

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

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

**GUJARAT TECHNOLOGICAL UNIVERSITY**

**M. Pharm. – SEMESTER – I • EXAMINATION – WINTER 2013**

**Subject Code: 910105**

**Date: 23-12-2013**

**Subject Name: Chemistry of Medicinal 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.**

- Q.1** (a) Define and classify alkaloids. Write down their general properties, isolation methods and identification tests. **06**
- (b) Write down structure elucidation of camptothecin and vincristine. **05**
- (c) Explain the acetate mevalonate pathway in detail. **05**
- Q.2** (a) Define and classify glycosides. Give their general distribution in plants, isolation method and identification tests. **06**
- (b) Write in detail stereochemistry, structure elucidation and biological activity of glycyrrhetic acid. **05**
- (c) Write down isolation and structure elucidation of calanolides **05**
- Q.3** (a) Give structure elucidation and importance of taxol and podophyllotoxin. **06**
- (b) Define and classify resins and terpenoids. Write down their general properties, isolation methods and identification tests. **05**
- (c) Give applications of immunoglobulins obtained from natural sources in pharma industry. **05**
- Q.4** (a) Define and classify carbohydrates. Write down their general properties, isolation methods and identification tests. **06**
- (b) Give an explanatory note on acetate malonate pathway. **05**
- (c) Write in detail about shikimic acid pathway. **05**
- Q.5** (a) Give a short note on tracer techniques used in plants to elucidate biosynthetic pathways. **06**
- (b) Write down isolation and structure elucidation of Griseofulvin. **05**
- (c) Give structure elucidation and importance of Penicillin. **05**
- Q. 6** (a) Write down biogenesis of indole alkaloids and tropane alkaloids. **06**
- (b) Give Isolation, stereochemistry and biological activity of streptomycin. **05**
- (c) Give biogenesis account for cardiac glycosides and hormones. **05**
- Q.7** (a) Explain successive solvent extraction method and supercritical fluid extraction method. **06**
- (b) Enlist novel extraction methods. Explain any three of them. **05**
- (c) Enlist conventional extraction methods. Explain any two of them. **05**

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