

## B.Sc. Sem.-2 (Rep.) Examination

CC 3-P-103

Bio-Technology

May-2024

Time : 2-30 Hours]

[Max. Marks : 70

**Q.1.** Draw a labelled diagram of prokaryotic cell. State the structural difference between prokaryotic and eukaryotic cells.

(14)

OR

**Q.1.A.** Explain salient features of cell theory.

(7)

**Q.1.B.** Write a short note on archaea.

(7)

**Q.2.** Explain the types of cytoskeleton structure with neat labeled diagram.

(14)

OR

**Q.2.A.** Outline with an example the process of exocytosis.

(7)

**Q.2.B.** Write down the structure and functions of plant cell wall.

(7)

**Q.3.** Describe the structure, composition and functions of Nucleus.

(14)

OR

**Q.3.A.** Explain the ultra-structure of Golgi apparatus.

(7)

**Q.3.B.** Give an account of the structure and functions of the lysosomes.

(7)

**Q.4.** Discuss the process of Meiosis with its significance in detail.

(14)

OR

**Q.4.A.** Write a note on Cell senescence.

(7)

**Q.4.B.** Explain Cell cycle with check points.

(7)

**Q.5.** Short Questions (Any 7)

(14)

- 1) Draw diagrammatic presentation of Fluid Mosaic model
- 2) Enlist any two significance of bacterial cell wall.
- 3) Write postulates of protoplasm theory?
- 4) Differentiate SER and RER.
- 5) What is Phagocytosis? Write its significance.
- 6) Define Apoptosis.
- 7) What is Cell Biology? Who is the father of cell biology?
- 8) Write two functions of peroxisomes.
- 9) Differentiate between bacteria and archaea
- 10) What are the two types of tumor? Write their differentiating features.
- 11) Give two essential characteristics of cell.
- 12) What is thylakoid? State its importance.

