Date: 09-01-2019

0819E373

First Year MBBS Examination

I MBBS Biochemistry Paper 1

Time: 3 hours

Max Marks: 50

1. Answer to the points.
2. Figure to the right indicates marks.
3. Use separate answer books for each section.
4. Draw diagrams wherever necessary.
5. Write legibly.

Section 1

1. Write short notes on the following

a) Diabetic ketoacidosis (10)

b) Von Gierk's disease

c) Biochemical basis of ammonia toxicity

2. Write Short notes of (any three)

a) Physiologically important glycosides (9)

b) Serum enzymes in myocardial infarction

c) Regulation of cholesterol synthesis

d) Acute intermittent porphyria

e) Suicidal inhibition of enzymes

3. Discuss Any TWO

a) Application of ELISA (enzyme linked immunosorbent assay) (6)

b) Role of kidneys in regulation of blood pH

c) Fluid mosaic model of cell membrane

Section 2

4. Write Short notes on (any two)

a) Reciprocal regulation of glycogenesis of glycogenolysis (10)

b) Fatty acid synthase complex

c) Significance of HMP (hexoe mono phosphate) shunt

5. Write Short notes on (any two)

a) Water pollutants (9)

b) Oncogenes

c) Uncouplers of oxidative phosphorylation

d) Structure of immunoglobulin

e) Biological effects of radiation on

tissues

6. Case report:

During a hunger strike, one tudent who took only water for next 15 days when his condition deteriorated, he was admitted in a hospital blood level of sugar and amino acids were found to be decreased urine had ketone bodies, urinary non protein nitrogen was increased. Answer the following questions (any six). (6)

1) The brain consumes 65 % of the total circulating glucose daily. How does brain obtain energy during starvation?

2) Can brain utilize ketone bodies to meet part of its energy requirement?

3) How does starvation trigger

gluconeogenesis and lipolysis?

4) What is the fate of amino nitrogen generated in the liver during process of gluconeogenesis?

5) What are the sources of two carbon atoms in urea molecule?

6) Why does ketoacidosis develop in the patient?

7) What happens to "branched chain amino acids" in the initial phase of starvation?

8) What happens to alanine in the initial phase of starvation?