

**2019 Scheme**

Q.P. Code: 115001

Reg. no.: .....

**First Professional MBBS Degree Regular Examinations March 2021  
Biochemistry - Paper I**

Time: 3 Hours

Total Marks: 100

- Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space • Answer all parts of a single question together
- Leave sufficient space between answers • Draw table/diagrams/flow charts wherever necessary

**Long Essays****(2x15=30)**

1. 23-year-old female was brought to casualty with the complaints of dizziness, weakness and fainting attack. History revealed that she had skipped her breakfast and lunch with intention of losing weight. Random blood glucose was 40 mg/dl. All other investigations were normal.
  - What is the probable diagnosis
  - What is the normal blood glucose level
  - Describe the regulation of blood glucose.
  - Add a note on glucose tolerance test. (1+1+8+5)
2. Define enzyme. Classify with suitable examples. Discuss the various types of enzyme Inhibitions with clinical examples. (1+5+9)

**Short essays****(5x8=40)**

3. Molecular basis, clinical features and diagnosis of sickle cell anemia. (2+4+2)
4. Outline the metabolism of glycine under following heads.
  - Synthesis of glycine, synthesis of biologically important compounds from glycine. (2+6)
5. Describe the steps of beta oxidation. Calculate the energetics from palmitic acid. (6+2)
6. Causes, clinical features, biochemical manifestations and treatment of kwashiorkor. (2+2+2+2)
7. Sources, biochemical functions and deficiency manifestations of niacin. (2+4+2)

**Short answers****(5x4=20)**

8. Inhibitors of electron transport chain.
9. Fat is burnt under the fire of carbohydrates. Justify this statement.
10. Galactosemia.
11. Isoenzymes and their clinical significance
12. Endoplasmic reticulum.

**Give Precise Answers****(10x1=10)**

13. Protein digestion starts in-----
  14. Primary structure of a protein refers to-----
  15. Curd is an effective treatment for lactose intolerance. Justify.
  16. Name two clinical conditions causing ketosis..
  17. Rate limiting enzyme of Heme synthesis
  18. Patients with G6PD deficiency should not be treated with anti-malarials. Why.
  19. Normal serum cholesterol level
  20. Enzyme defect in Gaucher's disease.
  21. Name the aromatic amino acids
  22. Name the essential fatty acids.
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