

BT-1/D-24

41043

BIOLOGY

Paper-BS-141A

Time allowed : 3 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. (i) Enlist the importance of Biology in major discoveries of life. 5
- (ii) Draw a well labelled structure of chloroplast. 5
- (iii) Differentiate between prokaryotic cell and eukaryotic cell. 5
2. Why classification of living organisms is important. Classify living organism based upon energy and carbon utilisation and habitate. 15

UNIT-II

3. (a) Define Carbohydrates. Enlist different criteria used for classification of carbohydrates. Also discuss about major functions of carbohydrates. 8
- (b) Classify proteins based on their biological roles. 7
4. (a) Discuss in brief about enzyme kinetics and kinetic parameters of enzyme. 7

41043/K/782/350

P.T.O.

- (b) Discuss in brief about different parameters that affect enzyme activity. 8

UNIT-III

5. (a) Discuss about different stages of mitosis. Also enlist its significance in cell physiology. 12
- (b) Illustrate the concept of central dogma of molecular biology. 3
6. (a) Write down the Mendel's Law of inheritance. Also appreciate the significance of these laws in understanding of genetics. 10
- (b) With the help of example illustrate the concept of recessiveness and dominance. 5

UNIT-IV

7. (a) Why ATP is considered as energy currency of cell. 5
- (b) Write down the last five reactions of glycolysis along with names of enzymes which catalyze these reactions. 10
8. (a) Discuss in detail roles of Biology in agriculture and medicine. 10
- (b) Write down a short note on Bio-MEMS. 5