

Exam. Code : 107404

Subject Code : 2244

B.Sc. Bio-Technology Semester—IV

CELL BIOLOGY—B

Paper—BT-4

Time Allowed—3 Hours]

[Maximum Marks—40

Note : Attempt ALL the Sections.

## SECTION—A

Note : Attempt ALL the parts. Answer to any part should not exceed 1/3 of a page.

Define :

1. Heterochromatin
2. S phase
3. Cell differentiation
4. Cisternae
5. Pleuripotent cell
6. Endoplasmic reticulum
7. Plasmalemma
8. Pachytene.

8×1=8

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(Contd.)

**SECTION—B**

**Note :** Attempt **FIVE** questions. Answer to any question should not exceed **two** pages.

1. Write a detailed note on cell-cell interaction.
2. Write a short on cell locomotion.
3. Explain briefly cytoskeletal structures present in the cell.
4. Describe the structure of lysosomes and why are they called suicidal bags ?
5. Describe briefly cell differentiation in plants and animals.
6. Give a brief account of Golgi bodies and their functions.
7. What do you mean by apoptosis ?
8. Differentiate between heterochromatin and euchromatin.

5×4=20

**SECTION—C**

**Note :** Attempt **TWO** questions. Answer to any question should not exceed **five** pages.

1. Explain the ultra structure of plasma membrane.
2. Describe in detail the structure and function of two semi-autonomous organelles and explain why they are called semi-autonomous.
3. Discuss the following :
  - (a) Totipotent, multipotent and pluripotent cells
  - (b) Artificial creation of "cells".
4. Write in detail the differences between mitosis and meiosis of plant and animal cells.

2×6=12