#### **COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS, July, 2025**

#### **Diploma in Medical Lab Technician Course (DMLT)**

#### **PAPER III**

Biochemistry, Techniques & Metabolism

Date - 16-07-2025

Time: 10 am to 1 pm (3hrs) Answer any **TEN** Questions

- 1. Name the Plasma proteins. Add a note on functions of albumin.
- 2. Classify Lipoproteins. Write in detail about Cholesterol estimation.
- 3. Enumerate the parts of Colorimeter with diagram. Discuss uses of it and add a note on laws of colorimetry.
- 4. What are different methods for Urea estimation? Write any one method in detail.
- 5. Define PH. Write in detail about PH meter with diagram.
- 6. Name the ketone bodies. Write in detail about test used for identification of ketones bodies.
- 7. What is Chromatography? Write in detail about the procedure.
- 8. Name various anti-coagulants and discuss in detail about them.
- 9. Discuss Glucose Tolernce Test (GTT) in detail and mention prerequisites and indications for GTT.
- 10. Enumerate the types of Jaundice. Discuss about Vandenberg test for bilirubin and Write its clinical significance.
- 11. Name Thyroid hormones. Write a note on normal values and TSH.
- 12. Classify fat soluable vitamins. Write in detail about source, RDA and biochemical functions of Vitamin D.

#### COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS, July, 2025 DIPLOMA IN OPHTHALMIC ASSISTANT COURSE

#### PAPER III

Optics, Refraction

Total Marks:80

Date - 16-07-2025

- Discuss briefly about a) Progressive lens b) Aphakic Spectacles. 1.
- Write about Keratometry in detail. 2.
- 3. Write principles of Retinoscopy and uses.
- Write about Accomodation tests and AC/A ratio. 4.
- Write about eye camps and importance. 5.
- 6. Discuss blindness, Classification and Low Vision Aid's.
- Discuss about Neutralization and various methods. 7.
- Write about Pathological Myopia. 8.
- 9. Write about Mobile Ophthalmic Unit.
- 10. Discuss about a) Prisms b) Spherical aberrations
- 11. Discuss about Lensometer.
- 12. Discuss about Presbyopia in detail with management.

#### **COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS, July, 2025**

# DIPLOMA IN OPTOMETRY TECHNICIAN COURSE PAPER III

Clinical Refraction, Diseases of Eye, Case Presentation

Date - 16-07-2025

- 1. Write about CRVO and management.
- 2. How will you manage a case of Optic Neuritis?
- 3. Discuss a) Chalazion b) Prerygium.
- 4. Discuss about Retinoblastoma and management.
- 5. Write about Retinoscopy, Trial set and accessories.
- 6. Corneal ulcer features and management.
- 7. Discuss Sympathetic Ophthalmitis.
- 8. Discuss vision testing in infants, children below 5 years and above 5 years.
- 9. Write about a) Autorefractometer b) Conjunctivitis
- 10. Discuss about signs and symptoms of Acute Angle Closure Glaucoma.
- 11. Explain Tonometry.
- 12. What is Computer Vision Syndrome?

#### COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS, July, 2025

#### DIPLOMA IN DIALYSIS TECHNICIAN COURSE **PAPER III**

Dialysis-II (Techniques) Diseases of Kidney & Hemodialysis

Total Marks:80

Date - 16-07-2025

Time: 10 am to 1 pm (3hrs) All Questions carry equal marks Answer any **TEN** Questions

- 1. What are the Duties of a Dialysis Technician?
- 2. What are the various types of vascular access used for dialysis?
- 3. How do you check that the fistula of the patient is working properly when you check the patient in dialysis unit?
- 4. How do you do if there is a blood leak alarm?
- 5. How do you perform dialysis for a hepatitis B or hepatitis C positive patient?
- 6. What are the various techniques for AV fistula needling?
- 7. What are the types of biomedical waste generated in a dialysis unit?
- 8. Describe pediatric dialysis.
- 9. What food items should not be given to patients with CKD?
- 10. What is the hub and spoke model of dialysis by government of Telangana (nodal and peripheral center) for dialysis.
- 11. How do you wash the dialyzer after dialysis if you are re-using the dialyzer?
- 12. What are the universal precautions in dialysis unit?

#### **COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS, July, 2025**

### DIPLOMA IN RESPIRATORY THERAPY TECHNICIAN COURSE PAPER III

Respiratory Therapy Science & Respiratory Practices

Date - 16-07-2025

Time: 10 am to 1 pm (3hrs) Answer any **TEN** Questions

- 1. Describe ARDS and its management.
- 2. Describe in detail about nosocomial infections.
- 3. Describe about (a) ECG (b) Capnography.
- 4. Write notes on ABG and different parameters measured by it.
- 5. Describe about ventilator settings used in the management of pulmonary edema.
- Write notes on Thoracocentesis.
- 7. Describe ventilator and its advantages and disadvantages.
- 8. Write notes on emergency drugs used in ICU.
- Write notes on pneumonia and its management.
- 10. Write notes on control of respiration.
- 11. Describe in detail about Humidification techniques.
- 12. Describe Respiratory complications in a patient of Renal failure.

#### **COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS, July, 2025**

# DIPLOMA IN AUDIOMETRY TECHNICIAN COURSE <u>PAPER III</u>

Audiogram

Date - 16-07-2025

Time: 10 am to 1 pm (3hrs) Answer any **TEN** Questions

- 1. Explain about behavioural observation audiometry.
- 2. Difference between conductive and mixed hearing loss.
- 3. Difference between speech therapy and auditory verbal therapy.
- 4. What is mean by fluency disorder?
- 5. Difference between subjective and objective tests.
- 6. Explain in detail about physiology of hearing.
- 7. Explain about Audiogram.
- 8. What are hearing aids to be recommended for bilateral profound hearing loss cases?
- 9. Explain augmentative and alternative communication.
- 10. What is mean by presbycusis and treatment?
- 11. What is mean by impedance test? When it is considered as diagnostic tool?
- 12. Explain about body level hearing aids.

**COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS, July, 2025** 

# DIPLOMA IN EMERGENCY PARAMEDIC TECHNICIAN COURSE (DEPT) PAPER III

Surgical Orthopedic, ENT Emergencies, Diasters, Obstetrics, OT & Post Operative care

Date - 16-07-2025

- 1. Describe the Ryel's tube and its indications.
- 2. How do you manage a case of cervical spondylosis patient with quadriplegia?
- 3. How do you manage breech delivery?
- 4. How do you assess and manage fracture of femur in 60 year female?
- 5. How do you assess and manage electrical burns in 40-year-old patient?
- 6. Write steps in assessment of unconscious patient and how do you manage.
- 7. Write in detail the causes, clinical features and management of hypotension.
- 8. Discuss the management of 2<sup>nd</sup> trimester pregnant women brought in with severe bleeding per vagina to the emergency department.
- 9. How do you prepare and keep the operation theatre ready for a case posted for emergency laparotomy?
- 10. Describe types of pneumothorax. How do you manage a case of pneumothorax?
- 11. How do you manage a case of accidental ingestion of a strong acid?
- 12. Write notes on a) Heimlich maneuver b) Triple maneuver?

#### **COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS, July, 2025**

#### DIPLOMA IN MEDICAL IMAGING TECHNICIAN COURSE

#### **PAPER III**

MRI Techniques & Nuclear Medicine Technology

Date - 16-07-2025

Time: 10 am to 1 pm (3hrs) Answer any **TEN** Questions

- 1. What is the principle of MRI? Write about Spin echo sequence?
- 2. Safety precautions in MRI.
- 3. Protocol and sequences for MRI of brain.
- 4. CT angiography versus MR Angiography.
- 5. Principle and use of PET CT.
- 6. Use of Gamma camera in nuclear scan.
- 7. Protocol and sequences for MRI of knee.
- 8. What are MRI artefacts? Mention any five artefacts in MRI.
- 9. Protocol and sequences for MRI of spine.
- 10. Different types of coils in MRI.
- 11. MR Contrast.
- 12. Write in detail about MRCP and its advantages over ERCP.

**COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS, July, 2025** 

# DIPLOMA IN MEDICAL STERILIZATION MANAGEMENT AND OPERATION THEATRE TECHNICIAN COURSE

#### **PAPER III**

Bio Medical Sciences, Physical Examinations & Cardiac Procedures

Date - 16-07-2025

Time: 10 am to 1 pm (3hrs) Answer any **TEN** Questions

- 1. Write about defibrillator.
- 2. What is blood pressure? What are the methods of measurement?
- 3. Write about echocardiogram.
- 4. Describe about the circulatory system.
- 5. Describe how to check pulse and respiratory rate during physical examination, including normal ranges.
- 6. What is the role of operation theatre technicians during a preoperative check up?
- 7. Write about electro surgical cautery.
- 8. Explain in detail about the operation table.
- 9. Write in detail about Endo tracheal tubes.
- 10. Write short notes on 1. Atropine 2. Noradrenaline
- 11. Write in detail about the prevention of electric fire hazards in operation theatre.
- 12. Write in detail about oxygen delivery devices.

#### **COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS, July, 2025**

#### **DIPLOMA IN RADIOTHERAPY TECHNICIAN COURSE**

#### **PAPER III**

Radiation Therapy Physics & Radiation Protection

Date - 28-12-2024

Time: 10 am to 1 pm (3hrs)
Answer any **TEN** Questions

- 1.) Write about various fractionations and its usefulness in radiotherapy.
- Write in detail about Medical Linear accelerator and draw its diagram.
- 3.) Describe the steps in the treatment of carcinoma breast with radiotherapy.
- 4.) What is the role of a Radiation therapy technologist when Cobalt source is stuck in the Gantry?
- 5.) Write a note on concurrent chemo radiotherapy and its importance?
  Give examples.
- 6.) What are setup errors? Write about Systematic and Random errors.
- 7.) Explain about primary and secondary barriers.
- 8.) Write a note on (1) EPID (2) MLC
- What are the different immobilization devices used in radiotherapy?
   Describe in detail about Vaclok.
- 10.) Discuss briefly about (1) SRS (2) SRT
- 11.) Define GTV, CTV, PTV and OAR.
- 12.) What is the role of Radiation Therapy technologist in external beam therapy treatment room?

#### **COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS, July, 2025**

# DIPLOMA IN DENTAL TECHNICIAN COURSE PAPER III

Oral Anatomy, Applied Physics & Chemistry

Date - 16-07-2025

- 1. Explain about the Functions of teeth.
- 2. Explain in detail the ligaments of TMJ
- 3. Explain in detail about the electric furnaces, heaters and Thermostats.
- 4. Explain the terms Cusp, Ridge, Sulcus and Spillways
- 5. Explain in detail about Basic Anatomy of Oral Cavity.
- 6. Describe in detail the morphology of permanent maxillary central incisor.
- 7. Draw a labeled diagram of T.M Joint and explain parts in detail.
- 8. Write in detail the universal tooth numbering system for primary and permanent tooth.
- 9. Write in detail about cervical line, embrasure, Cusp, ridge and sulcus with diagram
- 10. Explain the muscles of facial expression.
- 11. Explain in detail about general characteristics of aromatic Substances.
- 12. What is the density and the specific gravity of given liquids and solids.

#### **COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS, July, 2025**

### DIPLOMA IN DENTAL HYGEINIST COURSE PAPER III

General Pharmacology, Periodontics, Community Dentistry

Date - 16-07-2025

- 1. Classify Betalactam Antibiotics. Discuss the pharmacology of Amoxicillin.
- 2. Write about IV route o drug administration.
- 3. What is Biofilm and Name the bacteria present in dental plaque?
- 4. Classify Analgesics.
- 5. Describe the structure of Junctional epithelium and add notes on its role in healthy gingiva.
- 6. What is Autoclave?
- 7. Write about Local anesthetics.
- 8. CPITN probe.
- 9. Write about gingival index.
- 10. Theories of plaque formation and factors that contributes to plaque formation.
- 11. Enumerate the drugs that may cause gingival enlargement.
- 12. Interdental COL.

#### **COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS, July, 2025**

#### DIPLOMA IN RADIOGRAPHIC ASSISTANT COURSE

#### PAPER III

Ultra Sound Imaging, Interventional Procedures & Angiography

Date - 16-07-2025

Time: 10 am to 1 pm (3hrs)
Answer any **TEN** Questions

- 1. Ultrasound guided interventional procedures- Describe any two procedures.
- 2. Role of ultrasound in Pregnancy.
- 3. Sonomammography.
- 4. a) Peizoelectric effect b) Doppler effect.
- 5. CT Angiography of Brain- Procedure and advantages.
- 6. Colour Doppler of Lower Limbs (Arterial and Venous).
- 7. Discuss the principle and uses of Digital Substraction Angiography (DSA).
- 8. Various Types of Ultrasound Probes used in Routie Practice.
- 9. Transrectal Ultrasound.
- 10. Advantages of Ultrasonography over CT Scan.
- 11. Bedside Ultrasonography and Its Uses.
- 12. Structure of Ultrasound Probe.

#### **COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS, July, 2025**

# DIPLOMA IN CARDIOLOGY TECHNICIAN COURSE (DCARDIO) PAPER III

#### Introduction of ICU and its Structure

Date - 16-07-2025

Time: 10 am to 1 pm (3hrs) Answer any **TEN** Questions

- 1. Explain in detail about mobile ICU.
- 2. Explain in detail about the ICU & its purpose.
- 3. What are all Emergency medications used in ICU?
- 4. Explain in detail about emergency equipment's in ICU.
- 5. Describe the management of heart failure in ICCU?
- 6. Explain about Cardiopulmonary resuscitation.
- 7. Explain about primary angioplasty.
- 8. How do you disinfect ICU?
- 9. Diagnosis and management of Ventricular tachycardia.
- 10. How do you monitor post PTCA patient in ICCU?
- 11. Describe the role of ECG monitoring in ICCU.
- 12. What is oxygen therapy? Write the methods used for oxygen therapy.

#### **COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS, July, 2025**

### DIPLOMA IN CATHLAB TECHNICIAN COURSE (DCLT) PAPER III

Cardio Vascular Physiology & Pulmonary Resuscitation

Date - 16-07-2025

Time: 10 am to 1 pm (3hrs) Answer any **TEN** Questions

- 1. Describe the multi paramonitor.
- 2. Describe the cardiac pulmonary resuscitation.
- 3. Use of cardiac emergency drugs in Cath Lab.
- 4. Fick's principle.
- 5. Mean arterial pressure.
- 6. Dampening and Ventricularization.
- 7. Management of tachycardia during cardiac procedures.
- 8. Describe the cardiac cycle.
- 9. Describe the use of defibrillator.
- 10. Describe the use of adenosine in cath lab.
- 11. Describe the use of amiodarone in cath lab.
- 12. Describe the management of air embolism.

#### COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS, July, 2025

### DIPLOMA IN ECG TECHNICIAN COURSE (DECG) PAPER III

Defibrillator – indications & Operations

Date - 16-07-2025

Time: 10 am to 1 pm (3hrs) Answer any **TEN** Questions

- 1. Write about heart anatomy and physiology with Diagram.
- 2. Write about various types of Ectopics & their management.
- 3. Describe the atrial fibrillation with diagram and management.
- 4. Draw diagram of ventricular tachycardia & its management.
- 5. Describe the drug used in bradycardia / asystole.
- 6. Describe about pacing and over dose pacing.
- 7. Describe the equipment defibrillator & its uses in ICCU.
- 8. Describe the role of ECG monitoring in ICCU.
- 9. Maintenance of ECG machine and defibrillation in ICCU.
- 10. What is TMT & Describe the TMT Procedure?
- 11. What is the difference between synchronized cardio version and defibrillation in ICCU?
- 12. What safety measure must be taken before, during and after defibrillation?

#### **COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS, July, 2025**

#### **DIPLOMA IN ANESTHESIA TECHNICIAN COURSE (DANS)**

#### **PAPER III**

Cardio Vascular Physiology & Pulmonary Resuscitation

Date - 16-07-2025

Time: 10 am to 1 pm (3hrs) Answer any **TEN** Questions

- 1. Write in detail about coronary circulation.
- 2. Explain in detail about electrocardiogram ECG.
- 3. Write about defibrillator.
- 4. Write about peripheral Venous canulation.
- 5. What is blood pressure and how is it measured?
- 6. Write about drugs used during cardio pulmonary resuscitation (CPR).
- 7. Write about blood grouping and various types of blood groups.
- 8. Write in detail about triple airway maneuver.
- 9. Write about key differences between adult and pediatric CPR.
- 10. Write about AMBU bag.
- 11. Write about any two commonly used beta blockers intra operatively.
- 12. Write about any vasopressor used intra operatively.

#### **COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS, July, 2025**

## DIPLOMA IN MPHA (MALE) COURSE PAPER III

Environmental Sanitation, Hygiene

Date - 16-07-2025

Time: 10 am to 1 pm (3hrs)
Answer any **TEN** Questions

- 1. Sources of noise and air pollution.
- 2. Biomedical hazards.
- 3. Methods used in the purification of water.
- 4. What are the various hygienic problems faced by adolescents?
- 5. Control measures according to national vector borne disease control programme.
- 6. What is the first response after an earthquake?
- 7. Measures taken to prevent food poisoning in hostels/canteens.
- 8. Write about pulse polio programme.
- 9. Census and its importance.
- 10. Family adoption initiative.
- 11. What are the various equipment's required in the treatment of organophosphorus poisoning?
- 12. Write about "Green Blanket Environment".