R8393

Sub. Code
525501

M.Sc. DEGREE EXAMINATION, APRIL – 2023

Fourth Semester

Botany

PLANT TISSUE CULTURE

(CBCS – 2019 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** the questions.

1. Sterilization

2. Media

3. Explant

4. Nurse Culture

5. Germplasm

6. Propagation

7. Haploids

8. Protoplast

9. Immobilization

10. Deep Freezing

Part B (5 × 5 = 25)

Answer **all** the questions, choosing either (a) or (b).

11. (a) Briefly discuss about the History of Plant Tissue Culture.

Or

(b) Write about Gamborg's culture media.

12. (a) Explain in brief about Cell suspension culture.

Or

(b) Write about the Micro – chamber technique.

13. (a) Discuss about the factors affecting Morphogenesis.

Or

(b) Briefly explain about somacolonal variations.

14. (a) What is in *vitro* pollination? Explain in brief.

Or

(b) Write about plantlets from Haploids.

15. (a) What is Biotransformation? Add notes on its Application.

Or

(b) How Plant Tissue Culture is effectively used in Horticulture?

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Write in detail about the construction and design of a Plant Tissue Culture Laboratory.

17. Write an essay on Microchamber Techniques.

18. Explain in detail about Somatic embryogenesis and its Applications.

19. Write an essay on Androgenesis.

20. Explain in detail about Cryopreservation, its applications and Limitations.

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