MAHATMA GANDHI UNIVERSITY
of
MEDICAL SCIENCES & TECHNOLOGY
JAIPUR

Syllabus

MD – Emergency medicine

(3 Years Post Graduate Degree Course)

Notice

1. Amendment made by the Medical Council of India in Rules/Regulations of Post Graduate Medical Courses shall automatically apply to the Rules/Regulations of the Mahatma Gandhi University of Medical Sciences & Technology (MGUMST), Jaipur.

2. The University reserves the right to make changes in the syllabus/books/guidelines, fees-structure or any other information at any time without prior notice. The decision of the University shall be binding on all.

3. The Jurisdiction of all court cases shall be Jaipur Bench of Hon'ble Rajasthan High Court only.

RULES & REGULATIONS

MD EMERGENCY MEDICINE
(3 Years Post Graduate degree course)

TITLE OF THE COURSE:
It shall be called Doctor of Medicine.

ELIGIBILITY FOR ADMISSION:
No candidate of any category (including NRI quota) shall be eligible for admission to MD/MS courses, if he or she has not qualified NEET PG (MD/MS) conducted by National Board of Examinations or any other Authority appointed by the Government of India for the purpose.

(1) General Seats
(a) Every student, selected for admission to postgraduate medical course shall possess recognized MBBS degree or equivalent qualification and should have obtained permanent Registration with the Medical Council of India, or any of the State Medical Councils or should obtain the same within one month from the date of his/her admission, failing which the admission of the candidate shall be cancelled;
(b) Completed satisfactorily one year's rotatory internship or would be completing the same before the date announced by the University for that specific year as per MCI rules after passing 3rd professional MBBS Part II Examination satisfactorily.
(c) In the case of a foreign national, the Medical Council of India may, on payment of the prescribed fee for registration, grant temporary registration for the duration of the postgraduate training restricted to the medical college/institution to which he/she is admitted for the time being exclusively for postgraduate studies; however temporary registration to such foreign national shall be subject to the condition that such person is duly registered as medical practitioner in his/her own country from which he has obtained his basic medical qualification and that his degree is recognized by the corresponding Medical Council or concerned authority.

(2) NRI Seats
(a) Students from other countries should possess passport, visa and exchange permits valid for the period of their course of study in this Institution and should also observe the regulations of both central and state governments regarding residential permits and obtain no-objection certificate from the same.
(b) The candidate should have a provisional "Student Visa". If he comes on any other visa and is selected for admission, he will have to first obtain a student visa from his country and then only he will be allowed to join the course. Therefore it is imperative to obtain provisional student visa before coming for Counseling.
(c) This clause is applicable to NRI/Foreign Students only.

CRITERIA FOR SELECTION FOR ADMISSION:

(1) NRI Quota
15% of the total seats are earmarked for Foreign National / PIO / OCI/ NRI / Ward of NRI/NRI sponsored candidates who would be admitted on the basis of merit obtained in NEET PG or any other criteria laid down by Central Government/MCI.

(2) Remaining Seats (Other than NRI Quota Seats)

(a) Admissions to the remaining 85% of the seats shall be made on the basis of the merit obtained at the NEET conducted by the National Board of Examinations or any other Authority appointed by the Government of India for the purpose.
(b) The admission policy may be changed according to the law prevailing at the time of admission.

COUNSELING/INTERVIEW:

(1) Candidates in order of merit will be called for Counseling/Interview and for verification of original documents and identity by personal appearance.

(2) Counseling will be performed and the placement will be done on merit-cum-choice basis by the Admission Board appointed by the Government of Rajasthan.

RESERVATION:

Reservation shall be applicable as per policy of the State Government in terms of scheduled caste, scheduled tribe, back ward class, special back ward class, women and handicapped persons.

ELIGIBILITY AND ENROLMENT:

Every candidate who is admitted to MD/MS course in Mahatma Gandhi Medical College & Hospital shall be required to get himself/herself enrolled and registered with the Mahatma Gandhi University of Medical Sciences & Technology after paying the prescribed eligibility and enrolment fees.

The candidate shall have to submit application to the MGUMST for the enrolment/eligibility along with the following original documents with the prescribed fees (upto November 30 of the year of admission without late fees and upto December 31 of the year of admission with late fees) –

(a) MBBS pass Marks sheet/Degree certificate issued by the University (Ist MBBS to Final MBBS)

(b) Certificate regarding the recognition of medical college by the Medical Council of India.

(c) Completion of the Rotatory Internship certificate from a recognized college.

(d) Migration certificate issued by the concerned University.

(e) Date of Birth Certificate

(f) Certificate regarding registration with Rajasthan Medical Council / Medical Council of India / Other State Medical Council.

REGISTRATION

Every candidate who is admitted to MD/MS course in Mahatma Gandhi Medical College & Hospital shall be required to get himself/herself registered with the Mahatma Gandhi University of Medical Sciences & Technology after paying the prescribed registration fees.

The candidate shall have to submit an application to the MGUMST for registration with the prescribed fees (upto November 30 of the year of admission without late fees upto December 31 of the year of admission with late fees).

DURATION OF COURSE:

The course shall be of 3 years duration from the date of commencement of academic session.

PERIOD OF TRAINING:

The period of training for obtaining Post graduate degrees (MD/MS) shall be three completed years including the period of examination.

MIGRATION:

No application for migration to other Medical Colleges will be entertained from the students already admitted to the MD/MS course at this Institute.

METHODS OF TRAINING FOR MD/MS:

Method of training for MD/MS courses shall be as laid down by the Medical Council of India.

ONLINE COURSE IN RESEARCH METHODS

i. All postgraduate students shall complete an online course in Research Methods to be conducted by an Institute(s) that may be designated by the Medical Council of India by way of public notice, including on its website and by Circular to all Medical Colleges. The students shall have to register on the portal of the designated institution or any other institute as indicated in the public notice.
ii. The students have to complete the course by the end of their 2nd semester.
iii. The online certificate generated on successful completion of the course and examination thereafter, will be taken as proof of completion of this course
iv. The successful completion of the online research methods course with proof of its completion shall be essential before the candidate is allowed to appear for the final examination of the respective postgraduate course.
v. This requirement will be applicable for all postgraduate students admitted from the academic year 2019-20 onwards

ATTENDANCE, PROGRESS AND CONDUCT:

(1) Attendance:

(a) 80% attendance in each course is compulsory. Any one failing to achieve this, shall not be allowed to appear in the University examination.

(b) A candidate pursuing MD/MS course shall reside in the campus and work in the respective department of the institution for the full period as a full time student. No candidate is permitted to run a clinic/work in clinic/laboratory/ nursing home while studying postgraduate course. No candidate shall join any other course of study or appear for any other examination conducted by this university or any other university in India or abroad during the period of registration. Each year shall be taken as a unit for the purpose of calculating attendance.

(c) Every candidate shall attend symposia, seminars, conferences, journal review meetings, grand rounds, CPC, CCR, case presentation, clinics and lectures during each year as prescribed by the department and not absent himself / herself from work without valid reasons. Candidates should not be absent continuously as the course is a full time one.

(2) Monitoring Progress of Studies- Work diary/Log Book:

(a) Every candidate shall maintain a work diary in which his/her participation in the entire training program conducted by the department such as reviews, seminars, etc. has to be chronologically entered.

(b) The work scrutinized and certified by the Head of the Department and Head of the Institution is to be presented in the University practical/clinical examination.

(3) Periodic tests:

There shall be periodic tests as prescribed by the Medical Council of India and/ or the Board of Management of the University, tests shall include written papers, practical/clinical and viva voce.

(4) Records:

Records and marks obtained in tests will be maintained by the Head of the Department and will be made available to the University when called for.

THESIS:

(1) Every candidate pursuing MD/MS degree course is required to carry out work on research project under the guidance of a recognized post graduate teacher. Then such a work shall be submitted in the form of a Thesis.

(2) The Thesis is aimed to train a postgraduate student in research methods & techniques.

(3) It includes identification of a problem, formulation of a hypothesis, designing of a study, getting acquainted with recent advances, review of literature, collection of data, critical analysis, comparison of results and drawing conclusions.

(4) Every candidate shall submit to the Registrar of the University in the prescribed format a Plan of Thesis containing particulars of proposed Thesis work within six months of the date of commencement of the course on or before the dates notified by the University.

(5) The Plan of Thesis shall be sent through proper channel.

(6) Thesis topic and plan shall be approved by the Institutional Ethics Committee before sending the same to the University for registration.

(7) Synopsis will be reviewed and the Thesis topic will be registered by the University.

(8) No change in the thesis topic or guide shall be made without prior notice and permission from the University.

(9) The Guide, Head of the Department and head of the institution shall certify the thesis. Three printed copies and one soft copy of the thesis thus prepared shall be submitted by the candidate to the Principal. While retaining the soft copy in his office, the Principal shall send the three printed copies of the thesis to the Registrar six months before MD/MS University Examinations. Examiners appointed by the University shall evaluate the thesis. Approval of Thesis at least by two examiners is an essential pre-condition for a candidate to appear in the University Examination.

(10) Guide: The academic qualification and teaching experience required for recognition by this University as a guide for thesis work is as laid down by Medical Council of India/Mahatma Gandhi University of Medical Sciences & Technology, Jaipur.

(11) Co-guide: A co-guide may be included provided the work requires substantial contribution from a sister department or from another institution recognized for teaching/training by Mahatma Gandhi University of Medical Sciences & Technology, Jaipur/Medical Council of India. The co-guide shall be a recognized postgraduate teacher.

(12) Change of guide: In the event of a registered guide leaving the college for any reason or in the event of death of guide, guide may be changed with prior permission from the University.

ELIGIBILITY TO APPEAR FOR UNIVERSITY EXAMINATION:

The following requirements shall be fulfilled by every candidate to become eligible to appear for the final examination:

(1) Attendance: Every candidate shall have fulfilled the requirement of 80% attendance prescribed by the University during each academic year of the postgraduate course. (as per MCI rules)

(2) Progress and Conduct: Every candidate shall have participated in seminars, journal review meetings, symposia, conferences, case presentations, clinics and didactic lectures during each year as designed by the department.

(3) Work diary and Logbook: Every candidate shall maintain a work diary for recording his/her participation in the training program conducted in the department. The work diary and logbook shall be verified and certified by the Department Head and Head of the Institution.

(4) Every student would be required to present one poster presentation, to read one paper at a National/State Conference and to have one research paper which should be published/accepted for publication/ sent for publication to an indexed journal during the period of his/her post graduate studies so as to make him/her eligible to appear at the Post Graduate Degree Examination.

(5) Every student would be required to appear in and qualify the Pre-University Post graduate degree Mock examination. Post graduate students who fail to appear in or do not qualify the Pre-University Post graduate degree Mock examination shall not be permitted to appear in the final examination of the University.

The certification of satisfactory progress by the Head of the Department/ Institution shall be based on (1), (2), (3), (4) and (5) criteria mentioned above.

ASSESSMENT:

(1) The progress of work of the candidates shall be assessed periodically by the respective guides and report submitted to the Head of the Institution through the Head of the Department at the end of every six months. The assessment report may also be conveyed in writing to the candidate who may also be advised of his/her shortcomings, if any.

(2) In case the report indicate that a candidate is incapable of continuing to do the work of the desired standard and complete it within the prescribed period, the Head of the Institution may recommend cancellation of his/her registration at any time to the University.

(3) Formative Assessment:

(a) General Principles

i. The assessment is valid, objective, constructive and reliable.

ii. It covers cognitive, psychomotor and affective domains.

iii. Formative, continuing and summative (final) assessment is also conducted.

iv. Thesis is also assessed separately.

(b) Internal Assessment

i. The internal assessment is continuous as well as periodical. The former is based on the feedback from the senior residents and the consultants concerned. Assessment is held periodically.

ii. Internal assessment will not count towards pass/fail at the end of the program, but will provide feedback to the candidate.

iii. The performance of the Postgraduate student during the training period should be monitored throughout the course and duly recorded in the log books as evidence of the ability and daily work of the student.

iv. Marks should be allotted out of 100 as under

1) Personal Attributes - 20 marks

a. Behavior and Emotional Stability: Dependable, disciplined, dedicated, stable in emergency situations, shows positive approach.

b. Motivation and Initiative: Takes on responsibility, innovative, enterprising, does not shirk duties or leave any work pending.

c. Honesty and Integrity: Truthful, admits mistakes, does not cook up information, has ethical conduct, exhibits good moral values, loyal to the institution.

2) Clinical Work - 20 marks

a Availability: Punctual, available continuously on duty, responds promptly on calls and takes proper permission for leave.

b Diligence: Dedicated, hardworking, does not shirk duties, leaves no work pending, does not sit idle, competent in clinical case work up and management.

c Academic Ability: Intelligent, shows sound knowledge and skills, participates adequately in academic activities and performs well in oral presentation and departmental tests.

d Clinical Performance: Proficient in clinical presentations and case discussion during rounds and OPD work up. Preparing Documents of the case history/examination and progress notes in the file (daily notes, round discussion, investigations and management) Skill of performing bed side procedures and handling emergencies.

3) Academic Activities - 20 marks

a. Performance during presentation at Journal club/ Seminar/Case discussion/Stat meeting and other academic sessions. Proficiency in skills as mentioned in job responsibilities.

4) End of term theory examination - 20 marks

a. End of term theory examination conducted at end of 1st, 2nd year and after 2 years 9 months.

5) End of term practical examination - 20 marks

a. End of term practical/oral examinations after 2 years 9 months.

b. Marks for personal attributes and clinical work should be given annually by all the consultants under whom the resident was posted during the year. Average of the three years should be put as the final marks out of 20.

c. Marks for academic activity should be given by the all consultants who have attended the session presented by the resident.

d. The Internal assessment should be presented to the Board of examiners for due consideration at the time of Final Examinations.

e. Yearly (end of 1st, 2nd & 3rd year) theory and practical examination will be conducted by internal examiners and each candidate will enter details of theory paper, cases allotted (2 long & 2 short) and viva.

f. Log book to be brought at the time of final practical examination.

APPOINTMENT OF EXAMINERS:

Appointment of paper setters, thesis evaluators, answer books evaluators and practical & viva voce examiners shall be made as per regulations of the Medical Council of India.

SCHEME OF EXAMINATION:

Scheme of examination in respect of all the subjects of MD/MS shall be as under :

(1) The examination for MD/MS shall be held at the end of three Academic Years.

(2) Examinations shall be organized on the basis of marking system.

(3) The period of training for obtaining MD/MS degrees shall be three completed years including the period of examination.

(4) The University shall conduct not more than two examinations in a year for any subject with an interval of not less than 4 months and not more than 6 months between the two examinations.

(5) The examinations shall consist of:

(a) Thesis :

i. Thesis shall be submitted at least six months before the main Theory examinations.

ii. The thesis shall be examined by a minimum of three examiners – one Internal and two External examiners who shall not be the examiners for Theory and Clinical/Practical.

iii. In departments where besides the two earmarked practical/clinical examiners no one else is a qualified P.G. teacher, in that case the Thesis shall be sent to the third external examiner who shall actually be in place of the internal examiner.

iv. Only on the acceptance of the thesis by any two examiners, the candidate shall be eligible to appear for the final examination.

v. A candidate whose thesis has been once approved by the examiners will not be required to submit the Thesis afresh, even if he/she fails in theory and/or practical of the examination of the same branch.

vi. In case the Thesis submitted by a candidate is rejected, he/she should be required to submit a fresh Thesis.

(b) Theory papers:

i. There shall be four theory papers.

ii. Out of these, one shall be of Basic Medical Sciences and one shall be of Recent Advances.

iii. Each theory paper examination shall be of three hours duration.

iv. Each theory paper shall carry maximum 100 marks.

v. The question papers shall be set by the External Examiners.

vi. There will be a set pattern of question papers.

Every question paper shall contain three questions. All the questions shall be compulsory, having no choice.

Question No. 1 shall be of long answer type carrying 20 marks.

Question No. 2 shall have two parts of 15 marks each. Each part will be required to be answered in detail.

Question No. 3 shall be of five short notes carrying 10 marks each.

vii. The answer books of theory paper examination shall be evaluated by two External and two internal examiners. Out of the four paper setters, the two paper setters will be given answer books pertaining to their papers and the answer books of the remaining two papers will be evaluated by two Internal Examiners. It will be decided by the President as to which paper is to be assigned to which Internal Examiner for evaluation.

viii. A candidate will be required to pass theory and practical examinations separately in terms of the governing provisions pertaining to the scheme of examination in the post graduate regulations. The examinee should obtain minimum 40% marks in each theory paper and not less than 50% marks cumulatively in all the four papers for degree examination to be cleared as "passed" at the said Degree examination.

(c) Clinical/ Practical & Oral examinations:

i. Clinical/Practical and Oral Examination of 400 marks will be conducted by at least four examiners, out of which two (50%) shall be External Examiners.

ii. A candidate will be required to secure at least 50% (viz. 200/400) marks in the Practical including clinical and viva voce examinations.

(6) If a candidate fails in one or more theory paper(s) or practical, he/she shall have to reappear in the whole examination i.e. in all theory papers as well as practical.

GRACE MARKS

No grace marks will be provided in MD/MS examinations.

REVALUATION / SCRUTINY:

No Revaluation shall be permitted in the MD/MS examinations. However, the student can apply for scrutiny of the answer books as per University Rules.

GUIDELINES FOR COMPETENCY BASED POSTGRADUATE TRAINING PROGRAMME FOR MD IN EMERGENCY MEDICINE

Preamble:
The purpose of PG education is to create specialists who would provide high quality health care and advance the cause of science through research & training.

The competency based training programme aims to produce a post-graduate student who after undergoing the required training should be able to deal effectively with the needs of the community and should be competent to handle all problems related to his/her specialty including recent advances. The student should also acquire skill in teaching of medical/para-medical students in the subject that he/she has received his/her training. He She should be aware of his/her limitations. The student is also expected to know the principles of research methodology and modes of accessing literature.

The purpose of this document is to provide teachers and learners illustrative guidelines to achieve defined outcomes through learning and assessment. This document was prepared by various subject-content specialists. The Reconciliation Board of the Academic Committee has attempted to render uniformity without compromise to purpose and content of the document. Compromise in purity of syntax has been made in order to preserve the purpose and content. This has necessitated retention of "domains of learning" under the heading "competencies".

SUBJECT SPECIFIC OBJECTIVES

The postgraduate training should enable the student to:

1. Practice efficiently emergency medicine specialty, backed by scientific knowledge including basic sciences and skills
2. Diagnose and manage majority of conditions in emergency medicine on the basis of clinical assessment, and appropriately selected and conducted investigations.
3. Exercise empathy and a caring attitude and maintain professional integrity, honesty and high ethical standards
4. Practice pre-hospital and in-hospital reception, resuscitation and management of undifferentiated urgent and emergency cases until discharge from the Emergency Department or transfer to the care of another physician.
5. Plan, develop and implement comprehensive prehospital and in hospital emergency systems
6. Plan and deliver comprehensive treatment using the principles of rational drug therapy
7. Manage emergencies efficiently by providing Basic Life Support (BLS) and Advanced Life Support (ALS), other interventions and invasive procedures in emergency situations
8. Demonstrate skills in documentation of individual case details as well as morbidity and mortality rate relevant to the assigned situation.
9. Identify social, economic, environmental, biological and emotional determinants of health in a given case, and take them into account while planning therapeutic, rehabilitative, preventive and pre-emptive measure/strategies.
10. Demonstrate competence in basic concepts of research methodology and clinical epidemiology; and be able to critically analyse relevant published research literature.
11. Be a motivated 'teacher'-keen to share knowledge and skills with a colleague or a junior, paramedic or any learner.

12. Develop skills as a self-directed learner, recognize continuing education needs; use appropriate learning resources in educational methods and techniques as applicable to the teaching and learning.
13. Be well versed with his medico-legal responsibilities
14. Organize and supervise the chosen/assigned health care services demonstrating adequate managerial skills in the clinic/hospital or the field situation.
15. Undertake audit, use information technology tools and carry out research - both basic and clinical, with the aim of publishing the work and presenting the work at scientific forums.

The intended outcome of a competency-based program is a consultant specialist who can provide quality health care to patients at a defined level of competency in different settings. i.e. pre- hospital, inpatient, intensive care at tertiary care as well as in the community.

No limit can be fixed and no fixed number of topics can be prescribed as course contents. The student is expected to know his subject in depth; however, emphasis should be on the diseases/health problems most prevalent in that area. Knowledge of recent advances and basic sciences as applicable to his/her specialty should get high priority. Competence in skills commensurate with the specialty (actual hands-on training) must be ensured.

SUBJECT SPECIFIC COMPETENCIES

A. **Cognitive domain**

By the end of the course, the student should have acquired knowledge (cognitive domain), professionalism (affective domain) and skills (psychomotor domain) as given below:

Basic Sciences

1. Basics of human anatomy as relevant to clinical practice e.g. surface anatomy of various viscera, neuro-anatomy, important structures/organs location in different anatomical locations in the body; common congenital anomalies.
2. Basic functioning of various organ-system, control of vital functions, patho-physiological alteration in diseased states, interpretation of symptoms and signs in relation to patho-physiology.
3. Pre-hospital and in-hospital reception, resuscitation and management of undifferentiated urgent and emergency cases until discharge from the Emergency Department or transfer to the care of another physician.
4. Core clinical procedural skills required in emergency medicine
5. Knowledge about pharmacokinetics and pharmaco-dynamics of the drugs used for the management of emergency and critically ill patients and various poisons with specific reference to different geographical and clinical settings, diagnosis and management.
6. Research Methodology and Studies, epidemiology and basic Biostatistics.
7. It also in the development of pre-hospital and in-hospital emergency medical systems.
8. Biochemical basis of various diseases including fluid and electrolyte disorders; Acid base disorders etc.
9. Recent advances in relevant basic science subjects.

Emergency Medicine:

1. Pathological abnormalities of life threatening to self-limiting and all ages, clinical manifestations, and of medical and surgical principles of management of a large variety of emergencies of pediatrics, adults and geriatrics, affecting any organ system.

2. Principles of triage, primary assessment, categorization, scrupulous medical history, clinical management including physical, mental and social aspects and documentation along with medico-legal formalities.
3. Efficiency in communication with patients, relatives, colleagues, health care providers, police, social services, mass media and general public with due considerations to patient's privacy and confidentiality.
4. Resuscitation and management of all undifferentiated urgent and emergency cases until discharge or transfer to another physician. BLS, ACLS, ATLS and PALS Emergency Medicine is an inter-disciplinary and interdependent other clinical disciplines.
5. Clinical Pharmacology - principles of drug therapy relevant to emergency medicine.
6. Cardio-vascular Emergencies - Approach to the patient with possible cardio-vascular diseases, heart failure, arrhythmia, hypertension, coronary artery disease, valvular heart disease, infective endocarditis, diseases of the myocardium.
7. Respiratory system Emergencies - approach to the patient with respiratory disease, disorders of ventilation, asthma, Dyspnea, hemoptysis, Pneumonia, pulmonary embolism, cystic fibrosis, obstructive sleep apnea syndrome and diseases of pleura and mediastinum
8. Renal and Genito urinary Emergencies - approach to the patient with renal diseases, acid-base disorders, acute kidney injury, obstructive uropathy and treatment of irreversible renal failure
9. Gastro-intestinal diseases - acid peptic disease, functional gastrointestinal disorders, diarrhea, irritable bowel syndrome, Nausea, vomiting and upper and lower G I bleeding.
10. Obstetrics and Gynaecological Emergencies: Abnormal uterine bleeding, emergency delivery, maternal emergencies after 20 weeks of pregnancy, pelvic inflammatory diseases, pelvic pain and abdominal pain in the nonpregnant female etc.
11. Endocrine and Metabolic disorders - principles of emergency management in DKA, Thyroid storm, Myxedema, metabolic encephalopathy, etc.
12. Pediatric emergencies – Sudden infant death syndrome, trauma in infant and children.
13. Infectious diseases – Sepsis, Malaria, Basic consideration in Infectious Diseases clinical syndromes, community acquired clinical syndromes, Nosocomial infections, Bacterial diseases - General consideration, diseases caused by gram - positive bacteria, diseases caused by gram - negative bacteria miscellaneous bacterial infections, Mycobacterial diseases, Spirochetal diseases, Rickettsia, Mycoplasma and Chlamydia, viral diseases, DNA viruses, DNA and RNA respiratory viruses, RNA viruses, fungal infections, protozoal and helminthic infections.
14. Neurology - approach to the patient with neurologic emergencies, headache, seizure disorders and epilepsy, coma, disorders of sleep, cerebrovascular diseases, motor neuron disease, meningitis and encephalitis, peripheral neuropathies, muscle diseases, diseases of neuromuscular transmission and autonomic disorders and their management and central nervous system procedures and devices, etc.
15. Toxicology – General management of poisoning and emergency management of all known and unknown poisons.
16. Trauma- Basics of trauma management in all age groups.
17. Environmental disaster and mass casualties' management.

SYLLABUS

- Basic Sciences
- Anaesthesia
- Cardiology
- Critical Care
- General medicine
- General Surgery
- Orthopaedics
- Paediatrics
- Obstetrics / Gynaecology
- Trauma
- Emergency Medicine Services
- Ophthalmology
- Otolaryngology
- Psychiatry
- Radiology
- Toxicology
- Environmental Illnesses

UPDATED

- Study of Incidence, Prevalence & risk factors in M.I
- Scorpion Envenomation

MANAGEMENT

- Venous Blood Gases in acute breathlessness
- IVC Collapsibility for assessment of Fluid response
- Efficiency of troponin T (Qualitative vs Quantitative)
- To select patients for PTCA
- Estimation of ET tube size using USG in difficult intubation
- Sepsis guidelines
- Thrombolysis during Cardiac arrest
- Therapeutic hypothermia
- Procedural sedation
- Neonatal advanced life support
- Wound closure

THREE YEAR CURRICULIM

36 Months

- 12 Months of rotation
- 24 Months of Emergency Department

Allied Specialty Training

Postings to other specialty departments and duration of postings are as under:

SPECIALITY	**DURATION**
ANAESTHESIA	15 DAYS

CARDIOLOGY	1 MONTH
CRITICAL CARE	1 MONTH
GENERAL MEDICINE	1 MONTH
PAEDIATRICS & NICU	1 MONTH
OBS & GYN	1 MONTH
RADIOLOGY	15 DAYS
NEUROLOGY	15 DAYS
PSYCHIATRY	15 DAYS
GENERAL SURGERY	1 MONTH
ENT	15 DAYS
OPHTHALMOLOGY	15 DAYS
TRAUMA	3 MONTH

TEACHING MODEL:

- Lectures
- Journal club
- Periodical exams
- Honing special skills in simulation lab
- BCLS/ACLS/ATLS/NALS/PALS
- Thesis

ANESTHESIA

TOPICS TO BE COVERED

1) Airway
2) Mechanical ventilation & non-invasive ventilatory support
3) Resuscitation
   - adults
   -neonates
   -children
   -issues in pregnancy
4) Monitoring the emergency patient
5) Acute pain management in adults
6) Pain management in infants & children
7) Adults with chronic pain
8) Procedural sedation & analgesia
9) Local & regional anaesthesia

PSYCOMOTOR SILLS:

1) Oral airway, Nasal airway
2) LMA placement
3) Endotracheal intubation/Rapid Sequence intubation
4) Bag- mask ventilation
5) Regional anesthesia
6) Arterial line

7) Procedural sedation

EVALUATION

CARDIOLOGY

TOPICS TO BE COVERED
1) Chest pain: Cardiac or not
2) Acute Coronary Syndromes: Acute Myocardial Infarction and Unstable Angina
3) Cardiogenic shock
4) Low probability Acute coronary syndrome
5) Syncope
6) Congestive Heart failure and Acute Pulmonary Oedema
7) Valvular Emergencies
8) The cardiomyopathies, Myocarditis, and Pericardial diseases
9) Thromboembolism
10) Systemic and pulmonary hypertension
11) Aortic Dissection and Related Aortic Syndromes
12) Aneurysm of the Aorta and Major Arteries

PSYCHOMOTE SKILLS
1) ACLS protocols
2) Transthoracic pacing
3) Transvenous pacing
4) CVS placement
5) Defibrillation
6) Cardioversion/SVT conversion
7) Bedside Echocardiography
8) Pericardiocentesis

EVALUATION

CRITICAL CARE
TOPICS TO BE COVERED
1) Dosages, indication and contraindication of pharmacologic interventions
    -shock
    -cardiac failure
    -dysrhythmias
    -sepsis
    -trauma
    -toxins
    -respiratory failure
    -hepatic failure
    -renal failure
    -neurologic illnesses
2) Ventilator
3) Diagnose and treat
    -shock
    - sepsis
    -fluid and electrolyte abnormalities
    -cardiac failure

-cardiac dysrhythmias
-renal failure
-hepatic failure
-toxicologic emergencies

PSYCHOMOTR SILLS

1) ACLS protocols
2) Endotracheal intubation
3) Ventilator management
4) CVS placement
5) Arterial line
6) Cardiac pacing
7) Thoracentesis
8) Thoracostomy tube placement

EVALUATION

OPHTHALMOOGY
TOPICS TO BE COVERED:

1) Normal ocular anatomy
2) Ocular exam
3) Approach to patient with
-red eye
-painful eye
-foreign body in the eye
-abrasion / laceration
4) Ocular trauma – blunt % penetrating
5) Chemical ocular injury
6) Acute or painful vision reduction loss
7) Painless vision reduction or loss
8) Ocular manifestation of systemic disease
9) Topical and systemic ophthalmologic medications

PHYCHOMOTOR SKILLS

1) Fundoscopy
2) Slit lamp exam
3) Eye irrigation
4) Intraocular pressure measurement
5) Lateral canthotomy

EVALUATION

EMERGENCY MEDICINE SERVICES
TOPICS TO BE COVERED

1) Prehospital care protocols
2) Medicolegal issues relating to EMS
3) Mass casualties
4) Disaster management

5) Common environmental, toxicologic and biological hazards encountered in the prehospital care setting

PSYCHOMOTOR SKILLS

1) ACLS protocols
2) ATLS protocols
3) NALS/PALS protocols
4) Peripheral iv placement
5) Defibrillation
6) Cardioversion
7) Drug administration
8) 10 placement

TOPICS TO BE COVERED

1) Approach to patient
   -fever
   -weakness
   -cyanosis
   -syncope
   -depressed consciousness and coma
   -confusion
   -seizures
   -dizziness and vertigo
   -headache
   -diplopia
   -hemoptysis
   -dyspnea
   -chest pain
   -abdominal pain
   -jaundice 722
   -nausea and vomiting
   -diarrhea
   -constipation
   -gastrointestinal bleeding
2) Pulmonary System
   - Asthma
   - Chronic Obstructive Pulmonary Disease
   - Upper respiratory Tract Infection
   - Pneumonia
   - Pleural Disease
3) Cardiac System
   -Acute Coronary Syndrome
   -Dysrhythmias
   - Implantable Cardiac Devices
   - Heart failure
   - Pericardial and Myocardial Disease
   - Infective Endocarditis and Valvular Heart Disease
4) Vascular System
   -Hypertension

- Aortic Dissection
-Abdominal Aortic Aneurysm
-Peripheral Arteriovascular Disease
- Pulmonary Embolism and deep vein Thrombosis

5) Gastrointestinal system
-Disorders of the liver and biliary tract
-Gastroenteritis

6) Genitourinary
-Renal failure

7) Neurology
-Stroke
-Seizure disorder
-Headache
-Delirium and dementia
-Brain and cranial nerve disorders
-Spinal cord disorders
-Peripheral nerve disorders
- Neuromuscular disorders
-Central nervous system infections

8) Immunologic and inflammatory
-SLE and Vasculitis
-Allergy, Hypersensitivity, Angioedema, and Anaphylaxis

9) Hematology and oncology
-Anemia, Polycythemia and White blood cell disorders
-Disorders of hemostasis
-Oncologic emergencies

10) Metabolism and Endocrinology
-Acid –Base disorders
-Electrolyte disorders
-Diabetes Mellitus and Disorders of glucose homeostasis
- Rhabdomyolysis
-Thyroid and adrenal disorders

11) Infectious diseases
-Bacteria
-Viral Illnesses
-HIV Infection and AIDS
-Parasitic infections
-Tick-Borne illnesses
-Tuberculosis
-Bone and Joint infections
-Skin and soft tissue infections
-Sepsis syndromes

PSYCHOMOTR SKILLS

1) Central Venous catheter
2) Arterial Line
3) Endotracheal intubation
4) Ventilator management
5) Paracentesis
6) Thoracentesis

GENERAL SURGERY

TOPICS TO BE COVERED

1) Approach to a patient with
   -Abdominal pain
   -constipation
   -hematemesis
   -PR bleed
2) PEPTIC Ulcer disease & Gastritis
3) Pancreatitis & Cholecystitis
4) Acute appendicitis
5) Diverticulitis
6) Bowel evaluation & preparation
7) Hernia in Adults
8) Anorectal disorders
9) Wound evaluation & preparation
10) Methods of wound closure
11) Trauma
   -Head injury
   - Chest trauma
   -Abdominal trauma
   -Genitourinary trauma
   -Penetrating injuries
   -Spinal trauma
   -Geriatric trauma
   -Peripheral Vascular injuries

PSYCHOMOTOR SKILLS

1) Diagnostic Peritoneal lavage
2) Cricothyroidotomy
3) Jet ventilation
4) CVC Placement
5) Tube thoracostomy
6) Wound closure/Laceration repair-suturing, staples and glue
7) G-tube replacement
8) Hernia reduction
9) Incision & drainage
10) Anorectal procedures – excision of thrombosed hemorrhoid, endoscopy and reduction of prolapsed rectum

11) Tracheostomy tube replacement
12) Burns dressing and fasciotomy
13) Appendicectomy
14) Exploratory laparotomy

ORTHOPEDICS
TOPICS TO BE COVERED

1) General principles of orthopedic injuries
2) Injuries to the hand and digits
3) Wrist injuries
4) Injuries to the elbow and forearm
5) Shoulder and humerus injuries
6) Pelvis injuries
7) Hip and femur injuries 1
8) Knee injuries
9) Leg Injuries
10) Ankle injuries
11) Foot injuries
12) Compartment syndrome
13) Musculoskeletal disorders

PSYCHOMOTOR SKILLS
1) Splinting
2) Fracture reduction
3) Arthrocentesis
4) Extensor tendon repair
5) Nail trephination
6) Joint relocation
7) Compartment pressure measurement
8) Regional anesthesia / nerve blocks
9) Foreign body removal

TRAUMA

TOPICS TO BE COVERED

1) Trauma in adults
2) Trauma in children
3) Geriatric trauma
4) Trauma in pregnancy
5) Head trauma in adults and children
6) Spine and spinal cord trauma
7) Trauma to the face
8) Trauma to the neck
9) Pulmonary trauma
10) Cardiac trauma
11) Abdominal trauma
12) Penetrating trauma to the extremities

PSYCHOMOTOR SKILLS

1) ATLS protocol
2) Diagnostic peritoneal lavage
3) Intubation
4) Cricothyroidotomy
5) Jet ventilation
6) Central venous catheter placement
7) Needle and tube thoracostomy
8) Wound closure laceration repair – suturing , staples, glue
9) Thoracotomy
10) Pericardiocentesis
11) Application of pelvic binder / stabilization
12) Splinting and reduction of fractures / dislocations
13) Measurement of compartment pressures
14) Urinary catheter placement
15) Bedside ultrasonography / FAST exam

EVALUATION

PEDIATRICS

TOPICS TO BE COVERED

1) Approach to the pediatric patient
2) Pediatric fever
3) Respiratory emergencies
4) Cardiac disorders
5) Gastrointestinal disorders
6) Infectious diarrheal disease and dehydration
7) Genitourinary and renal tract disorders
8) Neurologic disorders
9) Musculoskeletal disorders

PSYCHOMOTOR SKILLS

1) Umbilical vein catheterization
2) Peripheral iv
3) Intraosseous access
4) Central venous catheterization
5) Lumbar puncture
6) Intubation
7) Incision and drainage
8) Foreign body removal
9) SVT conversion
10) PALS protocols
11) Pediatric ATLS management

OBSTETRICS / GYNECOLOGY

TOPICS TO BE COVERED

1) General approach to the pregnant patient
2) Acute complications of pregnancy
3) Chronic medical illness during pregnancy
4) Drug therapy in pregnancy
5) Labour and Normal delivery and their complications
6) Emergencies after 20 weeks of pregnancy and the postpartum period
7) Ectopic pregnancy and emergencies in the 1st 20 weeks of pregnancy
8) Acute pelvic pain in non-pregnant patient
9) Vaginal bleeding in the non-pregnant patient
10) Vulvovaginitis
11) Pelvic inflammatory disease
12) Breast disorders
13) Complications of gynecologic procedures

PSYCHOMOTOR SKILLS

1) Perimortem C-section
2) Pelvic exam
3) Vaginal delivery
4) Bartholin's cyst incision & drainage and Word catheter placement

OTOLARYNGOGOGY

TOPICS TO BE COVERED

1) Normal anatomy
2) Otalgia
3) Tinnitus
4) Sudden hearing loss
5) Infections
6) Ear lacerations
7) Hematoma of the ear – aspiration and dressing
8) Foreign bodies
9) Cerumen impaction
10) Tympanic membrane perforation
11) Face and law emergencies
12) Epistaxis
13) Nasal fractures and septal hematoma
14) Sinusitis and rhinosinusitis
15) Trauma – head, face, neck, and teeth,
16) Facial nerve blocks
17) Life threatening infections of the head and neck
18) Orofacial
    - Pain
    - trauma

PSYCHOMOTOR SKILLS

1) Foreign body removal
2) Anterior and posterior nasal packing
3) Nasal cauterization
4) Drainage and dressing of auricular hematoma

5) Cricothyroidotomy / Tracheostomy
6) Incision and drainage of oropharyngeal abscesses
7) Direct, Indirect and Fiberoptic laryngoscope

EVALUATION

PSYCHIATRY

TOPICS TO BE COVERED

1) History taking
2) Thought disorders
3) Mood disorders
4) Anxiety disorders
5) Somatoform disorders
6) Factitious disorders and malingering
7) Suicide
8) Substance abuse

PSYCHOMOTOR SKILL

1) Appropriate indication and use of physical restrains

RADIOLOGY

TOPICS TO BE COVERED

1) Ultrasound
   - Cardiac scan
   - Abdominal scan (FAST, AAA, RUQ)
   - Pelvic scan
2) Computed tomography
3) Magnetic Resonance Imaging

PSYCHOMOTOR SKILLS

1) Bedside ultrasonography

EVALUATION

FORENSIC MEDICINE AND TOXICOLOGY

TOPICS TO BE COVERED

1) General approach to the poisoned patient
2) Acetaminophen
3) Aspirin and Nonsteroidal agents

4) Anticholinergics
5) Antidepressants
6) Cardiovascular drugs
7) Caustics
8) Cocaine and other sympathomimetics
9) Toxic alcohols
10) Hallucinogens
11) Heavy metals
12) Hydrocarbons
13) Inhaled toxins
14) Lithium
15) Antipsychotics
16) Opioids 17
17) Pesticides
18) Plants, mushrooms, and herbal medications
19) Sedative hypnotics
20) Forensic emergency medicine

PSYCHOMOTOR SKILLS

1) Gastric Lavage
2) Intubation
3) Central venous catheter placement
4) Decontamination

ENVIORNMENTAL ILLNESS
TOPICS TO BE COVERED

1) Frost bite
2) Accidental hypothermia
3) Heat illness
4) Electrical and Lightening injuries
5) Scuba diving and dysbarism
6) High altitude medicine
7) Drowning
8) Radiation injuries

PSYCHOMOTOR SKILLS

1) Peritoneal lavage / Bladder lavage
2) Active cooling methods

TEACHING AND LEARNING METHODS

Didactic lectures are of least importance; seminars, journal clubs, symposia, reviews, and guest lectures should get priority for acquiring theoretical knowledge. Bedside teaching, grand rounds, interactive group discussions and clinical demonstrations should be the hallmark of clinical/practical learning. Students should have hands-on training in performing various procedures and ability to interpret results of various tests/ investigations. Exposure to newer specialized diagnostic/therapeutic procedures should be given.

Importance should be attached to ward rounds especially in conjunction with emergency admissions. Supervision of work in outpatient department should cover the whole

range of work in the unit. It is particularly necessary to attend sub-specialty and symptom specific clinics. The development of independent skills is an important facet of postgraduate training. Joint meetings with physician colleagues, e.g. radiologists and pathologists play a valuable part in training.

The training techniques and approach should be based on principles of adult learning. It should provide opportunities initially for practicing skills in controlled or simulated situations. Repetitions would be necessary to become competent or proficient in a particular skill. The more realistic the learning situation, the more effective will be the learning. Clinical training should include measures for assessing competence in skills being taught and providing feedback on progress towards a satisfactory standard of performance. Time must be available for academic work and audit.

The following is a rough guideline to various teaching/learning activities that may be employed:

- Intradepartmental and interdepartmental conferences related to case discussions.
- Ward rounds along with emergency admissions.
- Attendance at sub-specialty and symptom specific clinics
- external rotation postings in departments like cardiology, neurology and other subspecialties
- Skills training
- Conferences, Seminars, Continuing Medical Education (CME) Programmes.
- Journal Club
- Research Presentation and review of research work.
- A postgraduate student of a postgraduate degree course in broad specialities/super specialities would be required to present one poster presentation, to read one paper at a national/state conference and to present one research paper which should be published/accepted for publication/sent for publication during the period of his postgraduate studies so as to make him eligible to appear at the postgraduate degree examination.
- Participation in workshops, conferences and presentation of papers etc.
- Maintenance of records. Log books should be maintained to record the work done which shall be checked and assessed periodically by the faculty members imparting the training.
- Postgraduate students shall be required to participate in the teaching and training programme of undergraduate students and interns.
- Department should encourage e-learning activities.

Illustration of Structured Training

Time Period	Description/ Levels	Content	Responsibilities
Ist Month	Orientation	Basic cognitive skills	– Combined duties – Supervised procedures
I Year	Beginners	procedural abilities Emergency & ward work	– History sheet writing – Clinical abilities, – Procedural abilities (PA), – Laboratory-diagnostic(All PI) – Communication skills - O, A, PA – BLS & ACLS, ATLS,PALS
IInd Year	Intermediate	Intermediate degree	– Independent duties

		of cognitive abilities Specialised procedural skills	– All procedures – Communication skills (PA, PI) – writing thesis – Teaching UGs
IIIrd Year		Special skills Intensive critical care	– Advance levels of independent duties – ICU, NICU, PICU – UG Teaching

- Specialized skills include Airway management, patients resuscitation (Trauma and non Trauma), intercostals drainage, central line cannulation, USG, endoscopy and bronchoscopy, defibrillation/ cardioversion etc.
- Levels of necessary cognitive skills are best illustrated by the following:

Basic: History taking, diagnosis/differential diagnosis, points for and against each diagnosis

Intermediate: Detailed discussion on differential diagnoses, analysis and detailed interpretation of clinical and laboratory data;

Advanced: Analysis of clinical information and synthesis of reasonable concepts including research ideas.

During the training program, patient safety is of paramount importance; therefore, skills are to be learnt initially on the models, later to be performed under supervision followed by performing independently; for this purpose, provision of skills laboratories in the medical colleges is mandatory.

ASSESSMENT

FORMATIVE ASSESSMENT, during the training program
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.

General Principles
Internal Assessment should be frequent, cover all domains of learning and used to provide feedback to improve learning; it should also cover professionalism and communication skills. The Internal Assessment should be conducted in theory and practical/clinical examination.

Quarterly assessment during the MD training should be based on:
1. Journal based / recent advances learning
2. Patient based /Laboratory or Skill based learning
3. Self directed learning and teaching
4. Departmental and interdepartmental learning activity
5. External and Outreach Activities / CMEs

The student to be assessed periodically as per categories listed in postgraduate student appraisal form **(Annexure I)**.

SUMMATIVE ASSESSMENT, namely, assessment at the end of training
The summative examination would be carried out as per the Rules given in POSTGRADUATE MEDICAL EDUCATION REGULATIONS, 2000.

The Post graduate examination shall be in three parts:

1. **Thesis**

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:**

There will be four theory papers, as below:

Paper I	:	Basic Medical Sciences (at the end of first year of training) (Applied Basic Sciences, General Emergency Medicine and Disaster Preparedness)
Paper II	:	Infectious Disease, HIV and AIDS, CVS, GIT, Critical Care, Paediatrics, Environmental Emergencies and Toxicology
Paper III	:	Respiratory Medicine, CNS, Surgical Emergencies, Obstetric and Gynaecological Emergencies, Surgical Specialities, Procedures
Paper IV	:	Nephrology, Endocrinology, Haematology, Oncology, Psychiatry, Dermatology, Occupational disease and Recent Advances.

3. **Clinical / Practical and Oral/viva voce Examination:**

The final clinical examination should include:

- cases pertaining to major systems
- stations for clinical, procedural and communication skills
- Log Book Records and day-to-day observation during the training
- Oral/viva voce examination shall be comprehensive enough to test the post graduate student's overall knowledge of the subject.

Recommended Reading

- **Text Books (latest edition)**

1. Emergency Medicine – Concept and Clinical Practice –VII Edition, Rosen Barkin
2. Principle and Practice of Emergency Medicine – George Schwartz - IV Edition
3. Emergency Medicine – Hamilton
4. Essential of Immediate Medical Care, II Edition – Dr. C. John Eaton
5. Clinical Management of Drug Overdose and Poisoning, - Haddad, Shannon, Winchester
6. Emergency Department Management Principles and Application - Richard F Salluzzo
7. The Five Minute Emergency Medicine Consult - Rosen Barkin – III Edison
8. Disaster Medicine - David E Hugan
9. Text Book of Paediatric Emergency Medicine – Fleisher – XVII Edition
10. Medical Emergencies In Children - Meherban Singh
11. Drugs Therapy in Emergency Medicine - Joseph P. Ornato/Edgar R. Gonalez
12. Hamilton Bailey's 1995 - Emergency Surgery - BW Ellis, 12th edition.
13. Davidson's Principles and Practices of Medicine
14. Clinical Medicine - Kumar & Clark
15. Harrisons Principles of Internal Medicine
16. Emergency Medicine – A comprehensive Study Guide – VII Edition. – Judith Tintinalli
17. Text Book of Critical Care – V Edition – Shoe maker

18. Gold frank's Toxicologic Emergencies – V Edition
19. Pediatric Emergency Medicine: A Comprehensive Study Guide by Gary R. Strange, William R. Ahrens, Steven Lelyveld, William Ahrens- McGraw-Hill Professional; 1st edition (August 1, 1995)
20. Emergencies in Obstetrics and Gynaecology (Oxford Handbooks in Emergency Medicine, Vol 8) by Lindsey Stevens, Anthony Kenney- Oxford University Press; (July 1, 1994)
21. Principles of Critical Care by Jesse B. Hall, Gregory A. Schmidt, Lawrence D. H. Wood- McGraw-Hill Professional Publishing; 2nd edition (January 1, 1998)
22. Critical Care by Joseph M. Civetta, Robert W. Taylor, Robert R. Kirby- Lippincott Williams &Wilkins; 3rd edition (January 15, 1997)
23. Emergency Medicine: Topics and Problems for Students by Jelinek- Blackwell Science Ltd; (September 28, 1999)
24. Accidents and Emergencies in Children (Oxford Handbooks in Emergency Medicine)

- **List of Journals**

1. Emergency Medical Journal BMJ
2. Journal of Trauma and Shock
3. Canadian journal of emergency medicine
4. Annals of Emergency Medicine
5. Paediatric Emergency Medicine journals
6. Journal of Accident and Emergency Medicine
7. The American journal of Emergency Medicine

Annexure - I

Postgraduate Students Appraisal Form
Pre / Para /Clinical Disciplines

Name of the Department/Unit :

Name of the PG Student :

Period of Training: **FROM.....TO.....**

Sr. No.	Particulars	Not satisfactory	Satisfactory	More Than Satisfactory	Remarks
		1 2 3	4 5 6	7 8 9	
1.	Journal based/recent advances learning				
2.	Patient based/Laboratory or Skill based learning				
3.	Self directed learning and teaching				
4.	Departmental and interdepartmental learning activity				
5.	External and Outreach Activities/CMEs				
6.	Thesis/Research work				
7.	Log Book Maintenance				

Publications Yes/ No

Remarks*_____
_____
_____

*REMARKS: Any significant positive or negative attributes of a postgraduate student to be mentioned. For score less than 4 in any category, remediation must be suggested. Individual feedback to postgraduate student is strongly recommended.

SIGNATURE OF ASSESSEE | SIGNATURE OF CONSULTANT | SIGNATURE OF HOD

MODEL PAPER

MD-……. **ABS,GEM&DP-I**

MD Examination Month, Year
EMERGENCY MEDICINE

Paper – I
Basic Medical Sciences
(Applied Basic Sciences, General Emergency Medicine and Disaster Preparedness)

Time : Three Hours
Maximum Marks : 100

Attempt all questions
All the parts of one question should be answered at one place in sequential order.
Draw diagrams wherever necessary

Q1. Subclavian vein-anatomy. Indications, contra indications, techniques and complications of subclavian vein cannulation. 20

Q2. Describe American Heart Association (AHA) algorithm for 2x15=30

a. bradycardia management in acute care setting

b. Define disaster. Describe about the components of the hospital emergency operations plan

Q2. Write short notes on the following: 5x10=50

a. Describe anatomy of larynx, relevant for endotracheal intubation.

b. Enumerate the difference of adult and paediatric airway.

c. Lung volumes and capacities.

d. ED approach to a patient with hyponatremia

e. ED disaster response including triage.

MODEL PAPER

MD-……. **ID,HIV&ACG,CC,PEE&T-II**

MD Examination Month, Year
EMERGENCY MEDICINE

Paper – II

Infectious Disease, HIV and AIDS, CVS, GIT, Critical Care, Paediatrics, Environmental Emergencies and Toxicology.

Time : Three Hours
Maximum Marks : 100

Attempt all questions
All the parts of one question should be answered at one place in sequential order.
Draw diagrams wherever necessary

Q1. ED approach to a patient with acute poisoning. Enumerate the common toxidromes.20

Q2. a. ECG changes and complications of Acute coronary Syndrome. 2x15=30

b. Management of ST-elevation MI in ED.

Q3. Write short notes on the following 5x10=50

a. E-FAST in ED

b. Non-invasive ventilation – indications, contraindications, modes, complications.

c. Basic principles of PALS

d. Classification and management of a burns patient.

e. Acute mountain sickness.

MODEL PAPER

MD-……. **RMCSEO&GESSP-III**

MD Examination Month, Year
EMERGENCY MEDICINE

Paper – III

Respiratory Medicine, CNS, Surgical Emergencies, Obstetric and Gynaecological Emergencies, Surgical Specialities, Procedures

Time : Three Hours
Maximum Marks : 100

Attempt all questions
All the parts of one question should be answered at one place in sequential order.
Draw diagrams wherever necessary

Q1. Enumerate emergencies in the first 20 weeks of pregnancy. Management of a patient with ectopic pregnancy. 20

Q2. a. ED approach to a patient with blunt trauma abdomen. 2x15=30

b. Tube thoracostomy – indications, technique and complications.

Q3. Write short notes on the following: 5x10=50

a. UGI bleed

b. Acute Kidney injury

c. Methods of wound closure.

d. Acute agitation in ED

e. Stroke mimics.

MODEL PAPER

MD-……. **NEHOPDOD&RA-IV**

MD Examination Month, Year
EMERGENCY MEDICINE

Paper – IV

Nephrology, Endocrinology, Haematology, Oncology, Psychiatry, Dermatology, Occupational Disease and Recent Advances

Time : Three Hours
Maximum Marks : 100

Attempt all questions
All the parts of one question should be answered at one place in sequential order.
Draw diagrams wherever necessary.

Q1. Describe the clinical features, diagnosis, laboratory studies and treatment of hyperglycaemic emergencies. 20

Q2. a. RUSH protocol 2x15=30

b. Mass casualty incidents.

Q3. Write short notes on: 5x10=50

a. ScVO2

b. Massive Blood Transfusion

c. Newer modes of mechanical ventilation

d. Delayed sequence intubation.

e. Chemical ocular injuries.