Diploma
in
Operation Theatre Technician Course

(Recognised by Govt. of NCT of Delhi, Deptt of Health & Family Welfare No. F.3(4)/PHC/TRC/2007/2815-21)

INDIAN MEDICAL ASSOCIATION
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Medical science is advancing everyday. New gazettes are introduced to the profession for the better management of the patients. Life saving devices are used in the resuscitation of the dying patients to run such gazettes a qualified and trained technicians are needed.

Considering all these IMA H.Q. is launching a course for Operation Theatre Technicians which will enable the candidates to learn the procedure adopted in the operation theatre, speciality in handling of life saving gazettes, maintaining the aseptic conditions for the operation theatre people, Sterilization of operation theatre instruments along with linen and disposables.

IMA's expert committee for operation theatre technician course along with a team of NIOS has formulated the operation theatre technician course.

ELIGIBILITY

1) Candidates who have passed 10 + 2 from any Board/ CBSE/ ICSE board or Pre-University examination with 40 % percent marks with science stream (Physics, Chemistry, Biology, Mathematics, Agriculture, etc.).

2) If science candidates are not available then the institutes may enrol students from any other stream with minimum of 50% of aggregate marks with an under taking/Affidavit from the students that they are fully aware that the Diploma may not be recognised by some of the State Governments and that they are undergoing the training on their own risk and will. Such an undertaking/Affidavit will have to be submitted to IMA at the time of enrolment of the candidates.

3) A candidate seeking admission to Diploma in Medical Laboratory Technology (DMLT) course should have 17 years of age, as on 31st, December of the year of admission. The candidate seeking admission in to Diploma courses should have attained 17 years of age as on 31ST December of the year of admission but not more than 25 years at the time of admission. Age relaxation of 5 years for SC/ST candidates and 3 years for OBC candidates is admissible.

DURATION OF THE COURSE

The duration of the O.T. Technician Course shall be Two Years and there is no internship programme of six months.

MEDIUM OF INSTRUCTION

English shall be the medium of instruction for all the subjects of study and for the examination of O.T. Technician Course.

SCHEDULE OF EXAMINATION

There will be two examination in a year, I) July and ii) November. Examination to be conducted as per notification issued by the IMA and NIOS from time to time.

EXAMINATION

There will be 3 Theory papers as under: -

PAPER - I: UNIT I and UNIT II
PAPER- II: UNIT III and UNIT IV-A
PAPER-III: UNIT IV , UNIT V and UNIT VI

FEE

TUTION FEE including Admission Fee (Excluding Enrolment & Examination Fee) is Rs. 30,000/- per year.

Rs. 2000/- Registration Fee per candidate and Rs. 3000/- Examination Fee per candidate.

CRITERIA FOR PASSING

A candidate is declared passed in an examination in a subject, ***if he/she secures 40% of marks in theory (all papers) and 40% in practical separately***, will be placed in division as under :

i) 75% Distinction
ii) 60-74.9% Ist Division
iii) 50- 59.9 % 2nd Division
iv) 40-49.9% Pass

SUPPLEMENTARY EXAM : Candidate failing may take up supplementary examination to be held after 6 months.

FEE: As per IMA guidelines.

SYLLABUS

O.T. TECHNICIAN

1. Introduction to the course: Operation room set up; discipline; liability and responsibility as an Operation Room Assistant.
2. Medicolegal Aspects of Anaesthesia, consent form
3. Basic Priniciples of Electricity and its application in O.T., I.C.U., and C.S.S.D.
4. Fire and explosion hazards in the Operation Theatre.
5. Basic Sciences (Anatomy and Physiology)
    a. Anatomy and Physiology of upper respiratory system.
    b. Anatomy and Physiology of lower respiratory system.
    c. Anatomy and Physiology of heart
    d. Anatomy and Physiology of circulatory system.
    e. Anatomy and Physiology of upper respiratory system.
    f. Anatomy and Physiology of G.I.T. and liver.
    g. Anatomy and Physiology of excretory system.
    h. Anatomy and Physiology of reproductive system.
    i. Anatomy and Physiology of C.N.System.
    j. Anatomy of Skeletal System of long bones, vertebrae, cranium and sacrum.
    k. Anatomy and Physiology of special senses-Ear
    l. Anatomy and Physiology of Nose.

6. Pharmacology

    a. Introduction to basic pharmacological principles.
    b. Applied pharmacology of General Anaesthetics
    c. Applied pharmacology of drugs used in premedication
    d. Muscle relaxants and drugs used in reversal of muscle relaxation.
    e. Drugs used for CPR.
    f. commonly used I.V. Fluids
    g. Blood transfusion and blood reactions.

7. Sterilization

    a. Common types of bacteria, viruses, protozoa
    b. Effects of bacterial infection, immunity, sensitivity, resistance
    c. Principles of asepsis, disinfection, sterilization, fumigation, and prevention of cross infection.
    d. Sterilization and its various methods
    e. Various types of sterilizers, autoclaves, hot air oven, flush autoclave, working principles, care and maintenance.
    f. Nosocomial infection (Hospital acquired infection).
    g. C.S.S.D. set up, function, procedures, discipline, storage and safety of articles.
    h. Universal safety precautions with special reference to AIDS and Hepatitis.

8. General

1. Personal hygiene and preoperative preparation of patients.
2. Reception of surgical/trauma patients.
3. Personal hygiene and first-aid
4. Reception of a patient in operation suite, pre and post operative observation.
5. Care of an unconscious patient.
6. Various positions during operative procedures.
7. ABC of repsuscitation, cardiac arrest and its management.
8. Aseptor, disinfector

9. Lectures/Demonstrations

1. Anaesthesia machine.
2. Electrocautery, suction apparatus.
3. Monitor (E.C.G. Pulse) Defibillators, pace makers, NIBP, SPO_2
4. Endoscopies, O.T.Lights, tables, fracture table.
5. Compressed and medical gas cylinders and pipelines, reducing valves.
6. Manifold room duties and responsibilities layout, safety precautions.
7. Vaporizers and their upkeep.
8. O_2 therapy and humidification.
9. Anatomy of skeletal system.

10. Pharmacology

1. Preparing different concentrations of solu tions and drug dilutions.
2. Setting up I.V.drips and infusion pumps.
3. Technique of I/M, S/C, I/V injections.
4. Identification and physical characteristics of commonly used anaesthetic agents.
5. Premedicant, muscle relaxants, and I.V.fluids.
6. Blood transfusion,: Preparation and storage.

11. Microbiology

1. Common antiseptics used in an O.T.preparation of antiseptic solutions in common use.
2. Components, parts, care and maintenance of sterilizers
3. E.O. gas sterilizers.
4. Aseptor, disinfector
5. Cleaning, handling, packing of material for CSSD.
6. Methods of fumigation of operation theatre and ICU.
7. Sterilization of hospital furniture
8. Sterilization of blunt and sharp instuments.
9. Sterilization of rubber goods, gloves, polyethylene tubes, gum, elastic equipment.
10. Ventilator basic knowledge
11. Sterilization of dressings/bandages.
12. Sterilization of sutures, ligatures.
13. Sterilization of Endoscopes.
14. Sterilization of Electrical instruments/cautery.
15. Preparation and packing of different surgical and anaesthetic sets.
16. Collection, labelling and dispatch of various samples/biopsy material.

12. General

1. Transportation of unconscious patient.
2. Common positions for operative procedures.
3. O.T. tables and lighting C arm, microscopes, endoscopes.
4. Airway management and IPPR.
5. Cardio pulmonary resuscitation.
6. First Aid bandages, splints, plasters.
7. Preparing POP splints, bandages.
8. Collection, handling, dispatching of tissue, fluid, blood, urine samples for laboratory investigations, pathological or microbiological exam.
9. Biomedical waste collection, transport, disposal and personal hazards.

The syllabus of Diploma in Operation Theatre Course for Para Medical Final Examination are as follows:

PAPER –I

UNIT-I

1. Introduction to the course: Operation room set up; discipline; liability and responsibility as an Operation Room Assistant.
2. Medicolegal Aspects of Anaesthesia, consent form
3. Basic Priniciples of Electricity and its application in O.T., I.C.U., and C.S.S.D.
4. Fire and explosion hazards in the Operation Theatre.
5. O.T. environment (Air flow, temperature, humidity and air-conditioning)

UNIT-II

1. Anatomy and Physiology of Respiratory System.
    a. Upper Respiratory System.
    b. Lower Respiratory System.
2. Anatomy and Physiology of heart
3. Anatomy and Physiology of circulatory system.
4. Anatomy and Physiology of G.I.T. and liver.
5. Anatomy and Physiology of excretory system.
6. Anatomy and Physiology of reproductive system.
7. Anatomy and Physiology of Central Nervous System.
8. Anatomy of Skeletal System of long bones, vertebrae, cranium and sacrum.
9. Anatomy and Physiology of special senses-**Ear, Eye & Nose.**
10. Temperature Regulation

PAPER-II

UNIT-III

1. Introduction to basic pharmacological principles, anaphylaxis and drug management
2. Applied pharmacology of General Anaesthetics agents
3. Applied pharmacology of Local Anaesthetics agents
4. Applied pharmacology of drugs used in premedication
5. Essential drugs used in CPBR (Cardio Pulmonary Brain Resuscitation)
6. Commonly used I.V. Fluids (Crystalloids and colloids).
7. Blood transfusion
    1. Blood reactions
    2 Blood components
8. Analgesics
    1. Opioids
    2. Non Opioids

UNIT – IV-A

1. Orientation of infective agents
    A. Bacteria, viruses, protozoa
    B. Effects of bacterial infection, immunity, sensitivity, resistance
2. Asepsis
    A. Principles of asepsis
    B. Disinfection
    C. Sterilization
    D. Fumigation and prevention of cross infection.
3. Types of methods Sterilization

PAPER-III

UNIT-IV

1. Nosocomial infection (Hospital acquired infection).
2. C.S.S.D.
3. Universal safety precautions
4. HIV / AIDS and Hepatitis.

UNIT-V

1. Reception of patients
2. Pre-operative preparation of Patient
3. Exact Anaesthetic Technique
4. Post Anaesthetic Care Unit (PACU)
5. Care and transport of unconscious patient
6. Positioning
   A. Anesthetic Procedures
   B. Operative Procedures
7. O.T. Technician in surgical Assistant

UNIT-VI

1. Airway Management
2. C.P.B.R.

For detail please contact
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