

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. Pharm. – SEMESTER – I • EXAMINATION – WINTER • 2014

Subject Code: 910201

Date: 09-01-2015

Subject Name: Chemistry of Natural Products

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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|------------|---|-----------|
| Q.1 | (a) Discuss the structure determination of morphine. | 06 |
| | (b) Define and classify alkaloids with examples. | 05 |
| | (c) Discuss tertiary and quaternary structure of the proteins. | 05 |
| Q.2 | (a) Define and explain epimers and anomers of glucose. | 06 |
| | (b) Prove the structure of uric acid. | 05 |
| | (c) Discuss hantzsch pyridine synthesis with mechanism. | 05 |
| Q.3 | (a) Discuss general methods for the degradation of alkaloids. | 06 |
| | (b) Enlist the various methods to convert an aldose into the next higher aldose and describe any two. | 05 |
| | (c) Discuss structure elucidation of sucrose. | 05 |
| Q.4 | (a) What is a nucleic acid? Describe structure and function of DNA. | 06 |
| | (b) Discuss stereochemistry of steroids and chemistry of aldosterone. | 05 |
| | (c) What is an amino acid? Write any three methods for the synthesis of amino acids. | 05 |
| Q.5 | (a) What are flavones and flavanoids? Discuss biological importance of flavones and flavanoids. | 06 |
| | (b) How ring size of sugars is determined? | 05 |
| | (c) Write about carboxyl end degradation of polypeptides for structure determination. | 05 |
| Q.6 | (a) Write general chemical reactions of Thiophene and furan. | 06 |
| | (b) Write general methods of synthesis and reactions of pyrimidine. | 05 |
| | (c) Discuss any two methods for the synthesis of indole ring. | 05 |
| Q.7 | (a) Discuss chemistry of insulin. | 06 |
| | (b) Write any two methods of synthesis of pyrrole in detail. | 05 |
| | (c) Write various reactions of isoquinoline. | 05 |
