

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. Pharm. - SEMESTER - I • EXAMINATION – SUMMER-2016

Subject Code: 910201

Date: 30/05/2016

Subject Name: Chemistry of Natural Products

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) | Discuss stereochemistry of steroids and SAR of glucocorticoids. | 08 |
| | (b) | What are steroids? Discuss the chemistry of cholesterol. | 08 |
| Q.2 | (a) | What are heterocyclic compounds? Give method of synthesis and reactions of Imidazole and pyrimidine. | 08 |
| | (b) | Give following synthesis with reaction mechanism: | 08 |
| | | 1. Skraup synthesis | |
| | | 2. Hantzsch pyridine synthesis | |
| | | 3. Fischer-Indole synthesis | |
| Q.3 | (a) | What are carbohydrates? Classify them with examples. | 06 |
| | (b) | Write a note on lignin and pectin. | 05 |
| | (c) | Discuss the structure of sucrose. | 05 |
| Q.4 | (a) | Define flavones and flavanoids? Give biological importance of flavones and flavanoids. | 06 |
| | (b) | What are alkaloids? Classify them with suitable examples. | 05 |
| | (c) | Discuss the Chemistry of morphine. | 05 |
| Q.5 | (a) | What are purines? Give brief account of purine and pyrimidine bases. | 06 |
| | (b) | What is nucleic acid? Give the structure and function of RNA. | 05 |
| | (c) | Define polypeptides? Give the methods of synthesis of polypeptide. | 05 |
| Q. 6 | (a) | Define and classify proteins. Discuss the structure of proteins. | 06 |
| | (b) | Define and classify amino acids. Discuss any two synthesis methods of amino acid. | 05 |
| | (c) | Write a note on “Solid phase peptide synthesis” | 05 |
| Q.7 | (a) | What are anthocyanins? Discuss general methods for the synthesis of anthocyanins. | 06 |
| | (b) | Write a short note on Vinca alkaloids | 05 |
| | (c) | Discuss the structure and chemistry of oxytocin | 05 |
