

G-3/353/22

Roll No.

III Semester Examination, January 2022

M.Sc.

BIOTECHNOLOGY

Paper III

(Animal Biotechnology)

Time : 3 Hours]

[Max. Marks : 80

Note : *All questions are compulsory. Question Paper comprises of 3 Sections. Section A is objective type/multiple choice questions with no internal choice. Section B is short answer type with internal choice. Section C is long answer type with internal choice.*

SECTION A

1×8=8

(Objective Type/Multiple Choice Questions)

Choose the correct answer :

1. In the beginning the cell suspension is isolated and inoculated in a new culture vessel with fresh culture medium. Such culture is called :
 - (a) Primary cell culture
 - (b) Secondary cell culture
 - (c) Cell line
 - (d) None of the above

P.T.O.

[2]

2. Which of the following stages is not performed while isolating a primary culture ?
- (a) Isolation of the tissue
 - (b) Cell counting
 - (c) Disaggregation of the tissue
 - (d) Seeding of culture into the culture vessel
3. Identify the method for disaggregating which offers high recovery of cells without affecting the liability of cells ?
- (a) Physical disaggregation
 - (b) Enzymatic disaggregation
 - (c) Using chelating agents
 - (d) None of the above
4. Artificial serum containing media containsserum in it.
- (a) 0-10%
 - (b) 5-20%
 - (c) 20-50%
 - (d) 30-35%
5. Somatic hybridization is achieved through :
- (a) Grafting
 - (b) Protoplast fusion
 - (c) Conjugation
 - (d) Recombinant DNA technology

G-3/353/22

[3]

6. Monoclonal antibodies are produced by :
- (a) Hybridomas
 - (b) Lymphocytes
 - (c) Myeloma cells
 - (d) Plasma cells
7. DNA microinjection into the egg has been used to produce which of the following transgenic animals ?
- (a) Pigs
 - (b) Chicken
 - (c) Mice
 - (d) All of these
8. Name the asexual mode of embryo formation :
- (a) Protoplast fusion
 - (b) Callus culture
 - (c) Somatic embryogenesis
 - (d) Protoplast culture

SECTION B

4×6=24

(Short Answer Type Questions)

Note : Answer the following questions in 250 words.

Unit-I

1. Explain about natural and defined media.

Or

Write note on structure and organization of animal cell.

G-3/353/22

P.T.O.

[4]

Unit-II

2. Write an account of cell banking.

Or

Explain about cell lines.

Unit-III

3. Discuss about hybridoma technology.

Or

Explain about properties and analysis of cultured somatic cell.

Unit-IV

4. Write an account of tissue engineering.

Or

Explain about super ovulation.

SECTION C

12×4=48

(Long Answer Type Questions)

Note : Answer the following questions in 500 words.

Unit-I

1. Explain in detail about laboratory facilities for animal tissue culture.

Or

Write a note on advantages and disadvantages of animal and tissue culture.

G-3/353/22

[5]

Unit-II

2. Discuss about tissues disaggregation methods.

Or

Explain about continues cell lines and give the process of separation of viable and non viable cells.

Unit-III

3. Explain about cell cultured vaccines.

Or

Discuss about somatic cell fusion.

Unit-IV

4. Discuss in detail about transfection methods and transgenic animals.

Or

Explain about organ and embryo culture.

☆☆☆☆☆☆☆☆e ☆☆☆☆☆☆☆

G-3/353/22

5/50