

M.Sc. (Botany) Semester - 1 (CBCS) Examination**Nov/Dec - 2022 [OLD COURSE]****CELL BIOLOGY(CORE)****Time: 2:30 Hours****Marks: 70****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

-
- Q.1 Answer the following (any 7) 14**
1. What are 'cardiolipin' in Mitochondria?
 2. Explain the function of microfillaments.
 3. What are porins ?
 4. State the types of Endoplasmic reticulum? Explain the difference between them.
 5. What is programmed cell death?
 6. What is endocytosis?
 7. Define the term diffusion.
 8. What do you mean by 'Blebbing'? Where do they occur.
 9. State any two regulation of CDK?
 10. Write briefly the difference between cell wall of plant and microbes
- Q.2 Answer the following (any two) 14**
1. Write a note on ultrastructure of chromosomes
 2. Elaborate the ultrastructure of plasma membrane
 3. Explain in detail Cyclins and cyclin dependent Kinase
- Q.3 Answer the following**
1. Describe the functions and structure of Vacuoles **05**
 2. Explain the organelles: Glyoxisomes and Peroxisome **05**
 3. Explain the ultrastructure of Mitochondria **04**
- OR**
- Q.3 Answer the following 14**
1. Describe the association of different organelles in GERL system
 2. Write a note on photosynthetic units and reaction center
- Q.4 Answer the following**
- A. Attempt any two 10**
1. Explain the ultrastructure and functions of microfilaments and its associated proteins
 2. Describe active transport and pumps
 3. What do you mean by Intracellular junctions? Explain its functions
- B. Attempt any one 04**
1. What are antiports and symports?
 2. Describe – Calcium dependent homophilic and non-homophilic cell adhesion
- Q.5 Answer the following (any two) 14**
1. Describe the phenomenon of Endocytosis and Exocytosis
 2. What are cell surface receptor and their mode of action
 3. Explain mechanism of apoptosis and its significance.
 4. Discuss the mechanism of 'HIV' in cell biology
