



**UNIVERSITY OF THE PUNJAB**  
B.S. 4 Years Program / Sixth Semester – 2019

Paper: Bio Chemistry  
Course Code: CHEM-323 Part – I (Compulsory)

Time: 15 Min. Marks: 10

Roll No. in Fig. ....

Roll No. in Words. ....

Signature of Supdt.

**ATTEMPT THIS PAPER ON THIS QUESTION SHEET ONLY.**

**Division of marks is given in front of each question.**

**This Paper will be collected back after expiry of time limit mentioned above.**

Q.1. Encircle the correct choice.

(1x10=10)

- i) An example of a saturated fatty acid is:
  - a) Palmitic acid
  - b) Oleic acid
  - c) Linoleic acid
  - d) Erucic acid
  
- ii) If the fatty acid is esterified with an alcohol of high molecular weight instead of glycerol, the resulting compound is:
  - a) Wax
  - b) Plasmologen
  - c) Cephalin
  - d) Lipositol
  
- iii) Which one of the following acid is a vitamin
  - a) Aspartic acid
  - b) Lactic acid
  - c) Ascorbic acid
  - d) Adipic acid
  
- iv) Calcium deficiency in the body occurs in the absence of:
  - a) Vitamin C
  - b) Vitamin D
  - c) Vitamin A
  - d) Vitamin E
  
- v) Protein present in milk is
  - a) Sericin
  - b) Oryzenin
  - c) Glutalin
  - d) Casein
  
- vi) What is the calorific value of fat/g?
  - a) 5 Cal/g
  - b) 9 Cal/g
  - c) 4 Cal/g
  - d) 10 Cal/g

P.T.O.

- vii) Cephalins consists of
- a) Glycerol, fatty acids, phosphoric acid and choline
  - b) Glycerol, fatty acids, phosphoric acid and ethanolamine
  - c) Glycerol, fatty acids, phosphoric acid and inositol
  - d) Glycerol, fatty acids, phosphoric acid and Serine
- viii) Molecular formula of cholesterol is
- a)  $C_{27}H_{45}OH$
  - b)  $C_{29}H_{47}OH$
  - c)  $C_{25}H_{46}OH$
  - d)  $C_{23}H_{41}OH$
- ix) Each turn of  $\alpha$ -helix contains the amino acid residues (number):
- a) 3.6
  - b) 3
  - c) 4.6
  - d) 4
- x) An essential amino acid in man is
- a) Aspartate
  - b) Tyrosine
  - c) Methionine
  - d) Serine



**ATTEMPT THIS (SUBJECTIVE) ON THE SEPARATE ANSWER SHEET PROVIDED**

**Q.2 Short Questions**

**2x10 = 20**

- i. How much amount of catalyst is consumed in the reaction it catalyzes?
- ii. What are AROMATIC Amino Acids? Give example.
- iii. What is the difference between reversible and irreversible inhibition?
- iv. What do you mean by a PEPTIDE LINKAGE?
- v. What is the main source and form of energy?
- vi. Define MICELLES?
- vii. What is RANCIDIFICATION? Give example.
- viii. Differentiate between COLLAGEN and ELASTIN?
- ix. Write two Functions of MYOGLOBIN.
- x. What do you mean by COMPETITIVE INHIBITION?

**Q.3 Extensive Questions**

**6 x 5 = 30**

- a) Define PROSTAGLANDINS. Write about it in detail.
- b) Write a note on FACTORS effecting ENZYME ACTIVITY.
- c) Write a note on the STRUCTURE of PROTEINS.
- d) Write a note on ENZYME INHIBITORS.
- e) What do you understand by THERMOGENIC EFFECT of food?
- f) What are PHOSPHOLIPIDS? Explain briefly.