

Roll No. ....

Total No. of Pages : 2

BT-2/J08

8232

Introduction to Biotechnology

Paper : BT-101E

Time : Three Hours]

[Maximum Marks : 100

Note :— Attempt any FIVE questions, selecting at least ONE question from each unit.

UNIT—I

1. Discuss the structure of a typical prokaryotic cell with a suitable diagram. Give various examples of prokaryotes. 17+3=20
2. (a) Write a note on different structural levels of proteins. 10  
(b) List the general characteristics of enzymes and discuss their nomenclature. 10

UNIT—II

3. Define photosynthesis. Describe cyclic and noncyclic photophosphorylation. 20
4. (a) Describe the process of digestion in stomach. 10  
(b) Give a brief account of salient features of bacteria, fungi and viruses. 10

UNIT—III

5. (a) How does variation and speciation plays important role in the process of evolution. 10

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- (b) Write short notes on monohybrid and dihybrid crosses conducted by Mendel. 10
6. Describe the various events that take place during prophase I of meiosis I cell division. Distinguish between metaphase of mitosis and metaphase-I of meiosis. 10+10=20

### UNIT—IV

7. By taking suitable example discuss the various steps and tools to be followed for the construction of a recombinant organism. 20
8. Discuss the application of biotechnology in the field of agriculture and environment. 20