

**GUJARAT TECHNOLOGICAL UNIVERSITY****B. Pharm - SEMESTER-IV EXAMINATION – WINTER - 2016****Subject Code: 2240003****Date: 26/10/2016****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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|-------------|--------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>Q.1</b>  | (a) Draw the Krebs-Henseleit cycle and enlist disorders of the cycle.                                                                | <b>06</b> |
|             | (b) Explain Southern Blotting technique as a tool of analysis in Biochemistry.                                                       | <b>05</b> |
|             | (c) Define Protein and classify proteins based on chemical nature.                                                                   | <b>05</b> |
| <b>Q.2</b>  | (a) Explain metabolism of Methionine.                                                                                                | <b>06</b> |
|             | (b) Draw well labeled diagram of Replication and explain role of different DNA Polymerase enzymes in replication of eukaryotic cell. | <b>05</b> |
|             | (c) Define genetic code, Explain its characteristics.                                                                                | <b>05</b> |
| <b>Q.3</b>  | (a) Explain about enzymes involved in Biological oxidation.                                                                          | <b>06</b> |
|             | (b) Explain any two mechanism of Oxidative phosphorylation.                                                                          | <b>05</b> |
|             | (c) Explain Electrophoresis as a tool of Biochemistry.                                                                               | <b>05</b> |
| <b>Q.4</b>  | (a) Write a note on mutation and its consequences.                                                                                   | <b>06</b> |
|             | (b) Write a note on post transcriptional modifications.                                                                              | <b>05</b> |
|             | (c) Enlist the salient feature of transamination in amino acid metabolism.                                                           | <b>05</b> |
| <b>Q.5</b>  | (a) Explain in brief with diagram about Polymerase chain reaction.                                                                   | <b>06</b> |
|             | (b) Explain about excision-repair of DNA.                                                                                            | <b>05</b> |
|             | (c) Write application of genetic engineering.                                                                                        | <b>05</b> |
| <b>Q. 6</b> | (a) Explain Lactose metabolism in <i>E. coli</i> .                                                                                   | <b>06</b> |
|             | (b) Write in detail about structure of protein.                                                                                      | <b>05</b> |
|             | (c) Explain the characteristics of amino acid.                                                                                       | <b>05</b> |
| <b>Q.7</b>  | (a) Define Bioenergetics and explain ATP as most important high energy compound.                                                     | <b>06</b> |
|             | (b) Explain synthesis of Inosine monophosphate in liver.                                                                             | <b>05</b> |
|             | (c) Explain inhibitors of oxidative phosphorylation.                                                                                 | <b>05</b> |

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