

Government Medical Collage, Surat
Preliminary Examination, June-2016 Biochemistry paper – I
Duration : 10 min for Q:5 & 1 hr 50 min for Q:1 to Q:4 **Maximum Mark: 40**

Q: 1 Short Notes (2 out of 3) **(08 Marks)**

1. Renal mechanism for acid base balance
2. Carnitine shuttle & Explain energy formation from palmitic acid (16 carbon saturated fatty acid) through beta oxidation
3. Electron-transport Chain

Q: 2 Write in Brief (4 out of 6) **(12 Marks)**

1. Metabolism of LDL
2. Principle, Type and utility of ELISA
3. Tumour Markers
4. Mucosal block theory of iron absorption.
5. Liposome & Micelle
6. Significant of HMP Shunt pathway & Explain it's role for maintain RBC membrane.

Q:3 Read Following Case & Answer the Question **(10 Marks)**

Early in the morning, 40 years old male patient came in emergency with complain of chest pain, perspiration and altered consciousness for 4 hours. Patient also had diabetes mellitus for 10 years. He was taking medicine for diabetes mellitus irregularly. In history, it was found that he was chronic alcoholic and a day before chest pain, he also had heavy alcohol ingestion, with no feed intake. Doctor asked for few blood investigations. From ECG finding and abnormal cardiac function test. Diagnosis of myocardial infarction was confirmed.

Following treatment was given

loading dose of anti-platelet drug (Aspirin)

loading dose of hypocholesterolemic (Statin group) drug

Fibrinolytic drug (streptokinase)

50% dextrose saline with Thiamine (Vitamin B1)

After complete management and recovery after 7 days of admission in hospital, at time discharge from hospital, physician advised to take medicines regularly and to take more amount of fruit and fiber food.

Investigation

Random Blood Sugar = 30 mg%

HbA1C = 9 %

S. Cholesterol = 350 mg%

1. Explain biochemical role of statin, aspirin and fibrinolytic drugs in treatment of myocardial infarction.
2. What is biochemical reason for hypoglycemia? and Why physician asked to give injectable 50% Dextrose saline with Thiamine (Vitamin B1)?
3. Chronic un-control diabetic patient are more prone to atherosclerosis and arteriosclerosis. Explain in detail.
4. What are the cardiac markers for diagnosis of myocardial infarction? Which one is specific for diagnosis of patient if come with in 6-8 hour of chest pain and if patient come after 5 day of onset of chest pain?
5. What is re-perfusion injury? And what is role of allopurinol to prevent it?

Q:4 Write a justification in 2-3 lines (5 out of 7) **(10 Marks)**

1. Orlistat (pancreatic and hepatic lipase inhibitor) treatment is supplemented with lipid soluble vitamins.
2. Diarrhea cause normal anion gap acidosis.
3. Structure of proteoglycan is well suited for its function.
4. Acute alcoholism can trigger gouty arthritis.
5. Unsaturated cis-fatty acids decrease fluidity of membrane.
6. Snake bite causes severe haemolysis of RBCs
7. In absence of O₂, glycolysis can not continue if there is no formation lactic acid.