

Exam. Code : 107401

Subject Code : 2238

B.Sc. Biotechnology I<sup>st</sup> Semester

BIOCHEMISTRY—I

Paper—BT-9

Time Allowed—3 Hours] [Maximum Marks—40

**Note** :—(1) Attempt **ALL** parts from Section A. Each question carries **1** mark.

(2) Attempt any **FIVE** questions from Section B. Each question carries **4** marks.

(3) Attempt any **TWO** questions from Section-C. Each question carries **6** marks.

**SECTION—A**

1. (i) Structure of water molecule.
- (ii) Buffer.
- (iii) Mutarotation.
- (iv) Chemically modified carbohydrates.
- (v) Saponification.
- (vi) Gangliosides.
- (vii) t-RNA.
- (viii) Hyperchromicity.

**SECTION—B**

2. Discuss the physiochemical properties of water.
3. Dissociation and association constant.
4. Concept of reducing and non-reducing sugar.
5. Monosaccharides.
6. Lipopolysaccharides.
7. Glycolipids.
8. Features of different types of NDA.
9. Watson-Crick model of DNA.

**SECTION—C**

10. Discuss Hasselbach Hendersson equation and its implications.
11. Discuss the role of stereochemistry carbohydrate biology.
12. What are Glycoproteins ? Mention their applications.
13. Write down the structural features of major species of RNA.