

Roll No.

Total Pages : 02

BT-4/M-24

42040

BIOLOGY

BS-141-A

Time : Three Hours]

[Maximum Marks : 75

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

Unit I

1. Describe the ultrastructure of a typical Prokaryotic cell indicating all the cell organelles with the help of well-labelled diagram. 15
2. Write short notes on the following : 15
 - (i) Differentiate between Plant and Animal cell
 - (ii) Characteristic features of living organisms.

Unit II

3. Discuss the general characteristics and classification of carbohydrates in details with the help of suitable examples. 15
4. Write short notes on the following : 15
 - (i) Mechanism of enzyme action
 - (ii) Effect of substrate concentration on enzyme activity.

Unit III

5. Discuss the concepts of recessiveness and dominance in genetics with the help of suitable examples. 15
6. Write short notes on the following : 15
 - (i) Mitosis and meiosis cell division
 - (ii) Evidence of nucleic acids as genetic material.

Unit IV

7. Discuss the Glycolysis pathway and Krebs cycle with the help of well-labelled diagrams and highlight the significance of each to the living organism. 15
8. Write short notes on the following : 15
 - (i) Role of biology in agriculture and health
 - (ii) Concept of species and strains in microbiology.