



QP CODE: 25050500



Reg No :

Name :

MSc DEGREE (CSS) EXAMINATION DECEMBER 2025

First Semester

M Sc ZOOLOGY

Core Courses - ZL010103 - BIOCHEMISTRY

2019 Admission Onwards

4571E356

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

Weight 1 each.

1. Differentiate monosaccharides and disaccharides with examples?
2. What is Cori cycle? Comment on its significance.
3. The peptide bond is a resonance hybrid. Explain.
4. Comment on sickle cell anaemia.
5. Write a brief note on the oxidation of odd chain fatty acids.
6. Explain the role of triglycerides and phospholipids in health and disease.
7. What is nucleoside?
8. Explain Cys2\Cys2 fingers.
9. Why are enzymes the major and most versatile biological catalysts?
10. What do you mean by covalent modification of enzymes?

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

Weight 2 each.

11. Explain oxidative and substrate level phosphorylation with examples.
12. What is adenylate cascade system?
13. Write on the various chemical properties of amino acids.
14. Comment on forces stabilizing protein structure.
15. Discuss the structure and functions of prostaglandins.





16. Write an account of antioxidant enzyme system.
17. Explain briefly catabolism of purines.
18. Explain the reaction coordinate diagram of enzymes.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

Weight 5 each.

19. Describe in detail the two phases of glycolysis and enumerate the ATP and NADH molecules formed.
20. 'Certain aminoacids, in addition to their major function as protein building blocks, are essential precursors of a variety of important biomolecules'. Describe in detail about the synthesis of biologically significant compounds from different aminoacids.
21. Write down an essay on the different classes of lipids. Also write on the biological importance and role of lipids.
22. Explain the rate equation. From the rate equation, derive *Michaelis-Menten equation* with reference to steady state theory.

(2×5=10 weightage)

