

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

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

## GUJARAT TECHNOLOGICAL UNIVERSITY

M. Pharm. I<sup>ST</sup> Semester Examination – June- 2011

Subject code: 910201

Subject Name: Chemistry of Natural Products

Date: 24/06/2011

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.

|      |     |                                                                                          |    |
|------|-----|------------------------------------------------------------------------------------------|----|
| Q.1  | (a) | Define and classify carbohydrates.                                                       | 06 |
|      | (b) | Discuss the structure of lactose.                                                        | 05 |
|      | (c) | Write a note on pectins.                                                                 | 05 |
| Q.2  | (a) | What are polypeptides? Give the method of synthesis of polypeptide.                      | 06 |
|      | (b) | Define and classify amino acids. Discuss any three synthetic methods for amino acid.     | 05 |
|      | (c) | Discuss the chemistry of oxytocin.                                                       | 05 |
| Q.3  | (a) | What are alkaloids? Classify them. Give the general methods of degradation of alkaloids. | 08 |
|      | (b) | Prove the structure of morphine.                                                         | 08 |
| Q.4  | (a) | What are steroids? Discuss conformation of steroids.                                     | 08 |
|      | (b) | Discuss the chemistry of cholesterol.                                                    | 08 |
| Q.5  | (a) | What are anthocyanins? Discuss the structure of anthocyanins.                            | 08 |
|      | (b) | What are nucleic acids? Discuss the structure of DNA.                                    | 08 |
| Q. 6 | (a) | What are heterocyclic compounds? Give the synthesis and reactions of indole.             | 09 |
|      | (b) | What are diazines? Give preparation and properties of pyrimidines.                       | 07 |
| Q.7  |     | Write notes on:                                                                          | 16 |
|      | (a) | Cellulose.                                                                               |    |
|      | (b) | Insulin.                                                                                 |    |
|      | (c) | Vinca alkaloids.                                                                         |    |

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