

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Pharm– SEMESTER-IV EXAMINATION – WINTER -2021

Subject Code:2240003**Date: 19/02/2022****Subject Name: Pharmaceutical Chemistry – V (Biochemistry – II)****Time: 02:30pm to 05:30pm****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 amino acids and classify it and give their functions and properties. | 06 |
| | (b) Describe structure of protein. | 05 |
| | (c) Discuss in detail the de novo pathway for the synthesis of nucleotides. | 05 |
| Q.2 | (a) Explain urea cycle with its metabolic disorders. | 06 |
| | (b) Discuss biosynthesis of heme. (prophyrin) | 05 |
| | (c) Write Short note on metabolism of sulphur containing amino acids, | 05 |
| Q.3 | (a) Write short note on DNA replication in E-coli. | 06 |
| | (b) Write short note on DNA damage. | 05 |
| | (c) Short note on DNA repair. | 05 |
| Q.4 | (a) Write note on Genetic code | 06 |
| | (b) Write note on polymerase chain reactions | 05 |
| | (c) Discuss account of genetic engineering | 05 |
| Q.5 | (a) Discuss in detail the first model of gene regulation studied on E-coli. | 06 |
| | (b) Discuss gene expression in eucaryotes in detail. | 05 |
| | (c) Write short note on structure of DNA. | 05 |
| Q. 6 | (a) Explain Southern Blotting technique as a tool of analysis in biochemistry. | 06 |
| | (b) Write a note on different chromatographic techniques used in biochemistry. | 05 |
| | (c) Write note on electrophoresis | 05 |
| Q.7 | (a) Discuss about Respiratory chain with its role as energetic and discuss respiratory chain inhibitors. | 06 |
| | (b) Explain mechanism of oxidative phosphorylation. | 05 |
| | (c) Explain with suitable example about different enzyme and co-enzyme involved in biological oxidation. | 05 |