



**JI-4653**                      Seat No. \_\_\_\_\_  
**First Year M. B. B. S. Examination**  
July - 2019  
**Biochemistry : Paper - II**  
**(Old Course)**

Time : 3 Hours]

[Total Marks : 50

**Instructions :**

- (1) Each section to be answered in separate answer book
- (2) Answer should be brief and to the point.

**SECTION-I**

- 1 State true or false with justification on any six:                      **1×6=6**
  - (a) Insoluble dietary fibers lowers cholesterol level in our body.
  - (b) Bile salt helps in digestion and absorption of lipids from intestine.
  - (c) Lactic acid is always the end product of glycolysis in red blood cells.
  - (d) Sodium is related with total body water where as albumin is for compartmentalization of water in our body.
  - (e) Liver produces and utilizes ketone bodies for energy source.
  - (f) Glutathione is also necessary for detoxification of different substances.
  - (g) Lead poisoning causes anemia.
  
- 2 (a) Read the following case report and answer all the five questions :                      **1×5=5**

A patient was operated for intestinal obstruction and had continuous gastric aspiration for 3 days. His blood pH was 7.55, pCO<sub>2</sub> 50mm of Hg, Plasma bicarbonate 30 meq/L. Serum Sodium 130 mmol/L, serum potassium 2.9 mmol/L, Serum chloride 95 mmol/L. The patient was diagnosed having "Metabolic Alkalosis".

  - (1) What is Metabolic Alkalosis?
  - (2) Comment on the obtained values in this patient.
  - (3) What is the significance of potassium in acid base status assessment ?
  - (4) Why is chloride measured in this patient?
  - (5) Calculate and comment on Anion Gap in this patient.

- (b) Discuss the following : **3+2=5**  
(1) Biochemistry of Cancer.  
(2) Free radical related disorders.
- 3** Write short note on any three : **3×3=9**  
(a) Creatinine clearance test.  
(b) Phase- I detoxification reactions.  
(c) Ketone body metabolism.  
(d) Fates of cholesterol in our body.

### SECTION-II

- 4** Give your comments with justification on any six : **1×6=6**  
(a) HIV is a mutation prone virus.  
(b) Urinary pH is important factor for precipitation of uric acid stones in urinary tract.  
(c) G-SH is important for detoxifying substances in our body.  
(d) Propionic acid is glucogenic.  
(e)  $\omega$ -3 fatty acid is good for health.  
(f) Starch digestion starts from mouth cavity.  
(g) Not in all diabetic patients glucose is present in urine.
- 5** Discuss any two of the following : **5×2=10**  
(a) Metabolic adaptations during starvation.  
(b) Glucose tolerance test.  
(c) Urea cycle.
- 6** Write short note on any three : **3×3=9**  
(a) Steps of TCA cycle which generates ATP in ETC.  
(b) DNA replication in bacteria.  
(c) Alkaptonuria  
(d) Nitric oxide.
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