

Ref: Ex/MPC104T/2024

M. Pharm 1st Year 1st Semester Examination-2024

Subject: Chemistry of Natural Products

F.M - 75

Time: 3hrs

Answer any five questions taking at least two from each group

Group – A

1. a) Draw the structure and biological source of any two acyclic and cyclic monoterpenoids.
- b) What are bicyclic monoterpenoids? Give two examples with structures.
- c) Give tabular form of essential oils with their main terpenoid constituents

6 + 4 + 5 = 15

2. Write short notes on camphor, α -carotene, capsanthin and lycopene.

4 × 3.75 = 15

3. Discuss the chemical properties, mechanism of action, acid degradation and SAR of macrolide antibiotics.

3 + 1 + 5 + 6 = 15

4. a) What do you mean by dereplication of natural products? Explain with a scheme.
- b) What do you mean by bioactivity guided isolation?
- c) What are the logical approaches to structure elucidation of natural compounds?

4 + 4 + 7 = 15

[Turn over

Subject: Chemistry of natural products

Subject code: MPC104T

M. Pharm 1st Year 1st Semester Examination 2023

Full Marks: 75

Time: 3 hr

Answer any five questions (*at least two* from each group)

Group B

5. a) Write a note on various marketed antimalarials drugs with their mode of action and structures. [7]
b) Outline briefly the conventional and novel targets found in the malaria parasites for drug development. [8]
6. a) Write an account of the mechanisms of topoisomerases. [5]
b) Discuss in detail the overall structural requirements of camptothecin analogs for achieving higher cytotoxicity. [5]
c) Provide proper examples of different ring-modified camptothecin analogs. [5]
7. a) Discuss in detail about the structure elucidation of vitamin K. [8]
b) Discuss in detail about the structure elucidation of pyridoxine. [7]
8. a) Discuss the importance of ethnobotany and traditional sources of natural products. [5]
b) Write an account of morphine. [5]
c) Outline any of the synthesis steps of morphine and codeine. [2.5 x 2 = 5]