FOURTH SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2024

(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. Explain the method of isolation of Carotenoids.

2. What are Oleoresins? Describe the Oleoresins of Pepper.

3. Draw the structure of Androsterone. Explain its functions.

4. Draw the structure of Oestrone. Explain its functions.

5. Draw the structure of Adrenaline. What type of alkaloid is adrenaline?

6. What are phthalocyanine dyes? What is its application?

7. What are stereoregular polymers and how do they differ from atactic polymers?

8. Explain Spherullites.

9. What type of alkenes prefer to undergo anionic polymerisation? Give an example.

10. Acrylonitrile polymerizes under anionic conditions. Why?

11. What is PVC and PVA?

12. Diffrentiate between Flavone and isoflavone.

(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, turpenine oil and sandwood oil.

14. Explain in details about biosynthesis of Terpenoids

15. Explain the conversion of Cholesterol to Progestrone

16. Elucidate the structure of tropine.

17. Explain Static and dynamic methods in Light scattering.

18. Write a note on the following (a) Polyamides() polyesters.

19. Discuss in detail the mechanism of ring opening polymerization reactions.

(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 structure elucidation of Quinine.

22. Write a note on fluorine containing polymers.

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

(2 × 5 = 10 Weightage)

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