Oct-2024

BLDE (DEEMED TO BE UNIVERSITY)

MBBS PHASE – I EXAMINATION

[Time: 3 Hours] [Max. Marks: 80]

BIOCHEMISTRY – PAPER – I

QP CODE: 1015

Your answer should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.
Each answer should be written on new page only.
Write question number in the middle of the page

Long Essay: (Answer to be started on fresh page only) **2 X 10 = 20**

1. A 15 year old boy came to the physician with the complaints of frequent fatigue while playing. He also complained of painful muscle cramps on exertion. Blood samples collected during exercise revealed low glucose, low lactate and low pyruvate levels.
   a) What is the probable diagnosis?
   b) Name the deficient enzyme.
   c) Interpret the cause of low glucose, lactate and pyruvate levels.
   d) Enumerate the differences between muscle glycogen and liver glycogen.
2. What are enzymes? Discuss the various factors affecting enzyme activity in detail.

Short Essay: (Answer to be started on fresh page only) **6 X 5 = 30**

3. A 50 year old male who is a known case of Type 2 Diabetes and is on regular insulin treatment, observed a fast for some religious reasons for a day and took insulin injection as usual. He developed a severe headache, profuse sweating and altered sensorium. He was immediately shifted to a nearby hospital, by the time he reached the hospital he was almost in a comatose condition.
   a) What is your most probable immediate diagnosis?
   b) As the doctor in charge, how would you react immediately to save the patient?
   c) List the common complications of uncontrolled Diabetes Mellitus.
4. What are the different lipoproteins? Add a note on Reverse cholesterol transport.
5. Describe in brief about functions of Prostaglandins
6. Balanced diet
7. Respiratory regulation of pH of blood
8. Write a note on collagen - structure, biosynthesis, post-translational modification and functions

P.T.O

Short Answer: (Leave three lines gap between the answers) **10 X 3 = 30**

9. Active site of enzymes.
10. Selenium.
11. What is Buffer system? List the various body buffers.
12. Dehydration
13. Cytochromes P450
14. Role of intrinsic factor in the absorption of vitamin B12.
15. Zellweger syndrome.
16. Renin Angiotensin mechanism
17. S D A
18. HbA1c and its clinical significance

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MBBS PHASE – I EXAMINATION

[Time: 3 Hours] **[Max. Marks: 80]**

BIOCHEMISTRY – PAPER – II

QP CODE: 1016

Your answer should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.
Each answer should be written on new page only.
Write question number in the middle of the page

Long Essay: (Answer to be started on fresh page only) **2 X 10 = 20**

1. A 40 year old obese male presented in OPD with complaints of mild fever, loss of appetite, itching all over the body, dark coloured urine and clay coloured stool.

   Lab investigations reports are as below.

   Serum Total Bilirubin -17 mg%

   Direct Bilirubin-13.8 mg%

   SGOT-45 IU/L

   SGPT-55 IU/L

   ALP-120 KA Units

   USG finding-Stone in common bile duct.

   a) What is the likely diagnosis? What is the biochemical basis of the condition?

   b) How Bilirubin is synthesized in the body?

   c) What is the fate of Bilirubin in the body? Add a note on hyperbiliruinemia

2. What is Replication? Explain stages of replication. Add a note on inhibitors of DNA replication.

Short Essay: (Answer to be started on fresh page only) **6 X 5 = 30**

3. A one year old child with delayed milestones was brought to Hospital. His parents gave history of mousy odour from urine.

   a) What is the probable diagnosis? b) What is the biochemical basis for mousy odour from urine?

   c) Explain the reaction catalyzed by deficient enzyme [1+3+1]

4. Functions of albumin and mention the cause of hypoalbuminemia
5. Draw & Explain the Watson & Crick model of DNA structure
6. List the kidney function tests. Add a note on tests based on measurement of glomerular filtration rate
7. Classify tumor markers, Name it with its clinical significance
8. Name different blotting techniques. Explain Western blot technique.

P.T.O

Short Answer: (Leave three lines gap between the answers) **10 X 3 = 30**

9. Enumerate – Important compound synthesizes from Glycine
10. Quality control
11. What is detoxification? Explain the detoxification of drugs with examples
12. Lipid peroxidation
13. Orotic aciduria
14. C-AMP as second messenger
15. Name the enzyme defect in 1. Lesch Nyhan syndrome 2.Homocysinuria 3. Crigler-Najjar syndrome.
16. Oncogenes with suitable examples
17. Bence Jones Proteins.
18. Essential Amino Acids