

Note: Answer to all questions (including multiple choice questions) should be written in the provided answer book only.

Number of Printed Pages = 2

[9]

Seat No.:

SARDAR PATEL UNIVERSITY
M.Sc (II Semester) Examination
Saturday, 29th October, 2016
10:00 am to 1:00 pm
Organic Chemistry

PS02ECHE02 – Introduction to Biochemistry

TOTAL MARKS: 70

Q.1 Tick mark / select the correct answer for the following. (Only correct option against given question number needs to be written in provided answer book) (08 Marks)

- 1) Citrus fruits, gooseberry, guava, tomatoes are rich source of.....
 - a) Ascorbic acid
 - b) Tocopherol
 - c) Thiamine
 - d) Retinoic acid

- 2) The phospholipid that prevents the adherence of inner surface of lungs is
 - a) Cardiolipin
 - b) Dipalmitoyl lecithin
 - c) Lysolecithin
 - d) Plasmalogens

- 3) Proteins are polymers of:
 - a) D-glyceraldehydes
 - b) D-amino acids
 - c) L-amino acids
 - d) L-glyceraldehydes

- 4) The charged molecules which are electrically neutral is known as
 - a) Anion
 - b) Zwitter ion
 - c) Cation
 - d) None of the above

- 5) The protein part of the enzyme is known as:
 - a) Holo enzyme
 - b) Prosthetic group
 - c) Apo enzyme
 - d) None of above

- 6) Which sugar is known as non reducing sugar?
 - a) Lactose
 - b) Glucose
 - c) Sucrose
 - d) Maltose

- 7) The weak attractions among molecules are called.....
 - a) Nuclear forces
 - b) Electrostatic force
 - c) Van-der-waals interactions
 - d) None of the above

- 8) Which base is not present in the structure of RNA?
 - a) Adenine
 - b) Guanine
 - c) Uracil
 - d) Thiamine

- Q.2** Answer any seven from the following: 14
- a) What do you mean by vitamins? Write vitamins of vitamin-A.
 - b) Give the classification of vitamins.
 - c) Draw the structure of following: (1) Plasmalogen (2) Cardiolipin
 - d) Describe the primary structure of protein.
 - e) Write a note on "Inversion of sucrose".
 - f) Define the terms epimers and enantiomers with examples
 - g) Write a short note on activation of latent enzymes.
 - h) Describe the chemical nature and properties of enzyme.
 - i) What are the functions of nucleic acids?
- Q.3**
- (A) Describe the biochemical function of vitamin A in vision process. 6
 - (B) Write an account on properties of triacylglycerols. 6
- OR
- (B) Describe the structure and function of cholesterol. 6
- Q.4**
- (A) Describe the various structures of proteins. 6
 - (B) Classify protein molecule on the basis of their shape. 6
- OR
- (B) Write brief account on the following: 6
 - (i) Fibrous proteins
 - (ii) Globular proteins
- Q.5**
- (A) Define polysaccharides. Describe the structure and role of two homo polysaccharides. 6
 - (B) Define monosaccharides and explain its reactions. 6
- OR
- (B) Describe the ionization of water. 6
- Q.6**
- (A) Explain enzyme inhibition. 6
 - (B) Describe the mechanism of action of Hexokinase enzyme. 6
- OR
- (B) Explain the other type of DNA structure. 6

————— X ——— (2) ——— X ———