

B.Sc. Semester - 2 (NEP-2020) Examination

JUNE – 2024

BOT: Biomolecules (Minor-2)

Time: 2:00 Hours

Marks: 50

Instructions:

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

-
- Que.1 (1) Describe the significance & different types of chemical bonds. (05)
(2) What is pH and how do buffers help in maintain a constant pH in living organisms? (05)
- OR
- Que.1 (1) Describe the laws of thermodynamics and how do they relate to biological energy transfer? (05)
(2) Write a short note on unique properties of water. (05)
- Que.2 (1) Describe the function of Carbohydrates? (05)
(2) Explain : The structure and function of Monosaccharides? (05)
- OR
- Que.2 (1) Differentiate between disaccharides and polysaccharides. Give examples of each. (05)
(2) write a short note on classification of protein (05)
- Que.3 (1) Describe the structure and function of Fatty acids. (05)
(2) Write a short note on TAG (triacylglycerol). (05)
- OR
- Que.3 (1) Describe in detail types of nucleic acids (05)
(2) Describe classification of lipids (05)
- Que.4 (1) Give a classification of enzymes. (05)
(2) Write a short note on lock and key hypothesis (05)
- OR
- Que.4 (1) What is the difference between a holoenzyme, apoenzyme, and a coenzyme? (05)
(2) write a short note in enzyme inhibition and factors affecting enzyme activity (05)
- Que.5 (1) Describe: How do buffers work (05)
(2) Describe the four levels of protein structure (primary, secondary, tertiary, quaternary) and how each level is formed? (05)
- OR
- Que.5 (1) Describe Structure of Nucleotides. (05)
(2) Short note on Active Site in Enzymes (05)
