

**C 80682**

**(Pages : 2)**

**Name.....**

**Reg. No.....**

**FOURTH SEMESTER M.Sc. DEGREE EXAMINATION, MARCH 2020**

**(CUCSS)**

**Chemistry**

**CH 4E 06—NATURAL PRODUCTS AND POLYMER CHEMISTRY**

**Time : Three Hours**

**Maximum : 36 Weightage**

**Section A**

*Answer all questions.*

*Each question carries a weightage of 1.*

1. What is meant by taxonomy ?
2. What is meant by aromatherapy ?
3. Give two example for write the structure.
4. What is the basis of classification of alkaloids ?
5. Distinguish between dyes and pigments.
6. What are flavones ?
7. Write two examples for living polymers write the structure.
8. Explain with example gelation.
9. What are stereo-regular polymers ?
10. What are photorefractive polymers ?
11. Explain with example swelling ?
12. What are liquid crystalline polymers ?

**(12 × 1 = 12 weightage)**

**Section B**

*Answer any eight questions.*

*Each question carries a weightage of 2.*

13. Discuss the isolation of lemon grass oil.
14. Discuss the synthesis of prostaglandins.
15. Discuss the structural elucidation of Oesterone.
16. What are chalcones ? Give the general structure.

**Turn over**

17. Discuss the structure and uses of beta-carotene.
18. Point out the applications of supramolecular chemistry.
19. Explain the mechanism of addition polymerization.
20. What are copolymers ? Discuss.
21. Distinguish between sperullites and lammellacs.
22. Write Flory-Huggins equation. Discuss.
23. Discuss the synthesis and applications of polypropylene.
24. What are photo-responsive polymers ? What are their specialties ?

(8 × 2 = 16 weightage)

### Section C

*Answer any two questions.*

*Each question carries a weightage of 4.*

25. (i) Discuss the method of isolation of steroids.  
(ii) Explain the structural elucidation of cholesterol.
26. (i) Briefly explain the biosynthesis of quinine.  
(ii) What are phthalocyanines ? Explain.
27. (i) Explain the kinetics of step growth polymerization.  
(ii) Discuss the various methods used for the determination of the molecular weight of a polymer.
28. Discuss the kinetics and mechanism of cationic polymerisation with suitable example.

(2 × 4 = 8 weightage)