

Microbiology [Honours]

[CBCS]

B.Sc. Third Semester End Examination-2023

(Regular & Supplementary Paper)

PAPER-C6T

[Cell Biology]

Full Marks: 40

Time: 02 Hrs

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

Group A

Answer any FIVE questions of the following: 5x2= 10

1. What is apoptosis and necrosis? 1+1
2. Define embryonic stem cells and adult stem cells. 1+1
3. Name two microtubule based motor protein. 1+1
4. Why are chloroplast found only plant cell.
5. Write the features of signal sequence for protein sorting.
6. Write the importance of CDK to control the cell cycle.
7. Define glycocalyx and mention its role in cell organization.
8. Why gap junction also called tight junction?

(2)

Group B

Answer any FOUR questions of the following: 4x5 = 20

1. Draw a circle diagram with time of the eukaryotic cell cycle.
Label all phases. 4+1
2. Write the principle of fluid mosaic model. 5
3. What is caspase? Write the role of caspase in cell apoptosis.
1+4
4. Differentiate between tight junction and gap junction. 5
5. The role of Chaperones in Protein Folding. 5
6. Briefly describe Suicidal bag. 5

Group C

Answer any ONE question of the following: 1x10 = 10

1. Briefly discuss the protein glycosylation process in golgi-complex. Write the different secondary messenger in cell signalling system. Write the basic steps of extracellular signalling systems. 4+4+2
2. Classify the cell-surface receptors and briefly describe each type. Mention the difference between desmosome and chromosome. Describe the outline structure of nucleus. 4+3+3
