

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