

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharm. – SEMESTER – III • EXAMINATION – WINTER • 2015

Subject Code: 2230003

Date: 04-01-2016

Subject Name: Pharmaceutical Chemistry – III (Biochemistry - I)

Time: 10:30 am - 01:30 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)** What are carbohydrates? Give classification of carbohydrates with examples. Describe in brief chemical reactions of monosaccharides. **06**
- (b)** Write a note on Phospholipids. **05**
- (c)** Enumerate various cell organelles and discuss about mitochondria. **05**
- Q.2 (a)** Define lipids. Classify them and add note on Triacylglycerides. **06**
- (b)** Explain the various parameters measured to check the purity of fats and oils. **05**
- (c)** Discuss the process of active transport across cell membrane. **05**
- Q.3 (a)** Discuss HMP Shunt. **06**
- (b)** Define following terminology.
(I) Glycolysis (II) Gluconeogenesis (III) Mutarotation (IV) Epimers
(V) Anomers **05**
- (c)** Write a note on role of hormones in maintenance of blood glucose blood sugar level. **05**
- Q.4 (a)** Classify enzymes based on type of reactions they catalyze with relevant Examples. Explain clinical significance of Enzymes. **06**
- (b)** Explain mechanism of Enzyme action. **05**
- (c)** Explain Vitamines as Co-Enzymes and their Significance. **05**
- Q.5 (a)** Explain TCA cycle. Why it's amphibolic in nature? **06**
- (b)** How is Galactose metabolized in our body? **05**
- (c)** Differentiate Saturated and Unsaturated fatty acids. **05**
- Q.6 (a)** Explain Cholesterol biosynthesis. **06**
- (b)** Discuss in brief the factors affecting enzyme action. **05**
- (c)** Explain reactions and utilizations of ketonbodies. **05**
- Q.7 (a)** Discuss β -oxidation of fatty acids. **06**
- (b)** Discuss aerobic glycolysis with energetics. **05**
- (c)** Write a note on Iso-enzymes. **05**
