

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

**Subject Code: 2230003****Date: 14-11-2019****Subject Name: Pharmaceutical Chemistry-III (Biochemistry – I)****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) Enumerate various cell organelles and discuss about mitochondria.                                   | <b>06</b> |
|             | (b) Write a note on polysaccharide.   | <b>05</b> |
|             | (c) Write principle of (a) Molisch 's test (b) Osazone Test.  | <b>05</b> |
| <b>Q.2</b>  | (a) Write a note on Embden –Meyerhof pathway and write salient features of it.                          | <b>06</b> |
|             | (b) Discuss TCA cycle. How many molecule of ATP are produce in the cycle?                               | <b>05</b> |
|             | (c) Write a note on role of hormones in maintenance of blood sugar level.                               | <b>05</b> |
| <b>Q.3</b>  | (a) Give an account of pentose phosphate pathway and mention its importance.                            | <b>06</b> |
|             | (b) Write a note on glycogenolysis.   | <b>05</b> |
|             | (c) Define gluconeogenesis. Discuss cori's cycle.   | <b>05</b> |
| <b>Q.4</b>  | (a) Define phospholipids. Classify them and write the functions of phospholipids.                       | <b>06</b> |
|             | (b) Write a note on utilization of ketone bodies.   | <b>05</b> |
|             | (c) Write a note on lipid storage diseases.   | <b>05</b> |
| <b>Q.5</b>  | (a) Write a note on triglycerides   | <b>06</b> |
|             | (b) Write note on fattyacid oxidation and explain $\beta$ -oxidation on detail.                         | <b>05</b> |
|             | (c) What are fatty acids? Explain the various parameters measured to check the purity of fats and oils. | <b>05</b> |
| <b>Q. 6</b> | (a) Write a note on enzyme kinetics   | <b>06</b> |
|             | (b) Write a note on enzyme inhibition.  | <b>05</b> |
|             | (c) Classify enzyme with examples.  | <b>05</b> |
| <b>Q.7</b>  | (a) What is bioenergetics? Discuss their biochemical importance.  | <b>06</b> |
|             | (b) Short note on water and mineral metabolism.   | <b>05</b> |
|             | (c) Explain metals as co-enzyme and their Significance.   | <b>05</b> |
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