

Roll No.

Total Pages : 02

BT-2/M-17

8232

FUNDAMENTALS OF BIOTECHNOLOGY

BT-101N

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) What is Biology ? Discuss various branches of Biology with their applications in our daily life. 8
(b) Define cell organelle. Illustrate ultrastructure and functions of Nucleus. 7
2. (a) Make well labelled diagram of eukaryotic cell. 8
(b) Enlist differences between plant and animal cell. 7

Unit II

3. (a) Discuss different phases of mitosis with suitable diagrams. 8
(b) Explain the process of replication in detail. 7

4. (a) Define Mutation. Explain various types of mutations. 8
- (b) Mention different types of blood groups and their genetics. 7

Unit III

5. (a) What is Recombinant NDA ? Discuss various steps of recombinant DNA Technology in detail. 8
- (b) What is a Vector ? Explain different types of vectors being used in Recombinant DNA Technology. 7
6. (a) Explain the production and significance of Bt Cotton. 8
- (b) What is molecular farming ? Explain with suitable example. 7

Unit IV

7. (a) Define Biotechnology. Discuss its various applications in agriculture. 8
- (b) What is Bioinformatics ? Discuss its role in detail. 7
8. (a) Explain ethical issues related to biotechnology. 8
- (b) What is Microbial Biotechnology ? Discuss the role of biotechnology in industry. 7