

Exam. Code : 210002

Subject Code : 4217

M.Sc. (Botany) 2nd Semester

CELL BIOLOGY

Paper : BOTC-524

Time Allowed—3 Hours] [Maximum Marks—50

Note :— Attempt any **five** questions selecting at least **one** question from each section. The **fifth** question may be attempted from any section. Each question carries **10** marks. Answer to each question should not exceed **five** pages.

SECTION—A

- I. Write a detailed note on protein targeting towards different cell organelles.
- II. Elucidate the structure and function of various ion pumps and ion channels present on membranes.

SECTION—B

- III. Discuss structural organization and functions of chloroplast and vacuoles.
- IV. What are transposons ? Discuss their role in evolution.

SECTION—C

- V. What are G-proteins ? Discuss their role in signaling pathways.
- VI. With suitable diagrams describe the role of CDKs and Cyclins in regulation of cell cycle.

SECTION—D

- VII. What is bacterial chemotaxis ? Explain in detail with suitable diagram.
- VIII. Describe the role of different cell adhesion molecules in cell communication. 5×10=50