



Seat No. _____

H-1603120602040500

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

April - 2023

EBC-5 : Animal Cell Tissue Culture

Time : $2\frac{1}{2}$ Hours / Total Marks : 70

- 1 Answer briefly any Seven of the following questions : **14**
- (A) Explain work of Harrison for cell and tissue culture in brief.
 - (B) What are the major risks associated with liquid nitrogen used in cell culture.
 - (C) Write advantages and disadvantages of glass as substrate materials.
 - (D) Briefly explain trypsinization.
 - (E) Write short note on stem cell proliferation.
 - (F) Give brief note on source of contamination in cell culture.
 - (G) Write short note on CO₂ incubator used for cell culture.
 - (H) Which factors govern the choice of culture vessel ?
 - (I) Explain briefly centrifugal elutriation.
 - (J) What is chromosome painting ?
- 2 Answer any Two of the following questions : **14**
- (A) Write note on Complete media.
 - (B) Write advantage of tissue culture.
 - (C) Write note on types of primary culture.
- 3 (A) What are the various elements of aseptic condition ? **7**
Write any two in detail.
- (B) Write note on cross-contamination. Which steps need to be taken to avoid cross-contamination ? **7**

OR

- (C) Write note on preparation and sterilization of media. **7**
 - (D) Write principles of cryopreservation. **7**
- 4 Answer the following questions : **14**

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- (A) Draw schematic diagram and explain small tissue culture laboratory.
- (B) Explain selective culture of tumor cells.

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

- (A) Write detailed note on preparation and sterilization of media.
 - (B) Write detailed note on control, testing, and storage of media.
 - (C) Explain various parameters for cell line characterization.
 - (D) Write applications of cytotoxicity assays.
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