

Department of Biochemistry, GMC, Surat
1st MBBS Preliminary Examination December 2016

Duration: 3 hours

Max Mark: 50

Section - I

Q: 1 Short Notes (2 out of 3)

(08 Marks)

1. Significance of NADPH
2. Lactose intolerance.
3. Renal mechanism for acid base regulation

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

(12 Marks)

1. Mucopolysaccharides
2. Significant and Regulation of Cholesterol.
3. Significance of glycated hemoglobin
4. Types and functions of apolipoproteins
5. Clinical significant of Dietary Fiber.
6. Protein Energy Malnutrition (PEM)

Q: 3 Write answer in few line (5 out of 6)

(05 Marks)

1. Substrate for Gluconeogenesis
2. Factor affecting BMR
3. Name The Lipoprotein
4. Significant of Benedict's Test
5. Name of Fat Soluble Vitamins
6. Name the test of Liver Function Test.

Section - II

Q:4 Read the case & answer the questions given below

(10 Marks)

15 year unconscious boy bring by his parents in hospital. He has tachypnia (increase respiratory rate) & fruity smell from breath. Sign of dehydration was present and patient was also having very low blood pressure. In blood investigation, following thing were found .

Parameter	Value	Reference range
Random blood sugar	500 mg/dl	<140 mg/dl
Serum acetone	10 mg/dl	<1 mg/dl
pH	7.1	7.35-7.45

The patient was diagnosed as a case of Type - I Diabetes Mellitus with Diabetic ketoacidosis

Patient was treated with

Inj normal saline fast I.V. (4-5 litre in 1st 24 hrs) Until systolic blood pressure reaches to normal

Inj Human Insulin injection slow infusion I.V.

All the biochemical parameters and urine output are monitored at regular interval till patient recovered.

1. What is reason of dehydration in this case?
2. Why this patient was having fruity smell in breath & increase respiratory rate?
3. What does blood pH indicate, in this patient ? And Give biochemical reason for that abnormal?
4. What is role of insulin in this case?
5. What is role of normal saline in this case?

Q:5 Write Justification in 2-3 lines (5 out of 7)

(10 Marks)

1. Flouride is used as preservative for blood sample for glucose estimation.
2. Sucrose is non- reducing.
3. "Alcohol inhibit gluconeogenesis,so it causes hypoglycemia, if person is on starvation." explain it.
4. Pre-mature baby can suffer from Acute Respiratory Distress Syndrome.
5. HDL cholesterol has preventive role in atherosclerosis.
6. Uncouplers like 2-4 dinitrophenol cause thermogenesis.
7. Cataract is more common in diabetic patients.

Q: 6 Write answer in few line (5 out of 6)

(05 Marks)

1. Name the Essential fatty acid
2. Function of Mitochondria
3. Component of Cell membrane
4. Use of Electrophoresis
5. Define "Rancidity of Fatty acid".
6. Function of Vitamin K