

2023
B.E. (Biotechnology), First Semester
ESBT-101: Basic Biology

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Section.

x-x-x

1. a. What do you understand by the term biotechnology?
- b. What are the different types of evolution?
- c. How many membranes are present in mitochondria?
- d. What happens during anaphase stage of mitosis?
- e. Name any one beneficial micro-organism.
- f. Name any one covalent bond found in nucleic acids.
- g. Define polysaccharide?
- h. Name any one water soluble vitamin.
- i. What are enzymes?
- j. Name any one application of biotechnology. (1 each)

SECTION-A

2. a. What are the future prospects of biotechnology? Explain briefly. (5)
- b. Explain the Miller's experiment. (5)
3. a. Write a short note on harmful micro-organisms. (5)
- b. Explain the structure and function of lysosomes, with the help of a schematic diagram. (5)
4. a. Explain the salient features of eukaryotic cell with the help of a schematic diagram. (5)
- b. Explain the different stages of Meiosis-I, with the help of a schematic diagram. (5)

SECTION-B

5. a. Write a short note on application of biotechnology in food industry. (5)
- b. What are the different classes of enzymes? Explain. (5)
6. a. Describe the role of biotechnology in the medicine. (5)
- b. Illustrate any two applications of enzymes. (5)
7. a. Write a short note on lipids. (5)
- b. Write a short note on vitamins. (5)

x-x-x