

Enrollment No: _____

Exam Seat No: _____

C. U. SHAH UNIVERSITY

Winter Examination-2019

Subject Name : Clinical Biochemistry

Subject Code : 2SC01CLB1

Branch: PGDMLT

Semester : 1

Date : 16/11/2019

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

1x14=14

- (a) _____ Deficiency leads to Rickets. (Vitamin C / Vitamin D)
- (b) Glutamate is a _____ amino acid. (Acidic / Basic)
- (c) _____ Transport requires energy in form of ATP. (Active / Passive)
- (d) Normal level of serum albumin is _____ gm/dL. (3.5 to 5.5 / 6 to 8)
- (e) End product of Purine catabolism is _____. (Urea / Uric Acid)
- (f) Krebs's Cycle is take place in _____. (Mitochondria / Cytoplasm)
- (g) _____ Deficiency leads to Tetany. (Copper / Calcium)
- (h) Keto sugars can be identified by _____ test. (BPG Shunt/ HMP Shunt)
- (i) NADPH & Ribose sugars are formed in _____ Pathway. (HMP Shunt / BPG Shunt)
- (j) Serum alanine aminotransferase level increases in _____ disease. (Hepatic / Cardiac)
- (k) _____ is an example of Hormone. (Glycogen / Glucagon)
- (l) _____ Buffer System is act as first line defense mechanism to maintain acid base balance in our body. (Renal / Blood)
- (m) _____ can cross placental barrier to provide immunity to the fetus. (IgG / IgA)
- (n) _____ Enzyme is used to cut DNA at specific site in Recombinant DNA Technology. (DNA helicase / Restriction Endonuclease)



Attempt any four from the following:-

Q-2. Explain the following -

2x7=14

- (a) Explain structure, types & functions of Deoxynucleic Acid (DNA).
- (b) Classify Enzymes & Explain in brief about factors affecting enzyme activity.

Q-3. Explain the following -

2x7=14

- (a) Types, Principle & Applications of different types of Chromatography.
- (b) Classify lipids & Explain in brief about Phospholipids with suitable examples.

Q-4. Write short notes on the following -

5+5+4=14

- (a) Nutritional importance of Dietary fibers (BMR).
- (b) Biological function of Albumin.
- (c) Structure & Function of Endoplasmic Reticulum.

Q-5. Write in brief on the following -

5+5+4=14

- (a) Metabolic Acidosis & Alkalosis.
- (b) Absorption, Transport & Storage of Iron.
- (c) Enumerate Thyroid Function Tests.

Q-6. Explain the following -

2 X 7=14

- (a) Explain various steps of Glycolysis, Regulation of Glycolysis & its energetics.
- (b) Explain the process & different stages of DNA Replication with suitable diagrams.

Q-7. Write in brief on the following -

5 +5+4=14

- (a) Phenylketonuria.
- (b) Sickle cell Anemia & Thalassemia.
- (c) Westgard Rules for L-J charts.

Q-8. Describe the following -

2 X 7=14

- (a) Describe various Complexes of Electron Transport Chain & its Inhibitors and Uncouplers.
- (b) Classify Vitamins on the bases of its Solubility. Describe Sources, RDA, Biological Functions & Deficiency Disorders of Vitamin A.

