

B.Sc. Semester III (Honours) Examination, 2018-19

MICROBIOLOGY

Course ID : 32202

Course Code : SHMCB-302C-6(T)

Course Title : Cell Biology

Time: 1 Hour 15 Minutes

Full Marks: 25

The figures in the margin indicate full marks.

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

Answer all the questions.

1. Answer *any five* of the following: 1×5=5
 - (a) What are cisternae?
 - (b) Define clastogen.
 - (c) What is passive transport?
 - (d) State the role of P⁵³ protein.
 - (e) Differentiate between smooth endoplasmic reticulum and rough endoplasmic reticulum.
 - (f) What is chaperon?
 - (g) What is nucleosome?
 - (h) Write down the significance of nuclear pore complex.

2. Answer *any two* of the following: 5×2=10
 - (a) Write in brief about cytoskeleton. What is the cell wall composition of plant? 3+2=5
 - (b) What do you mean by glycosylation of protein? Write down the major functions of lysosome. 2+3=5
 - (c) What is apoptosis? Specify the factors that trigger apoptosis. 2+3=5
 - (d) State the function of (i) Lysosome (ii) Golgi apparatus 2.5+2.5=5

3. Answer *any one* of the following: 10×1=10
 - (a) State the salient features of stem cell. Classify stem cell on the basis of potency. Mention some clinical applications of stem cell. 2+6+2=10
 - (b) Diagrammatically describe the mode of action of G-protein coupled receptors. Discuss the role of cyclin and MPF in regulation of eukaryotic cell cycle. 6+4=10