

M.Sc. (Micro) Semester - 2 (CBCS) Examination
March/April – 2026 (As Per Syllabus Year-2018)
Biochemistry(CORE)

Time: 2:30 Hours**Marks:70****Instructions:**

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

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

- (1) Define disaccharides with suitable examples..
- (2) Describe the primary structure of proteins briefly.
- (3) Explain the term “saponification of lipids.”
- (4) What is the difference between anabolism and catabolism ?
- (5) State the names of two amino acids which are aromatic.
- (6) What are non-essential types of amino acids.
- (7) What is the second order reaction?
- (8) What is ping pong mechanism of enzyme reaction?
- (9) What are high energy rich compounds? Give suitable examples.
- (10) Give names of any two examples of neutral amino acids

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

- (1) Describe the chemical properties of disaccharides and Monosaccharides.
- (2) Explain the process of β -oxidation of fatty acids in detail
- (3) Classify lipids with appropriate examples.

Que.3 Answer the following (14)

- (1) Describe the physical and chemical properties of amino acids.
- (2) Write a note on Secondary structures of proteins.

OR

Que.3 Answer the following

- (1) Describe the Dihedral angles of amino acids. (05)
- (2) Explain the Ramachandran plot in detail. (05)
- (3) Describe various important functions of proteins. (04)

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

- (1) Distinguish between reversible and irreversible inhibition.
- (2) Describe the mechanism of action of anabolic and catabolic enzymes.
- (3) Discuss the contribution of Briggs and Haldane in enzyme kinetics studies.

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

- (1) Write a detailed note on TCA cycle
- (2) Discuss the pathway of gluconeogenesis in detail
- (3) Describe in detail ‘Glycolysis’.
