

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

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

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**DIPLOMA PHARMACY - SEMESTER-I • EXAMINATION-SUMMER • 2014**

**Subject Code: 410004**

**Date: 28-05-2014**

**Subject Name: Bio-Chemistry and Clinical Pathology**

**Time: 10:30 am - 01:30 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>  | <b>(a)</b> Define amino acid. Give its classification with example. Give brief account on properties of amino acids.      | <b>06</b> |
|             | <b>(b)</b> Define carbohydrates. Give detail classification of carbohydrates with example.                                | <b>05</b> |
|             | <b>(c)</b> Describe in brief biochemical functions of (1) proteins and (2) carbohydrates.                                 | <b>05</b> |
| <b>Q.2</b>  | <b>(a)</b> Write a detail note on factors affecting enzyme action.                                                        | <b>06</b> |
|             | <b>(b)</b> Define enzyme. Give properties and applications of enzyme.                                                     | <b>05</b> |
|             | <b>(c)</b> Explain mechanism of enzyme action.                                                                            | <b>05</b> |
| <b>Q.3</b>  | <b>(a)</b> Define vitamin. Classify vitamins with example. Give properties of vitamins.                                   | <b>06</b> |
|             | <b>(b)</b> Write in brief about chemistry, source, functions and deficiency of Vitamin A and Vitamin B <sub>1</sub>       | <b>05</b> |
|             | <b>(c)</b> What is coenzyme? Write in brief about the coenzymatic role of Vitamin B <sub>1</sub> & Vitamin B <sub>2</sub> | <b>05</b> |
| <b>Q.4</b>  | <b>(a)</b> Write a note on TCA cycle and its energetics.                                                                  | <b>06</b> |
|             | <b>(b)</b> Outline the steps involved in Urea cycle along with associated metabolic disorders.                            | <b>05</b> |
|             | <b>(c)</b> $\beta$ - Oxidation of fatty acids                                                                             | <b>05</b> |
| <b>Q.5</b>  | <b>(a)</b> Write a note on Glycolysis.                                                                                    | <b>06</b> |
|             | <b>(b)</b> Describe qualitative color reactions for carbohydrates and proteins.                                           | <b>05</b> |
|             | <b>(c)</b> What is Biochemistry? Describe its importance in Pharmacy.                                                     | <b>05</b> |
| <b>Q. 6</b> | <b>(a)</b> Enlist various normal and abnormal constituents of urine and give its clinical significance.                   | <b>06</b> |
|             | <b>(b)</b> Describe functions of blood. Give pathology of RBC and type of anemia.                                         | <b>05</b> |
|             | <b>(c)</b> Give classification and biological functions of lipid.                                                         | <b>05</b> |
| <b>Q.7</b>  | <b>(a)</b> Define fatty acids. Give its classification. Describe biological importance of fatty acids.                    | <b>06</b> |
|             | <b>(b)</b> Describe properties, physiological functions, and metabolism of water.                                         | <b>05</b> |
|             | <b>(c)</b> Describe physiological functions and associated disease state for sodium, potassium and chloride.              | <b>05</b> |

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