

7. Describe the following : 5,5

- (i) DNA intercalators
- (ii) Lipid bilayer formation.

Unit IV

8. (a) Explain the mechanism of enzyme action and the factors affecting it. 5
- (b) What are enzyme inhibitors ? Discuss their importance. 5
9. (a) Explain the drug action receptor theory. 5
- (b) Briefly describe the structure-activity relationship of drug molecules. 5



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B.Sc. (Hons.) (NEP-2020)

EXAMINATION, 2025

(Fourth Semester)

ELECTIVE CHEMISTRY-I

B-23-CHE-405(E2)

Organic Chemistry

Time : 3 Hours]

[Maximum Marks : 50

Before answering the question-paper, candidates must ensure that they have been supplied with correct and complete question-paper. No complaint, in this regard will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

(Compulsory Question)

1. (a) Draw the structure of sucrose. 2
- (b) What is the isoelectric point ? 2
- (c) What do you mean by denaturation of proteins ? 2
- (d) What are Phospholipids ? 2
- (e) Differentiate between coenzyme and cofactor. 2

Unit I

2. (a) Explain the following with examples :
 - (i) Reducing and non-reducing sugars
 - (ii) Anomers and epimers. 3,3
 - (b) Describe the phenomenon of mutarotation. 4
3. (a) Draw the structure of starch and cellulose and differentiate between them. 6

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- (b) Discuss the determination of the configuration of glucose. 4

Unit II

4. (a) Describe the classification of amino acids with examples. 4
 - (b) Illustrate the secondary and tertiary structure of proteins. 6
5. Describe the Merrifield solid phase polypeptide synthesis. 10

Unit III

6. Explain the double helical DNA structure and differentiate between A, B and Z double helix. 10

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P.T.O.