

B.Sc. Semester - 1 (NEP-2020) Examination**OCT/NOV-2025****BIT: Introduction to Biotechnology (Multidisciplinary Course)****Time: 2:00 Hours****Marks:50****Instructions:**

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

Que.1 Explain the principles of recombinant DNA technology and its importance. (10)

OR

Que.1 Describe the applications of biotechnology in agriculture, medicine, and the environment.

Que.2 Explain the concept of life and summarize the origin and evolution of the cell. (10)

OR

Que.2 Compare the organization and chemical composition of plant, animal, and prokaryotic cells.

Que.3 Describe the structure and functions of the cell wall and plasma membrane. (10)

OR

Que.3 Explain the structure and functions of mitochondria.

Que.4 Describe the structure and functions of the nucleus. (10)

OR

Que.4 Explain the structure and ultrastructure of chromosomes.

Que.5 Write the short note on: (10)

(A) Discuss the current status and future prospects of biotechnology in the developing world.

(B) Draw neat and labelled diagram of bacteriophage

OR

(A) Describe the endoplasmic reticulum and Golgi bodies and their roles in the cell.

(B) Differentiate between mitosis and meiosis
