

## MSc Sem.-1 Examination

402

Cancer Biology

February-2025

Time : 2-30 Hours]

[Max. Marks : 70

**Instructions: All Questions are  
Compulsory Draw neat and labeled diagram  
wherever necessary**

- Q-1 Write the following** **14**
- (i) Write a note on histone modification. 7
- (ii) Describe different types of translocations in detail. 7
- OR**
- (i) Write a note on Solenoid structure of chromosome. 7
- (ii) What is the deletion? Describe different types of deletions in detail. 7
- Q-2 Write the following** **14**
- (i) What are histones? List out various characteristics of histones. 7
- (ii) Describe micronucleus and its significance in cancer. 7
- OR**
- (i) Describe the process when a chromosome duplicates and divides into two identical sets. 7
- (ii) Briefly describe Patau Syndrome. 7
- Q-3 Write the following** **14**
- (i) Write a note on the relative position of signals expressed using the BCR-ABL DC DF probe as per ISCN guidelines. 7
- (ii) Illustrate the difference between adherent culture and suspension culture. 7
- OR**
- (i) Describe different FISH results using ISCN guidelines. 7
- (ii) Explain basic components of culture media in detail. 7
- Q-4 Write the following** **14**
- (i) As per ISCN guidelines, define inversion, insertion, ring chromosome and mosaicism. 7
- (ii) Write a short note on acquiring contamination control. 7
- OR**

(P.T.O)



- 10 Which of the following cryoprotectant is most used in cryopreservation?
- |   |                    |   |          |
|---|--------------------|---|----------|
| a | Ethylene glycol    | b | Glycerol |
| c | Dimethyl sulfoxide | d | Methanol |
- 11 In peripheral blood lymphoblast culture, T-cell population is stimulated by which of the following mitogens?
- |   |                    |   |                      |
|---|--------------------|---|----------------------|
| a | Pokeweed           | b | Lipopolysaccharide   |
| c | Phytohemagglutinin | d | Phytolacca Americana |
- 12 Which of the following is added into the culture media as an alternative source of energy?
- |   |           |   |           |
|---|-----------|---|-----------|
| a | Aspartate | b | Pyruvate  |
| c | Glutamate | d | Glutamine |
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