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Total No. of printed pages = 1

**Monsoon, 2023**

**M. Pharm (Pharm. Chemistry) Semester Examinations**

**CHEMISTRY OF NATURAL PRODUCTS**

**Course Code: MPC104T**

**Full Marks – 75**

**Time – 03 hours**

*The figure in the margin indicates full marks for the questions.*

Answer question no 1 and any seven from the followings:

1. Answer the following questions: 5x1=5
  - a) Draw the structure of two natural anticancer drugs.
  - b) Explain Flavonoids with structure.
  - c) Describe the isoprene rule of terpenoids.
  - d) State the physiological significance of Vit B<sub>1</sub> and B<sub>2</sub>.
  - e) Draw the structure of two antimalarial drugs.
2. Answer the following questions (Any seven) 7x10=70
  - a) Explain the general methods of structural determination of flavonoids and describe the structure elucidation of quercetin. 5+5=10
  - b) Classify steroids and draw the structure of a steroids from each class. Explain The SAR of adrenocorticoids. 6+4=10
  - c) List out the drug with structure affecting the CNS and explain the details about Morphine alkaloids. 6+4=10
  - d) Classify cardiovascular drugs and explain the synthesis of lovastatin. Draw the structures of the analogues of Lovastatin. 6+4=10
  - e) Draw the general structure of macrolide. Explain the SAR of macrolide and give example of four macrolides with structure. 1+5+4=10
  - f) Explain the Structural elucidation and stereochemistry of ephedrine and morphine. 5+5=10
  - g) Explain the chemistry of Vit A and elaborate its physiological significance. 6+4=10
  - h) Describe the structural characterization of Digitalis glycosides using different analytical techniques. 10
  - i) Explain clinical application and recent advances in gene therapy in details. 10