

M.Sc. (Micro) Semester - 1 (CBCS) Examination
OCT/NOV-2025 (AS PER SYLLABUS YEAR JUNE-2018)
CELL BIOLOGY(CORE)

Time: 2:30 Hours**Marks:70****Instructions:**

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

Que.1	Answer the following. (Any 7)	(14)
	1) Define the term osmosis. 2) How cell wall is different from Plasma membranes? 3) State important functions of the Golgi body. 4) Name some of the genes responsible for cancer ? 5) What is the difference between primary and secondary messengers? 6) What are porins ? 7) What do you mean by microfilaments? 8) What is exocytosis? 9) What is the role of PGC in biogenesis of Mitochondria? 10) Write briefly the difference between the cell walls of plants and microbes	
Que.2	Answer the following. (any two)	(14)
	1) Explain in detail plasma membranes 2) Elaborate ultrastructure of nucleus and nucleolus of the cell 3) Write a note on different types of models of chromosomes	
Que.3	Answer the following.	
	1) State the structure and main functions of glyoxysomes	(05)
	2) What are Vacuoles? Explain the role of vacuoles in the cell.	(05)
	3) Write a note on the biogenesis of chloroplast	(04)
	OR	
Que.3	Answer the following.	(14)
	1) Explain the ultra structure of Lysosomes and Peroxisome 2) Explain the ultrastructure of Mitochondria	
Que.4 (A)	Attempt any two.	(10)
	1) Write a note on ultrastructure of microfilaments and associated proteins 2) What do you mean by Intracellular junctions? Explain its functions 3) Explain – Calcium dependent homophilic and non-homophilic cell adhesion	
Que.4 (B)	Attempt any one.	(04)
	1) Explain the functions of Myosin in detail 2) What are uniports and symports?	
Que.5	Answer the following (any two)	(14)
	1) Discuss the term – ‘HIV’ in context to the immune system of human beings 2) How does the cell transform into an oncogene from proto-oncogene? 3) State and explain the intrinsic type of pathway of apoptosis. 4) What are ligand-gated ion channels receptors? Explain their mode of action.	
