MO-602 Seat No._______
Diploma in Pharmacy (Part-I) Examination
May/June - 2003
Biochemistry & Clinical Pathology

Time : 3 Hours] [Total Marks : 80

Instructions : (1) Attempt any three questions from each section.
(2) Tie both the sections separately.
(3) Each question carries equal marks.

SECTION - I

1 (a) What are proteins ? Classify them. Write a note on quality protein.
(b) What are biological functions of protein ?
(c) Give qualitative tests for protein.

2 (a) Define and classify carbohydrates. Give chemical tests for monosaccharides.
(b) Explain the following :
(1) Heparin
(2) Mutarotation
(3) Starch
(4) Diabetes mellitus.

3 (a) What are lipids ? What are the functions of lipids in our body ?
(b) Give chemical tests for lipids.
(c) Write note on :
(1) Phospholipids
(2) Glycolipids
(3) Lipoproteins.

MO-602] 1 [Contd...
4 (a) Define the term vitamin and classify them.
   (b) Enumerate coenzyme forms of water soluble vitamins with their biochemical role.
   (c) Give biochemical functions of vitamin A and vitamin D.

5 (a) Enumerate the role of following minerals in our body:
   (1) Calcium
   (2) Iodine
   (3) Sodium
   (4) Zinc
   (5) Potassium.
   (b) Explain the properties of water.
   (c) Explain the following terms:
      (1) Osteomalacia
      (2) Goiter
      (3) Pellagra
      (iv) Beri-Beri.

SECTION - II

6 (a) How are proteins digested and absorbed?
   (b) Give the general metabolism of amino acids.
   (c) Outline urea formation and metabolic disorders.

7 (a) Explain the following terms:
      (i) gluconeogenesis
      (2) Glycolysis
      (3) Glycogenesis.
   (b) Discuss tricarboxylic acid cycle (Kreb cycle) and give its importance.
   (c) Write short notes on any two:
      (i) Glycogen storage disease
      (ii) Genetic disease
      (iii) Electron transport system.
8 (a) What are enzymes? Classify them giving suitable example for each class.
(b) Describe the factors affecting enzyme reaction.
(c) Write a note on enzyme inhibitors.

9 (a) Discuss beta-oxidation of unsaturated fatty acid.
(b) Enlist the abnormal constituents of urine and give their significance.
(c) Give the major functions of Platelets.

10 Write short notes on any four:
   (1) Optical isomerism
   (2) Glucose tolerance test
   (3) Role of Carnitine
   (4) Lipid storage disease
   (5) Insulin and its role
   (6) ATP.