

Practice Set
End Semester Examination, Spring- 2026

Program: D.Pharm
Year: 2nd Year
Course: Biochemistry & Clinical Pathology
Course Code: ER20-23T

Short Answer type Question

(3 marks each)

Unit-I

1. Define Biochemistry. Mention its importance in pharmacy.
2. Write short note on components of Cell.
3. Differentiate between reducing and non-reducing sugars with one example each.
4. Explain the role of Lipoproteins in lipid transport.
5. Write the biological importance of proteins in the Body.
6. Why glycogen is called “Animal starch”?
7. Differentiate between purines and pyrimidine with examples.
8. What are the functions of Lipoproteins?

Unit-II

1. Define Polysaccharides & classify them.
2. What are the Chemical Properties of Monosaccharides?
3. Explain qualitative tests of Proteins & Lipids.
4. Draw the structure & mention the functions of Cholesterol.
5. Give differences and similarity between Diabetes Mellitus Type-1 and Type-2.
6. Explain the term:
 - a. Glycogenolysis
 - b. Gluconeogenesis
 - c. Glucogenesis
7. What is ORT? Explain causes of Dehydration.
8. Describe the components Nucleosides.

Unit-III

1. What is Macrominerals?
2. Give complete information about Fat Soluble Vitamins by mentioning its sources, chemical nature, functions, co enzyme form, daily intake, and deficiency diseases.
3. Draw the cycle and pathway of Lipolysis and Beta Oxidation.
4. Explain the Transamination.
5. What is Biotechnology? Mention the scopes of Biotechnology.
6. What are the dietary intake of Electrolytes?
7. What is the distribution and function of water in the body?
8. Explain the functions of Lipids.

Unit-IV

1. Mention the significance of Amino Acid Metabolism.
2. Differentiate between Ketogenesis & Ketolysis.
3. Explain Michaelis- Menten & Briggs- Haldane Classification.
4. Write Short note on followings:
 - a. Glycogen Metabolism (with structure)
 - b. Blood Glucose level (with Flow Chart)
5. What is the mechanism of Deamination in amino acid metabolism?
6. Explain the classification of Amino Acids with proper examples.
7. Give details about the diseases related to Protein Malnutrition.
8. Classify Fatty Acids on the basis of Nutritional Requirements.

Long Answer Types Questions

(5 Marks question)

Unit -I

1. Describe the structure of DNA and its functions.
2. Elaborate Inversion of Sugar.
3. Explain Osazone Formation.
4. Discuss briefly about Dehydration properties of monosaccharides.
5. Elaborate the regulation of Blood Glucose Level.
6. Explain Amino Acid Metabolism.
7. Elaborate Urine Pathology?
8. Explain in detail abnormalities present in Erythrocytes.

Unit-II

1. Explain Glycolysis completing the whole TCA cycle.
2. Give detail history of Biotechnology.
3. What are the levels of Proteins? Explain in detail.
4. What is ETC and Metabolism of Amino Acid? Elaborate.
5. Explain the importance of enzymes in respect to Therapeutic and Pharmaceutical need.
6. What are the factors affecting enzyme activity?
7. Give details about structure and functions of DNA (Watson and Crick Model).
8. Elaborate the Qualitative Tests and Functions of Lipids.

Unit-III

1. Draw & Elaborate the β -Oxidation cycle.
2. Draw & Elaborate the Lipolysis cycle.
3. Give notes on Electron transport chain supporting with its structure.
4. Explain the Urea cycle along with its structure.
5. Explain fatty liver.
6. Write a note on ketoacidosis.
7. Mention the utilization of Ketone Bodies.

Unit-IV

1. Explain any two reactions of Monosaccharides.
2. Write the causes, site, types, symptoms and treatment of Jaundice.
3. Explain the terms mentioned below:
 - a. Hyperglycemia
 - b. Hypercholestroemia
4. What is Lactose intolerance and Hyperlipidemia?
5. Mention the composition of body fluids.
6. What are the functions of kidney?
7. Describe routinely performed test to assess liver function and its clinical significance.
8. Elaborate the role of Lymphocytes in health and disease.

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