

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

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

## GUJARAT TECHNOLOGICAL UNIVERSITY

M. Pharmacy Sem-I Regular / Remedial Examination January/February 2011

Subject code: 910201

Subject Name: Chemistry of Natural Products

Date: 03 /02 /2011

Time: 10.30 am – 01.30 pm

### Instructions:

Total Marks: 80

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) Define & Classify Carbohydrates. Discuss oxidation reaction OR osazone formation for monosaccharide.                              | <b>06</b> |
|             | (b) Discuss the structure elucidation for any one disaccharide you studied.   | <b>06</b> |
|             | (c) Write any one method of synthesis each for decreasing and increasing carbon in aldose series.                                     | <b>04</b> |
| <b>Q.2</b>  | (a) Define and Classify amino acids giving structure. Give any two method for synthesis of alpha amino acids.                         | <b>06</b> |
|             | (b) Discuss the method for structure determination of polypeptide.  | <b>06</b> |
|             | (c) Write a note on "Solid phase peptide synthesis".  | <b>04</b> |
| <b>Q.3</b>  | (a) Discuss in brief with mechanism Hantzsch Pyridine synthesis.  | <b>06</b> |
|             | (b) Give any two methods for synthesis of Pyrimidine, Pyrrole, Thiophene.   | <b>06</b> |
|             | (c) Give biological importance of heterocycles with example.  | <b>04</b> |
| <b>Q.4</b>  | (a) Define & Classify steroids. Discuss nomenclature and configuration of steroids.   | <b>08</b> |
|             | (b) Discuss the chemistry and structure of cholesterol.   | <b>08</b> |
| <b>Q.5</b>  | (a) Define and classify alkaloids. Give general method for structural elucidation of alkaloids.                                       | <b>08</b> |
|             | (b) Discuss the chemistry & structure of morphine.  | <b>08</b> |
| <b>Q. 6</b> | (a) What do you mean by anthocyanins? Give its example, functions and isolation. Discuss the structure determination of anthocyanins. | <b>10</b> |
|             | (b) Write a short note on nucleic acids.  | <b>06</b> |
| <b>Q.7</b>  | Answer the following as directed (Attempt any four question)  | <b>16</b> |
|             | (a) Discuss the structure of Proteins.  |           |
|             | (b) Write a note on Starch.   |           |
|             | (c) Write a note on Lignin & Pectin   |           |
|             | (d) Discuss with reaction mechanism "Fischer indole synthesis"  |           |
|             | (e) Give the general chemical reactions for Furan & Thiophene.  |           |

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