Dr. DINESH KUMAR SHUKLA, CHIEF MANAGING TRUSTEE, PARA MEDICAL COUNCIL OF INDIA, OM NAGAR, AMETHI ROAD,MUSAFIRKHANA, DISTRICT- SULTANPUR, U.P, INDIA PIN-227813

PARAMEDICAL EDUCATION & TRAINING COUNCIL

DMLT: -

DMLT (Diploma in Medical Laboratory Technology), who are desirable to become a professional Laboratory Technician, Medical Technician & Medical Assistant etc. It educates the students about sampling, testing in a laboratory, maintaining the record of the patients.

- It deals with the chemical analysis of blood fluid like saliva, urine culture, blood cultures, and some culture of ions present in our body.
- It covers the analysis of invader microorganism in the body of organisms.
- The courses impart depth knowledge of the culture of the culture of fluids and ions of our body, and truly documentation helps the doctors find specific diseases of the patients.

Eligibility: -

DMLT also known as Diploma in Medical Laboratory Technology is a diploma course for the students. Its Eligibility criteria is-

- Passed out 10th & 12th with 50% marks in Physics, chemistry & biology.

Job Profile: -

- Assistant Lab Technician
- Head Lab Technician

Skills: -

- Knowledge of Chemistry – Including the safe use & disposal of Chemicals.
- Knowledge of biology & math.
- To be able to use a computer & main Software Packages Competently.

Course Details: -

DMLT	
1st Year	2nd year
Anatomy & Physiology	Biochemistry
Microbiology	Microbiology
Biochemistry	Pathology
Pathology	Social & preventive Medicine

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1ST YEAR

Anatomy & Physiology: -

1. Introduction
2. The Cell
3. The Tissues
4. Organs And Systems
5. Skeletal System
6. Joints of The Skeleton
7. Blood
8. Lymphatic System
9. Cardiovascular System
10. Respiratory System
11. Urinary System
12. The Muscular System
13. The Physiology of Muscle
14. Central Nervous System
15. Autonomic Nervous System
16. Organs of Special Senses
17. Skin And Regulation of Body Temperature
18. Digestive System
19. Accessory Organs of Digestion
20. Metabolism, Diet And Vitamins
21. Endocrine System
22. Reproductive System
23. Process of Reproduction

Microbiology: -

1. Morphology And Classification of Bacteria
2. Common Staining Technique
3. Nutrition And Growth of Bacteria
4. Sterilisation And Disinfection
5. Bio Medical Waste Management
6. Laboratory Safety And Standards Precautions
7. Normal Flora of Human Body
8. Pathogenesis of Bacterial Infection
9. Bacterial Culture Media
10. Methods of Isolation of bacteria
11. Bacterial Identification Tests

12. Antibiotic Susceptibility Testing
13. Quality Control In Microbiology
14. Streptococcus
15. Streptococcus
16. Pneumococcus
17. Enterococcus
18. Nisseriae
19. Corynebacterium
20. Mycobacterium
21. Escherichia Coli And Klebsiella Escherichia Coli
22. Citrobacter, Edwardsiella, Enterobacter And Serratia
23. Salmonella
24. Shigella
25. Proteus And Providencia
26. Yersinia
27. Vibrio And Related Organism
28. Pseudomonas
29. Haemophilus
30. Bordetella

Biochemistry: -

1. General Biochemistry
2. Carbohydrates
3. Carbohydrate Metabolism
4. Proteins
5. Lipids
6. Nucleotides
7. Clinical Chemistry
8. Enzymes
9. Biological Oxidation, Electron Transfer Chain And Oxidative Phosphorylation
10. Vitamins
11. Minerals
12. Hormones

Pathology: -

- **Haematology**

1. Composition of Blood And Normal Erythropoiesis
2. Technique of Blood Collection
3. Estimation of Hemoglobin
4. Hematocrit
5. Selection And Registration of Donors

6. ABO Blood Grouping
7. Erythrocyte Sedimentation Rate (ESR)
8. Staining of PBF And Interpretation of Normal And Abnormal Red Cell Morphology
9. Maturation And Development of Leucocytes
10. Formation of Platelets of Leucocytes
11. Formation of Platelets and Thrombocytopenia
12. Rhesus Blood Group
13. Pretransfusion or Compatibility Testing

- **Histopathology**

1. Introduction To Histopathology
2. Light Microscopy
3. Special Light Microscopy
4. Receiving of Surgical Specimens
5. Fixation of tissues
6. Decalcification
7. Tissue Processing
8. Embedding
9. Microtome
10. Hematoxylin And Eosin Staining
11. Staining Methods To Demonstrate Special/Specific tissues
12. Metachromatic Staining
13. Lipid Stain
14. Staining Techniques For Demonstration And Identification of Microorganisms
15. Cryostat And Frozen Section

2nd YEAR

Biochemistry: -

1. Clinical Biochemistry
2. Body Water, Osmolarity And ionic Composition of Body Fluids
3. Nutrition
4. Kidney Function Test
5. Liver Function Tests
6. Spectrophotometry, Light Emission And Scattering Analytical Technique
7. Basic Principles of Radioactive Measurements
8. Electrochemistry
9. Electrophoresis
10. Chromatography And Mass Spectrometer

11. Clinical Enzymology
12. Immunochemical Techniques
13. Automation In Clinical Laboratory
14. Electrolytes And Blood Gases
15. Centrifugation
16. Primary And Secondary Standards
17. Primary And Secondary Standards
18. Radioactive Isotopes

Microbiology: -

1. Spirochaetes
2. Rickettsiaceae
3. Chlamydia
4. Mycoplasma And L-Forms
5. Spore Forming Anaerobes
6. Non-Sporing Anaerobes
7. Medical Parasitology
8. Entamoeba Histolytica And Other Rhizophodia
9. Plasmodium
10. Nematodes
11. Entrobius Vermicularis
12. Leishmaniasis
13. Nematodes Classification
14. Hook Work And Strongyloides
15. Trichuris Trichura
16. Trematodes
17. Cestodes
18. Echinococcus Granulosus
19. Tissue Nematodes
20. Stool Examination
21. Morphology And General Properties of Fungi
22. Laboratory Diagnosis Of Fungi
23. Morphology And General Properties of Viruses
24. Laboratory Diagnosis of Viral Infections
25. Immunity
26. Antigens
27. Immunoglobulins
28. Complement
29. Immunology Structure And Function of Immune System
30. Agglutination
31. Complement Fixation Test

32. Immunofluorescence
33. Eia And Ria
34. Autoimmunity And Autoimmune Diseases
35. Organ Transplantation

Pathology: -

- **Haematology**
  1. Transfusion Reactions
  2. Introduction To Anemia
  3. Microcytic Hypochromic Anemia
  4. Macrocytic Anemias
  5. Hemolytic Anemia
  6. Hemolytic Anemia Due To Abnormal Hemoglobin Synthesis
  7. Hemolytic Anemia Due To Abnormal Red Cell Enzymes
  8. Screening For Blood Transfusion Transmitted Diseases
  9. Anti Globulin Test
  10. Leukemia
  11. Haemostasis
  12. Autoimmune Hemolytic Anemia (AHA)

- **Histopathology**
  1. Procedures For DNA, RNA And Mitochondria Demonstration
  2. Special Processing
  3. ImmunohistoChemistry
  4. Electron Microscopy
  5. Museum Techniques
  6. Exfoliative Cytology
  7. Cytology: Specimen Collection & Storage
  8. Cytology: Specimen Processing & Staining
  9. Cytology: Disposal of Human Waste
  10. Cytology: Staining Methods
  11. Cytology Screening
  12. Quality Control in Cytology
  13. Cytomorphology
  14. Hormonal Assessment
  15. Fine Needle Aspiration Cytology
  16. Morphology pg Organs

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Social & Preventive Medicine: -

1. Health Education and Community Pharmacy
2. Important Terms and Definitions
3. Concept of Health
4. Nutrition and Health
5. Demography and Family Planning
6. First Aid
7. Environment and Health
8. Fundamental Principles of Microbiology
9. Communicable diseases
10. Non-Communicable diseases
11. Epidemiology