

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. Match the column. 10

Column A	Column B
i) RBCs	a) Denaturation of oils
ii) Rancidity	b) 4000-11000 cells/mm ³
iii) Wilson's Disease	c) 1,50,000-30,000 cells/mm ³
iv) WBCs	d) 4.5 - 5.5 millions/mm ³
v) Alkaptonuria	e) Copper
vi) Platelets	f) Defective metabolism of proteins
vii) Cholesterol	g) Deposition of lipids
viii) Atherosclerosis	h) Derived lipids
ix) Jaundice	i) Blood in urine
x) Hematuria	j) Bilirubin

2. Attempt any two 14

- a) Define and classify Carbohydrates. Write the properties of Carbohydrates.
- b) Give the structure of the following.
- i) Phenylalanine
 - ii) Tyrosine
 - iii) Cholesterol
 - iv) Glucose

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- c) Write note on any one
- i) Urea cycle
 - ii) β -oxidation of fatty acids
3. Attempt any two. 14
- a) Write two identification tests for the following
 - i) Proteins
 - ii) Lipids
 - iii) Disaccharides
 - b) Give the deficiency diseases/disorders for the following
 - i) Vitamin B₁
 - ii) Vitamin D
 - iii) Vitamin C
 - iv) Zinc
 - v) Copper
 - vi) Vitamin B₉
 - vii) Vitamin E
 - c) Give the biological importance of protein. Discuss essential and non essential amino acids.
4. Attempt any two. 14
- a) Define and classify enzymes. Discuss the mechanism of action of enzymes.
 - b) Give the pathological significance of lymphocytes.
 - c) Discuss Citric Acid cycle.
5. Attempt any two 14
- a) Discuss the role of potassium in human body.
 - b) Explain -
 - i) Edema
 - ii) Hyponatremia
 - iii) Group specificity
 - iv) Optical specificity

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Contd.....

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- c) Write note on
 - i) Glycogenesis
 - ii) Glycogenolysis

- 6. Attempt any two 14
 - a) Define vitamins and co-enzyme. Write in detail about two fat soluble or water soluble vitamin.
 - b) Explain the various factors affecting enzyme action.
 - c) Explain
 - i) Acid Value
 - ii) Saponification Value
 - iii) Polycythemia
 - iv) Sterility

- 7. Attempt any two 14
 - a) Discuss the abnormal constituents present in urine.
 - b) Write the role of minerals in the human life processes.
 - c) Give the physiological role of erythrocytes in the body.

- 8. Write short notes on. 14
 - i) Water Metabolism
 - ii) Disorders of lipid Metabolism
 - iii) Essential Amino acids



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