2211E799

Candidate's Seat No :_____

M.Sc Sem-3 Examination
503
MLT

Time : 2-30 Hours]

November-2024

[Max. Marks : 70

Q1A	Explain the working principle used in haematology analyser.	7 Marks
Q1B	Explain in detail about four different types of immunoassays.	7 Marks
OR		
Q1A	Write a note on Agarose Gel Electrophoresis and list out its applications.	7 Marks
Q1B	Describe sensors and transducers with example.	7 Marks
Q2A	Explain how the Laboratory Information System (LIS) contributes to data management and integration in labs.	7 Marks
Q2B	Discuss the role of automation in improving efficiency in clinical laboratories.	7 Marks
OR		
Q2A	What is total laboratory automation (TLA)? Explain TLA for each phase of analysis.	7 Marks
Q2B	List out advantages and limitations of laboratory automation.	7 Marks
Q3A	Explain the importance of quality control in maintaining instrument performance in clinical labs.	7 Marks
Q3B	What is the process of implementation in pre analytical phase in accreditation under NABL?	7 Marks
OR		
Q3A	Describe the process of establishing control limits for QC samples. Explain any 2 rejection criteria under westgard rule with appropriate example.	7 Marks
Q3B	Draw the Process Flow of Quality Management and explain in detail.	7 Marks
Q4A	Discuss common calibration errors in lab equipment and how they can be addressed.	7 Marks
Q4B	Write a note on maintenance of pathology lab equipment.	7 Marks
OR		
Q4A	Explain the types and causes of sample contamination.	7 Marks
Q4B	Describe how to troubleshoot signal interference in clinical laboratory instruments.	7 Marks
Q5	**Answer the following questions (Any Seven)**	14 Marks
I	Name the types of Light microscopes.	2 Marks
II	Write down principle of HPLC.	...arks
III	Write down principle of Spectrophotometer.	2 Marks

(P.T.O)

IV	Give two differences between clinical and medical instrument.	2 Marks
V	Name the type of analytical automation.	2 Marks
VI	Name any 3 limitations of laboratory automation.	2 Marks
VII	What does post analytical automation process in a clinical lab involve?	2 Marks
VII	What is Laboratory Information Systems (LIS)?	2 Marks
IX	What are "true value" and "expected true value"?	2 Marks
X	What are meant by "accuracy" and "precision"?	2 Marks
XI	What is preventive maintenance?	2 Marks
XII	What does calibration involve in a clinical lab setting?	2 Marks

BEST OF LUCK