

No. of Printed Pages : 03

Roll No.

AA-223

M. Tech. EXAMINATION, May 2017

(First Semester)

(B. Scheme) (Re-appear Only)

(BT)

BT-505-B

Animal Cell Culture Technology

Time : 3 Hours]

[Maximum Marks : 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

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P.T.O.

Unit I

1. Describe the planning architecture of an animal cell culture laboratory. Describe the services required and steps to be taken for its maintenance of aseptic conditions. **15**
2. What are the methods required for :
 - (a) Aseptic maintenance of animal cell culture and cell lines
 - (b) Decontamination of animal cell culture laboratory. **10+5=15**

Unit II

3. (a) How will you proceed for cryopreservation of animal cell lines ?
(b) What are the behavioural modifications in cells under conditions ? **7+8=15**
4. (a) Write a note on chronological developments in the field of animal cell culture technology.
(b) Explain primary and secondary cultures in animal biotechnology. **7½+7½=15**

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Unit III

5. How metabolism and regulation of cells under in vitro conditions affects nutritional requirements of mass cultivation of animal cells ? **15**
6. Write notes on the following :
 - (a) Hybridoma Technology
 - (b) Product and substrate transport under in vitro conditions in animal cells
 - (c) Cloning in animals. **5+5+5=15**

Unit IV

7. Describe various viral vectors and their application in genetic engineering of animal cells. **15**
8. Elaborate objectives of gene transfer in animals and ethical issues associated with this technology. **15**

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