

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Pharm. - SEMESTER-III • EXAMINATION – SUMMER 2017

Subject Code: 2230003**Date: 02/06/2017****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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| Q.1 | (a) Enlist unsaturated fatty acids and discuss oxidation of omega-3 fatty acid. | 06 |
| | (b) Discuss role of hormones in maintenance of blood sugar level. | 05 |
| | (c) Discuss water and mineral metabolism. | 05 |
| Q.2 | (a) Write a note on polysaccharide. | 06 |
| | (b) Explain role of metal as a coenzyme. | 05 |
| | (c) Write a note on lipoproteins | 05 |
| Q.3 | (a) Discuss in detail pentose phosphate pathway. | 06 |
| | (b) Discuss amphibolic nature of citric acid cycle. | 05 |
| | (c) Write a note on phospholipid and glycolipid. | 05 |
| Q.4 | (a) Explain lipoprotein metabolism. | 06 |
| | (b) Explain β -oxidation of fatty acid. | 05 |
| | (c) Write a note on cholesterol biosynthesis. | 05 |
| Q.5 | (a) Explain glycolysis with bioenergetics. | 06 |
| | (b) Explain mechanism of enzyme action. | 05 |
| | (c) Explain transport mechanism across the cell membrane. | 05 |
| Q. 6 | (a) Explain the properties and identification tests of carbohydrate. | 06 |
| | (b) Write a note on regulation of enzyme activities. | 05 |
| | (c) Discuss a citric acid cycle with bioenergetics. | 05 |
| Q.7 | (a) Define vitamin and discuss coenzyme activities of vitamin B ₁ or B ₆ . | 06 |
| | (b) Write a note on galactose and fructose. | 05 |
| | (c) Define the following terms: 1) gluconeogenesis 2) glycogenolysis 3) glycogenesis 4) isoenzyme and 5) lipid | 05 |
