

Roll No.....

Total No. of Printed Pages : 4

Code No. : B04/108

Fourth Semester Online Examination, May-June, 2022

M. Sc. BIOTECHNOLOGY

Paper I

ANIMAL CELL SCIENCE AND TECHNOLOGY

Time : Three Hours]

[Maximum Marks : 80

Note : Part A and B of each question in each unit consist of 'very short answer type question' which are to be answered in one or two sentences. Part C 'Short answer type' and D 'Long answer type' of each question should be answered within the word limit mentioned.

UNIT-I

1. (A) What is cell adhesion ? 2
- (B) Write five names of apparatus and equipment for animal cell culture. 2
- (C) What are elements for aseptic environment ? (word limit 200-250) 4

OR

Describe cell proliferation and differentiation.

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- (D) Describe about define a media and supplements. (word limit 400-450) 12

OR

What is serum free media ? What are its advantage and disadvantage ?

UNIT-II

2. (A) What is stem cell ? 2
- (B) What is cell confluence ? 2
- (C) How subculturing of cell line money be carried out ? (word limit 200-250) 4

OR

What are components of routine maintenance of cell culture ?

- (D) Describe protocol for five mammalian cell line culture. (word limit 400-450) 12

OR

Describe the process of primary call culture.

UNIT-III

3. (A) What is scaling of cell culture ? 2

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- (B) What is gas and nutrient exchange in organ culture process. **2**
- (C) Describe gell and sponge techniques of Histotypic culture.

(word limit 200-250) 4

OR

Describe process of scaling up of monolayer cell culture.

- (D) Describe process of cryopreservation for animal cell culture.

(word limit 400-450) 12

OR

Write about application of animal cell culture.

UNIT-IV

4. (A) What do you mean by genetic instability in a culture and cell. **2**
- (B) What are disadvatage with killed vaccine ? **2**
- (C) Describe transformation and mutagenesis testing in a cultured animal cell.

(word limit 200-250) 4

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OR

Describe properties of transformed cells.

- (D) What is vaccine ? Write a protocol for cell culture based vaccine production for polio.

(word limit 400-450) 12

OR

Describe various methods to perform viability of cultured animal cell.

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