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RNLKWC/B.Sc.-CBCS/IS/PHY/H/C1T/22

2022

Physiology

[HONOURS]

(CBCS)

(B.Sc. First Semester End Examination-2022)

PAPER-C1T

*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*

1. Answer any five questions of the following: 5x2=10
- a) Mention the function of desmosome.
  - b) Define uniport.
  - c) What is Flippase & Floppase?
  - d) Define coenzyme and prosthetic group
  - e) What is transGolgi network.
  - f) What do you mean by rate limiting enzyme? Give one example.
  - g) Define feedback inhibition of enzyme action.
  - h) What is secondary active transport?

(2)

2. Answer any four questions of the following: **4x5 = 20**

- a) What is tight junction? Write the structure and function of gap junction. 1+2+2
- b) Define unit membrane. Discuss the significance of fluid-mosaic model of cell membrane with the factors causing fluidity. 1+4
- c) Classify enzymes with suitable examples. State the significance of  $K_m$  value. 4+1
- d) How pH and temperature affect enzyme activity. What is turnover value of enzyme? 4+1
- e) What do you mean by allosteric modulation of enzyme action? What are K series & V series enzyme? 3+2
- f) What are the main components of extracellular matrix? Write in brief the function of cell adhesion molecules. 2+3

3. Answer any one question: **1x10 = 10**

- a) Describe the electron microscopic structure of mitochondria with suitable diagram mention in brief the functions of Golgi bodies. (5+2)+3
- b) What is  $V_{max}$ ? Briefly describe the Michaelis-Menten model for single substrate enzyme kinetics. "Allosteric enzymes do not obey Michaelis-Menten kinetics" – justify the statement.
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