

**BT - DEC 2009 - 1****8031****BT-1/D09****INTRODUCTION TO BIOTECHNOLOGY**

Paper : BT-101(E)

Time : Three Hours]

[Maximum Marks : 100

**Note :** Attempt *five* questions in total selecting at least *one* question from each unit.

**UNIT-I**

1. Describe the features of living organisms. Give the structure of animal cell, briefly describing the function of each organelle.
2. (a) Describe the classification and functions of carbohydrates. 10  
(b) Give the structure and forms of DNA. 10

**UNIT-II**

3. Describe the cell division by meiosis and mitosis, and the significance of the methods.
4. How bacteria are harmful ? Give the morphology and pathogenicity of *Salmonella* and role of immune response in the infection.

**UNIT-III**

5. What are the tools used in Genetic engineering ? Give the method in detail.

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6. How can we achieve transgenic plants ? Describe giving suitable examples with their significance.

### UNIT-IV

7. Biotechnology is an applied field. Discuss.

8. Write notes on the following :

- (a) Nano-biotechnology.
  - (b) Ethical issues in Biotechnology.
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