

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B Pharm Sem-VI Examination May 2011

Subject code: 260003

Subject Name: Pharmaceutical chemistry-VII (Biochemistry)

Date: 19/05/2011

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.**

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|-------------|-----|---|-----------|
| Q.1 | (a) | Write a note on electron transport chain and its inhibitors. | 06 |
| | (b) | Explain biosynthesis of cholesterol. | 05 |
| | (c) | Write a note on β -oxidation of fatty acids with energetics. Correlate it with metabolic water production. | 05 |
| Q.2 | (a) | Define oxidative phosphorylation. Discuss chemiosmotic hypothesis in detail. | 06 |
| | (b) | Write a note on post transcriptional modifications. | 05 |
| | (c) | Classify enzymes involved in biological oxidations. Discuss them with examples. | 05 |
| Q.3 | (a) | Write in detail about the process of replication of DNA. | 06 |
| | (b) | Discuss biochemical role and deficiency symptoms of calcium. | 05 |
| | (c) | Explain fully the operon concept. | 05 |
| Q.4 | (a) | Explain about transport and toxicity of ammonia in humans. | 06 |
| | (b) | Write about utilization of methionine. | 05 |
| | (c) | Write about distribution of water in humans. Add a note on water balance. | 05 |
| Q.5 | (a) | Enumerate amino acids participating in purine nucleotides bio-synthesis. Elaborate steps involved in it. | 06 |
| | (b) | Discuss bio-synthesis of heme. | 05 |
| | (c) | Write a note on chromatography. | 05 |
| Q. 6 | (a) | What is polymerase chain reaction? Write its significance. | 06 |
| | (b) | Explain initiation process of protein synthesis. Add a note on various inhibitors for protein synthesis. | 05 |
| | (c) | Define following terms.
1. Genetic code 2. Nucleotide 3. Reverse transcription
4. Glycogenic amino acids 5. Centrifugation | 05 |
| Q.7 | (a) | Write a note on bio-synthesis of fatty acids. | 06 |
| | (b) | Write about bio-synthesis and utilization of ketone bodies. | 05 |
| | (c) | Discuss urea cycle along with disorders associated with it. | 05 |
