

24P411

(Pages: 2)

Name:

Reg.No:

FOURTH SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2026

(CBCSS - PG)

(Regular/Supplementary/Improvement)

CC19PCHE4E06 - NATURAL PRODUCTS AND POLYMER CHEMISTRY

(Chemistry)

(2019 Admission onwards)

Time : 3 Hours

Maximum : 30 Weightage

Section A

Answer any *eight* questions. Each question carries 1 weightage.

1. Explain the method of isolation of Terpenoids.
2. Explain the Oleoresins of Turmeric.
3. Draw the structure of Testosterone. Explain its functions.
4. Draw the structure of Oestrone. Explain its functions.
5. Differentiate between isoflavone and chalcone.
6. Draw the general structure of cyanine dyes. What is its application?
7. What is the difference between a crystalline and amorphous material, and what are the properties associated with each other?
8. Explain Spherulites.
9. What is lithography process in polymers?
10. What type of alkenes prefer to undergo cationic polymerisation? Give an example.
11. Explain the special isoprene rule with example.
12. Draw the structure of Corticosterone. Explain its functions.

(8 × 1 = 8 Weightage)

Section B

Answer any *four* questions. Each question carries 3 weightage.

13. Describe a short note on the isolation and constituents of lemon grass oil, turpentine oil and sandwood oil.
14. Briefly describe the classification of Terpenoid based on isoprene units.
15. Briefly explain the structure elucidation of Ergosterol.
16. What are some common catalysts used in coordination polymerization, and how do they work?

17. Explain different types of chain model.
18. Discuss the electrical conductivity of polythiophenes.
19. What is polymer phase morphology? Discuss the role of morphology in polymer properties.

(4 × 3 = 12 Weightage)

Section C

Answer any *two* questions. Each question carries 5 weightage.

20. What are Prostaglandins? Briefly explain structure, Classification and synthesis of Prostaglandins
21. Discuss the classification of alkaloids with examples. How will you isolate alkaloids from plants?
22. Discuss the synthesis, structure and applications of phenolics and silicone polymers.
23. What are conducting polymers? How are they formed? Discuss the electrical conductivity of polyanilines and polypyrrols.

(2 × 5 = 10 Weightage)
