

**23P411**

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Name : .....

Reg. No : .....

**FOURTH SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2025**

(CBCSS-PG)

(Regular/Supplementary/Improvement)

**CC19P CHE4 E06 - 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. What is Zingiberin? Draw its structure.
2. Explain special isoprene rule with example.
3. Explain the isolation of Steroids.
4. Draw the structure of Ergosterol. Explain its functions.
5. Differentiate between Flavone and isoflavone.
6. Discuss the relationship between heme group and porphyrin.
7. Write a note on Diene rubbers.
8. What is polyamides?
9. Why do we need to control the molecular weight of a polymer?
10. What are chain transfer reagents? What is termination by chain transfer?
11. Explain copolymerisation equation.
12. Explain Q-e Scheme of polymerisation.

**(8 × 1 = 8 Weightage)**

**Section B**

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

13. Write a short note on the isolation techniques for Carotenoids and Anthocyanins.
14. Describe a short note on the isolation and constituents of lemon grass oil, turpentine oil and sandwood oil.
15. Write a short note on the classification of Prostaglandins.
16. Elucidate the structure of meroquinine.
17. Explain Static and dynamic methods in Light scattering.
18. What is the glass transition temperature, and how does it relate to the glassy state?

19. Discuss briefly the kinetics of anionic polymerization.

**(4 × 3 = 12 Weightage)**

**Section C**

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

20. Write a note on structure elucidation of Cholestrol

21. What do you mean by supramolecular chemistry? How it is related to molecular recognition in reaction systems?

22. Describe coordination polymerization.

23. Explain the following polymerization techniques. (a) Bulk solution (b) Suspension (c) Dispersion (d) Emulsion

**(2 × 5 = 10 Weightage)**

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