



R-3704

First Year M. B. B. S. Examination

July - 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 notes : (2 out of 3) 2×4=8
 - (a) Describe electron transport chain and its inhibitors.
 - (b) Degradation and clinical significance of cholesterol.
 - (c) Describe how carbohydrates are digested and absorb in the body.
- 2 Short notes : (4 out of 6) 4×3=12
 - (a) Principle and application of electrophoresis
 - (b) Homeostasis of plasma calcium level
 - (c) Gluconeogenesis and its significance
 - (d) Protein energy malnutrition
 - (e) Describe reverse cholesterol transport and HDL cycle
 - (f) Renal function test.
- 3 Answer in one or two line : (5 out of 6) 5×1=5
 - (a) Biochemical role of selenium.
 - (b) Name any four Tumor marker.
 - (c) Renal glycosuria.
 - (d) Mention any two phospholipids and its specific function.
 - (e) Principle of ELISA.
 - (f) Importance of benedict test.

R-3704]

1

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SECTION - II

- 4 Read the following case and answer the questions : $5 \times 2 = 10$

A 14 year old boy was brought to a hospital in a comatose state with fruity smell. The doctor on duty got his RBS and ketone bodies in urine analyzed. RBS was around 450 mg/dl and ketone bodies in urine was 4+. The urine sugar was also 4+. The patient was dehydrated and there was low serum potassium. His arterial blood gas analysis revealed :

Blood pH : 7.2, HCO_3^- : 14 mmol/L, pCO_2 : 30 mmHg

- (a) What is normal range of Random, Fasting and Postprandial plasma Glucose ?
- (b) Why Diabetes mellitus causes elevated serum ketone bodies ?
- (c) How will you differentiate between the diabetic ketoacidosis and starvation ketoacidosis ?
- (d) Describe the major functions of Insulin.
- (e) What is the reason of fruity smell ?

- 5 Write justification : (5 out of 7) $5 \times 2 = 10$

- (a) Ethanol is used to treat methanol poisoning.
- (b) Human being can not digest cellulose.
- (c) Premature baby tends to develop Respiratory distress syndrome.
- (d) Hyperkalemia is usually associated with acidosis while hypokalemia is seen during alkalosis.
- (e) Iron deficiency anemia is observed in copper deficiency.
- (f) Aspirin is used as an anti-inflammatory agent.
- (g) Excessive alcohol intake leads to fatty liver.

- 6 Answer in one or two line : (5 out of 6) $5 \times 1 = 5$

- (a) Biochemical changes in alcoholism.
- (b) Normal level of BMR (Basal Metabolic rate).
- (c) Application of isotopes for diagnosis.
- (d) Name of lipoprotein.
- (e) Name of glycogen storage diseases.
- (f) Write three main functions of prostaglandin.