YENEPOYA
Deemed to be University

REGULATIONS AND CURRICULUM GOVERNING

MD EMEREGENY MEDICINE PROGRAM

(2024-25)

Name of the Constituent Unit/Centre: Yenepoya Medical College



YENEPOYA
Deemed to be University

Deralakatte, Mangalore, Karnataka.

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NOTIFICATION FROM THE UNIVERSITY

YENEPOYA

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YENEPOYA (DEEMED TO BE UNIVERSITY)

No.: 56-ACM/10/2024

OFFICE OF THE REGISTRAR
Date: 20.06.2024

NOTIFICATION

Sub: Syllabus approval of MD Emergency Medicine

Ref: 1. Resolution of the Academic Council at its 56th meeting held on 15.05.2024 vide agenda-10.
2. Resolution of the Executive Council at its 3rd meeting held on 11.06.2024 vide agenda-03.

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Pursuant to the resolutions cited in the above references, the Yenepoya (Deemed to be University) hereby notifies syllabus approval of MD Emergency Medicine under the Faculty of Medicine from the academic year 2024-2025.

REGISTRAR

To:
PA to Vice Chancellor
Dean of Academics, Yenepoya (Deemed to be University)
Controller of Examinations
Dean, Faculty of Medicine
Professor & Head, Department of Emergency Medicine
File Copy

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MD IN EMERGENCY MEDICINE

Preamble:

Emergency Medicine is a specialty dedicated to diagnosing and treating all emergency medical disorders and injuries. It encompasses a unique body of knowledge as defined by its scope of practice of Emergency Medicine includes the initial evaluation, diagnosis, treatment, and disposition of any patient requiring expeditious medical, surgical, or psychiatric care.

The field of Emergency Medicine encompasses acute aspects of almost all subspecialties and it is designed to ensure the management of patients in life-threatening emergencies by providing immediate and definitive care till the patient is taken over by the concerned specialty department.

Goal:

This curriculum aims to prepare an M.D. in Emergency Medicine to acquire the competencies pertaining to knowledge, skills, and attitude necessary to function independently and effectively under any circumstances. This will enable them to deliver high-quality emergency care and function effectively as educators, researchers, and administrators in Emergency Medicine.

SUBJECT SPECIFIC LEARNING OBJECTIVES

• Care for physiologically stable patients presenting to acute care across the full range of complexity

At the end of the MD Emergency Medicine Course the student should be able to:

- Develop expertise in history taking,
- Develop expertise in Physical examination,
- Develop expertise in decision making and
- Develop expertise in emergency management full range of disorders.

• Identify sick patients, be able to resuscitate and stabilise and know when it is appropriate to stop.

At the end of the Course the student should be able to :

- Deliver the role of emergency physician as an expert in resuscitation and stabilisation of critically ill patients.
- Lead or participate as a member of the resuscitation team.
- Communicate with the patients and their caregivers with empathy.
- Support and guide the resuscitation team.
- Know when not to resuscitate and when to stop resuscitation.
- Care for the patients at the end of their lives.

• Care for acutely injured patients across the full range of complexity

At the end of the Course the student should be able to :

- Anticipate and recognize the Life threatening, limb threatening trauma presentations. In all age groups

- Organize and alert the trauma team and ancillary laboratory and blood bank and other support systems
- Collect and analyze the information from the EMS and prepare the adjuncts and be ready to receive the trauma victims.
- Resuscitate, stabilize and manage the trauma patients as per ATLS guidelines and make correct and timely decisions in patient care.
- Refer to appropriate specialist care as indicated once the patient is stabilized.
- Decide and transport under supervision and after proper communication.
- Document the injuries, Notify medico legally if indicated.
- Be prepared for any disaster/ mass casualties.

• **Care for children of all ages in the ED, at all stages of development and children with complex needs**

At the end of the Course the student should be able to :

- Evaluate the paediatric patients and investigate appropriately.
- Make decisions, safeguard, resuscitate and care the paediatric patients.
- Communicate with empathy and clarity to the parents or guardians of the paediatric patients.

• **Support the ED team by answering clinical questions and making safe decisions:**

At the end of the Course the student should be able to :

- Understand the key steps in diagnostic reasoning, how to make clinical decisions and to recognize the factors that have a negative or positive impact on patient care.

- Acquire the skills to recognize and rectify cognitive errors that can cause harm and threaten patient safety.
- Acquire the knowledge-base and apply the core principles of vidence-based medicine to everyday clinical problems.
- Formulate safe plans of management and decisions on disposal.
- Effectively communicate with and seek opinion from the seniors in profession, subordinates and supporting staff for collective decision making.

- **Deliver key procedural skills**

At the end of the Course the student should be able to:

- Perform key emergency skills that are time critical and/or life/limb saving.
- Organize the equipment and manpower for the procedure concerned.
- Anticipate and manage the post procedure complications
- Acquire knowledge, skills and attitude in Basic Life Support (BLS), Advanced Cardiac Life Support (ACLS), Advanced Trauma Life Support (ATLS), Pediatric Advanced Life Support (PALS), Point of Care Ultrasound (POCUS) training, Neonatal Advance Life Support (NALS), Basic Disaster Life Support (BDLS) Advanced Disaster Life Support (ADLS), HAZMAT life support, or **Equivalent Courses** etc, by enrolling standard training courses with periodic updation.

- **Deal with complex and challenging situations in the work place**

At the end of the Course the student should be able to:

- Anticipate and manage specific situations or circumstances that can have the potential to significantly impact patient care.
- Manage situations or circumstances that can affect the functioning of the Emergency Department like unpredicted events in relation to the interactions with patients attending the ED, other agencies attending the ED, challenging professional interactions or events that impact on the delivery of Emergency care.
- Document and timely report to the authorities if there are medico lega implications involved.

• **Lead the ED shift**

At the end of the Course the student should be able to :

- Lead the Emergency team during the ED shift
- Organize the duty schedules for the ED
- Alert the response team and organize the functioning of the rapid response team in case of disaster or mass casualties.
- Ensure proper documentation and maintenance of registers.
- Communicate effectively with other departments.

• **Support, supervise and educate**

At the end of the Course the student should be able to:

- Support and give relevant suggestions to the superiors and management authorities.
- To Support, appreciate and supervise the subordinate staff in patient care and collective decision making.
- Educate and train the learners /juniors / undergraduates /public coming under his/her sphere.

• **Participate in research and managing data appropriately**

At the end of the Course the student should be able to:

- Participate in and undertake research
- Acquire fundamental knowledge. skills and attitude to collect, manage and analyze data from clinical materials.
- Develop the attitude towards sharing and disseminating information with presentations, posters and publication in indexed journals.

- **Participate in and promote activity to improve the quality and safety of patient care**

At the end of the Course the student should be able to:

- Participate in activities to improve the quality and safety of patient care by monitoring and evaluation of the system.
- Periodic review and feedback to identify the strength and weakness and to make corrective measures.
- Involve in patient education and public awareness programs
- Suggest steps of improvement to the administrators so as to implement patient safety measures.

- **Manage, Administer and Lead**

At the end of the Course the student should be able to:

- Acquire the basic knowledge in the principles of ED administration
- Acquire the knowhow on how to establish and develop an Emergency Department with the necessary infrastructure and manpower as per accreditation standards.
- Lead all the activities in the Emergency Department, Academic, research and patient care activities.
- Participate in Conferences, workshops, curriculum improvement programs and peer group activities.
- Keep abreast of the recent advances in the field and incorporate in the patient care.

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SUBJECT SPECIFIC COMPETENCIES

By the end of the M.D. course in Emergency Medicine, the student should acquire the following competencies:

Cognitive Domain:

1. Prehospital Care - Comprehend the key features of emergency medical services, the role of prehospital equipment and adjuncts, air medical transport, neonatal and pediatric transport, and the dynamics of mass gatherings. Reflect upon their implications in the broader framework of emergency medicine.
2. Disaster Preparedness - Familiarize yourself with the conceptual and practical aspects of disaster preparedness and response mechanisms. This includes understanding the management of natural disasters, comprehending the medical response to bomb, blast, and crush injuries, becoming proficient in mass casualty and chemical agent management, and gaining knowledge about bioterrorism recognition and response, as well as radiation injury management.
3. Resuscitation - Grasp and internalize the principles and methodologies surrounding sudden cardiac death management, adult cardiopulmonary resuscitation, neonatal and
4. child resuscitation, resuscitation in pregnancy, ethical concerns in resuscitation, cerebral resuscitation, therapeutic hypothermia, acid-base disorders, blood gases, fluid and electrolyte balance, cardiac rhythm disturbances, pharmacology of antiarrhythmics and vasopressor agents, patient evaluation in shock, fluid and blood resuscitation, anaphylaxis, acute allergic reactions, and angioedema management.
5. Resuscitative Procedures - Acquire skills and understanding in non-invasive airway management, pediatric airway management, tracheal intubation, mechanical ventilation, surgical airway management, neonatal and pediatric intraosseous and central venous access, adult venous and intraosseous access, hemodynamic monitoring, cardiac pacing, defibrillation, cardioversion, and pericardiocentesis.

6. Analgesia, Anesthesia, and Procedural Sedation - Learn to effectively handle acute pain in adults, pain in infants and children, and to administer local and regional anesthesia. Develop the ability to perform procedural sedation and analgesia, and manage adults with chronic pain
7. Emergency Wound Management - Attain a comprehensive understanding of wound evaluation, wound preparation for treatment, and different wound closure techniques. Learn to manage injuries to the face, scalp, arm, hand, fingertip, nail, leg, foot, and handle soft tissue foreign bodies. Gain knowledge about the management of puncture wounds, bites, and post-repair wound care.
8. Cardiovascular Disease - Enhance your knowledge and expertise in the evaluation, diagnosis, and management of a broad spectrum of cardiovascular conditions such as chest pain, acute coronary syndromes, cardiogenic shock, low probability acute coronary syndrome, syncope, congestive heart failure, acute pulmonary edema, and valvular emergencies. Learn about the evaluation, diagnosis, and management of cardiomyopathies, myocarditis, pericardial disease, thromboembolism, systemic and pulmonary hypertension, aortic dissection, related aortic syndromes, aneurysms of the aorta, major arteries, and occlusive arterial disease.
9. Pulmonary Emergencies - Understand and become proficient in managing respiratory distress, hemoptysis, acute bronchitis, upper respiratory tract infections, community- acquired pneumonia, aspiration pneumonia, non-infectious pulmonary infiltrates,empyema, lung abscess, tuberculosis, spontaneous and iatrogenic pneumothorax, acute asthma in adults, and chronic obstructive pulmonary disease.
10. Gastrointestinal Emergencies - Deepen your understanding of the evaluation, diagnosis, and management of acute abdominal pain, nausea, vomiting, disorders presenting primarily with diarrhea, acute and chronic constipation, upper and lower gastrointestinal bleeding, esophageal emergencies, gastroesophageal reflux disease, swallowed foreign bodies, peptic ulcer disease, gastritis, pancreatitis, cholecystitis, hepatic disorders, jaundice, hepatic failure, acute appendicitis, diverticulitis, bowel obstruction, volvulus, hernias in adults, anorectal disorders, gastrointestinal procedures and devices, and complications of general surgical procedures.

11. Renal and Genitourinary Disorders - Become adept at understanding and managing acute renal failure, rhabdomyolysis, emergencies in renal failure and dialysis patients, urinary tract infections, hematuria, acute urinary retention, male genital problems, urologic stone disease, and complications of urologic procedures and devices.

12. Obstetrics and Gynecology - Develop a solid knowledge base for managing vaginal bleeding in the nonpregnant patient, abdominal and pelvic pain in the nonpregnant female, ectopic pregnancy and emergencies in the first 20 weeks of pregnancy, comorbid diseases in pregnancy, normal pregnancy, emergencies after 20 weeks of pregnancy and the postpartum period. Learn about the emergency delivery process, vulvovaginitis, pelvic inflammatory disease, breast disorders, urogynaecology disorders, and complications of gynaecologic procedures.

13. Paediatrics - Cultivate a comprehensive understanding of the assessment procedures for children in the emergency department, care strategies for neonatal emergencies and common neonatal problems, sudden infant death syndrome, serious bacterial illness associated with fever, and various disorders related to the ear, eye, nose, mouth, and throat in infants and children. Further, enhance your skills in managing specific conditions like stridor, drooling, wheezing, pneumonia, heart diseases, gastrointestinal issues, and urinary tract infections in children. Learn about the intricacies of dealing with seizures and status epilepticus, headaches, altered mental states, minor head injuries, musculoskeletal disorders, rashes, sickle cell disease, oncology, hematology emergencies, hypoglycemia, and metabolic emergencies in infants and children

14. Infectious Diseases - Develop a solid understanding of the evaluation process for sexually transmitted diseases, toxic shock syndrome, septic shock, soft tissue infections, and disseminated viral infections. Gain proficiency in managing HIV infection and AIDS, infective endocarditis, tetanus, rabies, and malaria. Become conversant with the assessment procedures for foodborne and waterborne diseases, zoonotic infections, medical issues of world travellers, occupational exposures, infection control, and standard precautions. Understand the pharmacological aspects of antimicrobials, antifungals, and antivirals.

15. Neurology - Attain expertise in the diagnosis and management of a variety of neurological conditions, including headache, facial pain, subarachnoid and intracerebral hemorrhage, stroke, transient ischemic attack, cervical artery dissection, altered mental status, coma, ataxia, gait disturbances, vertigo, dizziness, and seizures. Learn about the evaluation of acute peripheral neurologic lesions, chronic neurologic disorders, central nervous system and spinal infections, and comprehend the operations of central nervous system procedures and devices.

16. Toxicology - Enhance your understanding and skills in the assessment and management of patients with poisoning from various substances including a wide range of drugs, alcohols, pesticides, metals, industrial toxins, vitamins, herbals, and antimicrobials. Deepen your comprehension of the concept of dyshemoglobinemias.

17. Environmental Injuries - Gain knowledge about the diagnosis and management of environmental injuries like frostbite, hypothermia, heat emergencies, bites and stings, reptile bites, trauma from marine fauna, dysbarism, diving complications, drowning, thermal and chemical burns, electrical injuries, lightning injuries, mushroom poisoning, poisonous plant exposures, high-altitude medical problems, and carbon monoxide exposure.

18. Endocrine Emergencies - Understand and manage cases involving patients with type 1 and type 2 diabetes mellitus, diabetic ketoacidosis, alcoholic ketoacidosis, and hyperosmolar hyperglycaemic state. Learn to deal with thyroid disorders including hypothyroidism, myxoedema crisis, hyperthyroidism, and thyroid storm, and how to diagnose and manage adrenal insufficiency and adrenal crisis

19. Hematologic and Oncologic Emergencies - Develop a thorough understanding of how to recognize and manage anemia, interpret tests of haemostasis, and handle acquired bleeding disorders. Acquire skills in managing clotting disorders, hemophilias, von Willebrand disease, sickle cell disease, other hereditary haemolytic anemias, and acquired haemolytic anaemia. Familiarize yourself with the details of transfusion therapy and the management of anticoagulants, antiplatelet agents, and fibrinolytics. Learn to manage emergency complications of malignancy

20. Eyes, Ears, Nose, Throat, and Oral Surgery - Develop proficiency in managing a wide spectrum of emergency conditions concerning the eyes, ears, nose, throat, and oral region. Learn about the diverse emergencies linked to the facial structure and jaw, epistaxis, nasal fractures, and rhinosinusitis. Enhance your understanding of the various oral and dental emergencies, infections and disorders of the neck and upper airway, and potential complications associated with airway devices.
21. Skin Disorders - Acquire in-depth knowledge about diagnosing and treating a multitude of skin disorders presenting in the emergency department, including serious generalized skin disorders. Learn to address disorders of the face and scalp, hands, feet, extremities, and disorders of the groin and skinfolds. Handle common skin disorders found on the trunk effectively.
22. Trauma - Enhance your capabilities in managing trauma in adults, children, geriatric patients, and during pregnancy. Gain expertise in handling various forms of trauma such as head, spine and spinal cord, facial, neck, and pulmonary trauma. Learn to evaluate cardiac trauma, abdominal trauma, penetrating trauma to the flank and buttocks, genitourinary trauma, and penetrating trauma to the extremities.
23. Orthopaedics - Cultivate your skills in the initial evaluation and management of orthopedic injuries, including those to the hand, wrist, elbow, shoulder, pelvis, hip, knee, and foot. Gain understanding of the diagnosis and management of neck and back pain, shoulder pain, hip and knee pain, systemic rheumatic diseases, nontraumatic disorders of the hand, acute disorders of the joints and bursae, and soft tissue problems of the foot.
24. Psychosocial Disorders - Attain expertise in understanding and handling behavioral disorders. Gain a thorough understanding of emergency assessment procedures, diagnostic criteria, psychotropic medications, rapid tranquilization, anorexia nervosa, bulimia nervosa, panic disorder, conversion disorder, and the management of substance abuse.
25. Abuse and Assault - Develop a sensitive and informed approach to managing issues related to child abuse and neglect, female and male sexual assault,

intimate partner violence, and abuse of the elderly and impaired. Understanding the medico legal aspects of abuse and assault in the state

26. Special Situations - Learn to manage health concerns for special populations such as injection drug users, transplant patients, morbidly obese patients, and patients facing grief, death, and dying. Gain knowledge of the legal aspects of emergency medicine.
27. Principles of Emergency Imaging - Acquire knowledge about non-invasive myocardial imaging, computed tomography, magnetic resonance imaging, and emergency ultrasonography.
28. Point of Care Ultrasound - Develop expertise in the use of point of care ultrasound in a variety of clinical scenarios. Understand its application for intubation and tube placement confirmation, guidance for venous access, echocardiography, trans esophageal echo, cardiac arrest, heart failure, valvular pathologies, lung and pleural assessment, hemodynamic status, FAST/E-FAST examination, peripheral nerve blocks, musculoskeletal ultrasound, joint aspiration, DVT screening, paracentesis, obstetric conditions, paediatric access, airway ultrasound, ocular ultrasound, and intracranial pressure measurement.
29. Medicolegal Aspects of Emergency Medicine Practice in India - Understand and apply the best standards of case documentation, consent, signs of established death, medicolegal proceedings, brain death criteria, validity of DNR/DNI/DNT orders, and various acts related to transplantation of human organs, MTP, PCPNDT, POCSO, Mental Health, Clinical Establishments, Sexual Harassment of Women at Workplace, Consumer Protection, Domestic Violence, Good Samaritan Law, Hospital Protection Act. Learn about court procedures, dying declaration, expert witness roles, inquests, subpoenas and summons, medicolegal autopsy, wound and injury documentation, associated offenses, rape case procedures, and the role of the Clinical Forensic Medicine Unit.
30. Administration - Understand and apply concepts related to credentialing, career development, recruitment, budgeting, health care financing, managed care, personnel. management, public relations, marketing, hospital administration, practice management, contracts, work schedules, cost containment, NABH, JCI,

NMC, NBE requirements, and hospital and Emergency Department administrative organization.

Psychomotor Domain:

Clinical assessment skills:

1. Elicits a focused clinical history
2. Perform a thorough physical examination of all the systems

a. Respiratory system
b. Cardiovascular system
c. Neurological system
d. Abdomen including hernia and rectal examination
e. Ophthalmologic examination
f. ENT examination
g. Obstetric examination
h. Dermatologic examination

Procedural skills:(Minimum number of procedures that a candidate needs to perform are:)

1. Airway management and cervical spine Control

a. Basic airway management (opening airway by various methods) (100)
b. Bag mask ventilation (100)
c. Advanced airway management (25)
d. Tracheal intubation (100)
e. Alternative procedures (non- surgical and surgical (25)
f. Pediatric airway management (25)
g. Neonatal airway management (5)

2. Cardiopulmonary resuscitation

a. Basic (50)
b. Advanced (50)

3. Electric therapy
    a. Cardioversion/defibrillation (40)
    b. Temporary cardiac pacing (10)
4. ECG interpretation (250)
5. Ventilator management (100)
6. Basic trauma management and Advanced
    a. Trauma Life Support (100)
    b. Intercostal chest tube (10)
    c. Needle thoracentesis (10)
    d. ED thoracotomy (1)
    e. Surgical and needle cricothyroidotomy (5)
    f. Suprapubic catheterization (4)
    g. Central venous access (25)
    h. Suture technique (100)
    i. Arterial puncture (100)
    j. Nasal packing (10)
    k. Foreign body removal (10)
    l. Foley's catheterization (50)
7. Pulmonary procedures
    a. Invasive ventilation principles
    b. Thoracentesis

c. Needle/tube thoracostomy

8. Cardiovascular procedures

   a. Cardiac compression (100)

   b. Intra-osseous access (10)

   c. Pericardiocentesis (10)

9. Decontamination procedures

   a. Gastric lavage (10)

   b. Skin/eye decontamination

10. Paracentesis (25)

11. Neurological: Lumbar puncture (10)

12. Wound management

   a. Wound preparation (50)

   b. Wound closure techniques (50)

   c. Debridement (25)

   d. Dressing techniques (50)

   e. Removal of foreign bodies (10)

13. Orthopedic emergency procedures

   a. Splinting/immobilization (50)
   b. Spinal immobilization (50)
   c. Logrolling (50)
   d. Helmet removal (10)
   e. Fasciotomy
   f. Reduction of dislocations (20)
   g. Traction splints (10)

h. Plaster techniques for various Fractures (25)
i. Joint aspiration (10)
j. Cervical collar application (50)
k. Pelvic stabilization techniques (2)

14. Local and regional anaesthesia: Conscious sedation and analgesia (50)
15. Ear, nose and throat procedures
    a. Indirect laryngoscopy (10)
    b. Nasal packing (10)
    c. Removal of foreign bodies (10)
    d. Troubleshooting tracheostomy tube problems (5)
16. Maxillo-facial techniques
    a. Dental anaesthesia (4)
    b. Dental socket suture (4)
17. Ocular techniques
    a. Slit lamp (20)
    b. Foreign body removal (4)
    c. Lateral Canthotomy (1)
    d. IOP measurement (5)
18. Gynaecological and Obstetrics:
    a. Delivery (10)
    b. Speculum examination (10)
    c. Perimortem Caesarean section
19. Others
    a. Reducing paraphimosis (2)
    b. Nasogastric tube insertion (100)
    c. Incision and drainage of abscess (20)
    d. Nerve blocks (20)
    e. Detorsion of torsion of testis (2)
20. Transportation of patients a. Intra-hospital (25) b. Inter-hospital (10)
21. Communication skills:

a. Patients and relatives (50)
b. Colleagues and other personnel (50)

22. Ultrasonography and echocardiography (both diagnostic and therapeutic)

a. FAST/E-FAST (50)
b. Focused ECHO (50)
c. Airway ultrasound (25)
d. Shock assessment (50)
e. Pulmonary ultrasound (50)
f. Abdominal and Renal POCUS (50)
g. Soft tissue and skin ultrasound (25)
h. Joint and fracture assessment (25)
i. Cardiac arrest POCUS/TEE (5)
j. Procedural guidance (50)
k. Ocular ultrasound (25)

23. Interpretation of laboratory investigations/plain X-rays/CT/MRI (100)

24. Major incident planning (10)

Affective Domain:

1. **Communication and Interpersonal Skills**: This involves empathetic communication with patients and their caregivers, effective collaboration with team members, and the establishment of effective relationships with other departments and staff members.

2. **Leadership and Teamwork**: The ability to lead effectively in an Emergency Department (ED) setting, including managing duty schedules, coordinating response teams, and handling disaster or mass casualty situations. This also includes functioning collaboratively as part of a team.

3. **Informed Decision Making and Professionalism**: The capacity to make informed decisions based on sound diagnostic reasoning and to act with professional integrity and responsibility, including timely and accurate reporting of medico-legal implications.

4. **Commitment to Patient Care and Lifelong Learning**: The commitment to improve the quality and safety of patient care, emphasizing a patient-centered approach, along with a dedication to self-improvement, self-directed learning, and staying abreast of recent advances in the field.

5. **Ethics in End-of-Life Care**: Sensitivity and understanding towards ethical issues in end-of-life care, including making informed decisions about resuscitation and providing empathetic care for patients at the end of their lives.

SYLLABUS

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

Trauma:

1. Trauma resuscitation

a. Primary survey

b. Secondary survey

c. Advanced trauma life support d.
Transfer arrangements

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 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 (strains and sprains)

e. Hand trauma

f. Compartment syndrome g. Degloving injuries

h. Amputation/reimplantation 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 is chaemia 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

1. Nephrolithiasis

2. Acute renal failure

3 Acute retention of urine

4. Sexual assault

5. Complications of chronic kidney disease

6. Haematuria

7. Torsion of testis

8. Sexually transmitted diseases

9. Epididymitis/orchitis/prostatitis

10. Obstructive uropathy

11. Acute pyelonephritis and perinephric abscess

12. Phimosis and paraphimosis; priapism

13. Foreign body insertion

14. Kidney transplant patient

15. 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

24. Metabolic emergencies (including diabetes mellitus)

25. Skin rashes

26. Child abuse

27. Child with special healthcare needs

Environmental emergencies

1. Burns (thermal and chemical)
2. Smoke inhalation
3. Lightening
4. Electric burns
5. High altitude illnesses
6. Diving emergencies
7. Cold-induced illnesses
8. Heat-induced illnesses
9. Near-drowning
10. Animal and human bites
11. Marine trauma and envenomation

Rheumatological emergencies

1. Acute vasculitis
2. Anti-phospholipid antibody syndrome
3. Rheumatologic disorders involving vital organs
4. 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

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TEACHING AND LEARNING METHODS

Formal teaching sessions in Emergency medicine department

Minimum sessions

Bedside rounds/Handover rounds - Daily

Seminar - Once in a week

Journal club - Once in two weeks

Evidence based medicine discussion - Once in two weeks
Simulation session - Once in two weeks Radiology
Conference (USG/CT/X-RAY) - Once in a month Clinical
case discussion - Once in a week

Mortality meeting - Once a month

Audit - Once a month

Student thesis presentation - Once in 6 months

All above may refer to sessions conducted in the Emergency Department and not for each trainee. In addition, 10 lectures per year covering various ED administration and workflow would be taken by faculty. In addition, students should attend accredited scientific meetings (CME, symposia, and conferences) once or twice a year.

PG students shall be required to participate in the teaching and training program of Undergraduate students, emergency medicine technicians and interns.

A post-graduate student of Emergency Medicine will do at least one of the following to make him/her eligible to appear in his/her final examination:

a. Poster presentation at a National/Zonal/State conference of his/her speciality;

b. Podium presentation at a National/Zonal/State conference of his/her speciality;

c. Have one research paper published/accepted for publication in journal of his/her speciality as first author.

Basic structured courses for cardiac life support, trauma life support, airway management, research methodology, suturing and splinting, to be completed by end of first year and mechanical ventilation, pediatric life support, neonatal life support, nerve block needs to be completed by the postgraduate by the end of fifth semester.

ASSESSMENT

The evaluation of the students in the M.D. Emergency Medicine course is continuous and comprehensive, aimed at assessing their knowledge, skills, and attitudes. It includes:

FORMATIVE ASSESSMENT

Formative assessment should be continual and should assess medical knowledge, patient care, procedural & academic skills, interpersonal skills, professionalism, self-directed learning and ability to practice in the system.

- Monthly observation proforma's captured in the Logbook.
- End Semester Internal assessment by theory exam

SUMMATIVE ASSESSMENT

Post graduate Examination shall be as per the guidelines given in PGMER-23.

The final examination consists of following parts:

- Thesis
- Theory evaluation

- Practical/Clinical and Viva-Voce

1. Thesis/Dissertation

Every post graduate student shall carry out work on an assigned research project under the guidance of a recognised Post Graduate Teacher, the result of which shall be written up and submitted in the form of a Thesis. Work for writing the Thesis is aimed at contributing to the development of a spirit of enquiry, besides exposing the post graduate student to the techniques of research, critical analysis, acquaintance with the latest advances in medical science and the manner of identifying and consulting available literature.

2. Theory:

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.

3. Scheme of Clinical / Practical Examination(280 marks + 20 marks for Thesis/Dissertation)

i) Objective Structured Clinical Examination including X-rays, ABG, CT, MRI and ECGs (40 marks)

ii) Clinical Cases: This would include semi-long cases and short cases related to various clinical disciplines (Total 150 marks):

- Medical emergencies – One semi-long case
- Surgical emergencies – One semi-long case
- Trauma – One semi-long case
- Pediatrics – One semi-long case
- Obst./Gynae – One short case
- ENT – One short case
- Ophthalmology – One short case
- Dermatology – One short case

iii) Demonstration of skills (90 marks):

- Airway stabilization
- Cardiac Life support skills
- Communication
- Suturing and fracture splinting
- Pediatric life support skills
- Point of care ultrasound skills
- Trauma Life support skills

iv) Thesis/Dissertation (20 marks)

4. Scheme of Viva-Voce

iv) Viva Voce (100 marks):

- Instruments and Drugs
- Clinical Problems
- Research, Publication & Conference Presentation
- Pedagogy

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List of recommended text books:

- Rosen's Emergency Medicine
- Tintinalli's Emergency Medicine: A Comprehensive Study Guide
- Principles of Pediatric & Neonatal Emergencies by Piyush Gupta
- Goldfrank's Toxicologic Emergencies
- Clinical Procedures in Emergency Medicine and Acute Care by Roberts and Hedges' Fliesher and Ludwig's Pediatric Emergency Medicine
- Ma & Mateer's Emergency Ultrasound
- Textbook of Critical Care by Mitchell P. Fink, Jean-Louis Vincent, Frederick A. Moore
- Clinical Emergency Radiology by J. Christian Fox
- Geriatric Emergency Medicine by Christian Nickel, Abdelouahab Bellou, Simon Conroy Stephens
- Current diagnosis and Treatment Emergency Medicine by C. Keith Stone, Roger Humphries Symptom to Diagnosis: An Evidence Based Guide by Scott Stern, Adam Cifu

List of recommended Journals

- Annals of Emergency Medicine
- Journal of emergency medicine
- American journal of emergency medicine
- Emergency Medicine Journal
- Journal of Emergencies, Trauma and Shock
- Western Journal of emergency medicine
- Resuscitation
- Academic Emergency Medicine
- Shock
- Wilderness and environmental medicine
- Prehospital Emergency Care

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ANNEXURES

Blueprint

Yenepoya Medical College
Department of Emergency Medicine
MD Emergency Medicine - Theory Examination

The exam consists of four papers, each carrying 100 marks. Weightage is distributed equally across major domains of Emergency Medicine.

Each paper carries 100 marks. Weightage (%) corresponds to Marks Allotted (1% = 1 mark).

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

Sl. No.	Topics	Weightage (%)	Marks Allotted	No. of Questions
1	Anatomy	20	20	2
2	Physiology	10	10	1
3	Biochemistry	10	10	1
4	Microbiology	20	20	2
5	Pathology	20	20	2
6	Research methodology & Statistics	20	20	2
Total		**100**	**100**	**10**

Total = 100% | 100 marks

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

Sl. No.	Topics	Weightage (%)	Marks Allotted	No. of Questions
1	Medical emergencies	30	30	3
2	Anaesthesia & Resuscitation	20	20	2
3	Radiology & Imaging	20	20	2
4	Toxicology	20	20	2
5	Emergencies in Dermatology & Psychiatry	10	10	1
Total		**100**	**100**	**10**

Total = 100% | 100 marks

2. **Paper III – Emergency Surgical Specialties (Surgical emergencies, Trauma, Orthopedics, Eye, ENT)**

Sl. No.	Topics	Weightage (%)	Marks Allotted	No. of Questions
1	Surgical emergencies	20	20	2
2	Trauma	20	20	2
3	Orthopedics	20	20	2
4	Eye	20	20	2
5	ENT	20	20	2
Total		**100**	**100**	**10**

Total = 100% | 100 marks

Paper IV – Recent Advances, Pre-hospital Care & Administrative Aspects (Recent Advances in EM, Pre hospital care, Pediatrics, Obstetrics, Disaster medicine, Forensic, ED administration, Medico-legal aspects

Sl. No.	Topics	Weightage (%)	Marks Allotted	No. of Questions
1	Recent Advances in Emergency Medicine	20	20	2
2	Pre-hospital care & Disaster medicine	20	20	2
3	Pediatrics & Obstetrics	30	30	3
4	Forensic & Medico-legal aspects	20	20	2
5	ED Administration	10	10	1
Total		**100**	**100**	**10**

Total = 100% | 100 marks

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Yenepoya Medical College

Department of Emergency Medicine
MD Emergency Medicine - Model Question Papers

Paper I

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

Time: 3 Hours **Maximum Marks: 100**

Note: Answer all questions.
Each question carries 10 marks.
Draw neat labeled diagrams wherever necessary.

1. Describe the applied anatomy of the airway relevant to emergency airway management.

2. Explain the pathophysiology of shock. Classify and discuss distributive shock in detail.

3. Discuss the role of sodium, potassium, and calcium disturbances in emergency presentations.

4. Explain the mechanism of action and adverse effects of commonly used sedatives in the Emergency Department.

5. Discuss the microbiological basis of sepsis. How does it influence antibiotic choice in the Emergency room?

6. Describe the biochemical basis of lactic acidosis and its significance in critically ill patients.

7. Explain the coagulation cascade. Discuss how coagulopathy presents in trauma patients.

8. Outline the pharmacological management of status epilepticus, including drug choices and sequence.

9. Discuss the role of biomarkers (troponin, D-dimer, BNP) in emergency diagnosis and decision-making.

10. Explain the immunological basis of anaphylaxis and outline the emergency management.

Paper II

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

Time: 3 Hours **Maximum Marks: 100**

Note: Answer all questions.
Each question carries 10 marks.
Draw neat labeled diagrams wherever necessary.

1. A 55-year-old man presents with acute chest pain. Discuss the differential diagnosis and initial management.

2. Describe the recognition and management of acute ischemic stroke in the emergency setting.

3. Discuss the primary survey and resuscitation in a polytrauma patient.

4. Outline the diagnosis and emergency management of acute abdomen.

5. Discuss the initial management of organophosphorus poisoning.

6. Describe the approach to a child with febrile seizures in the emergency department.

7. Outline the recognition and management of postpartum hemorrhage.

8. Discuss the principles of fluid resuscitation in burns patients.

9. Describe the recognition and management of acute severe asthma.

10. Explain the approach and management of acute kidney injury in the emergency department.

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Paper III

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

Time: 3 Hours **Maximum Marks: 100**

Note: Answer all questions.
Each question carries 10 marks.
Draw neat labeled diagrams wherever necessary.

1. Discuss the indications, technique, and complications of rapid sequence intubation in the emergency room.

2. Explain ventilator modes commonly used in emergency and critical care settings.

3. Outline the approach to pain management in trauma patients, including pharmacological and regional techniques.

4. Discuss the role of ultrasound in emergency and critical care medicine.

5. Explain the principles of acid-base interpretation in emergency patients.

6. Describe the recognition and management of sepsis in the Emergency Department.

7. Discuss the indications, technique, and complications of central venous catheterization.

8. Outline the use of point-of-care diagnostics in acute cardiac emergencies.

9. Explain the pathophysiology and management of acute respiratory distress syndrome (ARDS).

10. Describe the use of procedural sedation in the emergency room, including monitoring and safety aspects.

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Paper IV

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

Time: 3 Hours **Maximum Marks: 100**

Note: Answer all questions.
Each question carries 10 marks.
Draw neat labeled diagrams wherever necessary.

1. Define disaster. Describe the phases of disaster management with examples.

2. Discuss the structure and role of pre-hospital emergency medical services (EMS) in India.

3. Explain triage in mass casualty incidents. Illustrate with START triage system.

4. Discuss ethical dilemmas commonly faced in the Emergency Department.

5. Outline the medico-legal issues in managing road traffic accidents in the ED.

6. Describe the principles of Good Clinical Practice (GCP) in emergency research.

7. Explain recent advances in cardiac arrest management, including extracorporeal CPR (E-CPR).

8. Discuss the role of simulation-based training in Emergency Medicine.

9. Explain occupational hazards and stress management strategies for emergency physicians.

10. Discuss the importance of health informatics and artificial intelligence in Emergency Medicine.

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Date:

Yenepoya Medical College Hospital
Direct Observational of procedural Skills (DOPS) form
Department of Emergency Medicine

PG Name & Year:

<table>
<tr><td>Procedural skills</td><td colspan="4">Procedure and setting</td></tr>
<tr><td>Degree of difficulty</td><td>☐ Low
☐ Moderate
☐ High</td><td colspan="3">Conducted:
☐ On a patient
☐ During simulation exercise</td></tr>
<tr><td>Degree of reason for any added degree of difficulty i.e obesity</td><td></td><td colspan="3">Ultrasound Used?
☐ Yes ☐ No</td></tr>
<tr><td>Time pressure</td><td>☐ Elective
☐ Critical</td><td>Number of times procedure has been previously completed by trainee</td><td colspan="2"></td></tr>
<tr><td rowspan="2">Assessment</td><td colspan="2">To ensure safe, efficient, and effective care on this aspect:</td><td colspan="2"></td></tr>
<tr><td>Significant input required from assessor</td><td>Significant guidance provided from assessor</td><td>Able to manage independently</td><td>Unable to assess</td></tr>
<tr><td>Clinical knowledge</td><td colspan="2">Demonstrate relevant knowledge and understanding of the procedure including indications</td><td colspan="2">UTA</td></tr>
</table>

	,contraindications, anatomy, technique, side effects and complications. 1 2 3 | 4 5 6 | 7 8 9	
Consent	Explains procedure to the patient and obtains valid and adequate informed to the consent 1 2 3 | 4 5 6 | 7 8 9	UTA
Preparation	Prepares appropriately for the procedures , ensures assisting staff are present, check equipment and prepare drugs , ensure clinically indicated monitoring , arranges workspace ergonomically 1 2 3 | 4 5 6 | 7 8 9	UTA
Vigilance	Demonstrates situational awareness though constant clinical and electronic monitoring. Maintains focus on the patient and avoids distraction 1 2 3 | 4 5 6 | 7 8 9	UTA
Infection control	Demonstrates aseptic / clean technique and standard (universal) precaution 1 2 3 | 4 5 6 | 7 8 9	UTA
Technical ability	Demonstrates manual dexterity and confidence , demonstrates correct procedural sequence with minimal hesitation and unnecessary actions 1 2 3 | 4 5 6 | 7 8 9	UTA
Patient interaction	Provides reassurance and checks for discomfort, concerns and complications 1 2 3 | 4 5 6 | 7 8 9	UTA
Insight	Knows when to seek assistance , abandon procedure or arrange alternative care to prevent harm to patient 1 2 3 | 4 5 6 | 7 8 9	UTA

Documentation / post procedure management	Documents the episode including problems and complications , arranges and documents plans for post procedural care 1 2 3 | 4 5 6 | 7 8 9	UTA
Team interaction	Provides clear and concise instructions to assisting staff and conveys relevant information concerning the patient and plans to team members 1 2 3 | 4 5 6 | 7 8 9	UTA
Was the procedure completed satisfactorily?	☐ Yes ☐ No	
Please note the focus of discussion during this assessment		

Name & Sign of the faculty

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Emergency Medicine Workplace Base Observation

Clinical Skills

Name of student:
Semester of training:
Month of posting:
Modality Posted:
Leaves taken: **authorized /unauthorized** **Reporting time:**

		Score 0 Trainee did not perform	**Score1** Trainee performed; senior clinician input required for majority of shift	**Score2** Trainee performed; senior clinician input required for minority of shift	**Score3** Trainee performed independently; senior clinician observed and advised for troubleshooting	**Score4** Trainee performed independently; senior clinician required to check	**Score5** Trainee performed independently at Senior resident level
1	History Taking From patient and/or Collateral sources						
2	Physical Examination Presence or absence of signs, structured examination						
3	Clinical Synthesis Appropriate, prioritized differential diagnosis, investigation approach and/or management plan						
4	Shared Decision Making with Patient/Care						
5	Communication Clear, collaborative, Culturally safe						
6	Professionalism Competent, caring and hones						

7	Organization and Efficiency Organization and prioritization of assessment or tasks. Performs Assessment or tasks in a timely manner						
	Total(7*5=35)						
	Logbook (5)						
	Total 40 Marks						
							Signature of faculty

Resident's percept of exercise:

Overall faculty assessment: Area for development and agreed learning goals for next assessment:

LOG BOOK

c. Post-graduate students of Emergency Medicine shall maintain a dynamic e-log book which needs to be updated on a weekly basis about the work being carried out by them and the training programme undergone during the period of training.It shall be the duty of the Post- graduate guide imparting the training to assess and authenticate monthly the record (e-Log) books.

Monthly observation Proforma

- Residents' medical knowledge, patient care, procedural & academic skills, interpersonal skills, professionalism, self-directed learning and ability to practice in the system will be assessed continuously on the ED floor.
- Attendance (number of authorized leaves and number of absences) and reporting time at work will be recorded.
- Directly observed procedural skills will be assessed (Performa in Annexure I)
- A Shift based work placed based assessment will be done daily (Performa in Annexure II)
- Workplace based assessment of clinical skills will be assessed (Performa in Annexure III)

Total procedures(consolidated)

S. No	Date	Procedure	Number assisted	Number performed	Comments	Faculty signature with date

Academic activities (consolidated –within department/peripheral posting/outside department/outside institution)

- Journal Club Presentation performance
- Thesis review Presentation & performance
- Seminar Presentation
- Presentation in conferences & CME
- Publications & Posters
- Mortality & Morbidity audit

S.No	Date	Academic activity	Place	Comments	Faculty signature

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Rotation:

Schedule for three years of MD Emergency Medicine postings:

Year	Rotation	Duration
First Year	Emergency	8 months
	Paediatric Emergency	1 month
	Dermatology	2 weeks
	Forensic Medicine	2 weeks
	Cardiology	2 weeks
	Wound care and Procedural sedation (In ED Dressing	2 weeks
	Orthopedics (in ED)	2 weeks
	Medicine	2 weeks
	Emergency	5 months
	Critical Care	1 month
	OBG	1 month
Second Year	Orthopaedics (in ward and	2 weeks
	District residency	3 months
	Surgery (in ward and minor	1 month
	Ophthalmology	2 weeks
Third Year	Emergency	7 months
	Radiology (CT, MRI,	2 weeks
	Psychiatry	2 weeks
	NICU	2 weeks
	PICU	2 weeks
	Neurology	2 weeks
	ENT	2 weeks
	Orthopedics (in ED)	2 weeks

	Paediatric Emergency	1 month
	Elective	2 weeks

Electives

Name of Block:	Block 2
Name of Elective	Experience in the Emergency Medicine department
Location of hospital lab or research facility	Emergency Medicine department
Name of internal preceptor(s)	Postgraduate in Emergency Medicine Staff of Emergency Medicine
Name of external preceptor (if any)	Nil
Learning objectives of the elective	To understand the ER functioning, the time taken for assessment and management of patients and to learn the art of initial assessment and stabilizing the patient
Number of students that can be accommodated in this elective	Upto 15
Prerequisites for the elective	-
Learning resources for students	Faculty and Text book including Manipal manual and Tentinallis
List of activities in which the student will participate	Passionate learning
Portfolio entries required	Yes
Log book entry required	Yes

Assessment	DOPS, OSCE, MCQ
Other comments	1 week duration