

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharm. – SEMESTER – III • EXAMINATION – SUMMER • 2014

Subject Code: 2230003

Date: 07-06-2014

Subject Name: Pharmaceutical Chemistry - III

Time: 02:30 pm - 05:30 pm

Total Marks: 80

Instructions:

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Explain in detail transport mechanism across cell membrane. (6)
- (b) Define and classify carbohydrates. Discuss biochemical importance of monosaccharides in detail. (5)
- (c) Write an account of classification of Lipids with suitable examples. Explain functions of phospholipids in detail. (5)
- Q.2** (a) Discuss glycolysis with energetics. (6)
- (b) Discuss importance of Cori cycle. (5)
- (c) Write a note on citric acid cycle explaining its amphibolic nature. (5)
- Q.3** (a) Explain glycogenolysis with metabolic reaction. (6)
- (b) Describe role of hormones in blood glucose homeostasis. (5)
- (c) Explain β - oxidation of fatty acids with its energetics. (5)
- Q.4** (a) Discuss ketogenesis with reactions. Explain significance of ketogenesis. Add note on demerits caused due to overproduction of ketone bodies. (6)
- (b) Write a note on cholesterol metabolism. (5)
- (c) Write a note on enzyme inhibition. (5)
- Q.5** (a) Define enzyme and isoenzymes. explain significance of isozymes in clinical diagnosis. (6)
- (b) Classify enzymes with examples. (5)
- (c) Discuss pentose phosphate pathway. (5)
- Q.6** (a) What are vitamins? Classify them. Explain briefly functions of Fat soluble vitamins. (6)
- (b) Explain α (alpha)- oxidation and ω (omega)- oxidation of fatty acid in detail. (5)
- (c) Explain glycogenesis in detail. (5)
- Q.7** (a) Write a note on water and mineral metabolism. (6)
- (b) Explain galactose metabolism in the body. (5)
- (c) Write short note on (5)
1. Essential fatty acid
 2. Lipoproteins
