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Reg. No. : .....

Name : .....

**Fifth Semester B.Sc. Degree Examination, December 2022**

**Career Related First Degree Programme under CBCSS**

**Group 2 (a) : Botany and Biotechnology**

**Vocational Course XI**

**BB 1573 : ANIMAL BIOTECHNOLOGY**

**(2018 Admission)**

Time : 3 Hours

Max. Marks : 80

**SECTION – A**

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

1. What is primary cell culture?
2. Define immortalised cell culture.
3. Give note on BSS.
4. Expand FACS.
5. What is interferon?
6. List the application of suspension cell culture.
7. What is passaging?
8. Comment on iPSC.

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9. What is thawing?
10. What is Trypan blue dye exclusion assay.

**(10 × 1 = 10 Marks)**

SECTION – B

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

11. What is a cell line?
12. What are transformed cell lines?
13. Comment on MEM.
14. Brief note on CO<sub>2</sub> incubator.
15. What is differential centrifugation?
16. What is virus culture?
17. Comment on Factor IX.
18. What is Anchor dependent cell culture?
19. Define confluence.
20. What are embryonic stem cells?
21. What are animal bioreactors?
22. Comment on growth factor.
23. What is cryopreservation?
24. Explain MTT assay.
25. Comment on t-Plasminogen activator.
26. Briefly discuss LDH assay.

**(8 × 2 = 16 Marks)**

## SECTION – C

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

27. Explain briefly cell viability assays.
28. Identify and comment on application of animal cell cultures.
29. Discuss on different cell culture media components.
30. Write a short note on characterization of cell lines.
31. Discuss briefly on cell culture vessels.
32. What are transgenic animals?
33. Give a brief note on bioethics in animal cell culture.
34. Discuss different types of stem cells.
35. Write a short essay on organ culture.
36. Discuss in detail various properties of Adherent cell lines.
37. Which is the technique used to create Dolly sheep?
38. Give a note on tissue grafting.

**(6 × 4 = 24 Marks)**

## SECTION – D

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

39. Discuss on the instruments and equipments needed for animal cell culture.
40. What is gene therapy? Explain its applications.

41. Write an essay on preservation and maintenance of cell culture.
42. Give an account on clinical application of stem cell culture.
43. Discuss large scale cultivation methods of animal cell culture.
44. Explain the products and uses of animal cell line culture.

**(2 × 15 = 30 Marks)**

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