

GUJARAT TECHNOLOGICAL UNIVERSITY

B.PHARM – SEMESTER – V • EXAMINATION – WINTER – 2015

Subject Code: 250003

Date: 10/12/2015

Subject Name: Pharmaceutical Chemistry – V (Biochemistry)

Time: 10.30 AM to 1.30 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) Describe α -helical structure of protein. | 06 |
| | (b) Write a note on Natural Fat. | 05 |
| | (c) Give an account of chemical tests of carbohydrates. | 05 |
| Q.2 | (a) Define bioenergetics. Discuss concept of free energy. | 06 |
| | (b) Discuss Transport of macromolecules across the biological membranes. | 05 |
| | (c) Define oxidative phosphorylation. Discuss chemiosmotic hypothesis in detail. | 05 |
| Q.3 | (a) Classify enzymes on the basis of the type of reactions they catalyze with relevant examples. | 06 |
| | (b) Write a detailed note on iso-enzymes. | 05 |
| | (c) Give an account on mechanism of enzyme action. | 05 |
| Q.4 | (a) Explain about amphibolic nature of citric acid cycle. | 06 |
| | (b) Discuss aerobic glycolysis with energetics. | 05 |
| | (c) Write a note on glycogen storage disease. | 05 |
| Q.5 | (a) Discuss the edman's techniques for determination of sequence of amino acids. | 06 |
| | (b) Classify the Lipids. Give the functions of Lipids. | 05 |
| | (c) What are fatty acids? Explain the various parameters measured to check the purity of fats and oils. | 05 |
| Q. 6 | (a) Enumerate vitamins used as coenzymes. Discuss any two of them. | 06 |
| | (b) Describe the role of hormones in maintenance of blood sugar level. | 05 |
| | (c) Explain role of metals as coenzymes. | 05 |
| Q.7 | (a) Define gluconeogenesis. Discuss cori's cycle. | 06 |
| | (b) Discuss pentose phosphate pathway. | 05 |
| | (c) How is galactose and fructose metabolized in the body? | 05 |
