

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B. Pharm. - SEMESTER-III • EXAMINATION – WINTER -2021**

**Subject Code: BP303TP**

**Date: 19/02/2022**

**Subject Name: BIOCHEMISTRY**

**Time: 10:30AM to 01:30PM**

**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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|-------------|---|-----------|
| <b>Q.1</b>  | (a) Write down electron transport chain and its mechanism.                            | <b>06</b> |
|             | (b) Write about formation and utilization of ketone bodies.                           | <b>05</b> |
|             | (c) Write down therapeutic and diagnostic applications of enzymes.                    | <b>05</b> |
| <b>Q.2</b>  | (a) Define Carbohydrate. Discuss Classification and biological roles of Carbohydrate. | <b>06</b> |
|             | (b) Write down biological significances of steroidal hormones.                        | <b>05</b> |
|             | (c) Write down biological significances of ATP and cAMP.                              | <b>05</b> |
| <b>Q.3</b>  | (a) Write a note on HMP shunt and its significances.                                  | <b>06</b> |
|             | (b) Write down biosynthesis and Catabolism of Purine nucleotide.                      | <b>05</b> |
|             | (c) Write about enzyme inhibitors with suitable examples.                             | <b>05</b> |
| <b>Q.4</b>  | (a) Write about concept of free energy. Discuss endergonic and exergonic reaction.    | <b>06</b> |
|             | (b) Define Lipids. Write down biological importance of lipids.                        | <b>05</b> |
|             | (c) Explain structure of DNA and RNA.   | <b>05</b> |
| <b>Q.5</b>  | (a) Discuss synthesis and significances of Dopamine, Noradrenalin and Adrenalin.      | <b>06</b> |
|             | (b) Write about $\beta$ -Oxidation of saturated fatty acid.                           | <b>05</b> |
|             | (c) Write down various steps in protein synthesis.                                    | <b>05</b> |
| <b>Q. 6</b> | (a) Define Enzymes. Write down properties and IUB classifications of enzymes.         | <b>06</b> |
|             | (b) Explain about Hyperuricemia and Gout diseases.                                    | <b>05</b> |
|             | (c) Define gluconeogenesis. Discuss its pathway and significance                      | <b>05</b> |
| <b>Q.7</b>  | (a) Write about various disorders of lipid metabolisms.                               | <b>06</b> |
|             | (b) Write a note on catabolism of heme.   | <b>05</b> |
|             | (c) Discuss structre and biochemical functions of Co-enzymes.                         | <b>05</b> |

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