

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.PHARM - SEMESTER- 3 EXAMINATION – SUMMER -2019**

**Subject Code: 2230003****Date: 28-05-2019****Subject Name: Pharmaceutical Chemistry-III (Biochemistry – I)****Time: 02:30 PM TO 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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|-------------|--|-----------|
| <b>Q.1</b>  | (a) Define Carbohydrates. Classify it with example and structure.                      | <b>06</b> |
|             | (b) Write a note on role of Hormones in maintenance of Blood sugar level.              | <b>05</b> |
|             | (c) Define Gluconeogenesis and write a note on Gluconeogenesis.                        | <b>05</b> |
| <b>Q.2</b>  | (a) Explain the $\beta$ -Oxidation of Fatty acids with energetics.                     | <b>06</b> |
|             | (b) What is Glycolysis? Discuss the Anaerobic Glycolysis with reaction and energetics. | <b>05</b> |
|             | (c) Discuss the transport mechanism across the cell membrane                           | <b>05</b> |
| <b>Q.3</b>  | (a) What are Phospholipids? Classify it and give the function of Phospholipid          | <b>06</b> |
|             | (b) Define Co-enzyme and Discuss Vit-B <sub>1</sub> as a Coenzyme                      | <b>05</b> |
|             | (c) Write a note on Mineral Metabolism.  | <b>05</b> |
| <b>Q.4</b>  | (a) Explain TCA Cycle with reaction and energetics.                                    | <b>06</b> |
|             | (b) Write a note on Biosynthesis and Utilization of Ketone bodies                      | <b>05</b> |
|             | (c) Discuss the Nomenclature and Enzyme Kinetics.                                      | <b>05</b> |
| <b>Q.5</b>  | (a) Discuss the HMP Shunt with it significant.   | <b>06</b> |
|             | (b) Write a note on Glyoxalic acid cycle.  | <b>05</b> |
|             | (c) Discuss the Bio-synthesis of Cholesterol.  | <b>05</b> |
| <b>Q. 6</b> | (a) Explain the Bio-synthesis of Fatty acid.   | <b>06</b> |
|             | (b) Define the Isoenzyme and give its clinical significance.                           | <b>05</b> |
|             | (c) Discuss the Amphibolic role of TCA Cycle   | <b>05</b> |
| <b>Q.7</b>  | (a) Discuss the Mechanism of Enzyme Inhibition.  | <b>06</b> |
|             | (b) Classify the Enzyme with example.  | <b>05</b> |
|             | (c) Discuss the metabolism of Galactose  | <b>05</b> |

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