

B.Sc. (Biotech.)- I-Year

NS-3457

B.Sc. (Biotechnology) Examination,

June-2023

CELL BIOLOGY

(B-103)

B.Sc. (Biotech.)

Time : Three Hours]

[Maximum Marks : 50

Note : Attempt any five questions. All questions carry equal marks.

- ✓1. What do you mean by cell signaling? Give mode of working of cAMP in transduction of cell signals. 10
2. What do you mean by membrane system? Describe the same with reference to Endoplasmic Reticulum (ER) and Golgi Complex. 10

3. Write detailed notes on the following :

- (a) Fluid mosaic model of structure of cell membrane 5
- (b) Sodium-Potassium pump 5

✓4. Discuss the events taking place during interphase in cell cycle. 10

✓5. Differentiate between the following : 2.5 each

(i) Prokaryotic and Eukaryotic cell

(ii) Plant and Animal cell

(iii) Mitosis and Meiosis

(iv) Euchromatin and Heterochromatin

✓6. What is cancer? Discuss various factor responsible for carcinogenesis. 10

✓7. Describe the stages of meiosis with particular emphasis on Prophase-I. 10

(3)

8. Write notes on the following : $4+3+3=10$
- (i) Role of microtubules in cell division
 - (ii) Significance of Meiosis
 - (iii) Function of mesosome in a prokaryotic cell
9. What is Apoptosis ? What types of cellular and physiological changes occur during the process. 10
10. What are glycoproteins and glycolipids ? Discuss their structure and function within the cell. 10