



MAR IVANIOS COLLEGE (AUTONOMOUS)
THIRUVANANTHAPURAM

Reg. No.:.....

Name:.....

Fifth Semester B.Sc. Degree Examination, November 2016

First Degree Programme under CBCSS

Vocational Course : Botany – IX

AUBB553: Animal Biotechnology

Time: 3 Hours

Max. Marks: 80

SECTION – A

Write short notes on ALL the following.

1. 3D Culture
2. CD markers
3. HeLa cells
4. Trypsinization
5. Embryonic stem cells
6. Synthetic Culture Media
7. Name two enzymes used for disaggregation of cells in animal cell culture
8. Somatic gene therapy
9. Characteristics of cells in culture
10. Bio reactors

(10 × 1 = 10 Marks)

SECTION – B

Answer any EIGHT questions, not exceeding one paragraph.

11. Write a short note on cell culture vessels.
12. What is gene therapy ? Explain Ex–vivo gene augmentation therapy.
13. Write briefly on the sources of stem cells.
14. Write a short note on disaggregation of tissue for cell culture.

15. Explain importance of CO₂ incubator in animal cell culture.
16. Write short note on Roller bottles and spinner flasks.
17. Write briefly on stem cell culture.
18. Write a note on HAT medium.
19. Point out uses of balanced salt solution.
20. What is feeder layer ? Point out its significance.
21. Write briefly on mono layer culture.
22. Write a note on primary cell culture.

(8 × 2 = 16 Marks)

SECTION – C

Short essay type : Answer any SIX questions.

23. Write shortly on continuous cell lines and its properties.
24. Describe the aseptic techniques adopted in animal cell culture.
25. Write about the physico–chemical properties of culture media.
26. Give a note on applications of animal cell culture.
27. Write briefly on virus cultivation.
28. Differentiate suspension and immobilized cell cultures.
29. Write about cell synchronization.
30. Advantages and disadvantages of serum in culture media.
31. Write about cryopreservation and retrieval of cells from the frozen stage.

(6 × 4 = 24 Marks)

SECTION – D

Long essay type : Answer any Two questions.

32. Explain about the transgenic animals. Mention its uses.
33. Describe basic requirements of animal cell culture.
34. Explain hybridoma technology and its applications.
35. Briefly explain about the special bioreactors for large scale cultivation of animal cells.

(2 × 15 = 30 Marks)

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