

C 21152

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Name.....

Reg. No.....

SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, MARCH 2017

(CUCBCSS—UG)

Biotechnology

BTY 6B 14—ANIMAL BIOTECHNOLOGY

Time : Three Hours

Maximum : 80 Marks

Section A

Answer any two out of four questions in about 1,500 words.

Each question carries 10 marks.

1. What are cell proliferation assays ?
2. What is a primary cell culture ?
3. What is immortality ? How is it induced ?
4. What are the essential features of setting up an animal cell culture lab ?

(2 × 10 = 20 marks)

Section B

Answer any seven out of fourteen questions in about 750 words.

Each question carries 5 marks.

5. Embryonic stem cell.
6. Primary explants.
7. CO₂ Incubator.
8. Cryopreservation using liquid nitrogen.
9. Subculture of cell lines.
10. MTT assay.
11. Hemocytometer.
12. Mechanical disaggregation.
13. Separation of viable and non-viable cells.
14. Fetal calf serum.
15. Role of vitamins in media and various vitamins used.
16. What are the hormones used in animal cell culture media.
17. Dye exclusion for estimation of viability.
18. Warm and cold trypsin differences.

(7 × 5 = 35 marks)

Turn over

Section C

Answer all questions in about 300 words.

Each question carries 3 marks.

19. Inverted microscope.
20. Sterilization of glassware and equipments.
21. Role of antibiotics in cell culture.
22. Osmolality.
23. Epstein- Barr virus in cell immortalization.

(5 × 3 = 15 marks)

Section D

Answer all questions in about 200 words.

Each question carries 2 marks.

24. Ambient temperature.
25. Thawing of cells.
26. Laminar air flow.
27. HEPES.
28. Uses of pH in cell culture.

(5 × 2 = 10 marks)