

[LD 504]

NOVEMBER 2013

Sub. Code : 4055

**FIRST M.B.B.S. DEGREE EXAMINATION****PAPER V – BIOCHEMISTRY - I***Q. P. Code : 524055***Time : 180 Minutes****Maximum: 50 Marks**

Answer ALL questions

**I. Elaborate on:****(2 x 7.5 = 15)**

1. Describe the how bilirubin is formed and excreted in the body.
2. Describe the process by which ATP is synthesized in the body.

**II. Write notes on:****(10 x 2.5 = 25)**

1. Role of carnitine in beta-oxidation of fatty acids
2. Covalent modification of enzymes in regulation of enzyme activities
3. Lactose intolerance
4. What is the importance of the pentose phosphate pathway in the body?
5. Gluconeogenesis, with reference to definition, substrates, sites and importance in the Body.
6. Role of vitamin D in the body.
7. Causes of iron deficiency and manifestations of such deficiency (2 +3).
8. Isoenzymes, with reference to definition, examples and clinical importance.
9. Glycated haemoglobin, with reference to its formation, reference value in blood and its clinical importance.
10. Thiamine, with reference to its functions in the body, dietary sources and deficiency manifestations.

**III. Short Answers on:****(10 x 1 = 10)**

1. List the vitamins that are required for the functioning of the citric acid cycle.
2. Give 2 examples of drugs that act as inhibitors of enzyme and name the enzyme that each one inhibits.
3. What is the function of mitochondria in a cell?
4. What is the mechanism of action of statins? What is the therapeutic use of this group of drugs?
5. List 2 dietary sources and 2 biochemical functions of vitamin C in the body.
6. Explain the mechanism of action of cyanide as a poison.
7. List 2 good dietary sources of iodine. What is the function of this mineral in the body?
8. Enzyme defect and commonest clinical feature in von Gierke's disease?
9. What is meant by glycaemic index of food?
10. List 2 differences between marasmus and kwashiorkor?