

(i) Printed Pages : 2

Roll No. ....

(ii) Questions : 9

Sub. Code : 

1	0	0	9	5
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Exam. Code : 

5	0	0	1
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NEP U.G. Common-Inter Disciplinary Course 1<sup>st</sup> Semester  
(2125)

**BIO-CHEMISTRY**

**Paper : Introduction to Biochemistry BCHIDC**

**Time Allowed : Three Hours]**

**[Maximum Marks : 40**

**Note :—** Attempt **five** questions in all, including Question No. 1 which is compulsory and selecting **one** question from each Unit.

I. Explain briefly the following terms:

(a) Enantiomer

(b) pH and pKa

(c) Storage polysaccharides

(d) Essential fatty acids

(e) Prostaglandins

(f) Structure of glycine

(g) RNA structure

(h) Structure of aspartic acid

8×1

**UNIT—I**

II. (a) Explain physico chemical properties of water.

(b) Discuss Henderson-Hasselbalch equation.

4,4

- III. (a) What are glycoproteins, glycolipids, polysaccharides and lipopolysaccharides?  
(b) Draw structure of any two disaccharides. 4,4

### UNIT—II

- IV. (a) Classify lipids giving examples.  
(b) Give structure and functions of any two phosphoglycerides and sphingolipids. 4,4
- V. (a) Write short note on terpenes.  
(b) Give structure and functions of any two steroids. 4,4

### UNIT—III

- VI. (a) Discuss non protein and essential amino acids.  
(b) Define primary, secondary, tertiary and quaternary structure of proteins. 4,4
- VII. (a) Classify proteins along with their functions.  
(b) Discuss various forces stabilizing protein structures. 4,4

### UNIT—IV

- VIII. (a) Discuss structure and properties of purine bases.  
(b) What are nucleosides and nucleotides? 4,4
- IX. (a) Elaborate structure of DNA.  
(b) Write short note on porphyrin. 4,4