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First Year (New) Pharmacy
BIOCHEMISTRY AND CLINICAL PATHOLOGY
(104)

Time : Three Hours *Maximum Marks : 80*

Note : i) Attempt total *six* questions. Question No.**1** is compulsory. From the remaining questions attempt any *five*.
ii) Illustrate your answer with neat sketches wherever necessary.

1. a) Fill in the blanks. 2
   i) Glucose is _____ constituent of Urine.
   ii) Enzyme which catalyse transfer of functional group is known as _____.
   iii) Phenylalanine is _____ amino acid.
   iv) Pectin is _____ saccharide.
   b) Match the column. 2

Column 'A'	Column 'B'
i) Vitamin C	A) Saturated fatty acid
ii) Oleic acid	B) Unsaturated fatty acid
iii) Stearic acid	C) Riboflavin
iv) Vitamin B_2	D) Ascorbic acid

   c) Define: 2
   i) Hypoglycemia ii) Hepatitis
   d) State true or false. 2
   i) Pectin is polysaccharide.
   ii) Fructose is disaccharide
   iii) Creatinine is normal constituent of urine
   iv) Myristic acid is unsaturated fatty acid
   e) Give the structure of one essential amino acid. 2

2. Attempt any two: 2×7
   a) Give the structure of the following:
   i) Glucose ii) Fructose
   iii) Maltose iv) Starch

   b) Explain the chemical properties of monosaccharide.
   c) Enlist disease related to carbohydrate metabolism. Describe any one of them. 2×7

3. Attempt any two:
   a) Classify enzymes with example.
   b) Discuss various factors affecting enzyme action.
   c) Explain the properties and specificity of enzymes.

4. Write note on any two: 2×7
   a) Kreb's cycle
   b) Glyconeolysis
   c) Urea cycle

5. Write note on any two: 2×7
   a) Water soluble vitamin
   b) Disorder of lipid metabolism
   c) Classification of amino acids

6. Attempt any two 2×7
   a) Explain the importance of Iron and potassium in human body.
   b) Give the identification test for proteins
   c) Write brief note on:
   i) Osazone formation
   ii) Molisch test

7. Attempt any two: 2×7
   a) Give the physiological role of erythrocytes in the body.
   b) How the following disease can be identified by analysing urine.
   c) Discuss the pathway of oxidation of lipids.

8. Attempt any two: 2×7
   a) Describe source, functions and deficiency disease of Vitamin E.
   b) Discuss the deficiency disease of the following:
   i) Iron
   ii) Iodine
   c) Discuss the importance of water metabolism in human being.