

U.G. 1st Semester Examination - 2020**PHYSIOLOGY****[HONOURS]****Course Code : PHYSIOL-H-CC-T-01****(Cellular Basis of Physiology)**

Full Marks : 40

Time : 2½ Hours

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.***GROUP-A**1. Answer any **five** from the following questions:

2×5=10

- a) What is pseudostratified epithelium? Where these epithelial cells are found?
- b) What is symport? Give an example.
- c) What do you mean by homeostasis?
- d) State the functions of lysosome.
- e) State two differences between peripheral and integral protein.
- f) What do you mean by membrane fluidity?

[Turn over]

- g) What is pinocytosis?
- h) What do you mean by “S” phase of cell cycle?

GROUP-B2. Answer any **two** from the following questions:

5×2=10

- a) Briefly describe the process of phagocytosis with suitable diagram. 5
- b) State the factors affecting membrane asymmetry. How does membrane asymmetry affect its physiological function? 3+2
- c) Discuss briefly about the different types of junctions present in cell. 5
- d) Write a note on facilitated diffusion. 5

GROUP-C3. Answer any **two** from the following questions:

10×2=20

- a) What do you mean by gerontology? How is aging different from senescence? Mention how aging can be delayed.

2+5+3

- b) Explain negative and positive feedback mechanism in human body with suitable example. 2+4+4
- c) i) What is autocrine and paracrine communication? Explain with example.
- ii) Describe how tyrosine kinase acts as a signaling molecule in cellular communication. 5+5
- d) i) Describe the structural component of a mitochondria with labelled diagram.
- ii) Describe the different filaments of the cytoskeleton. 5+5
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