B.Sc DEGREE (CBCS)) REGULAR/ IMPROVEMENT/ REAPPEARANCE / MERCY CHANCE EXAMINATIONS, FEBRUARY 2025

Fourth Semester

B.Sc Microbiology Model III

Complementary Course - BT4CMT04 - PLANT AND ANIMAL BIOTECHNOLOGY

2017 Admission Onwards

0B2CA4ED

Time: 3 Hours   Max. Marks : 60

Part A

*Answer any **ten** questions.*

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

1. What is meant by an explant?

2. Name any two growth hormones used in plant tissue culture media.

3. What is somaclonal variation?

4. What is organogenesis in plants?

5. Who developed the technique of meristem culture?

6. Define pollen culture.

7. Mention the significance of haploid production of plants.

8. Name the gelling agents used in media preparation.

9. What is growth factor?

10. Define transformed animal cell.

11. Define continuous cell lines.

12. Give an account of vaccine production.

(10×1=10)

Part B

*Answer any **six** questions.*

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

13. Briefly explain the medium stock preparation in plant tissue culture.

14. Explain briefly the cytodifferentiation.

15. What are the importance of somatic embryogenesis?

16. Briefly describe the applications of plant cell culture.

17. Explain about animal cellculture and its development.

18. Explain the importance of synthetic media over biological fluids used as a media.

19. Write an account on anchorage dependent cells and anchorage independent cells.

20. Explain the importance of secondary cell culture.

21. Write an account on the origin of animal cell lines.

(6×5=30)

Part C

*Answer any **two** questions.*

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

22. Write an essay on plant tissue culture media and the role of media components.

23. Write an essay on the types of tissue culture.

24. Describe in detail the various laboratory requirements for the establishment of animal cell culture.

25. Explain applications and advantages of animal cell culture.

(2×10=20)