



MAN-4653

Seat No. _____

First Year M. B. B. S. Examination

October / November – 2016

Biochemistry : Paper - II

Time : 3 Hours]

[Total Marks : 50

- Instructions :** (1) Each section should be answered in separate answer books.
(2) Answers should be brief and to the point.

SECTION – I

1 State true or false with justification : (any six) 1×6=6

- (a) Lipoprotein lipase is a functional serum enzyme.
- (b) Urine of Galactosemia patient' gives Benedict's test negative.
- (c) Glycerol kinase enzyme is present in adipose tissue.
- (d) LCAT enzyme is associated with reverse cholesterol transport.
- (e) Glycine is called "little master" among all amino acids.
- (f) Albumin is associated with maintaining "Total body water" in our body.
- (g) Serum potassium estimation is important in diabetic Ketoacidosis.

2 (a) Read the following case report and answer the questions : 5

A 45 year old man after consumption of alcohol and meat in the 31st night party returned home and went to sleep normally. In the early morning he woke up because of excruciating pain in right sided big toe joint Lately in the morning he attended medicine OPD. In investigation Serum uric acid was found 10mg% Normal 3.5 to 7 mg%). He was diagnosed having "Gout".

- (i) What is the difference between the term "Hyperuricemia" and "Gout"?
- (ii) What is the relation between "Winter night and Alcohol consumption" with precipitation of Gouty arthritis?
- (iii) What are the biochemical reasons of Primary Gout?
- (iv) What is the mechanism of action of the drug Allopurinol in Gout?
- (v) How will you explain role of free radicals in formation of "Gouty Arthritis"?

(b) Discuss the followings : **3+2=5**

- (i) Reactions of Phase I Detoxification. Role of Glutathione in detoxification in our body.
- (ii) Tumor markers and their clinical importance.

3 Write short notes : (any **three**) **3×3=9**

- (i) Lead poisoning
- (ii) Free radicals and clinical significance
- (iii) Ketone body synthesis
- (iv) Adipose tissue metabolism.

SECTION – II

4 Give your comments with Biochemical justification : **1×6=6**
(any **six**)

- (a) Glucokinase enzyme has high K_m value than Hexokinase.
- (b) Cataracts in children are found as sign of Galactosemia.
- (c) Bile salts helps in absorption of lipids from intestine.
- (d) Glutamic acid helps in trapping and transport of NH_3 in our body.
- (e) Citric acid cycle is amphibolic in nature.
- (f) ω_3 fatty acids are good for health.
- (g) Serum creatinine is a better indicator of kidney functions than urea.

5 Discuss the following : (any **two**) **5×2=10**

- (a) Describe β oxidation of Palmitic acid and calculate its energetics.
- (b) Describe types and synthesis of collagen and related disorders.
- (c) Trace gluconeogenic pathway from Alanine.

6 Write short notes : (any **three**) **3×3=9**

- (a) Trace Elements.
 - (b) Homeostasis of body fluids.
 - (c) Trans-deamination.
 - (d) Dietary fibers.
-