

(Pages : 4)

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Reg. No. :

Name :

Fifth Semester B.Sc. Degree Examination, December 2022

Career Related First Degree Programme under CBCSS

Botany and Biotechnology

BB 1573 : ANIMAL BIOTECHNOLOGY

(2019 Admission onwards)

Time : 3 Hours

Max. Marks : 80

PART – A

Answer **all** questions in a word or **one** or **two** sentences. Each question carries **1** mark.

1. Define primary cell culture.
2. What is Bio safety cabinet?
3. Comment on passaging.
4. Give note on t-plasminogen activator.
5. What are Mesenchymal stem cells?
6. Comment on induced pluripotent stem cells.
7. What is cryoprotectant?
8. Comment on Dolly.
9. Give note on Herman.
10. What are Roller bottles?

(10 × 1 = 10 Marks)

P.T.O.

PART – B

Answer **any eight** questions. Each question carries **2** marks. (Answer not to exceed **one** paragraph)

11. What are transformed cell lines?
12. Briefly explain MTT Assay.
13. Give notes on CO₂ incubator.
14. Explain suspension cell cultures.
15. What is DMEM?
16. Define confluence.
17. Comment on Balanced salt solutions.
18. Explain interferon.
19. Discuss the applications of spinner flask.
20. What are Hematopoietic stem cells?
21. Give notes on ANDi.
22. Explain the use and applications of Personal Protection Equipment.
23. Comment on Flow cytometry.
24. Discuss about Basal media.
25. Comment on Confocal microscopy.
26. What is GloFish?

(8 × 2 = 16 Marks)

PART – C

Answer **any six** questions. Each question carries **4** marks. (Answer not to exceed **120** words)

27. Give note on immortal cell lines.
28. Briefly describe the methods of production of insulin.
29. Explain the applications of animal cell culture.
30. Discuss in detail various properties of Adherent cell lines.
31. Brief a note on different cell culture media.
32. Explain the methods and applications of Virus cultivation.
33. What is meant by cell viability? Briefly discuss various assays to measure cell viability.
34. Differentiate between embryonic and adult stem cells.
35. What are transgenic animals?
36. Write a detail d note on Cryopreservation of animal cell lines.
37. Give an account on animal bioreactors.
38. Write a note on bioethics in animal cell culture.

(6 × 4 = 24 Marks)

PART – D

Answer **any two** questions. Each question carries **15** marks. (Answer not to exceed **three** pages)

39. Discuss in detail the laboratory facilities required for the cell culture facility.
40. Write an essay on characterization of animal cell lines.

41. What are bioreactors? Give a note on its types.
42. Give a brief essay on stem cell culture and its clinical uses.
43. Give an account on expansion of bioactive proteins in animal cell lines.
44. Write an essay on Preservation and maintenance of animal cell cultures.

(2 × 15 = 30 Marks)
