

D 51932

Name.....

Reg. No.....

FIRST SEMESTER M.Sc. DEGREE EXAMINATION, JANUARY 2009

General Biotechnology
GBT 101—CELL BIOLOGY

Time : Three Hours

Maximum : 80 Marks

Section A

Answer any two questions.

1. Give an account of SEM and TEM and their applications in biological process.
2. Discuss about the molecular organization of the cell membrane.
3. Critically comment on cytosol, cytoskeleton and microtubules.

(2 x 10 = 20 marks)

Section B

Answer any ten questions.

4. Write about the types of staining method for subcellular organelle detection.
5. What is reduction division ? Explain it.
6. Differentiate Tight junction from GAP junction.
7. Heterochromatin is genetically inactive—why ?
8. How the ionic transport occurs through charged pores in membrane ?
9. Explain the Fluid mosaic model of membrane with diagram.
10. Write about condensation and decondensation cycle of chromatin.
11. Discuss the structure of t-RNA.
12. Give an account of initiation elongation in protein synthesis.
13. Discuss briefly the Lac operon.
14. What is amoeboid motion ? Discuss its function.
15. How the intracellular traffic occurs by the coated vesicle ?

(10 x 5 = 50 marks)

Section C

Answer all questions.

16. What are the functions of IF1 IF2 and IF3 in protein synthesis ?
17. Why does the acrosome of sperm function as a specialized lysosome ?
18. Distinguish between 80s and 70s ribosome.
19. How the mitochondrion is known as cell respiratory system ?
20. What is the significance of cappin during mRNA synthesis ?

(5 x 2 = 10 marks)