

Roll No.

Total Pages : 2

BT-I/D-19

31043

BIOLOGY

Paper : BS-141A

Time : Three Hours]

[Maximum Marks : 75

Note : Attempt five questions in all, selecting at least one question from each unit.

UNIT-I

1. (a) Give reasons :
 - (i) Why mitochondria and chloroplast are regarded as semiautonomous organelles ?
 - (ii) Why lysosomes are called suicidal bags of cell ?
 - (iii) Why mitochondria are known as power house of the cell ? (3×3=9)
- (b) Write a brief account of the functional characteristics of living organisms. 6
2. (a) Classify and explain the organisms on the basis of energy and carbon utilisation. 5
- (b) Explain the structure and functions of nucleus. 6
- (c) Make a comparison of uricotelic and ureotelic animals. 4

UNIT-II

3. (a) Describe structural components of DNA and RNA. 5

- (b) Compare the 2° and 3° structure of proteins. 5
- (c) Explain the effect of substrate concentration on enzyme activity. 5

4. Write a comprehensive note on the nomenclature and classification of enzymes with suitable examples. 15

UNIT-III

5. Write notes on the following :
 - (a) Genetics of Blood group. 7
 - (b) Harshey and Chase experiment for DNA as a Genetic material. 8
6. Write notes on the following :
 - (a) Diabetes type-II. 7
 - (b) Prophase stage of Meiosis. 8

UNIT-IV

7. Explain the following :
 - (a) Role of Biology in Bio-MEMS. 8
 - (b) Different methods of Sterilization. 7
8. (a) Give flow chart of Glycolysis with energy consideration. 7
- (b) Role of Biosensors in modern day life. 8

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