

Code No. 1163/PCI

FACULTY OF PHARMACY**M. Pharmacy (Pharmaceutical Chemistry) I-Semester (PCI) (Main) Examination,
February 2018****Subject: Chemistry of Natural Products****Time: 3 Hrs****Max. Marks: 75****Note: Answer any five questions. All questions carry equal marks.**

- 1 Explain how natural products acted as lead molecules while designing drugs?
Explain by taking any three classes of drugs. (15)
- 2 (a) Write the classification and biological activity of alkaloids.
(b) Discuss the structural elucidation of Reserpine (OR) Ephedrine. (5+10)
- 3 (a) Discuss the stereochemistry and nomenclature of steroids.
(b) Write a note on contraceptive steroids.
(c) Explain structural elucidation of Quercetin (5+5+5)
- 4 (a) Explain isoprene rule and discuss general methods for structural elucidation of terpenoids.
(b) Discuss the chemistry and physiological significance of Vitamin A. (10+5)
- 5 Discuss the structural elucidation of any one monoterpenoid and one Diterpenoid. (15)
- 6 How do you characterize the structure of following natural compounds using IR, ¹HNMR and ¹³CNMR ? (Give approximate spectral values).
(a) Penicillin - G
(b) Morphine
(c) Quercetin
(d) Digoxin
(e) Vitamin - D (5x3)
- 7 (a) Write a note on Recombinant DNA technology and how it helped in new drug discovery?
(b) Write down the active constituents present in the following crude drugs by giving the structures for two compounds each:
(i) *Gymnema sylvestre* (ii) *Trigonella foenum-graecum*
(iii) *Phyllanthus niruri* (iv) *Curcuma longa* (7+8)
- 8 Write a note on :
(a) Anti inflammatory steroids
(b) Gene therapy
(c) Chemistry and biological significance of Vitamin B₁, B₂ and B₁₂
