



MJ-521

40963

M.Sc. Botany

3rd Semester Examination, July-Dec., 2021

Paper - III

Biotechnology and Genetic Engineering of  
Plants and Microbes

Time : Three Hours]

[Maximum Marks : 80

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

Unit-I

1. Write an essay on recombinant DNA technology.

OR

Write short notes on any two of the following :

- (a) Shuttle vector 61
- (b) c-DNA library 24
- (c) Choice of vector

(2)

### Unit-II

2. Write an essay on gene transfer methods.

OR

Write short notes on any two of the following :

- (a) Selection of recombinants
- (b) Virus mediated gene transfer
- (c) Vectorless or direct DNA transfer

### Unit-III

3. Give the Maxam-Gilbert sequencing of DNA.

OR

Write short notes on any two of the following :

- (a) Advantages of PCR
- (b) Limitations of PCR
- (c) High throughput DNA sequencing

### Unit-IV

4. Write an essay on transposon mediated gene transfer.

OR

( 3 )

Write short notes on any two of the following :

- (a) Microarrays
- (b) Functional genomics
- (c) Genome project