

Reg. No. :

Name :

Fifth Semester B.Sc. Degree Examination, December 2023

Career Related First Degree Programme under CBCSS

Botany and Biotechnology

Vocational Course

BB 1573 : ANIMAL BIOTECHNOLOGY

(2019 Admission Onwards)

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 are transformed cell lines?
2. Mention the significance of Factor IX.
3. Define passage number.
4. What is EMEM?
5. List the features of roller bottles.
6. What is MTT assay?
7. Define Hela cell line.
8. Give examples for growth factors in mammalian cell culture systems.
9. What is Trypan Blue Cell Counting?
10. What is karyotyping?

(10 × 1 = 10 Marks)

P.T.O.

SECTION – B

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

11. What is primary cell culture?
12. Give note on BSS.
13. What is natural media?
14. Comment on interferon.
15. What is spinner flask?
16. List the applications of gene therapy.
17. Explain the role of cryoprotectant in animal cell culture.
18. What are anchor dependent cell culture?
19. What is meant by Induced pluripotent stem cell?
20. Mention the role of hormones in cell culture media.
21. What is isoenzyme analysis?
22. Explain Luminescent Cell Viability Assays.

(8 × 2 = 16 Marks)

SECTION – C

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

23. Discuss on composition and types of animal cell culture media.
24. Briefly explain virus cultivation.
25. Explain the methods adopted for large scale cultivation of animal cells.

26. What is suspension cell culture? Explain.
27. Give a short note on animal bioreactors
28. What is stem cell culture? Write its clinical uses.
29. Explain the characterization of cell lines.
30. Discuss the role of bioethics in animal cell culture.
31. What is cell viability? Briefly discuss different methods to assess it

(6 × 4 = 24 Marks)

SECTION – D

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

32. Give a detailed account on products of animal cell culture.
33. Explain the instruments and equipments needed for animal cell cultures.
34. What are transgenic animals? Explain the methods for creating transgenic animals.
35. Write an essay on preservation and maintenance of animal cell cultures.

(2 × 15 = 30 Marks)