

First Year B.Sc MLT Degree Regular Examinations October 2025
Biochemistry I
(2024 Scheme)

Time: 3 Hours

Total Marks: 100

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw table/diagrams/flow charts wherever necessary*

Essays**(2x10=20)**

1. Explain in detail the principle, parts and uses of spectrophotometer. What are the differences between colorimeter and spectrophotometer. (2+4+2+2)
2. Enumerate the various hazards that can occur in clinical lab and explain in detail the safety measures. Add a note on universal safety precautions. (2+5+3)

Short notes**(10x5=50)**

3. Cleaning of laboratory glassware.
4. Primary and secondary chemical standards.
5. Preparation and storage of deionized water.
6. Urine preservatives.
7. How will you prepare 1N HCl.
8. Dialysis.
9. Applications of radioisotopes.
10. Glucose transporters.
11. Secondary structure of proteins.
12. Structure and functions of t-RNA.

Answer briefly**(10x3=30)**

13. Lysosomes.
14. Histones.
15. First aid in the laboratory.
16. Henderson Hassel Bach Equation and its applications.
17. Principle and parts of centrifuge.
18. High Density Lipoproteins (HDL).
19. Peptide bond.
20. Glycoproteins.
21. Heparin.
22. Units of radioactivity.
