(Pages : 3) **M – 1795**

Reg. No. : .....

Name : .....

Fifth Semester B.Sc. Degree Examination, December 2021

Career Related First Degree Programme under CBCSS

Group 2 (a) Botany and Biotechnology

BB 1573 : ANIMAL BIOTECHNOLOGY

(2016 & 2017 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. Define Primary cell cultures.
2. What is spinner flasks?
3. Define Biopharming.
4. Give note on iPS Cells.
5. What is Somatic Cell Nuclear Transfer?
6. Define Stem cells.
7. What is passage number?
8. Expand MEM.

9. Give any two examples for Human cell lines.

10. What is “Super mouse”?

(10 × 1 = 10 Marks)

SECTION – B

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

11. Define Cell lines.

12. Give note on MTT Assay.

13. Explain suspension cell culture.

14. What is Gene therapy?

15. Give note on FBS.

16. Identify the importance of trypsin in animal cell culture.

17. What is Balanced salt solutions?

18. Define explant culture.

19. Write a note on Chemically defined media.

20. What is confluent culture?

21. Explain finite cells.

22. Define Bioethics.

(8 × 2 = 16 Marks)

SECTION – C

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

23. Give short note on cell viability assays.

24. Explain cryopreservation of cell lines.

25. Differentiate between anchor dependent cells and suspension cells.

26. What are bioreactors? Give short note on different types of it.

27. Give note on the process to obtain primary cell culture.

28. Write a brief account on applications of cell culture.

29. Explain the methods adopted for suspension culture.

30. Give note on various instruments and equipment required for animal cell culture.

31. Explain the types of animal cell culture.

(6 × 4 = 24 Marks)

SECTION – D

Answer any **two** questions. **Each** question carries **15** marks. (Answer not to exceed **3** pages)

32. Elaborate on various products of animal cell culture.

33. What are transgenic animals? Explain its applications.

34. What are stem cells? Explain different types and its clinical uses.

35. Explain various techniques for scaling up of animal cell culture.

(2 × 15 = 30 Marks)

———————