

GMERS MEDICAL COLLEGE, VALSAD
DEPARTMENT OF BIOCHEMISTRY
1st MBBS Preliminary Examination, June-2019

Paper – I

Time – 2 Hrs 30 min

Marks- 50

SECTION – I

- 1. Short notes (2 out of 3) 8**
 - a) Describe metabolic derangements in Diabetes Mellitus.
 - b) Describe metabolism of VLDL and LDL.
 - c) Renal regulation of blood P^H

- 2. Short notes (4 out of 6) 12**
 - a) Utilization of Ketone Bodies.
 - b) Clinical signification of dietary fiber.
 - c) Liver function test
 - d) Principle, types and uses of ELISA
 - e) β oxidation of palmitic acid with energetic
 - f) Metabolic acidosis and alkalosis

- 3. Answer in one or two lines (5 out of 6) 5**
 - a) What is uncoupler ? Give examples.
 - b) Biochemical function of fluorine.
 - c) Wilson's disease
 - d) What is substrate level phosphorylation ? Give one example.
 - e) Functions of prostaglandins (any four)
 - f) Oedema in protein malnutrition.

SECTION – II

4. Read the following case and answer the questions : 10

A 48 year old man presented to the emergency center with chest pain. The chest pain lasted for approximately 15 min. then subsided on its own. He also noticed that he was nauseated and was sweating during the pain. He had no medical problems.

On examination he was no acute distress with normal vital signs. An electrocardiogram (ECG) revealed slight ischemic changes. The blood biochemistry revealed raised serum total cholesterol and LDL cholesterol levels. He was placed on low fat diet and lovastatin therapy.

- a) What is the diagnosis?
- b) What is the mechanism of action of the lovastatin drug
- c) What are the potential side effects?
- d) What are the alternative options to treat this patients?
- e) Write normal range of serum total cholesterol and LDL cholesterol.

5. Write justification (5 out of 7) 10

- a) Congenital cataract is seen in galactosemia.
- b) Fat has been chosen the energy reserve of the body.
- c) Hyperuricemia may be observed in von Gierke's disease.
- d) Pregnant woman frequently suffers from iron deficiency.
- e) Lead poisoning causes anemia.
- f) Hemolysed blood is not suitable for estimation of serum potassium level.
- g) Glucose is added in oral rehydration solution (ORS) for treatment of diarrhea.

6. Answer in one or two lines (5 out of 6) 5

- a) Write name and functions mucopolysaccharides.
- b) Respiratory distress syndrome
- c) Hemosiderosis and hemochromatosis
- d) Anion gap
- e) Biochemical changes in starvation
- f) Specific dynamic action (SDA)