COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS-July, 2025

Diploma in Medical Lab Technician Course (DMLT)

PAPER II

Microbiology, Parasitology & Microbes

Date - 15-07-2025

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

- 1. Explain procedure, principle, interpretation and application of Gram staining.
- 2. Write about collection, transportation & processing of Blood sample for Blood Culture.
- 3. Define sterilization and write principle of hot air oven and its uses.
- 4. Explain Standard precautions.
- 5. Laboratory diagnosis of enteric fever.
- 6. Write a short note on how biomedical waste is separated and treated.
- 7. Describe in detail Life Cycle and Laboratory diagnosis of malaria.
- 8. Write in detail about HIV virus.
- 9. Write principle, types and uses of ELISA.
- 10. Explain any 4 types of culture media with two examples each.
- 11. Write about Dermatophytes.
- 12. What is AST (Antibiotic Susceptibility Testing)?

COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS-July, 2025

DIPLOMA IN OPTHALMIC ASSISTANT COURSE

PAPER II

Health Education, Community Ophthalmology, Common Eye Disorders

Date - 15-07-2025

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

- 1. Explain the role of ophthalmic assistants.
- 2. Discuss risk factors of Primary open angle glaucoma and management.
- 3. Discuss briefly about corneal ulcer, causes and treatment.
- 4. Types of Retinal detachment and management?
- 5. Discuss a) Chalazion b) Hypermature Cataract.
- 6. Explain about Vitamin A deficiency in detail, various manifestations and treatment.
- 7. Discuss about OSSN.
- 8. Discuss School Health Programmes.
- 9. Write about Proliferative Diabetic Retinopathy and complications.
- 10. Discuss about Vernal Keratoconjunctivitis.
- 11. Write about Blunt trauma.
- 12. Discuss about Dry Eye and management

COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS-July, 2025

DIPLOMA IN OPTOMETRY TECHNICIAN COURSE PAPER II

Mechanical, Geometrical, Physiological Optics

Date - 15-07-2025

- 1. Explain principles of a) Refraction and b) Reflection.
- 2. Discuss Hypermetropia with management.
- 3. Role of Ophthalmic Technician's in School Health Programme.
- 4. Discuss about Spherical and Chromatic Aberrations.
- 5. Write in detail Dark room procedures?
- 6. Write about low vision aids in detail.
- 7. Discuss about Indirect Ophthalmoscopy.
- 8. Explain about Transposition with 7 examples.
- 9. Discuss a) Duochrome Test b) Jackson cross cylinder
- 10. Discuss Multifocal IOLs.
- 11. Write about various aberrations in detail.
- 12. Discuss about Aphakic lens and various problems associated.

COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS- July, 2025

DIPLOMA IN DIALYSIS TECHNICIAN COURSE PAPER II

Pharmacology, Pathology & Dialysis Management

Date - 15-07-2025

- 1. Name the various medicines used in transplant patients for immunosuppression.
- 2. Describe how you will manage a patient with hypotension during dialysis.
- 3. What are the medicines routinely present in crash cart/ emergency cart in dialysis unit?
- 4. Please write the names of all the investigations which are done for kidney failure patients.
- 5. Explain about peritoneal dialysis.
- 6. Explain the various parts of RO plant and describe the functions of each part.
- 7. What is CRRT and what are the types? Which patients are taken for CRTT?
- 8. What are the various alarms in the dialysis machine and what is their use?
- 9. How do you perform priming before dialysis?
- 10. Please explain the process of preparation of hemodialysis concentrate.
- 11. What are the precautions to prevent catheter related blood stream infections in the dialysis unit?
- 12. Describe what are the complications of AV fistula.

COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS-July, 2025

DIPLOMA IN RESPIRATORY THERAPY TECHNICIAN COURSE PAPER II

Patient Contact Techniques & Anaesthesiology

Date - 15-07-2025

- 1. Define the role of surfactant in neonatal respiratory distress syndrome.
- 2. Explain in detail about respiratory analgesics & stimulants.
- 3. Explain in detail about anesthesiology.
- 4. Write in detail about different NIV modes.
- 5. Write in detail about Basic & Advanced life support.
- 6. Explain in detail about the different steps to be taken in operation theatre to prevent sepsis.
- 7. Write notes on a) Adrenaline b) Hydrocortisone c) Atropine d) Dopamine.
- 8. Write about pleural effusion & pleural tap.
- 9. What is OSA? Describe about polysomnograhy.
- 10. Describe about hypoxia & its causes.
- 11. Explain in detail about the Anti-oxidants & the purpose.
- 12. Define various methods of administration of salbutamol in ventilated patient.

COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS-July, 2025

DIPLOMA AUDIOMETRY TECHNICIAN COURSE PAPER II

Speech and Language Development

Date - 15-07-2025

- 1. Difference between speech therapy in case of congenital and acquired cases.
- 2. What are the exclusive therapy techniques used in stuttering and explain.
- 3. What is mean by mis articulation and how it is diagnosed?
- 4. What is mean by speech therapy?
- 5. What are the speech and language assessment?
- 6. Explain in detail about Physiology of Hearing.
- 7. What is mean by articulation and what are the techniques to be used to correct?
- 8. Which cases OAE test is recommended?
- 9. Difference between mixed and sensori neural hearing loss.
- 10. What is AVT? When it start after switch on explain in detail?
- 11. Explain the difference therapy techniques in congenital and acquired hearing loss.
- 12. Explain in detail about mixed hearing loss.

COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS-July, 2025

DIPLOMA IN EMERGENCY PARAMEDIC TECHNICIAN COURSE PAPER II

Medical, Paediatric & Neonatal emergencies, Environmental Hazards, Toxicology & ICU Care

Date - 15-07-2025

- 1. Define cardiac arrest. Discuss the causes and management of cardiac arrest.
- 2. Write detailed notes on neonatal resuscitation.
- 3. Discuss the management of heart stroke patient.
- 4. How do you assess and manage patient with history of consumption of unknown substances presented to ER in semiconscious state?
- 5. Describe about airway clearing techniques.
- 6. Define Hematemesis. What are the causes, investigations and management?
- 7. A 2-year old brought with continuous cry for one hour. How do you assess child status and initial management?
- 8. How will you assess chest pain in 50 year old male? Describe immediate management.
- 9. How do you assess patient brought in unconscious state aged about 50 years?
- 10. Discuss the pre-hospital management of Acute GE with dehydration.
- 11. Describe the pre-hospital treatment of seizures.
- 12. Describe the immediate management of patient with Diabetes with unconsciousness.

COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS-July, 2025

DIPLOMA IN MEDICAL IMAGIOLOGY TECHNICIAN COURSE PAPER II

Ultrasound & Colour Doppler

Date - 15-07-2025

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

- USG in acute abdominal trauma.
- 2. Write about Carotid Doppler.
- 3. Compare Arterial Doppler versus CT Angiography.
- 4. Types of ultra sound probes and their uses.
- 5. Advantages of bedside ultrasound.
- 6.Describe the structure of ultra sound probe with labeled diagram.
- 7. Preparing patient for a) Ultrasound of abdomen and b) for pelvis.
- 8. Ultrasound guided procedures.
- 9. What is a) Spiral Act and b) MDCT?
- 10. How will you perform CT scan of brain?
- 11. Write about a) piezoelectric effect b) Doppler effect.
- 12. Compare CT angiography and MR angiography and mention advantages and disadvantages of each.

COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS-JULY, 2025

DIPLOMA IN MEDICAL STERILIZATION MANAGEMENT AND OPERATION THEATRE TECHNICIAN COURSE PAPER II

PHARMACOLOGY, RESPIRATION & SOURCES OF INFECTIONS

Date - 15-07-2025

- 1. Write about the emergency drugs used in Operation theatre.
- 2. Describe the mechanism of breathing and gas exchange in the lungs.
- 3. What are the Antiseptic and Disinfectants? Give two examples of each used in Operation theatre.
- 4. Write in detail about CPR cardio pulmonary resuscitation steps and importance.
- 5. Write in detail about the pulseoximetry.
- 6. Explain WHO steps of hand washing and its importance.
- 7. How to dispose of used needles and sharps safely in an operation theatre?
- 8. Write in detail about Adrenaline and Atropine.
- 9. What is sterilization? and write in detail about ethylene oxide sterilization.
- 10. Write about the fumigation of the operation theatre.
- 11. Write in detail about the indications and complications of Blood transfusion.
- 12. How do you assist during spinal anesthesia?

COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS-July, 2025

DIPLOMA IN RADIOTHERAPY TECHNICIAN COURSE PAPER II

General Physics, Radiography Techniques & Medical Imaging

Date - 15-07-2025

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

- 1. Write a note on TLD badge.
- 2. What is the characteristics curve of an x-ray film and explain the characteristics of an x-ray film?
- 3. What are the differences between KV CBCT and MV CBCT?
- 4. Explain in detail about mammography.
- 5. Describe in detail about simulation in radiotherapy.
- 6. Draw a neat and labeled diagram of Cobalt machine and explain in detail.
- 7. Explain in detail about Quality Assurance in Radiotherapy.
- 8. Write short note on 1) Photoelectric effect 2) Compton effect 3) Pair production 4) Coherent scattering.
- 9. Write short note on 1) IGRT 2) DIBH.
- 10. Describe in detail about Electron Beam Therapy.
- 11. What is Ionizing radiation? Write a note on alpha, beta and gamma Radiation.
- 12. Write a note on 1) PDD 2) Inverse Square Law.

COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS-July, 2025

DIPLOMA IN DENTAL TECHNICIAN COURSE PAPER II

Dental Material & Basic Knowledge of Computer

Date - 15-07-2025

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

- 1. Explain about GYPSUM and its products.
- 2. Write in detail about Physical stage of Polymerization
- 3. Mention few noble metal alloys and write in detail about gold alloys.
- 4. Classify dental cement and write about Glass Ionomer cement in detail.
- 5. Explain in detail about the difference between dental stone and plaster.
- 6. Classify dental casting alloys and write notes on cobalt chrome alloy.
- 7. Write the difference between self curve, heat curve and light curve resin.
- 8. Write about Mercury Toxicity.
- 9. Classify Ceramics and composition. Describe all ceramic materials.
- 10. Describe the processing technique of heat curve denture base resins.
- 11. Explain about CAD CAM in dentistry.
- 12. Describe composite materials.

COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS-July, 2025

DIPLOMA IN DENTAL HYGIENIST TECHNICIAN COURSE PAPER II

Dental Material & Basic Knowledge of Computer

Date - 15-07-2025

- 1. Classify Elastomeric Impression material. Write in detail about Addition Silicon's.
- 2. Role of Dental hygienists in community health.
- 3. Chromium cobalt alloys used in dentistry. Explain composition, uses, advantages, and disadvantages.
- 4. Write in detail about Tarnish and Corrosion.
- 5. What are the cavity varnishes and its applications?
- 6. Enumerate about Dentifrices.
- 7. Classify gypsum products. Elaborate how they differ in physical structure, manufacture and manipulation in dental uses.
- 8. Write about role of Hygienist in community.
- 9. Write about 18-8 stainless steel.
- 10. Classify dental cements and write in detail about Glass ionomer cements.
- 11. Write about Base plate wax
- 12. Explain in detail about the modem and its uses.

COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS-July, 2025

DIPLOMA IN RADIOGRAPHIC ASSISTANT TECHNICIAN COURSE PAPER II

Radiographic Techniques

Date - 15-07-2025

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

- 1. Patient preparation and procedure of intravenous urography.
- 2. Write about a) Chest Radiograph Lateral View b) X Ray Foot Oblique View.
- 3. Write note on a) Shoulder Axial View b) Patella Skyline View.
- 4. Procedure of bedside chest radiography.
- 5. Effect of kV and mA on Radiograph
- 6. Procedure and Radiographic views in Barium Enema
- 7. What is X Ray Artifacts?
- 8. Ionic and non-Ionic Contrast Media.
- 9. Developing of x ray film in darkroom (Film screen Radiography).
- 10. Standard sizes of X-ray Films / cassettes.
- 11. What is MCUG?
- 12. Write about a) RGU B) Fistulography.

COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS-July, 2025

DIPLOMA IN CARDIOLIGYTECHNICIAN COURSE PAPER II

Hypothermia & Pharmacology

Date - 15-07-2025

- 1. List of commonly used anti hypertension drugs, explain mechanism of ACE inhibitors.
- 2. Explain in detail about hypothermia & its management.
- 3. Explain in detail about the various cardiac profile tests.
- 4. Explain role of anticoagulants in ICCU.
- 5. Explain in detail about cardio pulmonary resuscitation.
- 6. What are thrombolytic drugs? Name two drugs & describe their uses in management of ACS (Acute Coronary Syndrome).
- 7. Explain in detail about the ECG in acute MI (Myocardial Infarction).
- 8. Explain Role of adenosine in cardiology.
- 9. Explain in detail about management of cardiogenic shock.
- 10. Describe treatment of unstable angina.
- 11. Explain in detail about coronary Angioplasty.
- 12. Describe the ECG changes seen in hypothermia. What are Osborne wave?

COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS-July, 2025

DIPLOMA IN CATHLAB TECHNICIAN COURSE PAPER II

Devices used in Pacing, Pacemaker and its types

Date - 15-07-2025

- 1. Describe the procedure of temporary pacemaker implantation. What are the settings and modes used?
- 2. Describe the preparation of the patient for permanent pacemaker implantation.
- 3. Describe the cardiac cycle with a neat labeled diagram.
- 4. Explain the oximetry sampling.
- 5. Explain the right heart catheterization.
- 6. Explain the radiation hazard and the safety measures from radiation.
- 7. Describe the duty of cathlab technician in a cathlab.
- 8. Describe the antiarrhymic drugs used in cath lab.
- 9. What is complete heart block? How do you manage complete heart block?
- 10. Describe the use of defibrillation in cath lab.
- 11. Arterial blood gas monitoring.
- 12. Different contrast agents used in cath lab.

COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS-July, 2025

DIPLOMA IN ECG TECHNICIAN COURSE PAPER II

Cardio Vascular Pathology & Biochemistry of System

Date - 15-07-2025

- 1. Write notes on cardiac circulation.
- 2. Draw and label the internal structure of the heart.
- 3. What are the ECG changes in acute coronary syndrome.
- 4. What are cardiac enzymes explain the role of cardiac enzymes in diagnosing MI?
- 5. Write a note on pulseoximetry.
- 6. Explain about the MI pathophysiology myocardial infarction.
- 7. What are the emergency drugs used in ICCU?
- 8. Describe the diagnosis & management of anterior wall MI (Myocardial Infarction).
- 9. What is pacemakers its uses and types?
- 10. Write a note on 6 min walking test.
- 11. Describe in detail about CPR.
- 12. Write notes on complete heart block and management.

COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS-July, 2025

DIPLOMA IN ANAESTHESISA TECHNICIAN COURSE PAPER II

Pharmacology & Equipment Management

Date - 15-07-2025

- 1. Write about Bupivacaine.
- 2. Write in detail about nitrous & oxygen cylinders.
- 3. Write about IV induction agents.
- 4. Write about Jackson Rees circuit.
- 5. Write about multi parameter monitor.
- 6. Write about emergency drugs used in operation theatre.
- 7. How do you manage intro operative hypotension?
- 8. Write about commonly used pre medication drugs.
- 9. Write about Supraglotic airway devices.
- 10. Write about non depolarizing muscle relaxants.
- 11. Write about succinyl choline.
- 12. Write about pulse oximetry.

COMBINED PARAMEDICAL (Supplementary) EXAMINATIONS-July, 2025

DIPLOMA IN MULTIPURPOSE HEALTH ASSISTANT (MALE) COURSE PAPER II

Health Education

Date - 15-07-2025

- 1. What are the principles of health education?
- 2. What are the barriers of health communication?
- 3. Aim and objectives of NRHM (National Rural Health Mission).
- 4. What is the role of an MOHA in prevention of malaria?
- 5. Describe the uses of breast feeding.
- 6. Cancer registry.
- 7. Role and responsibilities of health workers.
- 8. What are the various health problems faced by smokers.
- 9. Diagnostics algorithm of TB according to NTEP?
- 10. What are the various physical barriers of contraception?
- 11. Mention the various intravenous fluids administered to severe diarrhoea cases.
- 12. Importance of physical activity and yoga in daily life.