

SYLLABUS FOR THE POST OF MEDICAL LABORATORY TECHNOLOGIST (MLT)
(FOR PRELIMINARY MCQs BASED EXAM)

Examination Scheme: Objective Type Multiple Choice Questions (MCQs)

Test Component	Number of Questions	Maximum Marks
General Knowledge, Aptitude and Computer Awareness	20	20
Medical Laboratory Science Subjects	80	80
Total	100	100

Nature of Examination: Objective Type MCQs

Standard of Examination: Bachelor's in medical laboratory science (BMLS) Level

Medium of Examination: English and Hindi wherever applicable

Detailed Syllabus

Section I: General Knowledge, Aptitude and Computer Awareness: 20 Marks

Topic	Subtopics
General Knowledge	Current Affairs, Indian Constitution, Health Schemes, National Health Programs, Scientific Developments
Reasoning Ability	Logical Reasoning, Coding-Decoding, Series, Analogy, Classification
Mathematical Aptitude	Percentage, Ratio and Proportion, Average, Time and Work, Simple Interest, Data Interpretation
English Language	Grammar, Vocabulary, Comprehension, Sentence Correction
Computer Awareness	MS Office, Internet Applications, Laboratory Information Systems, Basic Computer Operations

Section II: Medical Laboratory Science Subjects: 80 Marks

Topic	Subtopics
Human Anatomy and Physiology	Cell Structure, Blood, Cardiovascular System, Respiratory System, Digestive System, Nervous System, Endocrine System
Biochemistry	Carbohydrates, Proteins, Lipids, Enzymes, Liver Function Tests, Kidney Function Tests, Blood Glucose Analysis



Clinical Biochemistry	Spectrophotometry, Electrolyte Analysis, Quality Control in Biochemistry Laboratory
Microbiology	Bacteriology, Virology, Mycology, Parasitology, Sterilization, Disinfection, Culture Techniques
Immunology and Serology	Antigen-Antibody Reactions, ELISA, Rapid Diagnostic Tests, Autoimmune Disorders
Hematology	Complete Blood Count, ESR, Coagulation Tests, Anemia, Leukemia, Hemostasis
Blood Banking and Transfusion Medicine	Blood Grouping, Cross Matching, Blood Components, Transfusion Reactions
Histopathology and Cytology	Tissue Processing, Staining Techniques, Biopsy Handling, Cytological Examination
Clinical Pathology	Urine Examination, Stool Examination, Body Fluid Analysis
Molecular Diagnostics	PCR, RT-PCR, Molecular Techniques, Genetic Testing Basics
Laboratory Instruments and Techniques	Microscopes, Centrifuges, Analyzers, Calibration, Maintenance and Troubleshooting
Quality Assurance and Laboratory Management	Internal Quality Control, External Quality Assurance, NABL Standards, Laboratory Safety
Biomedical Waste Management	Waste Segregation, Disposal Methods, Infection Control Practices
Medical Ethics and Professionalism	Patient Confidentiality, Laboratory Ethics, Professional Conduct
Laboratory Information Systems	Data Entry, Report Generation, Digital Record Maintenance
Research Methodology and Biostatistics	Sampling, Data Collection, Basic Statistics, Research Ethics
Infection Control and Biosafety	Universal Precautions, Biosafety Levels, PPE Usage
Emergency Laboratory Procedures	Sample Handling in Emergency Conditions, Critical Value Reporting