

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY**M. Ph. - SEMESTER-I • EXAMINATION – SUMMER -2018****Subject Code: MPC104T****Date: 09/05/2018****Subject Name: Chemistry of Natural Products****Time: 02:30PM TO 05:30PM****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) Discuss in detail the general methods for degradation of alkaloids. **06**
(b) Discuss the chemistry of morphine. **05**
(c) Write note on epimerization. **05**
- Q.2** (a) What are anthocyanins? Discuss general methods for the synthesis of Anthocyanins. **06**
(b) Discuss the chemistry of cholesterol. **05**
(c) Write note on Vitamin B1. **05**
- Q.3** (a) What are purines? Give the general method of synthesis of purine. **06**
(b) Discuss the structure of DNA. **05**
(c) Give the synthesis of pyridine and indole. **05**
- Q.4** (a) What are alkaloids? Classify them with example. Discuss steps involved in determination of molecular structure of alkaloids. **06**
(b) Write a note on cortisone. **05**
(c) Give SAR of glucocorticoids. **05**
- Q.5** (a) What are steroids? Discuss nomenclature and stereochemistry of steroids. **06**
(b) Discuss Paclitaxel as the lead molecule for the anticancer drug. **05**
(c) Discuss the structure elucidation of ephedrine. **05**
- Q. 6** (a) Discuss the detail structural characterization of digitalis glycosides. **06**
(b) Discuss the nomenclature and stereochemistry of progesterone. **05**
(c) Write a note on hybridoma technology. **05**
- Q.7** (a) What is isoprene rule? Discuss general methods of structural elucidation of terpenoids. **06**
(b) Discuss in detail about principles of RNA & DNA estimations. **05**
(c) Discuss the role of ¹³CNMR in the structural characterization of natural compounds. **05**
