

Roll No.

Total Pages : 2

BT-1/D-12**8003****INTRODUCTION TO BIOTECHNOLOGY****Paper-BT-101E**

Time Allowed : 3 Hours]

[Maximum Marks : 100

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

UNIT-I

1. (a) Briefly describe the structure of an animal cell. 10
(b) Write the differences between prokaryotic and eukaryotic cell. 10
2. Write notes on the following :
 - (a) Polysaccharides
 - (b) Structure and functions of DNA
 - (c) Classification of enzymes. 6,7,7

UNIT-II

3. (a) What is mitosis ? Explain the process of mitosis in detail. 12
(b) Write down the differences between mitosis and meiosis. 8
4. (a) Explain various characteristics of bacteria. 10
(b) Write about economic importance of viruses and fungi. 10

UNIT-III

5. Write short notes on the following :

- (a) Plasmids
- (b) Restriction enzymes
- (c) Vectors.

7,7,6

6. (a) What is transgenesis ?

5

- (b) Define transgenic plants. List some examples of transgenic plants along with their utility.

15

UNIT-IV

7. What is biotechnology ? Discuss the applications of biotechnology in medicine, environment and industry. 20

8. (a) Define bioinformatics. Discuss its role in genome sequencing. 10

- (b) Write a detailed note on nanobiotechnology. 10