

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. Pharm. – SEMESTER – I • EXAMINATION – SUMMER • 2015

Subject Code: 910105

Date: 21-05-2015

Subject Name: Chemistry of Medicinal Natural Products

Time: 02:30 pm - 05:30 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) Describe biosynthesis and stereochemistry of glycyrrhetic acid. (6)
(b) Describe isolation and biological activity of glycyrrhetic acid. (5)
(c) Describe sources isolation and biological activity of calanolides. (5)
- Q.2** (a) Describe in brief different methods to study biogenetic pathways. (6)
(b) Classify lipids; explain biogenesis of linolenic acid and its biological activity. (5)
(c) Write a note on autocoids. (5)
- Q.3** (a) Define and classify carbohydrates. Describe isolation of glucose from natural source and its stereochemistry. (6)
(b) Draw structures and biological activity of different mono and disaccharides. (5)
(c) Describe chemical composition of starch, cellulose, pectin, gum and mucilage giving their biological activity. (5)
- Q.4** (a) Define and classify alkaloids. Describe biogenesis and stereochemistry of vincristine. (6)
(b) Explain isolation and biological activities of vincristine. (5)
(c) Write a note on camptothecin. (5)
- Q.5** (a) Define and classify resins. Describe isolation and biological activity of podophyllotoxin. (6)
(b) Explain stereochemistry of podophyllotoxin and its semisynthetic derivatives. (5)
(c) Write a note on immunoglobins from plants. (5)
- Q.6** (a) Define and classify terpenoids. Describe commercial sources, isolation, and biological activity of taxol. (6)
(b) Classify antibiotics. Describe structure and stereochemistry of penicillin. Show structures and activity of semi synthetic derivatives of penicillin. (5)
(c) Write a brief note on streptomycin. (5)
- Q.7** (a) Enumerate different advanced methods of extraction of plant metabolites and describe any one method giving its merits and demerits. (6)
(b) Write a note on lipoproteins. (5)
(c) Write a note on glycopeptidolipids. (5)
