

B.Sc. Semester - 2 (NEP-2020) Examination**MARCH/APRIL-2025****BIT: Fundamental of Biochemistry (Major-4)****Time: 2:00 Hours****Marks: 50****Instructions:**

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

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- Que-1 Answer the following. (10)
(1) Describe various chemical bonds.
(2) Give a detail note on pH and buffer.
OR
- Que-1 Answer the following. (10)
(1) Write-down elements and structure of atoms.
(2) Discuss: Properties of water.
- Que-2 Answer the following. (10)
(1) Elaborate note on nomenclature and classification of enzyme.
(2) Write-down chemical nature of enzyme.
OR
- Que-2 Answer the following. (10)
(1) Discuss in detail about coenzymes.
(2) Give a detail note on acid-base catalysis.
- Que-3 Answer the following. (10)
(1) Discuss in detail about reversible enzyme inhibition.
(2) Describe a note on difference between prokaryotic and eukaryotic enzyme regulation.
OR
- Que-3 Answer the following. (10)
(1) Discuss derivation of Michaelis-Menten constant.
(2) Elaborate note on allosteric regulation.
- Que-4 Answer the following. (10)
(1) Describe in detail about passive diffusion.
(2) Write-down primary active transport in detail.
OR
- Que-4 Answer the following. (10)
(1) Discuss symport and antiport group translocation iron uptake.
(2) Describe architecture of membrane.
- Que-5 Answer the following. (10)
(1) Give a detail note on chemical reactions.
(2) Discuss in detail about isoenzyme.
OR
- Que-5 Answer the following. (10)
(1) Elaborate note on irreversible enzyme inhibition.
(2) Discuss secondary active transport.
