

First Year B.Sc MLT Degree Supplementary Examinations
October 2025
Biochemistry - I
(2016 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*
- *Simple calculator shall only be permitted*

Essay**(2x10=20)**

1. Describe various methods involved in collection, preservation and processing of biological specimens for biochemical analysis. (3+4+3)
2. Write in detail about structure and functions of cell membrane. Add a note on different transport mechanisms. (6+4)

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

3. Cleaning of glasswares.
4. Define pH. What are different methods by which pH is measured.
5. Differentiate between molar and molal solutions. Explain with examples.
6. Principle and parts of colorimeter.
7. Isomerism in carbohydrates.
8. Sequence analysis.
9. How will you prepare N/10 NaOH.
10. Structure and different types of DNA.
11. Lipoproteins.
12. Use of radio-isotopes in diagnosis and research.

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

13. Lysosomes.
14. Henderson Hasselbach equation.
15. Analytical balance.
16. Principle, use and maintenance of Centrifuge.
17. Donnan membrane equilibrium.
18. How many moles are there in 5gm of Na₂SO₄.
19. Buffer system.
20. What are nucleotides. Give examples.
21. Peptide bond.
22. How will you evaluate purity of water.
