

**D****r. . MEDICAL****[MBBS 0825]****AUGUST 2025****Sub. Code: 7055****M.B.B.S. DEGREE EXAMINATION****(For the candidates admitted from the Academic Year 2024-2025)****FIRST PROFESSIONAL – (CBME)****PAPER I – BIOCHEMISTRY*****Q.P. Code: 527055*****Time: Three hours****Maximum : 100 Marks (80 Theory + 20 MCQs)****Answer All Questions****I. Essay:****(1 x 10 = 10)**

1. A 8-year-old boy presented with pallor, fatigue and generalized weakness. H/o having taken sulfa drugs for a bacterial infection present. On examination child was anemic, mild jaundice present.
  - a) Which enzyme is deficient in this hemolytic disorder. (1)
  - b) Brief the steps of the metabolic pathway involved. (4)
  - c) Discuss the significance of this pathway. (5)

**II. Reasoning out short notes :****(2 x 5 = 10)**

1. Streptokinase is used in thrombolysis in Acute Myocardial Infarction (AMI).
  - a) How does it act? (2)
  - b) Mention three cardiac biomarkers and their time of onset, peak and fall in blood levels. (3)
2. Discuss the statement: Carbohydrates are absolutely required for the oxidation of fats.

**III. Write short notes on:****(10 x 6 = 60)**

1. Enumerate the functions of Copper and brief the disorders associated with copper.
2. Regulation of Citric acid cycle.
3. Explain Uncoupling of oxidative phosphorylation. Give four examples of uncouplers. (4+2)
4. A 2 year old child presented with liver enlargement, fasting hypoglycemia, increased uric acid and lactate levels.  
Glucose: 50mg%, Urine positive for ketone bodies.
  - a) What is the possible diagnosis? Name the enzyme deficient (1+1)
  - b) Reason out the biochemical basis of these findings. (4)
5. Congenital Hyperbilirubinemia.
6. a) List any four causes of Nonalcoholic Fatty liver. (2)  
b) Discuss the Metabolism of HDL. (4)

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7. Several people attending a family gathering suspected to have consumed illicit liquor, was brought to emergency in seriously ill condition.
  - a) What poisoning will you suspect in these patients? (1)
  - b) Discuss how alcohol is metabolized by our body. (4)
  - c) Name the laboratory findings in Chronic Alcoholism. (1)
8. A vitamin deficiency that can cause methylmalonic aciduria.  
Name the vitamin and discuss the role of the vitamin in this condition. (1+5)
9. Define Basal Metabolic Rate. Brief the factors affecting and the measurement of BMR. (1+3+2)
10. Discuss how the commitment to lifelong learning forms part of the physician growth.

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