

Roll No. : .....

Total No. of Questions : 11 ]

[ Total No. of Printed Pages : 3

# **BFMS-410**

**M.Sc. (Final) Examination, 2023**

**BOTANY**

Paper - VIII (d)

**(Advanced Plant Biotechnology-II)**

*Time : 3 Hours ]*

*[ Maximum Marks : 75*

**Section-A**

**(Marks : 2 × 10 = 20)**

**Note :-** Answer all *ten* questions (Answer limit **50** words). Each question carries **2** marks.

**Section-B**

**(Marks : 5 × 5 = 25)**

**Note :-** Answer all *five* questions. Each question has internal choice (Answer limit **200** words). Each question carries **5** marks.

**Section-C**

**(Marks : 10 × 3 = 30)**

**Note :-** Answer any *three* questions out of five (Answer limit **500** words). Each question carries **10** marks.

**Section-A**

1. Define the following :

(i) BAC

(ii) Clone

**BRI-734**

( 1 )

**BFMS-410** P.T.O.

- (iii) Vectors
- (iv) Cosmids
- (v) PCR
- (vi) T-DNA
- (vii) Blotting
- (viii) Transgenic plants
- (ix) *r*-DNA technology
- (x) Electroporation

**Section-B**

2. Write short note on Endonuclease.

*Or*

Describe PBR 322 and PBR 327.

3. Describe Crow gall disease.

*Or*

Write short note on reverse transcription.

4. Describe Southern blotting.

*Or*

Describe Northern and Western blotting.

5. Describe Male Sterility.

*Or*

Write short note on ballistic method.

6. Describe various enzymes for genetic engineering.

*Or*

Write on insect resistant plants.

### **Section-C**

7. Give a detailed description of nitrogen fixation.
8. Write about application of biotechnology.
9. Describe transcription in prokaryotes.
10. Discuss mechanism of translation process.
11. Describe protoplast culture.