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Subject Code: MPC104T

Roll No: 2301680576001

MPHARM
(SEM I) THEORY EXAMINATION 2023-24
CHEMISTRY OF NATURAL PRODUCTS

TIME: 3HRS

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 are lead compounds?
b.	Discuss any one example of lead compound for drugs affecting the central nervous system.
c.	Enlist the biological activities of alkaloids.
d.	What are steroids? Name and give structure of any one cardiac glycoside.
e.	Give the structure of any two diterpenoids.
f.	State the physiological significance of vitamin B12.
g.	Give the significance of hybridoma technology.
h.	Discuss the principle of RNA estimation.
i.	State the importance of spectroscopic techniques in structural elucidation and characterization of natural compounds.
j.	Discuss IR spectroscopic interpretation for morphine.

SECTION B

2. Attempt any two parts of the following:

2 x 10 = 20

a.	Outline isolation and purification of alkaloids. Discuss general methods of structural determination of alkaloids.
b.	What is isoprene rule? Discuss structural elucidation of menthol.
c.	Discuss the following: (i) Oligonucleotide therapy (ii) Gene therapy

SECTION C

3. Attempt any five parts of the following:

7 x 5 = 35

a.	Discuss the chemistry of Cephalosporins.
b.	Illustrate anticancer drugs as lead compounds for new pharmaceuticals with suitable examples.
c.	Describe isolation and structural determination of quercetin.
d.	Illustrate the chemistry and physiological significance of Vitamin A.
e.	Discuss the active constituents of <i>Swertia chirata</i> and <i>Gymnema sylvestre</i> used in Indigenous system for diabetic therapy.
f.	Describe structural characterization of camphor using IR, NMR and MS techniques.
g.	Illustrate structural characterization of penicillin using different spectroscopic techniques.