

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM - SEMESTER- 4 EXAMINATION – SUMMER -2019

Subject Code: 2240003

Date: 17-05-2019

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

Time: 10:30 AM TO 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) Define and classify amino acids with examples. | 06 |
| | (b) Define and classify proteins by several ways with examples. | 05 |
| | (c) Discuss primary and secondary structure of protein. | 05 |
| Q.2 | (a) Explain with diagram structure of DNA. | 06 |
| | (b) Write a note on nitrogen balance. | 05 |
| | (c) Explain transamination and deamination reactions of amino acids. | 05 |
| Q.3 | (a) Explain steps of urea cycle with its metabolic disorders. | 06 |
| | (b) Discuss biosynthesis of purine nucleotides. | 05 |
| | (c) Write a note on inhibitors of respiratory chain and oxidative phosphorylation. | 05 |
| Q.4 | (a) Explain steps involved in biosynthesis of heme. Add a note on jaundice. | 06 |
| | (b) Define genetic code. Write its characteristics. What is non sense codons. | 05 |
| | (c) Enumerate various chromatographic techniques. Discuss any one of them. | 05 |
| Q.5 | (a) Explain the process of DNA replication in prokaryotes. | 06 |
| | (b) Explain mechanisms for repair of DNA. | 05 |
| | (c) Enumerate sulphur containing amino acids with structures. Write about metabolism of methionine. | 05 |
| Q. 6 | (a) Define translation. Write about initiation of translation. | 06 |
| | (b) Explain the concept of Lac operon with suitable diagram. | 05 |
| | (c) Define bioenergetics. Write about high energy compounds. | 05 |
| Q.7 | (a) Explain electron transport chain. | 06 |
| | (b) Explain chemiosmotic hypothesis of oxidative phosphorylation. | 05 |
| | (c) Write about enzymes and coenzymes involved in biological oxidation. | 05 |
