

[79/A29]

Seat No : _____

No. of Printed Pages: 02

Sardar Patel University
B.Sc (Third Semester)
US03CBCH21 (Biochemistry of Biomolecules- I)

Date: 22/11/19 Friday
Time: 2:00 to 5:00 P.M.

Marks : 70

Note:

- 1) Figures to the rights indicate marks
- 2) Draw neat and labeled diagram wherever necessary

Q.1 Multiple Choice Questions

[10]

- 1) Monosaccharide can be named by system that is based on the number of
 - a. Carbon
 - b. Hydrogen
 - c. Oxygen
 - d. Nitrogen
- 2) Which of these carbohydrates is not found in plants ?
 - a. Sucrose
 - b. Lactose
 - c. Starch
 - d. Cellulose
- 3) Scurvy is due to the deficiency of
 - a. Vitamin A
 - b. Vitamin B
 - c. Vitamin C
 - d. Vitamin D
- 4) Which of the following pairs is not correctly matched ?
 - a. Vitamin B₄-Pellagra
 - b. Vitamin B₁₂-Pernicious anaemia
 - c. Vitamin C-Scurvy
 - d. Vitamin B₆-Beriberi
- 5) Guanosine is an example of a combination of _____.
 - a. Sugar + phosphate
 - b. Sugar + base
 - c. Base + phosphate
 - d. Sugar + base + phosphate
- 6) Ribose sugar is found in _____.
 - a. RNA
 - b. DNA
 - c. Peptide
 - d. All of these
- 7) The number of base pairs in one complete turn of B - DNA helix is :
 - a. 10.2
 - b. 10.4
 - c. 10.8
 - d. 11.0
- 8) Which of these minerals should be avoided in high blood pressure?
 - a. Iodine
 - b. Sodium
 - c. Potassium
 - d. Iron
- 9) Which of these glands necessarily requires Iodine ?
 - a. Pituitary gland
 - b. Salivary gland
 - c. Thyroid gland
 - d. Parathyroid gland
- 10) Haemoglobin formation needs _____.
 - a. Iron
 - b. Lead
 - c. Iodine
 - d. Copper

①

(PTO)

- Q.2 Answer the following questions (Attempt any TEN) [20]**
- 1) What is an asymmetric carbon? What is its significance?
 - 2) Define and give examples of: (i) Enantiomers (ii) Epimers
 - 3) Draw the Cyclic structures of Glucose and Fructose..
 - 4) Why Vitamin D is also known as a hormone?
 - 5) Explain the role of pyridoxal phosphate in transamination reaction.
 - 6) What are antivitamin? Explain in brief.
 - 7) What do you know about Chargaff's rule?
 - 8) Write down the importance of nucleic acids.
 - 9) Draw the structure of: (i) AMP (ii) TMP
 - 10) Give classification of minerals.
 - 11) What is RDA? Give RDA value for Magnesium and Sodium.
 - 12) Write a note on Wilson's disease.

- Q.3 What is Osazone? Write a detail note on Osazone formation and action of acids on sugar. [10]**

OR

- Q.3 a) Discuss chemistry and biological significance of Starch. [06]**
b) What is Mutarotation? Explain. [04]

- Q.4 Discuss in detail about the biochemical functions of Vitamin C in detail. Add a note on therapeutic use of mega doses of it. [10]**

OR

- Q.4 a) Write a note on Wald's visual cycle. [06]**
b) Write an account of folic acid involvement in one carbon metabolism. [04]

- Q.5 a) Discuss in detail: Salient features of Watson Crick model with structure. [06]**
b) Write a short note on Tm value of DNA. [04]

OR

- Q.5 a) Write a note on COT value of DNA. [06]**
b) Write short note on t-RNA with structure. [04]

- Q.6 Discuss the functions, dietary requirements, sources, absorption and deficiency symptoms of Calcium. [10]**

OR

- Q.6 a) Write a note on iron metabolism in our body. [06]**
b) Write down the biochemical significance of chloride. [04]

-X-
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