

FIRST SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2025

(CBCSS - PG)

(Regular/Supplementary/Improvement)

CC19PZOL1C01 - BIOCHEMISTRY AND BIOPHYSICS

(Zoology)

(2019 Admission onwards)

Time : 3 Hours

Maximum : 30 Weightage

Part-AAnswer any ***four*** questions. Each question carries 2 weightage.

1. What are polyunsaturated fatty acids (PUFA). Mention its importance.
2. Write a brief note on micro RNA.
3. Explain the specificity of an enzyme catalysed reaction.
4. Give the structure of shikimate. Describe the biosynthesis of chorismate from shikimate.
5. Describe the two additional steps required for oxidation of unsaturated fatty acids
6. Write a short note on echolocation with an example.
7. What is radio activity? Write a short note about the radioactive decay and half life.

(4 × 2 = 8 Weightage)**Part-B**Answer any ***four*** questions. Each question carries 3 weightage.

8. Write a short note on structural isomerism and its types.
9. Detail out the structure and biological role of agar-agar.
10. Explain the classification of amino acids with suitable examples.
11. Explain energy activation and standard free energy change.
12. Explain Glycogenesis and its regulation
13. What is beta-oxidation. What are the additional steps involved in the oxidation of unsaturated fatty acids?
14. Explain the Fick's law of diffusion. What is diffusion coefficient?

(4 × 3 = 12 Weightage)

Part-C

Answer any ***two*** questions. Each question carries 5 weightage.

15. Explain briefly about the classification of carbohydrates with examples.
16. Explain glycolytic pathway and describe the fate of pyruvate.
17. Explain the biosynthesis and degradation of different Pyrimidine nucleotides.
18. What are emulsions? Explain the preparation and properties of emulsions.

(2 × 5 = 10 Weightage)
