

1129
B.E. (Bio-Technology) First Semester
BIO-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 Unit.

x-x-x

I. Answer the following:-

- a) What is the function of mitochondria?
- b) Mention one important function of lysosomes.
- c) Differentiate between phagocytosis and pinocytosis.
- d) What is a Co-enzyme?
- e) Coacervates are defined as _____.
- f) Give one example to prove Lamarckism.
- g) Monosaccharide is a protein having one type of amino acids. [True/False]
- h) Cilia are used for respiration. [True/False]
- i) The proteins used in DNA packaging are known as _____.
- j) What is Bioremediation? (10x1)

UNIT - I

- II. Name different theories of origin of life and describe the theory of chemical origin in detail. (10)
- III. a) Draw a labeled diagram of eukaryotic cell and explain all the organelles briefly.
b) Differentiate between a plant cell and an animal cell. (7,3)
- IV. a) Explain all the stages of mitosis with the help of diagram.
b) Differentiate between mitosis and meiosis. (7,3)

UNIT - II

- V. What are enzymes? How do they function? Enlist the classification of enzymes based on their functions. Mention two example of each class. (10)
- VI. Write an explanatory note on any two of the following:-
 - a) Vitamins
 - b) Carbohydrates
 - c) DNA(2x5)
- VII. Describe various applications of biotechnology in agriculture, medical and food industry. (10)

x-x-x