

SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, MARCH/APRIL 2015

(UG-CCSS)

Core Course—Biotechnology

BT 6B 02—ANIMAL BIOTECHNOLOGY

Time : Three Hours

Maximum : 30 Weightage

I. Objective type questions. Answer **all** questions :

1 Serum can sterilized by :

- (a) Autoclave.
- (b) Boiling at 60° C.
- (c) Filtration.
- (d) Hot air oven.

2 Characteristic of cancerous cells :

- (a) High contact inhibition.
- (b) Loose contact inhibition.
- (c) Definite life span.
- (d) None of these.

3 Which one is a feeder layer ?

- (a) Mouse fibroblast.
- (b) HeLa cells.
- (c) Kidney cells.
- (d) Epidermal cells.

4 Monoclonal antibody is developed by :

- (a) rDNA technology.
- (b) Hybridoma technology.
- (c) Immunoblotting.
- (d) Immuno electrophoresis.

5 Which among is a natural medium ?

- (a) HEPES.
- (b) Egle's medium.
- (c) Whites medium.
- (d) Plasma clot.

6 Which one is a normal cell line ?

- (a) MRC-5.
- (b) HeP-G2.
- (c) CaCO-2.
- (d) MCF-7.

State True or False :

- 7 Tryphan Blue is a vital stain.
- 8 Dead cells absorb Evan's blue.
- 9 Primary cells are anchorage dependent.

Turn over

- 10 Interleukins are produced by nestcells.
- 11 CMV is an animal virus vector.
- 12 CaCl_2 is a chemical used for somatic cell fusion.

($12 \times \frac{1}{4} = 3$ weightage)

II. Short Answer Type Questions. Answer all *nine* questions :

- | | |
|----------------------------|-----------------------------|
| 13 Inverted microscope. | 14 CO_2 incubator. |
| 15 Tryphan blue exclusion. | 16 SV-40 virus. |
| 17 Amniotic fluid. | 18 Established cell line. |
| 19 Hollow-fiber reactor. | 20 HEPES. |
| 21 Pleuripotent. | |

($9 \times 1 = 9$ weightage)

III. Short Essay. Answer any *five* questions :

- 22 Give brief account on natural media.
- 23 Explain role of serum in the medium.
- 24 Discuss different animal viral vectors.
- 25 Discuss about cell line chracterization.
- 26 What is cell cloning ? Explain different cell cloning methods.
- 27 List out essential equipments in an animal cell culture lab.
- 28 Explain the principle and method of MTT based cytotoxicity assay.

($5 \times 2 = 10$ weightage)

IV. Essay Questions. Answer any *two* questions :

- 29 Explain the protocol for isolation and preparation of primary cell culture of mouse embryo.
- 30 Discuss the characterization and maintenance of cell lines.
- 31 Describe media components of animal cell culture.

($2 \times 4 = 8$ weightage)