

**2021**

**Microbiology**

**[HONOURS]**

**(CBCS)**

**(B.Sc. Third Semester End Examinations-2021)**

**PAPER-C6T**

**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 from the following:**

**5x2= 10**

1. What is Plasmodesmata? Write its importance. 1+1
2. Distinguish between tight junction and gapjunction. 1+1
3. Differentiate between signal sequence and signal patch. 1+1
4. Differentiate plant cell wall and bacterial cell wall. 1+1
5. What is the difference between MPF and mitogen? 1+1
6. What are meant by protein sorting and transport? 1+1
7. What are TIM and TOM? 1+1
8. Write the importance of cell signalling 2

(2)

**Group-B**

**Answer any four from the following: 4x5 = 20**

1. Briefly describe the structure and composition of Cytoskeleton. 5
2. What is ECM? Write the components of ECM? 1+4
3. State the specific function of SER. What are the major polymeric compounds found in plant cell wall? 2+3
4. Write the process of protein targeting and insertion in endoplasmic reticulum. 5
5. Briefly describe the MAP – Kinase pathway. 5
6. Write the different pathway of cell signalling system.

**Group -C**

**Answer any one of the following : 10x1 = 10**

- 1) What is cell cycle? Write the importance of 'cdk' to control the cell cycle. Differentiate between mitosis and meiosis. 2+4+4
- 2) Compare the role of pRB and p<sup>53</sup> in cell cycle regulation. What are the function of SRP and SRP- receptor?  
What is the function of phospholipase  $c-\beta$  in relation to a G-protein signalling? 3+4+3

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