

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. Pharmacy Sem-I Examination January 2010

Subject code: 910201

Subject Name: Chemistry of Natural Products

Date: 30 / 01 / 2010

Time: 12.00 – 3.00 pm

Instructions:

Total Marks: 80

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** Answer the following questions
- (a) Define and classify carbohydrate. Elucidate the structure of fructose **06**
 - (b) How will you convert aldose to ketose and vice versa. **05**
 - (c) Write two methods of synthesis for increasing carbon number in carbohydrate **05**
- Q.2** Answer the following questions
- (a) Write a brief note on solid phase synthesis of polypeptide. **06**
 - (b) Define and classify proteins. Add a note on structure of proteins. **05**
 - (c) Give chemistry and biological activity of Oxytocin. **05**
- Q.3** Answer the following questions
- (a) Define alkaloid. Give general methods for structure elucidation of alkaloids. **06**
 - (b) Discuss the structure of morphine. **05**
 - (c) Write a brief note on Podophyllum alkaloid. **05**
- Q.4** Answer the following questions
- (a) What are steroid? Write a note on nomenclature and configuration of steroids. **06**
 - (b) Discuss chemistry of Cholesterol. **05**
 - (c) Write a note on medicinal importance of peptides. **05**
- Q.5** Answer the following questions
- (a) Write general method for synthesis of flavones, isoflavones and flavonoids. **06**
 - (b) Explain Hantzsch pyridine synthesis with mechanism. **05**
 - (c) Write short note on Lignin and Pectines. **05**
- Q. 6** Answer the following questions
- (a) What are purines? Prove the structure of uric acid. **06**
 - (b) Discuss the attachment of sugar and phosphate in nucleotide. **05**
 - (c) Write a note on angiotensin. **05**
- Q.7** Answer the following questions
- (a) Give general method of synthesis and reaction of imidazole and pyrimidine. **06**
 - (b) Write a note on biological importance of heterocycles. **05**
 - (c) Give two methods each for synthesis of thiophene and indole **05**
