E 7196 (Pages : 2) Reg. No.....

Name.....

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, OCTOBER 2017

Fifth Semester

Core Course 18—ANIMAL BIOTECHNOLOGY

(For B.Sc. Biotechnology)

[2013 Admission onwards]

Time : Three Hours Maximum Marks : 80

Part A

Answer **all** *questions.*
Each question carries 1 *mark.*

1. What is a cell strain ?
2. What is the use of CO_2 incubator ?
3. Explain "Cell differentiation".
4. What is enzymatic disaggregation ?
5. What are T cells ?
6. Explain minimum essential medium.
7. What is 3D culture ?
8. Mention uses of EDTA in culture medium.
9. What is the use of autoclave ?
10. What is a feeder layer ?

(10 × 1 = 10)

Part B

Answer any **eight** *questions.*
Each question carries 2 *marks.*

11. Write a note on role of hormones in growth media.
12. What are stem cells ? Mention applications of stem cell culture.
13. Write a note on materials used for anchorage in cell culture.
14. Give an account of monolayer culture.
15. What are transformal animal cells ?
16. Write a short note on vectors.
17. Explain Organ culture.
18. Write a note on non-anchorage dependent cells.

Turn over

19. Write about important characteristic of animal cell lines.
20. Mention vitamins needed in a cell culture medium.
21. Explain maintenance of continuous cell lines.
22. Give an account of application of transgenic mice.

(8 × 2 = 16)

Part C

Answer any **six** *questions.*
Each question carries 4 *marks.*

23. Give an account of applications of animal cell culture.
24. Mention importance of growth factors in the serum.
25. Write about production of vaccines.
26. Explain culture of anchorage dependent cells.
27. Explain knock-in and knock-out technology.
28. Differentiate immobilized culture and suspension culture.
29. Explain components of synthetic culture media.
30. Explain how transgenic cow can be produced.
31. Write about primary and secondary cell cultures.

(6 × 4 = 24)

Part D

Answer any **two** *questions.*
Each question carries 15 *marks.*

32. Explain how cell lines can be cultured and maintained.
33. Describe preparation and sterilization of culture media.
34. Give an account of Bioreactors. Explain how bioreactors can be used for large scale culture of cells.
35. Explain production of monoclonal antibodies. Write about applications of monoclonal antibodies.

(2 × 15 = 30)