


B-3705
First M. B. B. S. Examination

December - 2017

Biochemistry : Paper - II

 Time : $2\frac{1}{2}$ Hours]

[Total Marks : 50

Instruction :

1. Fill up strictly the details of signs on your answer book.
 Name of the Examination :
 First M. B. B. S.
 Name of the Subject :
 Biochemistry : Paper - II
 Subject Code No. : 3 7 0 5 Section No. (1, 2, ...) : 1&2

Seat No. :
 Student's Signature

SECTION - I

- 1 Short notes : (2 out of 3) 8
 - (1) Describe Primary & Secondary structures of protein.
 - (2) Vitamin D - Sources, functions and deficiency manifestations.
 - (3) DNA Replication.
- 2 Describe in brief : (4 out of 5) 12
 - (1) Explain "Ammonia is toxic to brain".
 - (2) Molecular basis of Sickle cell anaemia.
 - (3) Polymerase chain reaction.
 - (4) Characteristic of Genetic Code.
 - (5) Hyperuricemia and gout.
- 3 Answer in one or two lines : (5 out of 6) 5
 - (1) Type of Mutation.
 - (2) What are Xenobiotics?
 - (3) Mention important compounds synthesized from tyrosine.
 - (4) Enzyme pattern in diagnosis of acute myocardial infarction.
 - (5) Zwitter ions.
 - (6) Competitive inhibition of enzymes.

B-3705]

1

[Contd...

SECTION - II

4 Clinical Case with 5 questions : 10

56 year male patient came in emergency with altered consciousness & haematemesis. He was suffering from chronic cirrhotic liver disease due to chronic alcoholism. On examination, it was found that he has edema on both lower limb, fluid collection in peritoneal cavity (Ascites), yellowish discoloration of skin & sclera (icterus). On blood investigation following was found.

Blood Glucose : 50 mg%,

APTT - Test : 60 second (Increase)

Serum Protein : 5.5 gm%

Serum Albumin : 2.0 gm%

Serum Total Billirubin : 20 mg%

Physician advised to give Following treatment

10% Dextrose with Thiamine (Vit-B1), 10% Albumin, Vitamin K, Oral Neomycin (Antibiotic)

Questions :

- (1) Explain biochemical reason for edema & ascites in this patient.
- (2) Explain biochemical reason for yellowish discoloration of skin & sclera?
- (3) What is reason for increase APTT in this case ?
- (4) How Oral Neomycin (Anti-microbial, Antibiotic) reduces risk of cerebral encephalopathy?
- (5) What is role of Vitamin K in this case?

5 Answer in few lines : (5 out of 7) 10

- (1) Alpha-1 antitrypsin deficiency causes emphysema.
- (2) Telomerase is essential for dividing cell.
- (3) Haemoglobin is good blood buffer.
- (4) In the presence of uncouplers of oxidative phosphorylation, body temperature rises.
- (5) Bile salts are detected in the urine of obstructive jaundice.
- (6) Strict vegetarian may suffer from vitamin B₁₂ deficiency.
- (7) Write different isoenzymes of CPK and LDH.



- 6 Answer in one or two lines : (5 out of 6) 5
- (1) Definition & example of Co-Enzyme
 - (2) Type of RNA
 - (3) Role of 2, 3 BPG in oxygen transport by hemoglobin.
 - (4) Why tyrosine becomes an essential amino acid for patients of phenylketoneuria?
 - (5) Role of ATP in body
 - (6) Major biochemical functions of liver.

