

SEAT No. _____

No. of Printed Pages : 2

[673]

SARDAR PATEL UNIVERSITY
B.SC. 3rd Semester Examination 2021

Subject: Biochemistry

Subject Code: US03CBCH01

(Biochemistry of Biomolecules I)

Monday, 4th January 2021

2:00 PM. To 4:00 PM

Total Marks: 70

Q1. Choose the correct option and write it in the answer sheet:

[10]

1. The Maltose is
 - a) Malt sugar
 - b) Blood sugar
 - c) Cane sugar
 - d) Fruit sugar
2. Majority of the Monosaccharides found in the human body are of
 - a) L-type
 - b) D-type
 - c) D, L type
 - d) None of these
3. Indians were first to discover how to extract crystallisedfrom cane sugar
 - a) Starch
 - b) Fat
 - c) Protein
 - d) Sugar
4. Which amino acid can form disulphide bonds?
 - a) Glycine
 - b) Proline
 - c) Alanine
 - d) Cysteine
5. Which amino acid is basic?
 - a) Glycine
 - b) Lysine
 - c) Alanine
 - d) Aspartic acid.
6. One of the amino acid is acidic in nature
 - a) Glycine
 - b) Cystein
 - c) Aspartic acid
 - d) Methionine
7. The type of sugar in RNA is
 - a) Triose
 - b) Tetrose
 - c) Hexose
 - d) Pentose
8. Which of following is true about DNA?
 - a) It is present in cell nucleus
 - b) It has single strand
 - c) It has ribose sugar
 - d) It is synthesized by RNA
9. Which of the following food is good source of Calcium?
 - a) Tomato
 - b) Potato
 - c) Milk
 - d) Onion
10. One of the following is source of energy.
 - a) Vitamin
 - b) Starch
 - c) Mineral
 - d) Sodium

[1]

[P.T.0]

Q2 (A) Fill in the blanks

[04]

1. _____ is plant storage polysaccharide
2. _____ is monomer unit of protein.
3. _____ is nucleic acid.
4. Mineral is _____ in nature.

Q2 (B) write true or false

[04]

1. Glucose is polymer.
2. Protein is monomer.
3. Nucleic is biopolymer.
4. Mineral is organic in nature.

Q3. Answer the followings in short (any ten)

[20]

1. Draw the structures of, D-Ribose, β -D Glucose.
2. What are monosaccharides?
3. Draw the shape of crystals for Fructosazones, Maltosazones.
4. Draw the structures of Glycine, Aspartic acid, Tyrosine and Proline.
5. Define zwitterions and nonessential amino acid.
6. Why glycine is optically inactive?
7. Draw the structures of Purines.
8. Draw the structures of pyrimidines.
9. Differentiate RNA and DNA.
10. What are daily requirements and food sources of potassium?
11. Define minerals with examples.
12. What is RDA value for sodium?

Q4. Write answers in detail (Any four)

[32]

- 1) Write functions of Carbohydrates.
- 2) Write notes on Glycogen.
- 3) Write notes on Structure of DNA.
- 4) Write notes on Types of DNA
- 5) Write about classification of Amino acids.
- 6) Draw any five structures of essential amino acids.
- 7) Write functions of Iron.
- 8) Write functions of Electrolytes.

[2]