

**BIOCHEMISTRY**  
**GMERS MEDICAL COLLEGE, VALSAD**  
**First Year M.B.B.S. Preliminary Examination 2018**  
**Paper-I**

2 hour and 30 minutes

Marks: 50

Instruction:

Write each section in separate answer books.

Draw figures wherever possible

**SECTION-1**

**Short note : (2 out of 3)**

**8**

- 1) Write biosynthesis of cholesterol. Give an account of its clinical significance.
- 2) Describe the stage of absorption, transport and storage of iron in the body. Add a note on disorder associated with defective iron metabolism.
- 3) Describe electron transport chain and its inhibitors.

**Describe in brief : (4 out of 6)**

**12**

- 1) Protein energy malnutrition
- 2) Renal regulation of blood pH
- 3) Liver function test
- 4) Clinical significance of dietary fiber
- 5) Significance of NADPH
- 6) Gluconeogenesis

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

**5**

- 1) Metabolic acidosis
- 2) Mention any two phospholipids and its specific function
- 3) Biochemical changes in alcoholism
- 4) Write three main function of prostaglandin.
- 5) Respiratory distress syndrome
- 6) Function of hyaluronic acid

## SECTION-II

### Case with 5 question

10

A 48 year old patient approached a physician as he lost about 6 kg of weight during the last 6 months. He also complained of fatigue, increased thirst and frequent urination. The patient's random blood sugar was 350 mg/dl. He also had a family history of hyperglycemia.

- 1) What is the diagnosis?
- 2) Explain biochemical basis of nephropathy & neuropathy in the patient.
- 3) What is normal range of FBS, RBS, PPBS.
- 4) What is the role of glucose in ORS (Oral rehydration salt)
- 5) Describe the major functions of insulin.

### Answer in few line : (5 out of 7)

10

- 1) Lead poisoning causes anemia
- 2) Aspirin is used as an anti-inflammatory agent
- 3) Inulin is used to measure glomerular filtration rate
- 4) Calcium as second messenger
- 5) Human beings cannot digest cellulose
- 6) Leukotrienes are chemotactic agents
- 7) Chronic alcoholism leads to fatty liver.

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

5

- 1) Biochemical role of selenium
- 2) Significance of RIA
- 3) fluorosis
- 4) Principle of electrophoresis
- 5) Write significance of Hb1c
- 6) Write test name of Lipid profile