



NBU-003-012408 Seat No. _____
M. Sc. (Bio. Chem.) (Sem. IV) (CBCS)
(External) Examination
April / May - 2017
EBC - 5 : Animal Cell Tissue Culture

Faculty Code : 003
Subject Code : 012408

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

- 1** Answer the following : (any **seven** out of **ten**) **7×2=14**
- (A) What do you mean by Senescence ?
 - (B) Write a note on Intercellular Junctions.
 - (C) Difference between pluripotent and totipotent cells.
 - (D) Explain swabbing.
 - (E) What are the advantages of serum-free media" ?
 - (F) Briefly explain: Quarantine.
 - (G) Write about three major elements for validation.
 - (H) 'What is conditioning. ?
 - (I) Write a short note on requirements before freezing.
 - (J) What is chromosome painting ?
- 2** Answer the following : (any **two** out of **three**) **2×7=14**
- (A) "Write a note on Cell Proliferation. Briefly describe control of cell proliferation and how the cell cycle is regulated by signals from the environment.
 - (B) Write a note on design of cell culture laboratory.
 - (C) 'Write down Advantages and Disadvantages of Tissue Culture in detail.

3 Answer the following : **2×7=14**

- (A) Write a detail note on preparation and sterilization of media.
- (B) Explain in detail about the three major classes of the transmembrane proteins involved in cell-cell and cell-substrate adhesion.

OR

3 Answer the following : **2×7=14**

- (A) Write down historical background of cell culture.
- (B) Write a detail note on Endocrine and Paracrine cell signaling.

4 Answer the following : **2×7=14**

- (A) Discuss general parameters to consider in selecting, cell lines.
- (B) Write a detail note on contamination ? How to prevent contamination and what are the sources of contamination" ?

5 Answer the following : (any **two** out of **four**) **2×7=14**

- (A) Write in detail about FACS technique.
- (B) What do you understand by cell proliferation ? How to regulate cell proliferation ?
- (C) What are the different methods of DNA transfer in animal cell" ? Discuss in detail.
- (D) What are the steps involve in cryopreservation" ? Explain the applications in detail.
