

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B. Pharm. – SEMESTER – I • EXAMINATION – SUMMER • 2014

Subject Code: 2240003

Date: 27-05-2014

Subject Name: Pharmaceutical Chemistry – V (Biochemistry – II)

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.**

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|-------------|--|-----------|
| Q.1 | (a) Write a detail note on structure of protein. | 06 |
| | (b) Explain properties of amino acids. | 05 |
| | (c) Describe structure of DNA. | 05 |
| Q.2 | (a) Describe porphyrin biosynthesis and write a note on different types of hyperbilirubinemias. | 06 |
| | (b) Discuss reactions of urea cycle. | 05 |
| | (c) Write about utilization of methionine. | 05 |
| Q.3 | (a) Write in detail about the process of replication of DNA. | 06 |
| | (b) Discuss about Transcription process. | 05 |
| | (c) Write note on DNA repair mechanisms. | 05 |
| Q.4 | (a) Explain initiation process of protein synthesis. Add a note on various inhibitors for protein synthesis. | 06 |
| | (b) Write a short note on Genetic code. | 05 |
| | (c) Describe polymerase chain reaction. | 05 |
| Q.5 | (a) Define oxidative phosphorylation. Discuss chemiosmotic hypothesis in detail. | 06 |
| | (b) Write in detail about enzymes involved in biological oxidation. | 05 |
| | (c) Describe different enzymes and coenzymes involved in biological oxidation and reduction reactions. | 05 |
| Q. 6 | (a) Discuss in detail about purine biosynthesis. | 06 |
| | (b) Write a short note on RNA. | 05 |
| | (c) Discuss about respiratory chain with its role as energetic. | 05 |
| Q.7 | (a) Write a note on gene expression in eukaryotes. | 06 |
| | (b) Define bioenergetics and discuss concept of free energy. | 05 |
| | (c) Write in detail about different chromatographic techniques with their importance in biochemistry. | 05 |
