

QP CODE: 25014769



Reg No :
Name :

**UNDER GRADUATE (CBCS) SPECIAL REAPPEARANCE EXAMINATIONS,
FEBRUARY 2025**

Fifth Semester

(Offered by the Board of Studies in Biotechnology)

OPEN COURSE - BT5OPT01 - TISSUE CULTURE TECHNIQUES

2022 Admission Only

5FF1C1D6

Time: 3 Hours

Max. Marks : 80

Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. Define plant tissue culture.
2. What are the structural components in plant tissue culture lab?
3. What is subculture?
4. Give an out line of animal tissue culture lab.
5. Write short note on MS medium.
6. Define surface sterilization.
7. Define media sterilization.
8. How serum affect the animal cell growth?
9. Define cloning.
10. What are the agricultural applications of animal cell culture?
11. What is protoplast and its uses?
12. How is tissue culture used in agriculture?

(10×2=20)

Part B

*Answer any **six** questions.*

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

13. What are the general requirements of tissue culture laboratory? Explain.





14. Animal tissue culture lab is incomplete without CO₂ incubator. Comment.
15. Explain the importance of standardization of media in plant tissue culture.
16. How the size, source and age of explant influence the growth in plant tissue culture? Explain.
17. Comment on organogenetic and embryogenetic methods in callus culture.
18. Explain the media preparation in animal cell culture.
19. Explain the methods in animal cell culture for the production of medically important proteins.
20. Comment on the industrial applications of animal cell culture.
21. Explain the structure and functions of industrial bioreactors for plant cell culture.

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **15** marks.*

22. What are the basic facilities to set up a tissue culture lab? Explain.
23. Explain the criteria for designing animal tissue culture laboratory.
24. Discuss on the various aseptic measures taken before plant tissue culture.
25. Discuss on media used in animal cell culture and the methods used for sterilizing it.

(2×15=30)

