Manifestation, Diagnosis &amp; Homoeopathic Therapeutics</td>
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<td>Convulsive disorders in Children</td>
<td>Etiopathogenesis, Manifestation, Diagnosis &amp; Homoeopathic Therapeutics</td>
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<td>10</td>
<td>Common Helminthic infection (Ascaris Lumbricoides, Enterobius vermicularis &amp; Echinococcosis)</td>
<td>Etiopathogenesis, Manifestation, Diagnosis &amp; Homoeopathic Therapeutics</td>
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<td>Inborn errors of metabolism (Aminoaciduria, Lysosomal storage disorders)</td>
<td>Etiopathogenesis, Manifestation, Diagnosis &amp; Homoeopathic Therapeutics</td>
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**XIII. Geriatric Disorders: 05hrs**

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<td>Geriatric care</td>
<td>General approach, Geriatric counseling, Reassurance</td>
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<td>Common Geriatric problems (Depression, Dementia &amp; Insomnia)</td>
<td>Causes, S/S, General management &amp; Hom Therapeutics</td>
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<td>3</td>
<td>Gait disorders</td>
<td>Causes, S/S, General management &amp; Hom Therapeutics</td>
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<td>4</td>
<td>Elder abuse</td>
<td>Causes, S/S, General management &amp; Hom Therapeutics</td>
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### General management & Hom Therapeutics

#### Assignment:

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<tr>
<th>Sl.No</th>
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<th>Must Know</th>
<th>Desirable to Know</th>
<th>Nice to Know</th>
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<td>1</td>
<td>Pain</td>
<td>Abdominal pain- Peptic ulcer, appendicitis, gallstones, Crohn's disease, diverticulitis, ectopic pregnancy, food poisoning, GERD (acid reflux), irritable bowel syndrome, kidney stones, Pancreatitis Cardiac disorders – MI, Angina, Pericarditis, Myocarditis, Cardiomyopathy Lung disorders - Pulmonary embolism, Pleurisy, TB Psychogenic cause - Panic attacks. Injuries in general</td>
<td>abdominal aortic aneurysm, twisted bowel (sigmoid volvulus), Collapsed lungs, Inflammation of lung tissue, Herpes infection.</td>
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<td>2</td>
<td>Fever</td>
<td>TB, Typhoid, Malaria, Pneumonia, Rheumatic fever, Viral fever, Infective endocarditis, Septicaemia, Dengue fever, Swine Flu, Meningitis, Hepatitis</td>
<td>Lymphadenopathy, Ophthalmological, SLE, Septic arthritis, Dermatological, Pelvic inflammatory disease, otitis media, Immunological, Allergic</td>
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<td>3</td>
<td>Cough with expectoration &amp; Haemoptysis</td>
<td>Pulmonary TB, COPD, Allergic bronchitis, Bronchial Carcinoma, Pneumonia, Foreign body in air passage, Pulmonary embolism, Left-side heart failure, Pleural effusion</td>
<td>Bronchiectasis, Lung abscess, Pulmonary oedema, Goodpasture’s syndrome, Systemic coagulopathy or use of anticoagulants or thrombolytic agents, Psychogenic cough</td>
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<td>Dyspnoea and Tachypnoea</td>
<td>MI, Angina, Lt heart failure, Arrhythmia, Pulmonary oedema, Bronchial asthma, COPD Pneumonia, Pulmonary</td>
<td>Intertial lung disease, Psychogenic, Post nasal drip, Pulmonary Other infections of Resp system, Gastro oesophageal</td>
<td></td>
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</table>

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embolism, Pneumothorax, hypertension, reflux, Cardiomyopathy
Anemia, Obesity, Bronchial carcinoma, Sleepapnoea, Metabolic acidosis

5 Cyanosis
Lt to Rt shunt, Fallot’s Tetralogy, Coarctation of aorta, Pulmonary stenosis, Pulmonary atresia, Pleural effusion, Polycythemia, Low cardiac output, COPD, Hypogycemia, Tracheo- Aspiration, Pneumothorax, Hypothermia, Sepsis Pulmonary oedema, Pulmonary stenosis, Pulmonary atresia, Respiratory distress syndrome, Polycystic oesophageal fistula Pneumonia, Seizures, Apnoea, Hypothermia, Sepsis Asphyxia, Meabolic acidosis, Pulmonary atresia,
Pulmonary stenosis,
Pleural effusion,

6 Dysuria, Ologuria, Nocturia, Polyuria, Incontinence and Enuresis
Diabetes mellitus, UTI, Interstitial Cystitis, Drug related, Prostate abnormalities, Bladder Kidney infection, Schistosomiasis Carcinoma, STD, Cystitis, Vaginitis, Detrosur Urethritis, Neurological instability disorders, Interstitial Cystitis,

7 Oedema and Anasarca
Liver failure(Cirrhosis), Renal failure(Hypoalbuminaemia), Eclampsia of pregnancy, Capillary leak PEM, Rt sided heart failure, Lupus nephritis syndrome, malnutrition, Hypothyroidism, Lymphatic obstruction

8 Anorexia, Nausea and Vomiting
Malignancies, Functional dyspepsia, Alcohol related dyspepsia, Adrenocortical Peptic ulcer, Renal tubular acidosis insufficiency,
Gastritis, IBS, Gastric cancer, Other rare causes Gall stones, Reflux of acidosis or oesophagitis, Diabetic alkalosis
ketoacidosis

9 Constipation and Diarrhoea
Diet, Stress, Medication, Neuromuscular disorder, Inadequate fluid intake, Fecal impaction, Coeliac endocrine disease disorder (e.g.diabetes, thyroid or (e.g.diabetes, thyroid or parathyroid disease) or rarely parathyroid disease) or rarely cancer, IBS, IBD, AIDS
| 10 | Jaundice and Hepatomegaly | Venoocclusive disease, Malaria, Viral hepatitis, Hepatic amoebiasis, Typhoid, Biliary cirrhosis, Hepatocellular carcinoma, CCF | Q fever, Leukemia, Infectious mononucleosis, 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, Dentine, Substance abuse |
| 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, Meniere Disease, Brain tumor, Ear infection (Otitis Media), 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**

- Tuberculosis
- Blood cancers (lymphoma, leukemia, myelofibrosis)
- Liver disease (cirrhosis due to chronic hepatitis B, chronic hepatitis C, fatty liver, long standing alcohol abuse)
- Abnormal blood flow and congestion (splenic vein thrombosis, portal vein obstruction, congestive heart failure)

**Joint pains**

- Osteoarthritis, Rheumatoid arthritis, Bursitis, Gout, Strains, Sprains and Injuries
- Viral infections, Psoriatic arthritis, Lyme disease, Chlamydia, Gonorrhea, SLE, Ankylosing spondylitis

**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: 75 hours - In outpatient department and inpatient department in different wards or department.

IV BHMS: 180 hours - 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 similimum and general management.

### SCHEME OF EXAMINATION

<table>
<thead>
<tr>
<th>Subject</th>
<th>Theory</th>
<th>Practical and oral</th>
<th>Grand total</th>
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<tr>
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<td>Max oral marks</td>
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<tr>
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### 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:

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<th>Type of Questions</th>
<th>No. of Questions</th>
<th>Marks per Question</th>
<th>Total</th>
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<td>05</td>
<td>50</td>
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<td>Short Answers</td>
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Maximum Marks 100

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<tr>
<td>3</td>
<td>Diseases concerning liver, gall –bladder and pancreas</td>
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<td>4</td>
<td>Genetic factors(co-relating diseases with the concept of chronic miasms)</td>
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<tr>
<td>5</td>
<td>Immunological factors in disease with concept of susceptibility(including HIV, Hepatitis B)</td>
<td>03</td>
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<tr>
<td>6</td>
<td>Disorders due to chemical and physical agents and to climatic and</td>
<td>03</td>
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<tr>
<td></td>
<td>environmental Factors</td>
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<td>Diseases of haemopoietic system</td>
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<td>Endocrinal diseases</td>
<td>05</td>
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<tr>
<td>4</td>
<td>Infectious diseases</td>
<td>08</td>
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<tr>
<td>5</td>
<td>Diseases of Cardiovascular system</td>
<td>13</td>
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<tr>
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<td>Diseases of urogenital tract</td>
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<td>Diseases of the Central Nervous system and peripheral nervous system</td>
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<td>Diseases of Skin &amp; sexually transmitted diseases</td>
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### Question Paper Blueprint

#### Practice of Medicine – Paper I

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### 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. Diseases of digestive system & peritoneum  
5. Diseases concerning liver, gall-bladder and pancreas  
6. Genetic factors (co-relating diseases with the concept of chronic miasms)  
7. Disorders of Water & Electrolyte balance

**Short Answers:**  
3X10 = 30

8. Respiratory diseases  
9. Diseases of digestive system & peritoneum  
10. Diseases concerning liver, gall-bladder and pancreas  
11. Immunological factors in diseases with concept of susceptibility (including HIV, Hepatitis B)  
12. 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:  
\[5 \times 10 = 50\]

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<td>Disease of skin and sexually transmitted diseases</td>
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### Short Answers:  
\[3 \times 10 = 30\]

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<tr>
<td>16</td>
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### B – Practical including viva voce or oral:
Marks: 200

**Distribution of marks:**

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**Total** 200

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<th>Diagnosis</th>
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<th>Prescription and dosage</th>
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Recommended books

Basic books

- Raue CG. (1885) Special Pathology and Diagnostics with Therapeutic Hints. 3rd edition. F. E. Boericke Hahneman Publishing House; Philadelhia.

Reference Books

- Baehr Bernhard. (1875) The Science of Therapeutics Boericke and Tafel; New York
- Vandenburg MW. (2002 Reprint) Therapeutics of Respiratory System. B. Jain Publisher (P) Ltd; New Delhi.
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

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<th>Desirable to Know</th>
<th>Nice to Know</th>
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<td>• History of KENT/BTPB/BBCR&lt;br&gt;• Philosophical Background&lt;br&gt;• Concept of totality&lt;br&gt;• Plan &amp; Construction&lt;br&gt;• Cross references&lt;br&gt;• Scope &amp; adaptability&lt;br&gt;• Limitations&lt;br&gt;Comparative study of different repertories Kent/BTPB/BBCR/Synoptic Key</td>
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<td>Gentry’s Repertory</td>
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<td>J.H.clarke Clinical repertory Allen’s fever Bell’s Diarrhoea Minton’s uterine therapeutic s</td>
<td>Prescriber Berridge Eye Morgan’s urinary organs Douglas skin Rheumatic Remedies by H.A.Robert s</td>
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<td>Thematic Repertory by Mirili</td>
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<td>RADAR Complete Dynamics, MAC Repertory, ISIS Open Source Repertories, Stimulare</td>
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**Question Paper Blueprint**

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2. Derivation of word repertory
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. Based on form
3. Based on Philosophy
4. Based on Era (Pre Kentian Post Kentian)

III. Gradation of Remedies by different authors
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. 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
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
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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
1 SE
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+SA

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
<table>
<thead>
<tr>
<th>25. CASE TAKING (Difficulties in taking chronic case)</th>
</tr>
</thead>
<tbody>
<tr>
<td>26. CASE TAKING (Analysis &amp; evaluation of symptoms)</td>
</tr>
<tr>
<td>27. REPERTORY PROPER (Classification of Repertories)</td>
</tr>
<tr>
<td>28. REPERTORY PROPER (methods &amp; Techniques of Repertorization)</td>
</tr>
<tr>
<td>29. REPERTORY PROPER (Knerr Repertory)</td>
</tr>
<tr>
<td>30. REPERTORY PROPER (Computer Repertories RADAR &amp; HOMPATH))</td>
</tr>
<tr>
<td>31. REPERTORY PROPER (Modern Repertory Synthesis/ Synthetic/ Murphy)</td>
</tr>
<tr>
<td>32. REPERTORY PROPER (Boericke Repertory)</td>
</tr>
<tr>
<td>33. REPERTORY PROPER (Study of Repertories KENT/BOGER/BTPB)</td>
</tr>
<tr>
<td>34. REPERTORY PROPER (Cross references)</td>
</tr>
</tbody>
</table>

**SHORT ANSWERS:** \[3 	imes 10 = 30\]

<table>
<thead>
<tr>
<th>35. CASE TAKING (Case recording)</th>
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</thead>
<tbody>
<tr>
<td>36. CASE TAKING (Totality of symptoms or conceptual image of the patient)</td>
</tr>
<tr>
<td>37. CASE TAKING (Symptomatology)</td>
</tr>
<tr>
<td>38. REPERTORY PROPER (Introduction To repertory)</td>
</tr>
<tr>
<td>39. REPERTORY PROPER (Introduction to Repertory)</td>
</tr>
<tr>
<td>40. REPERTORY PROPER (clinical Repertory minton/ Allen’s fever/ Clarke Clinical)</td>
</tr>
<tr>
<td>41. REPERTORY PROPER (Bell’s Diarrhoea)</td>
</tr>
<tr>
<td>42. REPERTORY PROPER (Gradation of Medicines by different authors)</td>
</tr>
<tr>
<td>43. REPERTORY PROPER (Study of Repertories KENT/BOGER/BTPB)</td>
</tr>
<tr>
<td>44. REPERTORY PROPER (terms and language of repertories(rubrics))</td>
</tr>
</tbody>
</table>

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

380
<table>
<thead>
<tr>
<th>Case</th>
<th>Case taking</th>
<th>Case analysis</th>
<th>Repertorisation</th>
<th>Result and drug selection</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long</td>
<td>10</td>
<td>10</td>
<td>05</td>
<td>05</td>
<td>30</td>
</tr>
<tr>
<td>Short</td>
<td>04</td>
<td>03</td>
<td>02</td>
<td>01</td>
<td>10</td>
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<td>Journal</td>
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<tr>
<td>Total</td>
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<td>50</td>
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</tbody>
</table>

Practical record 10 Marks,
Viva Voce 50 Marks.

**Recommended Books:**


**Reference books**


