

2063

B.E. (Bio-Technology) Seventh Semester  
BIO-713: Plant Tissue Culture

Time allowed: 3 Hours

Max. Marks: 50

**NOTE:** Attempt five questions in all, including Question No. I which is compulsory and selecting two questions from each Unit.

x-x-x

I. Write short note on the following:-

- a) Explant
- b) Zygotic embryo
- c) Embryo rescue
- d) Double haploids
- e) Cytokinins
- f) Agar agar
- g) Ri Plasmid
- h) Synthetic seeds
- i) Flavr Savr Tomato
- j) Vitrification

(10x1)

**UNIT - I**

- II. a) Discuss the history of plant tissue culture.
- b) Explain the requirements and general techniques of plant tissue culture. (2x5)
- III. Give a detailed account of somatic embryogenesis highlighting the applications of somatic embryogenesis in crop improvement (10)
- IV. Explain the method and application of protoplast isolation and culture. (10)

**UNIT - II**

- V. Explain the various methods to develop disease resistant plants. Justify your answer with suitable examples. (10)
- VI. Give an account of production of secondary metabolites using plant tissue culture. (10)
- VII. How does germplasm storage contribute to plant conservation? Give an account of various methods employed for the purpose (10)

x-x-x



