[186] SEAT No._____ No. of Printed Pages : 9

**SARDAR PATEL UNIVERSITY**
**M.Sc. (II-SEMESTER) Examination (CBCS)**
**THURSDAY, 28th March, 2019**
**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. Which of the following serum Isoenzyme of LDH predominantly increased in patient with acute viral hepatitis?
   a. LDH - 5
   b. LDH - 4
   c. LDH - 2
   d. LDH - 1

2. During pancreatitis, the elevated enzyme(s) is / are
   a. Amylase
   b. Aldolase
   c. Lipase
   d. Both (a) and (b)

3. Which neurotransmitters are involved in epilepsy?
   a. GABA and Dopamine
   b. Norepinephrine and GABA
   c. GABA and Serotonin
   d. Norepinephrine and Serotonin

4. The patients suffering from which of the following disease will show increased resistance to malaria:
   a. Cholera
   b. Hypercalcemia
   c. Hypophosphatemia
   d. Sickle cell anaemia

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

6. In the patient's gastric analysis shows absence of free acid at all, the probable condition is:
   a. Hyperacidity
   b. Hypoacidity
   c. Achlorhydria
   d. All of the above

7. Which of the following is present in the cell wall of Mycobacterium renders the acid fast characteristic:
   a. Mycolic acid
   b. Murein
   c. Lipoarabino Mannan
   d. Lipo techoic acid

8. The simplest microbial interaction, an association of two or more different species of organisms, is called
   a. Parasitism
   b. Symbiosis
   c. Predation
   d. Competition



(P.T.O.)

**Q.2** Answer **any seven** from the following: **14**

a) State the importance of Vitamin A in vision.
b) Briefly explain serum enzyme used in GI tract diseases with the clinical importance.
c) Write down the causes of hyperphosphatemia.
d) Categorize water soluble and fat-soluble vitamins. Discuss the dietary source and clinical importance of vitamin D
e) Briefly describe the disorders of sleep.
f) What are opportunistic microorganisms? Name any three of them.
g) List the various thyroid function tests used for the diagnosis of thyroid disorders.
h) Describe any four modes of transmission of infection.
i) Define hypertension. What is difference between of diastolic and systolic blood pressure?

**Q.3** (A) State the physiological significance of calcium. Discuss the various factors responsible for regulation of calcium level. **6**

(B) What are cardiac biomarkers? Describe the site, normal values and clinical feature of different markers used during acute myocardial infarction. **6**

**OR**

(B) Explain the term, 'isoenzyme'. Citing suitable examples describe the isoenzymes of any one enzyme which holds significance in medical biochemistry. **6**

**Q.4** (A) Write a short note on 'Jaundice and its types'. **6**

(B) Discuss the mechanism of formation of bilirubin pigment from hemoglobin. How bilirubin gets conjugated in liver. **6**

**OR**

(B) Classify the various kidney function tests. Describe urea clearance test in detail. **6**

**Q.5** (A) Describe the mechanism involved in development of different stages of atherosclerosis and add a note on any two risk factors. **6**

(B) Enlist various neurological disorders and discuss the different types of epilepsy and its mechanism in detail. **6**

**OR**

(B) What is carcinogenesis? Explain the role of various oncogenes and tumor suppressor gene in development of cancer. **6**

**Q.6** (A) Describe the mode of transmission, pathogenesis and diagnostic tests for pulmonary tuberculosis. **6**

(B) Describe the pathogenesis of cholera with special reference to genetic organization and regulation of virulence factors in *vibrio cholerae* **6**

**OR**

(B) Enlist host microbes interactions and explain any two interactions in human host **6**

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(2)