

BTECH
(SEM VI) THEORY EXAMINATION 2018-19
ANIMAL BIOTECHNOLOGY

Time: 3 Hours

Total Marks: 70

Notes: Assume any Missing Data.

SECTION A

1. Attempt all parts. Each part carries equal marks : (2X7=14)
- What is the use of CO₂ incubator in animal cell culture laboratory?
 - Name any five therapeutic protein made by using animal cell lines.
 - Discuss any three animal cell lines and from where you will obtain these.
 - Give your views on trypsinization with respect to cell culture.
 - Chat about the advantages of serum free media.
 - What will happen if osmotic pressure will decrease in the animal cell?
 - Describe the disadvantages of using bovine serum in animal cell culture media.

SECTION B

2. Attempt any three question from this section (7x3=21)
- Enlighten the Proto-oncogene's in detail.
 - Spell out the utility of buffering capacity in scaling-up of cell line.
 - Converse about the usual contaminant which affects cell culture.
 - Selectively define the methods of transfection with their merits and demerits.
 - Recap the various steps used in the creation of transgenic animals
 - Depict the fluidized bed reactors used for culturing animal cell lines in suspension

SECTION- C

3. Attempt any one part of the following: (7x1=7)
- Uncover role of antibiotics markers and different promoters in improving cell lines with appropriate example .
 - Point out in brief, the various physio-chemical factors which may enforce the growth of cell lines.
4. Attempt any one part of the following: (7x1=7)
- Which sterilization methods are used for cell culture lab, describe in details
 - How will you improve and characterize a new chick embryo fibroblast cell line?
5. Attempt any one part of the following: (7x1=7)
- Stipulate the applications of animal cell lines in pharmaceutical manufacturing.
 - Briefly define the role of animal cell lines in testing the toxicity of environment pollutants and drugs with proper example
6. Attempt any one part of the following: (7x1=7)
- Give details on : Perfused monolayer culture, micro-carriers and multi-array disc.
 - Express your views on the role of rotating chambers and aeration in scaling up of animal cell culture.
7. Attempt any one part of the following: (7x1=7)
- Write a statement on stem cell differentiation
 - Pile up your knowledge on the gene targeting methods .