

FIRST SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2024
(Regular/Improvement/Supplementary)

ZOOLOGY
FZOL1C01- BIOCHEMISTRY

Time: 3 Hours**Maximum Weightage: 30****Part A: Answer any *four* questions. Each carries *two* weightage.**

1. Explain the biological roles of nucleic acids.
2. Briefly discuss the role of 2,3 DPG as a regulator of oxygen transport.
3. What is meant by Ramachandran plot? Explain.
4. Mention the role of vitamins as coenzymes.
5. Explain Mutarotation.
6. Compare the structure of Maltose and Lactose. Mention the biological uses.
7. Discuss any two factors influencing the enzyme action.

(4 × 2 = 8 weightage)

Part B: Answer any *four* questions. Each carries *three* weightage.

8. Describe the Citric acid cycle.
9. Distinguish between structural and optical isomerism.
10. Write a note on standard free energy change.
11. Explain the fate of amino acids in the body.
12. Describe the biological roles of lipids.
13. Explain the structural organization of DNA.
14. Describe the beta oxidation of fatty acids.

(4 × 3 = 12 weightage)

Part C: Answer any *two* questions. Each carries *five* weightage.

15. Explain the Michaelis- Menten equation. Add a note on double reciprocal plot.
16. Describe the biosynthesis of cholesterol.
17. Explain the electron transport system and oxidative phosphorylation.
18. Describe the biochemistry of prostaglandins and explain their biological functions.

(2 × 5 = 10 weightage)