



QP CODE: 25050605



Reg No :

Name :

MSc DEGREE (CSS) EXAMINATION DECEMBER 2025

First Semester

M Sc BIOCHEMISTRY

Core Courses - BC010101 - BIOMOLECULES AND STRUCTURAL BIOLOGY

2019 Admission Onwards

F57B0422

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

Weight 1 each.

1. Distinguish between aldo and Keto sugars.
2. List out the monosaccharide components in glycoproteins.
3. Define homopolysaccharides. Explain with example.
4. Phospholipids are amphipathic in nature. Justify.
5. What are steroids? Explain its functions.
6. Why myoglobin is a storage protein rather than a transport form of Oxygen?
7. Explain the significance of allowed and disallowed regions in Ramachandran plot with example.
8. What is Positive supercoiling?
9. What is T_m? Explain its significance.
10. List out the Src homology domains.

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

Weight 2 each.

11. Peptidoglycans contain amino acid components. Justify.
12. Explain the classification of lipids.
13. Explain the functions of thromboxanes.
14. How is the structure of ATP favours the formation of ATP? Justify.
15. Explain briefly the chaotropic agents.





16. Describe the forces that stabilize the nucleic acid structure.
17. Explain the structure and functions of tRNA.
18. Explain the motifs in DNA Protein interaction.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

Weight 5 each.

19. Describe the structure, classification and functions of glycolipids.
20. Elaborate on the structure and functions of sphingolipids.
21. Comment on the structure and stabilizing interactions of fibrous proteins taking keratin and collagen as examples
22. Discuss about the higher order structure of DNA.

(2×5=10 weightage)

