

Roll No.

U03A15

Y-2150

B. Sc. (Part I) EXAMINATION, 2015

BIOCHEMISTRY

Paper First

(Biomolecules)

Time : Three Hours]

[Maximum Marks : 50

Note : All questions are compulsory. All questions carry equal marks.

Unit—I

1. (a) Write down biological importance of cellulose.
- (b) Write a note on glycoproteins.
- (c) What are the important derivatives of monosaccharides ?
- (d) Comment briefly on mutarotation.

Or

Write notes on the following :

- (a) Structure, occurrence and importance of various polysaccharides
- (b) Reactions of sugars due to aldehyde and ketone groups

Unit—II

2. Describe briefly to the following :
 - (a) Properties and functions of sterols
 - (b) Functions of fats

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Or

Write notes on the following :

- (a) Chemical properties of triacylglycerols
- (b) Cerebrosides and gangliosides

Unit—III

- 3. (a) Describe chemical properties of amino acids.
- (b) Discuss Merrifield solid-phase peptide synthesis.

Or

Write notes on the following :

- (a) Primary and secondary structure of protein
- (b) Sequencing of a polypeptide chain

Unit—IV

- 4. Discuss various features of DNA double helix and draw a labelled diagram of it.

Or

Write the structure and function of *t*-RNA

Unit—V

- 5. What are porphyrins ? Discuss various metalloporphyrins commonly found in nature.

Or

- (a) Discuss physiological significance of heme pigments.
- (b) Describe various methods of heme detection.