

**Physiology [MAJOR]  
[NEP-CBCS]**

**B.Sc. First Semester End Examination-2023**

**PAPER: PHYH-MJ101T**

*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**

1. Answer any FIVE questions of the following: 5x2= 10
- a) Differentiate diffusion from facilitated diffusion.
  - b) Mention the importance of cell membrane.
  - c) Why is lysosomes known as suicidal bag of the cell?
  - d) Mention the functions of ribosomes.
  - e) Write down the composition of Pulmonary Surfactant.
  - f) What is edema?
  - g) What is QRS complex? Mention it's significance.
  - h) Why cardiac muscle does not undergo fatigue?

**Group B**

2. Answer any FOUR questions of the following: 4x5 = 20
- a) What is lung compliance? Describe the factors affecting the lung compliance. 2+3

(2)

- b) What plasma protein are present in blood Write their origin and functions. 1+2+2
- c) Define cardiac output. Discuss about different factors affecting cardiac output. 1+4
- d) What are the differences between smooth and rough endoplasmic reticulum? Write the structure of rough endoplasmic reticulum with suitable diagram. State its function. 2+2+1
- e) Classify tissue. Briefly write down on epithelial tissues. 2+3
- f) What are the differences between isotonic, hypotonic and hypertonic solution? What would a red blood cell do in an isotonic hypotonic and hypertonic solution? 3+2

**Group C**

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

- a) What is the function of membrane protein? What are the integral and peripheral protein? Briefly discuss the significance of fluid mosaic model of cell membrane with diagram. 2+3+3+2
- b) What are the composition and function of gastric juice? Discuss the secretion regulation of gastric juice? 2+3+5