



MAF-780

Seat No. _____

B. Sc. (Sem. V) Examination

October / November - 2018

Biotechnology : Paper - CC-I-10

(Principle of Biotechnology Applied to Animals)

Time : 3 Hours]

[Total Marks : 70

1 Answer the following : (all Ten) 10

- (1) Disaggregating of cells can be achieved by
 - (a) Physical disruption
 - (b) Enzymatic digestion
 - (c) Treating with gelating agent
 - (d) All of the above
- (2) Cells with the ability to divide for indefinite periods in culture and to give rise to specialized cells.
 - (a) Blood cells
 - (b) Stromal cells
 - (c) Stem cells
 - (d) All of these
- (3) A fertilized ovum is known as
 - (a) zygote
 - (b) dycot
 - (c) unigot
 - (d) oogote
- (4) _____ is the effective cryoprotectant?
 - (a) amyl
 - (b) DMSO
 - (c) trpsin
 - (d) liquid nitrogen

- (5) Which carries DNA sequence into a host?
- (a) Plasmid
 - (b) tRNA
 - (c) mRNA
 - (d) Virus
- (6) What is the concentration of CO₂ required for culturing animal cells?
- (a) 2-5%
 - (b) 1-10%
 - (c) 10-20%
 - (d) 20-30%
- (7) Undisaggregated tissue is used in?
- (a) cell culture
 - (b) cell line
 - (c) organ culture
 - (d) None
- (8) Which of the following is not a suspension culture technique?
- (a) Air lift culture
 - (b) Stirrer culture
 - (c) Rollar bottle culture
 - (d) None
- (9) Cell lines can be cultured for such a long time that they apparently develop the potential to be sub-cultured indefinitely in vitro. Such cells lines are called
- (a) established cell lines
 - (b) secondary cell. lines
 - (c) propagated cell lines
 - (d) lifelong cell lines
- (10) Define cell viability.

- 2** Answer the followings : (any **five**) **10**
- (1) Explain Passage number
 - (2) Define serum free media and its components shortly.
 - (3) Define cell line and give any two example of it.
 - (4) Example and role of Growth factors used in cell culture medium.
 - (5) Scope of animal tissue culture
 - (6) What is primary cell culture?
- 3** Answer the followings : (any **five**) **30**
- (1) Serum Media
 - (2) Enzymatic disaggregation methods
 - (3) Viral vector - SV40 and retrovirus
 - (4) Air lift Bioreactor
 - (5) Short note - vaccine
 - (6) Factor affecting animal cell culture
 - (7) Stem Cell culture
- 5** Answer the followings : (any **two**) **20**
- (1) Explain in detail about Hybridoma technology
 - (2) Define Transgenic animals? Explain different types of transgenic animals with application.
 - (3) Elaborate in vitro fertilization and embryo transfer.