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 boiosynthesis. **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**

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