



BBA-1603120602040500 Seat No. _____

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

July - 2021

EBC-5 : Biochemistry

(Animal Cell Tissue Culture)

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

[Total Marks : 70

Instructions : Answer any five questions out of 10

- 1** Answer briefly the following questions. **14**
- (A) Give the laboratory layout for tissue culture laboratory.
 - (B) What are the applications of cytotoxicity assay?
 - (C) What is cell differentiation?
 - (D) Give advantages of serum-free media.
 - (E) What is cell freezing?
 - (F) Enlist different microbial contaminations in tissue culture.
 - (G) Explain swabbing?
- 2** Answer briefly the following questions. **14**
- (A) Explain the Harrison's Experiment for cell tissue culture in brief.
 - (B) Explain dedifferentiation.
 - (C) Write a short note on requirements for freezing.
 - (D) What is flaming?
 - (E) Write applications of laminar flow hood.
 - (F) Write the characteristics of culture vessel.
 - (G) What is organotypic culture?
- 3** Answer the following questions. **14**
- (A) Discuss physicochemical properties of media.
 - (B) Discuss general parameters to consider in selecting cell lines.

- 4 Answer the following questions. 14
(A) Write detail note on cloning and selection.
(B) Explain the historical background of development of cell and tissue culture.
- 5 Answer the following questions. 14
(A) Write down principles of cryopreservation.
(B) Give detail about media sterilization methods.
- 6 Answer the following questions. 14
(A) Write a note on equipments used in animal cell tissue culture laboratory.
(B) Write the use of aspiration pump in the aseptic area.
- 7 Answer the following questions. 14
(A) Write a short note on eradication of microbial contamination.
(B) Explain in detail: types of media.
- 8 Answer the following questions. 14
(A) Discuss conditioned medium and feeder layer.
(B) What is the significance of cell characterization.
- 9 Answer the following questions. 14
(A) Write a short note on nature of cytotoxicity assay.
(B) Write a detailed note on transformation and immortalization.
- 10 Answer the following questions. 14
(A) Give a detailed note on culture of tumor cells.
(B) Describe bioethics and validation in detail.
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