

B.Sc. Semester - 6 (NEP-2020) Examination**March/April-2026****ZOO: Biochemistry and Molecular Biology (Major-14)****Time: 2:00 Hours****Marks: 50****Instructions:**

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

Que.1 Answer the following questions. (10)

- 1) Write definition, general formula and classification of monosaccharides with suitable examples.
- 2) Write short note on structure of protein.

OR

Que.1 Answer the following questions.

- 1) Write note on homopolysaccharides.
- 2) Describe classification of protein based on composition and solubility.

Que.2 Answer the following questions. (10)

- 1) Give classification of lipids.
- 2) What is enzyme? Describe its nomenclature and classification.

OR

Que.2 Answer the following questions.

- 1) Describe biological roles of lipids.
- 2) Write note on: Factors affecting enzyme activity.

Que.3 Answer the following questions. (10)

- 1) Explain the differences and similarities of A-DNA, B-DNA, and Z-DNA.
- 2) Write note on β – oxidation of fatty acid.

OR

Que.3 Answer the following questions.

- 1) Explain: Glycolysis.
- 2) Explain: Urea Cycle.

Que.4 Answer the following questions. (10)

- 1) Explain DNA replication.
- 2) Write note on paper chromatography.

OR

Que.4 Answer the following questions.

- 1) Write note on Gel electrophoresis.
- 2) Describe Recombinant DNA technology.

Que.5 Answer the following questions. (10)

- 1) Write definition, general formula and classification of disaccharides with suitable examples.
- 2) Explain enzyme inhibition.

OR

Que.5 Answer the following questions.

- 1) Describe the structure and functional roles of t-RNA.
- 2) Explain transcription stage of protein synthesis.
