



SEAT No. _____

No. of Printed Pages: 2

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SARDAR PATEL UNIVERSITY

B. Sc. Semester- III

CBCS (NC) OLD COURSE

US03CBCH01 - BIOCHEMISTRY OF BIOMOLECULES-I

Date: 15/6/2022, Wednesday

Time: 12:00pm to 2:00pm

Marks: 70

Q.1 Mark the right answer of following questions. [10]

- Which of the following is known as Milk sugar?
a. Maltose
b. Sucrose
c. Lactose
d. Galactose
- The Carbon atoms involved in Osazone formation are _____.
a. 1 and 2
b. 4 and 5
c. 3 and 3
d. 5 and 6
- Which of them is a Non Reducing Disaccharide?
a. Maltose
b. Lactose
c. Sucrose
d. Starch
- _____ is an Iminoacid found in Protein structure.
a. Arginine
b. Histidine
c. Proline
d. Lysine
- _____ is the Simplest aminoacid.
a. Methionine
b. Glycine
c. Isoleucine
d. Valine
- The Nitrogenous base NOT present in DNA structure is _____.
a. Adenine
b. Uracil
c. Guanine
d. Cytosine
- Which of the following is a left-handed DNA?
a. A DNA
b. B DNA
c. Z DNA
d. All of these
- The number of base pairs present in each turn (pitch) of B-form of DNA double helix is _____.
a. 10
b. 11
c. 12
d. 8
- Haemoglobin formation needs _____.
a. Iodine
b. Potassium
c. Iron
d. Sodium
- _____ is the Storage form of Iron.
a. Ferritin
b. Ceruloplasmin
c. Transferrin
d. None of them

Q-2 (a) Fill in the blanks.

[04]

1. If two Monosaccharides differ in configuration around a single carbon atom, they are known as _____ of each other.
2. The Bond by which two amino acids joins together is _____.
3. The double helical structure of DNA was proposed by _____.
4. Bone and teeth formation requires mainly _____ mineral.

Q-2 (b) True or False

[04]

1. Starch is a Polysaccharide found only in Plants.
2. Amino acids are building blocks of Proteins.
3. B-DNA is left handed double helix.
4. Minerals are Inorganic elements.

Q-3 Answer the following in brief (Any Ten)

[20]

- 1) Define : (a) Chiral Carbon , (b) Epimers
- 2) Draw the structure of Alpha – D- Glucopyranose.
- 3) Give any Four Functions of Carbohydrates.
- 4) Define Essential Amino acids and Give two examples.
- 5) What is Isoelectric pH?
- 6) Draw structure of Glycine and Histidine
- 7) Give Chargaff's rule.
- 8) Differentiate between Nucleoside and Nucleotide.
- 9) What is Tm value with reference to DNA?
- 10) Define Minerals.
- 11) What is RDA value? Give RDA value of Sodium.
- 12) Briefly discuss Classification of Minerals.

Q-4 Answer the following in detail (Any four)

[32]

- 1 Explain Osazone formation in detail.
- 2 Define Polysaccharides & Describe structure of Starch .
- 3 Give detailed Classification of Amino acids based on Polarity.
- 4 Discuss Titration curve of Glycine.
- 5 Write a detailed note on Watson Crick model of DNA.
- 6 Short note on : DNA supercoiling
- 7 Give Sources, RDA & Biochemical functions of Calcium.
- 8 Give Sources, RDA & Biochemical functions of Iron.

*****X*****