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**24-BC-21**

**M.Sc. II SEMESTER [MAIN/ATKT] EXAMINATION  
JUNE - JULY 2024**

**BIOCHEMISTRY**

Paper - I

**[Physiology]**

*[Max. Marks : 75]*

*[Time : 3:00 Hrs.]*

*[Min. Marks : 26]*

**Note :** Candidate should write his/her Roll Number at the prescribed space on the question paper.  
Student should not write anything on question paper.  
Attempt five questions. Each question carries an internal choice.  
Each question carries **15 marks**.

**Q. 1** Describe structure of Hemoglobin. Give an account of abnormal hemoglobins. (15 Marks)

**OR**

Describe composition and function of blood. (15 Marks)

**Q. 2** Describe role of Kidneys and hormones in regulation of water and electrolyte balance. (15 Marks)

**OR**

How tubular reabsorption of glucose, water and electrolytes takes place? (15 Marks)

**Q. 3 a)** Describe role of lungs in hydrogen ion homeostasis. (7½ Marks)

**b)** Chloride shift. (7½ Marks)

**OR**

Describe metabolic and respiratory acidosis. How is it compensated ? (15 Marks)

**Q. 4** Describe mechanical events and subcellular ion movements during contraction cycle in skeletal muscles. (15 Marks)

**OR**

**a)** Classify muscles with their structure and functions. (10 Marks)

**b)** Sarcomere and Sarcoplasmic reticulum. (05 Marks)

**P.T.O.**



**Q. 5** Write notes on -

(15 Marks)

- i) Reflex Action.
- ii) Action Potential.
- iii) Origin and transmission of nerve impulse.

**OR**

What is a Nerve Synapse ? Describe neurotransmitters and their mechanism of action. (15 Marks)

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