



MODEL PAPER
2nd Year Examination, June-2025

Program: D. Pharm

Year: 2nd Year

Course: Biochemistry and Clinical Pathology

Course Code: ER20-23T

Section- II from all the units

Section: II Short Answers Types Questions

(3 Marks question)

Unit-I

1. Write short note on components of Cell.
2. Define Polysaccharides & classify them.
3. What are the Chemical Properties of Monosaccharides?
4. Explain qualitative tests of Proteins & Lipids.
5. Draw the structure & mention the functions of Cholesterol.

Unit-II

6. What is Watson & Crick Model? Draw its Structure.
7. Classify the Enzymes on the basis of IUB.
8. Discuss the key steps involved in the catalytic mechanism of enzymes.
9. What is Lipid Profile Test?
10. Mention the source, requirements, functions & deficiency disease of any two Vitamins.

Unit-III

11. Write the functions, deficiency diseases & dietary requirements of any 3 Minerals.
12. Write short note on Water Turnover & Balance.
13. Give a brief description on the History of Bio-Technology.
14. Write about following:-
 - a. Functions of Kidney
 - b. Routinely performed tests to assess liver function.
15. Differentiate between Lymphocytes, Platelets & Erythrocytes.

Unit-IV

16. What is ORT?
17. Differentiate between Ketogenesis & Ketolysis.
18. Explain Michaelis- Menten & Briggs- Haldane Classification.
19. Write Short note on followings:
 - a. Glycogen Metabolism (with structure)
 - b. Blood Glucose level (with Flow Chart)
20. What are the mechanisms of Transamination & Deamination in amino acid metabolism?

Section- III from all the units

Section: III Long Answer Types Questions

(5 Marks question)

Unit -I

1. Elaborate the regulation of Blood Glucose Level.
2. Explain Amino Acid Metabolism.
3. What is Urine Pathology? Elaborate.
4. Explain abnormalities present in Erythrocytes in detail.
5. Describe the structure and function of hemoglobin.

Unit-II

6. Explain in details about Transamination & Deamination.
7. Elaborate the chemical nature of Starch & Glycogen.
8. What is the structure and functions of RNA?
9. Explain the modes of Enzyme action.
10. Differentiate between DNA and RNA.

Unit-III

11. Draw & Elaborate the Lipolysis cycle.
12. Give notes on Kidney function and its routinely tests.
13. Explain the Urea cycle along with its structure.
14. Discuss the electron transport chain (ETC) and oxidative phosphorylation.
15. Draw & Elaborate the β -Oxidation cycle.

Unit-IV

16. Explain any 2 reactions of Monosaccharides.
17. Write the causes, site, types, symptoms and treatment of Jaundice.

18. Describe the biochemical tests used for the identification of carbohydrates, proteins, and lipids.
19. Write a note on liver function tests (LFTs).
20. Explain the terms mentioned below:
 - i. Gluconeogenesis
 - ii. Glycogenolysis

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Disclaimer: - This is a Model Paper. The Question in End semester examination will differ from the Model Paper. This Model paper is meant for practice only.