

**M.Sc. DEGREE EXAMINATION, NOVEMBER 2019**  
**II Year III Semester**  
**Plant Tissue Culture**

**Time : 3 Hours**

**Max.marks :75**

**Section A** ( $10 \times 2 = 20$ ) Marks

Answer any **TEN** questions

1. Dry heat sterilization.
2. Define Totipotency.
3. Mention the role of solidifying agent in tissue culture media.
4. Comment on Macro nutrients.
5. Define Callus.
6. What is Vitrification?
7. Mention the purpose of Feeder layer technique.
8. What is fusogens?
9. Comment on Meristem culture
10. What are secondary metabolites?
11. Define Immobilization.
12. Expand the following : PGPR and PGPF.

**Section B** ( $5 \times 5 = 25$ ) Marks

Answer any **FIVE** questions

13. Write short note on moist heat sterilization.
14. Describe the components of tissue culture media and their importance.
15. Distinguish between direct and indirect morphogenesis.
16. Discuss on the types of explants.
17. Write in brief about the preparation of virus free culture.
18. Give a general account on surface sterilization techniques.
19. Explain the method on embryo culture techniques.

**Section C** ( $3 \times 10 = 30$ ) Marks

Answer any **THREE** questions

20. Write in detail on the tissue culture laboratory facility.
21. Write the steps involved in isolation and protoplast culture.
22. Write an essay on synthetic seeds and its application.
23. Elaborate on plant cell suspension culture technique.
24. Discuss the significance of tissue culture techniques with respect to crop improvement.

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