23105142

**QP CODE: 23105142**

**Reg No : .....**

**Name : .....**

# B.Sc DEGREE (CBCS) REGULAR / REAPPEARANCE EXAMINATIONS, MARCH 2023

## Sixth Semester

B.Sc Biotechnology Model III

## CORE COURSE - BT6CRT15 - PLANT BIOTECHNOLOGY

2017 Admission Onwards

865DF062

Time: 3 Hours Max. Marks : 60

### Part A

*Answer any **ten** questions.*

*Each question carries **1** mark.*

1. Point out the work of Haberlandt in Tradescantia.
2. Examine the importance of aseptic conditions in plant tissue culture lab.
3. What is culture medium?
4. What is the role of plant hormone?
5. What are the stages of micropropagation?
6. Who introduced meristem culture?
7. What is anther culture?
8. Differentiate miniprotoplast and cytoplast.
9. List application of cybrid.
10. State cryopreservation.
11. Name any two viral vectors used for plant transformation.
12. Mention about the reporter gene used in agrobacterium mediated gene transfer.

(10×1=10)

### Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Use of autoclave, working table and distillation plant in plant tissue culture lab.
14. Evaluate the importance of Hardening centre in plant tissue culture.
15. Describe the significance of totipotency.
16. Explain single cell culture.
17. Describe the isolation of somaclonal variation.
18. Explain the procedure for somatic embryogenesis.
19. Explain slow growth method.
20. Describe about the insect reistance induced in plants through transgencis.
21. Differentiate the Ti plasmid and Ri plasmid.

(6×5=30)

**Part C**

*Answer any **two** questions.*

*Each question carries **10** marks.*

22. Explain the preparation of plant tissue culture medium. How a medium can be standardised for plant regeneration?
23. Explain the types, uses and advantages of artificial seeds.
24. Describe protoplast culture.
25. Explain about binary vector and helper plasmid.

(2×10=20)