Seat No.: _____ Enrolment No._____

# GUJARAT TECHNOLOGICAL UNIVERSITY

**B. Pharm. – SEMESTER – VI • EXAMINATION – WINTER 2013**

**Subject Code: 260003** **Date: 02-12-2013**

**Subject Name: Pharmaceutical Chemistry-VII (Biochemistry)**

**Time: 02.30 pm To 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.**

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|---|---|---|---|
| **Q.1** | (a) | Discuss in detail β – oxidation | **06** |
| | (b) | Explain in detail biosynthesis of cholesterol. | **05** |
| | (c) | Write a short note on ketogenesis. | **05** |
| **Q.2** | (a) | Explain in detail structural organization of respiratory chain | **06** |
| | (b) | Discuss in detail inhibitors of electron transport chain | **05** |
| | (c) | Write a note on enzymes involved in biological oxidation | **05** |
| **Q.3** | (a) | Discuss reactions of urea cycle. | **06** |
| | (b) | Describe metabolism of any one sulphur containing amino acid. Add a note on metabolic disorder of urea cycle. | **05** |
| | (c) | Discuss conversion of tyrosine to its specialized products | **05** |
| **Q.4** | (a) | Discuss in detail the de novo pathway for the synthesis of nucleotides | **06** |
| | (b) | Why is DNA replication said to be semi conservative? Discuss the experiment which provided proof of semi conservative replication | **05** |
| | (c) | Enlist and Discuss any two of the different DNA repair systems of E.Coli | **05** |
| **Q.5** | (a) | What is Translation? Discuss the different steps involved in it. | **06** |
| | (b) | Discuss in detail the first model of gene regulation studied on E. Coli | **05** |
| | (c) | Write Short Notes: (i) t-RNA (ii) Polymerase Chain Reaction | **05** |
| **Q. 6** | (a) | Give a detailed account of metabolism of iron | **06** |
| | (b) | Discuss the factors affecting electrophoretic separation | **05** |
| | (c) | Write a note on detection of sample after electrophoresis. | **05** |
| **Q.7** | (a) | Discuss in detail biosynthesis of fatty acids. | **06** |
| | (b) | Describe metabolismof α – amino butyrate | **05** |
| | (c) | Write an explanatory note on catabolism of amino acids. | **05** |

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