

SEAT No. _____

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SARDAR PATEL UNIVERSITY
M.Sc. (II-SEMESTER) Examination (CBCS)
FRIDAY, 20th April, 2018
2:00 to 5:00 pm
M.Sc. Biochemistry
PS02EBIC22: MEDICAL 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. Most circulating T3 and T4 is bound to
 - a. Thyroxine binding globulin (TBG)
 - b. Thyroxine binding prealbumin (TBPA)
 - c. Gamma globulin
 - d. Thyroglobulin

2. Which of the following LDH exhibits fastest electrophoretic mobility at pH 8.6?
 - a. LDH 1
 - b. LDH 3
 - c. LDH 2
 - d. LDH 4

3. Crigler-Najjar Syndrome is the inherited metabolic disorder of Bilirubin metabolism due to defective enzyme
 - a. Heme oxygenase
 - b. UDP-Glucouronyl transferase
 - c. Biliverdin reductase
 - d. Beta - glucuronisase

4. One of the following is the principle secretion of the parietal cells of the stomach
 - a. Mucous
 - b. Hcl
 - c. Gastrin
 - d. Trypsin

5. Angina Pectoris refers to:
 - a. Severe headache, usually due to decreased blood flow to the brain
 - b. Severe headache, usually due to increased blood flow to the brain
 - c. Chest pain or pressure, usually due to decreased blood flow to the heart muscle.
 - d. Chest pain or pressure, usually due to increased blood flow to the heart muscle.

6. Parkinson's disease is marked by the shortage of one of the following neurotransmitters.
 - a. Serotonin
 - b. GABA
 - c. Dopamine
 - d. Norepinephrine

7. Which of the following pairs is not correctly matched?
 - a. Vitamin C – Scurvy
 - b. Vitamin B₂ – Pellagra
 - c. Vitamin D – Rickets
 - d. Vitamin B₆ – beriberi

8. An individual who has been exposed to and harbors a pathogen but has not become ill or shown any of the symptoms of the disease is called:
 - a. Healthy carrier
 - b. Passive carrier
 - c. Convalescent carrier
 - d. Temporary carrier

(P. T. 00)

- Q.2** Answer **any seven** from the following: **14**
- a) Enlist serum enzyme for malignancies. Give the site, normal value and clinical importance of β -glucuronidase.
 - b) What is Haemoglobinopathies? Explain biochemical mechanism of sickle cell anaemia in brief.
 - c) Write about Van den Bergh Test for Bilirubin estimation.
 - d) Give an account on: Fractional Test Meal for gastric analysis.
 - e) Write down body distribution of phosphorus and enlist the causes of Hyperphosphatemia.
 - f) Enlist the fat soluble vitamins. Discuss the dietary source and importance of retinol.
 - g) What are atypical CPK isoenzymes?
 - h) Explain the term 'stroke' and enlist the risk factors associated with stroke.
 - i) Define hypertension. What is difference between of diastolic and systolic blood pressure?
- Q.3** (A) List clinically important Isoenzymes. Add a note on properties, structure and clinical significance of LDH isoenzymes in detail. **6**
- (B) Explain the terms hypocalcaemia and hypocalcaemia. Explain how vitamin D and parathyroid gland regulates blood calcium levels. **6**
- OR**
- (B) Give a brief overview on serum enzyme that act as biomarkers of cardiac disease. **6**
- Q.4** (A) List the various kidney function tests and explain in detail the renal function tests based on Glomerular Filtration Rate (GFR). **6**
- (B) What is hyperbilirubinemias? Discuss the clinical features of various types of Jaundice in detail. **6**
- OR**
- (B) Write short note on Liver Function Tests **6**
- Q.5** (A) Write short note on **any one** of the following (i) Mechanism for development of atherosclerosis with various risk factors. (ii) Medical biochemistry of hypertension **6**
- (B) Name any three neurological disorders. Explain the different types of epilepsy and its mechanisms. **6**
- OR**
- (B) What are oncogenes? Discuss the role of various oncogenes in the development of cancer with special emphasis on the role of viral oncogenes. **6**
- Q.6** (A) Describe the structure and life cycle of HIV. **6**
- (B) Give a detailed account on transmission and pathogenesis of pulmonary TB. **6**
- OR**
- (B) Enlist host microbes interactions and explain any two interactions in human host. **6**

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