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(Pages : 2)

Name.....

Reg. No.....

FOURTH SEMESTER M.Sc. DEGREE EXAMINATION, JUNE 2017

(CUCSS)

Botany

BO 04 ET 13 (5)—PLANT TISSUE CULTURE

(2010 Admissions)

Time : Three Hours

Maximum : 36 Weightage

Part A

I. Answer all *fourteen* questions. Each answer should be brief. Each question carries 1 weightage :

- 1 Name any *two* hormones used for phytomorphogenesis.
- 2 What are the advantages of semisolid medium in tissue culture ?
- 3 What is explant ?
- 4 How VAM inoculation is beneficial in tissue culture ?
- 5 What are the advantages of poly house ?
- 6 What are antioxidants ?
- 7 List the major components of a culture medium.
- 8 What is embryo culture ?
- 9 Write any two uses of anther culture.
- 10 What is synthetic seed ?
- 11 How can we make farmers confident in tissue culture plants ?
- 12 Differentiate primary hardening from secondary hardening .
- 13 Define clonal propagation.
- 14 Name any *two* major tissue culture ventures in India.

(14 × 1 = 14 weightage)

Turn over

Part B

II. Answer any *seven* questions. Each answer not exceeding 100 words. Each question carries 2 weightage :

- 15 Explain different types of Bioreactors.
- 16 What are the objectives of secondary metabolite production ?
- 17 What is virus indexing ? What are its importance ?
- 18 What is a green house ? What are its advantages ?
- 19 Tissue culture plants are expensive. Can you justify this statement ?
- 20 Explain the significance of somatic embryogenesis in agriculture.
- 21 Differentiate between somatic embryos and zygotic embryos.
- 22 Comment on the commercial tissue culturing of Teak, Banana, Papaya and Orchids.
- 23 Explain the major sources of contamination in a tissue culture lab. Suggest remedial measures.
- 24 What is androgenesis ? Discuss the role of androgenesis in tissue culture.

(7 × 2 = 14 weightage)

Part C

III. Answer any *two* questions. Each answer not exceeding 300 words. Each question carries 4 weightage :

- 25 Explain the methods of production of haploid plants and list out its applications.
- 26 Describe the isolation, purification and culture of protoplasts.
- 27 Write an essay on methods, advantages and applications of cell immobilization.
- 28 What is somatic embryogenesis ? How do somaclonal variations advantageous in tissue culture ?

(2 × 4 = 8 weightage)