

B.Sc. Biotechnology Part -1
Biochemistry
Paper BT-302

Time Allowed: 3Hours

Max. Marks: 50

Attempt five questions in all, including question no. 1, which is compulsory taking one question from each section.

Q.1 Answer the following:

- a) Define Molarity.
- b) Define titration curve & pK value.
- c) Definition of polysaccharide.
- d) Define primary structure of protein
- e) Protein folding
- f) Define co-enzyme
- g) Biological role of vitamin-C
- h) Define Z-form of DNA
- i) Define phosphoglycerides
- j) Define Ramachandran Plot

Section-A

Q.2 Write a short note on Biomolecules.

(10)

Q.3 Difference between Molarity, Molality and Normality.

Section-B

Q.4 Structural importance of protein in terms of primary, secondary and tertiary level.

(10)

Q.5 Importance of Ramachandran Plot.

Section-C

Q.6 Conformational parameters of DNA and their geometry.

(10)

Q.7 Classification of Lipids on the basis of functions.

Section-D

Q.8 Enzymes: Classification and Nomenclature.

(10)

Q.9 Michaelis-Menten Equation and Iso-enzyme

Model Test Paper-I
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Attempt five questions in all, including question no. 1, which is compulsory taking one question from each section.

Q.1 Answer the following:

- a) Difference b/w Molarity and Molality
- b) Denaturation of DNA
- c) Role of polysachharide in biology
- d) Define tertiary structure of protein
- e) Aromatic amino acid
- f) Define rancidity
- g) Henderson- Hassel Bach equation
- h) Define Plasma lipoprotein
- i) Define pH
- j) Define Iso-enzymes

Section-A

- Q.2 Define:- (a) Calculation of pH from H & OH concentration. (10)
(b) Buffers
(c) Polymerization
(d) Titration Curve
(e) Law of Mass action

Q.3 Write short note on Henderson- Hassel Bach equation, titration curve and Pk value.

Section-B

- Q.4 Classification of carbohydrates along with chemical structure. (10)
Q.5 Introduction and structure of 20 amino acid.

Section-C

- Q.6 Types and structure of ribonucleic acid. (10)
Q.7 Importance & classification of Lipids.

Section-D

- Q.8 Biological role of Vitamins. (10)
Q.9 Define enzyme Nomenclature & Model of enzyme catalysed reaction.

