E 3267

(Pages : 2)

Reg. No.....

Name.....

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, OCTOBER 2016

Fifth Semester

Core Course 18—ANIMAL BIOTECHNOLOGY

(For B.Sc. Biotechnology)

[2013 Admission onwards]

Time : Three Hours

Maximum : 80 Marks

Part A

Answer **all** *questions.*
1 *mark each.*

1. What is cellular differentiation ?
2. Name a commonly used biological fluid in natural media.
3. What is Hemocytometer ?
4. Name a source of human stem cells to get continuously growing cell lines.
5. Define Pluripotency.
6. What are polyclonal antibodies ?
7. Name *two* substrates commonly used for culture of anchorage dependent cells.
8. What is an autoclave ?
9. What is epitope ?
10. Write about suspension culture.

(10 × 1 = 10)

Part B

Answer any **eight** *of the following.*
2 *marks each.*

11. What is tissue engineering ?
12. Write a short note on structure of immunoglobulin.
13. Differentiate 'finite cell line' and 'continuous cell line'.
14. Explain use of balanced salt solution.
15. Write about cell synchronization.
16. What is a feeder layer ? Point out the uses.
17. Explain significance of microinjection in transgenesis.

Turn over

18. Write about immobilized culture.
19. Explain how tissues can be isolated and disaggregated for cell culture.
20. Write about various sterilization techniques used in culture lab.
21. Give a short note on Laminar air Flow cabinet.
22. What is a transgenic cow ? Give applications.

(8 × 2 = 16)

Part C

Answer any **six** *of the following.*
4 marks each.

23. Explain how cells can be immobilized.
24. Give an account of methods for transformation of animal cells.
25. Explain Knock-out and knock-in technology.
26. Write a short note on synthetic media.
27. Explain organ culture and its significance.
28. Give an account of vaccine production.
29. Describe animal vectors used for Genetic Engineering.
30. Write a note on primary cell culture.
31. Explain characteristics of cells in culture.

(6 × 4 = 24)

Part D

Answer any **two** *of the following*
15 marks each.

32. Explain the term 'cell lines'. Write about origin, characteristics and maintenance of animal cell lines.
33. Explain production of monoclonal antibodies.
34. What are the Bioreactors ? Explain its structure and importance in animal cell culture.
35. Describe basic requirements of animal cell culture. Mention importance of serum in animal cell culture.

(2 × 15 = 30)