

C 41947

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Name.....

Reg. No.....

FOURTH SEMESTER M.Sc. DEGREE (REGULAR/SUPPLEMENTARY)  
EXAMINATION, APRIL 2023

(CBCSS)

Botany

BOT 4E 01-3—PLANT TISSUE CULTURE

(2019 Admission onwards)

Time : Three Hours

Maximum : 30 Weightage

**Part A**

I. Answer any *four* questions. Short Answer Type. Each question carries 2 weightage :

- 1 Explain importance of antioxidants in tissue culture.
- 2 Write about exploitation of somaclonal variation.
- 3 Explain photoautotrophic micropropagation.
- 4 What is a Bioreactor ?
- 5 Write about certification of TC plants.
- 6 Differentiate liquid and semi solid media.
- 7 Write an account on organic supplements in tissue culture media.

(4 × 2 = 8 weightage)

**Part B**

II. Answer any *four* questions. Short Essay Type. Each question carries 3 weightage :

- 8 Explain objectives and achievements in secondary metabolite production.
- 9 Write an account on commercial production of orchids and anthurium.
- 10 Explain somatic embryogenesis and synseed production.
- 11 Describe procedure for virus index in tissue culture regenerated plants.
- 12 Write about marketing issues and farmers acceptance of TC plants.

Turn over

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13 Write an account on procedures to avoid contamination in tissue culture lab.

14 Write an note on cost benefit analysis of commercial production of TC plants.

(4 × 3 = 12 weightage)

### Part C

Answer any *two* questions. Essay Type. Each question carries 5 weightage :

15 Write an account on components and preparation of MS and Nitsch medium.

16 Write an account on requirements, management, and production planning for commercial clonal propagation.

17 Explain embryo, endosperm and protoplast culture.

18 Explain hardening procedure of tissue cultured plants. Write about value addition.

(2 × 5 = 10 weightage)