SEAT No._____ No. of Printed Pages: 2

[12/A-14]

SARDAR PATEL UNIVERSITY

B.SC. 3rd Semester Examination 2022

Subject Code: US03CBCH01

(Biochemistry of Biomolecules I)

Subject: Biochemistry

27/9/22 Tuesday,

12:30 PM To 2:30 PM **Total Marks: 70**

Q1. Choose the correct option and write it in the answer sheet: **[10]**

1) Monomer unit of cellulose is _____
   a) Galactose b) Isomaltose
   c) Ribose d) Glucose

2) One of the followings is hetero polysaccharide.
   a) Heparin b) Inulin
   c) Glycogen d) Cellulose

3) Reffinose is composed of glucose,fructose and _____
   a) Ribose b) Mannose
   c) Ribulose d) Galctose

4) ATP is a _____
   a) Nucleoside b) Nucleotide
   c) Carbohydrate d) Phosphorous

5) _____stores genetic information that determines whether cell is a bone cell or brain cell
   a) DNA b) RNA
   c) mRNA d) tRNA

6) The combination of a base with a sugar and phosphate results in the formation of a____
   a) Nuclicacid b) Nuclioside
   c) Nucliotides d) None

7) The type of sugar in DNA is
   a) Heptose b) Tetrose
   c) Hexose d) De-oxyribose

8) In maize _____occurs in the bound form and is not available for utilisation.
   a) Vitamin A b) Vitamin K
   c) Vitamin D d) Niacin

9) Vitamin C, also known as _____
   a) Aspartic acid b) Asparginc
   c) Hippuric acid d) Antiscorbetic factor

10) Iodine is required for the synthesis of _____Hormone.

[P.T.O]

(1/9)

a) Parathyroid
b) Calcitonin
c) Aldosterone
d) Thyroid

[8]

Q.2 (a) Fill in the blanks

(1) Glucose and Mannose is _____ epimeric pair.
(2) RNA have _____ sugar.
(3) Synthesis of haemoglobin need _____ mineral
(4) Riboflavin exists in two active coenzymes FMN and

[8]

Q.2 (a) Write True and False

(1) Starch is plant storage oligosaccharide.
(2) The structure of every protein is programmed by RNA.
(3) All vitamins are not water-soluble.
(4) Uracil has only a single ring.

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Q.3 Answer any <u>TEN</u> from the following:

(1) Define oligosaccharide with examples.
(2) Define epimer, anomer and isomer with examples.
(3) Draw the structure of Lactose.
(4) Write little difference between Amylose and Amylopectin.
(5) Differentiate nucleotide and nucleoside.
(6) Write importance of tRNA.
(7) Define vitamins and write importance of vitamin E.
(8) Write food sources for vitamin C and E.
(9) What are the two natural form of vitamin K? Write their food sources.
(10) Define mineral with examples.
(11) Write about food sources of Iodine.
(12) What are dietary sources of Chloride and Potassium?

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Q.4 Write Answer in detail (Any four)

(1) What is oligosaccharide? Write detail factions of Carbohydrates.
(2) Write notes on Starch and Cellulose with structure.
(3) Describe Watson-Crick model of DNA structure.
(4) Write importance and differences of RNA and DNA.
(5) Describe biochemical functions, daily requirements and sources of vitamin D.
(6) Describe functions, daily requirements of Ascorbic acid.
(7) Write Biochemical functions of calcium and Phosphorus.
(8) Discuss about functions, dietary sources of Sodium, magnesium and Iron.

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(2/2)