

BLDE (DEEMED TO BE UNIVERSITY)

April - 2022

MBBS PHASE – I EXAMINATION

[Time :3 Hours]

[Max. Marks: 80+20(MCQ)]

BIOCHEMISTRY – PAPER – I**QP CODE: 1015 - CBME**

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 left side of margin

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

1. A five years old girl visited pediatrician with severe anemia followed by erythropoietic medication, with increased levels of indirect bilirubin. It was diagnosed as pyruvate kinase deficiency
(2+2+4+2=10)
 - a. Identify type of anemia and jaundice in above case
 - b. Explain cause of anaemia in pyruvatekinase deficiency .
 - c. Summarize glycolysis in RBC.
 - d. Describe energetics of aerobic glycolysis.
2. Describe structure and functions of Lipoproteins and explain role of LDL in atherosclerosis
(5+5=10)

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

3. Explain renal mechanism in acid base balance
4. Classify enzyme inhibition, and explain competitive inhibition with examples
5. A general physician prescribed **HMG co A reductase enzyme** inhibitors to 40 year obese person based on abnormal laboratory report. Summarise metabolism in which **HMG co A reductase enzyme** participates.
6. Describe calcium homeostasis in brief.
7. 5 years old child with growth failure and difficult to locate the things in dim light and during night was confirmed as **vitamin-A deficient**. Describe the Wald's visual cycle
8. Draw the fluid mosaic model of cell membrane and list out the functions

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

9. Enumerate three mucopolysaccharides and their functions
10. Deficiency manifestations of Niacin
11. Renal threshold for glucose and its clinical significance.
12. Enumerate three factors affecting enzyme activity
13. Anion Gap
14. Give the normal ranges of electrolytes. Mention the causes of hypokalemia
15. Explain lecithin structure and its function
16. How you are going to explain the importance of iron to iron deficiency anemic pregnant woman
17. Define SDA and RQ and their values for various foodstuffs.
18. High energy compounds.

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[Max. Marks: 80+20(MCQ)]

BIOCHEMISTRY – PAPER – II
QP CODE: 1016 . CBME

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 left side of margin

Long Essay: (Answer to be started on fresh page only)

2 X 10 = 20

1. A patient complains of fever and generalized weakness since 15 days. He gave history of taking anti malarial drugs. On examination clinician found pallor++ and icterus++ . Biochemistry Laboratory report was as follows.
(1+4+1+4=10)
 - Serum ALT and ALP levels were normal
 - Total bilirubin 12.0 mg/dL
 - Conjugated bilirubin 1.0 mg/dL
 - Unconjugated bilirubin 11.0 mg/dL
 - a. What is the probable diagnosis
 - b. Explain the formation and excretion of bilirubin
 - c. What is normal concentration of total bilirubin , conjugated and unconjugated bilirubin
 - d. How you differentiate different types of jaundice
2. Summarise metabolism of phenylalanine. Name special products obtained from tyrosine and describe synthesis of any one of them.
(4+2+4=10)

Short Essay: (Answer to be started on fresh page only)

6 X 5 = 30

3. A 50 year old male person with severe right toe pain without any trauma approached an orthopaedic doctor. He diagnosed it as gout by biochemical investigations .Which biochemical test helps to diagnose gout. Explain the metabolic defect of gout.
4. Define Proto-oncogenes and name any 3 Proto-oncogenes and analyse their role in cancer
5. Describe the mechanism of steroid hormones.
6. Which tests are performed to assess the glomerular function of Kidneys. Write in detail about any one of them.
7. Discuss Conjugation reactions in detoxification
8. Mention steps in PCR and mention the applications of PCR

Short Answer: (Leave three lines gap between the answers)

10 X 3 = 30

9. Acute intermittent porphyria
10. HIV virus.
11. Draw the general structure of Immunoglobulins
12. Write in brief about free radicals
13. Which tests are used to assess thyroid gland function
14. Functions of Alpha-1-Antitrypsin and describe its associated diseases
15. Complete protein
16. Name enzymatic antioxidants and their action
17. Name RNA virus and write the role of reverse transcriptase enzyme
18. Genetic code