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2495 (Pages : 2) Name.....

Reg. No.....

FOURTH SEMESTER M.Sc. DEGREE (REGULAR/SUPPLEMENTARY) EXAMINATION, APRIL 2022

(CBCSS)

Botany

BOT4E01 3—PLANT TISSUE CULTURE

(2019 Admission onwards)

: Three Hours Maximum : 30 Weightage

General Instructions

. *In cases where choices are provided, students can attend* **all** *questions in each section.*

. *The minimum number of questions to be attended from the Section / Part shall remain the same.*

. *The instruction if any, to attend a minimum number of questions from each sub section / sub part / sub division may be ignored.*

. *There will be an overall ceiling for each Section / Part that is equivalent to the maximum weightage of the Section / Part.*

Part A

. Answer any four questions : (Short Answer type) Each question carries 2 weightage :

1 Explain the importance of somaclonal variation.

2 Write about a media for special purpose.

3 Write a note on certification of TC plants.

4 Explain the importance of low cost alternatives.

5 Write about additives and adsorbants.

6 Explain lab to land awareness.

7 Mention the importance of VAM in TC plants.

(4 × 2 = 8 weightage)

Part B

II. Answer any *four* questions : (Short Essay type) Each question carries 3 weightage :

8 Write an account on embryo and endosperm culture.

9 Write about the contamination problems and measures to avoid it in tissue culture lab.

10 Explain somatic embryogenesis and synthetic seed production.

11 Explain the action of PGRs in tissue culture.

12 Explain methodology for virus indexing.

13 Write an account in tissue culture ventures and success stories in India.

14 Describe the hardening technique of TC plants.

(4 × 3 = 12 weig

Part C

II. Answer any *two* questions : (Essay type) Each question carries 5 weightage :

15 Write an account on different plant tissue culture media.

16 Describe bio-reactor technology and secondary metabolite production.

17 Explain commercial tissue culture production of teak, bamboo and banana. Explain cost be analysis

18 Explain protoplast culture and haploid plant culture.

(2 × 5 = 10 weig