



GAD-2327

Seat No. _____

B. Sc. (Sem. V) Examination

November / December - 2013

Biotechnology - CC - 504 - I - X

*(Paper - 10 : Principal of Biotechnology Applied to
Animals)*

(Core Course)

Time : 3 Hours]

[Total Marks : 70

- 1 Attempt any 14 questions. 14
- (i) Primary cell culture attempted by Harrison F/T
 - (ii) Heterogonous cells separated by _____
 - (iii) MEM is a non-synthetic media F\T
 - (iv) Define Contamination.
 - (v) Full name of IVF.
 - (vi) Define Vector
 - (vii) Define Bioreactor
 - (viii) The major problem associated with the isolation of free cells and cell aggregates from organs is that of
 - (a) releasing the cells from their supporting matrix
 - (b) inhibiting the cells from their supporting matrix
 - (c) disintegrating the cells from their supporting matrix
 - (d) none of the above
 - (ix) _____ was the first drug to be produced by mammalian cell culture.
 - (x) _____ are used for scaling up the production of suspension cells.

- (xi) In _____ the cells adhere to the total curved surface of the microcarrier beads.
- (xii) An _____ microscope is used for visualizing cell cultures in situ.
- (xiii) For culturing, plasma from the adult chicken is preferred to mammalian plasma because
- it forms a clear and solid coagulum even after dilution
 - it is too opaque
 - it doesn't produce solid clots
 - it forms a semi solid coagulum
- (xiv) Optimum temperature of animal cell growth in media.
- 23°C
 - 37°C
 - 40°C
 - 15°C
- (xv) True in term of cell line
- Cells are arranged in one line
 - Cell culture are known as cell line
 - Subculture of primary culture
 - B+C
- (xvi) Undisaggregates tissues are used in
- Cell culture
 - Organ culture
 - Cell line
 - None of the above

2 Answer the following : (any eight)

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- What is the most distinct feature of animal cell culture ?
- Which is the first drug to be produced by mammalian cell culture ? What do you mean by cell based therapy ?
- What do you mean cell toxicity ?

- (iv) Which are the most commonly used enzymes for separating cells in a given tissue for culture ?
- (v) Name a few medically important commercial proteins produced by animal cell culture.
- (vi) Draw the labelled diagram of vector.
- (vii) Write the name of Cloning Method.
- (viii) How to maintain Animal Cell line ?
- (ix) What is Stem cell ?
- (x) Explain Fumigation process.

3 Answer the following : (any four) **20**

- (i) What is a chimeric mouse ?
- (ii) What is embryonic stem cell culture ?
- (iii) Explain vaccines production.
- (iv) Write a note on hybridoma technique.
- (v) Describe animal tissue culture and applications.
- (vi) Explain Embryo culture technique.

4 Answer the following : (any two) **20**

- (i) How many categories of cell lines are available ? Explain any two.
 - (ii) Write difference between primary and secondary culture of animal tissue culture.
 - (iii) Write note on cryopreservation technique.
 - (iv) Write a note on stem cell technology.
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