

**Revised Ordinance Governing  
MBBS DEGREE COURSE AND CURRICULUM of  
Phase III Part 1 Subjects- RS4**



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## **SECTION I**

### **PREAMBLE**

#### **Introduction to CBME based curriculum**

The Medical Council of India has revised the undergraduate medical education curriculum so that the Indian Medical Graduate is able to recognize "health for all" as a national goal and should be able to fulfill his/her societal obligations. The revised curriculum has attempted to enunciate the competencies the student must be imparted and should have learnt, with clearly defined teaching-learning strategies and effective methods of assessment. Communicating effectively and sympathetically with patients and their relatives has been visualized as a core area of the revised curriculum. These and other goals identified in the curriculum are to be implemented in all medical colleges under the ambit of Medical Council of India from August 2019 and to smoothen this process Guidelines have been prepared for its effective implementation. In response to the need for a seamless introduction of the curriculum into the Undergraduate system, all medical colleges need to upgrade the teaching-learning skills of their faculty. Earlier experience with implementation of curricular changes suggests that a carefully managed, sustainable approach is necessary to ensure that every college has access to the new skills and knowledge enunciated in the new curriculum. Faculty training and development thus assumes a key role in the effective implementation and sustenance of the envisaged curricular reforms.

## INTRODUCTION

The undergraduate medical curriculum of the medical council of India is created to ensure that the medical doctor who emerges from the MBBS training program is capable of assisting the nation to achieve its goal of health for all. In addition, it aspires to ensure that the “graduate” meets or exceeds global bench-mark in knowledge, attitude, skills and communication. This intent is at the core of the Graduate Medical Regulations, 2019.

The Graduate Medical Regulations, 2019 represents the first major revision to the medical curriculum since 1997 and hence incorporates changes in science and thought over two decades. A significant advance is the development of global competencies and subject-wise outcomes that define the roles of the “Indian Medical Graduate”. Learning and assessment strategies have been outlined that will allow the learner to achieve these competencies/outcomes. Effective appropriate and empathetic communication, skill acquisition, student-doctor method of learning, aligned and integrated learning and assessment are features that have been given additional emphasis in the revised curriculum.

The revised curriculum is to be implemented by all medical colleges under the ambit of Medical Council of India from August 2019. The roll out will be progressive over the duration of the MBBS course.

This document represents a compilation of the resource material that was used in the Curricular Implementation Support Program (CISP) and has attempted to provide a stepwise and comprehensive approach to implement the curriculum. It details the philosophy and the steps required in a simple and richly illustrated manner. Teaching slide decks, faculty guides and online resource material supplement this document. The document is to be used in conjunction with the Competency document, AETCOM module and the GMR document.

### **Indian Medical Graduate Training Programme**

The undergraduate medical education programme is designed with a goal to create an “Indian Medical Graduate” (IMG) possessing requisite knowledge, skills, attitudes, values and responsiveness, so that she or he may function appropriately and effectively as a physician of first contact of the community while being globally relevant. To achieve this, the following national and institutional goals for the learner of the Indian Medical Graduate training programme are hereby prescribed:-

#### **National Goals**

At the end of undergraduate program, the Indian Medical Graduate should be able to:

- (a) Recognize “health for all” as a national goal and health right of all citizens and by undergoing training for medical profession to fulfill his/her social obligations towards realization of this goal.
- (b) Learn every aspect of National policies on health and devote her/him to its practical implementation.
- (c) Achieve competence in practice of holistic medicine, encompassing promotive, preventive, curative and rehabilitative aspects of common diseases.
- (d) Develop scientific temper, acquire educational experience for proficiency in profession and promote healthy living.
- (e) Become exemplary citizen by observance of medical ethics and fulfilling social and professional obligations, so as to respond to national aspirations.

## **Institutional Goals**

(1) In consonance with the national goals each medical institution should evolve institutional goals to define the kind of trained manpower (or professionals) they intend to produce. The Indian Medical Graduates coming out of a medical institute should:

(a) be competent in diagnosis and management of common health problems of the individual and the community, commensurate with his/her position as a member of the health team at the primary, secondary or tertiary levels, using his/her clinical skills based on history, physical examination and relevant investigations.

(b) be competent to practice preventive, promotive, curative, palliative and rehabilitative medicine in respect to the commonly encountered health problems.

(c) appreciate rationale for different therapeutic modalities; be familiar with the administration of “essential medicines” and their common adverse effects.

(d) be able to appreciate the socio-psychological, cultural, economic and environmental factors affecting health and develop humane attitude towards the patients in discharging 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, action research and documentation skills.

(f) be familiar with the basic factors which are essential for the implementation of the National Health Programmes including practical aspects of the following:

(i) Family Welfare and Maternal and Child Health (MCH)

(ii) Sanitation and water supply

(iii) Prevention and control of communicable and non-communicable diseases

(iv) Immunization

(v) Health Education

(vi) Indian Public Health Standards (IPHS), at various levels of service delivery

(vii) Bio-medical waste disposal

(viii) Organizational and/or institutional arrangements.

(g) acquire basic management skills in the area of human resources, materials and resource management related to health care delivery, hospital management, inventory skills and counseling.

(h) be able to identify community health problems and learn to work to resolve these by designing, 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.

(k) have personal characteristics and attitudes required for professional life such as personal integrity, sense of responsibility and dependability and ability to relate to or show concern for other individuals.

All efforts must be made to equip the medical graduate to acquire the skills as detailed in Table 11  
Certifiable procedural skills – A Comprehensive list of skills recommended as desirable for Bachelor of Medicine and Bachelor of Surgery (MBBS) – Indian Medical Graduate.

### **Goals and Roles for the Learner**

In order to fulfil the goal of the IMG training programme, the medical graduate must be able to function in the following roles appropriately and effectively

- Clinician who understands and provides preventive, promotive, curative, palliative and holistic care with compassion.
- Leader and member of the health care team and system with capabilities to collect analyze, synthesize and communicate health data appropriately.
- Communicator with patients, families, colleagues and community.
- Lifelong learner committed to continuous improvement of skills and knowledge.
- Professional, who is committed to excellence, is ethical, responsive and accountable to patients, community and profession.

### **Competency Based Training Programme of the Indian Medical Graduate**

Competency based learning would include designing and implementing medical education curriculum that focuses on the desired and observable ability in real life situations. In order to effectively fulfil the roles as listed in clause 2, the Indian Medical Graduate would have obtained the following set of competencies at the time of graduation:

#### ***Clinician, who understands and provides preventive, promotive, curative, palliative and holistic care with compassion***

- Demonstrate knowledge of normal human structure, function and development from a molecular, cellular, biological, clinical, behavioural and social perspective.
- Demonstrate knowledge of abnormal human structure, function and development from a molecular, cellular, biological, clinical, behavioural and social perspective.
- Demonstrate knowledge of medico-legal, societal, ethical and humanitarian principles that influence health care.
- Demonstrate knowledge of national and regional health care policies including the National Health Mission that incorporates National Rural Health Mission (NRHM) and National Urban Health Mission (NUHM), frameworks, economics and systems that influence health promotion, health care delivery, disease prevention, effectiveness, responsiveness, quality and patient safety.
- Demonstrate ability to elicit and record from the patient, and other relevant sources including relatives and caregivers, a history that is complete and relevant to disease identification, disease prevention and health promotion.
- Demonstrate ability to elicit and record from the patient, and other relevant sources including relatives and caregivers, a history that is contextual to gender, age, vulnerability, social and economic status, patient preferences, beliefs and values.
- Demonstrate ability to perform a physical examination that is complete and relevant to disease identification, disease prevention and health promotion.

- Demonstrate ability to perform a physical examination that is contextual to gender, social and economic status, patient preferences and values.

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- Demonstrate effective clinical problem solving, judgment and ability to interpret and integrate available data in order to address patient problems, generate differential diagnoses and develop individualized management plans that include preventive, promotive and therapeutic goals.
- Maintain accurate, clear and appropriate record of the patient in conformation with legal and administrative frame works.
- Demonstrate ability to choose the appropriate diagnostic tests and interpret these tests based on scientific validity, cost effectiveness and clinical context.
- Demonstrate ability to prescribe and safely administer appropriate therapies including nutritional interventions, pharmacotherapy and interventions based on the principles of rational drug therapy, scientific validity, evidence and cost that conform to established national and regional health programmes and policies for the following:
  - (i) Disease prevention,
  - (ii) Health promotion and cure,
  - (iii) Pain and distress alleviation, and
  - (iv) Rehabilitation.
- Demonstrate ability to provide a continuum of care at the primary and/or secondary level that addresses chronicity, mental and physical disability.
- Demonstrate ability to appropriately identify and refer patients who may require specialized or advanced tertiary care.
- Demonstrate familiarity with basic, clinical and translational research as it applies to the care of the patient.

***Leader and member of the health care team and system***

- Work effectively and appropriately with colleagues in an inter-professional health care team respecting diversity of roles, responsibilities and competencies of other professionals.
- Recognize and function effectively, responsibly and appropriately as a health care team leader in primary and secondary health care settings.
- Educate and motivate other members of the team and work in a collaborative and collegial fashion that will help maximize the health care delivery potential of the team.
- Access and utilize components of the health care system and health delivery in a manner that is appropriate, cost effective, fair and in compliance with the national health care priorities and policies, as well as be able to collect, analyze and utilize health data.
- Participate appropriately and effectively in measures that will advance quality of health care and patient safety within the health care system.
- Recognize and advocate health promotion, disease prevention and health care quality improvement through prevention and early recognition: in a) life style diseases and b) cancers, in collaboration with other members of the health care team.

***Communicator with patients, families, colleagues and community***

- Demonstrate ability to communicate adequately, sensitively, effectively and respectfully with patients in a language that the patient understands and in a manner that will improve patient satisfaction and health

care outcomes.

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- Demonstrate ability to establish professional relationships with patients and families that are positive, understanding, humane, ethical, empathetic, and trustworthy.
- Demonstrate ability to communicate with patients in a manner respectful of patient's preferences, values, prior experience, beliefs, confidentiality and privacy.
- Demonstrate ability to communicate with patients, colleagues and families in a manner that encourages participation and shared decision-making.

***Lifelong learner committed to continuous improvement of skills and knowledge***

- Demonstrate ability to perform an objective self-assessment of knowledge and skills, continue learning, refine existing skills and acquire new skills.
- Demonstrate ability to apply newly gained knowledge or skills to the care of the patient.
- Demonstrate ability to introspect and utilize experiences, to enhance personal and professional growth and learning.
- Demonstrate ability to search (including through electronic means), and critically evaluate the medical literature and apply the information in the care of the patient.
- Be able to identify and select an appropriate career pathway that is professionally rewarding and personally fulfilling.

***Professional who is committed to excellence, is ethical, responsive and accountable to patients, community and the profession***

- Practice selflessness, integrity, responsibility, accountability and respect.
- Respect and maintain professional boundaries between patients, colleagues and society.
- Demonstrate ability to recognize and manage ethical and professional conflicts.
- Abide by prescribed ethical and legal codes of conduct and practice.
- Demonstrate a commitment to the growth of the medical profession as a whole.

### **Broad Outline on training format**

In order to ensure that training is in alignment with the goals and competencies listed in sub-clause 2 and 3 above:

- There shall be a "Foundation Course" to orient medical learners to MBBS programme, and provide them with requisite knowledge, communication (including electronic), technical and language skills.
- The curricular contents shall be vertically and horizontally aligned and integrated to the maximum extent possible in order to enhance learner's interest and eliminate redundancy and overlap.
- Teaching-learning methods shall be learner centric and shall predominantly include small group learning, interactive teaching methods and case based learning.
- Clinical training shall emphasize early clinical exposure, skill acquisition, certification in essential skills; community/primary/secondary care-based learning experiences and emergencies.
- Training shall primarily focus on preventive and community based approaches to health and disease, with specific emphasis on national health priorities such as family welfare, communicable and noncommunicable diseases including cancer, epidemics and disaster management.
- Acquisition and certification of skills shall be through experiences in patient care, diagnostic and skill laboratories.
- The development of ethical values and overall professional growth as integral part of curriculum shall be emphasized through a structured longitudinal and dedicated programme on professional development including attitude, ethics and communication.
- Progress of the medical learner shall be documented through structured periodic assessment that includes formative and summative assessments. Logs of skill-based training shall be also maintained.

Appropriate Faculty Development Programmes shall be conducted regularly by institutions to facilitate medical teachers at all levels to continuously update their professional and teaching skills, and align their teaching skills to curricular objectives.

## **SECTION II**

### **Admission to the Indian Medical Graduate Programme**

**NATIONAL ELIGIBILITY-CUM-ENTRANCE TEST AND COMMON COUNSELLING**

## **SECTION III**

### **Migration**

**AS PER MCI GUIDELINES**

## SECTION IV

### REGULATIONS GOVERNING MBBS DEGREE COURSE

[Eligibility for Admission, Duration, Attendance and Scheme of Examination]

#### 1. ELIGIBILITY

As per guidelines of National Medical Council of India

#### 2. DURATION OF THE COURSE

Every learner shall undergo a period of certified study extending over 4 ½ academic years, divided into nine semesters from the date of commencement of course to the date of completion of examination which shall be followed by one year of compulsory rotating internship.

Each academic year will have at least 240 teaching days with a minimum of eight hours of working on each day including one hour as lunch break

The period of 4 ½ years is divided as follows:

- **Pre-Clinical Phase [(Phase I) - First Professional phase of 13 months]** preceded by Foundation Course of one month]: will consist of preclinical subjects – Human Anatomy, Physiology, Biochemistry, Introduction to Community Medicine, Humanities, Professional development including Attitude, Ethics & Communication (AETCOM) module and early clinical exposure, ensuring both horizontal and vertical integration.
- **Para-clinical phase [(Phase II) - Second Professional of 12 months]**: will consist of Para-clinical subjects namely Pathology, Pharmacology, Microbiology, Community Medicine, Forensic Medicine

and Toxicology, Professional development including Attitude, Ethics & Communication (AETCOM) module and introduction to clinical subjects ensuring both horizontal and vertical integration.

The clinical exposure to learners will be in the form of learner-doctor method of clinical training in all phases. The emphasis will be on primary, preventive and comprehensive health care. A part of training during clinical postings should take place at the *primary level* of health care. It is desirable to provide learning experiences in secondary health care, wherever possible. This will involve:

- (a) Experience in recognizing and managing common problems seen in outpatient, inpatient and emergency settings,
- (b) Involvement in patient care as a team member,
- (c) Involvement in patient management and performance of basic procedures.

• **Clinical Phase – [(Phase III) Third Professional (28 months)]**

- (a) Part I (13 months) - The clinical subjects include General Medicine, General Surgery, Obstetrics & Gynaecology, Pediatrics, Orthopaedics, Dermatology, Otorhinolaryngology, Ophthalmology, Community Medicine, Forensic Medicine and Toxicology, Psychiatry, Respiratory Medicine, Radiodiagnosis & Radiotherapy and Anaesthesiology & Professional development including AETCOM module.
- (b) Electives (2 months) - To provide learners with opportunity for diverse learning experiences, to do research/community projects that will stimulate enquiry, self directed experimental learning and lateral thinking [9.3].
- (c) Part II (13 months) - Clinical subjects include:
  - i. Medicine and allied specialties (General Medicine, Psychiatry, Dermatology Venereology and Leprosy (DVL), Respiratory Medicine including Tuberculosis)
  - ii. Surgery and allied specialties (General Surgery, Orthopedics [including trauma]), Dentistry, Physical Medicine and rehabilitation, Anaesthesiology and Radiodiagnosis)
  - iii. Obstetrics and Gynecology (including Family Welfare)
  - iv. Pediatrics
  - v. AETCOM module

- **A learner shall not be entitled to graduate after 10 years of his/her joining of the first part of the MBBS course**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
							Foundation course	I MBBS			
I MBBS								Phase I exam	II MBBS		
II MBBS								Phase II exam	III MBBS PART 1		

III MBBS PART 1		Phase III part 1 exam	Electives and skills
III MBBS PART 2			
Phase III part 2 exam	Internship		
Internship			

## DISTRIBUTION OF SUBJECTS BY PROFESSIONAL PHASE

Phase and Year of MBBS Training	Subjects and new teaching elements	Duration	University examination
First professional MBBS	<ul style="list-style-type: none"> <li>• Foundation course (1month)</li> <li>• Human Anatomy, Physiology &amp; Biochemistry</li> <li>• Introduction of Community Medicine, Humanities</li> <li>• Early Clinical Exposure</li> <li>• Attitude, Ethics and Communication Module (AETCOM)</li> </ul>	1+13 months	I <sup>st</sup> Professional

<b>Second professional MBBS</b>	<ul style="list-style-type: none"> <li>• Pathology, Microbiology, Pharmacology, Forensic Medicine And Toxicology</li> <li>• Introduction to clinical subjects including community Medicine</li> <li>• Clinical postings</li> <li>• AETCOM</li> </ul>	12 months	II <sup>nd</sup> Professional
<b>Third professional MBBS-part I</b>	<ul style="list-style-type: none"> <li>• General Medicine ,General Surgery, OBG, Paediatrics, Orthopaedics, Dermatology, Pyschiatry, Otorhinolaryngology, Ophthalmology, Community Medicine, Forensic Medicine and Toxicology, Respiratory Medicine, Radiodiagnosis &amp; Radiotherapy, Anaesthesiology</li> <li>• Clinical Subjects /postings</li> <li>• AETCOM</li> </ul>	12 months	III <sup>rd</sup> Professional PartI
<b>Electives</b>	<ul style="list-style-type: none"> <li>• Electives ,skills and assessment</li> </ul>	2 months	
<b>Third professional MBBS-part II</b>	<ul style="list-style-type: none"> <li>• General Medicine ,Paediatrics, General Surgery, Orthopaedics, Obstetrics and Gynaecology, including Family welfare and allied specialties</li> <li>• Clinical Postings /subjects</li> <li>• AETCOM</li> </ul>	13 months	III <sup>rd</sup> Professional PartII

### 3. ATTENDANCE

- Every candidate should have **attendance not less than 75% of the total classes conducted in theory and not less than 80% of the classes conducted in practical** in each calendar year calculated from the date of commencement of the term to the last working day as notified by the University in each of the subjects prescribed to be eligible to appear for the university examination.
- **Seventy five percent (75%) attendance in Professional Development Programme (AETCOM Module) is required for eligibility to appear for final examination in each professional year** (vide Medical Council of India Notification on Graduate Medical Education (Amendment) Regulations 2019, published in the Gazette of India Part III, Section 4, Extraordinary issued on 4<sup>th</sup> November 2019)
- In subjects that are taught in more than one phase – the learner must have 75% attendance in theory and 80% in practical in each phase of instruction in that subject.
- If an examination comprises more than one subject (for e.g., General Surgery and allied branches), the candidate must have 75% attendance in each subject and 80% attendance in each clinical posting. Learners who do not have at least 75% attendance in the electives will not be eligible for the Third Professional - Part II

examination.

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The Principal should notify at the College the attendance details at the end of each term without fail under intimation to this University.

A candidate lacking in the prescribed attendance and progress in any subject(s) in theory or practical should not be permitted to appear for the examination in that subject(s).

4. TEACHING HOURS: Third Professional Part 1

Subjects	Lecture (hours)	Small group learning (Tutorials / Seminars) /Integrated learning (hours)	Self - Directed Learning (hours)	Total(hours )
General Medicine	25	35	5	65
General Surgery	25	35	5	65
Obstetrics and Gynecology	25	35	5	65
Pediatrics	20	30	5	55
Orthopaedics	15	20	5	40
Forensic Medicine and Toxicology	25	45	5	75
Community Medicine	40	60	5	105
Otorhinolaryngology	25	40	5	70
Ophthalmology	30	60	10	100
Dermatology	20	5	5	30
Psychiatry	25	10	5	40
Respiratory Medicine	10	8	2	20
Radiodiagnosis and Radiotherapy	10	8	2	20
Anesthesiology	8	10	2	20
Clinical postings		-		756

Attitude, Ethics & Communication Module (AETCOM)		19	6	25
Total	303	401	66	1551

- Teaching and learning shall be aligned and integrated across specialties both vertically and horizontally for better learner comprehension. Learner centered learning methods should include problem oriented learning, case studies, community oriented learning, self- directed and experiential learning.
- Didactic lectures shall not exceed one third of the schedule; two third of the schedule shall include interactive sessions, practicals, clinical or/and group discussions. The learning process should include clinical experiences, problem oriented approach, case studies and community health care activities.

Table : Clinical postings for all clinical Subjects

Subjects	Period of training in weeks			Total (weeks)
	II MBBS	III MBBS Part 1	III MBBS Part 2	
Electives			8(4weeks clinical postings to continue)	
General Medicine	4	4	8+4	20
General Surgery	4	4	8+4	20
Obstetrics and Gynecology	4	4	8+4	20
Pediatrics	2	4	4	10
Orthopaedics including Trauma	2	4	2	8
Community Medicine	4	6	-	10
Otorhinolaryngology	4	4	-	8
Ophthalmology	4	4	-	8
Dermatology	2	2	2	6
Psychiatry	2	2	-	4
Respiratory Medicine	2	-	-	2
Radiodiagnosis	2	-	-	2
Dentistry & Anesthesiology	-	2	-	2
Casualty	-	2	-	2

Total	36	42	44	126
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## SCHEME OF EXAMINATION

### 5. INTERNAL ASSESSMENT:

#### General guidelines

- Regular periodic examinations shall be conducted throughout the course.
- There shall be **minimum three internal assessment examinations** in each 3<sup>rd</sup> MBBS Part 1 subjects which includes ENT, Ophthalmology, Community Medicine and Forensic medicine and one internal assessment examination in each of the other clinical subject in a professional year.
- An end of posting clinical assessment shall be conducted for each clinical posting in each professional year
- The **third internal examination** should be conducted on the lines of the university examination(Preliminary examination).
- When subjects are taught in more than one phase, the internal assessment must be done in each phase and must contribute proportionately to final assessment. For example, General Medicine must be assessed in second Professional, third Professional Part I and third Professional Part II, independently.
- An **average of the marks scored in the three internal assessment examinations** will be considered as the final internal assessment marks.
- Learners **must secure not less than 40 % marks in theory and practical separately and not less than 50% marks of the total marks (combined in theory and practical)** assigned for internal assessment in a particular subject in order to be eligible for appearing at the final University examination of that subject.
- A candidate who has not secured requisite aggregate in the internal assessment may be subjected to remedial measures by the institution. If he/she successfully completes the remediation measures, he/she is eligible to appear for University Examination. Remedial measures shall be completed before submitting the internal assessment marks online to the university.
- **Internal assessment marks will reflect under separate head in the marks card of the university examination. The internal assessment marks (theory/practical) will not be added to the marks**

**secured (theory/practical) in the university examination for consideration of pass criteria.**

- **The results of IA should be displayed on the notice board within a 1-2 week of the test.**
- Learners must have completed the required certifiable competencies for that phase of training and completed the logbook appropriate for that phase of training to be eligible for appearing at the final university examination of that subject.

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## 6. UNIVERSITY EXAMINATION

### Examination schedule

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
							Foundation course	I MBBS			
I MBBS								Phase I exam	II MBBS		
II MBBS								Phase II exam	III MBBS PART 1		
III MBBS PART 1								Phase III part 1 exam	Electives and skills		
III MBBS PART 2											
Phase III part 2 exam		Internship									
Internship											

### General guidelines

- University examinations are to be designed with a view to ascertain whether the candidate has acquired the necessary knowledge, minimal level of skills, ethical and professional values with clear concepts of the fundamentals which are necessary for him/her to function effectively and appropriately as a physician of first contact. Assessment shall be carried out on an objective basis to the extent possible.
- Nature of questions will include different types such as structured essays (Long Answer Questions - LAQ), Short Essays, Short Answers Questions (SAQ) and Multiple choice questions (MCQs). Marks for each part should be indicated separately.
- The learner **must secure at least 40% marks in each of the two papers with minimum 50% of marks in aggregate (both papers together) to pass in Community Medicine.**
- In subjects with one question paper the learner must secure a minimum of 50% marks to pass.
- Clinical examinations will be conducted at the bedside in the hospital wards. The objective will be to assess proficiency and skills to elicit a detailed history, perform clinical examination, interpret data and form logical conclusion, wherever applicable.
- There shall be one main examination in an academic year and a supplementary to be held not later than 90 days after the declaration of the results of the main examination.**

- A learner shall not be entitled to graduate after 10 years of his/her joining of the first part of the MBBS course.
- A maximum number of four permissible attempts would be available to clear the first Professional University examination, whereby the first Professional course will have to be cleared within 4 years of admission to the said course. Partial attendance at any University examination shall be counted as an availed attempt.
- **THIRD PROFESSIONAL PART 1 EXAMINATION:**

This examination shall be held at the end of third professional training(11 months), in the subjects of Otorhinolaryngology, Ophthalmology, Community Medicine and Forensic medicine.

#### Phase II

**Table: Examination components, Subjects and Distribution of Marks**

<b>THEORY</b>	<b>Community Medicine</b>	<b>Forensic Medicine</b>	<b>Ophthalmology</b>	<b>Otorhinolaryngology</b>
Written Paper				
No. of Papers & Maximum Marks for each paper.	<b>2×100=200</b>	<b>1×100=100</b>	<b>1×100=100</b>	<b>1×100=100</b>
<b>Total theory</b>	<b>200</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>PRACTICAL</b>				
1. Practical exam	<b>80</b>	<b>80</b>	<b>80</b>	<b>80</b>
2. Viva-voce	<b>20</b>	<b>20</b>	<b>20</b>	<b>20</b>
<b>Total practical</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>Internal assessment*</b>				
Internal Assessment (Theory)	<b>40</b>	<b>40</b>	<b>25</b>	<b>25</b>
Internal assessment (Practical)	<b>40</b>	<b>40</b>	<b>25</b>	<b>25</b>

\* Internal assessment marks will reflect under separate head in the marks card of the university examination.

### Type, number of questions and distribution of marks for written paper

TYPES OF QUESTION	NUMBER OF QUESTIONS	MARKS FOR EACH QUESTION
Long essay	2	10
Short essay	8	5
Short answers	10	3
MCQs	10	1
Total		100

#### 7. SUBMISSION OF LOGBOOK

- a. At the time of Clinical Examination each candidate shall submit to the Examiners his/her logbook record duly certified by the Head of the Department as a bonafide record of the work done by the candidate.

#### 8. ELIGIBILITY TO APPEAR FOR EXAMINATION

The following criteria to be met by the students to be eligible for the university exams:

- a. Shall have undergone satisfactorily the approved course of study in the subject/subjects for the prescribed duration.
- b. Shall have attended not less than 75% of the total classes conducted in theory and not less than 80% of the total classes conducted in practical separately to become eligible to appear for examination in that subject/subjects.
- c. Minimum of 40% marks to be obtained **separately** in theory and practical AND atleast 50% marks of the total marks **combined** in theory and practical assigned for internal assessment is to be obtained in a particular subject to appear for university exam. (average of 3 internal assessments theory and practical separately)
- d. Learners must have completed the required certifiable competencies for that phase of training and completed the logbook appropriate for that phase of training to be eligible for appearing at the final university examination of that subject.

#### 9. CRITERIA FOR PASS

For declaration of pass in any subject in the University examination, a candidate shall pass both in Theory and Practical examination components separately as stipulated below:

- The Theory component consists of marks obtained in University Written papers only. For a pass in theory, a candidate must secure at least 40% marks in each of the two papers with minimum 50% of

marks in aggregate (both papers together).

- For a pass in practical examination, a candidate shall secure not less than 50% marks in aggregate, i.e., marks obtained in university practical examination and viva voce added together.

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- **Internal assessment marks will reflect as a separate head of passing at the university examination.**
- A candidate not securing 50% marks in aggregate in Theory or Practical examination + viva in a subject shall be declared to have failed in that subject and is required to appear for both Theory and Practical again in the subsequent examination in that subject.

## 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 (university examination + internal assessment)** 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 (university examination + internal assessment)** 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 (university examination + internal assessment)** prescribed will be declared to have passed the examination in Pass 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.

**Note: Please note fraction of marks will not be rounded off for clauses (a), (b) and (c)**

### Appointment of Examiners

- (a) Person appointed as an examiner in the particular subject must have at least four years of total teaching experience as assistant professor after obtaining postgraduate degree in the subject in a college affiliated to a recognized/approved/permitted medical college.
- (b) For the Practical/ Clinical examinations, there shall be at least four examiners for 100 learners, out of whom not less than 50% must be external examiners. Of the four examiners, the senior-most internal examiner will act as the Chairman and coordinator of the whole examination programme so that uniformity in the matter of assessment of candidates is maintained. Where candidates appearing are more than 100, two additional examiners (one external & one internal) for every additional 50 or part there of candidates appearing, be appointed.
- (c) External examiners may not be from the same University.

- (d) The internal examiner in a subject shall not accept external examinership for a college from which external examiner is appointed in his/her subject.
- (e) A University having more than one college shall have separate sets of examiners for each college, with internal examiners from the concerned college.
- (f) External examiners shall rotate at an interval of 2 years.
- (g) There shall be a Chairman of the Board of paper-setters who shall be an internal examiner and shall moderate the questions.
- (h) All eligible examiners with requisite qualifications and experience can be appointed internal examiners by rotation in their subjects.
- (i) All theory paper assessment should be done as central assessment program (CAP) of concerned university.
- (j) Internal examiners should be appointed from same institution for unitary examination in same institution. For pooled examinations at one centre approved internal examiners from same university may be appointed.
- (k) The grace marks up to a maximum of five marks may be awarded at the discretion of the University to a learner for clearing the examination as a whole but not for clearing a subject resulting in exemption.

# FORENSIC MEDICINE & TOXICOLOGY

## GOAL:

The aim of teaching the undergraduate student in Forensic Medicine is to impart such knowledge and skills that may enable him to manage common medico-legal problems in day to day practice. He/she shall acquire competence for post mortem diagnosis based on history, physical examination and relevant observations during autopsy.

## COMPETENCIES:

### *Period of Training – Phase II MBBS & Phase III part 1 MBBS*

The learner must demonstrate:

- Understanding of medico-legal responsibilities of physicians in primary and secondary care settings,
- Understanding of the rational approach to the investigation of crime, based on scientific and legal principles,
- Ability to manage medical and legal issues in cases of poisoning / overdose,
- Understanding the medico-legal framework of medical practice and medical negligence,
- Understanding of codes of conduct and medical ethics.

### *Period of Training – Internship*

#### **A. An intern must perform or assist in:**

- Identifying and documenting medico-legal problems in a hospital and general practice,
- Identifying the medico-legal responsibilities of a medical practitioner in various hospital situations,
- Diagnosing and managing with competence basic poisoning conditions in the community,
- Diagnosing and managing with competence and documentation in cases of Rape /Sexual assault,
- Preparing medico-legal reports in various medico legal situations.

#### **B. An intern must have observed or preferably assisted at the following operations/ procedures:**

- Various medico legal / post-mortem procedures and formalities during their performance by police.

### *Certifiable Procedural skills desirable of Indian Medical Graduate in Forensic Medicine & Toxicology*

- Documentation and certification of trauma (I)
- Diagnosis and certification of death (D)

- Legal documentation related to emergency cases (D)
- Certification of medico-legal cases e.g. Age estimation, Sexual Violence etc. (D)
- Establishing communication in medico-legal cases with police, public health authorities, other concerned departments, etc (D)
  - I- Independently performed on patients,
  - O- Observed in patients or on simulations,
  - D- Demonstration on patients or simulations and performance under supervision in patients

<b>Competencies in Phase II MBBS and Phase III part 1 MBBS</b>			
<b>No.</b>	<b>Topic</b>	<b>Competencies</b>	<b>Procedures requiring certification</b>
1	General information	11	Nil
2	Forensic Pathology	35	Nil
3	Clinical Forensic Medicine	33	Nil
4	Medical jurisprudence (Medical Law & Ethics)	30	Nil
5	Forensic Psychiatry	06	Nil
6	Forensic laboratory investigation in medicolegal practice	03	Nil
7	Emerging technologies in Forensic Medicine	01	Nil
8	General Toxicology	10	Nil
9	Chemical Toxicology	06	Nil
10	Pharmaceutical Toxicology	01	Nil
11	Biotoxicology	01	Nil
12	Sociomedical Toxicology	01	Nil
13	Environmental Toxicology	02	Nil
14	Skills in Forensic Medicine & Toxicology	22	Nil
	<b>TOTAL</b>	<b>162</b>	<b>Nil</b>

<b>Competencies in Internship</b>			
<b>Sl no</b>	<b>Topic</b>	<b>Competencies</b>	<b>Procedures requiring certification</b>
<b>1</b>	Documentation and certification of trauma (I)	<b>1</b>	<b>1</b>
<b>2</b>	Diagnosis and certification of death (D)	<b>1</b>	<b>1</b>
<b>3</b>	Legal documentation related to emergency cases (D)	<b>1</b>	<b>1</b>
<b>4</b>	Certification of medico-legal cases e.g. Age estimation, Sexual Violence etc. (D)	<b>3</b>	<b>3</b>
<b>5</b>	Establishing communication in medico-legal cases with police, public health authorities, other concerned departments, etc (D)	<b>3</b>	<b>3</b>
<b>6</b>	Prerequisites, Procedure, Documentation and Opinion writing in Medicolegal Autopsy(D)	<b>1</b>	<b>1</b>
	<b>Total</b>	<b>10</b>	<b>10</b>

**Minimum Teaching Hours in MBBS Phase II & Phase III part 1**

<b>Forensic Medicine &amp; Toxicology</b>	<b>Lectures (hours)</b>	<b>Small group learning (Tutorials / Seminars) /Integrated learning (hours)</b>	<b>Self - Directed Learning (hours)</b>	<b>Total (hours)</b>
Phase II	15	30	05	50
Phase III part 1	25	45	05	75
<b>Total</b>	<b>40</b>	<b>75</b>	<b>10</b>	<b>125</b>
<b>AETCOM</b>	<b>Lectures (hours)</b>	<b>Small group learning (Tutorials / Seminars) /Integrated learning (hours)</b>	<b>Self - Directed Learning (hours)</b>	<b>Total (hours)</b>
Phase II	02	04	02	08
Phase III part 1	01	02	02	05
<b>Total</b>	<b>03</b>	<b>06</b>	<b>04</b>	<b>13</b>

**Minimum Teaching Hours in Internship**

<b>Subject</b>	<b>Period of posting</b>
<b>Forensic Medicine &amp; Toxicology</b>	<b>7 days</b>

**Expert group involved in planning, design and drafting this FMT booklet**

<b>Sl No</b>	<b>Name</b>	<b>Designation</b>	<b>College</b>
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5	Dr Pramod Kumar G N	Professor & Head of FMT	Karwar Institute of Medical Sciences, Karwar
6	Dr Srinivasa Reddy	Professor & Head of FMT	Sri Devaraj Urs Medical College, Kolar
7	Dr Umesh Babu R	Professor & Head of FMT	Kodagu Institute of Medical Sciences, Madikeri
8	Dr Raghavendra Babu Y P	Professor & Head of FMT	Koppal Institute of Medical Sciences, Koppal
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10	Dr Naveen Kumar T	Professor of FMT	Kempegowda Institute of Medical Sciences, Bangalore
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14	Dr Lohith Kumar R	Assistant Professor of FMT Assistant Registrar, RGUHS BOS member	Shimoga Institute of Medical Sciences, Shivamogga
15	Dr Yadukul S	Assistant Professor of FMT	Chamarajanagar Institute of Medical Sciences, Chamarajanagar
16	Dr Ravindra Kumar C N	Assistant Professor of FMT	East Point College of Medical Sciences & Research Centre, Bangalore

# List of Competencies and SLOs to be covered in Phase II MBBS

## General Information

- **Lecture – 1 hr (Orientation class)**
- **Assessment:** No assessment

### **FM1.1 - Demonstrate knowledge of basics of Forensic Medicine like definitions of Forensic medicine, Clinical Forensic Medicine, Forensic Pathology, State Medicine, Legal Medicine and Medical Jurisprudence**

- : Define Forensic Medicine and Medical Jurisprudence.
- : Describe different branches of Forensic medicine like Clinical Forensic Medicine, Forensic Pathology, Forensic Odontology and Forensic Psychiatry.
- : Discuss on Forensic Medicine practice in different parts of the world.

### **FM1.2 -Describe history of Forensic Medicine**

- : Describe the etymology of Forensic Medicine.
- : Describe how knowledge of medicine was applied to aid in the administration of justice from ancient time and its evolution to the recent times.
- : Enumerate the important people and events related to Forensic Medicine.

## Forensic Pathology

- **Lecture – 1 hr (Interactive)** **Assessment:** Written, Viva voce

### **FM2.1 - Define, describe and discuss death and its types including somatic/clinical/cellular, molecular and brain-death, Cortical Death and Brainstem Death**

- : Define death.
- : Describe the types of death (somatic, molecular, brain-death, cortical death and brainstem death).
- : Describe the procedure of declaring death with specific reference to brain stem death.

### **FM2.2 - Describe and discuss natural and unnatural deaths**

2.2.1: Describe the manner of death and cause of death

### **FM2.3 - Describe and discuss issues related to sudden natural deaths**

- : Define sudden natural death.
- : Enumerate the causes for sudden natural death.
- : Describe the medicolegal importance of sudden natural death.
- 2.3.4: Discuss the autopsy procedure in case of sudden natural death.

- **SDL – 1 hr (Followed by reflective writing)** **Assessment:** Written, Viva voce

### **FM2.4 - Describe salient features of the Organ Transplantation and The Human Organ Transplant (Amendment) Act 2011 and discuss ethical issues regarding organ donation**

- 2.4.1: Discuss the ethical and legal issues related to organ donation and transplantation.
- 2.4.2: Describe the salient features of The Human Organ Transplant Act, 1994 with amendments till date.

- **Lecture – 1 hr (Interactive)**

Written, Viva voce

**Assessment:**

**FM2.5 - Discuss moment of death, modes of death - coma, asphyxia and syncope**

2.5.1: Describe the modes of death (coma, syncope, asphyxia).

**FM2.6 - Discuss presumption of death and survivorship**

2.6.1: Discuss the importance of presumption of death (Sec. 107 & 108 IEA).

**FM2.7 - Describe and discuss suspended animation**

: Define suspended animation.

: Enumerate the causes for suspended animation.

: Discuss the medicolegal importance of suspended animation.

- **SGD – 2 hrs**

Viva voce

**Assessment:** Written,

**FM2.10 - Discuss estimation of time since death**

2.10.1: Enumerate the various factors which help in determination of time since death.

2.10.2: Discuss on Forensic entomology.

**FM2.8 - Describe and discuss postmortem changes including signs of death, cooling of body, post-mortem lividity, rigor mortis, cadaveric spasm, cold stiffening and heat stiffening**

2.8.1 Classify post-mortem changes (immediate, early, late).

:2.8.2 Describe postmortem cooling and its medicolegal importance.

2.8.3: Define postmortem lividity.

2.8.4: Describe postmortem lividity and its medico legal importance.

2.8.5: Define rigor mortis.

2.8.6: Describe rigor mortis and its medico legal importance.

2.8.7: Enumerate the conditions simulating rigor mortis.

2.8.8 Define cadaveric spasm.

2.8.9 Differentiate between cadaveric spasm and rigor mortis.

2.8.10: Discuss on cold stiffening, heat stiffening, chemical stiffening and gas stiffening.

- **SGD – 1 hr**

Viva voce

**Assessment:** Written,

**FM2.9 - Describe putrefaction, mummification, adipocere and maceration**

2.9.1: Describe the various changes seen in the body due to putrefaction.

2.9.2: Define adipocere.

2.9.3: Describe adipocere and its medico legal importance.

2.9.4: Define mummification.

2.9.5: Describe mummification and its medico legal importance.

- **Lecture – 1 hr**

**Assessment:** Written, Viva voce

**FM2.11 - Describe and discuss autopsy procedures including post-mortem examination, different types of autopsies, aims and objectives of post-mortem examination**

2.11.1 Describe the types of autopsy.

2.11.2 Enumerate the objectives of medicolegal autopsy.

- 2.11.3: Enumerate the objectives of foetal autopsy.  
2.11.4: Enumerate the objectives of skeletal remains examination.

**FM2.14 - Describe and discuss examination of clothing, preservation of viscera on post-mortem examination for chemical analysis and other medico-legal purposes, post-mortem artefacts**

- 2.14.1 Describe the method of preservation and dispatch of viscera and body fluids for chemical analysis.  
2.14.2 Describe the method of preservation and dispatch of viscera and body fluids for histopathology and microbiological investigations.  
2.14.3 : Describe the method of preservation and dispatch of clothes in a medicolegal case.  
2.14.4 : Discuss on postmortem artefacts and their medicolegal importance

**\*FM8.5 - Describe Medico-legal autopsy in cases of poisoning including preservation and dispatch of viscera for chemical analysis**

- 8.5.1: Explain the procedure of medico-legal autopsy in a suspected case of poisoning.  
8.5.2: Describe the method of preserving the various viscera in a case of poisoning.  
8.5.3: Describe the procedure for dispatch of viscera for chemical analysis in a case of poisoning.

**\*FM8.9 - Describe the procedure of intimation of suspicious cases or actual cases of foul play to the police, maintenance of records, preservation and dispatch of relevant samples for laboratory analysis.**

8.9.1 Describe the procedure of intimation of suspicious cases or actual cases of foul play to the police

- S. 39 CrPC, S. 40 CrPC, S. 175 CrPC.
- S. 166 (B) IPC, S. 176 IPC, S. 177 IPC, S. 201 IPC, S. 202 IPC.

8.9.2 Describe the procedure of record maintenance in a case of poisoning.

8.9.3: Describe the procedure of collection and dispatch of viscera for chemical analysis in a case of poisoning.

• **Lecture – 1 hr**

**Assessment:** Written, Viva voce

**FM2.12 - Describe the legal requirements to conduct post-mortem examination and procedures to conduct medico-legal post-mortem examination**

- 2.12.1: Describe the rules for conducting medicolegal autopsy.  
2.12.2: Enumerate the skin incisions in medicolegal autopsy.  
: Enumerate the methods of evisceration in medicolegal autopsy.  
: Describe the external and internal examination in medicolegal autopsy. 2.12.5:  
Explain the special techniques used in medicolegal autopsy (demonstration of pneumothorax, air embolism, etc).

**FM2.13 - Describe and discuss obscure autopsy**

- 2.13.1: Discuss on obscure autopsy with examples.  
2.13.2: Discuss on negative autopsy with examples.

**FM2.17 - Describe and discuss exhumation**

- 2.17.1 : Define exhumation.  
2.17.2 Enumerate the objectives of exhumation.  
2.17.3 : Describe the rules and procedure of exhumation.

- **SGD – 4 hrs (Practical)**

Practical book, Log book

**Assessment:** Written, Viva voce, OSPE,

**FM2.16 - Describe and discuss examination of mutilated bodies or fragments, charred bones and bundle of bones**

2.16.1 Describe the procedure of examination of mutilated bodies / fragments.

2.16.2 Describe the procedure of examination of skeletal remains (including charred bones).

**\*FM14.9 - Demonstrate examination of & present an opinion after examination of skeletal remains in a simulated/ supervised environment**

14.9.1 Enumerate the objectives of skeletal remains examination.

14.9.2 Demonstrate the procedure of examination of skeletal remains in a simulated/supervised environment.

14.9.3 Draft a medicolegal report and opinion after examination of skeletal remains.

- **SGD – 1 hr**

Viva voce

**Assessment:** Written,

**FM2.18 - Crime Scene Investigation: -**

**Describe and discuss the objectives of crime scene visit, the duties & responsibilities of doctors on crime scene and the reconstruction of sequence of events after crime scene investigation**

2.18.1 Enumerate the objectives of crime scene visit by an autopsy surgeon.

2.18.2 Describe the procedure of examination of crime scene and preservation of evidentiary material.

2.18.3 Explain the reconstruction of a case after the crime scene visit.

- **SGD – 1 hr**

**Assessment:** Viva voce

**FM2.31 - Demonstrate ability to work in a team for conduction of medico-legal autopsies in cases of death following alleged medical negligence, dowry death, death in custody or following violation of human rights as per National Human Rights Commission Guidelines on exhumation**

2.31.1 Demonstrate the benefit of team work in a medicolegal autopsy of alleged medical negligence.

2.31.2 Demonstrate the benefit of team work in a medicolegal autopsy of alleged dowry death.

2.31.3: Demonstrate the benefit of team work in a medicolegal autopsy of alleged custodial death.

2.31.4: Demonstrate the benefit of team work in a medicolegal autopsy of death due to violation of human rights.

2.31.5: Demonstrate the benefit of team work in exhumation.

- **SDL – 1 hr**

Viva voce

**Assessment:** Written,

**FM2.19 - Investigation of anaesthetic, operative deaths: Describe and discuss special protocols for conduction of autopsy and for collection, preservation and dispatch of related material evidences**

2.19.1: Explain the significance of autopsy in operative deaths.

2.19.2: Describe the procedure of autopsy in operative deaths.

2.19.3: Describe the procedure of preservation and dispatch of evidentiary material for investigation in deaths associated with anaesthesia and surgery

• **SDL – 1 hr**

**Assessment:** Written,

**FM2.15 - Describe special protocols for conduction of medico-legal autopsies in cases of death in custody or following violation of human rights as per National Human Rights Commission Guidelines**

2.15.1: Describe the National Human Rights Commission guidelines for conduction of medicolegal autopsy in cases of death in custody or violation of human rights.

• **SGD – 1 hr** **Assessment:** OSPE,  
Written, Viva voce

**FM2.32 - Demonstrate ability to exchange information by verbal or nonverbal communication to the peers, family members, law enforcing agency and judiciary**

2.32.1 Demonstrate the skills of communication by a doctor with the peers.

2.32.2 Demonstrate the skills of communication by a doctor with the patient's family members in MLC works at casualty.

2.32.3 Demonstrate the skills of communication by a doctor with the deceased familymembers during medicolegal autopsy.

2.32.4 : Demonstrate the skills of communication by a doctor with the law enforcing agency/judiciary in medicolegal practices.

**FM2.33 & FM2.34 - Demonstrate ability to use local resources whenever required like in mass disaster situations**

: 2.33.1 Define Mass disaster

: 2.33.2 Enumerate the types of Mass disaster.

: 2.33.3 List the objectives of forensic investigation in mass

disasters. 2.33.4: Describe the procedure of examination at disaster

site and autopsy. 2.33.5: Describe the evidentiary materials to be

preserved in mass disasters.2.33.6: Demonstrate the importance of

team work in Mass Disasters.

**FM2.35 - Demonstrate professionalism while conducting autopsy in medicolegal situations, interpretation of findings and making inference/opinion, collection, preservation and dispatch of biological or trace evidences**

2.35.1 Demonstrate the professionalism of a doctor during conduction of medicolegal autopsies (such as interaction with investigating officer/relatives of deceased, receiving inquest form, maintaining confidentiality, etc).

2.35.2 Demonstrate the professionalism in preservation and dispatching evidentiary materials to FSL (such as proper method of preservation and dispatch of materials with necessary forms and maintaining confidentiality).

2.35.3: Demonstrate the professionalism in preservation and dispatching evidentiary materials to histopathology and microbiology investigations (such as proper method of preservation and dispatch of materials with necessary forms and maintaining confidentiality).

2.35.4: Demonstrate the professionalism while giving opinion in medicolegal cases (such as honesty with unbiased inferences).

**Clinical Forensic Medicine**

• **SGD – 2 hrs**

**Assessment:** Written,

### **FM3.1 - IDENTIFICATION**

**Define and describe Corpus Delicti, establishment of identity of living persons including race, Sex, religion, complexion, Stature, age determination using morphology, teeth-eruption, decay, bite marks, bones-ossification centres, medicolegal aspects of age**

3.1.1 Define Corpus delicti

: 3.1.2 Describe the importance of corpus delicti in establishing the crime.

3.1.3: List the various means of identification in living and dead persons.

3.1.4 Explain the role of hand writing analysis, gait, speech, photography and facial description as a tool of identification.

3.1.5 Describe the methods of determination of race.

3.1.6 Describe the methods of sex determination in a living person.

3.1.7 Describe the methods of sex determination in a dead person.

3.1.8 Define intersex.

3.1.9: Describe the types of intersex and its medicolegal importance.

3.1.10: Describe the methods of age determination in a living person.

3.1.11: Describe the methods of age determination in a dead person.

3.1.12: Explain the method of age estimation using Gustafson's technique.

3.1.13: Discuss the forensic aspects related to teeth.

3.1.14: Describe the methods of determination of stature.

- **SGD – 1 hr**  
Viva voce

**Assessment:** Written,

### **FM3.2 - IDENTIFICATION**

**Describe and discuss identification of criminals, unknown persons, dead bodies from the remains-hairs, fibres, teeth, anthropometry, dactylography, foot prints, scars, tattoos, poroscopy & superimposition**

3.2.1: Explain the role of hair in the identification of an individual.

3.2.2: Describe the medicolegal importance of hair.

3.2.3: Describe the dyes used, methods of erasure and medicolegal importance of a tattoo.

3.2.4: Describe the medicolegal importance of the scar.

: Define anthropometry.

: Describe various data included in anthropometry and its importance in identification.

3.2.7: Define dactylography.

3.2.8: Describe the types, method of collection and medicolegal importance of dactylography.

3.2.9: Discuss the role of poroscopy, cheiloscopy and rugoscopy in identification.

: Describe the role of foot prints in establishing the identity.

: Describe the role of facial reconstruction in establishing the identity.

3.2.12: Discuss the role of superimposition in establishing the identity.

- **SGD – 2 hrs (Practical)**  
book, Log book

**Assessment:** OSPE, Practical

**\*FM14.6 - Demonstrate and interpret medico-legal aspects from examination of hair (human & animal) fibre, semen & other biological fluids**

:14.6.1 Identify hair (human/ animal), other fibres by physical and microscopic examination and describe its medicolegal importance.

: 14.6.2 Identify the **semen** by physical and microscopic examination and describe its medicolegal importance.

**\*FM14.7 - Demonstrate & identify that a particular stain is blood and identify the species of its origin**

: 14.7.1 Identify the blood by physical and microscopic examination.

: 14.7.2 Explain the various medicolegal conclusions by examining the blood stains.

14.7.3: Explain the method of identifying the species of origin of the blood stain.

**\*FM14.8 - Demonstrate the correct technique to perform and identify ABO & RH blood group of a person**

14.8.1: Perform the technique of identifying the ABO blood group of a person.

14.8.2: Perform the technique of identifying the Rh blood group of a person.

**Toxicology: General Toxicology**

• **SDL – 1 hr**

Viva Voce

**Assessment:** Written,

**FM8.1 - Describe the history of Toxicology**

8.1.1: Describe the history of Toxicology.

• **Lecture – 1 hr**

Viva Voce

**Assessment:** Written,

**FM8.2 - Define the terms Toxicology, Forensic Toxicology, Clinical Toxicology and poison**

8.2.1: Define Toxicology, Forensic Toxicology, Clinical Toxicology and Poison

**FM8.3 - Describe the various types of poisons, Toxicokinetics, and Toxicodynamics and diagnosis of poisoning in living and dead**

8.3.1: Classify poisons in respect to mode of action and mode of usage.

8.3.2: Describe pharmacokinetics & pharmacodynamics of the poisons.

8.3.3: Explain the diagnosis of poisoning in the living individual.

8.3.4: Explain the diagnosis of poisoning in the dead individual

**FM8.4 - Describe the Laws in relations to poisons including NDPS Act, Medico-legal aspects of poisons**

8.4.1 Describe the legal sections related to poisoning in India.

✓ S. 85 IPC, S. 86 IPC, S. 274 IPC, S. 284 IPC, S. 299 IPC, S. 300 IPC, S. 304 (A) IPC, S. 375 IPC

✓ S. 324 IPC, S. 325 IPC, S. 326 IPC, S. 326A IPC, S. 326B IPC, S. 328 IPC

✓ S. 357C CrPC

✓ S. 185 IMV Act, S. 203 IMV Act, S. 204 IMV Act

:8.4.2 Describe Narcotic Drugs and Psychotropic

Substances Act, 1985.8.4.3: Describe Karnataka

Poisons (Possession and Sale) Rules, 2015.

8.4.4: Describe the legal responsibilities of a doctor in a case of poisoning

**FM8.6 - Describe the general symptoms, principles of diagnosis and management of common poisons encountered in India**

8.6.1: Describe the general symptoms and signs of the common poisons encountered in India.

8.6.2: Describe the general principles of diagnosis of the common poisons encountered in India.

8.6.3: Enumerate the line of management of the common poisons encountered in India.

• **Lecture – 1 hr**

**Assessment:** Written, Viva Voce

**FM8.8 - Describe basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination**

8.8.1: List the general treatment procedure in case of poisoning.

8.8.2: Explain the procedure of Gastric lavage.

8.8.3: Enumerate the indications and contraindications for Gastric lavage.

8.8.4: Define antidote.

8.8.5: Describe the various types of antidotes.

8.8.6: Explain Chelation therapy.

8.8.7: Describe the methods for hastening elimination of absorbed poison.

• **Lecture – 1 hr**

**Assessment:** Written, Viva Voce

**FM8.10 - Describe the general principles of Analytical Toxicology and give a brief description of analytical methods available for toxicological analysis: Chromatography – Thin Layer Chromatography, Gas Chromatography, Liquid Chromatography and Atomic Absorption Spectroscopy**

8.10.1: List the various analytical methods used in Toxicology.

8.10.2: Describe the general principle of Thin Layer Chromatography.

8.10.3: Describe the basic principle and uses of Gas Chromatography.

: Describe the basic principle and uses of Liquid Chromatography.

: Describe the basic principle and uses of Atomic Absorption Spectroscopy.

8.10.6: Describe the basic principle and uses of Mass Spectrometry.

8.10.7: Describe the basic principle and uses of Radioimmuno Assay

• **SGD – 2 hrs (Practical/ Skills lab)**

**Assessment:**

OSPE, Written, Viva Voce

**\*FM14.2 - Demonstrate the correct technique of clinical examination in a suspected case of poisoning & prepare medico-legal report in a simulated/ supervised environment**

14.2.1: Take an informed consent from the Patient / Guardian after explaining the importance of MLC registration in Poisoning cases.

: Perform the clinical examination (history taking, general physical examination, systemic examination, laboratory investigations, differential diagnosis) in poisoning cases in a simulated/ supervised environment.

: Prepare the medicolegal certificate after documenting the clinical findings.

14.2.4: Prepare the police intimation.

**\*FM14.3 - Assist and demonstrate the proper technique in collecting, preserving and dispatch of the exhibits in a suspected case of poisoning, along with clinical examination**

14.3.1: Demonstrate the process of collecting, preserving and dispatch of the materials/exhibits in a suspected case of **ingested poisoning**.

14.3.2: Demonstrate the process of collecting, preserving and dispatch of the materials/exhibits in a suspected case of **inhalation poisoning** along with clinical examination.

14.3.3: Demonstrate the process of collecting, preserving and dispatch of the materials/exhibits in a suspected case of **injected poisoning** along with clinical examination.

**FM8.7 - Describe simple Bedside clinic tests to detect poison/drug in a patient's body fluids**

: Describe the bedside clinic tests for Hydrochloric acid poisoning (Ammonia test, Litmus paper test, Silver nitrate test).

: Describe the bedside clinic tests for Nitric acid poisoning

(Ferrous Sulphate test).8.7.3: Describe the bedside clinic tests for

Sulphuric acid poisoning (Litmus paper test).8.7.4: Describe the bedside clinic tests for Oxalic acid poisoning (Barium nitrate test).

8.7.5: Describe the bedside clinic tests for Caustic alkalis

poisoning (Litmus paper test).8.7.6: Describe the bedside clinic tests for Phenol (Folin Ciocalteu reagent test).

8.7.7: Describe the bedside clinic tests for Salicylates (Trinder's reagent test).

**Toxicology : Chemical Toxicology**

• **SGD – 2 hrs**

**Assessment:** Written, Viva voce

**FM9.1 - Describe General Principles and basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination with regard to: Caustics Inorganic – sulphuric, nitric, and hydrochloric acids; Organic-Carboic Acid (phenol), Oxalic and acetylsalicylic acids**

: Describe the characteristics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Sulphuric acid poisoning.

: Describe the characteristics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Nitric acid poisoning.9.1.3: Describe the

characteristics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Hydrochloric acid poisoning.

: Discuss on Vitriolage.

: Describe the characteristics, pharmacokinetics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Carboic acid poisoning.

: Discuss on Carboluria.

: Describe the characteristics, pharmacokinetics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem

findings and medicolegal aspects of Oxalic acid poisoning.

: Discuss on Oxaluria.

: Describe the characteristics, pharmacokinetics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Acetylsalicylic acid poisoning.

• **Lecture – 1 hr**

**Assessment:** Written, Viva voce

**FM9.2 - Describe General Principles and basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination with regard to Phosphorus, Iodine, Barium**

9.2.1: Describe the characteristics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Phosphorus poisoning.

9.2.2: Discuss on Phossy jaw.

9.2.3: Describe the characteristics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Iodine poisoning.

9.2.4: Describe the characteristics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Barium poisoning.

• **Lecture – 2 hrs**

**Assessment:** Written, Viva voce

**FM9.3 - Describe General Principles and basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination with regard to Arsenic, lead, mercury, copper, iron, cadmium and thallium**

9.3.1: Describe the characteristics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Arsenic poisoning.

: Describe the characteristics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Lead poisoning.

: Describe the characteristics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Mercury poisoning.

9.3.4: Describe the characteristics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Copper poisoning. 9.3.5: Describe the characteristics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Iron poisoning.

9.3.6: Describe the characteristics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Thallium poisoning.

9.3.7: Describe the characteristics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Cadmium poisoning.

9.3.8: Describe the causes, clinical features and treatment of Metallic fume fever.

• **Lecture – 2 hrs**

**Assessment:** Written, Viva voce

**FM9.4 - Describe General Principles and basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination with regard to Ethanol, methanol, ethylene glycol**

: Describe physical/chemical characteristics, pharmacokinetics, mechanism of action, fatal dose, fatal period, clinical features,

treatment, postmortem findings and medicolegal aspects of ethanol intoxication.

: Define drunkenness.

: Describe the methods of detection of drunken person in legal situations.

: Describe clinical features, treatment and medicolegal aspects of chronic alcoholism.

: Describe physical/chemical characteristics, pharmacokinetics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects in a case of methanol poisoning.

: Describe physical/chemical characteristics, pharmacokinetics, mechanism of action, fatal dose, fatal period, clinical features, treatment and medicolegal aspects of ethylene glycol poisoning.

• **SGD – 2 hrs (Integration – Pharmacology)**

**Assessment:** Written,

Viva Voce

**FM9.5 - Describe General Principles and basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination with regard to Organophosphates, Carbamates, Organochlorines, Pyrethroids, Paraquat, Aluminium and Zinc phosphide**

: Classify agricultural poisons.

: Describe physical/chemical characteristics, pharmacokinetics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Organophosphorous poisoning.

: Describe physical/chemical characteristics, pharmacokinetics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Carbamate poisoning.

: Describe physical/chemical characteristics, pharmacokinetics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Organochlorine poisoning.

: Describe physical/chemical characteristics, pharmacokinetics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Paraquat poisoning.

: Describe physical/chemical characteristics, pharmacokinetics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Pyrethroid poisoning.

: Describe physical/chemical characteristics, pharmacokinetics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Aluminum and Zinc phosphide poisoning.

• **SGD – 1 hr**

**Assessment:** Written, Viva Voce

**FM9.6 - Describe General Principles and basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination with regard to Ammonia, carbon monoxide, hydrogen cyanide & derivatives, methyl isocyanate, tear (riot control) gases**

: Describe physical/chemical characteristics, pharmacokinetics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Ammonia poisoning.

: Describe physical/chemical characteristics, pharmacokinetics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings & medicolegal aspects of Carbon monoxide poisoning.

: Describe physical/chemical characteristics, pharmacokinetics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Cyanide poisoning.

: Describe physical/chemical characteristics, mechanism of action, clinical features, treatment, postmortem findings and medicolegal aspects of Methyl Isocyanate poisoning. 9.6.5: Describe clinical features, treatment and medicolegal aspects of exposure to tear gas (inriot control).

**Toxicology : Pharmaceutical Toxicology**

• **SDL – 1 hr (Integration – Pharmacology)**

**Assessment:** Written, Viva Voce

**FM10.1 - Describe General Principles and basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination with regard to:**

**i. Antipyretics – Paracetamol, Salicylates**

**ii. Anti-Infectives (Common antibiotics – an overview)**

**iii. Neuropsychotoxicology Barbiturates, benzodiazepins, phenytoin, lithium, haloperidol, neuroleptics, tricyclics**

**iv. Narcotic Analgesics, Anaesthetics, and Muscle Relaxants**

**v. Gastro-Intestinal and Endocrinal Drugs – Insulin**

: Describe clinical features, treatment and medico-legal aspects of poisoning due to Antipyretics (such as Paracetamol and Salicylates).

: Describe clinical features, treatment and medico-legal aspects of poisoning due to Anti-Infective overdose (common antibiotics).

: Describe clinical features, treatment, post-mortem findings and medico-legal aspects of Barbiturate poisoning.

: Describe clinical features, treatment and medico-legal aspects of Benzodiazepine poisoning.

: Describe clinical features, treatment, post-mortem findings and medico-legal aspects of opium and its alkaloids.

: Describe clinical features, treatment, post-mortem findings and medico-legal aspects of poisoning due to Gastro-Intestinal and Endocrinal Drugs (e.g., Insulin).

- **Lecture – 1 hr** **Assessment:** Written, Viva voce  
**FM10.1 vi - Cardiovascular Toxicology Cardiotoxic plants – oleander, odollam, aconite, digitalis**

: Enumerate the cardiotoxic plants.  
 : Describe the active principles, mechanism of action, fatal dose, fatal period, clinical features, treatment, post-mortem findings and medico-legal aspects of poisoning due to cardiotoxic plants.

### **Toxicology : Biotoxicology**

- **SGD – 2 hrs** **Assessment:** Written, Viva Voce

#### **FM11.1 - Describe features and management of Snake bite, scorpion sting, bee and wasp sting and spider bite**

11.1.1: Differentiate poisonous and non-poisonous snakes.

11.1.2: Classify poisonous snakes.

: Identify the common poisonous and non-poisonous snakes in India.

: Describe mechanism of action, clinical features, management, postmortem findings and medicolegal aspects of snake bite (Ophitoxaemia).

: Identify the common scorpions seen in India.

: Describe mechanism of action, clinical features, management, postmortem findings and medicolegal aspects of scorpion sting.

: Describe mechanism of action, clinical features, management, postmortem findings and medicolegal aspects of bee and wasp sting, and spider bite.

### **Toxicology : Environmental Toxicology**

- **Lecture – 1 hr** **Assessment:** Written, Viva voce  
**FM13.1 - Describe toxic pollution of environment, its medico-legal aspects & toxic hazards of occupation and industry**

: Enumerate the causes for environmental pollution.

: Describe the health effects of environmental pollution due to toxic substances. 13.1.3: Describe the medico-legal aspects of toxic hazards on employees of an industry

#### **FM13.2 - Describe medico-legal aspects of poisoning in Workman's**

**Compensation Act** 13.2.1: Describe the medico-legal issues arising out of effects of poisoning due to occupational exposure as per Workman's Compensation Act.

13.2.2: Discuss the role of physician in cases of poisoning due to occupational exposure.

### **Toxicology : Sociomedical Toxicology**

- **Lecture – 2 hrs** **Assessment:** Written, Viva voce

#### **FM12.1 - Describe features and management of abuse/ poisoning with following chemicals: Tobacco, cannabis, amphetamines, cocaine, hallucinogens, designer drugs & solvent**

12.1.1: Define drug abuse, drug addiction, drug habituation and drug dependence.

12.1.2: List the drugs of abuse.

: Describe clinical features, treatment, post-mortem findings and medico-legal aspects of acute and chronic tobacco poisoning.

- : Enumerate the active principles and various preparations of cannabis.
- : Describe clinical features, treatment, post-mortem findings and medico-legal aspects of acute and chronic cannabis poisoning.
- : Describe clinical features, treatment, post-mortem findings and medico-legal aspects of acute and chronic cocaine poisoning.
- : Describe clinical features, treatment, post-mortem findings and medico-legal aspects of amphetamine poisoning.
- : Enlist hallucinogenic substances.
- : Describe clinical features, treatment, post-mortem findings and medico-legal aspects of Lysergic acid diethylamide poisoning.
- : Define 'Designer drug'.
  
- : Describe the clinical features and management of common designer drugs.
- 12.1.12: Define 'Solvent abuse'.
- : Describe clinical features, treatment, post-mortem findings and medico-legal aspects of Solvent abuse.
- : Discuss on Body packer's syndrome.

### **Skills in Forensic Medicine & Toxicology**

- **SGD – 2 hrs (Practical)**  
book, Viva Voce

**Assessment:** OSPE, Practical book, Log

**FM14.17 - To identify & draw medico-legal inference from common poisons e.g. dhatura, castor, cannabis, opium, aconite copper sulphate, pesticides compounds, marking nut, oleander, Nux vomica, abrus seeds, Snakes, capsicum, calotropis, lead compounds & tobacco.**

: Identify with physical and /or chemical characteristics of the common poisons e.g. dhatura, castor, cannabis, opium, aconite, copper sulphate, pesticide compounds, marking nut, oleander, Nux vomica, abrus seeds, snakes, capsicum, calotropis, lead compounds & tobacco. (*regional / local poisons*)

: Draw the medico-legal inferences with the use of the common poisons.

- **SGD – 5 hrs (Practical – 5 cases)**  
book, Log book, Viva Voce

**Assessment:** OSPE, Practical

**FM14.5 - Conduct & prepare post-mortem examination report of varied aetiologies (at least 15) in a simulated/ supervised environment**

: Describe the techniques of conducting a medicolegal autopsy.

: Describe the postmortem findings (external and internal) in a medicolegal autopsy. 14.5.3: Enumerate the ancillary investigations required (along with appropriate materials for such investigations) in a medicolegal autopsy.

14.5.4: Draft the postmortem report after a medicolegal autopsy.

Medicolegal autopsies may be a case of unnatural death, natural death, custodial death, alleged medical negligence, decomposed body, mutilated body.

- **SGD – 1 hr (Practical) Integration Pathology**  
book, Log book, Viva Voce

**Assessment:** OSPE, Practical

**FM14.19\* - To identify & prepare medico-legal inference from histo-pathological slides of Myocardial Infarction, pneumonitis, tuberculosis, brain infarct, liver cirrhosis, Pulmonary oedema, (remaining slides will be covered in phase 3 MBBS)**

: List the microscopic identifying features after examining the histopathological slides of myocardial Infarction, pneumonitis, tuberculosis, brain infarct, liver cirrhosis, pulmonary oedema.  
: Describe the medico-legal inferences after examining the above-mentioned histopathological slides.

### **Summary of TL methods and list of competencies to be covered in Phase II MBBS and Assessment methods**

<b>Sl. No.</b>	<b>Teaching hours and type</b>	<b>Competency numbers</b>	<b>Assessment methods</b>
1.	Lecture – 1 hr (Orientation class)	1.1, 1.2	No assessment
2.	Lecture – 1 hr (Interactive)	2.1, 2.2, 2.3	Written, Viva voce
3.	SDL – 1 hr (Followed by reflective writing)	2.4	Written, Viva voce
4.	Lecture – 1 hr (Interactive)	2.5, 2.6, 2.7	Written, Viva voce
5.	SGD – 2 hrs	2.10, 2.8	Written, Viva voce
6.	SGD – 1 hr	2.9	Written, Viva voce
7.	Lecture – 1 hr	2.11, 2.14, 8.5, 8.9	Written, Viva voce
8.	Lecture – 1 hr	2.12, 2.13, 2.17	Written, Viva voce
9.	SGD – 4 hrs (Practical)	2.16, 14.9	Written, Viva voce, OSPE, Practical book, Log book
10.	SGD – 1 hr	2.18	Written, Viva voce
11.	SGD – 1 hr	2.31	Viva voce
12.	SDL – 1 hr	2.19	Written, Viva voce

13.	SDL – 1 hr	2.15	Written, Viva voce
14.	SGD – 1 hr	2.32, 2.33, 2.34, 2.35	OSPE, Written, Viva voce
15.	SGD – 2 hrs	3.1	Written, Viva voce
16.	SGD – 1 hr	3.2	Written, Viva voce
17.	SGD – 2 hrs (Practical)	14.6, 14.7, 14.8	OSPE, Practical book, Log book
18.	SDL – 1 hr	8.1	Written, Viva voce
19.	Lecture – 1 hr	8.2, 8.3, 8.4, 8.6	Written, Viva voce
20.	Lecture – 1 hr	8.8	Written, Viva voce
21.	Lecture – 1 hr	8.10	Written, Viva voce
22.	SGD – 2 hrs (Practical/ Skills lab)	14.2, 14.3, 8.7	OSPE, Written, Viva Voce
23.	SGD – 2 hrs	9.1	Written, Viva voce
24.	Lecture – 1 hr	9.2	Written, Viva voce
25.	Lecture – 2 hrs	9.3	Written, Viva voce
26.	Lecture – 2 hrs	9.4	Written, Viva voce
27.	SGD – 2 hrs (Integration – Pharmacology)	9.5	Written, Viva voce
28.	SGD – 1 hr	9.6	Written, Viva voce
29.	SDL – 1 hr (Integration – Pharmacology)	10.1 (i-v)	Written, Viva voce
30.	Lecture – 1 hr	10.1 (vi)	Written, Viva voce
31.	SGD – 2 hrs	11.1	Written, Viva voce
32.	Lecture – 1 hr	13.1, 13.2	Written, Viva voce

33.	Lecture – 2 hrs	12.1	Written, Viva voce
34.	SGD – 2 hrs (Practical)	14.17	OSPE, Practical book, Log book, Viva Voce
35.	SGD – 5 hrs (5 cases)	14.5	OSPE, Practical book, Log book, Viva Voce
36.	SGD – 1 hr (Practical) Integration Pathology	14.19	OSPE, Practical book, Log book, Viva Voce

Draft

# List of Competencies and SLOs to be covered in Phase III MBBS part 1

## General Information

- **Lecture – 1 hr (Orientation class/ SDL)**

**Assessment:** No assessment

### **FM 1.3 - Describe legal procedures including Criminal Procedure Code, Indian Penal Code, Indian Evidence Act, Civil and Criminal Cases, Inquest (Police Inquest and Magistrate's Inquest), Cognizable and Non-cognizable offences**

- 1.3.1: Describe the meaning of Criminal Procedure Code, Indian Penal Code, and Indian Evidence Act.
- 1.3.2: Differentiate between civil and criminal cases and their proceedings in the court of law.
- 1.3.3: Define inquest.
- 1.3.4: Describe the types of inquest practiced in India.
- 1.3.5: Discuss the meaning of cognizable and non-cognizable offence with examples.

### **FM 1.4 - Describe Courts in India and their powers: Supreme Court, High Court, Sessions court, Magistrate's Court, Labour Court, Family Court, Executive Magistrate Court and Juvenile Justice Board**

- 1.4.1: List various civil and criminal courts in India.
- 1.4.2: Describe the location, presiding officer and powers of various courts in India.

### **FM 1.5 - Describe Court procedures including issue of summons, conduct money, types of witnesses, recording of evidence: oath, affirmation, examination in chief, cross examination, re-examination & court questions, recording of evidence & conduct of doctor in witness box.**

- 1.5.1: Define 'Summons'.
- 1.5.2: Describe the formalities to be followed by a doctor while receiving summons and consequence of not honouring the summons.
- 1.5.3: Define 'Witness'.
- 1.5.4: Describe the types of witness.
- 1.5.5: Define 'Evidence'.
- 1.5.6: Describe the types of evidence.
- 1.5.7: Describe the steps of recording evidence in the court of law.
- 1.5.8: Describe the conduct of a doctor in the witness box.

### **FM 1.6 - Describe the offences in Court including Perjury; Court strictures vis-a-vis medical officer**

- 1.6.1: Explain the meaning of perjury and its punishment.
- 1.6.2: Mention the various offences that could be charged upon medical officer by the court of law and its punishment.

- **SGD – 2 hrs (Moot Court)**

**Assessment:** Log book / Viva voce / OSCE

### **FM14.22 - To give expert medical/ medico-legal evidence in Court of law**

- 14.22.1: Describe **conduct of a doctor in witness box** during the process of deposing expert medical/ medico-legal evidence in Court of law.
- 14.22.2: Describe **the steps /procedure of recording of expert medical/ medico-legal evidence** in Court of law with relation to Court procedures.

### **FM2.29 - Demonstrate respect to the directions of courts, while appearing as witness for recording of evidence under oath or affirmation, examination in chief, cross examination, re-examination and court questions, recording of evidence**

- 29.1: Demonstrate the procedure of receiving summons.
- 29.2: Demonstrate the oath taking in the court of law.

29.3: Demonstrate the procedure of recording of evidence in court of law (examination in chief, cross examination, re-examination, question by Judge).

2.29.4: Demonstrate the doctor's professionalism (attitude and subject expertise) expected in the witness box.

- **SGD – 1 hr ( Role play)**

**Assessment:** Log book / Viva voce / OSCE / Skill station

**FM 1.7 - Describe Dying Declaration and Dying Deposition.**

1.7.1: Define dying declaration and dying deposition.

1.7.2: Describe the procedure of recording of dying declaration.

1.7.3: Differentiate between dying declaration and dying deposition.

**FM14.20 - To record and certify dying declaration in a simulated/ supervised environment**

14.20.1: Certify compos mentis (sound mind) by examining higher mental functions before recording of dying declaration in a simulated environment.

14.20.2: Record dying declaration in a simulated environment.

14.20.3: Assist the executive magistrate in recording of dying declaration in a simulated environment

- **Lecture – 1 hr**

**Assessment:** Written, Viva voce

**FM 1.8 - Describe the latest decisions/ notifications/resolutions/circulars/ standing orders related to medico-legal practice issued by Courts/Government authorities etc.**

1.8.1: Describe the latest decisions/notifications/resolutions/ circulars/ standing orders related to medico-legal practice issued by Courts.

1.8.2: Describe the latest decisions/notifications/resolutions/ circulars/ standing orders related to medico-legal practice issued by Central Government authorities.

1.8.3: Describe the latest decisions/notifications/resolutions/ circulars/ standing orders related to medico-legal practice issued by State Government authorities.

1.8.4: Describe the latest decisions/notifications/resolutions/ circulars/ standing orders related to medico-legal practice issued by NMC/MCI/ SMC.

**FM2.30 - Have knowledge/awareness of latest decisions/ notifications/ resolutions/ circulars/standing orders related to medico-legal practice issued by Courts/ Government authorities etc**

30.1: Debate on the latest decisions/notifications/circulars/standing orders related to medico-legal practice issued by Courts.

30.2: Debate on the latest decisions/notifications/circulars/standing orders related to medico-legal practice issued by Central Government.

30.3: Debate on the latest decisions/notifications/circulars/standing orders related to medico-legal practice issued by State Government.

2.30.4: Debate on the latest decisions/notifications/circulars/standing orders related to medico-legal practice issued by NMC/MCI/ SMC

- **Lecture – 1 hr**

**Assessment:** Written, Viva voce

**FM 1.9 - Describe the importance of documentation in medical practice in regard to medicolegal examinations, Medical certificates & medicolegal reports especially**

- **Maintenance of patient case records, discharge summary, prescribed registers to be maintained in Health Centres.**

- Maintenance of medico-legal register like accident register
- Documents of issuance of wound certificate
- Documents of issuance of drunkenness certificate
- Documents of issuance of sickness & fitness certificate
- Documents of issuance of death certificate
- Documents of issuance of medical certification of cause of death-form no.4, 4A
- Documents of estimation of age by physical, dental & radiological examination & issuance of certificate

1.9.1: Enumerate various medical / medicolegal records to be maintained by hospital/ medical practitioner.

1.9.2: Describe the importance of documentation and maintenance of medical records (out-patient slips, in-patient case details, consent forms, operative & anesthetic notes, discharge/death summary, sickness & fitness certificates, MCCD certificate, etc).

1.9.3: Describe the importance of documentation and maintenance of medicolegal records (MLC register, MTP register, age certificate, wound certificate, drunkenness certificate, sexual violence report, postmortem report, etc).

- **SGD – 1 hr ( Practical)**

**Assessment:** Written / Viva voce / OSCE

#### **FM 1.10 - Select appropriate cause of death in a particular scenario by referring ICD 10 code.**

1.10.1: Explain the importance of ICD-10 code in certifying the cause of death.

1.10.2: Enumerate the important causes of death as per ICD-10.

1.10.3: Chose the appropriate cause of death in a particular scenario.

#### **FM 1.11 - Write a correct cause of death certificate as per ICD 10 document**

1.11.1: Describe the objectives of MCCD certification.

1.11.2: Draft the MCCD certificate in a particular scenario as per ICD-10.

1.11.3: Explain the procedure of dispatching MCCD certificate to the concerned authorities.

### **Forensic Pathology**

- **SGD – 5 hrs**

**Assessment:** Written / Viva voce

#### **FM 2.20 - Mechanical asphyxia: Define, classify and describe asphyxia and medico-legal interpretation of post-mortem findings in asphyxial deaths.**

20.1: Define asphyxia.

20.2: Mention the various types of asphyxial deaths (mechanical, pathological, toxic, environmental, traumatic, postural, iatrogenic).

20.3: Describe the pathophysiology (vicious cycle) of asphyxia.

20.4: Explain the types of anoxia/ hypoxia (Gordon's classification).

2.20.5: Discuss the classical postmortem findings in asphyxial deaths.

#### **FM 2.21 - Mechanical asphyxia: Describe and discuss different types of hanging and strangulation including clinical findings, causes of death, post-mortem findings and medico-legal aspects of death due to hanging and strangulation including examination, preservation and dispatch of ligature material.**

21.1: Define mechanical asphyxia death.

21.2: Classify mechanical asphyxial deaths.

21.3: Define hanging.

21.4: Enumerate the types of hanging.

- 21.5: Explain the symptoms experienced by the victim in hanging.
- 21.6: Describe the causes of death, postmortem findings and medicolegal aspects of death due to hanging.
- 21.7: Discuss on judicial hanging.
- 21.8: Define strangulation.
- 21.9: Enumerate the types of strangulation.
- 21.10: Describe the causes of death, postmortem findings and medicolegal aspects of death due to ligature strangulation.
- 21.11: Describe the causes of death, postmortem findings and medicolegal aspects of death due to manual strangulation.
- 21.13: Discuss on Bansdola, Mugging, Garrotting,
- 21.14: Describe the examination, preservation and dispatch of ligature material used in hanging and strangulation.
- 2.21.15: Explain the fractures of hyoid bone.

**FM 2.22 - Mechanical asphyxia: Describe and discuss patho-physiology, clinical features, post-mortem findings and medico-legal aspects of traumatic asphyxia, obstruction of nose & mouth, suffocation and sexual asphyxia.**

- 22.1: Define traumatic asphyxia.
- 22.2: Describe the pathophysiology, postmortem findings and medicolegal aspects of traumatic asphyxia.
- 22.3: Discuss on postural/positional asphyxia.
- 22.4: Discuss on Overlying.
- 22.5: Define suffocation.
- 22.6: Enumerate the types of suffocation.
- 22.7: Describe the postmortem findings and medicolegal aspects of Environmental asphyxia, Smothering, Gagging and Choking.
- 22.8: Discuss on Café-coronary.
- 22.9: Discuss on Burking.
- 2.22.10: Describe methods used, postmortem findings and medicolegal aspects of Sexual/ Auto-erotic asphyxia.

**FM 2.23 - Mechanical asphyxia: Describe and discuss types, patho-physiology, clinical features, post-mortem findings and medico-legal aspects of drowning, diatom test and gettler test.**

- 23.1: Define drowning.
- 23.2: Explain the mechanism of drowning.
- 23.3: Enumerate the types of drowning.
- 23.4: Describe the pathophysiology, causes of death, postmortem findings and medicolegal aspects of drowning.
- 23.5: Describe the clinical features and treatment of Post-immersion syndrome (Near drowning).
- 23.6: Discuss on Diatom test and its medicolegal importance.
- 2.23.7: Discuss on Gettler test and its medicolegal importance.

• **SGD – 1 hr**

**Assessment:** Written / Viva voce

**FM 2.24 - Thermal deaths: Describe the clinical features, post-mortem finding and medicolegal aspects of injuries due to physical agents like heat (heat-hyper-pyrexia, heat stroke, sun stroke, heat exhaustion/prostration, heat cramps [miner's cramp] or cold (systemic and localized hypothermia, frostbite, trench foot, immersion foot)**

- 24.1: Classify thermal injuries.
- 24.2: Describe the local (frostbite, trench foot, immersion foot) and general effects (hypothermia) due to Cold.
- 24.3: Describe the postmortem findings and medicolegal aspects of deaths due to Hypothermia.
- 24.4: Describe the general effects due to Heat (heat cramps, heat exhaustion/prostration, heat hyperpyrexia/heat stroke/sunstroke).
- 2.24.5: Describe the postmortem findings and medicolegal aspects of deaths due to Heat stroke.

• **SGD – 1 hr**

**Assessment:** Written / Viva voce / OSPE

**FM 2.25 - Describe types of injuries, clinical features, patho-physiology, postmortem findings and medico-legal aspects in cases of burns, scalds, lightning, electrocution and radiations.**

- 25.1: Define Burn.
- 25.2: Enumerate the types or causes of burns.
- 25.3: Describe the degree of burns (Dupuytren's, Wilson's and Clinical classification).
- 25.4: Explain the method of calculation of percentage of burns (Rule of Nine/Wallace, Lund and Browder chart).
- 25.5: Describe the clinical features, management, causes of death, postmortem findings and medicolegal aspects of Dry burns and Scalds.
- 25.6: Differentiate between antemortem and postmortem burns.
- 25.7: Describe the factors affecting the electrical injuries.
- 25.8: Describe the postmortem findings, causes of death and medicolegal aspects in deaths due to electrocution.
- 25.9: Describe the factors affecting the lightning injuries.
- 25.10: Describe the postmortem findings, causes of death and medicolegal aspects in deaths due to lightning.
- 2.25.11 Discuss on injuries caused by exposure to radiation

• **Lecture – 1 hr**

**Assessment:** Written, Viva voce

**FM 2.26 - Describe and discuss clinical features, post-mortem findings and medico-legal aspects of death due to starvation and neglect**

- 26.1: Explain the meaning of starvation.
- 26.2: Enumerate the types of starvation.
- 26.3: Enumerate the causes of starvation.
- 26.4: Describe the factors modifying the effects of starvation.
- 26.5: Describe the clinical features, management, causes of death, postmortem findings and medicolegal aspects of starvation.

• **SGD – 3 hrs**

**Assessment:** Written / Viva voce / OSPE / log book / Practical record

**FM 2.27 - Define and discuss infanticide, foeticide and stillbirth**

- 27.1: Define Foeticide, Neonaticide and infanticide.
- 27.2: Define dead birth, still birth and live birth.
- 2.27.3: Discuss on medicolegal aspects of infanticide

**FM 2.28 - Describe and discuss signs of intrauterine death, signs of live birth, viability of foetus, age determination of foetus, DOAP session of ossification centres, Hydrostatic test, Sudden Infant Death syndrome. Munchausen's syndrome by proxy. [Munchausen's syndrome by proxy is covered in FM 3.29]**

- 2.28.1: Describe the causes of Intra Uterine Death (IUD).
- 2.28.2: Describe the features of 'Dead born foetus'.
- 2.28.3: Define 'Viability of foetus' and its medicolegal importance.
- 2.28.4: Describe the method of estimation of gestational age of foetus.
- 2.28.5: Describe the signs of 'Live birth'.
- 2.28.6: Describe the causes of infant death.
- 2.28.7: Define Sudden Infant Death Syndrome (SIDS).
- 2.28.8: Describe causes, postmortem findings & medicolegal aspects of SIDS

**FM14.13 - To estimate the age of foetus by post-mortem examination**

- 14.13.1: Enumerate the objectives of foetal autopsy.
- 14.13.2: Describe the procedure of foetal autopsy.
- 14.13.3: Estimate the age of foetus by examination of ossification centres, anthropometric measurements, blood

constituents, hair, nail, umbilical cord etc.

14.13.4: Draft a medicolegal report and opinion after foetal autopsy.

## **Clinical Forensic Medicine**

### • SGD – 4 hrs

Assessment: Written, Viva voce, OSCE

**FM 3.3 - Mechanical injuries and wounds: Define, describe and classify different types of mechanical injuries, abrasion, bruise, laceration, stab wound, incised wound, chop wound, defense wound, self-inflicted/ fabricated wounds and their medico-legal aspects.**

3.3.1: Define mechanical injury.

3.3.2: Classify mechanical injuries.

3.3.3: Define abrasion.

3.3.4: Describe the characteristic features, types and medicolegal aspects of an abrasion

3.3.5: Define contusion.

3.3.6: Describe the characteristic features, types and medicolegal aspects of contusion.

3.3.7: Describe the factors influencing the formation of contusion.

3.3.8: Define laceration.

3.3.9: Describe the characteristic features, types and medicolegal aspects of a laceration.

3.3.10: Define an incised wound.

3.3.11: Describe the characteristic features, types and medicolegal aspects of an incised wound.

3.3.12: Define chop wound.

3.3.13: Describe the characteristic features and medicolegal aspects of chop wound.

3.3.14: Define stab wound.

3.3.15: Describe the characteristic features, types and medicolegal aspects of stab wound.

3.3.16: Define defense wound.

3.3.17: Describe the characteristic features and medicolegal importance of defense wound.

3.3.18: Define fabricated wound.

3.3.19: Describe the characteristic features and medicolegal importance of fabricated wound.

### • Lecture – 2 hrs

Assessment: Written, Viva voce

**FM 3.4 - Define injury, assault & hurt. Describe IPC pertaining to injuries**

3.4.1: Define injury (S. 44 IPC), assault (S. 351 IPC) and hurt (S. 319 IPC).

3.4.2: Define homicide.

3.4.3: Describe the types of homicide.

3.4.4: Describe Grievous hurt (S. 320 IPC).

3.4.5: Understand the IPC sections pertaining to injuries (Sec. 44, 299, 300, 302, 304, 304-A, 304-B, 306, 307, 319, 320, 321-326, 351, 354, 497, 498-A).

**FM 3.5 - Describe accidental, suicidal and homicidal injuries. Describe simple, grievous and dangerous injuries. Describe ante-mortem and post-mortem injuries.**

3.5.1: Define medico-legal case (MLC) with examples.

3.5.2: Differentiate between the accidental, suicidal and homicidal injuries with examples.

3.5.3: Describe simple and grievous hurt.

3.5.4: Explain the difference between the injuries that are likely to cause death, sufficient in the ordinary course of nature to cause death and imminently dangerous.

3.5.5: Describe the difference between ante-mortem and post-mortem wounds.

**FM 3.6 - Describe healing of injury and fracture of bones with its medico-legal importance**

3.6.1: Describe wound healing by primary and secondary intention and its medicolegal importance.

3.6.2: Enumerate the types of fracture.

3.6.3: Describe the healing of a fracture and its medicolegal importance.  
3.6.4: Describe the difference between ante-mortem and post-mortem fracture.

**FM 3.7 - Describe factors influencing infliction of injuries and healing, examination and certification of wounds and wound as a cause of death: Primary and Secondary (along with FM 14.1)**

3.7.1: Describe the factors influencing the causation of an injury.  
3.7.2: Describe the factors that influence healing of an injury or fracture.  
3.7.3: Discuss the primary and secondary causes of death from a wound.

**FM 3.8 - Describe and discuss different types of weapons including dangerous weapons and their examination**

3.8.1: Identify the weapons that cause blunt force and sharp force injuries.  
3.8.2: Define dangerous weapon (S. 324 IPC and 326 IPC).

• **SGD – 3 hrs**

**Assessment:** Written, Viva voce, OSCE

**FM 3.9 - Firearm injuries: Describe different types of firearms including structure and components. Along with description of ammunition propellant charge and mechanism of fire-arms, different types of cartridges and bullets and various terminology in relation of firearm – caliber, range, choking**

3.9.1: Define Forensic ballistics, Proximal ballistics, Intermediate ballistics, and Terminal ballistics.  
3.9.2: Define firearm.  
3.9.3: Classify firearms.

3.9.4: Enumerate the parts of the basic firearms.  
3.9.5: Explain ‘rifling’ and ‘calibre’ of a firearm.  
3.9.6: Explain ‘choking’ in a firearm and its purpose.  
3.9.7: Enumerate the components of rifled firearm and shotgun cartridge, and its function.  
3.9.8: Describe the types of gunpowder.  
3.9.9: Discuss on types of bullets and pellets.

**FM 3.10 - Describe and discuss wound ballistics-different types of firearm injuries, blast injuries and their interpretation, preservation and dispatch of trace evidences in cases of firearm and blast injuries, various tests related to confirmation of use of firearms**

3.10.1: Define wound ballistics.  
3.10.2: Enumerate the factors affecting gunshot wound production.  
3.10.3: Explain the mechanism of firing and various components of discharge of firing.  
3.10.4: Describe the entry and exit wounds from a rifled firearm at various ranges.  
3.10.5: Describe the entry and exit wounds from a shotgun at various ranges.  
3.10.6: Discuss on Ricocheting of a bullet and its effect.  
3.10.7: Discuss on Tumbling bullet, Yawning bullet, Dumdum bullet, Tandem bullet, Souvenir bullet.  
3.10.8: List the evidentiary materials to be collected in gunshot wounds.  
3.10.9: Describe the method of collection and preservation of evidentiary materials in gunshot wounds.  
3.10.10: Describe the significance of bullet markings and use of comparison microscope.  
3.10.11: Enumerate the tests done for detection of gunshot residue.  
3.10.12: Describe the injuries caused by bomb blast / explosion

• **SGD – 4 hrs**

**Assessment:** Written, Viva voce, OSCE / OSPE

**FM 3.11 - Regional injuries: Describe and discuss regional injuries to head (Scalp wounds, fracture skull, intracranial haemorrhages, coup and contrecoup injuries), neck, chest, abdomen, limbs, genital organs, spinal cord and skeleton**

3.11.1: Define head injury.  
3.11.2: Discuss the forensic anatomy of scalp and scalp injuries.  
3.11.3: Enumerate the types of skull fracture.

- 3.11.4: Describe the intracranial hemorrhages and its medicolegal aspects.
- 3.11.5: Describe the cerebral injuries and its medicolegal aspects.
- 3.11.6: Explain 'concussion of brain' and 'diffuse axonal injury'.
- 3.11.7: Discuss on 'Punch drunk syndrome'.
- 3.11.8: Describe the mechanism, clinical features and medicolegal aspects of whiplash injury.
- 3.11.9: Discuss on 'railway spine'.
- 3.11.10: Discuss on injuries to chest, abdomen and genital organs

**FM 3.12 - Describe and discuss injuries related to fall from height and vehicular injuries – Primary and Secondary impact, Secondary injuries, crush syndrome, railway spine**

- 3.12.1: Describe the injuries sustained to person in a fall from height.
- 3.12.2: Describe the injuries to a pedestrian in vehicular accident (primary impact, second impact and secondary injuries).
- 3.12.3: Describe the injuries to driver, front seat passenger and back seat passenger of a motor car.
- 3.12.4: Discuss on 'Crush syndrome'.

- **SGD – 2 hrs (Practical)**

**Assessment:** Log book / Skill station / Viva voce, OSCE

**FM14.1 - Examine and prepare Medico-legal report of an injured person with different etiologies in a simulated/ supervised environment**

- 14.1.1: Take an informed consent from the Patient / Guardian after explaining the importance of MLC registration in Medicolegal cases (Road traffic accident / Fall from height / Assault / Self infliction of injuries / Burns / Firearms).
- 14.1.2: Perform the clinical examination of an injured person (history taking, general physical examination, systemic examination, laboratory investigations) in a simulated/ supervised environment.
- 14.1.3: Prepare the wound certificate after documenting the clinical findings.
- 14.1.4: Prepare the police intimation.

- **SGD – 1 hr (Practical)**

**Assessment:** Log book / Practical record / Viva voce, OSPE

**FM14.10 - Demonstrate ability to identify & prepare medicolegal inference from specimens obtained from various types of injuries e.g. contusion, abrasion, laceration, firearm wounds, burns, head injury and fracture of bone**

- 14.10.1: Prepare a medicolegal inference from **photographs** showing various types of injuries/ lesions/ postmortem findings.
- 14.10.2: Prepare a medicolegal inference from **wet specimens** showing various types of injuries/ lesions/ postmortem findings.
- 14.10.3: Prepare medicolegal inference from **models** showing various types of injuries/ lesions/ postmortem findings.

- **Lecture – 2 hrs**

**Assessment:** Written, Viva voce

**FM3.18 - Describe anatomy of male and female genitalia, hymen and its types. Discuss the medico-legal importance of hymen. Define virginity, defloration, legitimacy and its medicolegal importance**

- 3.18.1: Describe anatomy of male and female genitalia.
- 3.18.2: Describe the anatomical appearance and types of hymen.
- 3.18.3: Define virginity and defloration.
- 3.18.4: Describe the signs of virginity and its medicolegal importance.
- 3.18.5: Define legitimacy.
- 3.18.6: Discuss the medicolegal importance of legitimacy.

**FM3.19 - Discuss the medicolegal aspects of pregnancy and delivery, signs of pregnancy, precipitate labour, superfoetation, superfecundation, and signs of recent and remote delivery in living and dead**

- 3.19.1: Describe the presumptive, probable and positive signs of pregnancy.
- 3.19.2: Describe pseudocyesis.
- 3.19.3: Define superfoetation and superfecundation.

- 3.19.4: Describe the medicolegal aspects of pregnancy.
- 3.19.5: Define delivery.
- 3.19.6: Describe the signs of recent and remote delivery in a living individual.
- 3.19.7: Enumerate the signs of recent & remote delivery in a dead individual.
- 3.19.8. Mention the medicolegal aspects of delivery.
- 3.19.9: Define precipitate labour.
- 3.19.10: Describe the signs and medicolegal aspects of precipitate labour.

**FM3.20 - Discuss disputed paternity and maternity**

- 3.20.1: Discuss the medicolegal issues related to disputed paternity and maternity.
- 3.20.2: Describe the method of identifying paternalism and maternalism.

• **Lecture – 2 hrs**

**Assessment:** Written, Viva voce

**FM3.22 - Define and discuss impotence, sterility, frigidity, sexual dysfunction, premature ejaculation. Discuss the causes of impotence and sterility in male and female**

- 3.22.1: Define impotence, sterility, frigidity, sexual/erectile dysfunction and premature ejaculation.
- 3.22.2: List the causes of impotence in male and female.
- 3.22.3: Describe the medicolegal issues related to impotence, sexual/erectile dysfunction and premature ejaculation.
- 3.22.4: List the causes of sterility in male and female.
- 3.22.5: Describe the medicolegal issues related to sterility.
- 3.22.6: Describe procedure of examination in alleged case of impotency.

**FM3.23 - Discuss Sterilization of male and female, artificial insemination, Test Tube Baby, surrogate mother, hormonal replacement therapy with respect to appropriate national and state laws**

- 3.23.1: Describe the methods of sterilization in male and female.
- 3.23.2: Discuss the medicolegal issues related to sterilization procedure.
- 3.23.3: Define artificial insemination.
- 3.23.4: Mention the types of artificial insemination.
- 3.23.5: Enumerate the indications for artificial insemination.
- 3.23.6: Discuss ethical issues and precautions to be taken during the artificial insemination.
- 3.23.7: Describe medicolegal issues related to artificial insemination.
- 3.23.8: Discuss on invitro fertilization/ test tube baby and surrogate motherhood.

**FM3.26 - Discuss the national Guidelines for accreditation, supervision & regulation of ART Clinics in India**

- 3.26.1: Discuss the National Guidelines for accreditation, supervision & regulation of ART Clinics in India.
- 3.26.2: Explain the recent updates on laws related to ART and Surrogacy.

• **SDL – 1 hr**

**Assessment:** Written, Viva voce

**FM3.21 - Discuss Pre-conception and Pre Natal Diagnostic Techniques (PC&PNDT) - Prohibition of Sex Selection Act 2003 and Domestic Violence Act 2005**

- 3.21.1: Describe the objectives of PCPNDT Act, 1994.
- 3.21.2: Enumerate the indications for prenatal diagnostic procedures.
- 3.21.3: List the various prenatal diagnostic techniques.
- 3.21.4: Describe the guidelines for establishing and maintaining the centres to practice prenatal diagnostic procedures.
- 3.21.5: Describe the punishment for offences under PCPNDT Act.
- 3.21.6: Discuss on amendments to the PCPNDT Act till date.
- 3.21.7: Define domestic violence.
- 3.21.8: Describe the salient features of The Protection of Women from Domestic Violence Act, 2005.
- 3.21.9: Explain the medicolegal responsibilities of a medical practitioner in a domestic violence case.

**FM3.24 - Discuss the relative importance of surgical methods of contraception (vasectomy and tubectomy) as methods of contraception in the National Family Planning Programme**

- 3.24.1: Describe the salient features of the National Family Planning Programme related to vasectomy and tubectomy.

### **FM3.25 - Discuss the major results of the National Family Health Survey**

3.25.1: Discuss the major results of National Family Health Survey (NFHS).

• **Lecture – 1 hr**

**Assessment:** Written, Viva voce, OSPE / OSCE

**FM 3.13 - Sexual offences:** Describe different types of sexual offences. Describe various sections of IPC regarding rape including definition of rape (Section 375 IPC), Punishment for Rape (Section 376 IPC) and recent amendments notified till date.

3.13.1: Classify sexual offences.

3.13.2: Define 'rape' as per section 375 IPC.

3.13.3: Define 'statutory rape'.

3.13.4: Discuss on 'date rape'.

3.13.5: Describe the punishment for rape (Sec. 376 IPC).

3.13.6: Explain the meaning of 'custodial rape' and punishment for it.

3.13.7: Explain the meaning of 'gang rape' and punishment for it.

3.13.8: Understand the salient features of section 354, 354-A, 354-B, 354-C and 354-D IPC.

3.13.9: Describe the salient features of Protection of Children from Sexual Offences Act (POCSO), 2012.

• **Lecture – 1 hr**

**Assessment:** Written, Viva voce, OSCE

**FM 3.14 - Describe and discuss the examination of the victim of an alleged case of rape, and the preparation of report, framing the opinion and preservation and dispatch of trace evidences in such cases.**

3.14.1: Describe the findings in a victim of sexual violence.

3.14.2: Describe the duties of doctor towards victim of sexual violence.

3.14.3: Understand the legal sections related to examination of a victim of sexual violence (164-A CrPC, 327 CrPC, 357-C CrPC, 228-A IPC, 114-A IEA, 146 IEA).

3.14.4: Describe the procedure of examination, contents of the format, guidelines for preliminary and final opinion in a victim of sexual violence (given by Ministry of Health and Family welfare, Government of India).

3.14.5: Describe the procedure of collecting, preservation and dispatch of evidentiary materials from a victim of sexual violence.

3.14.6: Understand the significance of SAFE kit in collecting evidentiary material from a victim of sexual assault.

**SGD – 3 hrs**

**Assessment:** Written, Viva voce, OSCE

**FM 3.15 - Describe and discuss examination of accused and victim of sodomy, preparation of report, framing of opinion, preservation and despatch of trace evidences in such cases.**

3.15.1: Define sodomy.

3.15.2: Describe the findings in a victim of sodomy.

3.15.3: Describe the procedure of examination, contents of the format, and guidelines for opinion in a victim of sodomy.

3.15.4: Describe the procedure of collecting, preservation and dispatch of evidentiary materials from a victim of sodomy.

3.15.5: Describe the findings in an accused of sexual assault.

3.15.6: Describe the procedure of examination, contents of the format, and guidelines for opinion in an accused of sexual assault.

3.15.7: Understand the recent amendments in section 377 IPC.

**FM 3.16 - Describe and discuss adultery and unnatural sexual offences, sodomy, incest, lesbianism, buccal coitus, bestiality, indecent assault and preparation of report, framing the opinion and preservation and dispatch of trace evidences in such cases.**

3.16.1: Explain the meaning of 'adultery' and its medicolegal importance.

3.16.2: Explain the meaning of 'incest' and its medicolegal importance.

3.16.3: Define unnatural sexual offence (Sec. 377 IPC).

3.16.4: Discuss on 'lesbianism' and its medicolegal importance.

3.16.5: Discuss on 'buccal coitus' and its medicolegal importance.

- 3.16.6: Discuss on 'bestiality' and its medicolegal importance.
- 3.16.7: Describe the procedure of examination, collection, preservation and dispatch of evidentiary materials in a victim and accused of lesbianism, buccal coitus and bestiality
- FM 3.17 - Describe and discuss the sexual perversions fetishism, transvestism, voyeurism, sadism, necrophagia, masochism, exhibitionism, frotteurism, Necrophilia.**
- 3.17.1: Define sexual paraphilia.
- 3.17.2: Explain the sexual perversions requiring partner for sexual gratification (sadism, masochism, frotteurism, pedophilia, necrophilia, necrophagia).
- 3.17.3: Explain the sexual perversions not requiring partner for sexual gratification (voyeurism, exhibitionism).
- 3.17.4: Explain the sexual perversions requiring object/article as a stimulus for sexual gratification (fetishism, transvestism).

**SGD – 1 hr (Practical)**

**Assessment:** Practical record, log book, Viva voce, OSCE

**FM14.15 - To examine & prepare medico-legal report of a victim of sexual offence/ unnatural sexual offence in a simulated/ supervised environment**

- 14.15.1: Take an informed consent for examination of a victim of sexual offence.
- 14.15.2: Describe the procedure of examination and collection of evidentiary material for medical and medicolegal purposes.
- 14.15.3: Prepare a medicolegal report and opinion in a victim of sexual offence.
- 14.15.4: Explain the procedure of handing over the evidentiary material to the investigating officer.

**SGD – 1 hr (Practical)**

**Assessment:** Practical record, log book, Viva voce, OSCE

**FM14.14 - To examine & prepare report of an alleged accused in rape/ unnatural sexual offence in a simulated/ supervised environment**

- 14.14.1: Take an informed consent for examination of an accused of sexual offence.
- 14.14.2: Describe the procedure of examination and collection of evidentiary material for medical and medicolegal purposes.
- 14.14.3: Prepare a medicolegal report and opinion in an alleged accused of sexual offence.
- 14.14.4: Explain the procedure of handing over the evidentiary material to the investigating officer

• **Lecture – 2 hrs**

**Assessment:** Written, Viva voce, OSCE

**FM3.27 - Define, classify and discuss abortion, methods of procuring MTP and criminal abortion and complication of abortion. MTP Act 1971**

- 3.27.1: Define abortion.
- 3.27.2: Classify abortion.
- 3.27.3: Describe the methods used for therapeutic abortion.
- 3.27.4: Describe the methods used for criminal abortion & its complications.
- 3.27.5: Discuss the Medical termination of Pregnancy Act, 1971 and its amendments.

**FM3.28 - Describe evidences of abortion - living and dead, duties of doctor in cases of abortion, investigations of death due to criminal abortion**

- 3.28.1: Describe evidences of abortion in living and dead individual.
- 3.28.2: Explain the circumstances under which a case of abortion is brought to the notice of medical officer.
- 3.28.3: Describe the medical and legal duties of doctor in a case of criminal abortion.
- 3.28.4: Describe the examination, method of collection, preservation and dispatch of evidentiary materials during investigation of death of woman in criminal abortion.

• **Lecture – 1 hr**

**Assessment:** Written, Viva voce, OSCE

**FM3.29 - Describe and discuss child abuse and battered baby syndrome**

- 3.29.1: Define child abuse or child maltreatment (as per WHO).
- 3.29.2: Enumerate different forms of child abuse.

- 3.29.3: Define battered baby syndrome.  
3.29.4: Describe the clinical findings and medicolegal aspects of battered baby syndrome.  
3.29.5: Discuss on Shaken baby syndrome and Cinderella syndrome.  
3.29.6: Discuss on Munchausen's Syndrome by proxy.  
3.29.7: Describe the medicolegal responsibilities of a doctor in child abuse cases.

**SDL – 1 hr**

**Assessment:** Written, Viva voce, OSCE

**FM3.30 - Describe and discuss issues relating to torture, identification of injuries caused by torture and its sequelae, management of torture survivors**

- 3.30.1: Define Torture (as per UN Convention of Torture, World Medical Association).  
3.30.2: Enumerate the types/methods/techniques used for torture.  
3.30.3: Explain the medical findings in a case of torture.  
3.30.4: Outline the management of torture survivors.  
3.30.5: Discuss the ethical and legal issues related to torture.

**FM3.31 - Torture and Human rights- Describe and discuss guidelines and Protocols of National Human Rights Commission regarding torture**

- 3.31.1: Describe the guidelines and protocols of National human rights commission in cases of torture.

**SGD – 2 hrs**

**Assessment:** Practical record, Log book, Viva voce, OSCE

**FM3.32 - Demonstrate the professionalism while preparing reports in medico-legal situations, interpretation of findings and making inference/opinion, collection preservation and dispatch of biological or trace evidences**

- 3.32.1: Demonstrate the professionalism to be shown by a doctor while preparing reports in medicolegal cases, interpretation of findings and making inference/opinion.  
3.32.2: Demonstrate the professionalism to be shown by a doctor during the collection, preservation and dispatch of biological or trace evidences.

**FM3.33 - Should be able to demonstrate the professionalism while dealing with victims of torture and human right violations, sexual assaults psychological consultation, rehabilitation**

- 3.33.1: Demonstrate the professionalism to be shown by a doctor while dealing with victims of torture and human right violations.  
3.33.2: Demonstrate the professionalism to be shown by a doctor during the examination, psychological consultation and rehabilitation of sexual victims

**FM14.18 - To examine & prepare medico-legal report of a person in police, judicial custody or referred by Court of Law and violation of human rights as requirement of NHRC, who has been brought for medical examination**

- 14.18.1: Explain the procedure of examination and preparing the medico-legal report of a person in police custody/ judicial custody who has been brought for medical examination.  
14.18.2: Explain the procedure of examination and preparing the medico-legal report of a person referred by Court of Law for medical examination.  
14.18.3: Explain the procedure of examination and preparing the medico-legal report of a person with history of violation of human rights as per requirement of NHRC (victim of torture, hunger strike, etc), who has been brought for medical examination.

**Medical Jurisprudence (Medical Law and ethics)**

**Lecture – 3 hrs**

**Assessment:** Written, Viva voce, OSCE

**FM4.1 - Describe Medical Ethics and explain its historical emergence**

- 4.1.1: Define Ethics and Medical ethics.  
4.1.2: Describe the historical emergence of Medical ethics.  
4.1.3: Discuss the need for and the emergence of World Medical Association's Declaration of Helsinki 1964 and its subsequent revisions.

**FM4.2 - Describe the Code of Medical Ethics 2002 conduct, Etiquette and Ethics in medical practice and unethical practices & the dichotomy**

- 4.2.1: Describe the 'Code of medical ethics' as per Indian Medical Council (Professional conduct, Etiquette and Ethics) Regulations, 2002.

4.2.2: Enumerate the various practices of a medical practitioner which are considered as unethical.

4.2.3: Explain the meaning of Dichotomy with examples.

4.2.4: Mention guidelines laid down by MCI with respect to remuneration

#### **FM4.3 - Describe the functions and role of Medical Council of India / National Medical Commission and State Medical Councils**

4.3.1: Describe the constitution and functions of Medical Council of India/ National Medical Council.

4.3.2: Describe the constitution and functions of State Medical Council.

#### **FM4.4 - Describe the Indian Medical Register**

4.4.1: List the various particulars to be entered in Indian Medical Register (IMR).

4.4.2: Mention under which schedules, the degrees obtained by institutions in and outside India are recognized by MCI.

4.4.3: Describe the procedure for a foreign medical practitioner to get enrolled in IMR.

4.4.4: Mention the advantages to a Doctor after enrolling in IMR.

#### **FM4.5 - Rights/privileges of a medical practitioner, penal erasure, infamous conduct, disciplinary Committee, disciplinary procedures, warning notice and penal erasure**

4.5.1: Enumerate the Rights/privileges of a medical practitioner

4.5.2: Define Infamous conduct/Professional misconduct with suitable examples (as per IMC regulations, 2002)

4.5.3: Describe the composition of disciplinary committee and its procedure in dealing with cases of infamous conduct.

4.5.4: Discuss the various punishments awarded by disciplinary committee for infamous conduct (warning notice, temporary erasure, penal erasure).

#### **FM4.6 - Describe the Laws in Relation to medical practice and the duties of a medical practitioner towards patients and society**

4.6.1: Enumerate the laws related to medical practice in India.

4.6.2: Describe the 'Duties of a medical practitioner' in general towards his patient, society and research.

#### **• Lecture – 1 hr**

**Assessment:** Written, Viva voce, OSCE

#### **FM4.7 - Describe and discuss the ethics related to HIV patients**

4.7.1: Describe legal and ethical issues in HIV testing.

4.7.2: Mention the rights of HIV positive patients.

4.7.3: Discuss the duties of a Doctor while treating HIV patients with respect to confidentiality & disclosure.

4.7.4: Discuss the current policies related to the research and health care of HIV positive patients.

#### **FM4.12 - Discuss legal and ethical issues in relation to stem cell research**

4.12.1: Enumerate the application of stem cells in research and therapy.

4.12.2: Discuss the ethical issues arising from stem cell research and therapy.

4.12.3: Discuss the legal status of stem cell therapy and research in India.

4.12.4: Describe the guidelines for stem cell research in India.

#### **FM4.13 - Describe social aspects of Medico-legal cases with respect to victims of assault, rape, attempted suicide, homicide, domestic violence, dowry- related cases**

4.13.1: Describe the social aspects and role of medical professionals with respect to victim of sexual violence.

4.13.2: Describe the social aspects and role of medical professionals with respect to victim of attempted suicide.

4.13.3: Describe the social aspects and role of medical professionals with respect to victim of attempted homicide.

4.13.4: Describe the social aspects and role of medical professionals with respect to victim of domestic violence.

#### **• Lecture – 1 hr**

**Assessment:** Written, Viva voce, OSCE

#### **FM4.8 - Describe the Consumer Protection Act-1986 (Medical Indemnity Insurance, Civil Litigations and Compensations), Workman's Compensation Act & ESI Act**

4.8.1: Discuss on Consumer Protection Act-1986 & 2019 in view of medical services with latest amendments.

4.8.2: Describe the purpose of Medical Indemnity Insurance in civil litigations and compensations.

4.8.3: Discuss the role of a doctor in awarding compensation to workers or their dependents as per Workman's Compensation Act and ESI Act.

**SGD – 1 hr**

**Assessment:** Practical record, Log book, Viva voce, OSCE

**FM4.9 - Describe the medico - legal issues in relation to family violence, violation of human rights, NHRC and doctors**

4.9.1: Define Domestic Violence.

4.9.2: Discuss the salient features of "Protection of women from domestic violence Act, 2005" in relation to medical and legal responsibilities of a medical practitioner.

4.9.3: Enumerate the cases related to violation of human rights.

4.9.4: Discuss the responsibilities of a doctor in cases of violation of human rights.

**FM4.10 - Describe communication between doctors, public and media**

4.10.1: Describe the communication skills by a doctor with the public and its importance.

4.10.2: Describe the communication skills and precautions to be taken by a doctor while interacting with the media.

4.10.3: Describe communication skills by a doctor with his/her colleagues

**FM4.14 - Describe & discuss the challenges in managing medico-legal cases including development of skills in relationship management – Human behaviour, communication skills, conflict resolution techniques**

4.14.1: Discuss the challenges in managing the medico legal cases.

4.14.2: Describe the principles of doctor-patient relationship management.

4.14.3: Describe the development of human behavior and communication skills required for managing doctor-patient relationship.

4.14.4: Discuss the conflict resolution techniques in managing medico-legal cases.

**FM4.15 - Describe the principles of handling pressure – definition, types, causes, sources and skills for managing the pressure while dealing with medico-legal cases by the doctor**

4.15.1: Define stress.

4.15.2: Mention the types of pressure while dealing with medico-legal cases by a doctor.

4.15.3: List the causes/ sources of pressure in handling medico-legal cases.

4.15.4: Discuss the skills needed for managing the pressure situations in handling a medico-legal case.

• **Lecture – 1 hr**

**Assessment:** Written, Viva voce

**FM4.16 - Describe and discuss Bioethics**

4.16.1: Define bioethics.

4.16.2: Enumerate the issues in medical practice wherein bioethics is applied.

4.16.3: Mention the four main principles of bioethics.

4.16.4: Discuss the medico-legal issues related to bioethics in patient care.

**FM4.17 - Describe and discuss ethical Principles: Respect for autonomy, non-maleficence, beneficence & justice**

4.17.1: Describe respect for patient's autonomy.

4.17.2: Describe the role of beneficence as a guiding principle in patient care.

4.17.3: Describe the role of non-maleficence as a guiding principle in patient care.

4.17.4: Discuss the application of justice in distributing resources and benefits in medical practice and research.

**FM4.11 - Describe and discuss euthanasia**

4.11.1: Define euthanasia.

4.11.2: Describe various types of euthanasia.

4.11.3: Debate around euthanasia- the arguments against and in favour.

4.11.4: Mention the legal status of euthanasia in India and in other countries.

4.11.5: Discuss the landmark case of Aruna Shanbaug and its impact on the status of euthanasia in India.

**SGD – 3 hrs**

**Assessment:** Written, Viva voce

**FM4.18 - Describe and discuss medical negligence including civil and criminal negligence, contributory negligence, corporate negligence, vicarious liability, Res Ipsa Loquitur, prevention of medical negligence and defenses in medical negligence litigations**

- 4.18.1: Define medical negligence.
- 4.18.2: Describe the elements of medical negligence.
- 4.18.3: Describe civil and criminal negligence with examples.
- 4.18.4: Describe contributory negligence with examples.
- 4.18.5: Describe the importance of Vicarious liability in medical practice.
- 4.18.6: Describe Corporate Negligence with examples.
- 4.18.7: Describe Res Ipsa Loquitur with examples.
- 4.18.8: Mention the precautionary measures to be taken to avoid medical negligence.
- 4.18.9: Describe the various defenses for a doctor in medical negligence (including Contributory negligence, Therapeutic misadventure, Medical maloccurrence, Calculated risk doctrine, Novus actus interveniens, Res judicata etc).

**FM4.19 - Define Consent. Describe different types of consent and ingredients of informed consent. Describe the rules of consent and importance of consent in relation to age, emergency situation, mental illness and alcohol intoxication**

- 4.19.1: Define consent.
- 4.19.2: Describe the different types of consent with suitable examples.
- 4.19.3: Describe the ingredients of an informed consent.
- 4.19.4: Describe the rules and regulations associated with consent.
- 4.19.5: Explain the importance of consent in relation to age, emergency situation, mental illness and alcohol intoxication (with relevant sections of IPC).

**FM4.20 - Describe therapeutic privilege, Malingering, Therapeutic Misadventure, Professional Secrecy, Human Experimentation**

- 4.20.1: Explain the concept of 'therapeutic privilege' in medical practice.
- 4.20.2: Discuss the legal aspects of Malingering during medical practice.

**FM4.21 - Describe Products liability and Medical Indemnity Insurance**

- 4.21.1: Discuss about 'product liability' in medical negligence.
- 4.21.2: Describe medical indemnity insurance and its purpose.

**FM4.24 - Enumerate rights, privileges and duties of a Registered Medical Practitioner. Discuss doctor-patient relationship: professional secrecy and privileged communication**

- 4.24.1: Enumerate the rights and privileges of Registered Medical Practitioner.
- 4.24.2: Describe the duties of a Registered Medical Practitioner.
- 4.24.3: Discuss on doctor-patient relationship in clinical practice.
- 4.24.4: Explain professional secrecy with examples.
- 4.24.5: Describe Privileged communication with examples.

**FM4.22 - Explain Oath – Hippocrates, Charaka and Sushruta and procedure for administration of Oath**

- 4.22.1: Explain oath as described by Hippocrates, Charaka and Sushruta.
- 4.22.3: Describe the procedure for administration of oath for a medical practitioner.

**FM4.23 - Describe the modified Declaration of Geneva and its relevance**

- 4.23.1: Describe the components of declaration of Geneva.
- 4.23.2: Describe the components of modified declaration of Geneva.
- 4.23.3: Explain the relevance of Declaration of Geneva in the medical profession.

**FM4.25 - Clinical research & Ethics - Discuss human experimentation including clinical trials**

- 4.25.1: Enumerate the need and drawbacks of different types of clinical research on humans.

- 4.25.2: Describe the phases of clinical trials and its implications.
- 4.25.3: Describe the ethical regulations and guidelines for clinical research.
- 4.25.4: Discuss the principles pertaining to human experimentation in Nuremberg code and Belmont report.
- 4.25.5: Discuss the steps to be taken for protection of vulnerable population in clinical trials/research

**FM4.26 - Discuss the constitution and functions of ethical committees**

- 4.26.1: List the composition of Institutional Ethics Committee (IEC).
- 4.26.2: Mention the responsibilities and duties of IEC.
- 4.26.3: Describe the proposals that are required to be presented before IEC.
- 4.26.4: Discuss limitations of IEC.

**FM4.27 - Describe and discuss Ethical Guidelines for Biomedical Research on Human Subjects & Animals**

- 4.27.1: Describe the international and national ethics guidelines for human and animal research.
- 4.27.2: Discuss the principles of ICMR guidelines for research involving human participants.
- 4.27.3: Discuss the rights of human research participants.
- 4.27.4: Discuss the 5 R's (replace, reduce, refine, reuse, and rehabilitate) of animal research ethics.

**SGD – 1 hr**

**Assessment:** OSPE, Viva voce

**FM4.28 - Demonstrate respect to laws relating to medical practice and Ethical code of conduct prescribed by Medical Council of India and rules and regulations prescribed by it from time to time**

- 4.28.1: Demonstrate the conduct of doctor with patients as per the Code of Medical Ethics prescribed by IMC.

**FM4.29 - Demonstrate ability to communicate appropriately with media, public and doctors**

- 4.29.1: Demonstrate the skills of communication by a doctor with the public.
- 4.29.2: Demonstrate the skills of communication by a doctor with the media.
- 4.29.3: Demonstrate the skills of communication by a doctor with his/her colleagues.

**FM4.30 - Demonstrate ability to conduct research in pursuance to guidelines or research ethics**

- 4.30.1: Prepare a research protocol for a study as per the ICMR guidelines.
- 4.30.2: Demonstrate the procedure of taking informed consent for conducting a research.

**Forensic Psychiatry**

**Lecture – 1 hr**

**Assessment:** Written, Viva voce

**FM5.1 - Classify common mental illnesses including post-traumatic stress disorder (PTSD)**

- 5.1.1: Define Forensic Psychiatry.
- 5.1.2: Define mental illness.
- 5.1.3: Classify common mental illnesses.
- 5.1.4: Explain PTSD with examples.

**FM5.2 - Define, classify and describe delusions, hallucinations, illusion, lucid interval and obsessions with exemplification**

- 5.2.1: Define delusion.
- 5.2.2: Describe types of delusions and their medicolegal importance.
- 5.2.3: Define hallucination.
- 5.2.4: Describe types of hallucinations and their medicolegal importance.
- 5.2.5: Define illusion with examples.
- 5.2.6: Define lucid interval.
- 5.2.7: Describe the medicolegal importance of lucid interval.
- 5.2.8: Define Impulse.
- 5.2.9: Describe impulsive disorders with examples.
- 5.2.10: Describe the obsessive-compulsive disorders with examples.

• **Lecture – 1 hr**

**Assessment:** Written, Viva voce

**FM5.3 - Describe Civil and criminal responsibilities of a mentally ill person**

5.3.1: Describe Civil responsibility of a mentally ill person.

5.3.2: Describe Criminal responsibility of a mentally ill person.

5.3.3: Describe the M'Naughten Rule and critics about it.

5.3.4: Discuss the alternate hypotheses/tests in relation to criminal responsibility.

5.3.5: Describe the criminal responsibility in Automatism, Somnambulism, Somnolentia, Hypnotism and Intoxication.

**FM5.4 - Differentiate between true insanity from feigned insanity**

5.4.1: Differentiate between true and feigned insanity.

**FM5.5 - Describe & discuss Delirium tremens**

5.5.1: Define delirium tremens.

5.5.2: Describe the criminal responsibility in delirium tremens.

• **SDL – 1 hr**

**Assessment:** Written, Viva voce

**FM5.6 - Describe the Indian Mental Health Act, 1987 & Indian Mental Healthcare Act 2017 with special reference to admission, care and discharge of a mentally ill person**

5.6.1: Describe the important definitions mentioned in Mental Health Care Act, 2017 (MHCA).

5.6.2: Describe the Rights of mentally ill person including 'Advance directive' as per the MHCA.

5.6.3: Describe the guidelines to start and run a 'Mental health establishment'.

5.6.4: Discuss on 'Admission, Treatment and Discharge of mentally ill person' as described in the MHCA.

5.6.5: Discuss on punishment for violation of provisions of MHCA.

**Forensic Laboratory investigation in medical legal practice**

• **SGD – 1 hr**

**Assessment:** OSPE, Viva voce

**FM6.1 - Describe different types of specimen and tissues to be collected both in the living and dead: Body fluids (blood, urine, semen, faeces, saliva), Skin, Nails, tooth pulp, vaginal smear, viscera, skull, specimen for histopathological examination, blood grouping, HLA Typing and DNA Fingerprinting. Describe Locard's Exchange Principle**

6.1.1: Describe the importance of trace evidences in crime investigation.

6.1.2: Explain Locard's principle of exchange in crime investigation.

6.1.3: Enlist the various trace evidences seen in different type of crimes (living and dead).

6.1.4: Discuss the importance of DNA profiling in forensic investigation.

6.1.5: Enlist body tissue and body fluid suitable for DNA profiling.

6.1.6: Discuss the importance of histopathology and cytology examination in forensic investigation.

6.1.7: Discuss importance of blood grouping in forensic investigation.

6.1.8: Discuss significance of HLA typing in forensic investigation.

**FM6.2 - Describe the methods of sample collection, preservation, labeling, dispatch, and interpretation of reports**

6.2.1: Describe method of collection, packing, labelling, sealing and dispatch of evidentiary materials to the laboratory.

6.2.2: Describe the method of interpretation of investigation reports like Chemical analysis, Histopathological examination, Microbiological examination etc.

**FM6.3 - Demonstrate professionalism while sending biological or trace evidences to Forensic Science lab, specifying the required tests to be carried out, objectives of preservation of evidences sent for examination, personal discussions on interpretation of findings**

6.3.1: Draft requisition letter to be sent along with the samples preserved for laboratory analysis/examination mentioning type of sample preserved, required tests to be done, and brief history of the case.

6.3.2: Demonstrate professionalism while sending the samples for analysis such as maintaining confidentiality and chain of custody.

**FM14.21 - To collect, preserve, seal and dispatch exhibits for DNA-Finger printing using various formats of different laboratories.**

14.21.1: Describe the procedure involved in collecting, preserving, sealing and dispatching exhibits for DNA profiling from a living individual.

14.21.2: Describe the procedure involved in collecting, preserving, sealing and dispatching exhibits for DNA profiling from a dead individual after conducting medicolegal autopsy.

14.21.3: Describe the procedure involved in collecting samples for DNA profiling depending on the laboratory policies of collecting blood on dry gauze or EDTA vacutainer or on FTA cards,

**Emerging technologies in Forensic Medicine**

• **SDL – 1 hr**

**Assessment:** Written, Viva voce

FM7.1 - Enumerate the indications and describe the principles and appropriate use for:- DNA profiling, Facial reconstruction, Polygraph (Lie Detector), Narcoanalysis, Brain Mapping, Digital autopsy, Virtual Autopsy, Imaging technologies

7.1.1: Discuss principle, procedure and medico-legal significance of DNA profiling.

7.1.2: Describe principle and medico-legal significance of Facial reconstruction.

7.1.3: Enlist different Lie detection tests.

7.1.4: Describe principle, procedure and medico-legal significance of Polygraph, Narcoanalysis and Brain mapping.

7.1.5: Describe principles of Virtual / Digital autopsy.

7.1.6: Describe the uses of different Imaging technologies in crime investigation.

**Skills in Forensic Medicine & Toxicology**

• **SGD – 2 hrs (Practicals)**

**Assessment:** OSPE, OSCE, Viva voce

**FM14.4 - Conduct and prepare report of estimation of age of a person for medico-legal and other purposes & prepare medico-legal report in a simulated/ supervised environment**

14.4.1: Explain the procedure of taking an informed consent from a person after explaining the importance and procedure of age estimation in criminal cases (accused/ victim of a crime) and civil cases (joining employment, obtaining pension, etc).

14.4.2: Estimate the age of a person by using physical, dental and radiological findings.

14.4.3: Prepare the medicolegal report on the age of a person.

• **SGD – 10 hr (along with discussion of concerned competencies (Mechanical injuries, firearm injuries, thermal injuries, asphyxia, sexual offences, etc ) in other SGD)**

**Assessment:** OSPE, Viva voce, Practical record, Log Book

**FM14.5 - Conduct & prepare post-mortem examination report of varied etiologies (at least 10) in a simulated/ supervised environment**

14.5.1: Describe the techniques of conducting a medicolegal autopsy.

14.5.2: Describe the postmortem findings (external and internal) in a medicolegal autopsy.

14.5.3: Enumerate the ancillary investigations required (along with appropriate materials for such investigations) in a medicolegal autopsy.

14.5.4: Draft the postmortem report after a medicolegal autopsy.

Medicolegal autopsies may be a case of unnatural death, natural death, custodial death, alleged medical negligence, decomposed body, mutilated body.

• **SGD – 2 hrs (Practicals)**

**Assessment:** OSPE, Viva voce, Practical record,

Log Book

**FM14.11 - To identify & describe weapons of medicolegal importance which are commonly used e.g. lathi, knife,**

**kripan, axe, gandasa, gupti, farsha, dagger, bhalla, razor & stick. Able to prepare report of the weapons brought by police and to give opinion regarding injuries present on the person as described in injury report/ PM report so as to connect weapon with the injuries. (Prepare injury report/ PM report must be provided to connect the weapon with the injuries)**

14.11.1: Document the information before commencing the weapon examination.

14.11.2: Examine and document the details of weapons of medicolegal importance.

14.11.3: Prepare a report on the weapon examined.

14.11.4: Opine whether the injuries present in the wound certificate/ postmortem report are possible to be caused by the weapon examined.

14.11.5: Explain the method of packing and handing over the weapon to concerned police (maintaining the chain of custody).

**FM14.12 - Describe the contents and structure of bullet and cartridges used & to provide medico-legal interpretation from these**

14.12.1: Describe the structure and contents of Rifled cartridge & prepare a medico-legal inference.

14.12.2: Describe the structure and contents of Shotgun cartridge & prepare a medico-legal inference.

- **SGD – 1 hr (Practical)**  
Log Book

**Assessment:** OSPE, OSCE, Viva voce, Practical record,

**FM14.16 - To examine & prepare medico-legal report of drunk person in a simulated/ supervised environment**

14.16.1: Take an informed consent for examination of a person with alleged drunkenness.

14.16.2: Describe the procedure of examination and collection of evidentiary material for medicolegal purpose.

14.16.3: Prepare a medicolegal report and opinion in a drunkenness case.

14.16.4: Explain the procedure of handing over the evidentiary material to the investigating officer.

- **SGD – 1 hr (Practical)**

**Assessment:** OSPE, Viva voce, Practical record, Log Book

**FM14.19 - To identify & prepare medico-legal inference from bone fracture, soot particles, diatoms & wound healing (slides)**

14.19.1: List the microscopic identifying features after examining the histopathological slides of brain infarct, liver cirrhosis, brain haemorrhage, bone fracture, pulmonary oedema, brain oedema, soot particles, diatoms & wound healing.

14.19.2: Describe the medico-legal inferences after examining the above mentioned histopathological slides.

**Summary of TL methods and list of competencies to be covered  
in Phase III MBBS part 1 and Assessment methods**

<b>Sl. No.</b>	<b>Teaching hours and type</b>	<b>Competency numbers</b>	<b>Assessment methods</b>
1.	Lecture / SDL – 1 hr (Orientation class)	1.3, 1.4, 1.5,1.6	No assessment
2.	SGD – 2 hrs (Moot Court)	14.22, 2.29	Log book / Viva voce / OSCE
3.	SGD – 1 hr (Role play)	1.7, 14.20	Log book / Viva voce / OSCE / Skill station
4.	Lecture – 1 hr	1.8, 2.30	Written, Viva voce
5.	Lecture – 1 hr	1.9	Written, Viva voce
6.	SGD – 1hr (Practical)	1.10.1.11	Written / Viva voce / OSCE
7.	SGD – 5 hrs	2.20,2.21,2.22, 2.23,	Written / Viva voce
8.	SGD – 1 hr	2.24	Written / Viva voce
9.	SGD – 1 hr	2.25	Written / Viva voce / OSPE
10.	Lecture – 1 hr	2.26	Written, Viva voce
11.	SGD – 3hrs	2.27, 2.28, 4.13	Written / Viva voce / OSPE / log book / Practical record
12.	SGD – 4 hrs	3.3	Written, Viva voce, OSCE
13.	Lecture – 2hrs	3.4,3.5, 3.6, 3.7, 3.8	Written, Viva voce
14.	SGD – 3 hrs	3.9, 3.10	Written, Viva voce, OSCE
15.	SGD – 4 hrs	3.11, 3.12	Written, Viva voce, OSCE / OSPE
16.	SGD – 2 hrs (Practicals)	14.1	Log book / Skill station / Viva voce, OSCE
17.	SGD – 1 hr (Practicals)	14.10	Log book / Practical record / Viva voce, OSPE
18.	Lecture – 2 hrs	3.18, 3.19, 3.20	Written, Viva voce
19.	Lecture – 2 hrs	3.22, 3.23, 3.26	Written, Viva voce
20.	SDL – 1 hr	3.21, 3.24, 3.25	Written, Viva voce
21.	Lecture – 1 hr	3.13	Written, Viva voce, OSPE / OSCE
22.	Lecture – 1 hr	3.14	Written, Viva voce, OSCE
23.	SGD – 3 hrs	3.15, 3.16, 3.17	Written, Viva voce, OSCE
24.	SGD – 1hr (Practical)	14.15	Practical record, log book, Viva voce, OSCE
25.	SGD – 1hr (Practical)	14.14	Practical record, log book, Viva voce, OSCE
26.	Lecture – 2 hrs	3.27, 3.28	Written, Viva voce, OSCE
27.	Lecture – 1 hr	3.29	Written, Viva voce, OSCE

28.	SDL – 1 hr	3.30, 3.31	Written, Viva voce, OSCE
29.	SGD – 2 hrs	3.32, 3.33, 14.18	Practical record, Log book, Viva voce, OSCE
30.	Lecture – 3 hrs	4.1, 4.2, 4.3, 4.4, 4.5, 4.6	Written, Viva voce, OSCE
31.	Lecture – 1 hr	4.7, 4.12, 4.13	Written, Viva voce, OSCE
32.	Lecture – 1 hr	4.8	Written, Viva voce, OSCE
33	SGD – 1 hr	4.9, 4.10, 4.14, 4.15	Practical record, Log book, Viva voce, OSCE
34	Lecture – 1 hr	4.16, 4.17, 4.11	Written, Viva voce
35	SGD – 3hrs	4.18, 4.19, 4.20, 4.21, 4.24, 4.22, 4.23, 4.25, 4.26, 4.27	Written, Viva voce
36	SGD – 1 hr	4.28, 4.29, 4.30	OSPE, Viva voce
37	Lecture – 1 hr	5.1, 5.2	Written, Viva voce
38	Lecture – 1 hr	5.3, 5.4, 5.5	Written, Viva voce
39	SDL – 1 hr	5.6	Written, Viva voce
40	SGD – 1 hr	6.1, 6.2, 6.3, 14.21	OSPE, Viva voce
41	SDL – 1 hr	7.1	Written, Viva voce
42	SGD – 2hrs (Practicals)	14.4	OSPE, OSCE, Viva voce
43	SGD – 10 hrs	14.5	OSPE, Viva voce, Practical record, Log Book
44	SGD – 2hrs (Practicals)	14.11, 14.12	OSPE, Viva voce, Practical record, Log Book
45	SGD – 1 hr (Practicals)	14.16	OSPE, OSCE, Viva voce, Practical record, Log Book
46	SGD – 1 hr (Practicals)	14.19	OSPE, OSCE, Viva voce, Practical record, Log Book

**Model Time table for Phase II & Phase III part 1 MBBS**

**Refer to RGUHS website**

# Competencies in Internship

## Certifiable Procedural skills desirable of Indian Medical Graduate in Forensic Medicine & Toxicology

### **A. An Intern must have observed or preferably assisted in:**

- Documentation and certification of trauma (I)
- Diagnosis and certification of death (D)
- Legal documentation related to emergency cases (D)
- Certification of medico-legal cases e.g. Age estimation, Sexual Violence etc. (D)
- Establishing communication in medico-legal cases with police, public health authorities, other concerned departments, etc (D)
  - I- Independently performed on patients,
  - O- Observed in patients or on simulations,
  - D- Demonstration on patients or simulations and performance under supervision in patients

### **B. An Intern must have observed a medicolegal autopsy / postmortem**

**Compulsory rotating Internship posting of 7 days in Forensic Medicine and Toxicology**

**Log book to be maintained.**

**The internship posting has to be extended (repeated) till all the certifiable skills are achieved.**

**Use of skill lab is desirable wherever available**

Sl no	Competency	Number of times to be done	Assessment	Setting
1	IMG should independently examine a trauma patient / simulated patient and document and certify trauma	02	Skill assessment	Casualty / EMD
2	IMG should demonstrate on patients or simulations and performance under supervision in patients the diagnosis and certification of death	02	Skill assessment / DOAP Session	Casualty / EMD / Ward / ICU
3	IMG should demonstrate the legal documentation related to emergency care in a medicolegal register / accident register maintained at casualty / EMD	02	Skill assessment / DOAP Session	Casualty / EMD
4	IMG should examine, document and certify in a medicolegal case of age estimation	01	Skill assessment / DOAP Session	Forensic Medicine /Casualty / EMD
5	IMG should examine, document and certify in a medicolegal case of victim of Sexual violence	01	Skill assessment / DOAP Session	OBG /Forensic Medicine /Casualty / EMD
6	IMG should examine, document and certify in a medicolegal case of accused of Sexual violence	01	Skill assessment / DOAP Session	Forensic Medicine /Casualty / EMD

7	IMG should demonstrate communication in medicolegal cases with police	01	Skill assessment / DOAP Session	Forensic Medicine /Casualty / EMD
8	IMG should demonstrate communication in medicolegal cases with public health authorities	01	Skill assessment / DOAP Session	Forensic Medicine /Casualty / EMD
9	IMG should demonstrate communication in medicolegal cases with Radiology / Pathology / Microbiology / FSL departments	01	Skill assessment / DOAP Session	Forensic Medicine /Casualty / EMD
10	IMG should observe and document a medicolegal autopsy / postmortem examination	01	Skill assessment / DOAP Session	Forensic Medicine

## Assessment in Forensic Medicine & Toxicology

**Summative Assessment** - An assessment conducted at the end of instruction to check how much the student has learnt.

**Formative Assessment** - An assessment conducted during the instruction with primary purpose of providing feedback for improving learning.

**Internal Assessment** - Range of assessments conducted by the teachers teaching a particular subject with the purpose of knowing what is learnt and how it is learnt. Internal assessment can have both formative and summative functions.

**Note** - Assessment requires specification of measurable and observable entities. This could be in the form of whole tasks that contribute to one or more competencies or assessment of a competency per se. Another approach is to break down the individual competency into learning objectives related to the domains of knowledge, skills, attitudes, communication etc. and then assess them individually.

**Scheduling of Internal Assessment** - In Phase II MBBS there will be ONE Internal assessments in theory and practicals.

- In Phase III part 1 MBBS there will be two Internal assessments in theory and practical. One of the test should be prelim or pre-university examination

**Theory IA can include:** Theory tests, seminars, quizzes, interest in subject, scientific attitude etc. Written tests should have essay questions, short notes and creative writing experiences.

**Practical IA can include:** practical tests, Objective Structured Practical Examination (OSPE), Directly Observed Procedural Skills (DOPS), records maintenance and attitudinal assessment.

**Assessment of Log-book-** Log book should record all activities like seminar, symposia, quizzes and other academic activities. It should be assessed regularly and submitted to the department. Up to twenty per cent IA Theory marks should be for Log book assessment.

**Assessment of Practical Record book-** Practical book should record all skills and other practical exercises done during the academic programme. It should be assessed regularly and submitted to the department. Up to twenty per cent IA Practical marks should be for Log book assessment

**Internal Assessment for AETCOM will include:** - Written tests comprising of short notes and creative writing experiences.

- OSCE based clinical scenarios and/or viva voce. Skill competencies acquired during the Professional Development Programme (AETCOM) must be tested during the practical and viva voce.

**Feedback in Internal Assessment** - Feedback should be provided to students throughout the course so that they are aware of their performance and remedial action can be initiated well in time. The feedbacks need to be structured and the faculty and students must be sensitized to giving and receiving feedback.

The results of IA should be displayed on notice board within two weeks of the test and an opportunity provided to the students to discuss the results and get feedback on making their performance better.

It is also recommended that students should sign with date whenever they are shown IA records in token of having seen and discussed the marks.

**Internal assessment marks will not be added to University examination marks and will reflect as a separate head of passing at the summative examination.**

**Internal assessment should be based on competencies and skills.**

**Criteria for appearing in University examination:** Learners must secure at least 50% marks of the total marks (combined in theory and practical; not less than 40 % marks in theory and practical separately) assigned for internal assessment in order to be eligible for appearing at the final University examination

**Annexure**

**Teaching Learning Methods**

## Teaching Learning Methods

- Didactic lectures should be made more interactive by encouraging the more involvement of the students. In the present digital era, student's involvement is more with usage of technology. For examples, many polling sessions, quizzes etc can be done using google slides and other apps like Kahoot, Socrative, menti.com etc.
- Small group discussion (SGD) should be planned properly and discussed among the faculty members before taking the class. As far as possible, uniformity should be maintained in the SGD by various facilitators. Case based learning (CBL) and problem based learning (PBL) may be used to make the learner understand and learn about the various aspects in order to achieve the particular competency.
- Encourage the students learn themselves through self-directed learning (SDL). SDL sessions may be planned with objectives in order to cover the particular competency. These sessions may be conducted by providing learning material (research articles, public news, videos, etc) by a teacher and ask the students to search on a particular topic. Students should learn themselves by going through available resources and come back to classes allotted for SDL sessions where teacher able to connect the learning of students in order to achieve the competency.
- Integrated classes should be planned in order to cover the competency involving the topics from different subjects. These classes can be taken using Nesting, Temporal Coordination or Sharing. Case linkers may be used to link the topic/subject area among different subjects/ departments.
- Skills should be taught using the clinical cases at hospital wards/casualty/EMD, simulation in skills labs and/or departmental demonstration rooms. Case scenarios may be developed while teaching at skills lab and/or demonstration rooms.

### Example for teaching the clinical examination in poisoning:

- **Case scenario:** A farmer working in a field was brought with history of breathlessness, vomiting, excessive sweating and muscle twitching. On examination, the pupils were constricted and heart rate was decreased. He had defecated in his cloths. Smell of kerosene was present in his breath. Even the cloths were soiled smelling kerosene.
- **Demonstration of clinical examination:** Mannequins or standardised patients in the skills lab may be used for examination and recording of vital parameters like pulse, BP, RR, SPO2 and state of pupils. Also, response to treatment can be.
- **Diagnosis and management:** Discuss the differential diagnosis, investigations and definitive diagnosis. Discuss the various treatment modalities. The response to drugs used for treatment can be demonstrated using high fidelity mannequins.
- **Medicolegal responsibilities:** The medicolegal responsibilities such as preservation of gastric lavage material, medicolegal documentation, and police intimation should be demonstrated in a simulated environment and using standard formats.

### Example for teaching the topic Injuries/ Trauma with integration:

**Linker Case:** A 30-year-old male while travelling in a motor bike met with an accident with a car coming from opposite

side. As a result of this, he sustained multiple injuries (can be displayed in the form of photographs). He was brought by his friend to the hospital. On reaching the hospital, patient was in semiconscious state with difficulty in breathing.

**Subjects for integration:** Forensic Medicine, General Surgery.

- Forensic Medicine: Topics covered in this subject include different types of mechanical injuries possible in such accidents and other relevant topics related to mechanical injuries. [Competencies to be covered: FM 3.3, 3.4, 3.8]
- General Surgery: First aid treatment, Basic life support, Transportation of patient, Basic management of injuries at hospital. [Competencies to be covered: SU 17.1, 17.2, 17.3]

**Type of Integration:**

- Horizontal: Temporal coordination can be done if is done in the same phase.
- Vertical: Nesting can be used if it is done in two different phases.

**Additional details to case scenario:**

- In addition to linker case, case details need to be added by respective departments depending on the progression of the class (such as clinical features, internal injuries, postmortem findings etc).
- Case details may be introduced step by step in order to involve students in discussion.

**Example for teaching the topic Drugs / Substances of abuse with integration:**

**Linker Case:** A 15-year-old student was brought by his parents to the hospital with a history of addiction to drugs and behavioural changes since 6 months. On examination, the patient was anxious, restless and was hesitant to talk.

**Subjects for integration:** Pharmacology, Forensic Medicine, Psychiatry.

- Pharmacology: Topics covered in this subject include Definitions, List of drugs of abuse, Mechanism of drug addiction. [Competencies to be covered: PH 1.22, 1.23]
- Forensic Medicine: Description of features and management of drugs/substances of abuse. [Competencies to be covered: FM 12.1]
- Psychiatry: Etiology, clinical features, treatment of drugs/substances of abuse. [Competencies to be covered: PS 4.1, 4.2, 4.3, 4.4, 4.6, 4.7]

**Type of Integration:**

- Horizontal: Temporal coordination/ Sharing can be done if is done in the same phase.
- Vertical: Nesting can be used if it is done in two different phases.

**Additional details to case scenario:**

- In addition to linker case, case details need to be added by respective departments depending on the progression of the class (such as clinical features, behavioural changes, complications, legal problems etc).
- Case details may be introduced step by step in order to involve students in discussion.

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## **Annexure**

### **Blue Print & Assessment methods - Theory**

**Number of QPs for the subject: One**

**Theory marks 100**

### **Theory Question Paper: Blue print**

This shows the weightage given to each chapter in the summative assessment. This improves the content validity by distributing the assessment of learners in the competencies that are represented by learning objectives under each chapter.

Number of QPs for the subject: One.

Only CORE competencies shall be considered for framing questions. Each paper should contain the following distribution of questions (as shown in below table).

#### **Theory Question Paper:**

Only CORE competencies shall be considered for framing questions. Each paper should contain the following distribution of questions (as shown in below table).

<i>Type of questions</i>	<i>Marks per question</i>	<i>Number of questions</i>	<i>Total marks</i>
MCQs	1	10	10
Long Essay questions	10	2	20
Short essay questions	5	8	40
Short answer questions	3	10	30

#### **Distribution of marks in suggested blue print:**

Section	Chapters	Marks allotted	Number of questions			
			MCQs	Long essay	Short essay	Short answer
Section 1	General information [Dying declaration, Dying deposition, Medical records, Cause of death]	5 marks	2			1
Section 2	Forensic Pathology [Thanatology, Medicolegal autopsy, Mechanical asphyxia, Thermal deaths, Death due to starvation and neglect, Infanticide]	25 marks*	2	1	2	1
Section 3	Clinical Forensic Medicine [Identification, Mechanical injuries,	25 marks*	2	1	2	1

	Firearm injuries, Regional injuries, Sexual offences, Virginity, Pregnancy, Abortion, Impotence, Sterility, Sterilization, Artificial Insemination, Torture, Child abuse]					
Section 4	Medical Jurisprudence [Medical law and ethics, Euthanasia, Bioethics, Research ethics]	15 marks	1		1	3
Section 5	Forensic Psychiatry, Forensic Laboratory Investigation in medico-legal practice	5 marks	2			1
Section 6	General Toxicology, Chemical Toxicology, Pharmaceutical Toxicology, Biotoxicology, Sociomedical Toxicology, Environmental Toxicology	25 marks*	1		3	3
	<b>Total number of questions</b>	<b>100 marks</b>	<b>10</b>	<b>2</b>	<b>8</b>	<b>10</b>

Section	Chapters	Marks allotted	Number of questions			
			MCQs	Long essay	Short essay	Short answer
Section 1	General information [Competencies 1.7 to 1.10]	5 marks	2			1
Section 2	Forensic Pathology [Competencies 2.1 to 2.28]	25 marks*	2	1	2	1
Section 3	Clinical Forensic Medicine [Competencies 3.1 to 3.23, 3.26 to 3.30]	25 marks*	2	1	2	1
Section 4	Medical Jurisprudence [Competencies 4.1 to 4.8, 4.10 to 4.24, 4.26]	15 marks	1		1	3
Section 5	Forensic Psychiatry, Forensic Laboratory Investigation in medico-legal practice [Competencies 5.1 to 5.5, 6.1 to 6.2]	5 marks	2			1
Section 6	Toxicology [Competencies 8.1 to 8.10, 9.1 to 9.6, 10.1, 11.1, 12.1, 13.1 to 13.2]	25 marks*	1		3	3
	<b>Total number of questions</b>	<b>100 marks</b>	<b>10</b>	<b>2</b>	<b>8</b>	<b>10</b>

\*The Long essay questions shall be chosen from any two sections of Sections 2, 3 and 6. The distribution of questions for these sections shall be as follows:

- Two sections should contain 2 MCQs, 1 Long essay question, 2 Short essay questions and 1 Short answer question.
- One section should contain 1 MCQ, 3 Short essay questions and 3 Short answer questions.

**One Long Essay question and One Short Essay question should be of Problem solving or on Clinical application. 35% questions should be of the Higher order thinking**

This shows the weightage given to each topic in the summative assessment. This improves the content validity by distributing the assessment of learners in the competencies that are represented by learning objectives under each topic.

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# Annexure

## Blue Print & Assessment methods - Practicals

Practicals 80

Viva Voce 20

### Practical Question Paper: Blue print

OSPE in FMT:

<i>Station</i>	<i>Exercise</i>	<i>Marks</i>	<i>Duration</i>
Station-1	Wound certificate	10	30 min

	Weapon examination	5	
Station-2	Age certificate	15	30 min
Station-3	Skeletal remains	10	20 min
Station-4 (Any one exercise)	Victim of rape	10	20 min
	Accused of rape		
	Drunkenness certificate		
Station-5	PM certificate	10	20 min
Station-6	Spotters	10	10 min
Station-7	Blood grouping	5	10 min
Station-8 (Any one exercise)	Preservation of evidentiary materials in poisoning	5	10 min
	Preservation of DNA material for analysis		
	Gestational age of foetus		
	MCCD		

**Detailed planning of practical assessment:**

<i>Station</i>	<i>Exercise</i>	<i>Assessment</i>	<i>Marks</i>	<i>Duration</i>
Station-1	Wound certificate	<p>Option-A:</p> <ul style="list-style-type: none"> <li>A case scenario containing the details of a patient, history and part-task trainer with injuries will be given.</li> <li>Student will be asked to draft a certificate as per the format based on above case details.</li> <li>Evaluation will be based on the checklist.</li> </ul> <p>Option-B:</p> <ul style="list-style-type: none"> <li>A case scenario containing the details of a patient, history, multiple photographs of injuries with scale attached (printed in a single page) will be given.</li> <li>Student will be asked to draft a certificate as per the format based on above case details.</li> <li>Evaluation will be based on the checklist.</li> </ul>	10	30 min
	Weapon examination	<ul style="list-style-type: none"> <li>A weapon related to above wound certificate will be given.</li> <li>Student will be asked to examine and draft a report as per the format.</li> <li>Evaluation will be based on the checklist.</li> </ul>	5	
Station-2	Age certificate	<ul style="list-style-type: none"> <li>A case scenario containing the details of a patient, history, findings of General Physical Examination,</li> </ul>	15	30 min

		<p>Tooth eruption (picture of dentition) and X-ray film/s will be given.</p> <ul style="list-style-type: none"> <li>• Student will be asked to draft a certificate as per the format based on above case details.</li> <li>• Evaluation will be based on the checklist.</li> </ul>		
Station-3	Skeletal remains	<ul style="list-style-type: none"> <li>• A case scenario containing the history and relevant findings of scene from where the bone/s were recovered will be given.</li> <li>• Student will be asked to examine the bone/s and draft a report as per the format.</li> <li>• Evaluation will be based on the checklist.</li> </ul>	10	20 min
Station-4 (Any one exercise)	Victim of rape	<ul style="list-style-type: none"> <li>• A case scenario containing the details of a patient, history and findings related to sexual violence (victim of rape) will be given.</li> <li>• Student will be asked to draft a report in a printed modified format (as shown in annexure) based on case details and answer questions related to case scenario.</li> <li>• Evaluation will be based on the checklist.</li> </ul>	10	20 min
	Accused of rape	<ul style="list-style-type: none"> <li>• A case scenario containing the details of a patient, history and findings related to sexual violence (accused of rape) will be given.</li> <li>• Student will be asked to draft a report in a printed modified format (as shown in annexure) based on case details and answer questions related to case scenario.</li> <li>• Evaluation will be based on the checklist.</li> </ul>		
	Drunkenness certificate	<ul style="list-style-type: none"> <li>• A case scenario containing the details of a patient, history and findings related to drunkenness will be given.</li> <li>• Student will be asked to draft a report as per the format based on case details and answer questions related to case scenario.</li> <li>• Evaluation will be based on the checklist.</li> </ul>		
Station-5	PM certificate	<ul style="list-style-type: none"> <li>• A case scenario containing the details of a patient, history and postmortem findings will be given.</li> </ul>	10	20 min

		<ul style="list-style-type: none"> <li>• Student will be asked to draft the PM certificate and give opinion on cause of death, time since death and any other questions related to case scenario.</li> <li>• Evaluation will be based on the checklist.</li> </ul>		
Station-6 (Spotters)	Hair, Semen, & other Biological fluids; Blood - Identification of species; Photographs / Specimens; Poisons; Histopathology Slides; Firearm cartridge	<ul style="list-style-type: none"> <li>• It should contain 10 spotters.</li> <li>• Each spotter will be awarded maximum of one mark for correct responses.</li> <li>• Each spotter should be completed by 2 minutes duration.</li> <li>• Ideally spotters should contain applied type of questions related to content of the spotter.</li> <li>• Evaluation will be based on the marks allotted to structured questions.</li> </ul>	10	10 min
Station-7	Blood grouping	<ul style="list-style-type: none"> <li>• A case scenario containing the details of a patient, history and relevant findings related to blood grouping will be given.</li> <li>• Student will be asked to determine the blood group of a given sample.</li> <li>• Evaluation will be based on the checklist.</li> </ul>	5	10 min
Station-8 (Any one exercise)	Preservation of evidentiary materials in poisoning	<ul style="list-style-type: none"> <li>• A case scenario containing the details of a patient, history and clinical features of any poisoning will be given.</li> <li>• Student will be asked to list the various evidentiary materials to be preserved in such cases, write the labels for such preservation, and write the letters to FSL for analysis.</li> <li>• Evaluation will be based on the checklist.</li> </ul>	5	10 min
	DNA material	<ul style="list-style-type: none"> <li>• A case scenario containing the details of a patient, history and relevant findings related to DNA analysis will be given.</li> <li>• Student will be asked to list the various evidentiary materials to be preserved in such cases, write the labels for such preservation, and write the letters to FSL for analysis.</li> </ul>		

		<ul style="list-style-type: none"> <li>• Evaluation will be based on the checklist.</li> </ul>		
	Gestational age of foetus	<ul style="list-style-type: none"> <li>• A case scenario containing the details of a patient, history and findings related to gestational age will be given.</li> <li>• Student will be asked to determine the gestational age and answer the questions related to case scenario.</li> <li>• Evaluation will be based on the checklist.</li> </ul>		
	MCCD	<ul style="list-style-type: none"> <li>• A case scenario containing the details of a patient, history and clinical findings related to MCCD will be given.</li> <li>• Student will be asked to draft a certificate as per the format based on above case details.</li> <li>• Evaluation will be based on the checklist.</li> </ul>		

## Annexure

# Checklists

## Checklist for Practical Assessment:

### Wound certificate

(Maximum marks :10)

Component of certificate	Max marks	Marks awarded
Preliminary details (MLC No., Name, Age, Sex, Address, Date of admission & discharge, Brought by)	0.5	
Consent	1	
Identification marks	1	
History	1	
Details of injuries	4	
Opinion	2	
Signature, Name & Designation of doctor	0.5	
<b>Total</b>	<b>10</b>	

### Weapon examination

(Maximum marks :5)

Component of certificate	Max marks	Marks awarded
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Addressing to IO, Subject, Reference	0.5	
Details of receiving weapon from police and date and time of examination	0.5	
Name & Type of weapon; Weight of weapon	1	
Description & dimensions of weapon	1.5	
Opinion	1	
Signature, Name & Designation of doctor	0.5	
<b>Total</b>	<b>5</b>	

### Age certificate

(Maximum marks : 15)

Task	Max marks	Marks awarded
Details on receiving request letter	0.5	
Preliminary details (MLC No., Name, Age, Sex, Address, Date, time & place of examination)	1	
Consent	1	
Identification marks	1	
History	1	
General physical examination with inference	2	
Dental examination with inference	3	
Radiological examination with inference	3	
Final opinion on age	2	
Signature, Name & Designation of doctor	0.5	
<b>Total</b>	<b>15</b>	

### Skeletal remains

(Maximum marks : 10)

Component of certificate	Max marks	Marks awarded
Addressing to IO, Subject, Reference	0.5	
Details of receiving Skeletal remains from police and date and time of examination	1	
Whether it is bone / not?	0.5	
Number of bones/dismembered body parts	0.5	
Physical state of bones/dismembered body		
Belongs to human/animal	4	
Morphological details		
Belongs to one or more individuals	0.5	
Injuries / manner of separation	0.5	
Cause of death		
Time since death	2	
Opinion		
Signature, Name & Designation of doctor	0.5	
<b>Total</b>	<b>10</b>	

### Examination of Victim of sexual violence

(Maximum marks : 10)

<b>Task</b>	<b>Max marks</b>	<b>Marks awarded</b>
Preliminary details (as printed from No. 1 to 11 in the format given)	0.5	
Consent	1	
Identification marks	0.5	
Relevant medical/surgical history	0.5	
History related to sexual violence	0.5	
General physical examination	0.5	
Examination for injuries on body	0.5	
Local examination of genital parts/other orifices	1	
Sample collection/ investigations for hospital laboratory/ Clinical laboratory	1	
Samples Collection for FSL	1	
Date and time of completion of examination	0.5	
Investigation (hospital laboratory/FSL) reports	0.5	
Opinion	2	
<b>Total</b>	<b>10</b>	

**Examination of Accused of sexual violence**

**(Maximum marks : 10)**

<b>Task</b>	<b>Max marks</b>	<b>Marks awarded</b>
Preliminary details (as printed from No. 1 to 11 in the format given)	0.5	
Consent	1	
Identification marks	0.5	
Relevant medical/surgical history	0.5	
History related to sexual violence	0.5	
General physical examination	0.5	
Examination for injuries on body	0.5	
Local examination of genital parts/other orifices	1	
Sample collection/ investigations for hospital laboratory/ Clinical laboratory	1	
Samples Collection for FSL	1	
Hospital laboratory/FSL reports	0.5	
Opinion	2	
Signature, Name & Designation of doctor	0.5	
<b>Total</b>	<b>10</b>	

**Drunkenness certificate**

**(Maximum marks : 10)**

<b>Component of certificate</b>	<b>Max marks</b>	<b>Marks awarded</b>
Preliminary details (OPD/IPD No., MLC No., Name, Age, Sex, Address, Date & time of examination, Brought by)	0.5	
Consent	1	
Identification marks	0.5	
History	1	
General examination	1	
Examination for muscular Co-ordination	1	
Injuries	1	

Systemic examination	0.5	
Collection of materials for analysis	1	
Opinion	2	
Signature, Name & Designation of doctor	0.5	
<b>Total</b>	<b>10</b>	

**Preservation of evidentiary material in Poisoning** (Maximum marks :5)

Component of certificate	Max marks	Marks awarded
From and To address	0.5	
PM No., Name, Age, Sex, Crime/UDR No., PS	0.5	
List of evidentiary materials collected	2	
Signature, Name & Designation of doctor	0.5	
Labels for evidentiary materials	1.5	
<b>Total</b>	<b>5</b>	

**Preservation of evidentiary material for DNA analysis** (Maximum marks :5)

Component of certificate	Max marks	Marks awarded
From and To address	0.5	
PM/MLC No., Name, Age, Sex, Crime/UDR No., PS	0.5	
List of evidentiary materials collected	2	
Signature, Name & Designation of doctor	0.5	
Labels for evidentiary materials	1.5	
<b>Total</b>	<b>5</b>	

**Blood grouping** (Maximum marks :5)

Component of certificate	Max marks	Marks awarded
From and To address	0.5	
PM/MLC No., Name, Age, Sex, Crime/UDR No., PS	0.5	
Test conducted	0.5	
Method used for testing	0.5	
Findings observed after testing	1.5	
Final opinion	1	
Signature, Name & Designation of doctor	0.5	
<b>Total</b>	<b>5</b>	

**MCCD certification** (Maximum marks :5)

Component of certificate	Max marks	Marks awarded
Preliminary details (Name of hospital, Date and time of death)	0.5	
Name, Age, Sex	0.5	
Cause of death (Immediate & Antecedent cause)	2	

Cause of death (Other contributing causes)	0.5	
Manner of death	0.5	
Death associated with pregnancy/ delivery	0.5	
Signature, Name & Designation of doctor	0.5	
<b>Total</b>	<b>5</b>	

**PM certificate**

(Maximum marks :10)

<b>Component of certificate</b>	<b>Max marks</b>	<b>Marks awarded</b>
Drafting PM certificate + Opinion	3+2	
Question 1	1	
Question 2	1	
Question 3	1	
Question 4	1	
Question 5	1	
<b>Total</b>	<b>10</b>	

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## **Annexure**

### **Integration topics**

**Integration:** The teaching should be aligned and integrated horizontally and vertically recognizing the importance of

medico-legal, ethical and toxicological issues as they relate to the practice of medicine.

### **Integration of Forensic Medicine with Other departments:**

The suggested topics, competencies and the subjects/departments for integrated teaching are shown in below table.

<i>Sl. No.</i>	<i>Topic for integration</i>	<i>Subject [Competencies]</i>
1	Injuries / Trauma	Forensic Medicine [FM 3.3, 3.4, 3.8, 3.9, 3.10] General Surgery [SU 17.1, 17.2, 17.3]
2	Wound healing	General Surgery [SU 5.1, 5.2, 5.3, 5.4] Pathology [PA 5.1] Forensic Medicine [FM 3.6]
3	Regional injuries	Forensic Medicine [FM 3.11, 3.12] General Surgery [SU 17.4, 17.5, 17.6, 17.7, 17.8, 17.9, 17.10]
4	Burns	Forensic Medicine [FM 2.24, 2.25] General Surgery [SU 4.1, 4.2, 4.3, 4.4]
5	Organ transplantation	General Surgery [SU 13.1, 13.2, 13.3, 13.4] Ophthalmology [OP 4.9, 4.10] Forensic Medicine [FM 2.4]
6	Pregnancy and labour	Forensic Medicine [FM 3.19, 3.20] OBG [OG 6.1, 7.1]
7	Abortion	Forensic Medicine [FM 3.27, 3.28] OBG [OG 1.3, 9.1, 9.2, 20.1, 20.2]
8	PCPNDT Act	OBG [OG 20.3] Radiodiagnosis [RD 1.13] Forensic Medicine [FM 3.21]
9	Impotence and Sterility	Forensic Medicine [FM 3.22, 3.23, 3.24, 3.25, 3.26] Pharmacology [PH 1.40] OBG [OG 28.1, 28.2, 28.3, 28.4]
10	Psychiatric disorders	Psychiatry [PS 3.7, 3.8] Forensic Medicine [FM 5.1, 5.2, 5.3, 5.4, 5.5, 5.6]

11	General toxicology	Forensic Medicine [FM 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7, 8.8] Pharmacology [PH 1.4, 1.5, 1.11] General Medicine [IM 21.1, 21.5, 21.6, 21.7, 21.8]
12	Insecticides	Forensic Medicine [FM 8.6] Pharmacology [PH 1.52] Community Medicine [CM 3.8]
13	Corrosives	Forensic Medicine [FM 9.1] General Medicine [IM 21.3]
14	Heavy metal poisoning	Forensic Medicine [FM 9.2, 9.3] Pharmacology [PH 1.53]
15	Plant poisons	General Medicine [IM 21.2] Forensic Medicine [FM 10.1]
16	Snake, scorpion, insect bites	Forensic Medicine [FM 11.1] General Medicine [IM 20.1, 20.2, 20.3, 20.4, 20.5, 20.6, 20.7, 20.8,
17	Alcohol disorders	Pharmacology [PH 1.20, 1.21] Pathology [PA 12.1, 25.4] General Medicine [IM 5.5] Forensic Medicine [FM 9.4]
18	Drugs of abuse	Pharmacology [PH 1.22, 1.23] Forensic Medicine [FM 12.1] Psychiatry [PS 4.1, 4.2, 4.3, 4.4, 4.6, 4.7]

Sl no	Subject	Competency number	Competency	TL method	Assessment	Vertical Integration	Horizontal Integration
1	Anatomy	AN14.3	Describe the importance of ossification of lower end of femur & upper end of tibia	Lecture	Viva voce / Practicals	Forensic Medicine	-
2	Pharmacology	PH1.22	Describe drugs of abuse (dependence, addiction, stimulants, depressants, psychedelics, drugs used for criminal offences)	Lecture / SGD	Written / Viva voce	Psychiatry	Forensic Medicine
3		PH5.7	Demonstrate an understanding of the legal and ethical	SGD	Short note / viva voce	-	Forensic Medicine

			aspects of prescribing drugs				
4	Radiodiagnosis	RD1.13	Describe the components of the PC & PNDT act and its medicolegal implications	Lecture / SGD		OBG, Forensic Medicine	-
5	Psychiatry	PS19.3	Describe and discuss the basic legal and ethical issues in psychiatry	Lecture / SGD	Written / Viva voce	Forensic Medicine, AETCOM	-
6	General Medicine	IM20.1	Enumerate the poisonous snakes of your area and describe the distinguishing marks of each	Lecture / SGD	Written / Viva voce	Forensic Medicine, Pharmacology	
7		M20.2	Describe, demonstrate in a volunteer or a mannequin and educate (to other health care workers / patients) the correct initial management of patient with a snake bite in the field	DOAP session	Skill assessment / Written / Viva voce	Forensic Medicine	
8		M20.3	Describe the initial approach to the stabilisation of the patient who presents with snake bite	Lecture / SGD	Written / Viva voce	Forensic Medicine	
9		M20.4	Elicit and document and present an appropriate history, the circumstance, time, kind of snake, evolution of symptoms in a patient with snake bite	Bedside clinic, DOAP session	Skill assessment	Forensic Medicine	
10		IM21.2	Enumerate the common plant poisons seen in your area and describe their toxicology, clinical features, prognosis and specific approach to detoxification	Lecture / SGD	Written / Viva voce	Forensic Medicine, Pharmacology	

11		IM21.3	Enumerate the common corrosives used in your area and describe their toxicology, clinical features, prognosis and approach to therapy	Lecture / SGD	Written / Viva voce	Forensic Medicine, Pharmacology	
12		IM21.4	Enumerate the commonly observed drug overdose in your area and describe their toxicology, clinical features, prognosis and approach to therapy	Lecture / SGD	Written / Viva voce	Forensic Medicine, Pharmacology	
13		IM21.5	Observe and describe the functions and role of a poison centre in suspected poisoning	DOAP Session	Document in log book	Forensic Medicine, Pharmacology	
14		IM21.6	Describe the medico legal aspects of suspected suicidal or homicidal poisoning and demonstrate the correct procedure to write a medico legal report on a suspected poisoning	Lecture / SGD / DOAP Session	Written / Viva voce / Skill assessment	Forensic Medicine, Pharmacology	
15		IM21.7	Counsel family members of a patient with suspected poisoning about the clinical and medico legal aspects with empathy	DOAP Session	Skill assessment	Forensic Medicine, Pharmacology	
16		IM21.8	Enumerate the indications for psychiatric consultation and describe the precautions to be taken in a patient with suspected suicidal ideation / gesture	DOAP Session	Skill assessment	Forensic Medicine, Psychiatry	

17	OBG	OG1.3	Define and Discuss still birth and abortion	Lecture / SGD	Notes	Forensic Medicine		
18		OG9.2	Describe the steps and observe/ assist in the performance of an MTP evacuation	DOAP Session, Bedside clinic	Viva voce	Forensic Medicine		
19		OG20.1	Enumerate the indications and describe and discuss the legal aspects, indications, methods for first and second trimester MTP; complications and management of complications of medical termination of pregnancy	Lecture / SGD	Written / Viva voce	Forensic Medicine		
20		OG20.2	In a simulated environment administer informed consent to a person wishing to undergo medical termination of pregnancy	DOAP Session	Skill assessment	Forensic Medicine		
21		OG20.3	Discuss Pre-conception and Pre Natal Diagnostic Techniques (PC& PNDT) Act 1994 & its amendments	Lecture / SGD	Written / Viva voce	Forensic Medicine		
22	General Surgery	SU8.1	Describe the principles of Ethics as it pertains to surgery	Lecture / SGD	Written / Viva voce/ Skill assessment	Forensic Medicine, AETCOM		
23		SU8.2	Demonstrate Professionalism and empathy to the patient undergoing surgery	Lecture / SGD / DOAP Session	Written / Viva voce/ Skill assessment	Forensic Medicine, AETCOM		
24		SU8.3	Discuss Medico legal issues in surgical practice	Lecture / SGD	Written / Viva voce/ Skill assessment	Forensic Medicine, AETCOM		

**Annexure**

**Topics for Electives**

## **Topics for Electives**

- Disaster management
- Medicolegal aspects of healthcare / hospital administration
- Deposing evidence in a Court of Law
- Medicolegal aspects in management of emergency cases
- Forensic odontology
- Disaster victim identification
- Forensic anthropology
- Forensic psychiatry
- Forensic radiology
- Forensic toxicology
- Snake bite – species identification and management
- Crime scene examination
- Forensic ballistics

Draft

## **Annexure**

# Reference Books and Journals

**Suggested references** (as per Vancouver style): (Specification mentioned such as edition – subject to change with newer edition)

- **Basic references**

- 1) Reddy KSN, Murthy OP. The Essentials of Forensic Medicine and Toxicology. 34<sup>th</sup> edition, 2017. Jaypee Brothers Medical Publishers, New Delhi.
- 2) Pillay VV. Textbook of Forensic Medicine and Toxicology, 19<sup>th</sup> edition, 2019, Paras Medical Publishers, Hyderabad.
- 3) Karmakar RN. Forensic Medicine and Toxicology: Theory, Oral and Practical, 5<sup>th</sup> edition, 2015. Academic Publishers, Kolkata.
- 4) Nandy A. Principles of Forensic Medicine including Toxicology, 3<sup>rd</sup> edition, 2010, New Central Book Agency.
- 5) Subrahmanyam BV. Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology, 8<sup>th</sup> edition, 2019, CBS Publishers.
- 6) Guharaj PV, Gupta SK. Forensic Medicine and Toxicology, 3<sup>rd</sup> edition, 2019, Universities Press (India) Private Ltd., Hyderabad.
- 7) Bardale R. Principles of Forensic Medicine & Toxicology, 2<sup>nd</sup> edition, 2016, Jaypee Brothers Medical Publishers, New Delhi.

- 8) Biswas G. Review of Forensic Medicine & Toxicology, 3<sup>rd</sup> edition, 2015, Jaypee Brothers Medical Publishers, New Delhi.
- 9) Vij K. Textbook of Forensic Medicine and Toxicology: Principles and Practice, 6<sup>th</sup> edition, 2014, Elsevier Ltd.
- 10) Ignatius PC. Forensic Medicine and Toxicology, 4<sup>th</sup> edition, 2019, Elsevier India.
- 11) Pillay VV. NACPFMT's Practical Medicolegal Manual: Medical Ethics, Clinical Forensics & Toxicology, 1<sup>st</sup> edition, 2019, Paras Medical Publishers, Hyderabad.
- 12) Bakkannavar SM. Forensic Medicine and Toxicology: Practical manual, 1<sup>st</sup> edition, 2018, Elsevier India.
- 13) Borah. Medical Ethics for Students and Doctors, 1<sup>st</sup> edition, 2014, Ahuja Publishers.

• **Advanced references (may also include journals/ web/ other electronic sources).**

- 1) Kannan K. Modi's Medical Jurisprudence and Toxicology, 26<sup>th</sup> edition, 2019, LexisNexis.
- 2) Karmakar RN. JB Mukherjee's Forensic Medicine and Toxicology, 2007, Academic Publishers.
- 3) Dogra TD, Rudra A. Lyon's Medical Jurisprudence and Toxicology. 11th edition (reprint), 2018. Delhi Law House, Delhi.
- 4) Saukko P, Knight B. Knight's Forensic Pathology. 4<sup>th</sup> edition. 2015, CRC Press
- 5) Pillay VV. Modern Medical Toxicology, 4<sup>th</sup> edition, 2013, Jaypee Brothers Medical Publishers Ltd., New Delhi.
- 6) Journal of Karnataka Medico-Legal Society.
- 7) Journal of South India Medico-Legal Association.
- 8) Journal of Indian Academy of Forensic Medicine.
- 9) Journal of Indian Society of Toxicology
- 10) Journal of Forensic and Legal Medicine
- 11) Journal of Forensic Sciences
- 12) Indian Journal of Medical Ethics

# **Annexure**

## **Log Book Format**

# Rajiv Gandhi University of Health Sciences Bangalore, Karnataka



## FORENSIC MEDICINE and TOXICOLOGY LOGBOOK FOR MBBS

AS PER

Competency-Based Medical Education Curriculum

**College Name**

**College Logo**

**Affiliated to  
Rajiv Gandhi University of Health Sciences,  
Karnataka  
College Name**

(Affiliated to Rajiv Gandhi University of Health Sciences, Karnataka)

**M.B.B.S Log Book  
Forensic Medicine and Toxicology**

Name of the Student :

University Registration Number :

Academic year :

Signature of the Student :

## CERTIFICATE

This is to certify that Ms / Mr .....  
is student of ..... Medical  
College, ..... He / She has participated in the National Medical Commission  
mandated sessions as a part of the Competency Based Medical Education Curriculum in the subject of  
Forensic Medicine and Toxicology during the period ..... to .....  
Recording of the contents in this Log Book is a bonafide work of the student.

Staff In-charge

Head of Department

Date:

Place:

## **GENERAL INSTRUCTIONS**

- 1) Log book is the record of all the relevant academic/co-curricular activities undertaken by the student in a particular department.
- 2) The student is responsible for getting the entries in the logbook verified by the Faculty in charge regularly.
- 3) Entries in the logbook will reflect the activities undertaken in the department and have to be scrutinized by the Head of the Department.
- 4) The logbook is a record of various activities by the student like:
  - a. Overall participation & performance
  - b. Attendance
  - c. Participation in sessions
  - d. Record of completion of pre-determined activities.
  - e. Acquisition of selected competencies

5) The logbook is the record of work done by the candidate in that department and should be verified by the college before submitting the application of the students for the University examination.

## INDEX

Sl. No.	Type of activity	Page Numbers	
		From	To
1	MBBS Phase II: Seminars, Tutorials, Projects, Case discussion, Debate, Quiz etc		
2	MBBS Phase II: Skill / Practical Sessions, Postmortem/ Clinical case observation		
3	MBBS Phase II: Self-directed learning		

4	MBBS Phase II: AETCOM module		
5	MBBS Phase II: Attendance and Internal Assessment		
6	MBBS Phase III, Part I: Seminars, Tutorials, Projects, Case discussion, Debate, Quiz etc		
7	MBBS Phase III, Part I: Skill / Practical Sessions, Postmortem/ Clinical case observation		
8	MBBS Phase III, Part I: Self-directed learning		
9	MBBS Phase III, Part I: AETCOM module		
10	MBBS Phase III, Part I: Attendance and Internal Assessment		
11	Final Attendance and Internal Assessment marks		
12	Certifiable Skill Acquisition in Forensic Medicine and Toxicology		
13	Achievements, Awards, Conference/ CME/ Workshop attended		
14	Certifiable skills in Internship		

**ACTIVITIES DONE IN  
MBBS PHASE II**

**Seminars, Tutorials, Projects, Case discussion, Debate, Quiz etc**

Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature

**Seminars, Tutorials, Projects, Case discussion, Debate, Quiz etc**

Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature



Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature

**Skill / Practical Sessions, Postmortem/ Clinical case observation**

Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature

**Skill / Practical Sessions, Postmortem/ Clinical case observation**

Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature

**Skill / Practical Sessions, Postmortem/ Clinical case observation**

Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature


**Self-directed learning**

**Name of the topic:**

**Objectives:**

- 1.
- 2.
- 3.
- 4.

**Reflective narration:**

- 1. What did you learn from the above session?

2. How do you apply your knowledge in a medical / medicolegal situation?
3. What skill do you need to develop to handle a real situation in future?

Signature of Faculty

### **Self-directed learning**

**Name of the topic:**

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Signature of Faculty

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**Name of the topic:**

**Objectives:**

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- 2.
- 3.
- 4.

**Reflective narration:**

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2. How do you apply your knowledge in a medical / medicolegal situation?
3. What skill do you need to develop to handle a real situation in future?

Signature of Faculty

## AETCOM Session

**Module number:**

**Name of the topic:**

**Objectives:**

- 1.
- 2.
- 3.
- 4.

**Reflective narration:**

1. What did you learn from this AETCOM session?
2. How do you apply the knowledge gained in a medical / medicolegal situation?
3. What skill do you need to develop to handle a real situation in future?

Signature of Faculty

## AETCOM Session

**Module number:**

**Name of the topic:**

**Objectives:**

- 1.
- 2.

3.  
4.

**Reflective narration:**

1. What did you learn from this AETCOM session?
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Signature of Faculty

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**Module number:**

**Name of the topic:**

**Objectives:**

1.  
2.  
3.  
4.

**Reflective narration:**

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**Module number:**

**Name of the topic:**

**Objectives:**

- 1.
- 2.
- 3.

**Reflective narration:**

- 1. What did you learn from this AETCOM session?
- 2. How do you apply the knowledge gained in a medical / medicolegal situation?
- 3. What skill do you need to develop to handle a real situation in future?

Signature of Faculty

**Formative Assessment**  
 (Written test/ MCQs/ Viva Voce/ Quiz/ Debate etc)

Sl No.	Name of Activity	Date	Rating	Faculty's signature	Feedback	Student's signature

**Rating:** Below Expectations (B) – less than 50 %; Meets Expectations (M) – 51 to 70 %; Exceeds Expectations (E) – above 70 %.

**Formative Assessment**  
(Written test/ MCQs/ Viva Voce/ Quiz/ Debate etc)

Sl No.	Name of Activity	Date	Rating	Faculty's signature	Feedback	Student's signature

**Rating:** Below Expectations (B) – less than 50 %; Meets Expectations (M) – 51 to 70 %; Exceeds Expectations (E) – above 70 %.

**Attendance at the end of MBBS Phase II**

<i>Percentage of classes attended</i>				<i>Student's signature</i>	<i>Faculty's signature</i>
<i>Lecture</i>	<i>SGD</i>	<i>SDL</i>	<i>AETCOM</i>		

**Internal Assessment (IA)**

<i>Sl. No.</i>	<i>Type of Assessment</i>	<i>Date of Assessment</i>	<i>Total marks</i>	<i>Marks scored</i>	<i>Student's signature</i>	<i>Faculty's signature</i>

# **In theory marks**, certain weightage can be given to up-to-date entries of logbook, AETCOM module reflection, Showing Professionalism during the course, etc.

# **In practical marks**, certain weightage can be given to acquisition of skills and up-to-date entries of practical record book.

Draft

Draft

**ACTIVITIES DONE IN  
MBBS PHASE III, Part I**

**Seminars, Tutorials, Projects, Case discussion, Debate, Quiz etc**

Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature

**Seminars, Tutorials, Projects, Case discussion, Debate, Quiz etc**

Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature


**Seminars, Tutorials, Projects, Case discussion, Debate, Quiz etc**

Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature

**Seminars, Tutorials, Projects, Case discussion, Debate, Quiz etc**



**Skill / Practical Sessions, Postmortem/ Clinical case observation**

Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature

**Skill / Practical Sessions, Postmortem/ Clinical case observation**

Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature


**Skill / Practical Sessions, Postmortem/ Clinical case observation**

Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature

**Skill / Practical Sessions, Postmortem/ Clinical case observation**

Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature


**Skill / Practical Sessions, Postmortem/ Clinical case observation**

Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature

**Skill / Practical Sessions, Postmortem/ Clinical case observation**

Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature

## **Self-directed learning**

**Name of the topic:**

**Objectives:**

- 1.
- 2.
- 3.
- 4.

**Reflective narration:**

1. What did you learn from the above session?
2. How do you apply your knowledge in a medical / medicolegal situation?
3. What knowledge or skill do you need to develop to handle similar situation in future?

Signature of Faculty

## **Self-directed learning**

**Name of the topic:**

**Objectives:**

- 1.
- 2.
- 3.
- 4.

**Reflective narration:**

1. What did you learn from the above session?
2. How do you apply your knowledge in a medical / medicolegal situation?

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Signature of Faculty

**Self-directed learning**

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1. What did you learn from the above session?
2. How do you apply your knowledge in a medical / medicolegal situation?
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Signature of Faculty

**Self-directed learning**

**Name of the topic:**

**Objectives:**

- 1.
- 2.
- 3.

4.

**Reflective narration:**

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**Self-directed learning**

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**Name of the topic:**

**Objectives:**

- 1.
- 2.
- 3.
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**Reflective narration:**

1. What did you learn from the above session?
2. How do you apply your knowledge in a medical / medicolegal situation?
3. What knowledge or skill do you need to develop to handle similar situation in future?

Signature of Faculty

## **AETCOM Session**

**Module number:**

**Name of the topic:**

**Objectives:**

- 1.
- 2.
- 3.
- 4.

**Reflective narration:**

1. What did you learn from this AETCOM session?
2. How do you apply the knowledge gained in a medical / medicolegal situation?
3. What skill do you need to develop to handle a real situation in future?

Signature of Faculty

## **AETCOM Session**

**Module number:**

**Name of the topic:**

**Objectives:**

- 1.
- 2.
- 3.
- 4.

**Reflective narration:**

1. What did you learn from this AETCOM session?

2. How do you apply the knowledge gained in a medical / medicolegal situation?
3. What skill do you need to develop to handle a real situation in future?

Signature of Faculty

### AETCOM Session

**Module number:**

**Name of the topic:**

**Objectives:**

- 1.
- 2.
- 3.
- 4.

**Reflective narration:**

1. What did you learn from this AETCOM session?
2. How do you apply the knowledge gained in a medical / medicolegal situation?
3. What skill do you need to develop to handle a real situation in future?

Signature of Faculty

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**Module number:**

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- 1.

- 2.
- 3.
- 4.

**Reflective narration:**

- 1. What did you learn from this AETCOM session?
- 2. How do you apply the knowledge gained in a medical / medicolegal situation?
- 3. What skill do you need to develop to handle a real situation in future?

Signature of Faculty

**Formative Assessment**  
(Written test/ MCQs/ Viva Voce/ Quizzes/ Debate etc)

Sl No.	Name of Activity	Date	Rating	Faculty's signature	Feedback	Student's signature

**Rating:** Below Expectations (B) – less than 50 %; Meets Expectations (M) – 51 to 70 %; Exceeds Expectations (E) – above 70 %.

**Formative Assessment**  
(Written test/ MCQs/ Viva Voce/ Quizzes/ Debate etc)

Sl No.	Name of Activity	Date	Rating	Faculty's signature	Feedback	Student's signature

**Rating:** Below Expectations (B) – less than 50 %; Meets Expectations (M) – 51 to 70 %; Exceeds Expectations (E) – above 70 %.

**Formative Assessment**  
 (Written test/ MCQs/ Viva Voce/ Quizzes/ Debate etc)

Sl No.	Name of Activity	Date	Rating	Faculty's signature	Feedback	Student's signature


**Rating:** *Below Expectations (B) – less than 50 %; Meets Expectations (M) – 51 to 70 %; Exceeds Expectations (E) – above 70 %.*

Draft

**Attendance at the end of MBBS Phase III, Part I**

<i>Percentage of classes attended</i>				<i>Student's signature</i>	<i>Faculty's signature</i>
<i>Lecture</i>	<i>SGD</i>	<i>SDL</i>	<i>AETCOM</i>		

## Internal Assessment (IA)

Sl. No.	<i>Type of Assessment</i>	<i>Date of Assessment</i>	<i>Total marks</i>	<i>Marks scored</i>	<i>Student's signature</i>	<i>Faculty's signature</i>

# **In theory marks**, certain weightage can be given to up-to-date entries of logbook, AETCOM module reflection, Showing Professionalism during the course, etc.

# **In practical marks**, certain weightage can be given to acquisition of skills and up-to-date entries of practical record book.

## FINAL ATTENDANCE

<i>Phase</i>	<i>Percentage of classes attended</i>	<i>Eligible for</i>	<i>Student's</i>	<i>Faculty's</i>
--------------	---------------------------------------	---------------------	------------------	------------------

		<i>Theory</i>	<i>Practical</i>	AETCOM	<i>University examination (Yes / No)</i>	<i>signature</i>	<i>signature</i>
attendance at the end of MBBS Phase II					Not applicable		
attendance at the end of MBBS Phase III (part I)							

**FINAL INTERNAL ASSESSMENT MARKS**

<i>Sl. No.</i>	<i>Type of Assessment</i>	<i>Total marks</i>	<i>Marks scored</i>	<i>Student's signature</i>	<i>Faculty's signature</i>
1	Theory				
2	Practical				

**Achievements, Awards, Conference/ CME/ Workshop attended**  
**(Related to Forensic Medicine and Toxicology)**

Sl No.	Date	Particulars	Faculty's signature

# **ACTIVITIES DONE**

## **During Internship**

### Skills in Forensic medicine & Toxicology

Skill	Observed		Assisted		Done under Supervision		Able to do independently		Remarks/ Comments
	Date	No	Date	No	Date	No	Date	No	
Documentation and certification of trauma(I)									
Diagnosis and certification of death (D)									
Legal documentation related to emergency cases (D)									
Legal documentation related to emergency cases (D)									
Certification of medical-legal cases - Age estimation,. (D)									
Certification of medical-legal cases - sexual violence etc. (D)									
Certification of medical-legal cases - sexual violence etc. (D)									
Establishing communication in medico-legal cases with police, (D)									
Establishing communication in medico-legal cases with public health authorities, (D)									
Establishing communication in medico-legal cases with other concerned departments (D)									

Skill	Observed		Assisted		Done under Supervision		Able to do independently		Remarks/ Comments
	Date	No	Date	No	Date	No	Date	No	
Prerequisites, Conduct and Opinion Writing in Medicolegal Autopsy (D)									
Prerequisites, Conduct and Opinion Writing in Medicolegal Autopsy (D)									
Prerequisites, Conduct and Opinion Writing in Medicolegal Autopsy (D)									
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Prerequisites, Conduct and Opinion Writing in Medicolegal Autopsy (D)									

Draft

**Annexure**

**Model Question papers**

# Rajiv Gandhi University of Health Sciences, Karnataka

Forensic Medicine & Toxicology

QP Code - XXXXX

Answer all questions, Illustrate your answer with diagrams wherever relevant

Max Marks 100

(This Question paper has XX pages)

Max Time 3 hours

**Long Essay: (10 M X 2 = 20 M)**

1. A 30 year old agricultural labourer was brought to emergency department of the hospital with symptoms of excessive salivation, tears in the eyes, blurred vision, frequent urination, diarrhea and difficulty in breathing. Relatives accompanying him give history of he spraying some fluid in the fields when they saw him collapsed at the field. The doctor on examination found smell of kerosene emitting from mouth and nostrils, miosis, hypotension, bradycardia.
  - a) What is the probable diagnosis of poisoning? Give reasons **2M**
  - b) What is the mechanism of action in such poisoning for the expression of different signs and symptoms **2M**
  - c) Describe the management of such poisoning cases. **2M**
  - d) Describe the postmortem examination features in such poisoning case deaths. **2M**
  - e) Describe the Medicolegal importance of such poisoning cases **2M**
2. Classify changes after death. Describe in detail about the mechanism of action, factors affecting, medicolegal importance and conditions mimicking Rigor mortis.  
(2+2+2+2+2= 10M)

**Short Essay: (5 M X 8= 40 M)**

3. The Police found a human hand in a dust bin with intact fingers and tissues without any decomposition. How to identify the owner of this hand by examining the skin findings of the finger tips only? Describe in detail about this method of identification. What is the medicolegal importance of such method of identification?  
(1+2+2= 5M)
4. Describe in detail the procedure of calculation of time since death by use of features of late changes after death in a dead body. **5M**
5. Describe in detail the procedure of medicolegal autopsy in a case of Custodial death as per NHRC (National Human Rights Commission) guidelines. **5M**
6. Describe the mechanism of action, clinical features, management, postmortem findings and medicolegal aspects of chronic lead poisoning  
(1+1+1+1+1= 5M)
7. Describe the mechanism of action, clinical features, management, postmortem findings and medicolegal aspects of Organophosphorus poisoning  
(1+1+1+1+1= 5M)
8. Define Professional Misconduct, Enlist four examples. What is the disciplinary procedure in such cases by State medical Council? (1+2+2= 5M)

9. Classify Skull fractures. What is Signature fracture and Ring fracture? What is lucid interval of head injury?  
(2+2 +1= 5M)
10. Describe the differentiating features between dry flame burns, scalds and chemical burns of skin. Add a note on Heat hematoma and heat laceration. (3+2=5M)

**Short Answer: (3 M X 10 = 30 M)**

11. Define Rape under Section 375 IPC 3M
12. Describe the entry wound of a Rifled firearm of a contact shot over the temple region of skull 3M
13. Name three poisons which can be identified by their characteristic smell / odour in a poisoned person. (Both Poison name and characteristic smell / odour has to be written)  
(1+1+1= 3M)
14. Describe the changes brought out by the MTP Amendment Act of 2021 3M
15. What is Privileged Communication, Describe with examples 3M
16. What constitutes Res ipsa loquitor, Describe with examples 3M
17. Describe the Rights of a registered medical practitioner 3M
18. Describe three differences between True insanity and Feigned insanity 3M
19. Describe three acts of Omission for causing Infanticide 3M
20. Describe three differences between Dying Declaration and Dying Deposition 3M

**MCQ (Multiple choice questions): (1M X 10 = 10 M)**

- 21.
- i. Kleptomania is an example of ..... disorder  
 a) Delusion      b) Impulse      c) Hallucination      d) Insomnia
- ii. Luminal test is used to identify stains of  
 a) Blood      b) Semen      c) Feces      d) Saliva
- iii. Diagnosis of COMA in a dead person is also known as  
 a) Moment of death      b) Mode of death      c) Cause of death      d) Manner of death

- iv. Oochronosis is seen in poisoning of  
a) Formic acid      b) Nitric acid      c) Oxalic acid      d) Carbolic acid
- v. N-acetyl Cysteine is used as antidote in the poisoning of  
a) Paraquat      b) Phosphorus      c) Paracetamol      d) Paraldehyde

22.

- i. Certifying Compositus mentis by the doctor is done by examining  
a) Bicep reflex      b) Patellar reflex      c) Babinski  
sign      d) Higher mental functions
- ii. Suspended animation is also known as  
a) Apparent death      b) Brain death      c) Sudden death      d) Instantaneous death
- iii. Brush burn is also known as  
a) Scalds      b) Joule burn      c) Dermabrasion      d) Grazed abrasion
- iv. Penal erasure means  
a) Punishment under IPC      b) Professional death sentence      c) Judicial hanging  
d) Marking Nut
- v. Locard's method is also known as  
a) Poroscopy      b) Rugoscopy      c) Cheiloscopy      d) Palatoscopy
-

**RAJIV GANDHI UNIVERSITY OF MEDICAL SCIENCES, KARNATAKA**  
**MBBS Phase – III, Part I (CBME) Degree Examination**

**Time: Three hours**  
**Marks: 100 Marks**

**Max.**

**FORENSIC MEDICINE (RS-4)**

**Q.P. CODE:**

Your answers should be specific to the questions asked  
Draw neat labelled diagrams wherever necessary  
(Questions No. 21 & 22 will have Multiple Choice Questions)

**LONG ESSAYS:**

**2 x 10 = 20 marks**

1. A 42-year-old male was found dead in his house in Mangalore. Autopsy was conducted on the deceased on 21<sup>st</sup> February, which revealed a moderately built adult male, measuring 165 cm in length and weighing 58 kg. Muscles of the jaw, neck, trunk and upper limbs were stiffened. The back of trunk was bluish to purplish coloured and on pressure over it for about a minute showed blanching. Body orifices are intact and healthy. Conjunctiva is pale on both sides. No external injuries are present on the body. Internal examination revealed oedematous lungs, congestion of liver, kidney and spleen. Heart examination revealed atherosclerotic changes in all the coronary arteries. Organs were preserved for histopathological examination. Viscera and blood preserved for chemical analysis. Cause of death kept pending histopathology and chemical analysis reports.

Question 1.1: Name of postmortem changes 'muscle stiffness of the body' and 'bluish colouration over back of trunk'. (2 marks)

Question 1.2: Enumerate the early postmortem changes after death. (2 marks)

Question 1.3: Describe the mechanism of postmortem change 'muscle stiffness'. (2 marks)

Question 1.4: Describe the medicolegal importance of postmortem change 'muscle stiffness'. (2 marks)

Question 1.5: Estimate the time since death in this case with reasons. (2 marks)

2. A 30-year-old male was brought to a casualty with a history of consumption of an unknown poison. Patient was in semiconscious state with vomitus material on the shirt with kerosene like odour. He had difficulty in breathing with excessive salivation and profuse sweating. On examination, it was observed that pupils were constricted with bradycardia, hypotension, abdominal cramps, wheezing and crepitations on lung auscultation.

Question 2.1: What is the most probable diagnosis in this case? (1 mark)

Question 2.2: Explain the mechanism of this poisoning. (2 marks)

Question 2.3: Interpret the lung findings in this case with reasoning. (2 marks)

Question 2.4: Suggest the investigations required in this case. (2 marks)

Question 2.5: Create a treatment plan for this poisoning. (3 marks)

**SHORT ESSAYS:**

**8 x 5 = 40 Marks**

3. Define hanging. Describe the postmortem findings in a complete hanging. (1+4 = 5 marks)
4. Explain difference between scald and flame burn. (5 marks)

5. Define Dactylography. Mention it's types. Explain its medicolegal importance. (1+2+2 = 5 marks)
6. A 25-year-old unmarried female was arrived to a hospital with history of sexual violence. The patient was examined by the duty doctor and documented the findings and preserved samples for medical laboratory and forensic laboratory analysis. After receiving the lab reports, doctor opines as 'there are signs suggestive of vaginal intercourse with force'.
- Question 6.1: Enumerate the findings of general physical examination. (1 mark)
- Question 6.2: Describe the findings of genital examination. (2 marks)
- Question 6.3: Enumerate the samples collected for medical & forensic laboratory analysis. (1 mark)
- Question 6.4: Justify with reasons for the doctor's opinion. (1 mark)
7. Define contusion. Describe its medicolegal importance. (1+4 = 5 marks)
8. A patient visits a doctor complaining of pain abdomen since 2 days. After clinical examination doctor asks the patient to get a US scan abdomen at XYZ laboratory. Patient pays his professional fee Rs. 300 and visits the laboratory for scanning. After scanning, the patient was asked to pay Rs. 2000, which was argued by the patient for extra charges and threatened to lodge a complaint. Finally, lab informs that 50% goes to the doctor as cuts for referring the patient.
- Question 8.1: Name the unethical act by the doctor in this case. (1 mark)
- Question 8.2: Define the doctor's offence in this case as per the IMC Act. (1 mark)
- Question 8.3: Justify the reason for concluding the doctor's act as unethical. (2 mark)
- Question 8.4: Describe any two punishments for unethical act in this case. (1 mark)
9. Differentiate between venomous and non-venomous snake. (5 marks)
10. Explain the treatment of cyanide poisoning. (5 marks)

#### SHORT ANSWERS:

**10 x 3 = 30 Marks**

11. Define dying declaration and explain its medicolegal importance. (1+2 = 3 marks)
12. Describe the skin incisions used for medicolegal autopsy. (3 marks)
13. What is meant by tandem bullet, Dum-Dum bullet and Souvenir bullet. (3 marks)
14. Write briefly on whiplash injury. (3 marks)
15. Enumerate any three indications for MTP. (3 marks)
16. Name any one active principle of Abrus precatorius, Ricinus and Cannabis. (1+1+1 = 3 marks)

17. Define Bioethics. Enumerate any 4 principles of Bioethics. (1+2 = 3 marks)
18. Define Euthanasia and explain its types. (1+2 = 3 marks)
19. What is meant by 'Res Ipsa Loquitor'? Give any two suitable examples. (1+2 = 3 marks)
20. Explain the Criminal responsibility of an insane person. (3 marks)

**MULTIPLE CHOICE QUESTIONS:**

**10 x 1 = 10 Marks**

*[Instructions: Write the question number followed by your response.]*

- 21.i) The form used for Medical Certification of Cause of Death in institutional deaths is:
- a. Form No. 3
  - b. Form No. 3A
  - c. Form No. 4
  - d. Form No. 4A
- 21.ii) As per Indian Medical Council (Professional Conduct, Etiquette and Ethics) Regulations, 2002, a physician has to maintain indoor medical records for a period of:
- a. 2 years
  - b. 3 years
  - c. 5 years
  - d. 10 years
- 21.iii) All the following organs are shrunken in death due to starvation, EXCEPT:
- a. Pancreas
  - b. Spleen
  - c. Gall bladder
  - d. Liver
- 21.iv) The measurement usually taken to calculate the gestational age in Haase's rule is:
- a. Crown-heel length
  - b. Crown-rump length
  - c. Crown-toe length
  - d. Rump-heel length
- 21.v) For Homologous Artificial Insemination, the semen is obtained from:
- a. Husband
  - b. Donor
  - c. Sperm bank

d. Both husband and donor

22.i) One of the following is NOT a recognized type of consent in medical practice:

- a. Implied
- b. Expressed
- c. Informed
- d. Hearsay

22.ii) A false perception in the absence of any sensory stimulus is called as:

- a. Delusion
- b. Hallucination
- c. Illusion
- d. Delirium

22.iii) One of the following is NOT a test for detecting seminal stains:

- a. Zinc test
- b. Florence test
- c. Phenolphthalein test
- d. Barberio's test

22.iv) The term "Corrosive sublimate" refers to:

- a. Sulfuric acid
- b. Carboic acid
- c. Copper sulfate
- d. Mercuric chloride

22.v) One of the following opiates does NOT belong to 'Phenanthrene' group:

- a. Papaverine
- b. Thebaine
- c. Morphine
- d. Codeine

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# Competency Based Medical Education

## MBBS

### Phase III , Part I

## Community Medicine

(a) **Competencies:** The learner must demonstrate:

1. Understanding of physical, social, psychological, economic and environmental determinants of health and disease,
2. Ability to recognize and manage common health problems including physical, emotional and social aspects at individual family and community level in the context of National Health Programmes
3. Ability to Implement and monitor National Health Programmes in the primary care setting
4. Knowledge of maternal and child wellness as they apply to national health care priorities and programmes,
5. Ability to recognize, investigate, report, plan and manage community health problems including malnutrition and emergencies.

(b) **Integration:** The teaching should be aligned and integrated **horizontally** and vertically in order to allow the learner to understand the impact of environment, society and national health priorities as they relate to the promotion of health and prevention and cure of disease.

#### TEACHING METHODS & HOURS

	Large group Teaching	Small group teaching/Practical /Tutorials	SDL	AETCOM	Total	Clinical/Field Posting
1 <sup>st</sup> Professional	20 hours	27 hours	5hours	-	52hours	-
2 <sup>nd</sup> Professional	20 hours	30 hours	10hours	7 hours	60 hours	4weeks
3 <sup>rd</sup> Professional	40 hours	60 hours	5 hours	-	105 hours	6weeks
Total	80 hours	117 hours	20 hours	7 hours	217 hours	10weeks

## COMMUNITY MEDICINE SYLLABUS FOR FIRST PROFESSIONAL YEAR

Sl no	TOPIC	LECTURE	SGD/DOAP	SDL	TOT HOURS
1	Concept of Health and Disease (CM 01)	8	13	1	22
2	Relationship of social and behavioural to health and disease ( CM 02)	4	3	1	8
3	Nutrition (CM 05)	5	7	2	14
4	Demography and vital statistics (CM 09)	3	4	1	8
<b>TOTAL HOURS</b>		<b>20</b>	<b>27</b>	<b>5</b>	<b>52</b>
<b>*AETCOM</b>		<b>8 HRS</b>			
<b>INTEGRATION / AETCOM SUPERVISION</b>					

## COMMUNITY MEDICINE SYLLABUS FOR SECOND PROFESSIONAL YEAR

Sl no	TOPIC	LECTURE	SGD/DOAP	SDL	TOTAL HOURS
1	Environmental health problems (CM 3)	2	19	2	23
2	Epidemiology (CM 7)	10	8	2	20
3	Occupational Health (CM 11)	4	0	1	5
4	Disaster Management (CM 13)	2	0	2	4
5	Mental Health (CM 15)	0	2	2	4
6	International health (CM 18)	2	0	0	2
7	Essential Medicine (CM 19)	0	1	1	2
<b>TOTAL HOURS</b>		<b>20</b>	<b>30</b>	<b>10</b>	<b>60</b>
+	<p>The number of hours mentioned above are rough guidelines that can be modified to Suit the specific requirements of a medical college.</p> <p>It is recommended that didactic teaching be restricted to less than one third of the total time allotted for that discipline.</p>				

- ✚ Greater emphasis is to be laid on hands-on training, symposia, seminars, small group discussions, problem-oriented and problem-based discussions and self-directed learning.
- ✚ Students must be encouraged to take active part in and shared responsibility for their Learning.

## **COMMUNITY MEDICINE SYLLABUS FOR THIRD PROFESSIONAL YEAR**

<b>SI no</b>	<b>TOPIC</b>	<b>LECTURE</b>	<b>SGD/ DOAP</b>	<b>SDL</b>	<b>TOTAL HOURS</b>
1	Principles of health promotion and education (CM 04)	03	0	0	03
2	Basic statistics and its applications (CM 06)	0	12	0	12
3	Epidemiology of communicable and non-communicable diseases (CM 08)	15	30	01	46
4	Reproductive maternal and child health (CM 10)	10	10	01	21
5	Geriatric services (CM 12)	01	02	0	03
6	Hospital waste management (CM 14)	01	02	01	04
7	Health planning and management (CM 16)	02	02	0	04
8	Health care of the community (CM 17)	06	0	01	07
9	Recent advances in Community Medicine (CM 20)	02	02	01	05
	<b>TOTAL HOURS</b>	<b>40</b>	<b>60</b>	<b>05</b>	<b>105</b>

Sl no	Topic
1	Concept of Health and Disease ( CM 01)
2	Relationship of social and behavioural to health and disease ( CM 02)
3	Environmental health problems ( CM 3)
4	Principles of health promotion and education (CM 04)
5	Nutrition ( CM 05)
6	Basic statistics and its applications (CM 06)
7	Epidemiology ( CM 7)
8	Epidemiology of communicable and non- communicable diseases (CM 08)
9	Demography and vital statistics ( CM 09)
10	Reproductive maternal and child health (CM 10)
11	Occupational Health ( CM 11)
12	Geriatric services (CM 12)
13	Disaster Management ( CM 13)
14	Hospital waste management (CM 14)
15	Mental Health ( CM 15)
16	Health planning and management (CM 16)
17	Health care of the community (CM 17)
18	International health ( CM 18)
19	Essential Medicine/Integration ( CM 19)
20	Recent advances in Community Medicine (CM 20)

### **ASSESSMENT / UNIVERSITY EXAMINATION**

**Summative Assessment** - An assessment conducted at the end of instruction to check how much the student has learnt.

**Formative Assessment** - An assessment conducted during the instruction with primary purpose of providing feedback for improving learning.

Internal assessment – Range of assessments conducted by the teacher teaching a particular subject with the purpose of knowing what is learnt. Internal assessment can have both formative and summative functions.

**Note** - Assessment requires specification of measurable and observable entities. This could be in the form of whole tasks that contribute to one or more competencies or assessment of a competency per se. Another approach is to break down the individual competency into learning objectives related to the domains of knowledge, skills, attitudes, communication etc. and then assess them individually.

**Scheduling of Internal Assessment** - done once at the end of each professional year

**Theory IA can include:** Written tests should have essay questions, short notes, and creative writing experiences.

**Practical IA can include:** Spotters, Problem solving exercises, Objective Structured Practical / Clinical Examination (OSPE / OSCE), Clinicosocial case discussion, and records maintenance and logbook assessment.

**Assessment of Log-book-** Log book should record all academic and curricular activities like seminar, symposia, and quizzes. It should be assessed regularly and submitted to the department. Marks should be allotted for logbook assessment and should be included as a part of formative assessment marks under practical's

**Assessment of Practical Record book-** Practical book should record all skills and other practical exercises done during the academic programme. It should be assessed regularly and submitted to the department. Marks should be allotted for practical record and should be included as a part of formative assessment marks under practical's

**Assessment for AETCOM will include:** - Written tests comprising of short notes and creative writing experiences only in internal assessment.

### **INTERNAL ASSESSMENT**

- There will be 3 internal assessment examinations in Community Medicine. The structure of the internal assessment examinations should be like the structure of University examinations.
- It is mandatory for the students to appear for all the internal assessment examinations.
- First internal assessment examination will be held at the end of 1<sup>st</sup> professional, second internal assessment examination will be held at the end of 2<sup>nd</sup> professional and 3<sup>rd</sup> internal assessment examination will be held at the end of 3<sup>rd</sup> professional as per University Pattern .

- Pattern of first and second Internal Assessment are left to the discretion of the individual institute. However, third internal assessment has to be conducted in the same pattern of the University exam
- Additional internal assessment examination for absent students can be considered due to genuine reason after approval by the head of the department. It should be taken before the submission of internal assessment marks to the University.
- Internal assessment marks allotment for theory and practical for the first and second internal assessment are left to the discretion of the respective institutes. Marks allotted in the third (final) Internal Assessment should be preferably for 100 marks each for Theory and Practical.
- 20% of the internal assessment marks should be from Formative Assessment in Practical internal assessment
- Feedback in Internal Assessment - Feedback should be provided to students throughout the course so that they are aware of their performance and remedial action can be initiated well in time. The feedbacks need to be structured and the faculty and students must be sensitized to giving and receiving feedback.
- The results of IA should be displayed on notice board within two weeks of the test and an opportunity provided to the students to discuss the results and get feedback on making their performance better.
- It is also recommended that students should sign with date whenever they are shown IA records in token of having seen and discussed the marks.
- Internal assessment marks will not be added to University examination marks and will reflect as a separate head of passing at the summative examination.
- Internal assessment should be based on competencies and skills.
- Criteria for appearing in University examination: Learners must secure at least 50% marks of the total marks (combined in theory and practical; not less than 40 % marks in theory and practical separately) assigned for internal assessment in order to be eligible for appearing at the final University examination.
- **Average marks obtained in all three internal assessments should be calculated to 40 marks.**
- A candidate who has not secured requisite aggregate in the internal assessment may be subjected to remedial assessment by the institution. If he/ she successfully complete the same, he/she is eligible to appear for University Examination. Remedial assessment shall be completed before submitting the internal assessment marks online to the University.

## **Annexures**

### **Blueprint for Theory and Practical assessment**

## SCHEME OF EXAMINATION

### Internal assessment

TABLE SHOWING SCHEME FOR CALCULATION OF INTERNAL EXAMINATION MARKS

Theory (Maximum marks)		Practical (Maximum marks)	
Theory papers	30*	Practical exercises	30**
Professionalism	5	Level of participation in AETCOM activities	5
Part completion tests	5	Practical record book	5
<b>TOTAL</b>	<b>40</b>	<b>TOTAL</b>	<b>40</b>
Please note:			
<input type="checkbox"/> *Prior to submission to the University, the marks for each of the internal examination theory assessments must be calculated out of 30 marks, regardless of the maximum marks.			
<input type="checkbox"/> **Prior to submission to the University, the marks for each of the internal examination practical assessments must be calculated out of 30 marks, regardless of the maximum marks.			
<input type="checkbox"/> Only the final marks out of 40 (as in the table) needs to be submitted to the University, separately for theory and practical for each internal assessment.			

### GENERAL INSTRUCTIONS

- Questions in each paper should be as per distribution of competencies in each professional year.
- The SLO to be referred while setting the question paper
- Repetition of questions from the same SLO to be avoided
- The marks allotted to the different topics & sections to be adhered
- There will be at least one question on AETCOM in the theory papers.
- Internal assessment needs to be for 40 marks in theory and 40 marks for Practical
- Internal assessment for theory may constitute Long essay, Short essay, and short answers
- 20% of the internal assessment marks will be contributed by formative assessment in both theory i.e. 8 marks in theory and 8 marks in practical.
- Total internal assessment marks of 40 will be 32 for internal assessment and 8 for formative assessment conducted. (32+8=40)
- Marks allocated for record and logbook maintenance will be added to practical internal assessment marks.

### FORMATIVE ASSESSMENT

- CBME mandates conduct of formative assessments, institutions can conduct formative assessments as per their convenience however the formative assessment would contribute towards the internal assessments.

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- Institutions can select from the suggested methods of formative assessment that are given below however the institutions can adapt methods that comply with that of the MCI regulations.
- Feedback to students regarding formative assessment have to be documented and should be the basis for mark allocation.
- The logbook in community medicine is a record of all activities of the students. All competencies at a “Shows How” level in the Miller’s pyramid should be documented in the logbook. In addition, logbook also contains documentation of attendance, involvement in departmental academic and extracurricular activities and feedback given to the student. The logbook should be signed by faculty on a regular basis. A total of 10 marks should be allotted to logbook in the second professional year. This should be reduced and added to formative assessment marks.
- The practical record in community medicine contains documentation of the practical sessions head during the course. A total of 10 marks should be allotted to practical record and should be reduced and added to formative assessment marks in the second professional year.
- Suggested methods for Formative Assessments are:
  - MCQs
  - Essays
  - Assignments
  - Seminar presentations
  - Project work
  - OSCE
  - OSPE

### Scheme of Internal assessment

Timing	Theory	Practical
1 <sup>st</sup> Professional Year	40	40
2 <sup>nd</sup> Professional Year	40	40
3 <sup>rd</sup> Professional Year	40	40
*(As per University Pattern)	(100)*	(100)*

### University Examination Marks

	University Examination Marks			Internal Assessment	
	Theory	Clinical/ Practical	Viva	Theory	Practical
	Paper 1=100 Paper 2=100  Long Essay 10X2  Short essay 8x5=40 marks	<ul style="list-style-type: none"> <li>• Case Discussion(35)</li> <li>• Epidemiological Exercises (35)</li> <li>• Spotters (10)</li> </ul> <b>=80</b>	40	40	40

	Short answer 10x3=30marks MCQs 10x1=10marks				
	Mandatory 50% theory and Practical				50% combined in theory and Practical (not less than 40% in each) for eligibility of appearing the University Examination

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### Distribution of Topics for Paper -1 & paper- 2 for University Examination

<b>PAPER 1 Topics</b>	<b>PAPER 2 Topics</b>
<ul style="list-style-type: none"><li>• Concept of Health and Disease (CM 01)</li><li>• Relationship of social and behavioural to health and disease (CM 02)</li><li>• Environmental Health Problems (CM 03)</li><li>• Nutrition (CM 05)</li><li>• Basic Statistics and its Applications (CM 06)</li><li>• Epidemiology (CM 07)</li><li>• Demography and vital statistics (CM 09)</li><li>• Reproductive, Maternal and Child Health (CM 10)</li><li>• International Health (CM 18)</li></ul>	<ul style="list-style-type: none"><li>• Principles of Health Promotion and Education (CM 04)</li><li>• Epidemiology of communicable and non- communicable diseases (CM 08)</li><li>• Occupational Health (CM 11)</li><li>• Geriatric services (CM12)</li><li>• Disaster Management (CM 13)</li><li>• Hospital Waste management (CM14)</li><li>• Mental Health (CM 15)</li><li>• Health Planning and Management (CM 16)</li><li>• Health Care of the Community (CM 17)</li><li>• Essential Medicines (CM 19)</li><li>• Recent Advances In Community Medicine (CM 20)</li></ul>

**THIRD PROFESSIONAL YEAR**

SI No.	Classes	Teaching method	Competency	Integration	Misc.	Assessment
<b>PRINCIPLES OF HEALTH PROMOTION AND EDUCATION (CM 04)</b>						
1	Describe the models of Health education & Describe various methods of health education with their advantages and limitations	LGT	CM4.1			Written/ Viva-voce
2	Describe the methods of organizing health promotion and education and counseling activities at individual family and community	SGT	CM4.2			Written/ Viva-voce
3	Demonstrate and describe the steps in evaluation of health promotion and education program	SGT	CM4.3			Written/ Viva-voce/ Skill Assessment
<b>Note: L- Lecture (03); SGD- Small group discussion (00); SDL-Self-directed learning (0)</b>						
<b>BASIC STATISTICS AND ITS APPLICATIONS [CM 6 - 6.1 TO 6.4]</b>						
1.	Discuss and introduce the topic of biostatistics and its applications. Formulate a research question for a study	SGD-1	CM 6.1	V.I with General Medicine & Paediatrics	Practical	Written/ Viva-voce/ Skill Assessment
2.	Describe and discuss the principles and demonstrate the methods of collection and classification of statistical data	SGD-2	CM 6.2	V.I with General Medicine & Paediatrics	Practical	Written/ Viva-voce/ Skill Assessment
3.	Enumerate, discuss and demonstrate common sampling techniques	SGD-3	CM 6.4	V.I with General Medicine & Paediatrics	Practical	Written/ Viva-voce/ Skill Assessment
4.	Describe and discuss the principles and demonstrate the methods of analysis and interpretation	SGD-4	CM 6.2	V.I with General Medicine & Paediatrics	Practical	Written/ Viva-voce/ Skill Assessment
5.	Describe and discuss the principles and demonstrate the methods of presentation of statistical data using frequency distribution and other appropriate methods	SGD-5	CM 6.2 & 6.4	V.I with General Medicine & Paediatrics	Practical	Written/ Viva-voce/ Skill Assessment
6.	Describe and discuss the elementary statistical methods - central tendency and dispersion	SGD-6	CM 6.4	V.I with General Medicine & Paediatrics	Practical	Written/ Viva-voce/ Skill Assessment
7.	Demonstrate the application of measures of central tendency and dispersion for discrete data	SGD-7	CM 6.4	V.I with General Medicine & Paediatrics	Practical	Written/ Viva-voce/ Skill Assessment
8.	Demonstrate measures of central tendency and dispersion for continuous data	SGD-8	CM 6.4	V.I with General Medicine & Paediatrics	Practical	Written/ Viva-voce/ Skill Assessment
9.	Describe, discuss and demonstrate the application of test of significance in various study designs – normal distribution and significance of 'P'-value.	SGD-9	CM 6.3	V.I with General Medicine & Paediatrics	Practical	Written/ Viva-voce/ Skill Assessment
10.	Demonstrate the application of test of significance for large samples	SGD-10	CM 6.3	V.I with General Medicine & Paediatrics	Practical	Written/ Viva-voce/ Skill Assessment
11.	Demonstrate the application of test of significance for small samples	SGD-11	CM 6.3	V.I with General Medicine & Paediatrics	Practical	Written/ Viva-voce/ Skill Assessment
12.	Demonstrate the application of test	SGD-12	CM 6.3	V.I with General Medicine &	Practical	Written/ Viva-voce/

of significance – Chi square test			Paediatrics		Skill Assessment
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**Note: SGD- Small group discussion (12)**

SI No.	Classes	Teaching method	Competency	Integration	Misc.	Assessment method
<b>EPIDEMIOLOGY OF COMMUNICABLE AND NON-COMMUNICABLE DISEASES [CM 8 - 8.1 TO 8.7]</b>						
1.	Discuss the lessons learnt from Smallpox eradication. Describe and discuss the epidemiological and control measures including the use of essential laboratory tests at the primary care level for Chickenpox.	Lecture-1	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology		Written/ Viva-voce
2.	Describe and discuss the epidemiological and control measures including the use of essential laboratory tests at the primary care level for, Mumps and Rubella	Lecture-2	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology		Written/ Viva-voce
3.	Describe and discuss the epidemiological and control measures including the use of essential laboratory tests at the primary care level for Influenza	Lecture-3	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology		Written/ Viva-voce
4.	Describe and discuss the epidemiological and control measures including the use of essential laboratory tests at the primary care level for Diphtheria, Whooping Cough and Meningococcal Meningitis	Lecture-4	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology		Written/ Viva-voce
5.	Describe and discuss the epidemiological and control measures including the use of essential laboratory tests at the primary care level for Measles and ARI	SGD-1	CM 8.1 & 8.3	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise	Written/ Viva-voce
6.	Describe and discuss the epidemiological and control measures including the use of essential laboratory tests at the primary care level for SARS including novel Corona Virus.	SGD-2	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise/ CSCD	Written/ Viva-voce
7.	Describe and discuss the epidemiology of TB up to Tuberculin test	SGD-3	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise	Written/ Viva-voce
8.	Describe and discuss the prevention and control measures including the use of essential laboratory tests at the primary care level for Tuberculosis	SGD-4	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise	Written/ Viva-voce
9.	Describe and discuss NTEP	SGD-5	CM 8.1 & 8.3	V.I with General Medicine & Paediatrics H.I with Microbiology &	Epidemiological exercise & Visit	Written/ Viva-voce

				Pathology		
10.	Describe and discuss the epidemiological and control measures including the use of essential laboratory tests at the primary care level for Poliomyelitis	Lecture-5	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology		Written/ Viva-voce
11.	Describe and discuss NPSP	SGD-6	CM 8.1 & 8.3	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise/ CSCD	Written/ Viva-voce
12.	Describe and discuss the epidemiological and control measures including the use of essential laboratory tests at the primary care level for Viral Hepatitis	Lecture-6	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology		Written/ Viva-voce
13.	Describe and discuss the epidemiological and control measures including the use of essential laboratory tests at the primary care level for Acute Diarrheal Diseases & ADD control Programme	SGD-7	CM 8.1 & 8.3	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise	Written/ Viva-voce
14.	Describe and discuss the epidemiological and control measures including the use of essential laboratory tests at the primary care level for Cholera, Food Poisoning	SGD-8	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercises	Written/ Viva-voce
15.	Describe and discuss the epidemiological and control measures including the use of essential laboratory tests at the primary care level for Typhoid fever	SGD-9	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	CSCD	Written/ Viva-voce
16.	Describe and discuss the epidemiological and control measures including the use of essential laboratory tests at the primary care level for Amoebiasis, Soil Transmitted Helminthiasis & Dracunculiasis with its related programme	Lecture-7	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology		Written/ Viva-voce
17.	Describe and discuss the epidemiological and control measures including the use of essential laboratory tests at the primary care level for The Dengue Syndrome	SGD-10	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise	Written/ Viva-voce
18.	Describe and discuss the epidemiology of Malaria till approaches and strategies of malaria control	SGD-11	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise/ CSCD	Written/ Viva-voce
19.	Describe and discuss the control measures including the use of essential laboratory tests at the primary care level for malaria	SGD-12	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise/ CSCD	Written/ Viva-voce

	control including the diagnosis and treatment of malaria in India as per 2013 guidelines					
20.	cribe and discuss the control measures including the use of essential laboratory tests at the primary care level for Lymphatic Filariasis and National filarial control programme	Lecture-8	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology		Written/ Viva-voce
21.	cribe and discuss the control measures including the use of essential laboratory tests at the primary care level for Japanese encephalitis, Chikungunya, Yellow Fever, Zika Virus disease	Lecture-9	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology		Written/ Viva-voce
22.	cribe and discuss the control measures including the use of essential laboratory tests at the primary care level for KFD	SGD-13	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise	Written/ Viva-voce
23.	cribe and discuss the epidemiological and control measures including the use of essential laboratory tests for Nipah Virus, Brucellosis and Human Salmonellosis	Lecture-10	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology		Written/ Viva-voce
24.	cribe and discuss the epidemiological and control measures including the use of essential laboratory tests for Rabies	SGD-14	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise	Written/ Viva-voce
25.	cribe and discuss the epidemiological and control measures including the use of essential laboratory tests for Leptospirosis, Plague, Rickettsial diseases	Lecture-11	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology		Written/ Viva-voce
26.	cribe and discuss the epidemiological and control measures including the use of essential laboratory tests for Trachoma and Tetanus	SGD-15	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise	Written/ Viva-voce
27.	cribe and discuss the epidemiological and control measures including the use of essential laboratory tests for Taeniasis, Hydatid disease and Leishmaniasis	Lecture-12	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology		Written/ Viva-voce
28.	cribe and discuss the epidemiology of Leprosy till diagnosis	SGD-16	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise/ CSD	Written/ Viva-voce
29.	cribe and discuss the epidemiological and control measures for Leprosy and describe and discuss NLEP	SGD-17	CM 8.1 & 8.3	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise/ CSD	Written/ Viva-voce
30.	cribe and discuss the epidemiological and control measures including the use of	SGD-18	CM 8.1 & 8.3	V.I with General Medicine & Paediatrics H.I with Microbiology &	Epidemiological exercise	Written/ Viva-voce

	essential laboratory tests for STD along with syndromic approach			Pathology		
31.	cribe and discuss the epidemiological and control measures including the use of essential laboratory tests for endemic treponematosi – Yaws eradication programme	Lecture-13	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology		Written/ Viva-voce
32.	cribe and discuss the epidemiology of HIV/AIDS including the use of essential laboratory tests	SGD-19	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise	Written/ Viva-voce
33.	cribe and discuss the epidemiological and control measures for HIV/AIDS	SGD-20	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise	Written/ Viva-voce
34.	cribe and discuss NACP	SGD-21	CM 8.1 & 8.3	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise	Written/ Viva-voce
35.	cribe and discuss emerging and re-emerging Infectious diseases.	SGD-22	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise	Written/ Viva-voce
36.	cribe and discuss Hospital acquired infections	SGD-23	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise	Written/ Viva-voce
37.	cribe and discuss the epidemiological and control measures including the use of essential laboratory tests for Cardiovascular diseases and Coronary heart disease	SGD-24	CM 8.2	V.I with General Medicine	Epidemiological exercise/ CSCD	Written/ Viva-voce
38.	cribe and discuss the epidemiological and control measures including the use of essential laboratory tests for Diabetes Mellitus and Obesity	SGD-25	CM 8.2	V.I with General Medicine	Epidemiological exercise/ CSCD	Written/ Viva-voce
39.	cribe and discuss the epidemiological and control measures including the use of essential laboratory tests for Hypertension	SGD-26	CM 8.2	V.I with General Medicine	Epidemiological exercise/ CSCD	Written/ Viva-voce
40.	cribe and discuss the epidemiological and control measures including the use of essential laboratory tests for Stroke, RHD and Cancer	Lecture-14	CM 8.2	V.I with General Medicine		Written/ Viva-voce
41.	cribe and discuss NPCDCS	Lecture-15	CM 8.2 & 8.3	V.I with General Medicine		Written/ Viva-voce
42.	cribe and discuss the epidemiological and control measures for Visual Impairment and Blindness along with control programme	SGD-27	CM 8.2 & 8.3	V.I with General Medicine	Epidemiological exercise	Written/ Viva-voce
43.	cribe and discuss the epidemiological and control measures for Accidents and	SGD-28	CM 8.2	V.I with General Medicine	Epidemiological exercise	Written/ Viva-voce

	Injuries					
44.	Describe and discuss the principles of planning, implementing and evaluating control measures for disease at community level bearing in mind the public health importance of the disease	SGD-29	CM 8.5	V.I with General Medicine & Paediatrics	PBL	Written/ Viva-voce
45.	Describe the principles of management of information systems.	Lecture-16	CM 8.7			Written/ Viva-voce
46.	Educate and train health workers in disease surveillance, control & treatment and health education.	SGD-30	CM 8.6		Family Study	Skill-assessment
47.	Observe the reporting of IDSP in our hospital and health centres	SDL-1	CM 8.6		Assignment	Written/ Viva-voce

**Note: L- Lecture (15); SGD- Small group discussion (30); SDL-Self-directed learning (1)**

SI No.	Classes	Teaching method	Competency	Integration	Misc.	Assessment method
<b>REPRODUCTIVE MATERNAL AND CHILD HEALTH [CM 10 - 10.1 TO 10.9]</b>						
1.	Describe the current status of Reproductive, maternal, newborn and Child Health	Lecture-1	CM 10.1	V.I with OBG & Paediatrics		Written/ Viva-voce
2.	Enumerate and describe the methods of screening high risk groups and common health problems	Lecture-2	CM 10.2	V.I with OBG & Paediatrics		Written/ Viva-voce
3.	Describe local customs and practices during pregnancy, childbirth, lactation and child feeding practices	SGD-1	CM 10.3	V.I with OBG & Paediatrics	Family Study	Written/ Viva-voce
4.	Describe the reproductive, maternal, newborn & child health (RMNCH); child survival and safe motherhood interventions	SGD-2	CM 10.4	V.I with OBG & Paediatrics	CSCD	Written/ Viva-voce
5.	Describe Universal Immunization Program; Integrated Management of Neonatal and Childhood Illness (IMNCI) and other existing Program including RBSK, BFHI, IYCF	SGD-3	CM 10.5	V.I with Paediatrics	Epidemiological exercise	Written/ Viva-voce
6.	Observe and classify neonatal and childhood illnesses in our hospital/ health centres according to IMNCI	SDL-1	CM 10.5	V.I with Paediatrics	Assignment	Written/ Viva-voce
7.	Describe the physiology, clinical management and principles of adolescent health including ARSH, RSKS, WIFS	SGD-4	CM 10.8		Tutorial	Written/ Viva-voce
8.	Describe and discuss gender issues and women empowerment including gender bias	SGD-5	CM 10.9		Tutorial	Written/ Viva-voce

9.	Describe and discuss NRHM	SGD-6	CM 10.5	V.I with Paediatrics	Tutorial	Written/ Viva-voce
10.	Describe and discuss NUHM	SGD-7	CM 10.5	V.I with Paediatrics	Tutorial	Written/ Viva-voce
11.	Describe and discuss NHM	Lecture-3	CM 10.5	V.I with Paediatrics		Written/ Viva-voce
12.	Describe and discuss Ayushman Bharat	Lecture-4	CM 10.5	V.I with Paediatrics		Written/ Viva-voce
13.	Describe and discuss INAP	Lecture-5	CM 10.5	V.I with Paediatrics		Written/ Viva-voce
14.	Describe and discuss various public health legislations MTP Act and PNDT Act, PFA Act and CP Act	SGD-8	CM 10.5 & 20.4	V.I with Paediatrics	Tutorial	Written/ Viva-voce
15.	Describe and discuss School health program	Lecture-6	CM 10.4 & 10.5	V.I with OBG & Paediatrics		Written/ Viva-voce
16.	Describe and discuss Behavioral problems and Handicapped children and ICF	Lecture-7	CM 10.4 & 10.5	V.I with OBG & Paediatrics		Written/ Viva-voce
17.	Describe and discuss prevention of congenital malformations and describe and discuss rights of persons with disabilities bill-2016,	Lecture-8	CM 10.4	V.I with OBG & Paediatrics		Written/ Viva-voce
18.	Describe and discuss children in difficult circumstances, battered baby syndrome, the children act 1960 and National policy for children, rights of women and children	Lecture-9	CM 10.4	V.I with OBG & Paediatrics		Written/ Viva-voce
19.	Describe and discuss Juvenile delinquency and Juvenile justice act 1986, 2000 & 2015	Lecture-10	CM 10.4	V.I with OBG & Paediatrics		Written/ Viva-voce
20.	Describe and discuss Street children, Refugee and displaced children, Child labor and child exploitation, child trafficking, child marriage, Child abuse	SGD-9	CM 10.4	V.I with OBG & Paediatrics	Tutorial	Written/ Viva-voce
21.	Describe and discuss Child guidance clinic and child placement	SGD-10	CM 10.4	V.I with OBG & Paediatrics	Tutorial	Written/ Viva-voce
22.	Describe and discuss MNP and 20 point programme	Lecture-11	CM 10.5	V.I with Paediatrics		Written/ Viva-voce
23.	Describe and discuss tribal Health	Lecture-12	CM 10.4 & 10.5	V.I with OBG & Paediatrics		Written/ Viva-voce

**Note: L- Lecture (10); SGD- Small group discussion (10); SDL-Self-directed learning (1)**

SI No.	Classes	Teaching method	Competency	Integration	Misc.	Assessment
<b>GERIATRIC SERVICES [CM 12 - 12.1 TO 12.4]</b>						
1.	Define and describe the concept of Geriatric services	Lecture-1	CM 12.1	V.I with General Medicine		Written/ Viva-voce
2.	Describe health problems of aged population	SGD-1	CM 12.2	V.I with General Medicine	CSCD	Written/ Viva-voce
3.	Describe the prevention of health problems of aged population. Describe National program for elderly	SGD-2	CM 12.3 & 12.4	V.I with General Medicine	CSCD	Written/ Viva-voce

**Note: L- Lecture (1); SGD- Small group discussion (2)**

SI No.	Classes	Teaching method	Competency	Integration	Misc.	Assessment
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<b>HOSPITAL WASTE MANAGEMENT [CM 14 - 14.1 TO 14.3]</b>						
1.	Define and classify hospital waste	Lecture-1	CM 14.1	H.I with Microbiology		Written/ Viva-voce
2.	Describe various methods of treatment of hospital waste	SGD-1	CM 14.2	H.I with Microbiology	Field visit	Written/ Viva-voce
3.	Describe laws related to hospital waste management	SGD-2	CM 14.3	H.I with Microbiology	Field visit	Written/ Viva-voce
4.	Observe the hospital waste management done at hospital/ Maridi	SDL-1	CM 14.2	H.I with Microbiology	Assignment	Written/ Viva-voce

**Note: L- Lecture (1); SGD- Small group discussion (2); SDL-Self-directed learning (1)**

SI No.	Classes	Teaching method	Competency	Integration	Misc.	Assessment
<b>HEALTH PLANNING AND MANAGEMENT [CM 16 - 16.1 TO 16.4]</b>						
1.	Define and describe the concept of Health planning	Lecture-1	CM 16.1			Written/ Viva-voce
2.	Describe planning cycle	Lecture-2	CM 16.2			Written/ Viva-voce
3.	Describe Health management techniques	SGD-1	CM 16.3		Tutorial	Written/ Viva-voce
4.	Describe health planning in India and National policies related to health and health planning	SGD-2	CM 16.2		Tutorial	Written/ Viva-voce

**Note: L- Lecture (2); SGD- Small group discussion (2)**

SI No.	Classes	Teaching method	Competency	Integration	Misc.	Assessment
<b>HEALTH CARE OF THE COMMUNITY [CM 17 - 17.1 TO 17.5]</b>						
1.	Define and describe the concept of health care to community	Lecture-1	CM 17.1			Written/ Viva-voce
2.	Describe community diagnosis	Lecture-2	CM 17.2			Written/ Viva-voce
3.	Describe primary health care, its components and principles	Lecture-3	CM 17.3			Written/ Viva-voce
4.	Describe National policies related to health and health planning and millennium development goals	Lecture-4	CM 17.4			Written/ Viva-voce
5.	Describe Sustainable development goals	Lecture-5	CM 17.4			Written/ Viva-voce
6.	Describe health care delivery in India	Lecture-6	CM 17.5			Written/ Viva-voce
7.	Observe the health care delivery in different level of health systems at primary, secondary and tertiary	SDL-1	CM 17.5		Assignment	Written/ Viva-voce

**Note: L- Lecture (6); SDL-Self-directed learning (1)**

SI No.	Classes	Teaching method	Competency	Integration	Misc.	Assessment
<b>RECENT ADVANCES IN COMMUNITY MEDICINE [CM 20 - 20.1 TO 20.4]</b>						
1.	List important public health events of last five years	SDL-1	CM 20.1		Assignment	Written/ Viva-voce
2.	Describe various issues during outbreaks and their prevention	SGD-1	CM 20.2		Tutorials	Written/ Viva-voce
3.	Describe any event important to Health of the Community	Lecture-1	CM 20.3			Written/ Viva-voce

4.	Discuss the laws pertaining to practice of medicine	Lecture-2	CM 20.4			Written/ Viva-voce
5.	Demonstrate awareness about laws pertaining to practice of medicine such as Clinical establishment Act and Human Organ Transplantation Act and its implications	SGD-2	CM 20.4		Tutorials	Written/ Viva-voce

**Note: L- Lecture (2); SGD- Small group discussion (2); SDL-Self-directed learning (1)**

## Specific Learning Objectives for 3<sup>rd</sup> Professional, Part - I

### CM 4 - Principles of Health Promotion & Education

#### Competency 4.1:

Describe various methods of health education with their advantages and limitations

Level: Knows How

#### Specific Learning Objectives

At the end of the session, the learner should be able to:

1. Define health education
2. Describe the various methods of health education
3. Describe the advantages and limitations of each health education method

#### Content and TL methods

Sl No	Content	TL methods	Time allotted
1	Definition of health education	Lecture discussion	05 minutes
2	Methods of health education	Lecture discussion	30 minutes
3	Advantages and limitations of each health education method	Lecture discussion	10 mins

#### Evaluation

1. Long essay (example)
  - a. Discuss in brief the different methods of 'Group Health Education'
2. Short essay (example)
  - a. Health education and health propaganda

- b. Socratic and didactic methods in communication
3. Multiple choice questions (example)
- a) In which method of group teaching, there is no active participation from learners:
- i. Lecture
  - ii. Group discussion
  - iii. Symposium
  - iv. Role play

## Competency 4.2

Describe the methods of organizing health promotion and education and counselling activities at individual family and community settings

Level: Knows How

### Specific Learning Objectives

At the end of the course, the learner should be able to:

1. Describe the methods of organizing health promotion and education and counselling activities at Individual, family and community settings
2. Plan a health education session at Individual/ family / community settings by selecting appropriate methods
3. Conduct a training session for given scenarios /target audience on the given topic

### Content and TL methods

Sl No	Content	TL methods	Time allotted
1.	Brief description of the methods of health promotion and counselling activities at Individual, family and community settings	Interactive discussion	15 minutes
2.	Allocation of scenarios for batches of 10 students each. Students are asked to prepare a training plan under the following headings: <ul style="list-style-type: none"> <li>• Topic</li> <li>• Pre test</li> <li>• Set induction</li> <li>• Key messages</li> <li>• Methodology to deliver the key messages</li> <li>• Training material and other resources needed</li> <li>• Time scheduling</li> <li>• Post test</li> </ul>	Interactive discussion	15 minutes

3	Development of training material by students	Group work	30 minutes
4	Implementation of the training program	Group presentation	1 hour

### Evaluation

1. Scores for the training program by faculty using a structured checklist that may include the following
  - a. Quality of the training plan
  - b. Session objectives
  - c. Design of pretest and post test questions
  - d. Key messages
  - e. Implementation of the training program
  - f. Training material
  - g. Team work and coordination
  - h. Audience involvement
2. Similar scoring to be used for health education program during ROP and CHAP

### Competency 4.3:

Demonstrate and describe the steps in evaluation of health promotion and education program

Level: Shows How

#### Specific Learning Objectives

At the end of the session, the learner should be able to:

- 1.Enumerate the steps in evaluation of health education program
- 2.Describe the steps in evaluation of health education program
- 3.Demonstrate and Apply the steps in evaluation of a health program

#### Content and TL methods

Sl No	Content	TL methods	Time allotted
1.	Steps in evaluation of health education program	Interactive discussion	15 minutes
2.	Application of the steps in evaluation of health promotion program : Following implementation of training program (Competency4.2), Students are asked to evaluate the sessions conducted by them	Interactive discussion	30 minutes
3	Debriefing by faculty	Interactive discussion	05 minutes

## Evaluation

1. Scores for the evaluation session using a structured checklist

# CM 06 - BASIC STATISTICS AND ITS APPLICATIONS

## Competency 6.1: (1hr)

Formulate research question for the study.

Level – know how

### Specific Learning Objectives

At the end of the session, the learner should be able to:

- a) Introduction to health research and biostatistics
- b) Difference between qualitative and quantitative approaches to research
- c) Elements of research question
- d) Steps in framing a research question, criteria in framing research question.

### Evaluation:

Describe various steps in research methodology.

## Competency 6.2:

Small group field activity (2hrs)

Level – Know how

Describe and discuss the principles and the methods, classification, interpretation and presentation of statistical data.

### Specific Learning Objectives

At the end of the session, the learner should be able to:

- a) Making of questionnaire based on research
- b) They will do the data collection using data questionnaire
- c) How to classify the data.
- d) Steps in analysis and interpretation

## Competency 6.3:

Describe, discuss and demonstrate the application of elementary statistical methods including test of significance in various study designs.

Level – Show how

### Specific Learning Objectives

At the end of the session, the learner should be able to:

- a) Able to calculate Mean, Median and Mode, Standard deviation, Standard error.
- b) To know various methods of graphical representation of data.
- c) To know various data entry tools- MS excel, Epinfo, Google forms, Google sheets.

**EVALUATION:**

- 1) Calculate mean, median and mode.
- 2) Describe Normal distribution curve.

### **Competency 6.4:**

Enumerate, discuss and demonstrate common sampling techniques, simple statistical methods, frequency distribution, measures of central tendency and dispersion.

Level – Show how

**Specific Learning Objectives**

At the end of the session, the learner should be able to:

- a) To know various sampling techniques and sample error.
- b) To know correlation and regression
- c) Able to calculate chi square test

**EVALUATION:**

- 1) Describe various sampling techniques.
- 2) Chi square test

## **Epidemiology of Communicable and Non- Communicable diseases (CM 08)**

### **Competency 8.1**

Describe and discuss the epidemiological and control measures including the use of essential laboratory tests at the primary care level for communicable diseases

**Specific Learning Objectives**

At the end of the course, the learner should be able to:

1. Describe the epidemiology of the following groups of communicable diseases
  - Respiratory diseases
  - Gastrointestinal infections
  - Vector borne diseases
  - Surface infections
2. Apply the concept of dynamics of disease control to the communicable disease under the above groups
3. Describe the salient features of national programs for the prevention and control of communicable diseases

## Content

### Theory

1. Overview of communicable diseases
2. Epidemiology of the following communicable diseases.....

- Respiratory diseases
  - Measles
  - Tuberculosis
  - Influenza
  - Diphtheria
  - Pertusis
- Gastrointestinal infections
  - Cholera
  - Typhoid
  - Poliomyelitis
  - Viral hepatitis
  - Helminthiasis
- Vector borne diseases
  - Malaria
  - Dengue
- Surface infections
  - HIV
  - Leprosy
  - Tetanus
- Zoonotic diseases
- Emerging and reemerging diseases
- Hospital acquired infections

.....under the following headings

- Burden
- Epidemiological triad
- Chain of transmission for that disease
- How to break the chain of transmission

3. Explain the following national health programs.....

- Revised national tuberculosis control program
- National polio surveillance program
- National vector borne disease control program
- National AIDS control program

.....under the following headings

- Relevance and need for the program
- Objectives
- Strategies
- Infrastructure for service delivery
- Monitoring and evaluation indicators

### Practical

Discuss public health scenarios on the following:

- Respiratory diseases
- Gastrointestinal infections
- Vector borne diseases
- Surface infections

### **Clinico-social case discussions**

1. Dengue
2. Typhoid
3. Acute respiratory tract infection
4. Acute diarrheal disease
5. HIV
6. Rabies

### **For the above diseases, focus on the following:**

- Clinical features
- Assessment of determinants
- Recommendations at individual, family and community level

### **Assessment questions**

1. Which of the following disease is covered under the national vector borne disease control program
  - a. Sleeping sickness
  - b. Kala azar
  - c. Yellow fever
  - d. Tick typhus
2. The population covered by a Tuberculosis Unit (TU) under RNTCP is
  - a. 500,000
  - b. 100,000
  - c. 50,000
  - d. 30,000
3. Purified Chick Embryo Cell Rabies vaccine is given by which of the following ways
  - a. Infiltration locally into the wound
  - b. Intramuscularly in the deltoid
  - c. Intramuscularly in the gluteal region
  - d. Subcutaneously in the abdomen
4. A district is classified under the category “Neonatal Tetanus Elimination” if it meets which of the following criteria:
  - a. NNT rate  $<0.1/1000$  live births, TT coverage  $>90\%$  and attended deliveries  $>75\%$
  - b. NNT rate  $<1/1000$  live births, TT coverage  $>90\%$  and attended deliveries  $>75\%$
  - c. NNT rate  $<1/1000$  live births, TT coverage  $>70\%$  and attended deliveries  $>50\%$
  - d. NNT rate  $<1/1000$  live births, TT coverage  $>70\%$  and attended deliveries  $>75\%$
5. What is the WHO clinical staging of HIV disease in a person who is HIV positive and has pulmonary tuberculosis?
  - a. Clinical stage 1

- b. Clinical stage 2
- c. Clinical stage 3
- d. Clinical stage 4

Draft

## Competency 8.2

Describe and discuss the epidemiological and control measures including the use of essential laboratory tests at the primary care level for Non Communicable diseases (diabetes, Hypertension, Stroke, obesity and cancer etc.)

### Specific Learning Objectives

At the end of the course, the learner should be able to:

1. Explain the characteristics of a non communicable disease
2. Explain the meaning of the term “risk factor”
3. Describe the epidemiology of the following non communicable diseases
  - Hypertension
  - Diabetes
  - Coronary heart disease
  - Cancers
  - Blindness
  - Accidents
4. Apply the concept of levels of prevention to the above non communicable disease
5. Describe the salient features of national programs for the prevention and control of NCDs

### Essential content

#### Theory

2. Introduction to NCDs
  - What are NCDs
  - Characteristics
  - Risk factor
  - Prevention and control
3. Epidemiology, prevention and control of the following diseases.....
  - Hypertension
  - Diabetes
  - Coronary heart disease
  - Cancers
  - Blindness
  - Accidents

.....under the following headings

- Burden
- Time trends
- Place and person distribution
- Risk factors (and web of causation)
- Primordial, primary and secondary and tertiary prevention
- Key initiatives at international and national level

#### Practical

Case studies on diabetes, RHD and stroke

### Clinico-social case discussions

1. Hypertension
2. Diabetes
3. Coronary heart disease
4. Stroke

For the above diseases, focus on the following:

- Clinical features
- Assessment of risk factors
- Anthropometric measurements
- Recommendations at individual, family and community level

### Assessment questions

1. Tracking of hypertension is an example for :
  - a. Treatment Strategy
  - b. Evaluation Strategy
  - c. High Risk Strategy
  - d. Diagnostic Strategy
2. The true statement regarding a “Risk Factor” is:
  - a. Risk factors are the same as an agent in a non communicable disease
  - b. Risk factors are observable only after the onset of disease
  - c. Risk factors are significantly associated with the development of disease.
  - d. If a risk factor is modified, the probability of occurrence of the disease will not change.
3. Which of the following statements is TRUE :
  - A. HPV is implicated in the development of cancer cervix
  - B. Mycobacterium tuberculosis is implicated in the development of lung cancer
  - C. Plasmodium falciparum is implicated in the development of blood cancer
  - D. Infective agents are not implicated in the development of cancers
4. The type of time trend seen in coronary heart disease is:
  - A. Secular Trend
  - B. Cyclic Trend
  - C. Seasonal Trend
  - D. Periodic Trend

## Competency 8.3

Enumerate and describe disease specific National Health Programs including their prevention and treatment of a case

### Specific Learning Objectives

At the end of the course, the learner should be able to:

1. List the national health programs in India
2. Describe the objectives and strategies for the following national health programs
  - a. RMNCH+A
  - b. RNTCP
  - c. NVBDCP
  - d. NACP
  - e. NLEP
  - f. ICDS
  - g. NPCDCS
  - h. NBCP

### Contents: (linked to competency 8.7)

Describe the salient features of the following national programs

- a. RMNCH+A
- b. RNTCP
- c. NVBDCP
- d. NACP
- e. NLEP
- f. ICDS
- g. IDSP
- h. NPCDCS
- i. NBCP
- j. NHM

.... under the following headings

- Need for national program (in terms of burden of problem)
- Objectives
- Strategies
- Infrastructure for service delivery and personnel at each level of care
- Monitoring indicators

### Evaluation

#### Long essay (example)

1. Describe the strategies under RMNCH+A to prevent maternal deaths in India.

#### Short essay (example)

1. Daily drug regimen under RNTCP

## Competency 8.4

Describe the principles and enumerate the measures to control a disease epidemic

### Specific Learning Objectives

At the end of the session, the learner should be able to:

1. To be able to list the definition of epidemic
2. To be able to list the steps of investigation out break
3. To be able to list the factors leading to an outbreak in the community

### Content:

1. Definition of epidemic, endemic and sporadic
2. Objectives of an epidemic investigation
3. 10 Steps of an outbreak investigation with example
4. Epidemiological case sheet
5. Epidemic curve
6. Report writing
7. List the control measures based on the epidemic with actual examples

### Assessment:

1. Prepare an epidemiological case sheet for an outbreak of food poisoning in the hostel

## Competency 8.5:

Describe and discuss the principles of planning, implementing and evaluating control measures for disease at community level bearing in mind the public health importance of the disease

Level: Knows

### Specific Learning Objectives

At the end of the session, the learner should be able to:

4. Describe the meaning of the terms “control”, “elimination” and “eradication” of disease
5. List the problems of public health importance in India
6. Describe the steps of the planning cycle (Link to competency 16.2 on planning cycle) and apply the steps of the planning cycle to common problems of public health importance
7. Describe the methods to prevent and control disease with two examples (one communicable and one non communicable disease)
8. Describe the strategies being used in the corresponding national program for the control of the two diseases chosen in SLO 5 (Link to competency 8.3 on national health programs)
9. Describe the steps in evaluation of a health program
10. Apply the steps in evaluation of a health program

### Content and TL methods

Sl No	Content	TL methods	Time allotted
1	Meaning of “control”, “elimination” and “eradication” of disease	Lecture discussion (Theory, 2 <sup>nd</sup> Professional)	30 minutes
2	Problems of public health importance in India	Lecture discussion (Theory, 2 <sup>nd</sup> Professional)	30 minutes
3	Application of the steps of planning cycle to a public health problem	Large group activity and interactive discussion (Theory, 2 <sup>nd</sup> Professional)	2 hours
4	Prevention and control of disease (with two examples - one communicable and one non communicable disease)	Small group activity (UOP, 2 <sup>nd</sup> Professional)	1 hour
5	Strategies used in the corresponding national program for the control of the two diseases chosen in SLO 4	Small group activity (UOP, 2 <sup>nd</sup> Professional)	1 hour
6	Steps in evaluation of a health program	Small group activity (Practicals, 3 <sup>rd</sup> Professional)	30 minutes
7	Application of steps in evaluation of a health program to a health program	Small group activity (Practicals, 3 <sup>rd</sup> Professional)	1 hour

### Evaluation

4. Long essay (example)
  - a. Describe the epidemiology, prevention and control of tuberculosis
  - b. You are the district health officer of Kolar district. Describe the steps in evaluating a campaign for the prevention and control of cardiovascular diseases your district.
5. Short essay (example)
  - a. National immunization day

- b. Steps to be followed by ANM to plan a VHSND in a village
6. Multiple choice questions (example)
- a. Use of chemoprophylaxis in malaria is an example for
    - i. Primordial prevention
    - ii. Primary prevention
    - iii. Secondary prevention
    - iv. Tertiary prevention

**Integration**

- Medicine
- Microbiology
- Pharmacology

**Competency 8.6**

Educate and train health workers in disease surveillance, control & treatment and health education

Level: Shows how

**Specific Learning Objectives**

At the end of the course, the learner should be able to:

- 4. Conduct a training session for health workers on the given topic
- 5. Conduct a health education program for a target audience (Link to competency 4.2 on health promotion. Covered as a part of a) ROP – community program b) ROP – child to child program and c) CHAP – health education in school)

Note :

- a) Health workers to include nursing aids, nurses, workers from allied health departments like housekeeping, laundry etc, ASHAs, Anganwadi workers etc
- b) The sessions will involve prior preparation by faculty to identify the target audience, topic, evaluation material, chart paper, markers, permissions etc
- c) The topic for health education will depend on the audience and will be allotted by faculty. Suggested topics include handwashing, dengue, healthy lifestyle, tobacco control etc

**Content and TL methods**

Sl No	Content	TL methods	Time allotted
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1	Allocation of topic and division into groups of 10 students each. Students are asked to prepare a training plan on the allotted topic under the following headings: <ul style="list-style-type: none"> <li>• Topic</li> <li>• Pre test</li> <li>• Set induction</li> <li>• Key messages</li> <li>• Methodology to deliver the key messages</li> <li>• Training material and other resources needed</li> <li>• Time scheduling</li> <li>• Post test</li> </ul>	Interactive discussion Practical, 3 <sup>rd</sup> Professional	15 minutes
2	Development of training material by students	Group work Practical, 3 <sup>rd</sup> Professional	1 hour
3	Review of training plan by faculty	Group presentation Practical, 3 <sup>rd</sup> Professional	45 minutes
4	Implementation of the training program for the target audience	Group presentation Practical, 3 <sup>rd</sup> Professional	1 hour
5	Debriefing by faculty	Interactive discussion	30 minutes

### Evaluation

3. Scores for the training program by faculty using a structured checklist that may include the following
  - a. Quality of the training plan
  - b. Session objectives
  - c. Design of pretest and post test questions
  - d. Key messages
  - e. Implementation of the training program
  - f. Training material
  - g. Team work and coordination
  - h. Audience involvement
4. Similar scoring to be used for health education program during ROP and CHAP

### Integration

- Nursing & allied health sciences
- Government functionaries

## Competency 8.7:

Describe the principles of management of information systems

### Specific Learning Objectives

At the end of the session, the learner should be able to:

1. Define health management information system [HMIS]
2. List the uses of HMIS
3. Describe the flow of data in HMIS in the public health system in India
4. List the sources of health information in India

### Content

1. Definition of HMIS
2. Distinction between data and information
3. WHO requirements for health information systems
4. Uses of HMIS
5. Sources of health information
6. HMIS in public health system in India

### TL methods

Lecture discussion, 3<sup>rd</sup> Professional

### Evaluation

1. Short essay (example)
    - a. Describe the uses of health information
    - b. Sample registration system
  2. Multiple choice question (example)
    - a. Which of the following is an advantage of hospital records?
      - i. They are a good guide to the estimation of disease frequency in the community
      - ii. They provide good data on association between different diseases
      - iii. They provide data from patients from a defined catchment area
- They provide uniform data from different types of hospitals

## 10)

### Competency 10.1:

Describe the current status of Reproductive, maternal, new born and child health

Level: Knows

#### Specific Learning Objectives

At the end of the session, the learner should be able to:

- Enumerate and discuss the indicators to measure the status of Maternal and child health- MMR, PMR, NMR, PNMR, IMR and Under 5 Mortality rate
- Define Maternal mortality rate and maternal mortality ratio.
- Discuss the approaches for measuring maternal mortality.
- Discuss the status of maternal mortality in India and rest of the world
- Discuss the direct and indirect causes of maternal mortality
- Discuss the global strategy for women's , children's and adolescents health(2016-2030)
- Describe the various interventions to prevent and reduce maternal mortality
- Define foetal deaths
- Define still birth rate
- Define Perinatal Mortality rate, neonatal and post neonatal mortality rate
- Discuss causes of PMR, NMR and PNMR

#### Content and TL methods

Sl No	Content	TL methods	Time allotted
1	Current status of Reproductive, maternal, new born and child health	Lecture	1 hour

#### Evaluation

- Define maternal mortality ratio and list the causes and preventive measures of MMR.
- Enumerate causes of PMR, NMR and PNMR

#### Integration

Obstetrics and Gynaecology

Paediatrics

### Competency 10.2:

Enumerate and describe the methods of screening high-risk groups and common health problems.

Level: Knows

#### Specific Learning Objectives

At the end of the session, the learner should be able to:

- Enumerate the screening methods for high-risk groups among antenatal women.
- Describe high risk approach in antenatal care

- c) Discuss the preventive services for antenatal mother- Antenatal checkup, investigations and prenatal advices.
- d) Enumerate common health problems among antenatal women and its management and prevention- Iron deficiency anemia, PIH, GDM, Rh incompatibility
- e) Discuss the complications of post- partal period and its management

**Content and TL methods**

Sl No	Content	TL methods	Time allotted
1	The methods of screening high-risk groups among antenatal women	Lecture	30 minutes
2	Common health problems among antenatal women	Lecture	30 minutes

**Evaluation**

- 1) Describe the screening methods for high risk antenatal women
- 2) Enumerate the common health problems among infants

**Integration**

Obstetrics and Gynaecology

**Competency 10.3:**

Describe local customs and Practices during Pregnancy, Child birth, Lactation and Child feeding practices

Level: Knows

**Specific Learning Objectives**

At the end of the session, the learner should be able to:

- a) Describe the Dietary Practices for a pregnant woman
- b) List the Pre-natal customs and Practices in detail
- c) List the Child Bearing Practices that a mother should know
- d) Enumerate the importance of Institutional delivery
- e) Enumerate the Advantages and Disadvantages of the Practice of Domiciliary Mid wifery services
- f) Describe the Nutritional Practices of a Post-natal mother
- g) Describe the practice of Post-natal exercises as well as the Psychological and Social support in a Post-natal women

- h) Enumerate the Benefits of the Practice of “Rooming In”
- i) Enlist the Advantages of Practice of Breast Feeding both Exclusive Breast Feeding and later
- j) Describe the various Family Planning Practices that a mother should adopt, according to her convenience.

**Content and TL methods**

Sl No	Content	TL methods	Time allotted
1	Prenatal customs and practices	Lecture	30 minutes
2	Child bearing practices and Child care	Lecture	30 minutes

**Evaluation**

- 1) Enlist the Advantages of Practice of Breast Feeding both Exclusive Breast Feeding and later
- 2) Enumerate the Benefits of the Practice of “Rooming In”

**INTEGRATION**

Obstetrics and Gynaecology  
Paediatrics

**Competency 10.4:**

Describe the RMNCH and CSSM interventions

Level: Knows

**Specific Learning Objectives**

At the end of the session, the learner should be able to:

**I REPRODUCTIVE**

- 1) Enlist causes of STI
- 2) Describe the syndromic approach
- 3) Enumerate various FP methods

**II MATERNAL HEALTH**

- 1) Enlist objectives of Antenatal Care
- 2) Enlist objectives of Intra natal Care and Postnatal Care
- 3) Define Maternal Mortality Rate (MMR) and describe causes of maternal mortality
- 4) List out preventive services for mothers
- 5) Describe High Risk Approach
- 6) Describe Essential and Emergency Obstetric Care

**III NEWBORN**

- 1) Describe Essential New Born Care
- 2) Discuss Baby Friendly Hospital Initiative
- 3) Define Exclusive Breastfeeding

**IV CHILD**

- 1) Define IMR and discuss causes of infant mortality and its prevention.
- 2) Discuss causes of Under-five mortality

- 3) Discuss causes and prevention of ARI and diarrhoeal diseases
- 4) List objectives of Under-five clinics
- 5) Demonstrate ORS preparations
- 6) Classify ARI and diarrhoeal diseases

#### **V ADOLESCENT**

- 1) Enlist adolescent health problem
- 2) Describe adolescent health program

#### **Content and TL methods**

Sl No	Content	TL methods	Time allotted
1	STI and Family planning methods	Lecture	60 minutes
2	Antenatal, Intranatal and Postnatal care	Lecture	90 minutes
3	Newborn care, Child and Adolescent health	Lecture	90 minutes

#### **Evaluation**

- 1) Describe Essential New Born Care and Discuss Baby Friendly Hospital Initiative
- 2) Discuss causes and prevention of ARI and diarrhoeal diseases

#### **Integration**

Obstetrics and Gynaecology  
Paediatrics

### **Competency 10.5:**

**Level:** Shows how

#### **Specific Learning Objectives**

##### **A. UNIVERSAL IMMUNIZATION PROGRAMME**

At the end of the session, the learner should be able to:

11. Outline the National Immunization Schedule .
12. Explain goals and targets of Mission Indradhanush and Intensified Mission Indradhanush.
13. Describe schedule, dose, route, site of administration, storage and AEFI of different vaccines.
14. Identify different components of Cold Chain.

### Content and TL methods

Sl No	Content	TL methods	Time allotted
1	National immunization schedule	Small group discussion	30minutes
2	Visit to UHTC and Demonstrate steps in vaccine administration and storage	Small group activity and interactive discussion	60 minutes
3	Steps in surveillance of AFP and reporting and management of AEFI	Small group discussion	30 minutes

### Evaluation

7. Long essay (example)
  - a. Describe universal immunization programme. Explain components of cold chain maintenance. Add a brief note on vaccine vial monitoring (VVM).
  - b. For a case of Acute Flaccid Paralysis (AFP) , describe the steps for AFP surveillance and measures for prevention and control of further cases.
8. Short essay (example)
  - a. National immunization day.
  - b. Write a brief note on AEFI.
9. Multiple choice questions (example)
  - a. Which of the following is the most heat sensitive vaccine among the below :
    - i. OPV
    - ii. JE Vaccine
    - iii. DPT
    - iv. DT

### Integration

- Paediatrics
- Obstetrics

### B. INTEGRATED MANAGEMENT OF NEONATAL AND CHILDHOOD ILLNESS (IMNCI)

At the end of the session, the learner should be able to:

- Enlist the principles of IMNCI.
- Classify the childhood illnesses according to colour coding of IMNCI.

- Describe salient features of Navjat Shishu Suraksha Karyakram, Janani Shishu Suraksha Karyakram, Baby Friendly Hospital Initiative
- Interpretation of growth charts.

### Content and TL methods

Sl No	Content	TL methods	Time allotted
1	IMNCI-STRATEGY, STEPS, COMPONENTS	SMALL GROUP DISCUSSION	30 Minutes
2	IMNCI CASE MANAGEMENT WITH SCENARIO	SMALL GROUP ACTIVITY AND INTERACTIVE DISCUSSION	30 minutes
3	NEWBORN & CHILD HEALTH PROGRAMS	SMALL GROUP DISCUSSION	30 minutes
4	GROWTH MONITORING & GROWTH CHART	SMALL GROUP DISCUSSION	30 minutes

### Evaluation

1. Visit to uhtc paediatric opd to classify of illness of children according to color coding of IMNCI.
2. Interpreting growth charts.

### Long Essay:

1. Describe the strategy, steps and components of IMNCI.

### Short Essay:

1. Note on Baby Friendly Hospital Initiative.

### Multiple choice:

1. Navjat Shishu Suraksha karyakram addresses the below except:
  - a) Care of baby at birth
  - b) Care of antenatal mother
  - c) Prevention of hypothermia
  - d) Transport of neonates

### Integration

- PAEDIATRICS

## CM10.6 Enumerate and describe various family planning methods, their advantages and shortcomings

Domain – Knowledge,

Level - Knows How,

Core competency – Y

### Specific Learning objectives

At the end of the session the learner should be able to

1. Classify and enumerate the different Family planning methods / contraception (Spacing methods and Permanent methods)
2. Describe the various family planning methods – including ideal candidates for each method
3. Enumerate the disadvantages and failure rates for the family planning methods
4. Explain the concept of failure rates of contraceptives (Pearl index) and the method of calculating the same
5. Describe Medical termination of Pregnancy, its legal basis. The circumstances/ indications under which it can be performed. The setting where it can be performed and qualifications to perform the same. The role of MTP in Reproductive and Child health care
6. Explain the concept of emergency contraception and various methods.

### Content and teaching learning methods

Sl	Content	Teaching Method	Time Allotted
1	List the contraceptive methods. Describe 'Condom', 'Mala N/Mala D', 'Saheli' & 'Antara' under the following headings (a) Description (b) Method of use (c) Advantages (d) Disadvantages (e) Failure Rate (f) Social Marketing	SGD	1 hour
2	Describe Contraceptive Methods 'Copper T 380A', 'No Scalpel Vasectomy' & 'Minilap' under the following headings (a) Description (b) Method of use (c) Advantages (d) Disadvantages (e) Failure Rate (f) Incentives	SGD	1 hour
3	Describe the various methods of emergency contraceptive methods. Describe the various methods of Medical Termination of Pregnancy (MTP). Describe the circumstances under which MTP can be performed. Describe the settings & qualifications required to perform MTP.	Lecture	1 hour
			3 hrs

### Evaluation

#### LONG ESSAY

1. Describe the contraceptive methods used for spacing under RCH.
2. Describe the terminal contraceptive methods.

#### SHORT ESSAY

1. Describe 'Condom' under the following headings (a) Description (b) Method of use (c) Advantages (d) Disadvantages (e) Failure Rate (f) Social Marketing
2. Describe 'Mala N/Mala D' under the following headings (a) Description (b) Method of use (c) Advantages (d) Disadvantages (e) Failure Rate (f) Social Marketing
3. Describe 'Saheli' & 'Antara' under the following headings (a) Description (b) Method of use (c) Advantages (d) Disadvantages (e) Failure Rate
4. Describe 'Copper T 380A' under the following headings (a) Description (b) Method of use (c) Advantages (d) Disadvantages (e) Failure Rate
5. Describe 'No Scalpel Vasectomy' under the following headings (a) Description (b) Method of use (c) Advantages (d) Disadvantages (e) Failure Rate (f) Incentives
6. Describe 'Minilap' under the following headings (a) Description (b) Method of use (c) Advantages (d) Disadvantages (e) Failure Rate (f) Incentives
7. Describe the various methods of emergency contraceptive methods.
8. Describe the various methods of Medical Termination of Pregnancy (MTP).
9. Describe the circumstances under which MTP can be performed.
10. Describe the settings & qualifications required to perform MTP.

#### MCQs

1) What is the maternal mortality rate (MMR) of India according to SRS(2018-2020)?

- a) 113/1, 00,000 live births
- b) 173/100,000 live births
- c) 188/100,000 live births
- d) 211/100,000 live births

2) What is the Infant Mortality Rate [IMR] of India according to SRS(2018-20)?

- a) 57/ 1000 live births
- b) 57/one lakh live births
- c) 32/1000 live births
- d) 32/one lakh live births

3) All the following are prelacteal feeds EXCEPT

- a) Honey
- b) zam zam
- c) Sugar
- d) Colostrums

4) According to WHO Exclusive breast feeding to be continued till

- a) 1 year
- b) 6 months
- c) 5 months
- d) 4 months

5) What is the route of administration of Rotaviral vaccine ?

- a) Intramuscular
- b) Subcutaneous
- c) Intradermal

d) Oral

**Integration** – no integration has been suggested in the NMC document

## CM 10.7 Enumerate and describe the basis and principles of the Family Welfare Program including the organization, technical and operational aspects

Domain – Knowledge,

Level - Knows How,

Core competency – Y

### Specific Learning objectives

At the end of the session the learner should be able to

1. Describe the historical evolution of family planning/ family welfare programme in India
2. Define family planning. Explain the sociological and demographical basis of family planning
3. Explain how family planning programme is planned at various levels (National, State, District and PHC level, including various fertility related statistics)
4. Explain how family planning programme is implemented at the district level and below
5. Explain basics of evaluation of family planning programme (needs, plans, performance, effects and impact)
6. Explain the National Population Policy – historical evolution, current NPP2000. Goals, objectives and targets

### Content and teaching learning methods

Sl No	Content	TL methods	Time allotted
1	Definition, demographic & Sociological basis of family planning in India and evolution of FP/FW program	Lecture	30 mins
2	Indicators used for calculation of Family welfare targets. Actual calculation of eligible couple number, indenting of FP methods	Practical / Lecture	60 mins
3	Organizational pattern of Family planning Program at District level and below.	SDL	30 mins
4	Community needs assessment survey. Types & Steps of health program evaluation	Lecture	60 Mins
5	NPP 2000 Historical evolution, current NPP2000. Goals, objectives and targets	Lecture	30 mins
			3 hrs 30 mins

### Evaluation

Long Essay

Describe the goals, objectives and targets of National Population policy 2000.

(2+3+5)

Short Essay

MCQs

1) Failure rate of Copper- T is

- a) 0.8%
- b) 0.5%
- c) 1%
- d) 2%

2) The IUD used in PHC under the National Programme is

- a) Copper T 220C
- b) Copper T 380A
- c) Copper T 200B
- d) Multiload 375

3) Mechanism of action of OCPS is

- a) Prevent the release of ovum from the ovary
- b) Cervical mucus thickening
- c) Inhibit tubal motility
- d) All of the above

4) The drugs used as post coital pills EXCEPT

- a) Levonorgestrol 0.75mg
- b) Ethinyl estradiol 50mcg
- c) Mifepristone 10mg
- d) Misoprostol 35mcg

5) The effectiveness of MALA D and MALA N is

- a) 100%
- b) 80%
- c) 90%
- d) 70%

**Integration** – no integration has been suggested in the NMC document

## **CM 10.8 Describe the physiology, clinical management and principles of adolescent health including ARSH (total hrs of teaching required 2 hrs 30 mins)**

Domain – Knowledge,

Level - Knows How,

Core competency – Y

### **Specific Learning objectives**

At the end of the session the learner should be able to

1. Enumerate the physiological changes taking place during adolescence in male and females and how it is assessed

2. List the priority interventions under Adolescent Health Programme and describe the various services provided at clinic, outreach/ sub center, family and community level
3. Explain the need for a separate adolescent reproductive and sexual health programme (ARSH) under RMNCH+A and how it is to be delivered.
4. Explain the topics to be covered while counseling for adolescent health.
5. Describe the global strategy for women's, children's and adolescents' health 2016-2030

#### Content and teaching learning methods

Sl No	Content	TL methods	Time allotted
1	Physiological changes in adolescence and its assessment	Lecture	15 min
2	Adolescent health programme – components and services delivered	Lecture, SGD, Field visits	30 min
3	Sensitivity involved in delivering reproductive and sexual health programme for adolescents, components of ARSH, service delivery in PHCs, CHCs, THs and District Hospitals	SGD	45 min
4	Counselling Adolescents – steps in counselling, contents of adolescent health education (physiological changes, changes in personality, both males and females, general health, reproductive and sexual health, counselling regarding not using habit forming substances)	SGD	45 mins
5	Global strategy for Women's, children's and adolescents' health 2016-2030	Lecture	15 mins
			2hrs 30mins (total)

#### Evaluation

##### Long Essay

**Describe Health needs and problems of adolescents.**

**(5+5)**

##### Short Essay

##### MCQs

- 1) Under the MTP Act Medical termination is allowed up to
  - a) 18 weeks
  - b) 20 weeks
  - c) 24 weeks
  - d) 28 weeks
- 2) How many days after normal delivery can copper T be inserted?
  - a) Immediately after delivery
  - b) After 1 & half months
  - c) After 3 months

d) After 9 months

3) Content of MALA D is

- a) Ethinyl Estradiol 0.03mg & Levonorgestrol 0.3mg
- b) Ethinyl Estradiol 0.3mg & Levonorgestrol 0.03mg
- c) Ethinyl Estradiol 0.1mg & Levonorgestrol 0.33mg
- d) Ethinyl Estradiol 0.03mg & Levonorgestrol 0.1mg

4) What is cafeteria approach in National Family Welfare Programme?

- a) Giving the option to couples to choose for contraceptives
- b) Advising them to choose a right contraceptive
- c) Giving the advantages and disadvantages of different contraceptives and giving them option to choose
- d) none of the above

5) The present National Family Welfare Programme is under

- a) NRHM
- b) RMNCHA
- c) National Family Planning Programme
- d) NHM

**Integration – no integration has been suggested in the NMC document**

## CM10.9 Describe and discuss gender issues and women empowerment

Domain – Knowledge,

Level - Knows How,

Core competency – Y

### Specific Learning objectives

At the end of the session the learner should be able to

1. Explain the difference between “sex” and “gender” in terms of biological and social perspective.
2. Explain the difference between patriarchal and matriarchal societies with positive and negative aspects of both.
3. Explain how “gender” is a determinant of health and why it has been mentioned (specifically women and children) in the Directive principles of state policy of the Constitution of India
4. Describe the concept of women empowerment with examples

### Content and teaching learning methods

sl.no	Content	TL Methods	Time allocated
1	Explain the difference between sex and gender in terms of biological and social perspective	Lecture/SGD	30minutes
2	Explain the difference between patriarchal and matriarchal society and its adv and disadvantages	SGD	30minutes
3	Explain how gender is the determinant of health and why the importance of girl child have been	Lecture	1 hour

	mentioned as the directive policy of constitution of India		
4	Discuss the concept of women empowerment and role of self help group in empowering women	Small group discussion	30 minutes
5	Explain about gender bias and medical and social problem faced by girl child at different ages	Group discussion	30 minutes
			3 hrs

### Evaluation

#### Long Essay

Define sex ratio. Describe socio-cultural determinants of sex ratio in India. Add a note on steps taken for women empowerment. (2+4+4). Short Essay

#### MCQs

1) Habit disorders are all EXCEPT

- a) Thumb sucking
- b) bed wetting
- c) nail-biting
- d) day-dreaming

2) Juvenile means a boy who has not attained the age of

- a) 16 years
- b) 18 years
- c) 21 years
- d) 25 years

3. Beneficiaries of Integrated child development scheme are all EXCEPT

- a) Pregnant women
- b) Children less than 6 years of age
- c) Children 7-14 years of age
- d) Nursing mothers

4. Components of UJJAWALA scheme to combat child trafficking are

- a) Rescue
- b) Rehabilitate
- c) Reintegrate
- d) Repatriation
- e) All of the above

5. All are ACTS to preserve the rights of the children in India except

- a) Child labour (prohibition and regulation) ACT
- b) Child Placement ACT
- c) Juvenile justice ACT
- d) Children ACT

**Integration** – no integration has been suggested in the NMC document

For CM 10.1 to CM 10.9 (total 21 hrs – Lecture 10 hrs and SGD/ Practicals/ SDL – 11 hrs)

## GERIATRIC SERVICES [(CM 12) - 12.1 TO 12.4]

SI No.	Classes	Teaching method	Competency	Integration	Misc.	Assessment
<b>GERIATRIC SERVICES [CM 12 - 12.1 TO 12.4]</b>						
1	Define and describe the concept of Geriatric services	Lecture-1	CM 12.1	V.I with General Medicine		Written/ Viva-voce
2	Describe health problems of aged population	SGD-1	CM 12.2	V.I with General Medicine	CSCD	Written/ Viva-voce
3	Describe the prevention of health problems of aged population. Describe National program for elderly	SGD-2	CM 12.3 & 12.4	V.I with General Medicine	CSCD	Written/ Viva-voce

### Competency 12.1:

Define and describe the concept of Geriatric services

#### Specific Learning Objectives

At the end of the session, the learner should be able to:

1. Delineate the age group that is described as elderly.
2. Discuss the characteristic features of geriatric health care services
3. Discuss the challenges in providing geriatric health care services.

#### Content

1. Who can be called an elderly?
2. Classify the elderly as young old, old old and old older.
3. Discuss the impact of demographic and epidemiologic transition on providing geriatric health care services
4. Discuss accessibility, availability, acceptability and quality of health care services with respect to geriatric health services
5. Discuss the economic, logistic, psychosocial, socio cultural challenges in providing geriatric health care services.
6. Discuss comprehensive geriatric health care services.

#### TL methods

Lecture discussion or SGD 6th term

#### Evaluation

3. Short essay(example)  
Discuss the implications of demographic transition on health services.
4. Multiple choice question (example)

Proportion of elderly in India as per 2011 census is

- a. 7.4%
- b. 8.0%
- c. 8.6%
- d. 9.0%

Ans: c

## Competency 12.2:

Describe health problems of aged population

### Specific Learning Objectives

At the end of the session, the learner should be able to:

1. Classify the problems faced by the elderly.
2. Discuss the health problems of the elderly

### Content

1. Health problems due to ageing
2. Problems due to chronic illness.
3. Health problems specific to gender.

### TL methods

Lecture discussion or SGD 6th term

### Evaluation

1. Short essay(example)  
Discuss the health problems of the elderly.

2. Multiple choice question (example)

Of the following diseases select the one that is not the primary disease of elderly age group.

(a) Parkinsonism (b) Alzheimer's (c) Multiple sclerosis (d) Cerebrovascular disease

Ans: C

## Competency 12.3 & 4:

Describe the prevention of health problems of aged population.

Describe National program for elderly

### Specific Learning Objectives

At the end of the session, the learner should be able to:

1. Explain the concept of healthy ageing
2. Describe the multipronged approach to prevention of health problems of the elderly
3. State the objectives and strategies of National health program for the aged.

### Content

1. Multipronged approach for prevention of health problems of the elderly including health, social sectors.
2. Concept of healthy ageing

3. Explain the policies and welfare programs applicable to elderly
4. Objectives, strategies and implementation of national program for the elderly
5. Importance of creation of elderly friendly environment in terms of elderly friendly walkways, elderly friendly homes, elderly friendly public transport system
6. Discuss the policies for the elderly.

**TL methods**

Lecture discussion or SGD 6th term

**Evaluation**

1. Short essay(example)  
State the objectives and discuss the strategies of National program for the elderly.
  
2. Multiple choice question (example)  
Health communication regarding prevention and control of health problems of elderly should be targeted to:  
(a) Elderly (b) People in late adulthood (c) Younger people (d) All of the above  
Ans: d

## HOSPITAL WASTE MANAGEMENT [CM 14 - 14.1 TO 14.3]

Sl No.	Classes	Teaching method	Competency	Integration	Misc.	Assessment
1	Define and classify hospital waste	Lecture-1	CM 14.1	H.I with Microbiology		Written/ Viva-voce
2	Describe various methods of treatment of hospital waste	SGD-1	CM 14.2	H.I with Microbiology	Field visit	Written/ Viva-voce
3	Describe laws related to hospital waste management	SGD-2	CM 14.3	H.I with Microbiology	Field visit	Written/ Viva-voce
4	Observe the hospital waste management done at hospital and Common Biomedical Waste Treatment Facility(CBWTF)	SDL-1	CM 14.2	H.I with Microbiology	Assignment	Written/ Viva-voce

## Competency 14.1:

Define and classify hospital waste

### Specific Learning Objectives

At the end of the session, the learner should be able to:

5. Define Biomedical Waste
6. Differentiate between Biomedical waste, Health care waste and Hospital waste
7. Describe effects of improper management of biomedical waste on environment and human health.
8. Enlist the different types of waste generated in the hospital
9. Classify biomedical waste

### Content

7. Definition of Biomedical waste, Health care waste and Hospital waste
8. Effect of improper management of Biomedical waste on the environment such as Air, water and soil pollution.
9. Effect of Persistent organic pollutants on human health in terms of cancers and endocrine disorders.
10. List the different types of waste generated in the Hospital
11. Classification of biomedical waste as per WHO classification and BMWM Rules 2016

### TL methods

Lecture discussion or SDL, 6<sup>th</sup> term

### Evaluation

5. Short Answer (example)
  - Define Biomedical waste
  - Enlist the different categories of waste generated in a hospital
  - Classify biomedical waste
6. Multiple choice question (example)

## Competency 14.2:

Describe various methods of treatment of hospital waste

### Specific Learning Objectives

At the end of the session, the learner should be able to:

1. Enlist the various methods of treatment of Biomedical waste.
2. Explain the advantages and disadvantages between burn and non burn technologies for treatment of biomedical waste
3. Explain the importance of pre-treatment of certain categories of Biomedical waste.

### Content

1. Describe the available technologies for treatment of various categories of biomedical waste such as- Chemical treatment, Incineration, disinfection and shredding.
2. Describe the working of incineration and the difference between incineration and burning.
3. Describe the working of autoclave and microwave. Discuss the difference between sterilization and disinfection.
4. Discuss the advantages and disadvantages of autoclave and microwave over incineration
5. Discuss the treatment methods available for waste water treatment from the hospital
6. Discuss specifically the treatment to be followed as per the BMWM Rules 2016 for the various categories of waste.

### TL methods

Lecture discussion 6th term

### Evaluation

7. Short essay (example)  
Describe the process of incineration for Biomedical waste treatment
8. Multiple choice question (example)

Microwave is not suitable for treatment of \_\_\_\_\_

- a. Clinical lab wastes
- b. Chemotherapeutic wastes
- c. Sample collection containers
- d. Items contaminated with blood

Answer: b. Chemotherapeutic wastes

The sources of waste water from the hospital are \_\_\_\_\_.

- i. Laundry
  - ii. Laboratories
  - iii. Operation theaters
  - iv. Hospital kitchen
- 
- a. i and iii
  - b. ii and iv
  - c. i,ii and iii
  - d. All of the above

Answer: c. i,ii and iii

The environmental risks of waste water from the hospital are \_\_\_\_\_

- a. Pollute the water bodies
- b. Emergence of microbial resistance.
- c. Outbreaks of water borne diseases
- d. All of the above

Ans d. All of the above

### Competency 14.3:

Describe laws related to hospital waste management

#### Specific Learning Objectives

At the end of the session, the learner should be able to:

1. Describe the scope and applicability of BMWM Rules 2016.
2. Discuss the processes of segregation, collection, transportation and final disposal mechanisms as per BMWM Rules 2016
3. Discuss the roles and responsibilities of Regulatory authorities in implementation of BMWM Rules 2016

#### Content

1. Describe the Scope and applicability of BMWM Rules 2016
2. Explain the role and process of segregation in Biomedical waste management as per BMWM 2016.
3. Describe the process of collection and transportation as per BMWM Rules 2016
4. Describe the role of bar coding and tracking of waste as described in BMWM Rules 2016.
5. Describe the roles of various committees such as Infection control committee or Biomedical waste management
6. Describe Spill management process.

#### TL methods

Lecture discussion 6th term

**Evaluation**

9. Short essay (example)

Justify Segregation of biomedical waste is the heart of biomedical waste management.

10. Multiple choice question (example)

Draft

1. Identify the statement that correctly represents segregation of biomedical waste? Select the correct answer.
  - a. Putting different categories of biomedical waste into single bin
  - b. Putting different categories of biomedical waste into appropriate color coded bin
  - c. Putting same category of biomedical waste into different color coded bin
  - d. None of the above

Answer: b. Putting different categories of waste into different color coded bin

## Competency 14.4:

Observe the Biomedical waste management done at hospital or Common Biomedical Waste Treatment Facility(CBWTF)

### Specific Learning Objectives

At the end of the observation session, the learner should be able to:

1. Identify the steps involved in biomedical waste management in a hospital as per BMWM Rules 2016
2. Enlist the documents that are to be maintained at the hospital as per BMWM Rules 2016

### Content

1. Student will use an observation check list and observe the segregation, collection, in house transportation, temporary storage, documentation process and use of personal protective equipment by the personnel.
2. Student will visit various locations in the hospital to observe the biomedical waste management process.

### TL methods

Demonstration of Biomedical waste management processes in the hospital. Interaction with nursing personnel.

### Evaluation

Evaluate the report of the visit submitted by the student

## Topic: Health planning and management (CM 16)

Total time allotted - 4 hours (2 hours large group and 2 hours small group learning)

Competency No	Competency	Domain K/S/A/C	Level	Phase	TL method	Integration	Assessment*	Remarks
16.1	Define and describe the concept of Health Planning	K	K	3	Interactive lecture		SAQ SEQ	
16.2	Describe planning Cycle	K	K	3	Interactive lecture		LAQ SEQ SAQ	
16.3	Describe Health Management Techniques	K/S	KH/S H	2 and 3	SGD Practical PHC/DH O visit		LAQ SEQ SAQ MCQ Assignment and log book entry Reflection writing	
16.4	Describe Health planning in India and National policies related to health and health planning	K	KH	3	Interactive lecture		SAQ SEQ MCQ	Pandemic module, PM 2.4)  FC 3.1 (foundation course)

**\* Formative Assessment tools for Interactive lecture**

- Quiz/MCQ test (app or google form)
- One minute paper
- Directed paraphrasing
- Muddiest point
- Buzz groups
- Exit slip/ticket
- Yes/No response (color cards)
- Log book/portfolio

Formative assessment for small group learning (some of them are used both for teaching and assessment)

- Checklist completion
- Peer assessment
- Think, Pair and share
- Round robin charts
- Jigsaw method
- Feedback forms
- Informal presentations
- Group discussions
- Poster making
- Role play
- Debates
- Logbook/practical record/portfolio

## CM 16.1- Define and Describe the concept of Health Planning

SLOs: *At the end of teaching learning session the student should be able to*

1. Define Health planning as per WHO
2. Identify the purpose of health planning
3. Define health needs (Postings during second year/family survey)
4. Define health demands (Postings during second year/family survey)
5. Differentiate between Goal, Target and Objective using suitable examples.

Content:

- Need for planning in health
- Pre requisites for planning
- Examples of planning in health care (national programs, hospitals and during health crisis)
- Health needs and demands

Assessment:

Sample Short answer Question:

Differential between goal, target and objective using suitable examples- 3 marks

## CM 16.2- Describe planning cycle

SLOs: *At the end of teaching learning session the student should be able to*

1. Define Planning Cycle
2. Describe the 8 steps of the Planning Cycle in the correct order with an example

Content:

- Planning cycle at various levels with examples'
- Gantt chart
- Types of planning

Assessment:

Sample Long answer question:

Describe the steps of planning cycle with an example – 10 marks

## CM 16.3- Describe Health management techniques

SLOs: *At the end of teaching learning session the student should be able to*

1. Define health management
2. Describe the principles of health management
3. Differentiate between management, organisation and administration in health
4. Describe the modern health management techniques with suitable examples

Content:

- Management and administration
- Organisational control
- Budgeting
- Inventory management
- Network analysis
- Time management

Assessment:

Sample Long answer question- 10 marks

As a new medical officer of the primary health centre of a tribal area, you are planning to implement the mother and child health programmes as per the needs of the community.

Answer the following questions in the context of the above scenario

- a) What is the importance of planning?
- b) Describe your plan of action using planning cycle.

Sample Short answer: 3 marks

What is Cost-benefit and Cost- effective Analysis?

Sample Long Essay: 10 marks

Describe Inventory management techniques with example

Sample MCQ

Which of the following is NOT a inventory management technique?

1. ABC analysis
2. FSN analysis
3. VED analysis
4. PHC analysis

Key- 4

## CM 16.4- Describe health planning in India and National policies related to health and health planning

SLOs: *At the end of teaching learning session the student should be able to*

1. Describe the steps to prepare a micro plan for vaccination activity at PHC level (Pandemic module, PM 2.4)
2. List the goal, key principles and objectives of National Health Policy 2017
3. Demonstrate the understanding of the national health goals and policies FC 3.1 (foundation course)
4. Describe the thrust areas under National Health Policy 2017
5. Enumerate the recommendations of the various Health Committees in India
6. List the functions of NITI in Health planning in India
7. Describe role of Five-year plans with respect to health care in India

Content:

- NITI AYOG and health
- Five-year plans and health
- Health committee recommendations
- National Health policy 2017 highlights

Assessment:

Sample Short Essay- 5 marks

- Describe the key features of national health policy 2017

**Faculty Guide:**  
**Sample lesson plan**

Topic: Health Planning

Competency:

CM16.1- Define and describe the concept of Health planning

CM16.2- Describe planning cycle

Specific Learning Objective:

At the end of teaching learning session, a Phase 3 student should be able to

1. Define Health planning correctly as per WHO definition.
2. Identify the purpose of health planning correctly.
3. Define health needs and health demands.
4. Differentiate between Goal, Target and Objective correctly using examples.
5. Define the Planning Cycle correctly.
6. Describe the steps of the Planning Cycle correctly.

Domain - Knowledge

Level – Knows, Knows how

Core – Yes

Integration: NIL

LESSON PLAN

Sl. No.	Content	TL Method	TL Media	Time
1.	Set induction- Need/ Purpose for Health Planning	Brainstorming	Black/white board	5 min
2.	Define Health planning as per WHO definition	Lecture	PPT	5 min
3.	Differentiate between Goal, Target and Objective using examples	Lecture	PPT	5 min

4.	Define planning Cycle	Lecture	PPT	5 min
5.	Formative assessment	MCQ	Kahoot	5 min
6.	Describe the steps of the Planning Cycle	Lecture	PPT	20 min
7	Assessment	Summative: Q&A session		5 min
8	Summary	Brainstorming	PPT, White/ Black board	5 min
9	Attendance			5 min

**Faculty guide:**  
**Assessment of small group learning:**  
**Rubric for Small group Discussion**

Score	Criteria for assessment
5	Is a proactive participant showing a balance between listening, initiating, and focusing discussion. Displays a proactive use of the whole range of discussion skills to keep discussion going and to involve everyone in the group. Understands the purpose of the discussion and keeps the discussion focused and on topic. Applies skills with confidence, showing leadership and sensitivity.
4	Is an active participant showing a balance between listening, initiating, and focusing discussion. Demonstrates all the elements of discussion skills but uses them less frequently and with less confidence than the above level. Keeps the discussion going but more as a supporter than a leader. Tries to involve everyone in the group. Demonstrates many skills but lacks the confidence to pursue them so that the group takes longer than necessary to reach consensus. Demonstrates a positive approach but is more focused on getting done than on having a positive discussion.
3	Is an active listener but defers easily to others and lacks confidence to pursue personal point of view even when it is right. Participates but doesn't use skills such as summarizing and clarifying often enough to show confidence. Limits discussion skills to asking questions, summarizing, and staying on topic. Lacks balance between discussion and analytical skills. Either displays good analysis skills and poor discussion skills or good discussion skills and poor analysis skills.
2	Is an active listener but defers easily to others and tends not pursue personal point of view, lacking confidence. Limits discussion skills to asking questions, summarizing, and staying on topic. Rarely demonstrates analysis skills because doesn't understand the purpose of the discussion, and as a result, offers little evidence to support any point of view.
1	Demonstrates no participation or effort. Participates only when prompted by the teacher. Only responds to others and initiates nothing. Provides limited responses that are often off topic. Participates minimally so that it is impossible to assess analysis skills or understanding of the issues.

**1 to 3 =Below Expectations**  
**4 =Meets Expectations**  
**5 =Above Expectations**

# HEALTH CARE OF THE COMMUNITY (CM 17)

## Competency 17.1/2/3

Define and describe the concept of health care to community/ Describe community diagnosis/ Describe primary health care, its components and principles.

### Specific learning Objectives

At the end of the session the learner will be able to:

- a. Define Health care.
- b. Classify levels of health care.
- c. Define Primary Health Care.
- d. Describe Principles and Elements of Primary Health Care.
- e. Define community diagnosis

## Competency 17.4

Describe National policies related to health and health planning and millennium development goals.

### Specific learning Objectives

At the end of the session the learner will be able to:

- a. Describe National Population Policy.
- b. Describe National Children Policy.
- c. Describe National policy for older persons.
- d. Describe Sustainable Development Goals (SDG) and targets.

## Competency 17.5

Describe health care delivery in India.

### Specific learning Objectives

At the end of the session the learner will be able to:

- a. Describe Health Systems in India – Centre, State,
- b. District Level: Panchayati Raj and Rural Development
- c. Describe Health Care Systems, Indigenous systems of medicine and its advantages and disadvantages in India.
- d. Describe the IPHS standards for PHC and Health and wellness centre, subcentre
- e. Describe the voluntary health agencies working in India
- f. Define evaluation
- g. Describe steps involved in evaluation of Health Service
- h. Describe Health Systems Research and Health Forecasting

## LONG ESSAY

1. Define primary health care. Describe principals and elements of primary health care.
2. Describe Primary health care in India.

**Short essay**

1. Levels of health care in India
2. Enumerate functions of primary health centre
3. Primary Health care workers
4. Describe IPHS standards for PHC.

Draft

**Short notes :**

1. Appropriate technology with example
2. List 4 functions of ASHA worker
3. List 4 functions of anganwadi worker.
4. List 4 voluntary health agency working in India
5. Enumerate 4 functions of Medical officer of PHC.

**MCQ :**

1. The population covered by a Primary health centre in rural area is a) 15000 b) 20000 c) 25000 d) 30000
2. The population covered by a health and wellness centre, subcentre in a tribal area is a) 5000 b) 30000 c) 4000 d) 6000

Ans : 3000

3. Treatment of locally endemic diseases is a job responsibility of PHC MO a). true b). false

Ans : True

## Recent advances in Community Medicine (CM 20)

Total time allotted – 2 hours

Competency No	Competency	Domain K/S/A/C	Level	Phase	TL method	Assessment*	Remarks
CM 20.1	List important public health events of last five years	K	KH	3	SGD SDL	Reflective writing	Participate in the public health events in their college or state
CM 20.2	Describe various issues during outbreaks and their prevention	K	KH	3	SGD	SAQ	<b>Reflective writing by the previous pandemic experiences</b> <ul style="list-style-type: none"> <li>• To be covered in Pandemic module</li> </ul>
CM 20.3	Describe any event important to Health of the Community	K	KH	3	SGD	Assignment and log book entry Reflection writing	Participate in the public health events in their college or state
CM 20.4	Demonstrate awareness about laws pertaining to practice of medicine such as Clinical establishment Act and Human Organ Transplantation Act and its implications	K	KH	3	SGD SDL	MCQ	

Formative assessment for small group learning (some

- Checklist completion
- Peer assessment
- Think, Pair and share
- Feedback forms
- Informal presentations
- Group discussions
- Poster making

- Role play
- Debates
- Logbook/practical record/portfolio

### CM 20.1- List important public health events of last five years

SLOs: *At the end of teaching learning session the student should be able to*

6. List the important public health events
7. Know the importance of it and the theme of that year
8. Events conducted in their college or district and participate

Assessment:

Log book – Reflective writing

### CM 20.2- Describe various issues during outbreaks and their prevention

SLOs: *At the end of teaching learning session the student should be able to*

3. Define Pandemic and should be able to describe the steps taken in containment of the pandemic
4. Should know the various government bodies and non Govt agencies which help in the outbreaks
5. Various problems faced by the health care professionals in during pandemic

Assessment:

Log book – reflective writing

### CM 20.3 - Describe any event important to Health of the Community

SLOs: *At the end of teaching learning session the student should be able to*

1. List the important health event
2. Know the importance of it and participate in it

Assessment:

Log book – reflective writing

### CM 20.4- Demonstrate awareness about laws pertaining to practice of medicine such as Clinical establishment Act and Human Organ

Transplantation Act and its implications

SLOs: *At the end of teaching learning session the student should be able to*

8. Demonstrate awareness about various laws in the state and in India
9. And the implications on health

Assessment:

# AETCOM

## 3.1 The Foundations of Communication- 3

### A. Healthcare as a right:

- 1) What are the implications of healthcare as a right?
- 2) What are social and economic implications of healthcare as a right?
- 3) What are the implications of doctor?

#### Evaluation:

Write a short note on barriers of implementation of healthcare as a universal right.

### B. Working In a healthcare team:

- 1) Demonstrate ability to work in a team of peers and superiors.
- 2) Demonstrate respect in relationship with patients, fellow team members, superiors and other healthcare workers.

### C. Doctor-patient relationship

- 1) Demonstrate empathy in patient encounters.
- 2) Communicate care options to patient and family with a terminal illness in a simulated environment.

## 3.3 The Foundations of Communication-4

(For Assessment of AETCOM competency please refer “AETCOM-Competency for the Indian medical Graduate 2018, MCI New Delhi Document)

# ELECTIVES:

## Electives : Department of Community Medicine

Name of Block	Block 1
Name of Elective	Assessment of client satisfaction of ANC services in urban and rural health center
Location of hospital Lab or research facility	Urban/Rural health training center of ----
Name of internal preceptor(s)	Dr. Dr. Dr. Dr.
Name of external preceptor(s)	NA
Learning objectives of elective	<ol style="list-style-type: none"> <li>1. Writing objectives of the study</li> <li>2. Sample size calculation, sampling method</li> <li>3. Review of literature Study tool designing</li> <li>4. Data collection methods and techniques</li> <li>5. Data analysis</li> <li>6. Report writing</li> </ol>
Number of students that can be accommodated	10
Prerequisites	Good communication skills
List of activities of student participation	<ol style="list-style-type: none"> <li>1. Orientation to research methods</li> <li>2. Protocol writing</li> <li>3. Review of literature</li> <li>4. Preparing questionnaire</li> <li>5. Data collection</li> <li>6. Data analysis and interpretation</li> <li>7. Project report writing and presentation</li> </ol>
Learning resources	Books on Research methodology Books on biostatistics Antenatal mothers
Portfolio	Activity Book with photos

Logbook	Satisfactory completion of posting with a “meets expectation ‘(M)’ grade”
Assessment	Attendance: Successful completion of objectives and log book entry
Comments	
Name of Block	Block 1
Name of Elective	Community based research
Location of hospital Lab or research facility	Urban/Rural field practice area of ----
Name of internal preceptor(s)	Dr. Dr. Dr. Dr.
Name of external preceptor(s)	
Learning objectives of elective	<ol style="list-style-type: none"> <li>1. To select the research topic</li> <li>2. To frame objectives of research topic</li> <li>3. To write methodology for research</li> <li>4. To collect data and analyze the results.</li> <li>5. To present abstract to the group.</li> </ol>
Number of students that can be accommodated	10
Prerequisites	Communication skills
List of activities of student participation	<ol style="list-style-type: none"> <li>1. Work with supervisor in selecting the topic, framing the objectives</li> <li>2. Write up the Introduction, Review of literature.</li> <li>3. Work up with statistician to write up methodology and to do analysis to the data collected</li> <li>4. Present abstract of the research done</li> </ol>
Learning resources	Leon Gordis: Clinical Epidemiology
Portfolio	Data collection notes

	Statistical work sheet Abstract created
Logbook	Satisfactory completion of posting with a “meets expectation ‘(M)’ grade”
Assessment	Attendance Successful completion of objectives and log book entry
Comments	

## **LOGBOOK:**

(Refer RGUHS 2<sup>nd</sup> Professional Document ordinance.)

## **Reference Books**

(Refer RGUHS 2<sup>nd</sup> Professional Document ordinance.)

### **REFERENCE BOOK**

1. K. Park, Park’s textbook of preventive and social medicine, M/s Banarasidas Bhanot Publishers, Jabalpur. -
2. B.K. Mahajan &M. Gupta Textbook of preventive and social medicine, Jaypee Brothers.
3. Mahajan’s Methods in Biostatistics for Medical Students and Research Workers. Jaypee Publishers
- 4). D.K Mahabalaraju., Essentials of Community Medicine, Practicals.
- 5) Sundar Lal, Textbook of Community Medicine, CBS Publishers.

### **Level II**

- 1) A M Kadri.IAPSM’s Textbook of Community Medicine.
- 2) I Kishore.Kishore's National Health Programs of India
- 3) Rajvir Bhalwar ,Textbook of Public Health and Community Medicine, Published in Collaboration with WHO.
- 3) Principles of Medical Education: Dr. T Singh
- 4) A H Suryakanth Community Medicine with Recent Advances.
- 5) P S S Sundar Rao.Introduction to biostatistics and research methods

### **Level-III**

1. Donald Hunter, (2018) The Disease of Occupations, Latest Edition, Hodder & Stoughton London, Sydney, Auckland, Toronto.
2. International Labour Organization, Encyclopaedia of Occupational Health and Safety, Volume 1 & 2. ILO, Geneva, Switzerland
3. Jallifee, Clinical Nutrition, WHO., Geneva

Draft

**Model Question paper**  
**Department of Community Medicine**  
**Rajiv Gandhi University of Health Sciences, Karnataka**

**MBBS PHASE III PART I MODEL QUESTION PAPER**

**Total 100 Marks**

**LONG ESSAY: (2 x 10 = 20 Marks)**

- 1) .A 40-year male with sedentary lifestyle came to a medical centre with complaints of weakness and lethargy along with the history of increased thirst and appetite during the day and night. He told the doctor that his sleep is disturbed during the night due to increase in frequency of micturition (2 to 3 visits to toilet). He further said to the doctor that his father is 72 year and has been suffering from diabetes and hypertension.
- a)What level of prevention is applicable for this specific scenario? (2M)
  - b)What measures are required to prevent from further disability? (2M)
  - c)What measure patient could have taken to delay the onset of a disease? (2M)
  - d)Describe the modes of intervention under each level of prevention with suitable examples. (4M)

**- 10M**

- 2) Enumerate the maternal and child health indicators. Define perinatal mortality rate. Write the causes and measures to reduce perinatal mortality in India.(4+2+4)

**SHORT ESSAY: (5 x 8 = 40 Marks)**

- 3) Discuss various methods of nutritional assessment in the community.
- 4) Write in detail about Adverse Events Following Immunization(AEFI) and precautions to be taken.
- 5) Radiation – hazards(biological effects) and prevention.
- 6) What is sampling. Enumerate different methods.
- 7) Carrier state in disease. Salient features. Classification with examples.
- 8) Surveillance of drinking water quality.
- 9) What is Neurolathyrism? Mention the causes, clinical features and interventions for the control of the problem.
- 10) Intrauterine device. Ideal candidate, advantages, contraindications and side-effects.

**SHORT ANSWERS : (3 x 10 = 30 Marks)**

- 11) Role of Immunoglobulins in disease prevention.
- 12) Population pyramid.
- 13) What are social factors affecting health.
- 14) Breakpoint chlorination.
- 15) Essential new-born care.
- 16) Emporiatrics and its components.
- 17) Uses of screening.
- 18) Social security.

- 19) Balwadi nutrition programme  
20) Healthcare delivery indicators.

**MCQS : (1 x 10 = 10 Marks)**

21) **Human living standards can be compared in different countries by:**

- a. HDI
- b. PQLI
- c. HPI
- d. DALY

(ANS=b)

22) Which of the following is the aggregation of two or more epidemics?

- a. Endemic
- b. Syndemic
- c. Poly epidemic
- d. Pandemic

(ANS=b)

23) All are true about milk as a diet except:-

- a. It is low in iron content but rich in calcium, sodium and potassium.
- b. The major carbohydrates is lactose
- c. The chief proteins are caseinogens and lactalbumin
- d. It is rich in vit C and D but poor in vit A and Riboflavin

(ANS=d)

24) Which of the following has the highest glycemic index?

- a. Icecream
- b. Dextron
- c. Dextrose
- d. Bread

(ANS=c)

25) Which of the following pollutant gases is not produced both naturally and as a result of industrial activity?

- a. CFCs
- b. CO<sub>2</sub>
- c. NO<sub>2</sub>
- d. Methane

(ANS=a)

26) Range of values surrounding the estimate which has a specified probability of including the true population values

- a. Standard deviation
- b. Standard error
- c. Confidence interval
- d. Correlational coefficient

(ANS=c)

27) Which fitness campaign of India has recently been applauded by WHO?

- a. Fitness ka Dose Aadha Ghanta Roz

- b. Indian Swasthya Abhiyan
- c. Hum Swasth to Jan Swasth
- d. None of the above

(ANS=a)

28) NRHM seeks to strengthen:

- a. Private healthcare system
- b. Public healthcare system
- c. Private and public healthcare system
- d. None of these

(ANS=c)

29) Which of the following is an important determinant of population change?

- a. Migration
- b. Human development report
- c. Net attendance ratio
- d. Life expectancy

(ANS=a)

30) If arithmetic mean is 82 and median is 78 then the appropriate value of mode will be.

- a. 50
- b. 60
- c. 70
- d. 80

(ANS=d)

## **Acknowledgement**

**Acknowledgement of contributors Faculty from the Department of Community  
Medicine:**

- **Bangalore Medical College and Research Institute, Bangalore**
- **St. John's Medical College, Bangalore,**
- **M.S. Ramaiah Medical College, Bangalore**
- **Mysore Medical College and Research Institute, Mysore**
- **Mandya Institute of Medical Sciences, Mandya**
- **Kempegowda Institute of Medical Sciences, Bangalore**
- **Sapthagiri Institute of Medical Sciences, Bangalore**
- **MVJ Medical College, Bangalore**
- **Belagavi Institute of Medical Sciences, Belagavi**

# Rajiv Gandhi University of Health Sciences



## UNDERGRADUATE LOGBOOK

For 1<sup>st</sup> 2<sup>nd</sup> and 3<sup>rd</sup> Professional Year MBBS Students

### DEPARTMENT OF COMMUNITY MEDICINE

Name of College, address & Logo

## **PREFACE**

The Medical Council of India has revised the undergraduate medical education curriculum so that the Indian Medical Graduate (IMG) is able to recognize “Health for all” as a national goal. He/she should also be able to fulfil his/her societal obligations. The revised curriculum has specified the competencies that a student must attain and clearly defined teaching learning strategies for the same. With this goal in mind, integrated teaching, skill development, AETCOM and self-directed learning have been introduced. There would be emphasis on communication skills, basic clinical skills, and professionalism. There is a paradigm shift from the traditional didactic classroom-based teaching to learning environments where there is emphasis on learning by exploring, questioning, applying, discussing, analysing, reflecting, collaborating, and doing. The recognition of this need is enshrined by a greatly enhanced allocation of time to these methods and also the assessment techniques. With this view in mind the logbook has been designed as per the guidelines of Competency Based Curriculum.

## **INSTRUCTIONS**

- 1) The logbook is a record of the academic and co-curricular activities of the designated student, who would be responsible for maintaining his/her logbook.
- 2) The student is responsible for
- 3) getting the entries in the logbook verified by the faculty in charge regularly.
- 4) Entries in the logbook will reflect the activities undertaken in the department & have to be scrutinized by the Head of the concerned department.
- 5) The logbook is a record of various activities by the student like:
  - Overall participation & performance
  - Attendance
  - Participation in sessions
  - Record of completion of pre-determined activities.
  - Acquisition of selected competencies
- 6) The logbook is the record of work done by the candidate in that department /specialty and should be verified by the college before submitting the application of the students for the university examination.

## BASIC INFORMATION

Passport size photo

Name	
Roll No	
University Registration Number	
Batch	
Contact No	
E mail Id	
Guardian/Parent Name	
Contact Number	
Faculty Mentor Name Department	

## LOGBOOK CERTIFICATE

This is to certify that this log book is the bonafide record of Mr./Ms...

..... Registration number

..... and admitted to this Institution in the academic year

..... whose particulars are given above. His/ Her log of competencies

acquired, are as noted in the entries in this log book in the subject of **COMMUNITY**

**MEDICINE** and related AETCOM modules as per the Competency Based Undergraduate

Medical Education Curriculum, Graduate Medical Regulation 2019, during the period

..... to.....

She / He is not eligible / eligible to appear for the summative (University) assessment as on the date given below.

Signature of Faculty Mentor

Name and Designation

Countersigned by Head of the Department

Place:

Date:

## INDEX

Topic	Page Nos.	Signature of Faculty
<b>Core Activities</b>		
<b>Attendance extract</b>	-----	
<b>Internal assessment marks</b>	With record feedback	
<b>Communication activity</b>		
<b>Family study</b>		
<b>Clinico-social Case</b>		
<b>Seminar</b>		
<b>Self-Directed Learning</b>		
<b>Record Maintenance</b>		
<b>Health Days</b>		
<b>Volunteering in National Health Program Related Field Activities</b>		
<b>Field Visit</b>		
<b>AETCOM</b>		
<b>Research</b>		
<b>Investigation of an Epidemic*</b>		
<b>Non-Core Activities</b>		
<b>Co - Curricular Activities (Quiz, Poster, Debate, Essay, Skits)</b>		
<b>CME/ Conference / Workshop</b>		
<b>Awards / recognition</b>		
<b>Overall assessment of student</b>		

## ATTENDANCE EXTRACT

Professional year	Classes conducted		Classes attended		Percentage	
	Theory	Practical	Theory	Practical	Theory	Practical
First						
Second						
Third						
Total						

**Signature of faculty and date**

**Note:**

Every candidate should have **attendance not less than 75% of the total classes conducted in theory which includes didactic lectures and self-directed learning and not less than 80% of the total classes conducted in practical which includes small group teaching, tutorials, integrated learning and practical sessions** in each calendar year calculated from the date of commencement of the term to the last working day as notified by the University in each of the subjects prescribed to be eligible to appear for the university examination.

The Principal should notify at the College the attendance details at the end of each term without fail under intimation to this University

## INTERNAL ASSESSMENT MARKS

<b>Professional year</b>	<b>Theory</b>		<b>Practicals</b>	
	<b>Total marks</b>	<b>Obtained</b>	<b>Total</b>	<b>Obtained</b>
<b>First</b>				
<b>Feedback given</b> <b>Date</b> <b>Signature of faculty</b> <b>Signature of student</b>				
<b>Second</b>				
<b>Feedback given</b> <b>Date</b> <b>Signature of faculty</b> <b>Signature of student</b>				
<b>Third</b>				
<b>Feedback given</b> <b>Date</b> <b>Signature of faculty</b> <b>Signature of student</b>				

## SUMMARY OF FORMATIVE ASSESSMENT FOR THE ENTIRE YEAR

Sl. No.	Type of Assessment	Total marks	Marks scored	Signature of student	Signature of teacher with date
1	Seminars/Tutorials/other activities/SGD	10			
2	Professionalism	10			
	TOTAL	20			

Note: Learners must secure at least 50% marks of the total marks (combined in theory and practical / clinical; not less than 40 % marks in theory and practical separately) assigned for internal assessment in a particular subject in order to be eligible for appearing at the final University examination of that subject. Internal assessment marks will reflect a separate head of passing at the summative examination.

## RUBRIC FOR ASSESSING THE PROFESSIONALISM

Phase	Areas assessed				Total (20)	Signature of student	Signature of teacher
	Regular for Classes (5)	Submission of records (5)	Behaviour in class and discipline (5)	Dress code and presentability (5)			
At the end of 1 <sup>st</sup> IA							
At the end of 2nd IA							
At the end of 3rd IA							
Average score at the end of the year							

## COMMUNICATION ACTIVITY

### Competencies covered

- : Demonstrate the role of effective communication skills in health in a simulated environment
- : Demonstrate the important aspects of the doctor patient relationship in a simulated environment
- 4.3: Demonstrate and describe the steps in evaluation of health promotion and education program

Competency # addressed	Name of Activity	Date completed	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations	Decision of faculty Completed (C) Repeat (R) Remedial (Re)	Initial of faculty and date	Feedback received Initial of learner

## FAMILY STUDY

### Competencies covered

- : Describe the steps and perform clinic-socio-cultural and demographic assessment of the individual, family, and community
  - : Describe the socio-cultural factors, family (types), its role in health and disease & demonstrate in a simulated environment the correct assessment of socio-economic status
  - : Describe and demonstrate in a simulated environment the assessment of barriers to good health and health seeking behaviour
- 5.2: Describe and demonstrate the correct method of performing a nutritional assessment of individuals, families, and the community by using the appropriate method
- 5.4: Plan and recommend a suitable diet for the individuals and families based on local availability of foods and economic status, etc in a simulated environment

Competency # addressed	Name of Activity	Date completed	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations	Decision of faculty Completed (C) Repeat (R) Remedial (Re)	Initial of faculty and date	Feedback received Initial of learner

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## CLINICO – SOCIAL CASE

### Competencies covered

- : Describe the steps and perform clinic-socio-cultural and demographic assessment of the individual, family, and community
  - : Describe the socio-cultural factors, family (types), its role in health and disease & demonstrate in a simulated environment the correct assessment of socio-economic status
  - : Describe and demonstrate in a simulated environment the assessment of barriers to good health and health seeking behaviour
- 5.2: Describe and demonstrate the correct method of performing a nutritional assessment of individuals, families, and the community by using the appropriate method
- 5.4: Plan and recommend a suitable diet for the individuals and families based on local availability of foods and economic status, etc in a simulated environment

Competency # addressed	Name of Activity	Date completed	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations	Decision of faculty Completed (C) Repeat (R) Remedial (Re)	Initial of faculty and date	Feedback received Initial of learner

## SEMINAR

### Competencies covered

- 1.9: Demonstrate the role of effective communication skills in health in a simulated environment
- 4.3: Demonstrate and describe the steps in evaluation of health promotion and education program

Competency # addressed	Topic	Date completed	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets (M) expectations Exceeds (E) Expectations	Decision of faculty Completed (C) Repeat (R) Remedial (Re)	Initial of faculty and date	Feedback received Initial of learner

## STUDENT SEMINAR EVALUATION RUBRIC

Name of the student: \_\_\_\_\_

Reg.No. \_\_\_\_\_

Name of the Topic: \_\_\_\_\_ Date of Presentation: \_\_\_\_\_

*Please tick mark (✓) the response which best represents your answer for the following questions.*

S. No.		Strongly Disagree (1)	Disagree (2)	Uncertain (3)	Agree (4)	Strongly Agree (5)
<i>Content:</i>						
1.	The topic chosen was relevant to the course					
2.	The objectives of the topic were clearly stated.					
3.	There was adequate review of the literature.					
4.	The student maintained good continuity of thoughts throughout the presentation.					
5.	The student demonstrated a good understanding of the topic.					
6.	The material presented was appropriate for the time allotted.					
<i>Presentation:</i>						
1.	The presentation was well organized.					
2.	The audio visuals were well prepared.					
3.	The voice was clear and audible.					
4.	The student maintained regular eye contact with the audience.					
5.	The student adhered to the expected style of a scientific talk.					
6.	The student maintained the interest of the audience throughout the presentation.					
7.	The student maintained proper pace during the presentation.					
8.	The student handled all the questions well.					
9.	The student summarized the topic well emphasizing a take home.					

**Suggestions for Improvement:**

**Any other Comments:**

Overall Score:

Evaluated by: Name of the Faculty: \_\_\_\_\_



The small group discussions will be scored based on the following criteria. Marks to be given

Score	Criteria for assessment
5	Is a proactive participant showing a balance between listening, initiating, and focusing discussion. Displays a proactive use of the whole range of discussion skills to keep discussion going and to involve everyone in the group. Understands the purpose of the discussion and keeps the discussion focused and on topic. Applies skills with confidence, showing leadership and sensitivity.
4	Is an active participant showing a balance between listening, initiating, and focusing discussion. Demonstrates all the elements of discussion skills but uses them less frequently and with less confidence than the above level. Keeps the discussion going but more as a supporter than a leader. Tries to involve everyone in the group. Demonstrates many skills but lacks the confidence to pursue them so that the group takes longer than necessary to reach consensus. Demonstrates a positive approach but is more focused on getting done than on having a positive discussion.
3	Is an active listener but defers easily to others and lacks confidence to pursue personal point of view even when it is right. Participates but doesn't use skills such as summarizing and clarifying often enough to show confidence. Limits discussion skills to asking questions, summarizing, and staying on topic. Lacks balance between discussion and analytical skills. Either displays good analysis skills and poor discussion skills or good discussion skills and poor analysis skills.
2	Is an active listener but defers easily to others and tends not pursue personal point of view, lacking confidence. Limits discussion skills to asking questions, summarizing, and staying on topic. Rarely demonstrates analysis skills because doesn't understand the purpose of the discussion, and as a result, offers little evidence to support any point of view.
1	Demonstrates no participation or effort. Participates only when prompted by the teacher. Only responds to others and initiates nothing. Provides limited responses that are often off topic. Participates minimally so that it is impossible to assess analysis skills or understanding of the issues.

## EVALUATION OF SGL SESSIONS

COURSE TITLE: \_\_\_\_\_

PHASE \_\_\_\_\_ DATE: \_\_\_\_\_

**Scale:1-** Never

**2-** Occasionally

**3-** Sometimes

**4-** Often

**5-** Always

1 2 3 4 5

<b>1.</b>	Assembles for the session in time							
<b>2.</b>	Contributes relevant information in discussions							
<b>3.</b>	Shares learning resources relevant to the topic							
<b>4.</b>	Gives critical feedback							
<b>5.</b>	Takes criticism in a healthy manner							
<b>6.</b>	Seeks answers to learning questions							
<b>7.</b>	Integrates old and new knowledge (across the courses)							
<b>8.</b>	Shows consideration for group process							
<b>9.</b>	Shows confidence in areas of understanding							
<b>10.</b>	Shows commitment to correct deficiencies							
	<b>Total</b>							

STUDENT

TUTOR

SIGNATURE	SIGNATURE
NAME:	NAME:
REG.NO.	DEPARTMENT:

**Documentation and feedback for Self-Directed Learning**

<b>Sl no</b>	<b>Date</b>	<b>Topic of SDL</b>	<b>Feedback</b>	<b>Signature of faculty/mentor</b>
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

Reflection on Self-directed learning Experience

Topic:

Date:

Draft

Signature of Teacher-in- charge

## RECORD MAINTAINANCE

Scoring:      Excellent (8-10)      Good (6-7)      Average (4-5)      Poor (<4)

Criterion	Rating	Signature of faculty and date
Completion		
Quality of content		
Appropriate diagrams where required		
Neatness		
Total		

## WORLD HEALTH DAY

Health day observed		
Date		
Location		
Role of the student	Participated	Observed
Details of the program		
Reflection by student		

**Signature of faculty and date**

## VOLUNTEERING IN NATIONAL HEALTH PROGRAM RELATED FIELD ACTIVITIES

Name of the National Health Program		
Date		
Location		
Role of the student	Participated	Observed
Details of the activity		
Reflection by student		

**Signature of faculty and date**



## Check List for Evaluation of Field Visit Report

**Field Visit Report** will be marked on five-point Likert Scale:

1=Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree

	1	2	3	4	5
1. There is a comment on whether the objectives of the visit have been fulfilled, if not which objective has not been covered					
2. There is Clear Description of student observation/ skill learned.					
3. Analysis of strengths and weaknesses of the services in light of theory and key concepts of the course					
4. Report include information that supports student analysis [Pictures, maps, forms]					
5. There is evidence of active participation of student during the visit					
6. There is statement of Limitation / suggestions					

# AETCOM

<b>Competency # addressed</b>	<b>Name of Activity</b>	<b>Date</b>	<b>Signature of faculty</b>	<b>Feedback Received Initial of learner</b>

# RESEARCH

## Competencies covered

- : Describe and discuss the principles and demonstrate the methods of collection, classification, analysis, interpretation, and presentation of statistical data
  - : Describe, discuss, and demonstrate the application of elementary statistical methods including test of significance in various study designs
  - : Enumerate, discuss, and demonstrate Common sampling techniques, simple statistical methods, frequency distribution, measures of central tendency and dispersion
- 7.9: Describe and demonstrate the application of computers in epidemiology

Activity	
Objectives	
Study design and sample size	
Study tool	
Main results	
Results presented in conference / department	
Signature of faculty guide	

# INVESTIGATION OF EPIDEMIC

## Competencies covered

- 7.7: Describe and demonstrate the steps in the Investigation of an epidemic of communicable disease and describe the principles of control measures/ If this activity is not possible a case scenario/ simulated event may be given for completion of this activity

Name of the exercise	Date	Documentation in record	Signature of faculty

### CME/CONFERENCE / WORKSHOP

Name of event	Date	Role	Learnings	Signature of faculty

## CO-CURRICULAR ACTIVITIES

Details of event	Date	Role	Learnings	Signature of faculty



## OVERALL ASSESSMENT OF THE STUDENT

<b>STRENGTHS</b>	
<b>SUGGESTIONS</b>	

**Signature of Mentor**

**Signature of HOD**

# Rajiv Gandhi University of Health Sciences Bangalore, Karnataka



## Ophthalmology Curriculum as per Competency-Based Medical Education Curriculum

## RGUHS Ophthalmology Curriculum as per the new Competency Based Medical Education Preamble

The NMC envisages that the Indian Medical Graduate, should function as the Physician of first contact in the community, to provide holistic health care to the evolving needs of the nation and the world. To fulfil this the IMG should be able to perform the following roles: a clinician, a communicator, a lifelong learner, a professional and a team leader.

Competency-based medical education (CBME) is an outcomes-based training model that has become the new standard of medical education internationally. This new curriculum is being implemented across the country and the first batch has been enrolled since the academic year 2019. The regulatory and accrediting body NMC had started the process by training faculty across the country in the key principles of CBME and developing key competencies for each speciality with the input from expert groups under each speciality.

Ophthalmology is one of the most advanced specialities in the field of medicine. Ophthalmology deals with preserving vision, the most important special sense. The eye is a unique organ, with none other to match it in structure, function, and gross appearance. Most disorders of the eye lend itself to direct visualisation. The advances in ophthalmology are frequent both in diagnostics and treatment options. It is an interesting area of study. The Ophthalmology undergraduate curriculum provides the IMG the requisite knowledge, essential skills, and appropriate attitudes to be able to diagnose and treat common ocular disorders and to be able to recognise serious eye conditions and refer appropriately.

The NMC, in the Graduate medical regulations 2019, has provided the list of ophthalmology competencies required for an IMG and these have been included in this ophthalmology curriculum document. The Specific learning objectives (SLO's) to achieve each competency has been listed along with the suggested Teaching-Learning methods and preferred assessment methods both formative and summative.

Following this is a detailed **blueprint** showing the weightage and the assessment tool for a particular chapter. This blueprint will ensure that there is an alignment between the SLOs', TL methods and the assessment. A **question paper layout** has also been added to ensure that there is consistency among different paper setters. Finally, the list of practical skills along with the most appropriate TL and assessment methods has been laid out.

## Goals and Objectives of the RGUHS Ophthalmology Curriculum

### Goals

The broad goal of the ophthalmology curriculum is to equip the IMG with sufficient knowledge, skills and attitude to diagnose and appropriately treat common ophthalmic disorders affecting our population.

### Objectives

#### A) Knowledge

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

- a. Describe the applied anatomy, physiology and biochemical attributes of the normal eye and adnexa.
- b. Describe the pathophysiology, clinical features, and management of diseases of the eye, orbit and adnexa.
- c. Demonstrate the ability to apply the knowledge in a clinical setting.

#### (B) Skills

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

- a. Elicit a detailed clinical history and perform an ocular examination in both outpatient and ward setting.
- b. Apply the elicited history and examination to arrive at correct diagnosis and plan treatment.
- c. Perform minor diagnostic and therapeutic procedures in an emergency situation prior to referral to higher centres

#### C) Attitude and communication skills

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

- a. Communicate effectively with patients, their families and the public at large.
- b. Communicate effectively with peers and teachers demonstrate the ability to work effectively with peers in a team.
- c. Demonstrate professional attributes of punctuality, accountability and respect for teachers and peers.
- d. Appreciate the issues of equity and social accountability while undergoing all clinical encounters

**List of all Ophthalmology Competencies with their specific learning objectives, with suggested teaching-learning and assessment methods**

	<b>Competencies</b>	<b>Specific learning objectives</b>	<b>Teaching learning methods</b>	<b>When T-L will be done</b>	<b>Formative assessment</b>	<b>Summative assessment</b>
<b>Topic: Refractive errors</b>						
OP1.1	Describe the physiology of vision	Anatomy of retina and fovea Visual pathway Mechanism of vision Theories of color vision	Lecture	6 <sup>th</sup> term	MCQs at the end of lecture	Short essay/viva voce
OP1.2	Define, classify and describe the types and methods of correcting refractive errors.	Definition of myopia, hypermetropia and astigmatism Describe the Types of myopia Describe Types of hypermetropia Describe Types of astigmatism Enumerate the Treatment options for myopia Enumerate the retinal findings in myopia Enumerate the Treatment options of hypermetropia Describe the treatment of astigmatism List the indications and advantages, complications of contact lenses	Lectures Tutorial to reinforce learning and prevent decay	6 <sup>th</sup> term	MCQs/S AQ's at the end of lecture or a group of lectures	Essay/SA Q/viva voce
OP1.3	Demonstrate the steps in performing the visual acuity assessment for distance vision, near vision, colour vision, the pin hole test and the menace	Assess visual acuity using Snellen's chart Demonstrate use of pin hole in visual acuity testing and interpret the findings Assess near vision using Times new Roman charts Elicit the blink reflex and menace reflex in an adult patient	DOAP session during clinical posting	1 <sup>st</sup> posting	Skill assessment during clinics Logbook	End of 1st posting – OSCE or short case

	and blink reflexes	Assess color vision using Ishihara's color plates				
OP1. 4	Enumerate the indications and describe the principles of refractive surgery	Enumerate the types of refractive surgery Enumerate the indication for refractive surgery Briefly describe the principle of LASIK	Lecturer	6 <sup>th</sup> term	MCQ's/S AQ/ Viva voce at the end of lecture	Short essay/viva voce
OP1. 5	Define, enumerate the types and the mechanism by which strabismus leads to amblyopia	Define amblyopia Enumerate the types of amblyopia Describe briefly the mechanism of strabismic amblyopia	Lecturer	6 <sup>th</sup> term	MCQ's/S AQ/ Viva voce at the end of lecture	Short essay/viva voce
<b>Topic: Lids and Adnexa, Orbit Number of Competencies: (08)</b>						
OP2. 1	Enumerate the causes, describe and discuss the aetiology, clinical presentations and diagnostic features of common conditions of the lid and adnexa	Describe the etiology, clinical features of common conditions of the lid and adnexa including Hordeolum externum/ internum, blepharitis, preseptal cellulitis, dacryocystitis, hemangioma, dermoid, ptosis, entropion, lid lag, lagophthalmos	Lecturer, Small group discussion like tutorials, PBL or CBL	6 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Short essay/viva voce
OP2. 2	Demonstrate the symptoms & clinical signs of conditions enumerated in OP2.1	Elicit signs and symptoms of common eyelid conditions Diagnose accurately common lid conditions based on the elicited signs and symptoms Accurately prescribe the local medication for common lid conditions Counsel a patient with lagophthalmos the need for tarsorrhaphy	DOAP session during clinical posting	1 <sup>st</sup> clinical posting	Skill Assessment during clinics Logbook	End of 1 <sup>st</sup> posting – OSCE or short case
OP2. 3	Demonstrate under supervision	Elicit Bell's phenomenon perform lacrimal sac regurgitation test	DOAP session	1 <sup>st</sup> clinical	Skill Assessment	End of 1 <sup>st</sup> posting –

	clinical procedures performed in the lid including: bells phenomenon, assessment of entropion/ectropion, perform the regurgitation test of lacrimal sac. Massage technique in cong. dacryocystitis , and trichiatric cilia removal by epilation	Demonstrate the correct technique of lacrimal sac massage for congenital nasolacrimal duct obstruction to the mother	during clinical posting	posting	during clinics Logbook	OSCE or short case
OP2. 4	Describe the aetiology, clinical presentation. Discuss the complications and management of orbital cellulitis	Discuss the etiopathogenesis of orbital cellulitis Describe the clinical features of OC Discuss the management of OC	Lecturer, Small group discussion	7th term	MCQs/SAQ/Viva voce	Short essay/viva voce
OP2. 5	Describe the clinical features on ocular examination and management of a patient with cavernous sinus thrombosis	Enumerate the predisposing factors for cavernous sinus thrombosis Compare and contrast clinical features of OC and cavernous sinus thrombosis Describe the management of CST	Lecturer	7th term	MCQs/SAQ/Viva voce	Short essay/viva voce
OP2. 6	Enumerate the causes and describe the differentiating	Discuss causes of unilateral proptosis Enumerate the causes of bilateral proptosis	Lecturer, SGD	7th term	MCQs/SAQ/Viva voce	Short essay/viva voce

	features, and clinical features and management of proptosis					
OP2.7	Classify the various types of orbital tumours. Differentiate the symptoms and signs of the presentation of various types of ocular tumours		Lectur e, SGD	7 <sup>th</sup> term	Written/ Viva voce	Short essay/viva voce
OP2.8	List the investigations helpful in diagnosis of orbital tumours. Enumerate the indications for appropriate referral		Lectur e, SGD	7 <sup>th</sup> term	Written/ Viva voce	Short essay/viva voce
<b>Topic: Conjunctiva Number of Competencies (09)</b>						
OP3.1	Elicit document and present an appropriate history in a patient presenting with a “red eye” including congestion, discharge, pain	Elicit appropriate history in a patient presenting with "Red eye" Perform ocular examination including vision assessment, pupil examination in a patient with "red eye" Counsel a patient with conjunctivitis on appropriate hand hygiene to prevent spread of infection	DOAP session during clinical posting Logbook	1st clinical posting	Skill assessment Logbook	End of 1st posting – OSCE or short case

OP3.2	Demonstrate document and present the correct method of examination of a "red eye" including vision assessment, corneal lustre, pupil abnormality, ciliary tenderness	Demonstrate correct method of digital tonometry Discuss the differential diagnosis of "red eye"	DOAP session	1st clinical posting	Skill assessment Logbook	End of 1st posting – OSCE or short case
OP3.3	Describe the aetiology, pathophysiology, ocular features, differential diagnosis, complications . and management of various causes of conjunctivitis	Describe the clinical features of ophthalmia neonatorum according to the pathogenetic agent Describe the management of Ophthalmia neonatorum Compare the clinical features of conjunctivitis of different aetiologies Describe the management of bacterial conjunctivitis	Lecture	6th term	SAQ Viva voce	Essay/SAQ
OP3.4	Describe the aetiology, pathophysiology, ocular features, differential diagnosis, complications , and management of trachoma.	Describe the clinical features of Trachoma Describe the management of Trachoma Describe the WHO classification og Trachoma Discuss the National programme for control of blindness due to Trachoma	Lecture	6th term	MCQs/SAQ/ Viva voce	Essay/SAQ
OP3.5	Describe the aetiology, pathophysiology, ocular features, differential diagnosis, complications and management	Describe the clinical features of vernal catarrh How will you manage a patient with vernal catarrh	Lecture,	6th term	Written/ Viva voce	Essay/SAQ

	of vernal catarrh					
OP3.6	Describe the aetiology, pathophysiology, ocular features, differential diagnosis, complications and management of pterygium	Elicit appropriate history and clinical signs of pterygium Enumerate causes of decreased vision due to pterygium Describe the different surgical options for pterygium	Lecture	6th term	Skill assessment SAQs	Essay/SAQ
OP3.7	Describe the aetiology, pathophysiology, ocular features, differential diagnosis, complications and management of symblepharon	Enumerate causes and complications of symblepharon	Lecture	6th term	MCQs/SAQ/ Viva voce	SAQ
OP3.8	Demonstrate correct technique of removal of foreign body from the eye in a simulated environment	Demonstrate correct technique of removal of foreign body from the eye in a simulated environment	DOAP session during clinical posting	1st clinical posting	Skill assessment Logbook	
OP3.9	Demonstrate the correct technique of instillation of eye drops in a simulated environment	Demonstrate the correct technique of instillation of eye drops in a simulated environment	DOAP session during clinical posting	1st clinical posting	Skill assessment Logbook	
OP3.10	Demonstrate the correct technique of applying an eye pad	Demonstrate the correct technique of applying an eye pad	DOAP session during clinical posting	1st clinical posting	Skill assessment Logbook	

			Logbook			
<b>Topic: Cornea Number of Competencies: (10)</b>						
OP4.1	Enumerate, describe and discuss the types and causes of corneal ulceration	Discuss the pathogenesis of corneal ulcer Discuss the clinical features based on etiological agent Elicit signs and symptoms of corneal ulcer Describe the general principles of management of corneal ulcers	Lecturer	6th term	MCQs/SAQ/ Viva voce Skill assessment	Essay/SAQ
OP4.2	Enumerate and discuss the differential diagnosis of infective keratitis	Enumerate the causes of infective keratitis Compare and contrast the clinical features of bacterial and fungal corneal ulcer	Lecturer, SGD	6th term	Written/ Viva voce	Essay/SAQ
OP4.3	Enumerate the causes of corneal edema	Enumerate the causes of corneal edema	Lecturer	6th term	Written/ Viva voce	SAQ
OP4.4	Enumerate the causes and discuss the management of dry eye	Describe briefly the Physiology of Tear film Describe briefly the tests done to detect dry eyes Enumerate different modalities of treatment of dry eyes	Lecturer, SGD	6th term	SAQs/ Viva voce	Essay/SAQ
OP4.5	Enumerate the causes of corneal blindness	Enumerate the causes of corneal blindness	Lecturer, SGD	6th term	Written/ Viva voce	SAQ
OP4.6	Enumerate the indications and the types of keratoplasty	Enumerate the indications and the types of keratoplasty	Lecturer, SGD	6th term	Viva voce	Essay/SAQ
OP4.7	Enumerate the indications and describe the methods of tarsorrhaphy	Enumerate the indications and describe the methods of tarsorrhaphy	Lecturer	6th term	Written/ Viva voce	Essay/SAQ
OP4.8	Demonstrate technique of	Demonstrate technique of removal of foreign body in	DOAP during	6th term	Logbook	SAQ

	removal of foreign body in the cornea in a simulated environment	the cornea in a simulated environment	clinical posting			
OP4.9	Describe and discuss the importance and protocols involved in eye donation and eye banking	Enumerate the contraindications for eye donation List all methods of corneal button storage	Lecturer	6th term	Written/ Viva voce	Essay/SA Q
OP4.10	Counsel patients and family about eye donation in a simulated environment	Counsel patients and family about eye donation in a simulated environment	DOAP during clinical posting	1st clinical posting	Logbook	
<b>Topic: Sclera Number of competencies: (02)</b>						
OP5.1	Define, enumerate and describe the aetiology, associated systemic conditions, clinical features complications indications for referral and management of episcleritis	Define scleritis Discuss the etiology of scleritis	Lecturer, SGD	6th term	Written/ Viva voce	Essay/SA Q
OP5.2	Define, enumerate, and describe the aetiology, associated systemic conditions, clinical features, complications, indications for referral and management of scleritis	Describe the clinical features, and treatment of scleritis Enumerate the complications of scleritis	Lecturer, SGD	6th term	Written/ Viva voce	Essay/SA Q

<b>Topic: Iris and Anterior chamber Number of Competencies (10)</b>						
OP6.1	Describe clinical signs of intraocular inflammation and enumerate the features that distinguish granulomatous from non-granulomatous inflammation. Identify acute iridocyclitis from chronic condition	Describe the etiology, clinical features of iridocyclitis Describe the distinguishing features of granulomatous and non-granulomatous iridocyclitis What is the etiology of granulomatous iridocyclitis	features e, SGD	6 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/SA Q
OP6.2	Identify and distinguish acute iridocyclitis from chronic iridocyclitis	Define acute and chronic iridocyclitis Mention the differentiating features between acute and chronic iridocyclitis	features e, SGD	6 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/SA Q
OP6.3	Enumerate systemic conditions that can present as iridocyclitis and describe their ocular manifestations	Enumerate the systemic conditions associated with iridocyclitis Enumerate the other ocular manifestations	features e, SGD	6 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/SA Q
OP6.4	Describe and distinguish hyphema and hypopyon	What is hyphema and what are its causes How will you manage a case of hyphema What is a hypopyon and what are its causes	features e	6 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/SA Q
OP6.5	Describe and discuss the angle of the anterior chamber and its clinical correlates	Describe the anatomy of the angle of the anterior chamber How will you grade the angle of the anterior chamber	features e	6 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/SA Q

OP6.6	Identify and demonstrate the clinical features and distinguish and diagnose common clinical conditions affecting the anterior chamber	Describe the clinical features of Primary open angle glaucoma Describe the management of POAG What is Trabeculectomy and describe its steps Describe the clinical features and management of Primary angle closure glaucoma Describe the clinical features and management of congenital glaucoma	Lecturer, SGD	6 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/SA Q
OP6.7	Enumerate and discuss the aetiology, the clinical distinguishing features of shallow and deep anterior chamber. Choose appropriate investigations for patients with above conditions of the anterior chamber	What are the causes of shallow deep anterior chamber What is gonioscopy What is perimetry and what are the visual field changes in glaucoma What is tonometry and how is it measured Demonstrate digital tonometry	Lecturer, SGD	6 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/SA Q
OP6.8	Enumerate and choose the appropriate investigation for patients with conditions affecting the Uvea	Describe the investigations in a patient with iridocyclitis	Lecturer, SGD	6 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/SA Q
OP6.9	Choose the correct local and systemic therapy for conditions of the anterior chamber and enumerate their indications,	Describe the management of a patient with iridocyclitis Enumerate the side effects of steroid use Discuss various routes of administration of steroids in ocular disease	Lecturer, SGD	6 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/SA Q

	adverse events and interactions					
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OP6.10	Counsel patients with conditions of the iris and anterior chamber about their diagnosis, therapy and prognosis in an empathetic manner in a simulated environment	Counsel a patient with uveitis regarding the need for compliance	DOAP during clinical posting	1 <sup>st</sup> posting	OSCE	OSCE/short case examination
<b>Topic: Lens Number of Competencies: (06)</b>						
OP7.1	Describe the surgical anatomy and the metabolism of the lens	Describe the anatomy of the lens Describe the metabolism of the lens	Lecture	6 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/S AQ
OP7.2	Describe and discuss the etiopathogenesis, stages of maturation and complications of cataract	Describe the etiopathogenesis of senile cataract Stages of cortical and nuclear cataract Complications of senile cataract Discuss etiology and morphology of complicated cataract	Lecture/ SGD	6 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/S AQ
OP7.3	Demonstrate the correct technique of ocular examination in a patient with a cataract	Differentiate between immature, mature and hypermature cataract Demonstrate the presence of iris shadow Macular function tests	DOAP during clinical posting	1 <sup>st</sup> posting	OSCE	OSCE/short case examination
OP7.4	Enumerate the types of cataract surgery and describe the steps, intra-operative and post-operative complication	Describe the steps of cataract surgery Mention the intraoperative complications Mention the early and late postoperative complications Treatment of After cataract	SGD/ Lecture	6 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/S AQ

	s of extracapsular cataract extraction surgery.					
OP7.5	To participate in the team for cataract surgery	Discuss the preoperative preparation of a patient for cataract surgery Experience a walkthrough of a single patient from advising for surgery till discharge of the patient	teacher-doctor	2 <sup>nd</sup> posting	OSCE	OSCE/short case examination
OP7.6	Administer informed consent and counsel patients for cataract surgery in a simulated environment	Administer informed consent and counsel patients for cataract surgery in a simulated environment	DOAP during clinical posting	2 <sup>nd</sup> posting	OSCE	OSCE/short case examination
Topic: Retina & optic Nerve Number of Competencies (05)						
OP8.1	Discuss the aetiology, pathology, clinical features and management of vascular occlusions of the retina	Describe the etiology, pathology, clinical features, and management of Retinal vein occlusions Describe the etiology, pathology, clinical features, and management of Retinal artery occlusions What is cherry red spot and what are its causes	Lecture/SGD	7 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/S AQ
OP8.2	Enumerate the indications for laser therapy in the treatment of retinal diseases (including retinal detachment, retinal degenerations, diabetic retinopathy & hypertensive retinopathy)	What is the pathogenesis of diabetic retinopathy What are the stages of diabetic retinopathy and maculopathy What is the management for each of the stages What are the grades of hypertensive retinopathy? What is Keith Wagner classification Enumerate the types of retinal detachment and its management What is age related macular degeneration? What are the clinical features and management	Lecture/SGD	7 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/S AQ
OP8.3	Demonstrate the correct	Demonstrate the correct technique in using a direct ophthalmoscope	DOAP in skills lab	6-7 <sup>th</sup> term	OSCE	

	technique of a fundus examination and describe and distinguish the fundoscopic features in a normal condition and in conditions causing an abnormal retinal exam	Describe a normal fundus with the help of a diagram				
OP8.4	Enumerate and discuss treatment modalities in management of diseases of the retina	Enumerate the various diseases/conditions of the retina Enumerate the treatment modalities of the above conditions	Lecture/SGD	7 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/S AQ
OP8.5	Describe and discuss the correlative anatomy, aetiology, clinical manifestations, diagnostic tests, imaging and management of diseases of the optic nerve and visual pathway	Describe the anatomy of the optic nerve Describe the clinical features, investigations and management of Optic neuritis Describe the clinical features, stages and fundus picture, investigations, and management of Papilledema Describe the clinical features, classification, investigations and management of Optic Atrophy Describe the anatomy of the visual pathway Describe the visual field defects occurring in diseases affecting the visual pathway Describe the pupillary pathway Describe the clinical features of the various pupillary abnormalities- Hutchisons pupil, ARP, Adies Pupil, Marcus Gunn Pupil Demonstrate swinging flashlight test	Picture/SGD	7 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/S AQ
PA36.1	Describe the etiology, genetics, pathogenesis	Discuss the pathogenesis, histopathology and genetics of retinoblastoma	Lecture/SGD	7 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/S AQ

	, pathology, presentation, sequelae, and complications of retinoblastoma	Enumerate the causes of leukocoria Describe the staging and clinical features of retinoblastoma Discuss the treatment options for the various stages of retinoblastoma				
<b>Topic: Miscellaneous Number of Competencies (05) Number of procedures that require certification: (01)</b>						
OP9.1	Demonstrate the correct technique to examine extra ocular movements (Unocular & Binocular)	List the extraocular muscles, their insertions, and their actions Demonstrate the correct technique to examine extra ocular movements (Unocular & Binocular)	Diagnosis during clinical posting	1 <sup>st</sup> & 2 <sup>nd</sup> posting	Logbook	
OP9.2	Classify, enumerate the types, methods of diagnosis and indications for referral in a patient with heterotropia/strabismus	List the types of strabismus What are the differences between Paralytic squint and Concomitant squint Enumerate and demonstrate the tests done in a case of Squint (Hirschberg's test, Head posture) List the conditions in which a patient with strabismus has to be referred	Lecture/SGD	7 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/S AQ
OP9.2	Describe the role of refractive error correction in a patient with headache and enumerate the indications for referral	Enumerate the causes of headache and list the differentiating features suggest an ocular cause List the type of headaches which require referral	Lecture/SGD	7 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/S AQ
OP9.4	Enumerate, describe and discuss the causes of avoidable blindness and the	What are the causes of avoidable blindness What is NPCB. What are the diseases included in this What is vision 2020	Lecture/SGD	7 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/S AQ

	National Programs for Control of Blindness (including vision 2020)	Define legal blindness, social blindness and economical blindness				
OP9.5	Describe the evaluation and enumerate the steps involved in the stabilisation, initial management and indication for referral in a patient with ocular injury	List the types of ocular injuries List the effects of blunt trauma to the eye List the steps of initial management of chemical injuries Demonstrate the correct method of eye irrigation List the steps of initial management of an open globe injury	Lecture/SGD	7 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/S AQ
<b>Integration – Anatomy</b>						
AN30.5	Explain effect of pituitary tumours on visual pathway	Describe the visual field changes in pituitary tumors Discuss the anatomical basis of VF changes in pituitary lesions	Lecture/SGD	7 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/S AQ
AN31.3	Describe anatomical basis of Horner's syndrome	What is Horner's syndrome? Differentiate acquired from congenital HS Describe the anatomical basis for HS due to various causes	Lecture/SGD	7 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/S AQ
AN31.5	Explain the anatomical basis of oculomotor, trochlear and abducent palsy	Describe the anatomy of the 3 <sup>rd</sup> ,4 <sup>th</sup> and 6 <sup>th</sup> cranial nerves Enumerate the causes of 3 <sup>rd</sup> ,4 <sup>th</sup> and 6 <sup>th</sup> cranial nerve palsies	Lecture/SGD	7 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/S AQ
AN41.1	Describe & demonstrate parts and layers of eyeball		Lecture/SGD	7 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/S AQ
AN41.2	Describe the anatomical aspects of cataract,		Lecture/SGD	7 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/S AQ

	glaucoma & central					
AN41.3	Describe the position, nerve supply and actions of intraocular muscles		Lecture/SGD	7 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/S AQ
<b>Integration- Physiology</b>						
PY10.17	Describe and discuss functional anatomy of eye, physiology of image formation, physiology of vision including colour vision, Refractive errors, colour blindness, Physiology of pupil and light reflex	Describe the theories of color vision Describe the pupillary pathway Describe the clinical features of the various pupillary abnormalities	Lecture/SGD	7 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/S AQ
PY10.18	Describe and discuss the physiological basis of lesion in visual pathway	Draw a neat, labelled diagram of the visual pathway Describe the field defects of lesions affecting the visual pathway	Lecture/SGD	7 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/S AQ
PY10.19	Describe and discuss auditory & visual evoke potentials		Lecture/SGD	7 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/S AQ
PY10.20	Demonstrate testing of visual acuity, colour and field of vision in a	Assess visual acuity, colour vision and visual field in a simulated patient	Lecture/SGD	7 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/S AQ

	simulated environment					
PH1.58	Describe drugs used in Ocular disorders	Describe the mechanism of action, dosage, duration, modes of delivery and side effects of the following groups of drugs used in Ophthalmology Anti-glaucoma drugs, antibiotics, antifungals, mydriatic and cycloplegics, steroids	Lecture/SGD	7 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/S AQ
IM24.15	Describe and discuss the aetiopathogenesis, clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of vision and visual loss in the elderly	List the causes of acute painless loss of vision in the elderly and their systemic causes List the causes of acute painful loss of vision in the elderly and their systemic causes Discuss the systemic investigations that is required in acute loss of vision in the elderly Discuss the treatment of acute loss of vision in the elderly	Lecture/SGD	7 <sup>th</sup> term	MCQs/S AQ/ Viva voce	Essay/S AQ

## Summary of course content, teaching and learning methods and student assessment for the undergraduate (MBBS) Curriculum in Ophthalmology

### Course content

The course content been given in detail in the above Table, which includes competencies, specific learning objectives for each competency and the suggested Teaching-Learning methods and assessment methods both formative and summative. The competencies have been developed by an expert group nominated by NMC, while the SLOs, T-L methods and assessments methods have written by the expert committee constituted by Rajiv Gandhi University of Health Sciences.

### Teaching-Learning methods and Time allotted

	Lectures	Small group discussion	Self-directed learning	Total hours	Clinical postings
<b>Ophthalmology</b>	30hours	60hours	10hours	100 hours	Two postings of 4 weeks each. First posting in 3-4 <sup>th</sup> terms (15hours/week) and Second posting in 6-7 <sup>th</sup> terms (18hours/week)

Teaching-learning methods shall be learner centric and shall predominantly include small group learning, interactive teaching methods and case-based learning. Didactic lectures not to exceed one-third of the total teaching time. The teaching learning activity focus should be on application of knowledge rather than acquisition of knowledge.

The curricular contents shall be vertically and horizontally aligned and integrated to the maximum extent possible to enhance learner's interest and eliminate redundancy and overlap. The integration allows the student to understand the structural basis of ophthalmologic problems, their management and correlation with function, rehabilitation, and quality of life Acquisition and certification of skills shall be through experiences in patient care, diagnostic and skill laboratories. Use of skill lab to train undergraduates in Direct Ophthalmoscopy although not mandatory, but it is desirable.

The clinical postings in the second professional shall be 15 hours per week (3 hrs per day from Monday to Friday)

The clinical postings in the third professional part II shall be 18 hours per week (3 hrs per day from Monday to Saturday)

Newer T-L method like Learner-doctor method (Clinical clerkship) should be mandatorily implemented, from 1<sup>st</sup> clinical postings in ophthalmology itself.

The goal of this type of T-L activity is to provide learners with experience in longitudinal patient care, being part of the health care team, and participate in hands-on care of patients in outpatient and inpatient setting. During the 1<sup>st</sup> clinical postings, the students are oriented to the working of the department. During the second clinical posting the students are allotted patients, whom they follow-up through their stay in the hospital, participating in that patient's care including case work-up, following-up on investigations, presenting patient findings on rounds, observing surgeries if any till patient is discharged.

The development of ethical values and overall professional growth as integral part of curriculum shall be emphasized through a structured longitudinal and dedicated programme on professional

development including attitude, ethics, and communication which is called the AETCOM module. The purpose is to help the students apply principles of bioethics, systems-based care, apply empathy and other human values in patient care, communicate effectively with patients and relatives and to become a professional who exhibits all these values. This will be a longitudinal programme spread across the continuum of the MBBS programme including internship. MBBS Phase 3 Part 1, has to complete 5 modules of 5 hours each. The Ophthalmology faculty will have the responsibility of conducting 1-2 modules as per the decision and logistics of each institution.

### **Assessment**

Eligibility to appear for university examinations is dependent on fulfilling criteria in two main areas – attendance and internal assessment marks

### **Attendance**

Attendance requirements are 75% in theory and 80% in clinical postings for eligibility to appear for the examinations in Ophthalmology.

75% attendance in AETCOM Module is required for eligibility to appear for final examination in 3<sup>rd</sup> professional year 3 part 1.

### **Internal Assessment**

Progress of the medical learner shall be documented through structured periodic assessment that includes formative and summative assessments. Logs of skill-based training shall be also maintained.

There shall be no less than three internal assessment examinations in Ophthalmology. An end of posting clinical assessment shall be conducted for each of the Ophthalmology clinical posting. Day to day records and logbook (including required skill certifications) should be given importance in internal assessment. Internal assessment should be based on competencies and skills.

Learners must secure at least 50% marks of the total marks (combined in theory and clinical; not less than 40 % marks in theory and practical separately) assigned for internal assessment in Ophthalmology in order to be eligible for appearing at the final University examination.

Internal assessment marks will reflect as separate head of passing at the summative examination.

The results of internal assessment should be displayed on the notice board within 1-2 weeks of the test.

Remedial measures should be offered to students who are either not able to score qualifying marks or have missed on some assessments due to any reason.

Learners must have completed the required certifiable competencies for that phase of training and Ophthalmology logbook entry completed to be eligible for appearing at the final university examination.

AETCOM assessment will include: (a) Written tests comprising of short notes and creative writing experiences, (b) OSCE based clinical scenarios / viva voce.

### **University examinations**

Third Professional Part I shall be held at end of third Professional part 1 of training (12 months) in the subjects of Ophthalmology, Otorhinolaryngology, Community Medicine and Forensic Medicine and Toxicology

University examinations are to be designed with a view to ascertain whether the candidate has acquired the necessary knowledge, minimal level of skills, ethical and professional values with clear concepts of the fundamentals which are necessary for him/her to function effectively and appropriately as a physician of first contact. Assessment shall be carried out on an objective basis to the extent possible.

### **Marks allotted**

Ophthalmology	Theory	Clinical examination
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<b>Total marks</b>	100 marks	100 marks
	Long essay 2X10= 20	Two cases x40marks=80marks
	Short essay 8x5=40 marks	Viva voce 2x10=20marks
	Short answer question 10x3=30marks	
	MCQs 10x1=10marks	

The theory paper should include different types such as structured essays, short essays, Short Answers Questions (SAQ) and MCQs ( Multiple Choice Questions). Marks for each part should be indicated separately.

All the question papers to follow the suggested **blueprint (APPENDIX 1)**. It is desirable that the marks allotted to a particular topic are adhered to.

A minimum of **80%** of the marks should be from the **must know** component of the curriculum. A maximum of **20%** can be from the **desirable to know** component. All **main essay questions** to be from the **must know component** of the curriculum.

**One main essay question** to be of the **modified variety** containing a clinical case scenario. At least 30% of questions should be clinical case scenario based. Questions to be constructed to test higher cognitive levels.

Clinical examinations will be conducted in the hospital wards. Clinical cases kept in the examination must be common conditions that the learner may encounter as a physician of first contact in the community. Selection of rare syndromes and disorders as examination cases is to be discouraged. Emphasis should be on candidate's capability to elicit history, demonstrate physical signs, write a case record, analyze the case and develop a management plan.

Viva/oral examination should assess approach to patient management, emergencies, attitudinal, ethical and professional values. Candidate's skill in interpretation of common investigative data, X-rays, identification of specimens, ECG, etc. is to be also assessed.

At least one question in each paper of the clinical specialties in the University examination should test knowledge competencies acquired during the professional development programme. Skill competencies acquired during the Professional Development Programme must be tested during the clinical, practical and viva voce.

There shall be one main examination in an academic year and a supplementary to be held not later than 90 days after the declaration of the results of the main examination.

#### **Pass criteria**

Internal Assessment: 50% combined in theory and practical (not less than 40% in each) for eligibility for appearing for University Examinations

University Examination: Mandatory 50% marks separately in theory and clinicals (clinical = clinical + viva)

The grace marks up to a maximum of five marks may be awarded at the discretion of the University to a learner for clearing the examination as a whole but not for clearing a subject resulting in exemption.

#### **Appointment of Examiners**

Person appointed as an examiner in the subject must have at least four years of total teaching experience as assistant professor after obtaining postgraduate degree in the subject in a college affiliated to a recognized/approved/permitted medical college.

For the Practical/ Clinical examinations, there shall be at least four examiners for 100 learners, out of whom not less than 50% must be external examiners. Of the four examiners, the senior-most internal examiner will act as the Chairman and coordinator of the whole examination programme so that uniformity in the matter of assessment of candidates is maintained.

Where candidates appearing are more than 100, two additional examiners (one external & one

internal) for every additional 50 or part there of candidates appearing, be appointed. All eligible examiners with requisite qualifications and experience can be appointed as internal examiners by rotation  
 External examiners may not be from the same University.  
 There shall be a Chairman of the Board of paper-setters who shall be an internal examiner and shall moderate the questions.  
 All theory paper assessment should be done as central assessment program (CAP) of concerned university.

**APPENDIX 1: Blueprint for Ophthalmology theory Examinations**

<b>Topics</b>	<b>Marks allotted</b>
<b>Eyelids disorders</b>	6
<b>Conjunctival diseases</b>	10
<b>Corneal disorders</b>	10
<b>Refractive errors</b>	6
<b>Lacrimal Drainage system</b>	6
<b>Tear Film abnormalities</b>	5
<b>Diseases of Sclera</b>	3
<b>Diseases of Lens</b>	8
<b>Glaucoma</b>	10
<b>Uveitis</b>	5
<b>Diseases of Retina and choroid</b>	10
<b>Orbital diseases</b>	5
<b>Neuroophthalmological conditions</b>	8
<b>Community Ophthalmology</b>	5
<b>Strabismus</b>	3
<b>Total</b>	100

## Sample Ophthalmology Question Paper

### Ophthalmology Paper

Time: 3 hours

Marks: 100

**Your answers should be specific to the questions asked.**

**Draw neat, labelled diagrams wherever necessary.**

#### Long essays (2 X 10 = 20 marks)

1. A 42year old male, farmer by profession seeks treatment for painful loss of vision in the left eye 1 week duration after he sustained trauma with vegetable matter while working. On examination his visual acuity is CF 3meters with a central whitish lesion on the cornea. What is the most likely diagnosis? Describe the clinical features of this condition? Discuss the investigations and treatment for this condition. Describe briefly the complications associated with this condition

(1+3+4+2=10)

2. Describe the staging of diabetic retinopathy with the clinical features and treatment of each stage. Add a note on anti-VEGF treatment (8+2=10)

#### Short essays (8x5=40marks)

3. A 3month old male child was brought with complaints of watering of right eye since birth with intermittent yellowish-white discharge. What is the most probable diagnosis and how will you manage this child?

4. Describe the WHO classification of vitamin A deficiency. Add a note on treatment of vitamin A deficiency

5. Discuss the etiological classification of entropion. Discuss the etiopathogenesis and management of senile entropion

6. Describe the visual field changes in Primary open angle glaucoma

7. Describe the Classification of Hypermetropia and management

8. A 48year old female presents with gradually progressive loss of vision in the right eye since 8months. What is the probable differential diagnosis and how will you investigate and manage this patient?

9.Enumerate the causes and discuss the investigations and treatment of non-granulomatous iridocyclitis.

10. Discuss the etiology, clinical features and management of optic neuritis

#### Short answer questions (10x3=30marks)

11. What is Paracentesis? Enumerate the indications

12. Enumerate the Differential diagnosis of Leukocoria

13. Briefly describe the tests for dry eyes

14. Causes of Anisocoria

15. Describe briefly the actions and nerve supply of Extraocular muscles

16. Write a short note on the uses of Atropine in Ophthalmology

17. Classification of scleritis

18. Write briefly on the Treatment of trachoma

19. Write a note on clinical features of orbital cellulitis

20. Enumerate the indications for keratoplasty

**Multiple choice questions (10x1=10marks, with no negative marking)**

21. (i) Corneal perforation is an expected complication of

- A) Hypopyon ulcer
- B) Fasicular ulcer
- C) Mooren's ulcer
- D) Dendritic ulcer

21. (ii) Surgery of choice in "Buphthalmos" is

- A) cyclocryo therapy
- B) iridectomy
- C) trabeculectomy
- D) trabeculotomy

21. (iii) A vertically oval mid-dilated pupil unresponsive to light is diagnostic of

- A) acute anterior uveitis
- B) acute mucopurulent conjunctivitis
- C) acute congestive glaucoma
- D) acute nodular scleritis

21. (iv) Orbicularis oculi is innervated by which cranial nerve?

- A) 4<sup>th</sup>
- B) 5<sup>th</sup>
- C) 6<sup>th</sup>
- D) 7<sup>th</sup>

21. (v) Proptosis is measured using

- A) Keratometer
- B) Tonometer
- C) Exophthalmometer
- D) Gonioscope

22. (i) Formation of a "Cyclitic membrane" leads to all the following **EXCEPT**

- A) Hypotony
- B) Glaucoma
- C) Loss of vision
- D) Pthisis bulbi

22. (ii) In an adult male presenting with acute severe purulent conjunctivitis, preauricular lymph node enlarged and tender with associated constitutional symptoms the treatment of choice is

- A) Ceftriaxone 1gm intramuscularly with intensive topical penicillin therapy
- B) Intensive topical penicillin therapy alone
- C) Fluoroquinolones 500mg BID intravenously with topical tetracycline therapy
- D) Intensive topical tetracycline therapy alone

22. (iii) Topical Mitomycin C is used in the treatment of pterygium to

- A) Prevent malignant transformation
- B) Improve circulation
- C) Prevent recurrence
- D) Prevent calcification

22. (iv) "Pizza pie" appearance is typically seen in

- A) Retinitis pigmentosa
- B) CMV retinitis
- C) Toxoplasma retinitis
- D) Tuberculous retinitis

22. (v) "Homonymous hemianopia with macular sparing" is seen in lesions of

- A) Occipital cortex
- B) Optic radiation
- C) Optic chiasm
- D) Optic nerve

### **Acknowledgement of contributors**

Faculty from the department of Ophthalmology, St John's Medical College, Bangalore, especially Dr Shubashree Karat, Dr Mary Joseph and Dr Suneetha Nithyanandam

Dr Suresh Babu, Bangalore medical College and Research Centre

**Draft**

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



OPHTHALMOLOGY  
LOGBOOK  
FOR  
PHASE III MBBS  
AS PER

Competency-Based Medical Education Curriculum

Insert  
institution  
logo

Student  
photo

Name and address of the college

Ophthalmology  
Logbook

Name of the student:

Contact Number:

Email id:

Date of admission to MBBS course:

Date of beginning of the current phase:

Reg. No. (College ID):

Reg. No. (University ID):

## INDEX

SI NO.	CONTENT	PAGE NUMBER
1	BONAFIDE CERTIFICATE	1
2	PREFACE	2
3	GENERAL INSTRUCTIONS	3
4	SUMMARY OF ATTENDANCE	4
5	SUMMARY OF INTERNAL ASSESSMENT (IA)	5
6	SECTION- 1	
	CBME CURRICULUM IN OPHTHALMOLOGY	
	1A. COMPETENCIES IN KNOWLEDGE DOMAIN	6
	1B. COMPETENCIES IN SKILL DOMAIN	7
7	SECTION-2 AETCOM MODULES	8
8	SECTION-3 FORMATIVE ASSESSMENTS	

	3A. SCHEME OF FORMATIVE ASSESSMENT	12
	3B. SUMMARY OF FORMATIVE ASSESSMENT	13 -15
9	<b>SECTION-4</b> ESSENTIAL SKILLS-CERTIFIABLE non-CERTIFIABLE	16 17-18
10	<b>SECTION-5</b> <b>ADDITIONAL ACTIVITIES</b> 5.1 CO-CURRICULAR ACTIVITIES 5.2 EXTRACURRICULAR ACTIVITIES 5.3 ACHIEVEMENTS AND AWARDS	19
11	<b>SUMMARY PAGE</b>	20

## **BONAFIDE CERTIFICATE**

### **ST. JOHN'S MEDICAL COLLEGE**

**This is to certify that the candidate .....**

**Reg No..... has satisfactorily completed all requirements mentioned in this Logbook for Phase III MBBS in OPHTHALMOLOGY including related AETCOM modules as per the Competency-Based Undergraduate Medical Education Curriculum, Graduate Medical Regulation 2019 during the period from .....to .....**

**He/ She is eligible to appear for the summative (University) assessment.**

**Faculty Mentor:**

**Head of Department:**

**Name:**

**Name:**

**Signature:**

**Signature:**

**Place:**

**Date:**

Draft

## PREFACE

This logbook is designed to follow and record your academic journey through the Ophthalmology course. The knowledge, skills and desirable attitudes you acquire in order to function as a primary care physician of first contact will be documented and certified in this logbook.

**Section 1** contains the **CBME competencies in Ophthalmology**. It includes the competencies that would be covered during the course.

**Section 2** records your participation in **Attitude, Ethics and Communication (AETCOM)** modules related to Ophthalmology.

**Section 3** consists of the **scheme and summary of formative assessments** in Ophthalmology, including the internal assessments.

**Section 4** documents the **procedures that require certification and those that do not require certification but only need to be maintained in the logbook**.

**Section 5** documents **additional-curricular activities** (Seminars, conference, workshops attended, scientific project presentations, outreach activities, etc.) and **extracurricular activities**.

We hope that this logbook serves as a guide and facilitates your progress through the year.

## **GENERAL INSTRUCTIONS**

1. This logbook is a record of the academic/co-curricular activities in Ophthalmology of the designated student.
2. The student is responsible for getting the entries in the logbook verified by the faculty in-charge regularly.
3. Entries in the Logbook will reflect the activities performed by you in the department of Ophthalmology during your course.
4. The student has to get this logbook verified by the mentor and the Head of the department before submitting the application of the University examination.
5. All signatures must be done with a date stamp.

## **SUMMARY OF ATTENDANCE**

<i>Block/Phase</i>	<i>Percentage of classes attended</i>		<i>Eligible for University examination (Yes / No)</i>	<i>Signature of student with date</i>	<i>Signature of teacher with date</i>
	<i>Theory</i>	<i>Practical</i>			
First Block					
Second Block					
Third Block					
Attendance at the end of MBBS Phase II					

**SUMMARY OF INTERNAL ASSESSMENT (IA)**

<i>Sl. No.</i>	<i>Internal Assessment</i>	<i>Date of Assessment</i>	<i>Total marks</i>		<i>Marks scored</i>		<i>Signature of student with date</i>	<i>Signature of teacher with date</i>
			<i>Theory</i>	<i>Practical</i>	<i>Theory</i>	<i>Practical</i>		
1	First							

2	Second							
3	Third							
4	Remedial							

**Note:** A candidate who has not secured requisite aggregate in the internal assessment may be subjected to remedial assessment by the institution. If he/she successfully completes the same, he/she is eligible to appear for University Examinations. The remedial assessment shall be completed before submitting the internal assessment marks online to the University.

## SECTION: 1

### Competencies in Ophthalmology

#### Competency-Based Medical Education (CBME) curriculum in Ophthalmology

##### Competencies in Ophthalmology:

There are **60** competencies in ophthalmology that have been listed in the CBME curriculum by the MCI (*Refer Annexure 1*). They can be categorized into knowledge, skills and affect domains as given below.

There are 43 competencies in the knowledge domain

#### 1.A Competencies in the knowledge domain

Sl no	Topic	Competency
1	Visual acuity assessment	OP 1.1, 1.2, OP1.4, 1.5
2	Lids, adnexa and orbit	OP 2.1, OP2.4 to 2.8
3	Conjunctiva	OP 3.3 to 3.7
4	Cornea	OP 4.1 to 4.7, OP 4.9
5	Sclera	OP 5.1, 5.2
6	Iris and anterior chamber	OP 6.1 to 6.5, OP6.7 to 6.9
7	Lens	OP 7.1, 7.2
8	Retina and optic nerve	OP 8.1, 8.2 OP8.4, 8.5
9	Miscellaneous	OP 9.2 to 9.5

**Competencies in Skills:** There are **15** competencies in this domain. These are as given below.

### **1.B Competencies in Skills**

Topics	Competency	Description
Visual acuity	OP 1.3	Demonstrate steps in visual acuity assessment- distance, near, colour vision and pinhole
Lids, adnexa and orbit	OP 2.2	Demonstrate clinical signs of hordeolum, ptosis, lagophthalmos
	OP 2.3	Demonstrate (under supervision) clinical procedures: bells phenomenon, assessment of entropion/ectropion, perform the regurgitation test of lacrimal sac, massage technique in congenital dacryocystitis and trichiatic cilia removal by epilation

Conjunctiva	OP 3.1	Elicit detailed history for red eye
	OP 3.2	Demonstrate clinical examination of a patient with red eye- corneal lustre, pupil, anterior chamber depth
	OP 3.8	Removal of FB in simulated environment
	OP 3.9	Demonstrate eyedrop instillation in simulated environment
Cornea	OP 4.8	Removal of FB in simulated environment
Iris and anterior chamber	OP 6.6?	Identify and demonstrate the clinical features and distinguish and diagnose common clinical conditions affecting the anterior chamber
Lens	OP 7.3	Demonstrate technique of examination in cataract
	OP 7.4	Enumerate types, explain steps, complications of cataract surgery
	OP 7.5	To participate in the team of cataract surgery
	OP 7.6	Administer informed consent and counsel patients of cataract surgery in a simulated environment
Retina and optic nerve	OP 8.3	Demonstrate the correct technique of fundus examination in normal fundus and in abnormal retinal exam- skills lab
Miscellaneous	OP 9.1	Demonstrate the correct technique to examine the extra-ocular movements (Unocular& binocular)

## **SECTION 2: FORMAT OF AETCOM Modules Report**

**AETCOM Module Number:**

Date:

**Topic:**

**Competencies:**

- 1.
- 2.
- 3.

**Reflections (100 words):**

1. What did you learn from this AETCOM session based on the objectives?

2. What change did this session make in your learning?
3. How will you apply this knowledge in future?

Remarks by Facilitator

Signature of facilitator with date

**AETCOM Module Number:**

**Date:**

**Topic:**

**Competencies:**

- 1.
- 2.
- 3.

**Reflections (100 words):**

1. What did you learn from this AETCOM session based on the objectives?
2. What change did this session make in your learning?
3. How will you apply this knowledge in future?

Remarks by Facilitator

Signature of facilitator with date

Draft

**SECTION: 3**  
**Formative Assessment 1**

	Maximum marks	Marks obtained	Feedback and Signature
<b>Formative assessment Theory</b>	50		
<b>Formative assessment Practical</b>	25		

**Formative Assessment 2**

	Maximum marks	Marks obtained	Feedback and Signature
<b>Formative assessment Theory</b>	50		
<b>Formative assessment Practical</b>	25		

**Formative Assessment 3**

	Maximum marks	Marks obtained	Feedback and Signature
<b>Formative assessment Theory</b>	100		
<b>Formative assessment Practical</b>	25		

**Rubric for Assessing Professionalism**

<i>Phase</i>	<i>Areas assessed</i>				<i>Total (20 marks)</i>	<i>Signature of student</i>	<i>Signature of teacher</i>
	<i>Regular for classes (5marks)</i>	<i>Regular in completing assignments (5marks)</i>	<i>Behaviour in class and discipline (5marks)</i>	<i>Dress code and presentation (5marks)</i>			
At the end of 1 <sup>st</sup> IA							
At the end of 2nd IA							
At the end of 3rd IA							
Average score at the end of the year							

**Note:** Parameters will be assessed at the Departmental level to consider eligibility (Minimum of 50% at the end of the year) of the candidate to appear for the university examination. Not considered for internal assessment marks.

## Evaluation and feedback

**on self-directed learning (SDL)- 10 hours**

<b>Sl no.</b>	<b>Date</b>	<b>Topic of SDL</b>	<b>Feedback</b>	<b>Signature of faculty/mentor</b>
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

**Section 4**

**Essential skills both Certifiable and non-certifiable skills**

**Certifiable skill 1**

**Skill:** Demonstrate the correct technique to examine the extra-ocular movements (Unocular& binocular)

Domain: Skills and knowledge

Level of competency: Perform

Core: Yes

The student must perform this activity **twice** to be certified

Date	Attempt			Faculty decision		Faculty signature with date	Rating		
	First F	Repeat R	Remedial Re	Completed	Not Completed		Below expectation B	Meets expectation M	Exceeds expectation E

Overall remarks:

In-charge faculty signature with date:

C #	Competency #		Attempt at activity	Rating	Decision of faculty	Initial of faculty & date
	SLO		First or Only (F)	(B): Below expectations	Completed (C)	
			Repeat (R)	(M) : Meets expectations	Repeat (R)	
			Remedial (Re)	(E): Exceeds expectations	Remedial (Re)*	
				Or Numerical Score		
	OP 6.6 & 7.3	Demonstrate the technique of examining the eye in near, anterior segment and disorders including cataract, uveitis and glaucoma				
	OP1.3	Measure visual acuity including distance, near, anterior segment and disorders including cataract, uveitis and glaucoma				
	OP2.2	Elicit the clinical signs of common eyelid disorders including Bell's phenomenon				
	OP 7.5 & 7.6	OP 7.6: Administer informed consent and counsel patients of ophthalmic surgery in a simulated environment				
	OP2.3	Perform lacrimal regurgitation test of lacrimal sac				
	OP 8.3	OP 8.3: Demonstrate lacrimal sac massage technique fundus congenital lesions in the dacryocystitis				
	OP 3.1	Elicit detailed history in a patient with red eye				
	OP 3.2	Demonstrate clinical examination of a patient with red eye- corneal lustre, pupil, anterior chamber depth				
	OP 3.8	Demonstrate removal of FB in simulated environment				
	OP 3.9	Demonstrate the correct technique of eyedrop instillation in simulated environment				

Case

**presentation 1<sup>st</sup> posting**

No.	name of patient	agnosis	esented/ rticipated	ulty signature
-----	-----------------	---------	------------------------	-------------------


**Case presentation 2<sup>nd</sup> posting**

No.	Name of patient	Diagnosis	Presented/ Participated	Faculty signature

**Section 5: Additional Curricular and extracurricular Activities**

**5.1 Additional curricular activities**  
(Seminar, conferences, outreach activities, Workshops etc.)

Sl no	Date	Particulars	Signature of the faculty


## 5.2 Extracurricular activities

Sl no	Date	Particulars	Signature of the faculty

## 5.3 Achievements/awards

Sl no	Date	Particulars	Signature of the faculty

## FINAL SUMMARY

Sl no.	Description	Dates		Attendance in percentage	Status *	Signature of the teacher with date
		From	To			
1	Certifiable skills					

2	AETCOM Modules					
3	Internal assessment Marks					

Signature of Head of department

Date:

\* Status: Complete/Incomplete: For skills and AETCOM modules  
 Eligible/Ineligible: For Internal marks

# Rajiv Gandhi University of Health Sciences Bangalore, Karnataka



## Otorhinolaryngology Curriculum

# as per Competency-Based Medical Education

## **Preamble**

The NMC envisages that the Indian Medical Graduate should function as the Physician of first contact in the community, to provide holistic health care to the evolving needs of the nation and the world. To fulfil this, the IMG should be able to perform the following roles: a clinician, a communicator, a lifelong learner, a professional and a team leader.

Competency-based medical education (CBME) is an outcome-based training model that has become the new standard of medical education internationally. This new curriculum is being implemented across the country and the first batch has been enrolled since the academic year 2019. The regulatory and accrediting body NMC had started the process by training faculty across the country in the key principles of CBME and developing key competencies for each speciality with the input from expert groups under each speciality.

The field of Otorhinolaryngology (ENT) came to be recognized as a separate entity in medicine at the end of the 19th century. It has been evolving as a separate surgical speciality since then owing to the contributions of pioneers in understanding the disease processes.

ENT as a speciality has been steered into new heights today due to the many technological advances in microsurgery by stalwarts in this field. Otology, Laryngology, Rhinology, Endoscopic Skull Base Surgery, Head and Neck Surgery, Facial Plastic Surgery, Neuro-otology, Pediatric ENT and Phonosurgery are the various sub-specialities that ENT has ramified into. ENT related medical problems are commonly encountered at a primary care and for this, an MBBS graduate requires a basic knowledge and skill in the speciality of ENT. The new CBME curriculum equips the undergraduate students with the skill and knowledge to face these challenges using innovative

teaching learning methods.

## **Goals and Objectives of the RGUHS Otorhinolaryngology Curriculum**

### **Goals**

The Goal of training in this subject is to make the candidate familiar with common ENT problems. The IMG should be competent enough to diagnose and treat routine ENT diseases and should be able to identify the cases, which require specialist care and identify deaf individuals at the earliest and refer them for proper rehabilitation

### **Competencies**

The Learner must demonstrate :-

1. Knowledge of the common Otorhinolaryngological(ENT) emergencies and problems
2. Ability to recognize, diagnose and manage common ENT emergencies and problems in primary care setting
3. Ability to perform simple ENT procedures as applicable in a primary care setting
4. Ability to recognize hearing impairment and refer to the appropriate Hearing impairment rehabilitation programme.

### **Skills**

1. Examine and diagnose common disorders of the Ear, Nose and Throat region and manage at first level of care.

2. Recognize premalignant and malignant cases of head and neck region at an early stage.
3. Remove foreign bodies in the ear and nose.
4. Perform life saving surgical procedures in patients with airway emergencies.
5. Should be familiar with drainage of intra oral and neck abscesses.
6. Able to do anterior and posterior nasal packing to control Epistaxis

### **Integration**

The teaching should be aligned and integrated horizontally and vertically in order to allow the learner to understand the structural basis of ENT problems, their management and correlation with function, rehabilitation and quality of life

### **Attitude and communication skills**

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

- e. Communicate effectively with patients, their families and the public at large.
- f. Communicate effectively with peers and teachers; demonstrate the ability to work effectively with peers in a team.
- g. Demonstrate professional attributes of punctuality, accountability and respect for teachers and peers.
- h. Appreciate the issues of equity and social accountability while undergoing early clinical exposure.

**Interactive Lectures – 25 hours**  
**Proposed topics**

<b>Sl No</b>	<b>Topics</b>
1	<b>Anatomy &amp; Physiology of Ear</b>
2	<b>Anatomy &amp; Physiology of Nose</b>
3	<b>Anatomy &amp; Physiology of Throat</b>
4	<b>Anatomy &amp; Physiology of Head &amp; Neck</b>
5	<b>Diseases of the External Ear</b>
6	<b>Non-infectious disorders of Middle Ear</b>
7	<b>Infections of Middle Ear</b>
8	<b>Diseases of Inner Ear</b>
9	<b>Hearing Loss &amp; Tinnitus</b>
10	<b>Vertigo &amp; Balance Disorders</b>
11	<b>Facial Nerve Paralysis</b>
12	<b>Diseases of Nasal Septum</b>
13	<b>Non-infectious Rhinitis</b>
14	<b>Acute &amp; Chronic Rhinosinusitis</b>
15	<b>Epistaxis &amp; Head &amp; neck Trauma</b>
16	<b>Tumors of Nose &amp; PNS</b>
17	<b>Tumors of Nasopharynx &amp; JNA</b>
18	<b>Diseases of Salivary glands</b>
19	<b>Acute &amp; chronic Pharyngitis &amp; Tonsillitis</b>
20	<b>Head &amp; Neck Space Infections</b>
21	<b>Laryngeal Infections &amp; Benign disorders of Larynx</b>
22	<b>Malignancy of Larynx &amp; Hypopharynx</b>
23	<b>Stridor &amp; management of Airway Emergencies</b>
24	<b>Diseases of Oesophagus</b>
25	<b>HIV manifestation of the ENT</b>

**Small Group Teaching– 40 hours  
Proposed topics**

<b>Sl No</b>	<b>Topics</b>	<b>No of hours</b>	<b>SG TL methods</b>
1	Anatomy & Physiology of Ear	2	Seminars & Model/chart making
3	Otoscopic examination of the Tympanic membrane	2	Simulation (DOAP)
4	Otomicroscopic examination in a simulated environment	2	Simulation (DOAP)
5	Tuning fork Tests	2	DOAP
6	Foreign body removal from ear / Syringing wax from ear	2	Simulation (DOAP)
7	Assessment & Rehabilitation of Hearing impaired & NPPC	2	Seminars & SGD (DOAP)
8	Interpretation of Pure Tone Audiograms & Impedance audiograms	2	SGD (Discussion of patient reports)
9	Surgical Procedures of the Ear	3	Seminars & Video demonstration
10	Diagnostic nasal endoscopy & anatomy of Nose	3	Seminars, Video demonstration & Simulation
11	Smell and taste perception	2	Seminars, SGD – chart making
12	Epistaxis & Anterior Nasal packing	3	Seminars, Video demonstration & Simulation
13	Foreign bodies in the nose & Upper respiratory tract & their management	3	Video demonstration & Simulation
14	Surgical procedures of the Nose	2	Seminars & Video demonstration
15	Anatomy & Physiology of throat	2	Seminars & Model/chart making
16	Surgical procedures of the throat	2	Seminars & Video demonstration
17	Airway emergencies & management of Stridor (including Tracheostomy)	3	Seminars, Video demonstration & Simulation
18	Counsel & Administer informed consent	1	Simulation -DOAP
19	Malignant & pre- malignant ENT diseases	1	Seminars, SGD
20	The national programs for prevention of deafness, cancer noise & environmental pollution	1	Seminars, Awareness activities (Poster making)

**Topics for Integration with Otorhinolaryngology from other Departments**

<b>Sl. No</b>	<b>Integrated Teaching</b>	<b>Integrated with (Department)</b>
1	Describe the (1) morphology, relations, blood supply and applied anatomy of palatine tonsil and (2) composition of soft palate	Human Anatomy
2	Describe the components and functions of Waldeyer's lymphatic ring	Human Anatomy
3	Describe the boundaries and clinical significance of pyriform fossa	Human Anatomy
4	Describe the anatomical basis of tonsillitis, tonsillectomy, adenoids and peritonsillar abscess	Human Anatomy
5	Describe the clinical significance of Killian's dehiscence	Human Anatomy
6	Describe & demonstrate features of nasal septum, lateral wall of nose, their blood supply and nerve supply	Human Anatomy
7	Describe location and functional anatomy of paranasal sinuses	Human Anatomy
8	Describe anatomical basis of sinusitis & maxillary sinus tumours	Human Anatomy
9	Describe the morphology, identify structure of the wall, nerve supply, blood supply and actions of intrinsic and extrinsic muscles of the larynx	Human Anatomy
10	Describe the anatomical aspects of laryngitis	Human Anatomy
11	Describe anatomical basis of recurrent laryngeal nerve injury	Human Anatomy
12	Explain the anatomical basis of hypoglossal nerve palsy	Human Anatomy
13	Describe & identify the parts, blood supply and nerve supply of external ear	Human Anatomy
14	Describe & demonstrate the boundaries, contents, relations and functional anatomy of middle ear and auditory tube	Human Anatomy
15	Describe the features of internal ear	Human Anatomy
16	Explain anatomical basis of otitis externa and otitis media	Human Anatomy
17	Explain anatomical basis of myringotomy	Human Anatomy
18	Describe and discuss perception of smell and taste sensation	Physiology
19	Describe and discuss functional anatomy of ear and auditory pathways & physiology of hearing	Physiology
20	Describe and discuss pathophysiology of deafness. Describe hearing tests	Physiology
21	Demonstrate (i) hearing (ii) testing for smell and (iii) taste sensation in volunteer/ simulated environment	Physiology
22	Describe the health hazards of air, water, noise, radiation and pollution.	Community Medicine
23	Discuss the prevalence of oral cancer and enumerate the common types of cancer that can affect tissues of the oral cavity	Dentistry
24	Discuss the role of etiological factors in the formation of precancerous /cancerous lesions	Dentistry

25	Identify potential pre-cancerous /cancerous lesions	Dentistry
26	Counsel patients to risks of oral cancer with respect to tobacco, smoking, alcohol and other causative factors	Dentistry
27	Describe and discuss the etiopathogenesis, clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of hearing loss in the elderly	General Medicine
28	Discuss the risk factors, clinical features, Diagnosis and management of Kerosene ingestion	Paediatrics/General Medicine
29	Discuss the etio-pathogenesis, clinical features and management of Naso pharyngitis	Paediatrics
30	Discuss the etio-pathogenesis of Pharyngo Tonsillitis	Paediatrics
31	Discuss the clinical features and management of Pharyngo Tonsillitis	Paediatrics
32	Discuss the etio-pathogenesis, clinical features and management of Acute Otitis Media (AOM)	Paediatrics
33	Discuss the etio-pathogenesis, clinical features and management of Epiglottitis	Paediatrics
34	Discuss the etio-pathogenesis, clinical features and management of Acute laryngo-trachea-bronchitis	Paediatrics
35	Discuss the etiology, clinical features and management of Stridor in children	Paediatrics
36	Discuss the types, clinical presentation, and management of foreign body aspiration in infants and children	Paediatrics
37	Elicit, document and present age appropriate history of a child with upper respiratory problem including Stridor	Paediatrics
38	Perform otoscopic examination of the ear	Paediatrics
39	Perform throat examination using tongue depressor	Paediatrics
40	Perform examination of the nose	Paediatrics
41	Interpret X-ray of the paranasal sinuses and mastoid; and /or use written report in case of management. Interpret CXR in foreign body aspiration and lower respiratory tract infection, understand the significance of thymic shadow in pediatric chest X-rays	Paediatrics
42	Describe the etio-pathogenesis, management and prevention of Allergic Rhinitis in Children	Paediatrics
43	Describe the etio-pathogenesis, clinical features and management of Atopic dermatitis in children	Paediatrics
44	Describe etiopathogenesis of oral cancer, symptoms and signs of pharyngeal cancer. Enumerate the appropriate investigations and discuss the principles of treatment.	General Surgery

# Self-Directed Learning

## Proposed topics

Sl. No	Topics
1	Hearing Loss
2	Vertigo
3	Allergy
4	Rhinosinusitis
5	Head & Neck Tumors

Draft

# OTORHINOLARYNGOLOGY

Core competencies – color Blue

Non - Core competencies – color Green

**TOPIC: ANATOMY AND PHYSIOLOGY OF EAR, NOSE, THROAT, HEAD & NECK**

Number of competencies:(02)

Number of procedures that require certification:(NIL)

EN1.1 Describe the Anatomy & physiology of ear, nose, throat, head & neck

Domain – K

Level - KH

Vertical Integration – Human Anatomy

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN1.1.1	Describe the Anatomy of ear	Lecture, Demonstration	Written, viva-voce
EN1.1.2	Describe the Anatomy of nose	Lecture, Demonstration	Written, viva-voce
EN1.1.3	Describe the Anatomy of throat	Lecture, Demonstration	Written, viva-voce
EN1.1.4	Describe the Anatomy of head & neck	Lecture, Demonstration	Written, viva-voce
EN1.1.5	Describe the Physiology of ear	Lecture, Demonstration	Written, viva-voce
EN1.1.6	Describe the Physiology of nose	Lecture, Demonstration	Written, viva-voce
EN1.1.7	Describe the Physiology of throat	Lecture, Demonstration	Written, viva-voce
EN1.1.8	Describe the Physiology of head & neck	Lecture, Demonstration	Written, viva-voce

EN1.2 Describe the patho-

physiology of common diseases in ENT

Domain – K

Level - KH

Vertical Integration – Pathology

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN1.2.1	Describe the patho-physiology of common diseases of the ear	Lecture, Demonstration, Bedside clinics	Written, viva-voce
EN1.2.2	Describe the patho-physiology of common diseases of the nose	Lecture, Demonstration, Bedside clinics	Written, viva-voce
EN1.2.3	Describe the patho-physiology of common diseases of the throat	Lecture, Demonstration, Bedside clinics	Written, viva-voce
EN1.2.4	Describe the patho-physiology of common diseases of the head & neck	Lecture, Demonstration, Bedside clinics	Written, viva-voce

## TOPIC: CLINICAL SKILLS

Number of competencies: (15)

Number of procedures that require certification: (NIL)

**To be taught and assessed in bed-side clinics and / or simulated environment.**

**EN2.1 Elicit document and present an appropriate history in a patient presenting with an ENT complaint**

**Domain – K/S/A/C**

**Level – SH**

**EN2.2 Demonstrate the correct use of a headlamp in the examination of the ear, nose and throat**

**Domain – S**

**Level – SH**

**EN2.3 Demonstrate the correct technique of examination of the ear including Otoscopy**

**Domain – K/S/A**

**Level – SH**

**EN2.4 Demonstrate the correct technique of performance and interpret tuning fork tests**

**Domain – K/S/A**

**Level – SH**

**EN2.5 Demonstrate the correct technique of examination of the nose & paranasal sinuses including the use of nasal speculum**

**Domain – S**

**Level – SH**

**EN2.6 Demonstrate the correct technique of examining the throat including the use of a tongue depressor**

**Domain – S**

**Level – SH**

**EN2.7 Demonstrate the correct technique of examination of neck including elicitation of laryngeal crepitus**

**Domain – S**

**Level – SH**

**EN2.8 Demonstrate the correct technique to perform and interpret pure tone audiogram & impedance audiogram**

**Domain – K/S**

**Level – SH**

**EN2.9 Choose correctly and interpret radiological, microbiological & histological investigations relevant to the ENT disorders**

**Domain – K/S**

**Level – SH**

**EN2.10 Identify and describe the use of common instruments used in ENT surgery**

**Domain – K**

**Level – SH**

**EN2.11 Describe and identify by clinical examination malignant & pre-malignant ENT diseases**

**Domain – K/S**

**Level – SH**

**EN2.12 Counsel and administer informed consent to patients and their families in a simulated environment**

**Domain – S/A/C**

**Level – SH**

**EN2.13 Identify, resuscitate and manage ENT emergencies in a simulated environment (including tracheostomy, anterior nasal packing, removal of foreign bodies in ear, nose, throat and upper respiratory tract)**

**Domain – K/S/A**

**Level – SH**

**EN2.14 Demonstrate the correct technique to instilling topical medications into the ear, nose and throat in a simulated environment**

**Domain – K/S**

**Level – SH**

**EN2.15 Describe the national programs for prevention of deafness, cancer, noise & environmental pollution**

**Domain – K**

**Level – KH**

## TOPIC: DIAGNOSTIC AND THERAPEUTIC PROCEDURES IN ENT

Number of competencies: (06)

Number of procedures that require certification: (NIL)

To be taught and assessed in bed-side clinics and / or simulated environment.

EN3.1 Observe and describe the indications for and steps involved in the performance of Oto-microscopic examination in a simulated environment

Domain –S

Level – KH

EN3.2 Observe and describe the indications for and steps involved in the performance of diagnostic nasal Endoscopy

Domain –S

Level – KH

EN3.3 Observe and describe the indications for and steps involved in the performance of Rigid/Flexible Laryngoscopy

Domain –K

Level – KH

EN3.4 Observe and describe the indications for and steps involved in the removal of foreign bodies from ear, nose & throat

Domain –K

Level – KH

EN3.5 Observe and describe the indications for and steps involved in the surgical procedures in ear, nose & throat

Domain –K

Level – KH

EN3.6 Observe and describe the indications for and steps involved in the skills of emergency procedures in ear, nose & throat

Domain –K

Level – KH

## TOPIC: MANAGEMENT OF DISEASES OF EAR, NOSE & THROAT

Number of competencies: (53)

Number of procedures that require certification: (NIL)

EN4.1 Elicit, document and present a correct history, demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of Otolgia

Domain – K/S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.1.1	List the causes of Otolgia	Lecture	Written, viva-voce
EN4.1.2	Elicit correct history in patients with Otolgia	Bedside clinic	Skill assessment
EN4.1.3	Document and present correct history in patients with Otolgia	Bedside clinic	Skill assessment
EN4.1.4	Describe the clinical features in a patient presenting with Otolgia	Bedside clinic	Skill assessment
EN4.1.5	Choose the correct investigations in a patient presenting with Otolgia	Bedside clinic	Viva voce
EN4.1.6	Describe the principles of management of Otolgia	Lecture ,Bedside clinic	Viva voce

EN4.2  
Elicit

document and present a correct history, demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of diseases of the external Ear

Domain – K/S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.2.1	List the diseases of external ear	Lecture	Written, viva-voce

EN4.2.2	Elicit correct history in patients presenting with disease of the external Ear	Bedside clinic	Skill assessment
EN4.2.3	Document and present correct history in patients with diseases of the external Ear	Bedside clinic	Skill assessment
EN4.2.4	Describe the clinical features in a patient presenting with diseases of the external Ear	Bedside clinic	Skill assessment
EN4.2.5	Choose the correct investigations in a patient presenting with diseases of the external Ear	Bedside clinic	Viva voce
EN4.2.6	Describe the principles of management of diseases of the external Ear	Lecture ,Bedside clinic	Viva voce

EN4.3 Elicit document and present a correct history, demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of ASOM

Domain – K/S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.3.1	Elicit correct history in patients presenting with ASOM	Bedside clinic	Skill assessment
EN4.3.2	Document and present correct history in patients with ASOM	Bedside clinic	Skill assessment
EN4.3.3	Describe the clinical features in a patient presenting with ASOM	Bedside clinic	Skill assessment
EN4.3.4	Choose the correct investigations in a patient presenting with ASOM	Bedside clinic	Viva voce
EN4.3.5	Describe the principles of management of ASOM	Lecture ,Bedside clinic	Viva voce/Written

EN4.4

Demonstrate the correct technique to hold visualize and assess the mobility of the tympanic membrane and its mobility and interpret and diagrammatically represent the findings

Domain – K/S/A

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.4.1	Describe the normal appearance of Tympanic membrane	Lecture	Viva voce
EN4.4.2	Demonstrate the correct technique to hold & visualize the tympanic membrane	DOAP session	Skill assessment
EN4.4.3	Demonstrate the correct technique to assess the mobility of the tympanic membrane	DOAP session	Skill assessment
EN4.4.4	Interpret and diagrammatically represent the findings of the tympanic membrane assessment	Bedside clinics	Viva voce

EN4.5  
Elicit

document and present a correct history, demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of OME

Domain – K/S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.5.1	Elicit correct history in patients presenting with OME	Bedside clinics	Skill assessment
EN4.5.2	Document and present correct history in patients with OME	Bedside clinics	Skill assessment
EN4.5.3	Describe the clinical features in a patient presenting with OME	Lecture, Bedside clinics	Skill assessment
EN4.5.4	Choose the correct investigations in a patient presenting with OME	Bedside clinics	Viva voce

EN4.5.5	Describe the principles of management of OME	Lecture	Written, viva voce
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EN4.6 Elicit document and present a correct history, demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of Discharging ear

Domain – K/S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.6.1	List the causes of Discharging ear	Lecture	Written, viva-voce
EN4.6.2	Elicit correct history in patients presenting with Discharging ear	Bedside clinic	Skill assessment
EN4.6.3	Document and present correct history in patients with Discharging ear	Bedside clinic	Skill assessment
EN4.6.4	Describe the clinical features in a patient presenting with Discharging ear	Bedside clinic	Skill assessment
EN4.6.5	Choose the correct investigations in a patient presenting with Discharging ear	Bedside clinic	Viva voce
EN4.6.6	Describe the principles of management of Discharging ear	Lecture ,Bedside clinic	Written, Viva voce

EN4.7  
Elicit

document and present a correct history demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of mucosal type of CSOM

Domain – K/S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.7.1	Elicit correct history in patients presenting with mucosal type of CSOM	Bedside clinic	Skill assessment
EN4.7.2	Document and present correct history in patients with mucosal type of CSOM	Bedside clinic	Skill assessment
EN4.7.3	Describe the clinical features in a patient presenting with mucosal type of CSOM	Bedside clinic	Skill assessment
EN4.7.4	Choose the correct investigations in a patient presenting with mucosal type of CSOM	Bedside clinic	Viva voce, written
EN4.7.5	Describe the principles of management of mucosal type of CSOM	Lecture ,Bedside clinic	Written, Viva voce

EN4.8  
Elicit

document and present a correct history, demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of squamosal type of CSOM

Domain – K/S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.8.1	Elicit correct history in patients presenting with squamosal type of CSOM	Bedside clinic	Skill assessment
EN4.8.2	Document and present correct history in patients with squamosal type of CSOM	Bedside clinic	Skill assessment
EN4.8.3	Describe the clinical features in a patient presenting with squamosal type of CSOM	Bedside clinic	Skill assessment
EN4.8.4	Choose the correct investigations in a patient presenting with squamosal type of CSOM	Bedside clinic	Viva voce, written
EN4.8.5	Describe the principles of management of squamosal type of CSOM	Lecture ,Bedside clinic	Written, Viva voce

EN4.9

Demonstrate the correct technique for syringing wax from the ear in a simulated environment

Domain –S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
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EN4.9.1	Describe the correct technique for syringing wax from the ear	DOAP	Skill assessment
EN4.9.2	Demonstrate the correct technique for syringing wax from the ear in a simulated environment	DOAP	Skill assessment

EN4.10  
Observe  
and  
describe

the indications for and steps involved in myringotomy and myringoplasty

Domain –S

Level - KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.10.1	Enumerate the indications for myringotomy	Lecture	Written , viva voce
EN4.10.2	Describe the steps of myringotomy	Lecture, video demonstration	Written , viva voce
EN4.10.3	Observe steps involved in myringotomy	Clinical (OT)	Written , viva voce
EN4.10.4	Enumerate the indications for myringoplasty	Lecture	Written , viva voce
EN4.10.5	Describe the steps of myringoplasty	Lecture, video demonstration	Written , viva voce
EN4.10.6	Observe steps involved in myringoplasty	Clinical (OT)	Written , viva voce

EN4.11 Enumerate the indications describe the steps and observe a Mastoidectomy

Domain – K/S

Level - KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.11.1	Enumerate the indications for Mastoidectomy	Lecture	Written , viva voce
EN4.11.2	Describe the steps of Mastoidectomy	Lecture	Written , viva voce
EN4.11.3	Observe steps involved in Mastoidectomy	Clinical (OT)	Written , viva voce

EN4.12  
Elicit

document and present a correct history demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of Hearing loss

Domain – K/S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.12.1	List the causes of Hearing loss	Lecture	Written, viva-voce
EN4.12.2	Elicit correct history in patients presenting with Hearing loss	Bedside clinic	Skill assessment
EN4.12.3	Document and present correct history in patients with Hearing loss	Bedside clinic	Skill assessment
EN4.12.4	Describe the clinical features in a patient presenting with Hearing loss	Bedside clinic	Skill assessment
EN4.12.5	Choose the correct investigations in a patient presenting with Hearing loss	Bedside clinic	Viva voce
EN4.12.6	Describe the principles of management of Hearing loss	Lecture ,Bedside clinic	Written, Viva voce

EN4.13

Describe the clinical features, investigations and principles of management of Otosclerosis

Domain – K

Level - KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.13.1	Describe the clinical features of Otosclerosis	Lecture	Written

EN4.13.2	Describe the investigations required for patient with Otosclerosis	Bedside clinic	Viva voce
EN4.13.3	Describe the principles of management of Otosclerosis	Lecture ,Bedside clinic	Written, Viva voce

EN4.14

Describe the clinical features, investigations and principles of management of Sudden Sensorineural Hearing Loss  
**Domain – K** **Level - KH**

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.14.1	Describe the clinical features of Sudden Sensorineural Hearing Loss	Lecture	Written
EN4.14.2	Describe the investigations required for patient presenting with Sudden Sensorineural Hearing Loss	Bedside clinic	Viva voce
EN4.14.3	Describe the principles of management of Sudden Sensorineural Hearing Loss	Lecture ,Bedside clinic	Written, Viva voce

EN4.15

Describe the clinical features, investigations and principles of management of Noise Induced Hearing Loss  
**Domain – K** **Level - KH**

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.15.1	Describe the clinical features of Noise Induced Hearing Loss	Lecture	Written
EN4.15.2	Describe the investigations required for patient presenting with Noise Induced Hearing Loss	Bedside clinic	Viva voce
EN4.15.3	Describe the principles of management of Noise Induced Hearing Loss	Lecture ,Bedside clinic	Written, Viva voce

EN4.16  
Observe and

describe the indications for and steps involved in the performance of pure tone audiometry  
**Domain –S** **Level - KH**

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.16.1	Enumerate the indications for pure tone audiometry	Lecture	Written, viva voce
EN4.16.2	Describe the steps involved in the performance of pure tone audiometry	DOAP	viva voce
EN4.16.3	Observe the steps involved in the performance of pure tone audiometry	DOAP	viva voce

EN4.17

Enumerate the indications and interpret the results of an audiogram  
**Domain –S** **Level - SH**

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.17.1	Enumerate the indications for an audiogram	Bedside clinics, DOAP	Viva voce
EN4.17.2	Interpret the results of an audiogram	DOAP	Skill assessment

EN4.18

Describe the clinical features, investigations and principles of management of Facial Nerve palsy  
**Domain – K** **Level - KH**

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.18.1	Describe the clinical features of Facial Nerve palsy	Lecture	Written, viva voce
EN4.18.2	Describe the investigations required for patient presenting with Facial Nerve palsy	Bedside clinics	Written, viva voce

EN4.18.3	Describe the principles of management of Facial Nerve palsy	Lecture ,Bedside clinic	Written, Viva voce
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EN4.19 Describe the clinical features, investigations and principles of management of Vertigo

Domain – K

Level - KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.19.1	Describe the clinical features of patient presenting with Vertigo	Lecture	Written, viva voce
EN4.19.2	Describe the investigations required for patient presenting with Vertigo	Bedside clinics	Written, viva voce
EN4.19.3	Describe the principles of management of Vertigo	Lecture ,Bedside clinic	Written, Viva voce

EN4.20

Describe the clinical features, investigations and principles of management of Meniere's Disease

Domain – K

Level - KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.20.1	Describe the clinical features of patient presenting with Meniere's Disease	Lecture	Written, viva voce
EN4.20.2	Describe the investigations required for patient presenting with Meniere's Disease	Bedside clinics	Written, viva voce
EN4.20.3	Describe the principles of management of Meniere's Disease	Lecture ,Bedside clinic	Written, Viva voce

EN4.21

Describe the clinical features, investigations and principles of management of Tinnitus

Domain – K

Level - KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.21.1	Describe the clinical features of patient presenting with Tinnitus	Lecture	Written, viva voce
EN4.21.2	Describe the investigations required for patient presenting with Tinnitus	Bedside clinics	Written, viva voce
EN4.21.3	Describe the principles of management of Tinnitus	Lecture ,Bedside clinic	Written, Viva voce

EN4.22  
Elicit

document and present a correct history demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of Nasal Obstruction

Domain – K/S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.22.1	List the causes of Nasal obstruction	Lecture	Written, viva-voce
EN4.22.2	Elicit correct history in patients presenting with Nasal obstruction	Bedside clinic	Skill assessment
EN4.22.3	Document and present correct history in patients with Nasal obstruction	Bedside clinic	Skill assessment
EN4.22.4	Describe the clinical features in a patient presenting with Nasal obstruction	Bedside clinic	Skill assessment
EN4.22.5	Choose the correct investigations in a patient presenting with Nasal obstruction	Bedside clinic	Viva voce

EN4.22.6	Describe the principles of management of Nasal obstruction	Lecture ,Bedside clinic	Written, Viva voce
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EN4.23

Describe the clinical features, investigations and principles of management of DNS

Domain – K

Level - KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.23.1	Describe the clinical features of patient presenting with DNS	Lecture	Written, viva voce
EN4.23.2	Describe the investigations required for patient presenting with DNS	Bedside clinics	Written, viva voce
EN4.23.3	Describe the principles of management of DNS	Lecture ,Bedside clinic	Written, Viva voce

EN4.24

Enumerate the indications observe and describe the steps in a septoplasty

Domain –S

Level - KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.24.1	Enumerate the indications for septoplasty	Lecture	Written , viva voce
EN4.24.2	Describe the steps of septoplasty	DOAP - video demonstration	Written , viva voce
EN4.24.3	Observe steps involved in septoplasty	DOAP - Clinical (OT)	Written , viva voce

EN4.25  
Elicit

document and present a correct history, demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of Nasal Polyps

Domain – K/S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.25.1	Elicit correct history in patients presenting with Nasal polyps	Bedside clinic	Skill assessment
EN4.25.2	Document and present correct history in patients with Nasal polyps	Bedside clinic	Skill assessment
EN4.25.3	Describe the clinical features in a patient presenting with Nasal polyps	Bedside clinic	Skill assessment
EN4.25.4	Choose the correct investigations in a patient presenting with Nasal polyps	Bedside clinic	Viva voce
EN4.25.5	Describe the principles of management of Nasal polyps	Lecture ,Bedside clinic	Written, Viva voce

EN4.26  
Elicit

document and present a correct history, demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of Adenoids

Domain – K/S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.26.1	Elicit correct history in patients presenting with Adenoids	Bedside clinic	Skill assessment
EN4.26.2	Document and present correct history in patients with Adenoids	Bedside clinic	Skill assessment
EN4.26.3	Describe the clinical features in a patient presenting with Adenoids	Bedside clinic	Skill assessment
EN4.26.4	Choose the correct investigations in a patient presenting with Adenoids	Lecture, DOAP	Viva voce
EN4.26.5	Describe the principles of management of Adenoids	Lecture ,Bedside clinic	Written, Viva voce

EN4.27  
Elicit

document and present a correct history, demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of Allergic Rhinitis

Domain – K/S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.27.1	Elicit correct history in patients presenting with Allergic Rhinitis	Bedside clinic	Skill assessment
EN4.27.2	Document and present correct history in patients with Allergic Rhinitis	Bedside clinic	Skill assessment
EN4.27.3	Describe the clinical features in a patient presenting with Allergic Rhinitis	Bedside clinic	Skill assessment
EN4.27.4	Choose the correct investigations in a patient presenting with Allergic Rhinitis	Lecture, DOAP	Viva voce
EN4.27.5	Describe the principles of management of Allergic Rhinitis	Lecture ,Bedside clinic	Written, Viva voce

EN4.28  
Elicit

document and present a correct history, demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of Vasomotor Rhinitis

Domain – K/S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.28.1	Elicit correct history in patients presenting with Vasomotor Rhinitis	Bedside clinic	Skill assessment
EN4.28.2	Document and present correct history in patients with Vasomotor Rhinitis	Bedside clinic	Skill assessment
EN4.28.3	Describe the clinical features in a patient presenting with Vasomotor Rhinitis	Bedside clinic	Skill assessment
EN4.28.4	Choose the correct investigations in a patient presenting with Vasomotor Rhinitis	Lecture, DOAP	Viva voce
EN4.28.5	Describe the principles of management of Vasomotor Rhinitis	Lecture ,Bedside clinic	Written, Viva voce

EN4.29  
Elicit

document and present a correct history demonstrate an describe the clinical features, choose the correct investigations and describe the principles of management of Acute & Chronic Rhinitis

Domain – K/S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.29.1	Elicit correct history in patients presenting with Acute Rhinitis	Bedside clinic	Skill assessment
EN4.29.2	Document and present correct history in patients with Acute Rhinitis	Bedside clinic	Skill assessment
EN4.29.3	Describe the clinical features in a patient presenting with Acute Rhinitis	Bedside clinic	Skill assessment
EN4.29.4	Choose the correct investigations in a patient presenting with Acute Rhinitis	Lecture, DOAP	Viva voce
EN4.29.5	Describe the principles of management of Acute Rhinitis	Lecture ,Bedside clinic	Written, Viva voce
EN4.29.6	Elicit correct history in patients presenting with Chronic Rhinitis	Bedside clinic	Skill assessment
EN4.29.7	Document and present correct history in patients with Chronic Rhinitis	Bedside clinic	Skill assessment
EN4.29.8	Describe the clinical features in a patient presenting with Chronic Rhinitis	Bedside clinic	Skill assessment
EN4.29.9	Choose the correct investigations in a patient presenting with Chronic Rhinitis	Lecture, DOAP	Viva voce
EN4.29.10	Describe the principles of management of Chronic Rhinitis	Lecture ,Bedside clinic	Written, Viva voce

EN4.30  
Elicit

document and present a correct history, demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of Epistaxis

Domain – K/S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
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EN4.30.1	Enumerate the causes of Epistaxis	Lecture	Written, Viva voce
EN4.30.2	Elicit correct history in patients presenting with Epistaxis	Bedside clinic	Skill assessment
EN4.30.3	Document and present correct history in patients with Epistaxis	Bedside clinic	Skill assessment
EN4.30.4	Describe the clinical features in a patient presenting with Epistaxis	Bedside clinic	Skill assessment
EN4.30.5	Choose the correct investigations in a patient presenting with Epistaxis	Lecture, DOAP	Viva voce
EN4.30.6	Describe the principles of management of Epistaxis	Lecture ,Bedside clinic	Written, Viva voce

EN4.31 Describe the clinical features, investigations and principles of management of trauma to the face & neck  
**Domain – K/S** **Level - KH**

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.31.1	Describe the clinical features in a patient presenting with trauma to face	Lecture	Written, Viva voce
EN4.31.2	Choose the correct investigations in a patient presenting with trauma to face	Lecture, DOAP	Viva voce
EN4.31.3	Describe the principles of management of trauma to face	Lecture ,Bedside clinic	Written, Viva voce
EN4.31.4	Describe the clinical features in a patient presenting with trauma to neck	Lecture	Written, Viva voce
EN4.31.5	Choose the correct investigations in a patient presenting with trauma to neck	Lecture, DOAP	Viva voce
EN4.31.6	Describe the principles of management of trauma to neck	Lecture ,Bedside clinic	Written, Viva voce

EN4.32

Describe the clinical features, investigations and principles of management of nasopharyngeal Angiofibroma  
**Domain – K** **Level - KH**

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.32.1	Describe the clinical features in a patient presenting with nasopharyngeal Angiofibroma	Lecture	Written, Viva voce
EN4.32.2	Choose the correct investigations in a patient presenting with nasopharyngeal Angiofibroma	Lecture, DOAP	Viva voce
EN4.32.3	Describe the principles of management of nasopharyngeal Angiofibroma	Lecture ,Bedside clinic	Written, Viva voce

EN4.33  
Elicit

document and present a correct history demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of Acute & Chronic Sinusitis

**Domain – K/S** **Level - SH**

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.33.1	Elicit correct history in patients presenting with Acute Sinusitis	Bedside clinic	Skill assessment
EN4.33.2	Document and present correct history in patients with Acute Sinusitis	Bedside clinic	Skill assessment
EN4.33.3	Describe the clinical features in a patient presenting with Acute Sinusitis	Bedside clinic	Skill assessment
EN4.33.4	Choose the correct investigations in a patient presenting with Acute Sinusitis	Lecture, DOAP	Viva voce
EN4.33.5	Describe the principles of management of Acute Sinusitis	Lecture ,Bedside clinic	Written, Viva voce

EN4.33.6	Elicit correct history in patients presenting with Chronic Sinusitis	Bedside clinic	Skill assessment
EN4.33.7	Document and present correct history in patients with Chronic Sinusitis	Bedside clinic	Skill assessment
EN4.33.8	Describe the clinical features in a patient presenting with Chronic Sinusitis	Bedside clinic	Skill assessment
EN4.33.9	Choose the correct investigations in a patient presenting with Chronic Sinusitis	Lecture, DOAP	Viva voce
EN4.33.10	Describe the principles of management of Chronic Sinusitis	Lecture ,Bedside clinic	Written, Viva voce

EN4.34

Describe the clinical features, investigations and principles of management of Tumors of Maxilla

Domain – K

Level - KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.34.1	Describe the clinical features in a patient presenting with Tumors of Maxilla	Lecture	Written, Viva voce
EN4.34.2	Choose the correct investigations in a patient presenting with Tumors of Maxilla	Lecture, DOAP	Viva voce
EN4.34.3	Describe the principles of management of Tumors of Maxilla	Lecture ,Bedside clinic	Written, Viva voce

EN4.35

Describe the clinical features, investigations and principles of management of Tumors of Nasopharynx

Domain – K

Level - KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.35.1	Describe the clinical features in a patient presenting with Tumors of Nasopharynx	Lecture	Written, Viva voce
EN4.35.2	Choose the correct investigations in a patient presenting with Tumors of Nasopharynx	Lecture, DOAP	Viva voce
EN4.35.3	Describe the principles of management of Tumors of Nasopharynx	Lecture ,Bedside clinic	Written, Viva voce

EN4.36

Describe the clinical features, investigations and principles of management of diseases of the Salivary glands

Domain – K

Level - KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.36.1	Describe the clinical features in a patient presenting with Diseases of salivary glands	Lecture	Written, Viva voce
EN4.36.2	Choose the correct investigations in a patient presenting with Diseases of salivary glands	Lecture, DOAP	Viva voce
EN4.36.3	Describe the principles of management of Diseases of salivary glands	Lecture ,Bedside clinic	Written, Viva voce

EN4.37

Describe the clinical features, investigations and principles of management of Ludwig's angina

Domain – K

Level - KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.37.1	Describe the clinical features in a patient presenting with Ludwig's angina	Lecture	Written, Viva voce
EN4.37.2	Choose the correct investigations for a patient presenting with Ludwig's angina	Lecture, DOAP	Viva voce
EN4.37.3	Describe the principles of management of Ludwig's angina	Lecture ,Bedside clinic	Written, Viva voce

EN4.38  
Elicit

document and present a correct history demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of type of dysphagia

Domain – K/S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.38.1	Enumerate the causes of Dysphagia	Lecture	Written, Viva voce
EN4.38.2	Elicit correct history in patients presenting with Dysphagia	Bedside clinic	Skill assessment
EN4.38.3	Document and present correct history in patients with Dysphagia	Bedside clinic	Skill assessment
EN4.38.4	Describe the clinical features in a patient presenting with Dysphagia	Bedside clinic	Skill assessment
EN4.38.5	Choose the correct investigations for a patient presenting with Dysphagia	Lecture, DOAP	Viva voce
EN4.38.6	Describe the principles of management of Dysphagia	Lecture ,Bedside clinic	Written, Viva voce

EN4.39  
Elicit

document and present a correct history, demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of Acute & Chronic Tonsillitis

Domain – K/S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.39.1	Elicit correct history in patients presenting with Acute Tonsillitis	Bedside clinic	Skill assessment
EN4.39.2	Document and present correct history in patients with Acute Tonsillitis	Bedside clinic	Skill assessment
EN4.39.3	Describe the clinical features in a patient presenting with Acute Tonsillitis	Bedside clinic	Skill assessment
EN4.39.4	Choose the correct investigations in a patient presenting with Acute Tonsillitis	Lecture, DOAP	Viva voce
EN4.39.5	Describe the principles of management of Acute Tonsillitis	Lecture ,Bedside clinic	Written, Viva voce
EN4.39.6	Elicit correct history in patients presenting with Chronic Tonsillitis	Bedside clinic	Skill assessment
EN4.39.7	Document and present correct history in patients with Chronic Tonsillitis	Bedside clinic	Skill assessment
EN4.39.8	Describe the clinical features in a patient presenting with Chronic Tonsillitis	Bedside clinic	Skill assessment
EN4.39.9	Choose the correct investigations in a patient presenting with Chronic Tonsillitis	Lecture, DOAP	Viva voce
EN4.39.10	Describe the principles of management of Chronic Tonsillitis	Lecture ,Bedside clinic	Written, Viva voce

EN4.40  
Observe and describe the

indications for and steps involved in a tonsillectomy / adenoidectomy

Domain – S

Level – KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.40.1	Enumerate the indications for tonsillectomy	Lecture, Bedside clinic	Written, Viva voce
EN4.40.2	Observe the steps involved in a tonsillectomy	Video demonstration, DOAP (OT)	Viva voce
EN4.40.3	Describe the steps involved in a tonsillectomy	DOAP (OT), Bedside clinic	Viva voce
EN4.40.4	Enumerate the indications for adenoidectomy	Lecture, Bedside clinic	Written, Viva voce
EN4.40.5	Observe the steps involved in an adenoidectomy	Video demonstration, DOAP (OT)	Viva voce
EN4.40.6	Describe the steps involved in an adenoidectomy	DOAP (OT), Bedside clinic	Viva voce

EN4.41 Describe the clinical features, investigations and principles of management of Acute & chronic abscesses in relation to Pharynx

Domain – K/S

Level - KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.41.1	List the abscesses in relation to pharynx	Lecture, Bedside clinic	Written, Viva voce
EN4.41.2	Describe the clinical features of acute abscesses in relation to pharynx	Bedside clinic	Viva voce
EN4.41.3	Choose the correct investigations in a patient presenting with an acute abscess related to the pharynx	DOAP, Bedside clinic	Viva voce
EN4.41.4	Describe the principles of management of a patient presenting with an acute abscess related to the pharynx	Lecture, DOAP	Viva voce
EN4.41.5	Describe the clinical features of chronic abscesses in relation to pharynx	Bedside clinic	Viva voce
EN4.41.6	Choose the correct investigations in a patient presenting with chronic abscess related to the pharynx	DOAP, Bedside clinic	Viva voce
EN4.41.7	Describe the principles of management of a patient presenting with chronic abscess related to the pharynx	Lecture, DOAP	Viva voce

EN4.42  
Elicit,

document and present a correct history, demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of hoarseness of voice

Domain – K/S

Level – SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.42.1	Enumerate the causes of hoarseness of voice	Lecture	Written, Viva voce
EN4.42.2	Elicit correct history in patients presenting with hoarseness of voice	Bedside clinic	Skill assessment
EN4.42.3	Document and present correct history in patients with hoarseness of voice	Bedside clinic	Skill assessment
EN4.42.4	Describe the clinical features in a patient presenting with hoarseness of voice	Bedside clinic	Skill assessment
EN4.42.5	Choose the correct investigations for a patient presenting with hoarseness of voice	Lecture, DOAP	Viva voce
EN4.42.6	Describe the principles of management of a patient with hoarseness of voice	Lecture, Bedside clinic	Written, Viva voce

EN4.43 Describe the clinical features, investigations and principles of management of Acute & Chronic Laryngitis

Domain – K

Level - KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.43.1	Describe the clinical features in a patient presenting with Acute Laryngitis	Lecture, Bedside clinic	Written, Viva voce
EN4.43.2	Choose the correct investigations in a patient presenting with Acute Laryngitis	Lecture, DOAP	Viva voce
EN4.43.3	Describe the principles of management of Acute Laryngitis	Lecture, Bedside clinic	Written, Viva voce
EN4.43.4	Describe the clinical features in a patient presenting with Chronic Laryngitis	Lecture, Bedside clinic	Written, Viva voce
EN4.43.5	Choose the correct investigations in a patient presenting with Chronic Laryngitis	Lecture, DOAP	Viva voce
EN4.43.6	Describe the principles of management of Chronic Laryngitis	Lecture, Bedside clinic	Written, Viva voce

EN4.44

Describe the clinical features, investigations and principles of management of benign lesions of the vocal cord

Domain – K

Level – KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.44.1	Enumerate the benign lesions of the vocal cord	Lecture ,Bedside clinic	Written, Viva voce
EN4.44.2	Describe the clinical features in a patient presenting with benign lesions of the vocal cord	Lecture ,Bedside clinic	Written, Viva voce
EN4.44.3	Choose the correct investigations for a patient presenting with benign lesions of the vocal cord	Lecture, DOAP	Viva voce
EN4.44.4	Describe the principles of management of benign lesions of the vocal cord	Lecture ,Bedside clinic	Written, Viva voce

EN4.45

Describe the clinical features, investigations and principles of management of Vocal cord palsy  
**Domain – K** **Level – KH**

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.45.1	Enumerate the causes of Vocal cord palsy	Lecture ,Bedside clinic	Written, Viva voce
EN4.45.2	Describe the clinical features in a patient presenting with Vocal cord palsy	Lecture ,Bedside clinic	Written, Viva voce
EN4.45.3	Choose the correct investigations for a patient presenting with Vocal cord palsy	Lecture, DOAP	Viva voce
EN4.45.4	Describe the principles of management of Vocal cord palsy	Lecture ,Bedside clinic	Written, Viva voce

EN4.46

Describe the clinical features, investigations and principles of management of Malignancy of the Larynx & Hypopharynx  
**Domain – K** **Level – KH**

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.46.1	Describe the clinical features in a patient presenting with Malignancy of the Larynx	Lecture ,Bedside clinic	Written, Viva voce
EN4.46.2	Choose the correct investigations for a patient presenting with Malignancy of the Larynx	Lecture, DOAP	Viva voce
EN4.46.3	Describe the principles of management of Malignancy of the Larynx	Lecture ,Bedside clinic	Written, Viva voce
EN4.46.4	Describe the clinical features in a patient presenting with Malignancy of the Hypopharynx	Lecture ,Bedside clinic	Written, Viva voce
EN4.46.4	Choose the correct investigations for a patient presenting with Malignancy of the Hypopharynx	Lecture, DOAP	Viva voce
EN4.46.4	Describe the principles of management of Malignancy of the Hypopharynx	Lecture ,Bedside clinic	Written, Viva voce

EN4.47  
Describe the clinical features,

investigations and principles of management of Stridor  
**Domain – K** **Level – KH**

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.47.1	Enumerate the causes of Stridor	Lecture ,Bedside clinic	Written, Viva voce
EN4.47.2	Describe the clinical features in a patient presenting with Stridor	Lecture ,Bedside clinic	Written, Viva voce
EN4.47.3	Choose the correct investigations for a patient presenting with Stridor	Lecture, DOAP	Viva voce
EN4.47.4	Describe the principles of management of Stridor	Lecture ,Bedside clinic	Written, Viva voce

EN4.48  
Elicit

document and present a correct history, demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of Airway Emergencies

Domain –S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.48.1	Enumerate the causes of Airway emergencies	Bedside clinic, DOAP	Viva voce
EN4.48.2	Elicit correct history in patients presenting with Airway emergencies	Bedside clinic	Skill assessment
EN4.48.3	Document and present correct history in patients with Airway emergencies	Bedside clinic	Skill assessment
EN4.48.4	Describe the clinical features in a patient presenting with Airway emergencies	Bedside clinic	Skill assessment
EN4.48.5	Choose the correct investigations for a patient presenting with Airway emergencies	DOAP	Viva voce
EN4.48.6	Describe the principles of management of Airway emergencies	Bedside clinic	Viva voce

EN4.49  
Elicit

document and present a correct history, demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of foreign bodies in the air & food passages

Domain –S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.49.1	Elicit correct history in patients presenting with foreign bodies in the air passages	Bedside clinic	Skill assessment
EN4.49.2	Document and present correct history in patients presenting with foreign bodies in the air passages	Bedside clinic	Skill assessment
EN4.49.3	Describe the clinical features in a patient presenting with foreign bodies in the air passages	Bedside clinic	Skill assessment
EN4.49.4	Choose the correct investigations in a patient presenting with foreign bodies in the air passages	DOAP	Viva voce
EN4.49.5	Describe the principles of management of foreign bodies in the air passages	Bedside clinic	Viva voce
EN4.49.6	Elicit correct history in patients presenting with foreign bodies in the food passages	Bedside clinic	Skill assessment
EN4.49.7	Document and present correct history in patients presenting with foreign bodies in the food passages	Bedside clinic	Skill assessment
EN4.49.8	Describe the clinical features in a patient presenting with foreign bodies in the food passages	Bedside clinic	Skill assessment
EN4.49.9	Choose the correct investigations in a patient presenting with foreign bodies in the food passages	DOAP	Viva voce
EN4.49.10	Describe the principles of management of foreign bodies in the food passages	Bedside clinic	Viva voce

EN4.50  
Observe and describe the

indications for and steps involved in tracheostomy

Domain – S

Level - KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.50.1	Enumerate the indications for Tracheostomy	Bedside clinics	Viva voce
EN4.50.3	Observe steps involved in Tracheostomy	DOAP - Clinical (OT), video demonstration	Viva voce

EN4.50.3	Describe the steps of Tracheostomy	DOAP - video demonstration	Viva voce
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EN4.51  
Observe

and describe the care of the patient with a tracheostomy

Domain – S

Level – KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.51.1	Observe steps involved in care of the patient with a tracheostomy	DOAP - Clinical (OT), video demonstration	Viva voce
EN4.51.2	Describe the steps involved in care of the patient with a tracheostomy	DOAP - video demonstration	Viva voce

EN4.52

Describe the Clinical features, Investigations and principles of management of diseases of Oesophagus

Domain – K

Level – KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.52.1	Enumerate the Diseases of Oesophagus	Lecture ,Bedside clinic	Written, Viva voce
EN4.52.2	Describe the clinical features in a patient presenting with Disease of Oesophagus	Lecture ,Bedside clinic	Written, Viva voce
EN4.52.3	Choose the correct investigations for a patient presenting with Disease of Oesophagus	Lecture, DOAP	Viva voce
EN4.52.4	Describe the principles of management of Diseases of Oesophagus	Lecture ,Bedside clinic	Written, Viva voce

EN4.53

Describe the clinical features, investigations and principles of management of HIV manifestations of the ENT (vertical integration- General Medicine)

Domain – K

Level – KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.53.1	Enumerate the HIV manifestations of the ENT	Lecture ,Bedside clinic	Written, Viva voce
EN4.53.2	Describe the clinical features in a patient presenting with HIV manifestations of the ENT	Lecture ,Bedside clinic	Written, Viva voce
EN4.53.3	Choose the correct investigations for a patient presenting with HIV manifestations of the ENT	Lecture, DOAP	Viva voce
EN4.53.4	Describe the principles of management of HIV manifestations of the ENT	Lecture ,Bedside clinic	Written, Viva voce

## Summary of course content, teaching and learning methods and student assessment for the undergraduate (MBBS) Curriculum in Otorhinolaryngology

### Teaching-Learning methods and Time allotted -Otorhinolaryngology

Lectures	Small group discussion	Self-directed learning	Total hours	Clinical postings
25 hours	40 hours	5 hours	70 hours	Two postings of 4 weeks each. First posting in II MBBS(15hours/week) and Second posting II MBBS Part I(18hours/week)

**Teaching-learning methods** shall be learner centric and shall predominantly include small group learning, interactive teaching methods and case-based learning. Didactic lectures not to exceed one-third of the total teaching time. The teaching learning activity focus should be on application of knowledge rather than acquisition of knowledge.

The curricular contents shall be vertically and horizontally **aligned and integrated** to the maximum extent possible to enhance learner's interest and eliminate redundancy and overlap. Acquisition and certification of skills shall be through experiences in patient care, diagnostic and skill laboratories.

The **clinical postings** in the second professional shall be 15 hours per week (3 hrs per day from Monday to Friday)

The clinical postings in the third professional part II shall be 18 hours per week (3 hrs per day from Monday to Saturday)

Newer T-L method like Learner-doctor method (Clinical clerkship) should be mandatorily implemented, from 1<sup>st</sup> clinical postings in Otorhinolaryngology itself. The goal of this type of T-L activity is to provide learners with experience in longitudinal patient care, being part of the health care team, and participate in hands-on care of patients in outpatient and inpatient setting. During the 1<sup>st</sup> clinical postings, the students are oriented to the working of the department. During the second clinical posting the students are allotted patients, whom they follow-up through their stay in the hospital, participating in that patients care including case work-up, following-up on investigations, presenting patient findings on rounds, observing surgeries if any till patient is discharged.

**AETCOM module.** The purpose is to help the students apply principles of bioethics, systems based care, apply empathy and other human values in patient care, communicate effectively with patients and relatives and to become a professional who exhibits all these values.

### Assessment

Eligibility to appear for University examinations is dependent on fulfilling criteria in two main areas – attendance and internal assessment marks

**Attendance**

Attendance requirements are 75% in theory and 80% in clinical postings for eligibility to appear for the examinations in Otorhinolaryngology.

75% attendance in AETCOM Module is required for eligibility to appear for final examination in 3<sup>rd</sup> professional year 3 part 1.

**Internal Assessment**

Formative and summative assessments should be carried out periodically. Log book of skill-based training shall be also maintained.

There shall be no less than three internal assessment examinations (Theory and Clinical) in Otorhinolaryngology. Learners must secure at least 50% marks of the total marks (combined in theory and clinical; not less than 40 % marks in theory and practical separately) assigned for internal assessment in Otorhinolaryngology in order to be eligible for appearing at the final University examination.

Learners must have completed the required certifiable competencies for that phase of training and Otorhinolaryngology logbookentry completed to be eligible for appearing at the final university examination.

**University examinations**

Third Professional Part I shall be held at end of third Professional part 1 of training (12 months) in the subjects of Ophthalmology, Otorhinolaryngology, Community Medicine and Forensic Medicine and Toxicology

**Marks allotted**

Otorhinolaryngology	Theory	Clinical examination
Total marks	100	100
	Long essay 2X10= 20	Two cases x40marks=80marks
	Short essay 8x5=40 marks	Viva voce 2x10=20marks
	Short answer question 10x3=30marks	
	MCQs 10x1=10marks	

The theory paper should include different types such as structured essays, short essays, Short Answers Questions (SAQ) and MCQs (Multiple Choice Questions). Marks for each part should be indicated separately.

A minimum of **80%** of the marks should be from the **must know** component of the curriculum. A maximum of **20%** can be from the **desirable to know** component. All **main essay questions** to be from the **must know component** of the curriculum.

**One main essay question** to be of the **modified variety** containing a clinical case scenario. At least 30% of questions should be clinical case scenario based. Questions to be constructed to test higher cognitive levels.

Clinical examinations will be conducted in the hospital wards. Clinical cases kept in the examination must be common conditions that the learner may encounter as a physician of first contact in the community. Emphasis should be on candidate’s capability to elicit history, demonstrate physical signs, write a case record, analyze the case and develop a management plan.

Viva/oral examination should assess approach to patient management, emergencies, and attitudinal, ethical and professional values. Candidate’s skill in interpretation of common investigative data, X-rays, identification of specimens, etc. is to be also assessed.

### Pass criteria

Internal Assessment: 50% combined in theory and practical (not less than 40% in each) for eligibility for appearing for University Examinations

University Examination: Mandatory 50% marks separately in theory and clinicals (clinicals = clinical + viva)

## Sample Otorhinolaryngology Question Paper Otorhinolaryngology Paper

Time: 3 hours

Marks: 100

Your answers should be specific to the questions asked.

Draw neat, labelled diagrams wherever necessary.

### Long essays (2 X 10 = 20 marks)

1. A 14 year old adolescent boy presents with left nasal obstructions and recurrent episodes of spontaneous, profuse and self limiting epistaxis. On examination pinkish mass was found in left nasal cavity along with fullness of left cheek
  - a) What is the most likely diagnosis?
  - b) Describe the etiopathogenesis of this condition?
  - c) Discuss the laboratory investigations for diagnosing the above condition.
  - d) Write a note on various modalities of treatment.

(1+3+2+4)
2. A 35 year old woman complaints of bilateral hearing loss for 5 years, which had worsened during her pregnancy 1 year back. She does not give any past history of ear discharge.
  - a) What is the most likely disease she is suffering from?
  - b) Discuss the etiopathogenesis & types of this disease?
  - c) Describe the investigations for confirming the diagnosis?
  - d) Discuss the treatment modalities along with their contraindications?

(1+3+3+3)

### Short essays (8x5=40marks)

3. A 38 year old female complains of fever, sore throat and pain during swallowing Since 3 days. On examination, the left tonsil is congested and enlarged and bulge in the soft palate on left side, and uvula pushed to the right.
  - a) What is the diagnosis of this condition?
  - b) What are the symptoms and signs of this condition?
  - c) How do you manage this patient?

(1+2+2)
4. Write a note on Graft materials for tympanoplasty.
5. Discuss Vocal rehabilitation following total laryngectomy.

6. Describe the Clinical features & management of acute Epiglottitis.
  7. Discuss the Causes & management of nasal septal perforation.
  8. Write a note on Corticosteroids in ENT.
  9. Discuss the Clinical features & management of Post Covid-19 mucormycosis -.
10. A 27 year old male patient who met with a road traffic accident was seen in the emergency room with complaint of clear watery nasal discharge.
- a) What are the bed side clinical tests to diagnose this condition?
  - b) What are the investigations that need to be done for this patient?
  - c) What is the treatment for this condition?
- (1+2+2)

**Short answer questions (10x3=30)**

11. Write a note on Siegel's speculum.
12. Enumerate three causes for Bell's palsy.
13. Write three Topodiagnostic tests for facial nerve palsy.
14. Constrictions of Oesophagus.
15. Write a note on Objective tests of hearing.
16. Blood supply of Adenoids.
17. Three causes for Referred Otalgia
18. Removal of Ear foreign body.
19. Stylalgia.
20. Informed consent for tracheostomy.

**MCQ's (10 x 1=10)**

21. (i) Cart wheel appearance of tympanic membrane is seen in
  - a) ASOM
  - b) Glomus tumor
  - c) OME
  - d) CSOM
- (ii) Cricothyroid muscle is supplied by :
  - a) External laryngeal nerve
  - b) Recurrent laryngeal nerve
  - c) Internal laryngeal nerve
  - d) Glossopharyngeal nerve
- (iii) Which of the following is known as gateway of tears

- a) Killian's dehiscence
  - b) Rathke's pouch
  - c) Waldeyer ring
  - d) Sinus of Morgagni
- (iv) Bony septal perforation is seen in :
- a) TB
  - b) Syphilis
  - c) Leprosy
  - d) Sarcoidosis
- (v) Which of the following is not the component of Gradenigotriad :
- a) Involvement of Vth and VIth cranial nerve
  - b) Persistent otorrhea
  - c) Palatal palsy
  - d) Retro- orbital pain
- (vi) Laryngocele arises from
- a) Anterior commissure
  - b) True cords
  - c) Saccule of ventricle
  - d) False cords
- (vii) Woodruff's plexus is located at :
- a) Posterior end of middle turbinate
  - b) Posterior end of inferior turbinate
  - c) Posterior end of superior turbinate
  - d) None of the above
- (viii) Steeple sign is seen in :
- a) Quinsy
  - b) Larngomalacia
  - c) Acute epiglottitis
  - d) Croup
- (ix) Grommet insertion with myringotomy is done at
- a) Antero-inferior quadrant
  - b) Postero- inferior quadrant
  - c) Antero superior quadrant
  - d) Postero superior quadrant
- (x) Caldwell view is done for :
- a) Sphenoid sinus
  - b) Ethmoid sinus
  - c) Maxillary sinus
  - d) Frontal sinus

## References:

1. Diseases of Ear, Nose & Throat. Mohan Bansal, 3<sup>rd</sup> Edition.
2. Diseases of Ear, Nose and Throat & Head and Neck Surgery. P L Dhingra, 8<sup>th</sup> Edition.

**Acknowledgement of contributors**

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Kodagu Institute of Medical Sciences, Madikeri.

# **RAJIV GANDHI UNIVERSITY OF HEALTH SCIENCES**

**BANGALORE, KARNATAKA**



**ENT LOGBOOK**

**For**

**MBBS PHASE II and III**

**As Per**

**Competency-Based Medical Education Curriculum**

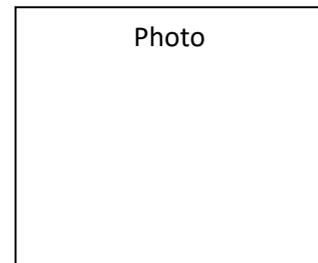
NAME OF THE CANDIDATE :

NAME OF THE COLLEGE :

UNIVERSITY REGISTER NUMBER:

ACADEMIC YEAR :

BASIC PROFORMA OF THE STUDENT



PARTICULARS OF THE STUDENT:

**Name of the student :**

**MBBS Batch :**

**Father's name :**

Mother's name :

Roll No :

RGUHS Reg No :

**Address :**

Contact number :

**Email-ID :**

Signature:.....

## INDEX

<b>Sl. No.</b>	<b>CONTENT</b>	<b>PAGE NO</b>
<b>01</b>	<b>BONAFIDE CERTIFICATE</b>	<b>04</b>
<b>02</b>	<b>GENERAL INFORMATION AND GUIDELINES FOR LOG BOOK</b>	<b>05 - 07</b>
<b>03</b>	<b>ATTENDANCE EXTRACT</b>	<b>08</b>
<b>04</b>	<b>INTERNAL ASSESSMENTS</b>	<b>09</b>
<b>05</b>	<b>FORMATIVE ASSESSMENT</b>	<b>10</b>
<b>06</b>	<b>COMPETENCY ASSESSMENT- CERTIFIABLE SKILLS</b>	<b>11 -18</b>
<b>07</b>	<b>CERTIFICATION OF SKILLS</b>	<b>19 – 20</b>
<b>08</b>	<b>COMPETENCY ASSESSMENT – NON CERTIFIABLE (SHOWS HOW) ACTIVITIES</b>	<b>21 - 23</b>

<b>09</b>	<b>AETCOM MODULES</b>	<b>24 – 26</b>
<b>10</b>	<b>SMALL GROUP DISCUSSION</b>	<b>27 – 30</b>
<b>11</b>	<b>SELF-DIRECTED LEARNING (SDL)</b>	<b>31</b>
<b>12</b>	<b>VERTICAL INTEGRATION</b>	<b>32</b>
<b>13</b>	<b>CONFERENCE/CME/WORKSHOPS ATTENDED</b>	<b>33</b>
<b>14</b>	<b>SCIENTIFIC PROJECT LIKE ICMR/PRESENTATIONS/ OUTREACH ACTIVITIES</b>	<b>34</b>
<b>15</b>	<b>ACHIVEMENTS / EXTRACURRICULAR ACTIVITIES</b>	<b>35</b>
<b>16</b>	<b>FINAL SUMMARY</b>	<b>36</b>

----- **INSTITUTE OF MEDICAL SCIENCES**

**DEPARTMENT OF ENT**

**BONAFIDE CERTIFICATE**

This is to certify that the candidate .....  
 Reg No..... has satisfactorily completed all requirements mentioned in  
 this Logbook for Phase III MBBS in ENT including related AETCOM modules as per  
 the Competency-Based Undergraduate Medical Education Curriculum, Graduate  
 Medical Regulation 2019 during the period from .....to ..... He/  
 She is eligible to appear for the summative (University) assessment.

**Faculty Incharge:**

**Head of Department:**

**Name:**

**Name:**

**Signature:**

**Signature:**

**Place:**

**Place:**

**Date:**

**Date:**

Draft

## PREFACE

This logbook is designed to follow and record your academic journey through the ENT course. The knowledge, skills and desirable attitudes you acquire in order to function as a primary care physician of first contact will be documented and certified in this logbook.

This logbook contains the **CBME competencies in ENT**. It includes the topics that would be covered during the course, records your participation in **Attitude, Ethics and Communication (AETCOM)** modules related to ENT.

This logbook consists of the **scheme and summary of formative assessments** in ENT, including the internal assessments and documents the **procedures that require certification and those that do not require certification but only need to be maintained in the logbook**.

This logbook also contains **additional-curricular activities** (Seminars, conference, workshops attended, scientific project presentations, outreach activities, etc.) and **extracurricular activities**.

We hope that this logbook serves as a guide and facilitates your progress through the year.

## **GENERAL INSTRUCTIONS**

- 6.** This logbook is a record of the academic/co-curricular activities in ENT of the designated student.
- 7.** The student is responsible for getting the entries in the logbook verified by the faculty in-charge regularly.
- 8.** Entries in the Logbook will reflect the activities undertaken in the department of ENT during your course.
- 9.** The student has to get this logbook verified by the mentor and the Head of the department before submitting the application of the University examination.
- 10.** All signatures must be done with a date stamp.

## SUGGESTED GUIDELINES FOR LOGBOOK:

### GENERAL INFORMATION:

- 1) The logbook is a record of the academic/co-curricular activities of the designated student, who would be responsible for maintaining his/her logbook.
- 2) The student is responsible for getting the entries in the logbook verified by the Faculty In-charge regularly.
- 3) Entries in the logbook will reflect the activities undertaken in the department & have to be scrutinized by the Head of the concerned department.
- 4) The logbook is a record of various activities by the student like:
  - a) Overall participation & performance
  - b) Attendance
  - c) Participation in sessions
  - d) Record of completion of pre-determined activities.
  - e) Acquisition of selected competencies
- 5) The logbook is the record of work done by the candidate in that department/specialty and should be verified by the college before submitting the application of the students for the University examination.

## SUMMARY OF ATTENDANCE

	Clinical Postings			Theory Classes			Signature of student	Signature of Faculty
	Total Conducted	Total Attended	Percentage	Total Conducted	Total Attended	Percentage		
Phase II								
Phase III Part I								
Attendance at the end of MBBS Phase III Part I								

## SUMMARY OF INTERNAL ASSESSMENT (IA)

Internal Assessment	Date of Assessment	Total marks		Marks scored		Signature of student	Signature of teacher
		Theory	Practical	Theory	Practical		
First							
Second							
Third							
Remedial							
Average IA							

**Note:** A candidate who has not secured requisite aggregate in the internal assessment may be subjected to remedial assessment by the institution. If he/ she successfully completes the same, he/she is eligible to appear for University Examination. Remedial assessment shall be completed before submitting the internal assessment marks online to the University.



Competency	Name of the Activity	Date Completed	Attempt at Activity First (F) Repeat (R) Remedial (RE)	Rating Below Expectation(B) MeetsExpectations (M) ExceedsExpectations(E)	Decision of Faculty Completed (C) Repeat (R) Remedial (RE)	Initial of the faculty and date	Feed Back Received Initial of the learner
EN 2.2	Demonstrate the correct use of headlamp in examination of Ear, Nose & Throat						
EN 2.3	Demonstrate the correct technique of examination of the ear including Otoscopy						
EN 2.4	Demonstrate the correct technique of performance and interpret tuning fork tests						

**Competency Assessment- Certifiable Skills**

Competency	Name of the Activity	Date Completed	Attempt at Activity First (F) Repeat (R) Remedial (RE)	Rating Below Expectation(B) Meets Expectations (M) Exceeds Expectations(E)	Decision of Faculty Completed (C) Repeat (R) Remedial (RE)	Initial of the faculty and date	Feed Back Received Initial of the learner
EN 2.5	Demonstrate the correct technique of Examination of the nose & paranasal sinuses including the use of nasal speculum						
EN 2.6	Demonstrate the correct technique of examining the throat including the use of a tongue depressor						
EN 2.7	Demonstrate the correct technique of examination of neck including elicitation of laryngeal crepitus						

**Competency Assessment- Certifiable Skills**

Draft

**Competency Assessment- Certifiable Skills**

Competency	Name of the Activity	Date Completed	Attempt at Activity First (F) Repeat (R) Remedial (RE)	Rating Below Expectation(B) Meets Expectations (M) Exceeds Expectations(E)	Decision of Faculty Completed (C) Repeat (R) Remedial (RE)	Initial of the faculty and date	Feed Back Received Initial of the learner
EN 3.1	Observe and describe the indications for and steps involved in the performance of Otomicroscopic examination in a simulated environment						
EN 3.2	Observe and describe the indications for and steps involved in the performance of diagnostic nasal endoscopy						
EN 4.9	Demonstration the correct technique for syringing wax from the ear in a simulated environment						

**Competency Assessment- Certifiable Skills**

Competency	Name of the Activity	Date Completed	Attempt at Activity First (F) Repeat (R) Remedial (RE)	Rating Below Expectation(B) Meets Expectations (M) Exceeds Expectations(E)	Decision of Faculty Completed (C) Repeat (R) Remedial (RE)	Initial of the faculty and date	Feed Back Received Initial of the learner
EN 4.10	Demonstration the correct technique the indications for and steps involved in myringotomy and myringoplasty						
EN 4.16	Observe and describe the indications for and steps involved in the performance of pure tone audiometry						
EN 4.17	Enumerate the indications and interpret the results if an audiogram						

Competency	Name of the Activity	Date Completed	Attempt at Activity First (F) Repeat (R) Remedial (RE)	Rating Below Expectation(B) Meets Expectations (M) Exceeds Expectations(E)	Decision of Faculty Completed (C) Repeat (R) Remedial (RE)	Initial of the faculty and date	Feed Back Received Initial of the learner
EN 4.24	Enumerate the indications observe and describe the steps in a septoplasty						
EN 4.40	Observe and describe the indications for and steps involved in a tonsillectomy / adenoidectomy						
EN 4.49	Elicit document and present a correct history, demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of foreign bodies in the air and food passages						

**Competency Assessment- Certifiable Skills**

Draft

**Competency Assessment- Certifiable Skills**

Competency	Name of the Activity	Date Completed	Attempt at Activity First (F) Repeat (R) Remedial (RE)	Rating Below Expectation(B) Meets Expectations (M) Exceeds Expectations(E)	Decision of Faculty Completed (C) Repeat (R) Remedial (RE)	Initial of the faculty and date	Feed Back Received Initial of the learner
EN 4.50	Observe and describe the indications for and steps involved in tracheostomy						
EN 4.51	Observe and describe the care of the patient with a tracheostomy						
PY 10.20	Demonstrate (i) hearing (ii) testing for smell and (iii) taste sensation in volunteer/simulated environment						

Competency	Name of the Activity	Date Completed	Attempt at Activity First (F) Repeat (R) Remedial (RE)	Rating Below Expectation(B) Meets Expectations (M) Exceeds Expectations(E)	Decision of Faculty Completed (C) Repeat (R) Remedial (RE)	Initial of the faculty and date	Feed Back Received Initial of the learner
PE 28.9	Elicit document and present age appropriate history of a child with upper respiratory problem including stridor						
PE 28.10	Perform otoscopic examination of the ear						
PE 28.11	Perform throat examination using tongue depressor						

**Competency Assessment- Certifiable Skills**

Draft

**Competency Assessment- Certifiable Skills**

Competency	Name of the Activity	Date Completed	Attempt at Activity First (F) Repeat (R) Remedial (RE)	Rating Below Expectation(B) Meets Expectations (M) Exceeds Expectations(E)	Decision of Faculty Completed (C) Repeat (R) Remedial (RE)	Initial of the faculty and date	Feed Back Received Initial of the learner
PE 28.12	Perform examination of the nose						
PE 28.17	Interpret X-ray of the paranasal sinuses and mastoids; and/or use written report in case of management interpret CXR in foreign body aspiration and lower respiratory tract infection, understand the significance of thymic shadow in paediatric chest X-rays						

## CERTIFICATIONS OF SKILLS

<b>Sl. No.</b>	<b>Competency No.</b>	<b>Topic</b>	<b>Certification Date</b>	<b>Signature of Faculty</b>
<b>01</b>	<b>EN 2.2</b>	Demonstrate the correct use of headlamp in examination of Ear, Nose & Throat		
<b>02</b>	<b>EN 2.3</b>	Demonstrate the correct technique of examination of the ear including Otoscopy		
<b>03</b>	<b>EN 2.4</b>	Demonstrate the correct technique of performance and interpret tuning fork tests		
<b>04</b>	<b>EN 2.5</b>	Demonstrate the correct technique of Examination of the nose & paranasal sinuses including the use of nasal speculum		
<b>05</b>	<b>EN 2.6</b>	Demonstrate the correct technique of examining the throat including the use of a tongue depressor		
<b>06</b>	<b>EN 2.7</b>	Demonstrate the correct technique of examination of neck including elicitation of laryngeal crepitus		
<b>07</b>	<b>EN 3.1</b>	Observe and describe the indications for and steps involved in the performance of Otomicroscopic examination in a simulated environment		
<b>08</b>	<b>EN 3.2</b>	Observe and describe the indications for and steps involved in the performance of diagnostic nasal endoscopy		
<b>09</b>	<b>EN 4.9</b>	Demonstration the correct technique for syringing wax from the ear in a simulated environment		
<b>10</b>	<b>EN 4.10</b>	Demonstration the correct technique the indications for and steps involved in myringotomy and myringoplasty		
<b>11</b>	<b>EN 4.16</b>	Observe and describe the indications for and steps involved in the performance of pure tone audiometry		
<b>12</b>	<b>EN 4.17</b>	Enumerate the indications and interpret the results if an audiogram		
<b>13</b>	<b>EN 4.24</b>	Enumerate the indications observe and describe the steps in a septoplasty		
<b>14</b>	<b>EN 4.40</b>	Observe and describe the indications for and steps involved in a tonsillectomy / adenoidectomy		
<b>15</b>	<b>EN 4.49</b>	Elicit document and present a correct history, demonstrate and describe the clinical features,		

		choose the correct investigations and describe the principles of management of foreign bodies in the air and food passages		
<b>16</b>	<b>EN 4.50</b>	Observe and describe the indications for and steps involved in tracheostomy		
<b>17</b>	<b>EN 4.51</b>	Observe and describe the care of the patient with a tracheostomy		
<b>18</b>	<b>PY 10.20</b>	Demonstrate (i) hearing (ii) testing for smell and (iii) taste sensation in volunteer/simulated environment		
<b>19</b>	<b>PE 28.9</b>	Elicit document and [resent age appropriate history of a child with upper respiratory problem including stridor		
<b>20</b>	<b>PE 28.10</b>	Perform otoscopic examination of the ear		
<b>21</b>	<b>PE 28.11</b>	Perform throat examination using tongue depressor		
<b>22</b>	<b>PE 28.12</b>	Perform examination of nose		
<b>23</b>	<b>PE 28.17</b>	Interpret X-ray of the paranasal sinuses and mastoids; and/or use written report in case of management. Interpret CXR in foreign body aspiration and lower respiratory tract infection, understand the significance of thymic shadow in paediatric chest X-rays		






- 1. Duplicate of this template shall be made depending on the activities planned
- 2. Activities may be skill sessions, seminars, tutorials, projects, etc.

**NON-CERTIFIABLE (SHOWS HOW) ACTIVITIES**

#Competency	Name of Activity	Date completed	Rating Below Expectations(C) Meets Expectations(B) Exceeds Expectations(A)	Decision of faculty Completed Repeat Remedial	Initial of faculty with date	Feedback Received  Initial of learner


**1. Duplicate of this template shall be made depending on the activities planned**

**2. Activities may be skill sessions, seminars, tutorials, projects, etc.**

# FORMAT OF AETCOM MODULES REPORT

**AETCOM Module Number:**

**Date:**

**Topic:**

**Competencies:**

- 1.
- 2.
- 3.

**Reflections (100 words):**

4. What did you learn from this AETCOM session based on the objectives?
5. What change did this session make in your learning?
6. How will you apply this knowledge in future?

Remarks by Facilitator

Signature of facilitator with date

Draft

**AETCOM Module Number:**

Date:

**Topic:**

**Competencies:**

- 1.
- 2.
- 3.

**Reflections (100 words):**

4. What did you learn from this AETCOM session based on the objectives?
5. What change did this session make in your learning?
6. How will you apply this knowledge in future?

Remarks by Facilitator

Signature of facilitator with date

## RUBRIC FOR ASSESSING PROFESSIONALISM

	Areas assessed				Total (20 marks)	Signature of student	Signature of teacher
	Regular for classes (5marks)	Regular in completing assignments (5marks)	Behaviour in class and discipline (5marks)	Dress code and presentation (5marks)			
At the end of 1 <sup>st</sup> IA							
At the end of 2nd IA							
At the end of 3rd IA							
Average score at the end of the year							

**Note:** Parameters will be assessed at the Departmental level to consider eligibility (Minimum of 50% at the end of the year) of the candidate to appear for the university examination. Not considered for internal assessment marks.








The small group discussions will be scored based on the following criteria. Marks to be given

Score	Criteria for assessment
5	Is a proactive participant showing a balance between listening, initiating, and focusing on discussion. Displays a proactive use of the whole range of discussion, skills to keep discussion going and to involve everyone in the group. Understands the purpose of the discussion and keeps the discussion focused and on topic. Applies skills with confidence, showing leadership and sensitivity.
4	Is an active participant showing a balance between listening, initiating, and focusing on discussion. Demonstrates all the elements of discussion skills but uses them less frequently and with less confidence than the above level. Keeps the discussion going but more as a supporter than a leader. Tries to involve everyone in the group. Demonstrates many skills but lacks the confidence to pursue them so that the group takes longer than necessary to reach consensus. Demonstrates a positive approach but is more focused on getting done than on having a positive discussion.
3	Is an active listener but defers easily to others and lacks confidence to pursue personal point of view even when it is right. Participates but doesn't use skills such as summarizing and clarifying often enough to show confidence. Limits discussion skills to asking questions, summarizing, and staying on topic. Lacks balanced between discussion and analytical skills. Either displays good analysis skills and poor discussion skills or good discussion skills and poor analysis skills.
2	Is an active listener but defers easily to others and tends not to pursue personal point of view, lacking confidence. Limits discussion skills to asking questions, summarizing and staying on topic. Rarely demonstrates analysis skills because doesn't understand the purpose of the discussion, and as a result, offers little evidence to support any point of view.

<b>1</b>	Demonstrates no participation or effort. Participates only when prompted by the teacher. Only responds to others and initiates nothing. Provides limited responses that are often off topic. Participates minimally so that it is impossible to assess / analyze skills or understanding of the issues.
----------	---

### **SELF-DIRECTED LEARNING (SDL)- 5 hours**

Sl no.	Date	Topic of SDL	Feedback	Signature of faculty/mentor
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

--	--	--	--	--

**VERTICAL INTEGRATION**

<b>SINo</b>	<b>Date</b>	<b>Topic</b>	<b>Attendance</b>	<b>Signature of faculty</b>


**CONFERENCE/CME/WORKSHOP ATTENDED**

<b>SL NO</b>	<b>DATE</b>	<b>PARTICULARS</b>	<b>REMARKS IF ANY</b>	<b>SIGNATURE OF FACULTY</b>


**SCIENTIFIC PROJECT PRESENTATIONS/REPORTS/OUTREACH ACTIVITIES**

<b>SL NO</b>	<b>DATE</b>	<b>PARTICULARS</b>	<b>SIGNATURE OF STAFF</b>

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Draft

**EXTRACURRICULAR ACTIVITIES**

<b>Sl no</b>	<b>Date</b>	<b>Particulars</b>	<b>Signature of the faculty</b>


### ACHIEVEMENTS/AWARDS

Sl no	Date	Particulars	Signature of the faculty

### FINAL SUMMARY

Sl no.	Description	Dates		Attendance in percentage	Status *	Signature of the teacher with date
		From	To			

1	Certifiable skills					
2	AETCOM Modules					
3	Internal assessment Marks					

Signature of Head of department

Date:

\* Status: Complete/Incomplete: For skills and AETCOM modules  
 Eligible/Ineligible: For Internal marks