R-3704

First Year M. B. B. S. Examination

November / December – 2018

Biochemistry : Paper - I

Time : $2\frac{1}{2}$ Hours] [Total Marks : 50

Instruction :

Fillup strictly the details of signs on your answer book.

Name of the Examination : FIRST YEAR M. B. B. S.

Name of the Subject : BIOCHEMISTRY : PAPER - 1

Subject Code No. : 3 7 0 4 Section No. (1, 2,....) : 1&2

Seat No. :

Student's Signature

SECTION- I

1. **Short note: (2 out of 3)** **2x4=8**
   a) Describe the mechanism of iron absorption, transport and storage. Add a note on disorder associated with defective iron metabolism.
   b) What is gluconeogenesis ? Write the pathway with its significance.
   c) Describe De Novo synthesis of fatty acid with regulation.

2. **Short notes: (4 out of 6)** **4x3=12**
   a) Metabolism of VLDL.
   b) Liver function test
   c) Write the role of kidneys in acid-base regulation.
   d) Name the function and composition of any four Mucopolysaccharides
   e) Electron transport chain and its inhibitors
   f) Protein energy malnutrition

3. **Answer in one or two line: (5 out of 6)** **5x1=5**
   a) Flurorosis
   b) ketoacidosis.
   c) Rancidity of fat
   d) What is P:O ratio & its importance
   e) Inulin chemical structure and clinical use
   f) Differentiate glucokinase & hexokinase

SECTION –II

4. Read the following case and answer the questions : **5x2=10**

5. A young shopkeeper was diagnosed for hypercholesterolemia during routine laboratory investigations. His total cholesterol was 245mg%, TG was 126mg% and HDL cholesterol was 33 mg%.

a) In which organ cholesterol is mainly synthesized in our body? Name the regulatory enzyme of cholesterol biosynthesis.
b) How cholesterol is transported from peripheral tissue to liver.
c) Calculate approximate blood level of LDL cholesterol in this patient.
d) How cholesterol is excreted from the body?
e) How "Statin" group of drugs reduces blood cholesterol level.

6. Write justification : (5 out of 7) **5x2=10**

a) 2-3 BPG decreases affinity of oxygen with hemoglobin.
b) Brain cannot utilize free fatty acids for energy purpose.
c) Fat burn in flame of carbohydrate
d) Human beings cannot digest cellulose
e) Lead poisoning causes anemia
f) Cataract is more common in galactosemia
g) Iron deficiency anemia is observed in copper deficiency

7. Answer in one or two line : (5 out of 6) **5x1=5**

a) Write significance of HbA1c
b) Application of isotopes for diagnosis
c) Glucose tolerance test
d) Write test name of Lipid profile
e) Significance of HMP shunt
f) Liposomes & its use