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25-CH-43

**M.Sc. IV SEMESTER [MAIN/ATKT] EXAMINATION
MAY - JUNE 2025**

CHEMISTRY

Paper - III
[Biochemistry]

[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 all five questions. Each question carries an internal choice.
Each question carries **15 marks**.

Q. 1 Explain the following –

- i) Role of metal ions in Biological System.
- ii) Photosystem (I) and Photosystem (II) in cleavage of water.

OR

Write notes on –

- i) Glucose storage.
- ii) Structure and functions of Haemoglobin.

Q. 2 Explain electron transfer process of Iron–Sulphur Protein in Biological System.

OR

Discuss the following –

- i) Chemical Nitrogen Fixation.
- ii) Nucleophilic displacement on a phosphorous atom.

Q. 3 Explain classification, nomenclature, enzyme kinetics and remarkable properties of enzymes.

OR

Comment upon the following –

- i) Reversible and Irreversible Inhibition.
- ii) Mechanism of action of Ribonuclease.

P.T.O.

Q. 4 What are Co-Enzymes ? Explain the structure and biological functions of Co-Enzyme – A.

OR

Write notes on –

- i) Crown Ether.
- ii) Immobilization of Enzymes.
- iii) Biotechnological applications of Enzymes.

Q. 5 Describe structure and functions of Proteins.

OR

Write in brief –

- i) Biological Cell.
- ii) Hydrolysis of ATP.
- iii) Forces involved in biopolymer interactions.

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