

QP CODE: 26019071



Reg No :

Name :

M.Sc DEGREE (CSS) EXAMINATION, MARCH 2026

Fourth Semester

M Sc BIOCHEMISTRY

ELECTIVE - BC800403 - PLANT AND ANIMAL CELL CULTURE

2019 Admission Onwards

62726C26

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

Weight 1 each.

1. Give the role of cell culture media in animal cell technology.
2. Compare the advantages & disadvantages of serum containing media.
3. Define confluence.
4. Recall the importance & advantages of a continuous cell line.
5. Identify the advantages of a histotypic culture.
6. What is callus culture?
7. What is acclimatization in plant tissue culture?
8. Explain protoplast culture.
9. Explain male sterility of plants.
10. What are different methods of end joining in gene editing technology?

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

Weight 2 each.

11. Explain the key aspects in the layout of animal cell culture labs.
12. Comment about the physical methods used for sterilization of media & supplements.
13. Define the relevance of sub culturing and cell lines.
14. Discuss the protocol for neural stem cell culture.





15. Explain the methods to eliminate viruses in plants.
16. What are the limitations of somatic hybridization?
17. Write down the protocol of anther culture.
18. Explain photobioreactors and its application in scale-up in suspension culture.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

Weight 5 each.

19. Explain sub culturing and secondary culture.
20. Outline the technique of embryo culture.
21. Emphasize the importance of somaclonal variation?
22. Gene knockout technology is a promising strategy to study the function of a gene product. Justify the statement.

(2×5=10 weightage)

