MBS-1603120602040500 Seat No. _____

M. Sc. (Sem. IV) (CBCS) Examination

April / May- 2018

EBC-5 : Biochemistry

(Animal Cell Tissue Culture)

Time : $2\frac{1}{2}$ Hours] [Total Marks : **70**

1 Answer briefly any seven of the following questions : **14**

(a) What are the disadvantages of cell culture?

(b) What is flaming?

(c) Briefly explain: Types of Laminar-Flow Hood and its application.

(d) What are the defined media supplements?

(e) Write the characteristics of culture vessel.

(f) What is primary cell culture?

(g) Explain cell freezing.

(h) Deflne differentiation and dedifferentiation.

(i) Explain conditioning.

(j) Explain cryopreservation.

2 Answer any two of the following questions : **14**

(a) Give the historical background of development of Cell and Tissue Culture.

(b) Explain preparation and sterilization of media.

(c) Discuss methods of DNA transfer in animal cell.

3 (a) Discuss the sources of contamination. **7**

(b) How cell proliferation occur during cell tissue culture? **7**

OR

(c) Discuss enzymatic disaggregation techniques for development of primary culture. **7**

(d) Write a short note on cytotoxicity assay. **7**

4 Answer the following questions : **14**

(a) Explain in detail about transmembrane proteins involved in cell-cell and cell-substrate adhesion.

(b) Discuss conditioned medium and feeder layer.

5 Answer the following questions : (any **two**) **14**

(a) What kind of precautions should be taken for aseptic condition in tissue culture lab?

(b) Write a detailed note on stem cell differentiation in vivo and in vitro?

(c) Describe in detail about instrumentation used for the animal cell culture.

(d) Give detail about suspension cloning.