

PARUL UNIVERSITY
PARUL INSTITUTE OF APPLIED SCIENCES
MID SEMESTER INTERNAL EXAMINATION, SEPTEMBER 2018
B. Sc. Semester I
Subject: MB/ BT

Paper Code:11103101

Title of the paper: Biochemistry I

Date: 08/ 09 /2018

Time: 2:30 – 4:00 pm

Maximum Marks: 40

Instructions:

- 1. All questions are compulsory and options are given in first and second question only.**
 - 2. Numbers to the right of question indicate the marks of respective question.**
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Q. 1 Attempt any one question of the following: **(08)**

- (i) Write a note on identifying characteristics of biomolecules.
- (ii) Explain optical isomerism in detail with examples.

Q. 2 Attempt any three questions of the following. **(12)**

- (i) What are physical properties of monosaccharides?
- (ii) Write a short note on disaccharides.
- (iii) Explain mutarotation.
- (iv) Write a note on essential amino acids(v) Classify Amino acids based on relative number $-NH_2$ and $-COOH$ with appropriate examples.

Q. 3 Do as directed. Attempt all five questions. **(05)**

- (i) Define carbohydrates.
- (ii) Why sucrose is known as non-reducing sugar.
- (iii) Who gave the term Protein?
- (iv) Which superscript is used for essential amino acids?
- (v) Name bond found between residual amino acid.

Q. 4 Write correct option in your answer sheet for following 15 multiple choice questions. **(15)**

- MCQ 1 Dextrin are:
- (A) Intermediates in synthesis of chitin (B) Substances which are formed in the course of hydrolytic breakdown of starch
- (C) Sugars which are dextrorotatory (D) Commercial name of sephadex
- MCQ 2 The most abundant constituent of a living cell is
- (A) Water (B) Carbohydrates
- (C) Salts (D) Proteins
- MCQ 3 Which of the following polysaccharide is not a polymer of glucose?
- (A) Maltose (B) Inulin
- (C) Amylopectin (D) Cellulose
- MCQ 4 Biomolecules are
- (A) Inorganic (B) Organic
- (C) Vital (D) Both A & B
- MCQ 5 The sweetest sugar is
- (A) Fructose (B) Glucose
- (C) Sucrose (D) Maltose
- MCQ 6 The sugar present in milk is
- (A) Casein (B) Maltose
- (C) Lactose (D) Heparin
- MCQ 7 Maltose has
- (A) β -1,6 linkages (B) β -1,4 linkages
- (C) α -1,6 linkages (D) α -1,4 linkages
- MCQ 8 Cellobiose is formed from
- (A) Hydrolysis of starch (B) Hydrolysis of cellulose
- (C) Condensation of two glucose molecules (D) Hydrolysis of sucrose
- MCQ 9 Example of galactan is
- (A) Agar (B) Mannan
- (C) Inulin (D) Chitin
- MCQ 10 The imino acid found in protein structure.
- (A) **Proline** (B) Lysine
- (C) Histidine (D) Arginine

- MCQ 11 L and D refers to
(A) Absolute configuration of the isomers (B) Phosphoryl choline
(C) Sugar residue (D) Hydroxyl group
- MCQ 12 Which amino acid contains imidazole ring in the structure?
(A) Histidine (B) Tyrosine
(C) Tryptophan (D) All of the above
- MCQ 13 Except _____ all amino acids are stereo active.
(A) Lysine (B) Glycine
(C) Leucine (D) Alanine
- MCQ 14 The point at which amino acids shows the zwitterionic effect known as
(A) Isomeric point (B) Isoelectric point
(C) Isomerism (D) None of the above
- MCQ 15 What is the Isoelectric point of glycine?
(A) 6.0 (B) 6.1
(C) 7.0 (D) None of the above

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