

**First Semester M.Pharm Degree Regular/Supplementary Examinations
April 2025
M.Pharm (Pharmaceutical Chemistry)
Paper IV - Chemistry of Natural Products (MPC 104T)
(Common for 2019 and 2024 Scheme)**

Time: 3 Hours

Total Marks: 75

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw table/diagrams/flow charts wherever necessary*

Essays

(3x10=30)

1. Explain the principle and applications of oligonucleotide therapy and discuss on principles of RNA and DNA estimation
2. Explain the structural elucidation and stereochemistry of ephedrine and add a note on general method for determining the functional nature of nitrogen in alkaloids
3. Explain the structural elucidation of camphor and discuss on isoprene rule

Short Notes

(9x5=45)

4. What are flavonoids. Write a note on isolation, purification and identification of flavonoids.
5. Discuss the chemistry of Cephalosporins
6. Explain the chemistry of any one anticancer drug obtained from natural sources
7. Write a note on stereochemistry and nomenclature of steroids with suitable examples
8. Explain the chemistry and physiological significance of Vitamin-E and folic acid
9. Discuss the role of NMR spectroscopy in structural characterization of natural products with suitable examples
10. Discuss about the active constituents of Gymnema sylvestre and Pterocarpus marsupium used in the indigenous system of medicine
11. Discuss on the general methods of structural elucidation of terpenoids
12. Explain the development of new cardiovascular drugs from natural products, using any two examples
