

4. a) Give an account on Ti plasmid based vectors and mechanism of Agrobacterium mediated gene transfer

OR

- b) What are the advantages of DNA markers? Discuss their significance in Crop improvement

5. a) Describe the development of tolerant/resistant plants for various abiotic stresses

OR

- b) Explain the strategies for the alteration of seed oil quality for industrial applications

6. a) Explain the pathway and advantages of Asymbiotic nitrogen fixation

OR

- b) Explain the production of BGA and VAM fungi inoculums and their significance in plant nutrition

[29/II Y/211]

[Aug-11]

[SPDBT-203]

M.Sc. DEGREE EXAMINATION

Biotechnology

II YEAR

PLANT BIOTECHNOLOGY

(Effective from the admitted batch 2009-10)

Time: 3 Hours

Max.Marks: 70

Instructions: All parts of the unit must be answered in one place only.
Figures in the right hand margin indicate marks allotted.

SECTION-A

1. Answer any **Four** of the following: (4x5=20)

- a) Pathways of regeneration
- b) Gynogenic haploids
- c) Cryopreservation
- d) Synthetic seeds
- e) Plantibodies
- f) Bt. Cotton and Brinjal
- g) Nitrogen cycle

SECTION-B

Answer all questions: (5x10=50)

2. a) Give an account on initiation, growth pattern and applications of different types of cell suspension cultures

OR

- b) Discuss the role of different components of culture media and compare major formulations

3. a) Explain the strategies to enhance the production of secondary metabolites in tissue culture

OR

- b) Describe the methods for the fusion of protoplasts and selection of somatic hybrids