

Exam. Code : 107404

Subject Code : 2144

B.Sc. (Bio-Technology) 4th Semester

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. 8×1=8

1. Define :

- (a) Actin filaments
- (b) Amoeboid locomotion
- (c) Multipotent cell
- (d) Nucleolus
- (e) Microtubules
- (f) Cell cycle
- (g) Apoptosis
- (h) Nucleoplasm.

SECTION—B

Note :— Attempt any FIVE questions. Answer to any question should not exceed 2 pages. 5×4=20

- 1. Differentiate between Apoptosis and Necrosis.
- 2. Describe the various stages of meiosis with well labelled diagrams.
- 3. Discuss the various modes of cell locomotion.
- 4. Differentiate between RER and SER.
- 5. Discuss the structure and function of nucleus.
- 6. Why mitochondria and chloroplasts are called semi-autonomous organelles ?
- 7. Give an account of cytoskeletal structures in animals.
- 8. Write a short note on artificial creation of "cells".

SECTION—C

Note :— Attempt any TWO questions. Answer to any question should not exceed 5 pages. 2×6=12

- 1. Describe in detail the process of mitosis with the help of diagrams. Discuss its significance.
- 2. Discuss the cell differentiation in plants and animals.
- 3. Describe the structure of ribosomes and their functions.
- 4. What are peroxysomes ? Describe their structure and functions.