

ATAL BIHARI VAJPAYEE MEDICAL UNIVERSITY, LUCKNOW
MBBS DEGREE EXAMINATION - 1st PROF PROFESSIONAL
SUPPLEMENTARY EXAM - MARCH 2024

BIOCHEMISTRY - PAPER – I

Time: 3 Hrs

Max. Marks: 100 Marks (80 Theory + 20 MCQs)

NOTE:

Attempt all questions.

This question paper consists of two sections: Section A - Multiple Choice Questions and Section B - Theory Questions.

Both sections have different paper codes. Write the correct paper code on the respective sheet.

Write the correct MCQ paper set on the OMR sheet.

Answer MCQs on the provided OMR sheet and theory questions on the provided answer booklet.

SECTION B - THEORY QUESTIONS

PAPER CODE: 2421230003

1. Long Answer Question

(15 Marks)

- i. Enumerate Ketone bodies found in our blood. (1 mark)
 - ii. Explain Ketogenesis and Ketolysis with the help of a schematic diagram. (5 marks)
 - iii. Define Ketosis. Discuss the biochemical basis for occurrence of Ketosis as a complication of Diabetes mellitus and starvation. (5 marks)
 - iv. Discuss the complications associated with ketosis. (1 mark)
 - v. Enumerate the test performed to detect Ketone bodies in urine. (1 mark)
 - vi. Explain why hepatocytes could synthesize Ketone bodies but could not utilize them. (2 marks)
-

2. Clinical Case Scenario Based Structured Question (15 Marks)

A 50-year-old male presented to the medicine OPD with complaints of weakness and increased frequency of thirst, hunger, and urination. On physical examination, his BMI was 33.2 kg/m². Oral Glucose tolerance test (OGTT) revealed the following values: Fasting blood glucose: 128 mg/dl; 1 hour glucose: 186 mg/dl; 2 hours glucose: 220 mg/dl; Urine sample gave brick red color on Benedict's test.

- Interpret the oral GTT report with proper reasoning. (2 marks)
- Interpret Urine Benedict test and why is it called a semi-quantitative test. What is the normal glucose concentration in urine? (2 marks)
- Explain the biochemical basis for symptoms. (3 marks)
- Explain the role of hormones in the regulation of blood glucose. (5 marks)
- Mention what other tests we could perform to confirm our diagnosis. (2 marks)

3. Short Note Questions (Within 500 Words) (5x6=30 Marks)

- Schematic representation of the Electron transport chain.
- Cytochrome P-450 and its role in Xenobiotics.
- Discuss biochemical significance and disease states associated with copper.
- Define Isoenzymes and discuss their role in the diagnosis of Myocardial infarction.
- Discuss the risks associated with obesity.

4. Short Answer Questions (Within 100 Words) (5x4=20 Marks)

- Differentiate between primary and secondary active transport with suitable examples.
- Compare and contrast competitive and noncompetitive enzyme inhibition.
- Compare and contrast Marasmus and Kwashiorkor.

iv. Differentiate between pre-hepatic and hepatic jaundice.

v. Discuss inhibitors of Eicosanoid synthesis.

firstranker.com
www.FirstRanker.com