



PAPER ID-310227

Printed Page: 1 of 1  
Subject Code: MPC104T

Roll No:

**MPHARM**  
**(SEM I) THEORY EXAMINATION 2025-26**  
**CHEMISTRY OF NATURAL PRODUCTS**

TIME: 3 HRS

M.MARKS: 75

Note: 1. Attempt all Sections. If require any missing data, then choose suitably.

**SECTION A**

1. Attempt all questions in brief.

10 x 2 = 20

a.	What is meant by natural products as drug leads? Give one example.
b.	Write the source and therapeutic use of paclitaxel (Taxol).
c.	Outline about contraceptive agents.
d.	Name any two antimalarial drugs of natural origin.
e.	Differentiate between $^1\text{H}$ NMR and $^{13}\text{C}$ NMR
f.	Name the active principle of <i>Gymnema sylvestre</i> .
g.	Define Carotenoids.
h.	Classify terpenoids based on number of isoprene units.
i.	Enumerate various gene therapy.
j.	Define hybridoma technology.

**SECTION B**

2. Attempt any two parts of the following:

2 x 10 = 20

a.	Explain the classification, isolation, and biological activity of alkaloids. Add a brief note on the structural elucidation of ephedrine.
b.	Elaborate the principle of recombinant DNA (rDNA) technology.
c.	Explain anticancer drug as lead for new pharmaceutical in natural product.

**SECTION C**

3. Attempt any five parts of the following:

7 x 5 = 35

a.	Explain the structure and therapeutic significance of $\beta$ -lactam antibiotics.
b.	Explain the chemistry and physiological role of Vitamin B12
c.	Give a short note on the chemistry and antibacterial activity of macrolide antibiotics.
d.	Write a short note on the chemistry of steroidal contraceptive agents used in males and females.
e.	Discuss the chemistry and biological significance of $\beta$ -Carotene.
f.	Write a short note on Paclitaxel and Docetaxel as anticancer agents
g.	Discuss the principles of RNA and DNA estimation.