



MGM INSTITUTE OF HEALTH SCIENCES

(Deemed to be University u/s 3 of UGC Act, 1956)

Grade 'A' Accredited by NAAC

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COMPETENCY BASED MEDICAL EDUCATION (CBME)

(with effect from 2021-2022 batch onwards)

Curriculum for Doctor of Medicine (MD) Emergency Medicine

Amended as per AC- 51/2025, Dated 29/04/2025

Amended History

1. Approved as per BOM– 43/2015, Dated 06/11/2015.
2. Amended as per BOM- 45/2016, [Resolution No.3.3 (a)], [Resolution No.3.4 (d)], Dated 24/01/2016.
3. Amended as per BOM- 46/2016, [Resolution No. 1.v], [Resolution No. 5.9(b)]; Dated 11/08/2016.
4. Amended as per BOM- 48/2017, [Resolution No. 5.25]; Dated 24/01/2017.
- 5 . Amended as per BOM-51/2017, [Resolution No. 1.3.7.11], [Resolution No.1.3.23]; Dated 28/08/2017.
6. Amended as per BOM-55/2018, [Resolution No. 4.13], [Resolution No. 4.5.4.2], Dated 27/11/2018.
7. Amended as per BOM-57/2019, [Resolution No. 3.1.3.1], [Resolution No. 3.1.3.6], [Resolution No. 3.1.3.10], [Resolution No. 3.1.4.2], Dated 26/04/2019.
8. Amended as per AC- 49/2024, (Resolution No. 4.27], Dated 25/04/2024.
9. Amended as per AC- 51/2025, [Resolution No. 4.32,(Annexure- 54A, 54B, 54C & 54D) Dated 29/04/2025.



MGM INSTITUTE OF HEALTH SCIENCES

KAMOTHE MUMBAI -410209

CURRICULUM

FOR

POST GRADUATE DEGREE COURSE

IN EMERGENCY MEDICINE

M.D. (EM)

CURRICULUM FOR POST GRAUDATE DEGREE COURSE IN EMERGENCY MEDICINE,M.D.(EM)

The underlying philosophy of the residency is that optimal learning comes first and foremost by evaluating and treating patients. This clinical experience is strongly supplemented by formalized didactics and case-directed readings. The MGM Emergency Medicine Residency realizes these goals and philosophy through a comprehensive mixture of clinical exposure (both in and out of the ED) and instructive lectures. Training is provided in the administration of emergency departments and Emergency Medical Services systems

1. Goal :

- ❖ To educate the residents in the diagnosis, treatment and disposition of patients with acute illness and injury.
- ❖ To provide the residents with the skills to analyze the medical literature and perform original research.
- ❖ To incorporate the residents into the administrative, emergency medical services and legal activities of the emergency department.
- ❖ To involve the residents in the training of medical students, and emergency nursing and paramedical personnel.
- ❖ To develop leaders in the field of Emergency Medicine

Objectives:

- ❖ Recognize, evaluate, and treat all patients with life or limb threatening conditions presenting to the ED. This includes the ability to simultaneously manage multiple patients as well as direct or supervise resuscitation efforts
- ❖ Make a timely and appropriate disposition for all patients presenting to the ED. This includes the ability to effectively interact with the patients, family members, and consulting or private physicians.
- ❖ Manage and direct mass casualty situations and participate in disaster planning.
- ❖ Develop teaching skills suitable to disseminate information to all levels of care providers, particularly prehospital personnel.
- ❖ Interact effectively with prehospital care providers and function as a Base Station physician.
- ❖ Effectively perform administrative tasks necessary to manage an emergency medicine service including scheduling, risk management, continuous quality improvement, and the handling of patient complaints.
- ❖ Develop competence in evaluating the medical literature and understanding research methodology.
- ❖ Develop a system for life-long learning to meet your professional goals after residency.

2. Course Description

Post Graduate degree course in M.D. (EM)
MD (Emergency Medicine)
Duration : 3 Yrs.

Eligibility : MBBS and completion of 1 year. Compulsory rotation housemanship /internship
: Entry after PG CET MGMIHS

3. Rotations: Intramural and extramural

MD (Emergency Medicine)

Adult Emergency Medicine 18 months and Paediatrics 1 month.

Critical care (MICU, PICU, NICU, SICU) 6 months.

Rest in rotation in allied including –

General Medicine -1 months,

ED based trauma Surgery -1 month,

ED based orthopaedics-1 month,

OB/Gyn-1 month,

Anaesthesia-1 month,

Ophthalmology-2 weeks,

Skin-2 weeks

ENT-2 weeks,

ED based Psychiatry-2 weeks,

Radiology -2 weeks

Forensic Medicine-2 weeks,

Community medicine- 2 Weeks

Respiratory medicine-1 month

Elective-6 weeks

First year rotation plan : Emergency medicine 6 months, Anesthesia 1 Month, Respiratory medicine 1 Month, General medicine 1 Month, OBGY 1 month, Forensic medicine 2 Weeks, ENT 2 weeks, Radiology and Ophthalmology 2 Weeks Each.

Second year rotation plan: Emergency medicine 6 Months, Critical care (MICU,SICU,NICU,PICU) total duration of 6 months.

Third year rotation plan: Emergency medicine 6 months, ED based General Surgery 1 month, Orthopedics 1 Months, Pediatrics 1 month, Dermatology 2 weeks, Psychiatry 2 weeks and elective for 6 weeks duration.

During the month of MAY all PGs is begin their residency experience in the emergency department. At the beginning of the month there are shifts in the emergency department where the residents work with nursing staff and other ancillary personnel in their roles to learn how the ED functions as a team. Later in the month residents begin their physician roles with clinical shifts in the EMD.

In medical institutions having superspeciality departments, the students should be uniformly rotated through various super specialties namely Cardiology, Neurology, Nephrology, Trauma Surgery, Neurosurgery, etc. for minimum of 2 weeks each. The duration of training in the above mentioned super specialties shall be deducted out of the training period allocated for the allied broad specialties viz. General Medicine/General Surgery respectively.

4. Syllabus

i) Resuscitation, Prehospital Care & Disaster Preparedness

- Sudden cardiac death

- Basic cardiopulmonary Resuscitation adult / Neonates / Children / Pregnant

- patients
 - Acid base, disorder, blood gases, cardiac rhythm disturbances, fluid & blood resuscitation
 - Pharmacology of arrhythmics & vasopressor agents
 - Approach to a patient of shock, Anaphylaxis acute allergic reaction, Angioedema
 - Emergency medical services
 - Disaster preparedness & response, Natural disaster, Bomb blast & crush casualties
 - Bioterrorism recognition and response – implication for the emergency clinicians
 - Radiation injuries
- ii) Emergency wound management
 - Evaluation and wound preparation and postrepair wound care
 - Methods of wound closure
 - Laceration of face scalp, leg & foot
 - Injuries to arm hands, fingertips & nail
 - Soft tissue foreign body
 - Puncture wounds & bites
- iii) Analgesia Anaesthesia and procedural sedation
- iv) Resuscitative procedures
- v) Cardiovascular disease
 - Evaluation of chest pain & management
 - Acute coronary syndrome
 - Cardiogenic shock
 - Syncope, CHF
 - Valvular Emergencies
 - Cardiomyopathies and pericardial effusion
 - Systemic & pulmonary embolism
 - Dissection of aorta & aneurysms
 - Occlusive arterial disease
- vi) Pulmonary Emergencies
 - Respiratory distress / URT I / Acute bronchitis
 - Hemoptysis / Tuberculosis
 - CAP aspiration pneumonia, Noninfections Pulmonary infiltrates
 - Spontaneous / iatrogenic pneumothorax
 - Empyema & lung abscess
 - Asthma / COPD
- vii) Gastrointestinal emergencies
 - Pain in Abdomen, Nausea, Vomiting / Diarrhea, constipation
 - GERD, upper & lower GI bleeding, PUD & Gastritis
 - Pancreatitis, Cholecystitis, Diverticulitis, Appendicitis
 - Hepatic disorders
 - Bowel obstruction, volvulus, hernias
 - Anorectal disorders
 - Complication & general surgical procedures
- viii) Renal & genitourinary disorders
 - ARF, emergencies in RF & dialysis patients
 - Acute urinary retention / Male genital problems, UTI hematuria
 - Rhabdomyolysis : Urologic stone disease
 - Complication of urologic procedures and devices

ix) OBGYN

- Vaginal bleeding – Abdominal and pelvic pain in non pregnant patient
- Normal pregnancy and co-morbid disease in pregnancy / emergency delivery
- Ectopic pregnancy and emergencies in the 1st 20 wks & post partum period.
- PID / vulvovaginitis, breast disorders
- Complications of gynecologic procedures

x) Paediatrics

- Emergencies care of children, neonatal emergencies and common Neonatal problems
- SIDS, fever and bacterial illness
- Ear, Mastoid, eye problems in infants & children.
- Nose, mouth, sinuses, Throat, neck masses in children
- Stridor, drooling, wheezing, vomiting, diarrhea dehydration in children
- Paediatric heart disease – congenital and acquired urologic & gynaecologic problems in infants & children
- Renal emergencies
- Headaches, Scizures, atterred mental status, Minor head injury in infants and children
- Musculoskeletal disorder in children
- Oncology & hematology emergencies in children sick cell
- Flypoglycaemia & metabolic emergencies in infants & children
- Syncope & sudden death in children
- Fluid, Electrolyte therapy in infants & children
- Behavioral & psychiatric disorder in children & infants

xi) Infectious disease

- STDs, HIV infection & AIDS, soft tissue infections
- Toxic shock syndrome & septic shock, disseminated viral infections
- Infective endocarditis teannus, Rabbies, Malaria, Food & waterbome, zoonotic diseases
- Occupational exposures, infection control & standard precautions
- Pharmacology Antimicrobials, Antifungals & Antivirals

xii) Toxicology and environmental injuries

xiii) Endocrine, hematologic and oncologic emergencies

xiv) Eyes, Ears, Nose, Throat and oral surgery & skin disorder

xv) Trauma & injuries to the bones and joints

- Trauma in adults, Paediatric geriatric & pregnant patients
- Trauma to face, neck, spine & spinal cord, abdominal cardiac, pulmonary, genitourinary & penetrating trauma
- Wound ballistics and forensics
- Initial evaluation and management of orthopaedics injuries
- Compartment syndromes
- Orthopaedics devices and reconstruction

xvi) Muskuloskeletal disorder

xvii) Psychosocial disorders, Abuse & assault

- Behavioural disorders – emergency assessment
- Child abuse & neglect
- Female & male sexual assault
- Intimate partner violence an abuse

- Abuse of elderly & impaired
- Violent patient
- xviii) Special situations
 - Infections drug users
 - The transplant patient
 - Grief, death and dying DNR/DNI orders. Delivering effect death notification in emergency department
 - Legal issues in emergency department
 - Management of prisoners attending the emergency department
- xix) Principles of imaging
 - Emergency ultrasonography, MRI, CT. Noninvasive myocardial imaging

5. List of skills :

- a) Elicitation of history from parents, guardians, relatives and patients regarding complaint, previous disease and therapy, development , diet, immunization, social and educational and economics background
- b) Thorough physical examination with due regards to bedside manners and skin
- c) Provide advice to parents and children regarding health and hygienic practices with a view to prevent disease, disorders, injuries, accidents and poisoning.
- d) Develop a diagnostic approach to any problem in adult, paediatric, geriatrics patients
- e) Develop communication skills between doctors & patients
 - To undertake relevant investigations for diagnostic and prognostic evaluation talking into considerations the risks, benefits & costs involved.
 - To convince patients to guardians regarding undertaking investigations and obtain their co-operation & valid informed legal consent
- f) Interpretation of lab reports ECG, EEG, USG counseling relative and parents
- g) Performance of diagnostics and therapeutic procedures
 - Venepuncture
 - Intravenous, intraosseous access for administration of drug and intravenous fluids
 - Lumbar puncture for cerebrospinal fluid evaluation
 - Ascitic tap for diagnostic & therapeutic purpose
 - Arterial blood collection for analysis of blood gases
 - Obtaining central venous access
 - Wound repair and post repair care
 - Non invasive airway management
 - Paediatrics airway management
 - Tracheal intubation and mechanical ventilation
 - Surgical airway management (percutaneous tracheostomy & cricothyrotomy)
 - Hemodynamic monitoring with arterial cannulation
 - Cardiac pacing
 - Defibrillation and cardioversion
 - Pericardiocentesis, Thoracocentesis
 - Slit lamp / nasal packing
 - Arthrocentesis, umbilical vein catheterisation
 - Venous cut down
 - Bedside ultrasound in emergency
 - Fracture reduction of splinting, jt reduction
 - Nasogastric aspiration, orogastric lavage, paracentesis, oesophageal balloon

- tamponade, Anoscopy, Hernia reduction, transabdominal feeding tube
- Normal Delivery
- Nursemaids elbow reduction
- Suprapubic catheterisation
- Bone marrow aspiration & biopsy – Tube thoracostomy, FB removal

6. Teaching / learning activities and opportunities

- Management of in & out patients
- Presentation of cases on clinical rounds
- Topic/Case presentation : once a week
- Mortality meeting review : once a month.
- Journal club article view : once a week.
- Simulation exercises
- Guest speakers from senior consultants : once in three months
- Lectures on the modular topic of the month – classroom and online :once a week
- Evidence based medicine
- Grand rounds : once a week
- Follow up cases discussion on patients admitted through the emergency department : once a week.
- Procedure and skill seminar
- Presentation by the residents
- Multidisciplinary case discussions
- Conferences
- Tutorials : once a week
- Seminars : once a week
- CME session, paper presentations
- Participation in workshops
- Teaching undergraduate students and paramedical staff
- Use & maintenance of biomedical equipments and gadgets
- Group discussion
- Assisting and performing diagnostic and therapeutic procedures

7. Research

Student will be encourage to initiate and conduct research projects pertinent to EM to write scholarly article that is worthy of publication. They will be expected to work on research project with the faculty and they will be required to submit one paper to a journal for potential publication.

A candidate registered for MD (EM) will be submitting a dissertation to the university. This will be a pre-requisite for appearing for MD examination. The dissertation will be done under the guidance and full satisfaction of the postgraduate teacher under whom the candidate is registered.

8. Fundamentals of programme

- a) Lectures on the modular topic of the month
- b) Evidence based medicine
- c) Journal club – for discussion and review of articles
- d) Grand rounds and guest speakers
- e) Mortality and morbidity conferences

- f) Follow up case discussions on patients admitted through the emergency department
- g) Procedures and skills seminar
- h) Presentations by the residents

9). Maintenance of LOG BOOK

The candidate must maintain a log book for various procedural skills and procedures, post graduate activities and patients managed in emergency and various allied departments.

10). Internal and external examiners for final examination

As in other specialties, final examination for postgraduates in EM should also have four examiners (two internal and two external). Internal examiners should be only those teachers who are working exclusively in the Department of EM. The Convener for the examination should not be below the rank of a Professor while the second examiner should not be below the rank of Associate Professor/Reader. External examiners should be appointed as per the MCI norms. Both the external examiners should not be below the rank of Professor/Additional Professor and should be only from the Departments of EM of various medical colleges running MCI-recognized postgraduate degree course in EM.

11). Theory examination

As with other specialties, the final examination should have four question papers (3 hours each) as given below

Paper 1	Basic sciences as relevant to Emergency Medicine (Applied Anatomy, Clinical Physiology, Clinical Biochemistry, Clinical Pharmacology, Clinical Microbiology, Clinical Pathology, Research Methodology, Biostatistics)
Paper 2	Emergency Medicine (Medicine, Dermatology, Psychiatry)
Paper 3	Emergency Medicine (Surgery, Trauma, Orthopedics, Obstetrics, Anesthesia, Eye, ENT, Dental, Radiology)
Paper 4	Emergency Medicine including recent advances (Pediatrics, Principles of Pre-hospital Care, Disaster Medicine, Forensic Medicine)

12). Composition of theory assessment

The theory papers should be based on as per the MGMIHS rule.

13). Practical examination

Not more than 4 candidates should be examined in one day. The practical should have following composition:

1. Case work up (cases to be taken from ED who are under observation and from those who are not seriously ill and are admitted to a department)

- *Short cases:* Assessment should be based only on short cases. At least 10 cases should be given to each postgraduate student with distribution of cases as follows: two from medicine, one from surgery, one from trauma, one from pediatrics, and one each from dermatology, psychiatry, ophthalmology (trauma/fundus), ENT (ear, nose or throat acute problem) and obstetrics and gynecology.
2. Procedural skills: Ten procedures need to be demonstrated on simulators or theoretically described on live persons by the candidate (if simulator is not available): (Example: Please describe the procedure for chest tube insertion.). The skills should include:
 - Ultrasound (at least two)
 - Cardiac resuscitation in adults, children and neonates
 - Trauma resuscitation
 - Other procedures
 3. Spotting: Twenty spotters should be given and these should include X-rays, ECG, CT/MRI imaging, instruments, blood gas and acid-base reports, ultrasound, clinical photographs.
 4. Objective Structured Clinical Examination (OSCE): Two cases (one single and one multiple patient encounters) should be given to test the candidates.
 5. Viva voce: Only questions relevant to EM should be asked in viva voce

14). EMERGENCY MEDICINE CURRICULUM FOR MBBS COURSE

The rotation in EM should be for one month followed by assessment. The student should do clinical shifts in the EM department during this rotation. He/she should attend all academic activities of the department, namely journal club, clinical presentations, seminars, etc. held in the department. It is recommended that the medical students learn in detail all fundamentals of resuscitation and also do various procedures in the ED under supervision of teachers and/or senior residents. A log book needs to be maintained where in the student should record all activities he or she has done during the rotation in EM.

- History, clinical examination, documentation and critical difference in emergency medicine
- High risk emergency medicine
- Avoiding common medical error
- Risk reduction to enhance patient safety
- Resuscitation
- ECG
- Basics of ultrasound
- Common X rays, CT scans and MRI images
- Approach to chest pain, shortness of breath, altered sensorium
- Management of pain anywhere in the body
- Approach to bleeding from anywhere in the body
- Medico- Legal issues with respect to emergency Patient
- Dermatological manifestation in emergency medicine
- Approach to poisonings.

15). Teachers eligibility qualifications for the department of emergency medicine

As per MCI Regulations, the minimum requirement of teachers for broad specialties or superspecialties shall be three full time faculty members belonging to the concerned disciplines of whom one shall be a Professor, one Associate Professor/Reader, and one Assistant Professor/Lecturer possessing requisite qualification and teaching experience prescribed by the MCI.

Since EM is not a well-established specialty in India and only a few colleges have this specialty, it may not be possible to get EM-qualified person for the faculty job during the initial few years. As per the MCI Regulations, for the Teachers Eligibility Qualifications in the department of EM, basic qualification should be MD/MS (or equivalent) in EM, general medicine, general surgery, anesthesia, orthopedics, or pulmonary medicine. Therefore, the faculty from other departments who are interested in EM may be asked to shift full time and permanently to EM and should not be shifted back to the parent department. This arrangement of selection from other specialties should continue till adequate EM-trained physicians become available in India. MCI has made provision for this for the next 10 years. The teachers' eligibility criteria may be reviewed after 10 years of existence of EM. Such selection should be based on open competition where faculty from other hospitals can also be considered for these posts.

In the current MCI Regulations, there is a need for 2-years training in EM before one can be considered for teaching posts in the department of EM; however since EM is not a well-established specialty in India, it may not be possible to get teachers having specific experience in the field of EM, especially at Professor and Associate Professor levels during the initial few years. The ACEE-India therefore proposes that the requirement of 2-year training in EM may be deleted; however, the teachers must fulfil the requirement of length of teaching experience in the parent specialty as specified by the MCI for the posts of Professor and Associate Professor/Reader respectively. During selection procedure of faculty, the ACEE-India is of strong view that physicians with training in EM like Fellowship of Academic College of Emergency Experts in India (FACEE) should be given preference as this fellowship is given after 1-year long program in which the physician has to become well versed with the whole body of knowledge of EM as well as acquire skills in various procedures. This fellowship can be achieved while one is working in his own discipline.

If teachers qualified in EM are not available, it should be ensured that at least one teacher should be from the specialty of General Medicine and the other one from the specialty of General Surgery. The third teacher can be from any one of the remaining specialties already approved by the MCI viz. Anesthesia, Pulmonary Medicine, or Orthopedics. The posts should be widely advertised so that the department has faculty from different specialties and not from a single or two specialties.

It has been observed that in many departments currently running MD course in EM, the existing teachers continue to work in their parent departments or in the Critical Care Units (CCUs) of the hospital, thus compromising the teaching facilities and patient care in the Department of EM. ACEE-India strongly feels that MCI must ensure that various medical institutions running MD course in EM must abstain from this practice and ensure that the teachers appointed in the Department of EM must be available on full time basis and should not be involved in the teaching/patient care activities of the parent departments.

16). List of books/journals relevant to Emergency Medicine

The list of the books is given below in the table attached.

17). Equipments

All the ICU/HDU beds in department of EM should have central oxygen and suction facility, bedside vital sign monitors (one per bed), ventilators (one per two beds), infusion pumps (two per bed), defibrillator with external pacer (one), and nebulizers (one per three beds). Other beds should also have central oxygen and suction facility, bedside vital sign monitors (one per seven beds), ventilators (one per seven beds), infusion pumps (two per seven beds) and nebulizers (one per seven beds). In addition, the department should have one portable ultrasound and echocardiography machine dedicated to EM.

The hospital should have in-house computed tomography (CT) scan with at least 10 scans performed per day. Department of EM should have a point-of-care (POC) laboratory for quantitative tests [arterial blood gas (ABG), serum electrolytes, cardiac enzymes, etc]. Facilities for analysis of body fluids and cultures should be available in the hospital round-the-clock.

List of equipment which should be available in the Department of EM.is given below.Excellent simulators and mannequins should be available for training. Availability of Skills Laboratory for training is not mandated at present; however ACEE-India emphasizes its requirement for Department of EM. Establishment of Skills Laboratory should entitle the institution for higher gradation in accreditation.

Central Library

Books

Peter Rosen's Textbook on Emergency Medicine
Tintinalli's Emergency Medicine
Goldfrank's Toxicologic Emergencies

Journals

American Journal of Emergency Medicine
Annals of Emergency Medicine
Clinical Toxicology
European Journal of Emergency Medicine
Human and Experimental Toxicology
International Journal of Critical Illness and Injury Science
Journal of Emergencies, Trauma and Shock
Journal of Emergency Medicine
Journal of Neurotrauma
Journal of Trauma and Acute Care Surgery
Shock

Departmental Library: Total 40 (including two computers having facilities for e-books and e-journals)

Books (latest editions)

Tintinalli's Emergency Medicine
Goldfrank's Toxicologic Emergencies
Clinical Pharmacology
Cardiology (relevant to EM)
Nephrology (relevant to EM)
Neurology (relevant to EM)
Gastroenterology (relevant to EM)
Endocrinology (relevant to EM)
Surgery (relevant to EM)
Pediatrics (relevant to EM)
Orthopedics (relevant to EM)
Obstetrics and Gynecology (relevant to EM)
Forensic Medicine
Internal Medicine (relevant to EM)
Dermatology (relevant to EM)
Psychiatry (relevant to EM)
Trauma
Anatomy
Physiology
Microbiology
Biostatistics

Journals

Annals of Emergency Medicine
Clinical Toxicology
International Journal of Critical Illness and Injury Science
Journal of Emergencies, Trauma and Shock

Essential

ICU beds – Six
Central oxygen and suction points – Twenty
Cardiac monitors (with ETCO₂ facility) – Eight
Defibrillator with external pacer – One
ECG machine – One
ICU ventilators – Three
Other ventilators – Two
Trolleys/Fowler beds – Eighteen (including those for shifting of patients)
Infusion pumps – Sixteen
Portable ultrasound with multiple probes including echo probe – One
Portable X-ray unit – One
Resuscitation trolley – One
Artificial breathing bag – Four
Endotracheal tubes of all sizes
Laryngoscope with all sized blades
Chest tubes
Point-of-care laboratory for quantitative estimation of cardiac enzymes, ABG and electrolytes
Oxygen cylinders – Four
Portable suction machines – Four
Ultrasonic nebulizers – Four
All essential life-saving drugs as per National Essential Drug List
Cervical collars of all sizes
Spine boards with slings and scotch tape all sizes – Two
Splints for all types of fractures
Glucometer – Two
Central lines of all sizes – Ten

Desirable

Simulators for teaching various emergencies
Additional ICU ventilators – Two
Additional cardiac monitors – Three
Additional infusion pumps – Six

Resolution No. 4.32 of Academic Council (AC-51/2025): Resolved to approve the pattern of practical examination for MD Emergency Medicine with effect from batch admitted in Oct 22. [ANNEXURE-54A, 54B, 54C & 54D].

Annexure-54A of AC-51/2025

SYALLABUS FOR EMERGENCY MEDICINE AS PER NMC GUIDELINE DATED 07/10/2024

Cardiovascular Diseases:	1.
Cardiopulmonary Resuscitation	
	a. Basic life support (one and two-rescuer CPR)
	b. Advanced life support
	- Recognition of cardiac rhythms during cardiac arrest
	- Use of drugs
	- Defibrillation
	- Pacing
	- Post-cardiac arrest syndrome
	- Ethical issues
	c. Leadership during CPR
	d. Choking victim
	e. Neonatal/pediatric CPR
	f. CPR during pregnancy
	2. Chest pain

- a. Stable angina
 - b. Acute coronary syndromes (unstable angina, ST-elevation and Non-ST-elevation myocardial infarction)
 - Use of thrombolytics
 - Use of glycoprotein inhibitors in ED - Angioplasty vs. thrombolytics c.
 - Pulmonary embolism
 - d. Aortic dissection
3. Congestive heart failure and pulmonary oedema
4. Palpitations
5. Cardiac arrhythmias
 - a. Tachycardias
 - Narrow complex vs. broad complex
 - Electric cardioversion - Anti-arrhythmic drugs b.
 - Bradycardias
6. Hypertensive urgencies and emergencies
7. Temporary and permanent cardiac pacemaker
8. Shock
 - a. Haemorrhagic shock
 - b. Cardiogenic shock
 - c. Neurogenic shock
 - d. Septic shock
 - e. Anaphylactic shock
 - f. Blood/blood products
 - g. Cardiovascular drugs
 - Fluids
 - Vasopressors
9. Deep vein thrombosis and pulmonary embolism
10. Valvular heart diseases
11. Stuck artificial cardiac valve
12. Infective endocarditis
13. Acute pericarditis and cardiac tamponade
14. Acute myocarditis
15. Acute rheumatic fever
16. Vascular access
17. Hemodynamic monitoring
18. Peripheral vascular disease
19. Aortic emergencies
20. Sudden cardiac death
21. Cardiac transplant patient

Airways management and Anesthesia	
1. Principle of airway management including difficult airway management 2. Non-invasive ventilation and mechanical ventilation 3. Rapid sequence intubation 4. Pain management 5. Procedural sedation 6. Regional, local and general anaesthesia	
7. Surgical airway	

1. Principle of airway management including difficult airway management
2. Non-invasive ventilation and mechanical ventilation
3. Rapid sequence intubation
4. Pain management
5. Procedural sedation
6. Regional, local and general anaesthesia

7. Surgical airway

Trauma:	
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1. Trauma resuscitation	
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- | | |
|---|--|
| <ul style="list-style-type: none">a. Primary surveyb. Secondary surveyc. Advanced trauma life support | |
|---|--|

2. Wound management:

- a. Lacerations
- b. Abrasions
- c. Contusion
- d. Puncture wounds
- e. Principles of management
- f. Control of local bleeding
- g. Suturing
 - General
 - Specific sites
- h. Local anaesthesia

3. Head and facial trauma

- a. Head injury
- b. Fractures of bones of face
- c. Facial injuries
- d. Dental injuries
- e. Nasal injuries
- f. Ear injuries
- g. Oral cavity injuries
- h. Temporomandibular joint dislocation

4. Spinal trauma

- a. Immobilization
- b. Examination
- c. Cervical
- d. Dorsal
- e. Lumbar

5. Chest trauma

- a. Blunt/penetrating
- b. Tension pneumothorax
- c. Cardiac tamponade
- d. Massive haemothorax
- e. Open chest wound
- f. Ruptured aorta
- g. Flail chest
- h. Contusion lung
- d. Transfer arrangements

i. Emphysema

6. Abdominal trauma

- a. Blunt/penetrating trauma
- b. E-FAST
- c. Diagnostic peritoneal lavage
- d. Ultrasound and CT

- e. Pelvic trauma
- f. Genitourinary trauma

7. Pelvic fracture

8. Extremity trauma

- a. Skeletal trauma (fractures)
- b. Dislocation
- c. Vascular trauma
- d. Soft tissue trauma (sprains and strains)
- e. Hand trauma
- f. Compartment syndrome
- g. Degloving injuries
- h. Amputation/replantation
- i. Fat embolism

9. Trauma in children

10. Trauma during pregnancy

11. Trauma in elderly

12. Blast injuries

13. Mass Casualties and Injury Care

Respiratory emergencies

1. Dyspnoea
2. Respiratory failure and ARDS
3. Haemoptysis
4. Acute severe Asthma / COPD
5. Pneumothorax
6. Foreign body
7. Pneumonia and chest infections
8. Thermal/chemical injury to lungs
9. Sleep apnoea syndrome
10. Lung empyema and lung abscess
11. Tuberculosis

Gastrointestinal and Hepatic emergencies

1. Abdominal pain

- a. Acute abdomen
- b. Acute gastritis
- c. Cholangitis, cholecystitis
- d. Acute pancreatitis
- e. Acute appendicitis
- f. Perforation/peritonitis
- g. Mesenteric ischaemia
- h. Renal pain
- i. Intestinal obstruction
- j. Paralytic ileus
- k. Inflammatory bowel disease

2. Vomiting and diarrhoea/constipation

- a. Evaluation of dehydration
- b. Fluid therapy

3. Acute GI bleed

- a. Upper GI bleed

- b. Lower GI bleed

4. Foreign body ingestion

5. Acute volvulus

6. Haemorrhoids

7. Rectal prolapse

8. Perirectal abscess

9. Hernias

10. Diverticulitis

11. Ascites

12. Acute liver failure

13. Cirrhosis and its complications

14. Liver abscess

15. Jaundice

16. Liver transplant patient

17. Gastrointestinal procedures and devices

CNS emergencies

1. Headache

- a. Approach
- b. Specific disorders (including migraine)

2. Syncope, vertigo and dizziness

3. Seizures

- a. Epileptic seizures
- b. Pseudoseizures
- c. Status Epilepticus

4. Coma and neurological impairment

- a. Metabolic coma
 - Hypoglycaemia
 - Ketoacidosis
 - Hyperosmolar coma
 - Hepatic encephalopathy
- b. Neurological coma

5. Meningitis and encephalitis

6. Acute stroke

- a. Ischaemic
- b. Haemorrhagic
- c. Transient ischaemic attack
- d. Subarachnoid haemorrhage

7. Cavernous sinus thrombosis

8. Ataxia and gait abnormalities

9. Compressive and non-compressive myelopathies

10 Peripheral neuropathy (including LGB syndrome)

11. Myasthenic gravis and crisis

12. Cranial nerve palsies

13. Complications of central nervous system devices and procedures

Genitourinary emergencies

- | | |
|--|--|
| <ol style="list-style-type: none">1. Nephrolithiasis2. Acute renal failure3 Acute retention of urine4. Sexual assault5. Complications of chronic kidney disease6. Haematuria7. Torsion of testis8. Sexually transmitted diseases9. Epididymitis/orchitis/prostatitis10. Obstructive uropathy11. Acute pyelonephritis and perinephric abscess12. Phimosis and paraphimosis; priapism13. Foreign body insertion14. Kidney transplant patient15. Complications of urological procedures and devices | |
|--|--|

Ocular emergencies

1. Red eye
 - a. Conjunctivitis
 - b. Acute glaucoma
 - c. Uveitis
2. Trauma
 - a. Foreign body
 - b. Corneal abrasión
 - c. Hyphema
 - d. Blow-out fracture
 - e. Chemical burns
3. Visual loss/impairment
4. Orbital cellulitis

ENT and Dental emergencies

1. Upper airway obstruction and stridor
2. Epistaxis
3. Acute tonsillitis/sore throat/acute laryngitis
4. Foreign bodies
5. Acute suppurative otitis media and externa
6. Acute sinusitis
7. Other infections
8. Nasal bone fracture and nasal septal hematoma
9. Orofacial pain
10. Dental fracture
11. Dental subluxation and avulsion
12. Complications of airway devices

Non-traumatic orthopaedic emergencies

1. Orthopaedic and neurovascular examination of extremities
2. Acute osteomyelitis

3. Acute arthritis
4. Acute gout
5. Prosthesis-related emergencies
6. Acute back pain
7. Acute neck pain
8. Acute shoulder pain
9. Hand and foot infections
10. Joint infections and inflammations
11. Muscle and tendon infections and inflammation

Onco-haematological emergencies

1. Normal hemostasis
2. Acute bleeding (including congenital and acquired bleeding disorders)
3. Disseminated intravascular coagulation
4. Clotting disorders
3. Use of antithrombotic and antiplatelet agents
4. Febrile neutropenia
5. Thrombocytopenia
6. Anemia and polycythemia
7. Acute haemolysis (congenital and acquired)
8. Superior vena cava syndrome
9. Tumour lysis syndrome
10. Cord compression
11. Metastatic emergencies
12. Blood/blood products and transfusion
13. Stem cell and bone marrow transplantation

Infections

1. HIV in Emergency department
2. Malaria (complicated and uncomplicated)
3. Leptospirosis
4. Enteric fever
5. Chicken pox and herpes zoster
6. Measles/mumps
7. Dengue and other haemorrhagic fevers
8. Chikungunya
9. Evaluation of fever in Emergency department
10. Acute hepatitis
11. Disseminated tuberculosis
12. Management of needlestick injury
13. Tetanus
14. Rabies
15. Diphtheria/Pertussis
16. Cholera
17. Food poisoning
18. Polio
19. Plague
20. Toxic shock syndrome

21. Gas gangrene and other anaerobic infections
22. Sexually transmitted diseases
23. Influenza
24. Fever
25. Immunization
26. Sepsis
27. Soft tissue infections
28. Sexually transmitted infections

Metabolic and Endocrine emergencies

1. Type 1 and Type 2 diabetes mellitus
2. Diabetic emergencies:
 - a. Hypoglycaemia
 - b. Hyperosmolar hyperglycaemic state
 - c. Diabetes ketoacidosis and other ketoacidotic syndromes
3. Fluid and electrolyte abnormalities
 - a. Normal physiology
 - b. Hypovolemia
 - c. Hyper/Hyponatremia
 - d. Hyper/hypokalemia
 - e. Hyper/hypocalcemia
4. Acid-base disturbances
5. Hypopituitarism/Hypoadrenalism
6. Hyperthyroidism and thyrotoxic crisis
7. Hypothyroidism and myxoedema coma

Acute toxicology

1. Initial management
2. Recognition of toxidromes
3. Antidotes
4. Insecticides and pesticides
5. Overdose with various therapeutic drugs
6. Poisoning due to various recreational agents
7. Snake bites, and scorpion and insect stings
8. Plant poisoning
9. Kerosene oil poisoning
10. Ethyl alcohol poisoning and withdrawal
11. Other alcohols (methyl alcohol, ethylene glycol and isopropanol)
12. Methaemoglobinemia
13. Hyperthermias
14. Substance abuse
15. Caustic ingestion
16. Asphyxiants
17. Metal poisoning
18. Industrial toxins
19. Mushroom poisoning
20. CBRN disasters

21. Poison control centers

Gynaecology & Obstetrics emergencies

1. Ectopic pregnancy
2. Lower abdominal pain
3. Abnormal uterine bleeding
4. Abortion
5. Pre-eclampsia/Eclampsia
6. Conduct of delivery
7. Emergency contraception
8. Sexual assault victim
9. Amniotic fluid embolism
10. Comorbid disorders during pregnancy
11. Antepartum and postpartum hemorrhage
12. Premature rupture of membranes
13. Other complications during pregnancy
14. Vulvovaginitis, pelvic inflammatory disease

Pediatric emergencies

1. Advanced pediatric life support
2. Care of newborn
3. Stridor (including croup/epiglottitis)
4. Asthma
5. Fever (neonate, young infant, older infant, child)
6. Sepsis
7. Pneumonia
8. ENT and eye disorders
9. Congenital diseases (including cardiac diseases)
10. Neonatal emergencies
11. Dehydration and fluid therapy
12. Sudden infant death syndrome
13. Drug therapy in newborns, infants and children
14. Orthopedic trauma
15. Head injury in children
16. Intubation and ventilation
17. Vascular access in children
18. Pain management and procedural sedation
19. Acute abdominal pain
20. Genitourinary emergencies
21. Neurologic emergencies
22. Hematologic emergencies
23. Oncologic emergencies

25. Skin rashes
26. Child abuse
24. Metabolic emergencies (including diabetes mellitus)

27. Child with special healthcare needs

Environmental emergencies

- | | |
|--|--|
| <ol style="list-style-type: none">1. Burns (thermal and chemical)2. Smoke inhalation3. Lightning4. Electric burns5. High altitude illnesses6. Diving emergencies7. Cold-induced illnesses8. Heat-induced illnesses9. Near-drowning10. Animal and human bites11. Marine trauma and envenomation | |
| Rheumatological emergencies <ol style="list-style-type: none">1. Acute vasculitis2. Anti-phospholipid antibody syndrome3. Rheumatologic disorders involving vital organs4. Kawasaki's syndrome | |
| | |

Dermatological emergencies

1. Initial evaluation and management
2. Exfoliative dermatitis
3. Steven Johnson syndrome
4. Toxic epidermal necrolysis
5. Skin infections, inflammation and allergies

Geriatric emergencies

1. Psycho-social assessment
2. Mobility assessment
3. Drug pharmacology
4. Geriatric abuse

Psychiatric emergencies

1. Thought & Mood Disorders
2. Anxiety & somatiform disorders
3. Self-harm
4. Delirium, dementia and psychosis
5. Suicide and homicide
6. Alcohol & substance abuse
7. IV drug abuse
8. Sexual assault & child abuse
9. Domestic violence & elder abuse
10. Violence in the ED

Disaster Medicine

1. Definitions
2. Disaster planning
3. Medical response to terrorist incidents

Miscellaneous

1. Pre-hospital care
2. Forensic aspects
 - a. Medico-legal examination
 - b. Examination of sexual assault accused
 - c. Wound examination
 - d. Bullet wounds
 - e. Types of injuries (simple, grievous, dangerous)
 - f. Signs of death
 - g. POCSO Act
3. Palliative care in emergency department
4. Death notification in emergency department
5. Legal issues
6. Biostatistics
7. Imaging techniques:
 - a. Plain x-rays
 - b. Ultrasound and echocardiography
 - c. CT
 - d. MRI
 - e. Interventional techniques
8. Nuclear medicine in emergencies

Annexure-56A of AC-49/2024

PRACTICAL EXAMINATION
M.D. (EMERGENCY MEDICINE)
PROPOSED PATTERN FOR EXAMINATION
AS PER NMC GUIDELINES

TOTAL MARKS- 400

A) CLINICAL/ PRACTICAL – 280 MARKS

1) CLINICAL CASES- 200 MARKS

a) Long Case- 100 marks (Acute medical/ surgical/ trauma)

Duration for case taking- 60 mins

Assessment time- 15 mins

b) Short Cases- Each case 50 marks (Acute medical/ surgical/ trauma)

Total cases – 02

Total marks – 100

Duration for case taking- 30 mins

Assessment time- 8 mins for each case

2) OSCE- 80 Marks

a) OSCE Stations

Candidate shall demonstrate the skills appropriate to the given scenario

Candidate is expected to narrate the steps of the procedure in a methodical manner.

I) Pediatrics- 20 Marks

II) Obstetrics- 20 Marks

III) Orthopedics- 20 Marks

IV) Resuscitation- 20 Marks

(BLS/ACLS/ATLS)

Max Marks- $20 \times 4 = 80$ marks

Each station will have 7 mins- TOTAL TIME- 28 mins

B) Thesis/ Dissertation with recent advances- 20 marks

Time of assessment- 5 min

Research aptitude and dissertation- 5 marks

Procedures performed and Log book- 5 marks

Journal article analysis, recent advances- 5 marks

Administrative skills- 5 marks

C) Viva-Voce (100Marks)

1) SPOTTERS- 20 MARKS

Each spot will have 2 marks- 10 spots

$10 \times 2 = 20$ Marks

Each spot for 3 mins

ENT

OPHTHAL

DERMATOLOGY

PSYCHIATRY

OMFS

TOXICOLOGY

2) PEDAGOGY-20 MARKS

Candidate will be assessed on

Communication of the purpose of talk- 5 marks

Clarity of presentation – 5 marks

Time scheduling- 5 marks

Use of audio- visual aids- 5 marks

3) Table Viva- Total 60 marks

Max Marks- 4 x 15

Each table for 15 marks

Each table will have assessment time of 5 mins

I) Instruments, Equipment's and Emergency procedure - 15 marks

II) Drugs- 15 marks

III) ABG and ECG- 15 marks

IV) Radiology - 15 marks

(Xray, POCUS, point of care 2D echo, CT Scan, MRI)

TOTAL MARKS- A (CLINICAL CASE/ PRACTICAL) +B

(Thesis/Dissertation) + C [(SPOTTERS + PEDAGOGY + Table VIVA)]

(280) + (20) + (20 + 20 + 60 = 100)

400 MARKS

As per NMC, eligibility for passing is 50 % overall in practical examination

TIME FOR ASSESSMENT OF EACH STUDENT

A) CLINICAL / PRACTICAL- 66 MINS

1)CLINICAL CASE- 31 MINS

a) Long case – 15 mins

b) Short case – 2 x 8 mins= 16 mins

2) OSCE- 28 MINS

OSCE- 4 x 7 mins = 28 mins

Total- 59 mins

B) Thesis/ Dissertation with recent advances - 5 mins = 5mins

(By External Examiner Only)

C) Viva-Voce

1) SPOTTERS - 30 MINS

(10 x 3 mins- 30 mins)

2) PEDAGOGY – 5 MINS

3) Table VIVA – 20 MINS

(Table Viva- 4 x 5 mins = 20 mins)

Total duration for each student = Clinical / Practical + Thesis/ Dissertation +
(Spotters + Pedagogy + Table Viva) Viva Voce

= 59 mins + 05 mins + (30 mins + 05 mins + 20mins = 55mins)

= 119 mins

Theory evaluation preferably to be carried out one day prior or after the date
of practical examination by external/ internal examiner.

Resolution No. 4.32 of Academic Council (AC-51/2025): Resolved to approve the pattern of practical examination for MD Emergency Medicine with effect from batch admitted in Oct 22. [ANNEXURE-54A, 54B, 54C & 54D].

Annexure-54B of AC-51/2025

A. Broad Specialties: Doctor of Medicine (M.D.)/Master of Surgery (M.S.): M.D./M.S. examinations, in any subject shall consist of theory papers, and clinical/practical and viva voce examinations.

a. Theory: The theory examination (both formative and summative) may be of descriptive answer of a question type, Multiple Choice Question (MCQ) type or mix of both types. Theory examination for summative examination shall be of four theory papers. The first and the fourth paper shall be on basic medical science and recent advances, respectively.

The theory examination shall be held well in advance before the clinical and practical examination.

b. Clinical/Practical and viva voce

- i. Clinical examination for the subjects in clinical sciences shall be conducted to test the knowledge and competence of the candidates for undertaking independent work as a consultant/specialist/teacher, for which candidates shall be examined for one long case and two short cases.
- ii. Practical examination for other subjects shall be conducted to test the knowledge and competence of the candidates for making valid and relevant observations based on the experimental/ laboratory studies and his ability to perform such studies as are relevant to his subject.
- iii. The viva voce examination shall be thorough and shall aim at assessing the candidate's knowledge and competence about the subject, investigative procedures, therapeutic technique and other aspects of the Speciality.
- iv. Clinical/practical examination shall include Objective Structured Clinical Examination (OSCE).

S.No.	Description	M.S./M.D./M.Ch./DM Courses
1	THEORY	
	No. of Theory Papers	4
	Marks for each Theory Paper	100
	Total marks for Theory Paper	400
	Passing Minimum for Theory	200/400 (40% minimum in each paper)
2	PRACTICAL/CLINICAL	300
3	VIVA VOCE	100
	Passing minimum for Practical/Clinical including Viva voce	200/400
	The candidate shall secure not less than 50% marks in each head of passing which shall include (1) Theory – aggregate 50% (In addition, in each Theory paper a candidate has to secure minimum of 40%) (2) Practical/Clinical and Viva voce - aggregate 50% (3) If any candidate fails even under one head, he/she has to re-appear for both Theory and Practical/Clinical and Viva voce examination. (4) Five per cent of mark of total marks of Clinical/Practical and Viva Voce marks (20 marks) will be of dissertation/thesis and it will be part of clinical/practical examination marks. External examiner outside the state will evaluate dissertation/ thesis and take viva voce on it and marks will be given on quality of dissertation/thesis and performance on its viva voce. (5) No grace mark is permitted in post-graduate examination either for theory or for practical.	

Theory papers will include the following topics and will be distributed as follows:

Theory consists of four papers of 3 hours each having 10 short-structured questions with 10 marks each

Paper I: Basic Medical Sciences relevant to Emergency Medicine (Anatomy, Physiology, Biochemistry, Microbiology, Pathology, Research methodology and Statistics)

Paper II: Emergency medical specialties (Medical emergencies, Radiology and Imaging, Anaesthesia and resuscitation, Toxicology, Emergencies in Dermatology and psychiatry)

Paper III: Emergency surgical specialties (Surgical emergencies, Trauma, Orthopedics, Eye, ENT)

Paper IV: Recent Advances in Emergency Medicine, Pre hospital care, Pediatrics, Obstetrics, Disaster medicine, Forensic, ED administration, medico-legal aspects.

Resolution No. 4.32 of Academic Council (AC-51/2025): Resolved to approve the pattern of practical examination for MD Emergency Medicine with effect from batch admitted in Oct 22. [ANNEXURE-54A, 54B, 54C & 54D].

Annexure-54C of AC-51/2025

Theory paper distribution

Paper I: Basic Medical Sciences relevant to Emergency Medicine (Anatomy, Physiology, Biochemistry, Microbiology, Pathology, Research methodology and Statistics)

Paper II: Emergency medical specialties (Medical emergencies, Radiology and Imaging, Anaesthesia and resuscitation, Toxicology, Emergencies in Dermatology and psychiatry)

Paper III: Emergency surgical specialties (Surgical emergencies, Trauma, Orthopedics, Eye, ENT)

Paper IV: Recent Advances in Emergency Medicine, Pre hospital care, Pediatrics, Obstetrics, Disaster medicine, Forensic, ED administration, medico-legal aspects

PRACTICAL EXAMINATION

M.D EMERGENCY MEDICINE

PROPOSED PATTERN FOR EXAMINATION AS PER NMC GUIDELINES DATED 07/10/2024 FROM BATCH 2022 AS PER NOTICE

No. N-P050(20)/16/2024-PGMEB-NMC (e-8285090) Government of India

TOTAL MARKS- 400

A) CLINICAL/ PRACTICAL EXAMINATION – 280 MARKS + 20 MARKS – thesis /dissertation

1) CLINICAL CASES- 150 MARKS

a) Semi Long Case- 25 marks (Acute medical/ surgical/ trauma/ pediatrics)

Total Cases - 04

Duration for case taking- 15 mins

Assessment time- 07 mins

b) Short Cases- Each case 12.5 marks (obstetrics-gynecology/ ENT / ophthalmology/ dermatology)

Total cases – 04

Total marks – 50

Duration for case taking- 07 mins

Assessment time- 04 mins for each case

2) OSCE- 40 Marks

a) OSCE

Candidate should be able to identify Xray, ABGs, CT, MRI and ECG

Each question – 5 mins

Max Marks- 40 marks (10 questions x 4 marks)

3) Demonstration of skills – 90 Marks

a) Airway Stabilization

b) Cardiac Life Support Skills(Adult/ Paediatrics)

c) Trauma Life Support Skills

d) Point of care ultrasound

e) Suturing and Fracture Splinting

f) Communication

Each Skill to be demonstrated in 05 mins

Each Skill – 15 marks (15 x 6 = 90 marks)

4) THESIS/ DISSERTATION- 20 MARKS

Time- 05 mins

B) VIVA VOCE- 100 MARKS

1) INSTRUMENTS AND DRUGS – 25 MARKS

2) CLINICAL PROBLEMS – 25 MARKS (Case based Scenario)

3) RESEARCH, PUBLICATIONS AND CONFERENCE PRESENTATION- 25 MARKS

4) PEDAGOGY-25 MARKS

A Clinical + Practical + Dissertation

Semi long case	ShortCases	OSCE	Demonstration of skills	DISSERTATION	Total
150 25*4	50 12.5 * 4	40 10*4	90 15*6	20	300

B VIVA

INSTRUMENTS AND DRUGS	CLINICAL PROBLEMS – Case based Scenario)	RESEARCH, PUBLICATIONS AND CONFERENCE PRESENTATION	PEDAGOGY	Total	Grand Total A+B
25	25	25	25	100	400

Candidate will be assessed on

Communication of the purpose of talk- 7 marks

Clarity of presentation – 6 marks

Time scheduling- 6 marks

Use of audio- visual aids- 6 marks

Time – 5 mins

TOTAL MARKS- (CLINICAL CASE/ PRACTICAL + THESIS/ DISSERTATION)+ VIVA VOCE

280 + 20 + 100

400 MARKS

As per NMC, eligibility for passing is 50 % overall in practical examination

TIME FOR ASSESSMENT OF EACH STUDENT

A) CLINICAL / PRACTICAL- 173 MINS

1)CLINICAL CASE- 44 MINS

a) Semi Long case – 07 x 04 = 28 mins

b) Short case – 04 x 04 = 16 mins

2) OSCE- 50 MINS

OSCE- 10 x 5 mins = 50 mins

3) Demonstration of skills – 30 MINS

06x 5 mins per skill = 30 mins

4) Thesis/ dissertation – 5 mins

B) VIVA VOCE- 20 MINS

1) Instruments And Drugs- 05 Mins

2) Clinical Problems- 05 Mins

3) Research, Publication And Conference Presentation- 05 Mins

4) Pedagogy – 05 Mins

Total duration for each student =(Clinical / Practical + Thesis/ Dissertation) + Viva Voce
= 129 + 20 mins
= 149 mins

Theory evaluation preferably to be carried out one day prior or after the date of practical examination by external/ internal examiner.

Resolution No. 4.32 of Academic Council (AC-51/2025): Resolved to approve the pattern of practical examination for MD Emergency Medicine with effect from batch admitted in Oct 22. [ANNEXURE-54A, 54B, 54C & 54D].

Date:10/03/2016

Preliminary Practical Examination in MD Emergency Medicine

Annexure-54D of AC- 51/2025

[illegible]



PG Practical Examination in MD Emergency Medicine

[illegible]



MGM Institute of Health Sciences, Navi Mumbai																	
Mark List for Practical and Viva- Voce Examination																	
Exam Centre :												Course/ Exam: PG					
Date of Examination:												Examination For: MD (Emergency Medicine)					
PG Practical Examination in MD Emergency Medicine																	
Clinical/Practical (280 marks)								Total (A)	Dissertation/ Thesis (B) (20 Marks)	Viva - Voce (100 marks)						Total (C)	Grand Total Marks (A+B+C)
Roll No	Long case (100 marks) Acute medical / Surgical / trauma	Short cases (100 marks) Acute medical / Surgical / trauma		OSCE (80 marks)						Spotters (10 X 2 marks) (20 marks)	Pedagogy (20 marks)	Table Viva (60 marks)					
		50 marks	50 marks	a	b	c	d					a	b	c	d		
		1	2	Pediatrics (20 marks)	Obstetrics (20 marks)	Orthopedics (20 marks)	Resuscitation (20 marks)	280	20			Instruments, Equipments & Emergency Procedure (15 marks)	Drugs (15 marks)	ABG & ECG (15 marks)	Radiology (15 marks)	100	400

Name of The Examiner	College	Signature with Date
1		
2		
3		
4		
5		



**Mahatma Gandhi Mission Medical College & Hospital
Kamothe , Navi Mumbai**

Department of _____

CERTIFICATE

*This is to Certify that Dr _____ has
successfully completed the requirement for the degree examination for
Doctor / Master of _____ , MD/MS at MGM institute of
health Sciences (Deemed University). The procedures and academic
activities recorded in the book are as per the college / hospital records
and have been carried out satisfactorily.*

Signature and Name of the
PG Guide

Signature and Name of
Head of the Department

DISSERTATION / THESIS DETAILS

Title:

Date of Approval of Dissertation / Thesis from ethics committee:

Date of Submission of Dissertation / Thesis to the University :

Name of the PG Guide

Signature of the PG Guide

Approved / Not Approved

Date :

Sign and Seal of Dean

Resolution passed in BOM – 48/2017, dated 24/01/2017

Item No. 5.9: BOS (Surgery and Allied) dated 21.09.2016

b) Structured ALS/BLS course

BOM has already adopted following resolution on this matter:

Resolution No. 3.4(d) of BOM-45/2016 dt. 28/04/2016: As ALS/BLS is already included in the syllabus of MBBS/PG courses, hence there is no need to have separate structured programme.

Resolution No. 1(v) of BOM-46/2016 dt. 11/08/2016: Resolved to include 01 additional page in the Intern's log book indicating that the Students have undergone ALS/BLS training.

After deliberations on both the above resolutions, following resolution is adopted:

Resolution No. 5.9(b): It is resolved that as ALS/BLS is already a part of the syllabus of MBBS/PG courses, it is not necessary to have a separate structured programme for ALS/BLS. However looking at its importance, it becomes essential to retrain UG and PG students, therefore, it is also resolved to certify the interns and PG students during their internship and PG training respectively by incorporating a certificate of completion in the Intern's log book/PG log book indicating that the Students have undergone ALS/BLS training. This training can be imparted by Department of Emergency Medicine/Anaesthesia. This will be effective from the batch of internship during 2017 and PG batch of academic year 2015-16.

Resolution passed in BOM – 48/2017, dated 24/01/2017

Resolution No. 5.25: Resolved to institute 6 monthly progress Report for PG Students of all Courses from the batches admitted in 2016-17. **[Annexure-XVII of BOM-48/2017]**



**Mahatma Gandhi Mission's Medical College and Hospital
Navi Mumbai**

Six monthly Progress Report for Postgraduate Students

PART A

Name of the PG student: _____

Department: _____

Admitted in (Month and Year): _____

Name of the PG guide: _____

Report for the period: _____ to _____

Attendance: _____ days (_____ %)

PART B

Grading as per performance

Grade	Percentage
A	80% and above
B	65% to 79%
C	50% to 64%
D	Below 50%

1. OPD work:
2. Ward work:
3. Lab work:
4. OT work:
5. ICU work:
6. Teaching assignments:

PART C

Progress of Thesis

PART D

Activities from serial No. 1 to 5 should be rated on a scale of 0 to 10.

1. Case Presentations

Sr. No.	Topic	Date	Guide	Marks

2. Microteaching

Sr. No.	Topic	Date	Guide	Marks

3. Recent Advances

Sr. No.	Topic	Date	Guide	Marks

4. Seminars

Sr. No.	Topic	Date	Guide	Marks

5. Journal Clubs

Sr. No.	Journal	Title of Paper	Date	Guide	Marks

6. Marks obtained in tests

Sr. No.	Date	Theory / Practical	Marks obtained

7. Any other academic activity conducted:

PART E

1. Papers presented

Sr. No.	Title of Paper	Authors	Event	Date

2. Posters presented

Sr. No.	Title of Poster	Authors	Event	Date

3. Publications

(Note: Mention only those publications that are published or are accepted for publication during the said period only)

Sr. No.	Title of Paper	Authors	Journal	Year/Vol/ Issue	Page Nos	Indexed/ Non-Indexed	Status

Certificate by the PG Guide

This is to certify that Dr. _____, has an attendance of _____% , during the period _____ to _____. His /Her performance during the said period has been **satisfactory/ average / unsatisfactory.**

Overall Grading: _____

Date: _____

Name and Signature of PG guide:

Certificate by the Head of Department

This is to certify that the performance of Dr. _____, during the period _____ to _____, has been **satisfactory/ average / unsatisfactory.**

Overall Grading: _____

Date: _____

Name and Signature of HOD:

Final Remarks

Satisfactory / Average / Unsatisfactory

Director (Academics)

Dean

Date:

Resolution No. 1.3.7.11 (i) of BOM-51/2017: Resolved that the following Bioethics topics in PG Curriculum are to be included for PG students of all specialization and a sensitization of these topics can be done during PG Induction programme:

- Concept of Autonomy
- Informed Consent
- Confidentiality
- Communication Skills
- Patient rights
- Withholding / Withdrawing life-saving treatment
- Palliative Care
- Issues related to Organ Transplantation
- Surgical Research and Surgical Innovation
- Hospital Ethics Committee
- Doctor-Patient relationship

For PG.

30 copies

Resolution No. 1.3.23 of POM-51/2017: Resolved to implement a Structured Induction programme (07 days) for PG students. [Annexure-XI-IV]

MGM INSTITUTE OF HEALTH SCIENCES
New Mumbai

Induction Program for newly admitted Postgraduate students

Day 1	• Address by Dean, Medical Suptd, Director (Academics) • Pre-test • Communication Skills • Universal Safety Precautions • Biomedical Waste Management • Infection Control Policy
Day 2 ✓	• Emergency services • Laboratory services • Blood Bank services • Medicolegal issues • Prescription writing • Adverse Drug Reaction • Handling surgical specimens
Day 3	• Principles of Ethics • Professionalism • Research Ethics • Informed Consent • Confidentiality • Doctor-Patient relationship
Day 4	• Research Methodology • Synopsis writing • Dissertation writing • Statistics
Day 5	
Day 6	
Day 7	• ATLS • Post-test

The Induction Program will be conducted in the first week of June.
Timing: 9.30 am to 3.30 pm

(Prof. Dr. Siddharth P. Dubhashi)
Director (Academics)

Resolution No. 4.5.4.2 of BOM-55/2018: Resolved to have 10 short notes out of 11 (10 marks each) in all the papers in university examination for PG courses including superspeciality. To be implemented from batch appearing in April/May 2019 examination onwards for MD/MS/Diploma and August/September 2019 examination onwards for superspeciality.

Resolution No. 4.13 of BOM-55/2018: Resolved as follows:-

- (i) Slow learners must be re-designated as potential learners.
- (ii) Students scoring less than 35% marks in a particular subjects/course in the 1st formative exam are to be listed as potential learners. These learners must be constantly encouraged to perform better with the help of various remedial measures.
- (iii) Students scoring more than 75% marks in a particular subjects/course in the 1st formative exam are to be listed as advanced learners. These learners must be constantly encouraged to participate in various scholarly activities.

Resolution No. 3.1.3.1 of BOM-57/2019: It was resolved to approve the following list of books (new titles & reference books):

Subject	UG	PG	Annexure
General Medicine		√	Annexure-12
Respiratory Medicine		√	Annexure-13
Community Medicine	√		Annexure-14
Emergency Medicine		√	Annexure-15

Annexure - 15

Books required for Emergency Medicine:

For PG course

1. Emergency Medicine, An approach to clinical problem solving – Hamilton.-Quantity 02
2. Emergency Medicine, A comprehensive study guide - Judith E. Tintinalli, 8th Edition
Quantity 01
3. Rosen's textbooks of emergency medicine - Quantity 01
4. Basic Life Support Manual – AHA.- Quantity 02
5. Advanced Cardiac Life Support Manual – AHA.- Quantity 02
6. Advanced Trauma Life Support manual - Quantity 02
7. Advanced Pediatric Life Support Manual - Quantity 02
8. Advanced Neonatal Life Support Manual – Quantity 02

Resolution No. 3.1.3.6 of BOM-57/2019: Resolved to approve addition of following topics on neurology in PG syllabus of Emergency Medicine to be applicable from PG batch admitted in 2019-20:

1. Neurologic Examination
- 2. Stroke Syndromes
3. Altered Mental Status
4. Vertigo
5. Seizures
6. Acute Peripheral Neurologic Disorders
7. CNS and Spinal Infections
8. CNS Procedures and Devices
9. Headache
10. Spontaneous SAH and ICH

Resolution No. 3.1.3.10 of BOM-57/2019: It was resolved to approve the Topics of integrated teaching in Dept of Emergency medicine for UG (from batch entering into 2nd MBBS from August 2019) & PG (from batch admitted in 2019-20). [**Annexure-18**]

Annexure - 18

Emergency Medicine

Integrated Teaching:

A) Undergraduate topics

1. History, Clinical Examination, Documentation and Critical difference in Emergency Medicine. (Dept of Medicine)
2. High risk Emergency Medicine. (Dept of Medicine)
3. Avoiding common medical error. (Dept of Forensic Medicine)
4. Risk reduction to enhance patient safety.
5. Resuscitation. (Dept of Anesthesia)
6. ECG. (Dept of Medicine)
7. Basics of Ultrasound. (Dept of Radiology)
8. Common X-ray, CT scan and MRI Images. (Dept of Radiology)
9. Approach to chest pain, Shortness of breath, Altered sensorium. (Dept of Medicine)
10. Management of pain anywhere in the body. (Dept of Anesthesia)
11. Medco-legal issues with respect to emergency patient. (Dept of Forensic Medicine)
12. Dermatological manifestation in Emergency Medicine. (Dept of Dermatology)
13. Approach to poisonings. (Dept of Medicine)

B) Postgraduate topics

Respiratory Medicine:

1. Respiratory Distress /URTI / Acute Bronchitis
2. Hemoptysis / Tuberculosis
3. CAP aspiration pneumonia, Noninfections Pulmonary infiltrates
4. Spontaneous / iatrogenic pneumothorax
5. Empyema & lung abscess
6. Asthma / COPD

Orthopedics:

1. Trauma in adults, Paediatric geriatric & pregnant patients
2. Trauma to face, neck, spine & spinal cord, abdominal cardiac, pulmonary, genitourinary & penetrating trauma
3. Wound ballistics and forensics
4. Initial evaluation and management of orthopedics injuries
5. Compartment syndromes
6. Orthopaedics devices and reconstruction.

Cardiology with Medicine:

1. Evaluation of chest pain and management
2. Acute coronary syndrome
3. Cardiogenic shock
4. Syncope, CHF
5. Valvular Emergencies
6. Cardiomyopathies and pericardial effusion
7. Dissection of aorta and Aneurysms
8. Acid Base Disorder, Blood gases, cardiac rhythm disturbances, fluid and blood resuscitation.

Anaesthesia

1. Noninvasive Airway , Pediatric airway management , Surgical airway management
2. Tracheal Intubation & Mechanical Ventilation
3. Neonatal & Pediatric , intraosseous & Central Venous access
4. Venous & intraosseous access in Adults
5. Acute pain management in Adults & in infants & Children
6. Local & Regional Anesthesia.
7. Procedural sedation & Analgesia
8. Adults With Chronic pain

Radiology

- 1) Fast Scan
- 2) MRI
- 3) C T Scan
- 4) X-Rays
- 5) Non-Invasive Myocardial Imaging

Topics For Forensic Medicine

1. Examination female rape victim
2. Legal Issues in Emergency Department
3. Child /Abuse / Elderly Abuse
4. Domestic Violence
5. Labour Act
6. EMTALA Obligation (Emergency Medical Transfer in Active Labour Act)
7. Issues in the ED Cases of Minor
8. Emergency Physicians and Death Certificate
9. Newborns Left at the ED

Case Based Learning:

i-CBL (Integrated Case Based Learning) has been included in our routine schedule. We have been conducting the sessions every 3 months.

Resolution No. 3.1.4.2 of BOM-57/2019:

- i. Resolved to include “Gender Sensitization” into UG (from new batch 2019-2020) and PG (from existing batches) curricula. [**Annexure-21**]
- ii. Resolved to align the module of “Gender Sensitization” with MCI CBME pattern for MBBS students.
- iii. Resolved that Dr. Swati Shiradkar, Prof., Dept. of OBGY., MGM Medical College, Aurangabad will coordinate this activity at both campuses.

Annexure - 21

Gender sensitization for UG (2nd , 3rd , 8th semesters) and PG (3 hours)

INCLUSION OF “ GENDER SENSATIZATION” IN CURRICULUM

Introduction :

The health care provider should have a healthy gender attitude, so that discrimination, stigmatization, bias while providing health care will be avoided. The health care provider should also be aware of certain medico legal issues related with sex & gender.

Society particularly youth & adolescents need medically accurate, culturally & agewise appropriate knowledge about sex, gender & sexuality. So we can train the trainers for the same. It is need of the hour to prevent sexual harassment & abuse .

To fulfill these objectives, some suggestions are there for approval of BOS.

Outline

1)For undergraduates :- Three sessions of two hours each, one in 2nd term, one in 3rd term & one in 8th term.

2)For Faculties and postgraduates :- One session of two hrs .

3)For those want to be trainers or interested for their ownself, value added course, which is optional about sex, gender, sexuality & related issues.

Responsibility

ICC of MGM, MCHA , with necessary support from IQAC & respective departments.

Details of undergraduate sessions

1)First session in 2nd term

Aim – To make Students aware about the concept of sexuality & gender.

To check accuracy of knowledge they have,

To make them comfortable with their own gender identify & related issues.

To make them aware about ICC & it is functioning.

Mode – Brain storming , Interactive power point presentation experience sharing.

Duration – Around two hours

Evaluation – Feedback from participants.

2)Second session in 3rd / 4th term

Aim – To ensure healthy gender attitude in these students as now they start interacting with patients.

To ensure that the maintain dignity privacy while interacting with patients and relatives, particularly gender related.

To make them aware about importance of confidentiality related with gender issues.

To encourage them to note gender related issues affecting health care & seek solutions.

Mode – focused group discussions on case studies, Role plays & discussion.

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Duration – Around two hours.

Evaluation – Feedback from participants.

Third session in 8th term.

Aim – To understand effect of gender attitudes on health care in various subjects.

To develop healthy gender attitude while dealing with these issues.

Mode – Suggested PBL by departments individually. (In collaboration with ICC till faculty sensitization is complete)

Evaluation – Feedback

FOR POSTGRADUATES

Session of 2-3 hrs preferably in induction program.

Aim – To introduce medically accurate concept of gender, sex, gender role & sex role.

To ensure healthy gender attitude at workplace.

To understand gender associated concepts on health related issues & avoid such bias while providing health care.

To make them aware about ICC & its functioning.

Mode – Interactive PPT

Role plays & discussion

Duration – 2 to 3 hrs

Evaluation – Feedback.

FOR FACULTIES

Session of 2 hours may be during combined activities.

Aim – To ensure clarity of concept about gender & sex.

To discuss effect of these concept on health related issues.

To identify such gender & sex related issues in individual subject specialties.

To discuss methodology like PBL for under graduate students when they are in 7th-8th semester.

Mode – Role play

Focused group discussion

Case studies

Evaluation – Feed back.



MGM INSTITUTE OF HEALTH SCIENCES

(Deemed to be University u/s 3 of UGC Act, 1956)

Grade 'A' Accredited by NAAC

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