

Enrollment No: _____

Exam Seat No: _____

C.U.SHAH UNIVERSITY

Winter Examination-2018

Subject Name : Clinical Biochemistry

Subject Code : 2SC01CLB1

Branch: PGDMLT

Semester : 1

Date : 28/11/2018

Time : 02:30 To 05:30

Marks : 70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
- (2) Instructions written on main answer book are strictly to be obeyed.
- (3) Draw neat diagrams and figures (if necessary) at right places.
- (4) Assume suitable data if needed.

Q-1. Complete the following sentences by choosing correct word given in the brackets:

1x14=14

- (a) Hemoglobin is a _____ Protein. (Simple / Conjugated)
- (b) _____ is a non reducing sugar. (Sucrose / Glucose)
- (c) Tyrosine is a _____ amino acid. (Essential / Non-essential)
- (d) Osmosis is a _____ Flow of solvent across a cell membrane. (Active / Passive)
- (e) Normal level of serum calcium is _____ mg/dL. (9 to 11 / 0.9 to 0.11)
- (f) End product of Heme catabolism is _____. (Biliverdin / Bilirubin)
- (g) Fatty Acid Synthesis takes place in _____. (Mitochondria / Cytoplasm)
- (h) _____ Deficiency leads to Beriberi. (Thiamine / Niacin)
- (i) Reducing sugars can be detected by _____ test. (Benedict's / Barfoed's)
- (j) One molecule of NADH can produce _____ ATPs. (Two / Three)
- (k) _____ are called suicidal bags of the cell. (Lysosomes / Golgi Apparatus)
- (l) Serum lipase level increases in _____ disease. (Cardiac / pancreatic)
- (m) _____ is an example of Hormone. (Inulin / Insulin)
- (n) _____ RNA is required for transfer amino acids from cytoplasm to the ribosomal protein synthesizing machinery. (Ribosomal / Transfer)

Attempt any four from the following:-

Q-2. Explain the following -

2x7=14

- (a) Explain structure, types & functions of Immunoglobulin.



(b) Classify Enzymes & explain the mechanism of enzyme action by various models.

Q-3. Explain the following -

2x7=14

- (a) Explain Structure & Biological functions of Homopolysaccharides.
- (b) Classify lipids & Explain in brief about Essential Fatty acids.

Q-4. Write short notes on the following -

5+5+4=14

- (a) Basal Metabolic Rate (BMR).
- (b) Structure & function of Hemoglobin.
- (c) Enzyme Linked Immunosorbant Assay (ELISA) – types & applications.

Q-5. Write in brief on the following -

5+5+4=14

- (a) Enumerate Liver Function tests.
- (b) Biochemical Functions of Calcium & Phosphorus.
- (c) Enumerate Vitamin A Deficiency Disorders.

Q-6. Explain the following -

2 X 7=14

- (a) Explain various steps of Protein Synthesis (translation) & Post-translational Modification.
- (b) Enumerate different types of Fatty acid oxidation. Explain steps of beta oxidation & it's energetic.

Q-7. Write in brief on the following -

5 +5+4=14

- (a) Inhibitors & Uncouplers of Oxidative phosphorylation.
- (b) Role of Quality Control in Clinical Biochemistry Laboratory.
- (c) Important products derived from Tyrosine metabolism.

Q-8. Describe the following -

2 X 7=14

- (a) Types, metabolic alterations, laboratory diagnostic tests & complications of Diabetes Mellitus.
- (b) Structure & function of Mitochondria & Endoplasmic Reticulum with suitable diagrams.

