

19P410

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Name:

Reg. No.....

FOURTH SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2021

(CBCSS-PG)

CC19P CHE4 E06 - NATURAL PRODUCTS AND POLYMER CHEMISTRY

(Chemistry - Elective Course)

(2019 Admission - Regular)

Time: Three Hours

Maximum: 30 Weightage

Section A

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

1. Explain free radical addition polymerization.
2. Write Mayo-walling equation and explain the terms.
3. What are chalcones? Give one example.
4. Give one method of isolation of cinnamon oil.
5. Explain briefly Q e-scheme.
6. Give the structure of indigo dye.
7. Describe Kaminsky polymerization process.
8. What are EVA and PAN polymers?
9. Give two examples of polymers used as catalysts in organic synthesis.
10. What is meant by group transfer metathesis?

(8 × 1 = 8 Weightage)

Section B

Answer any *six* questions. Each question carries 2 weightage.

11. Write a note on Spherulites and Lammellac morphology of polymers.
12. Elucidate the structure of androsterone.
13. Explain linear Vs cyclic polymerization with suitable examples.
14. Describe briefly photoresponsive and photorefractive polymers.
15. Discuss the relevance of Flory-Reiner equation.
16. Give the steps involved in the conversion of cholesterol to progesterone.
17. Explain the term coordination polymerization with suitable examples.
18. Discuss the NLO properties of polymers.

(6 × 2 = 12 Weightage)

Section C

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

19. Explain any two methods for the synthesis of abietic acid.
20. Discuss the structure elucidation of ergosterol.
21. Discuss the various methods for determining molecular weights of polymers.
22. Describe in detail the following polymerization reactions:
 - (a) Step growth polymerization
 - (b) Ring opening polymerization
 - (c) Anionic polymerisation

(2 × 5 = 10 Weightage)
