



**AF-3059**

B.Sc. (Part - II)  
Term End Examination, 2017-18

**BIOTECHNOLOGY**

Paper - II

*Time* : Three Hours]      [*Maximum Marks* : 50

**Note** : Answer **all** questions. All questions carry equal marks.

**Unit-I**

1. Give a general concept and application of Recombinant DNA Technology.

**OR**

Write short notes on the following :

- (a) Restriction endonuclease
- (b) Genomic library

( 2 )

**Unit-II**

2. What do you mean by vectors ? Discuss the nature and significance of different types of vectors used in DNA technology.

**OR**

Write short notes on the following :

- (a) Cloning vectors for animal
- (b) Plasmid as a vector

**Unit-III**

3. Briefly discuss the applications, advantages and limitations of polymerase chain reaction.

**OR**

Comment on the following in brief:

- (a) Kary Mullis (1983)
- (b) Annealing
- (c) Bivalent cations
- (d) DNA isolation

**Unit-IV**

4. What do you mean by monoclonal antibodies ? Briefly discuss the production and application of monoclonal antibodies.

**OR**

( 3 )

Write short notes on the following :

- (a) In vitro fertilization
- (b) Chimeric antibodies

**Unit-V**

5. What is DNA fingerprinting ? Give a critical account of its procedure/method and applications.

**OR**

Write short notes on the following :

- (a) Transgenic plants
  - (b) Targeted gene transfer
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