

M.Sc. (Botany) Semester - 2 (CBCS) Examination
March/April – 2025 (As Per Syllabus Year-2023)
Biochemistry (Core)

Time: 2:30 Hours

Marks: 70

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate marks.

Q.1 Answer the following (any 7) (14)

- (1) Explain the term 'Homopolysaccharides' with two examples.
- (2) Give the difference between isomers and epimers
- (3) What are Fibrous proteins?
- (4) Explain the term 'isoelectric point'.
- (5) State the special characteristic of 'Proline'.
- (6) Explain the importance of Michaelis-Menton theory
- (7) Explain the effect of pH on enzyme activity.
- (8) State the salient features of competitive inhibition

Q.2 Answer the following (any two) (14)

- (1) Explain in detail the hydration, oxidation and thiolysis in beta oxidation with appropriate diagram.
- (2) Describe in detail 'Heteropolysachharides' with suitable example.
- (3) State the chemical properties of Polysaccharides and Disaccharides

Q.3 Answer the following (Any two) (14)

- (1) Explain the Titration curve in detail.
- (2) Write a note on 'dihedral angles' in polypeptide chains
- (3) Give the classification of the amino acid along with the chemical properties of amino acids

Q.4 Answer the following (any two) (14)

- (1) Distinguish between reversible and irreversible inhibition.
- (2) Write a detailed note on Line Weaver Burke equation and it's importance.
- (3) Explain classification and Nomenclature of enzymes

Q.5 Answer the following (any two) (14)

- (1) Discuss the pathway of Glycolysis in detail
- (2) Describe the TCA cycle in detail
- (3) What is Entropy? Describe various laws of thermodynamics
