

Roll No.

Total Pages : 02

BT-1/D-22

41043

BIOLOGY

BS-141A

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. (a) Enlist the features of living organisms. 7
- (b) Draw the structure of mitochondria and endoplasmic reticulum. 8
2. Classify the organisms on the basis of energy and carbon utilisation and habitat. 15

Unit II

3. (a) Classify the carbohydrates based on functional group and number of carbons. 10
- (b) Differentiate between plant and animal cell. 5
4. (a) Classify enzymes based on criteria which is most acceptable and as per enzyme commission. 10
- (b) Enlist the importance of kinetic parameters. 5

Unit III

5. Define the process of cell division and with the help of diagrams, discuss the process of mitosis. 15
6. (a) Write down the Mendel's law of inheritance along with concept of central dogma of molecular biology. 10
- (b) Write a short note on Diabetes type I and type II. 5

Unit IV

7. Discuss with an example, the concept of exothermic and endothermic reactions along with significance of Gibbs' free energy in metabolism. 15
8. Write short notes on the following : 5×3=15
- (i) ATP as energy currency of cell
 - (ii) Concept of species and strains
 - (iii) Role of biology in agriculture and medicine.