



QP CODE: 26019321



26019321

Reg No :

Name :

M.Sc DEGREE (CSS) EXAMINATION, MARCH 2026

Fourth Semester

M Sc CHEMISTRY

ELECTIVE - CH800402 - ADVANCED ORGANIC CHEMISTRY

2019 Admission Onwards

F09ACBD0

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

Weight 1 each.

1. What are crown ethers? Give an example.
2. What are molecular clefts and tweezers? Explain.
3. Why is microwave energy used in synthesis?
4. What is the difference between Synthesis and Biosynthesis?
5. Sketch the synthesis of Corey lactone.
6. Outline the synthesis of atropine.
7. Discuss DNA profiling?
8. Write on the mode of action of organic nitrates.
9. Describe one method of synthesis of a conducting polymer.
10. What is the impact factor of a scientific journal? How impact factor of a journal is calculated?
(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

Weight 2 each.

11. How preorganization and complementarity helps in molecular recognition?
12. Explain with example, the principle of microwave assisted synthesis.
13. Explain the pathways involved in the biosynthesis of (α)-terpineol.
14. What do you mean by chiral auxiliaries? Explain with examples.





15. How is gene expression regulated? What are the types of gene regulation?
16. What are the various modelling techniques used in drug designing?
17. Discuss the synthesis of hyperbranched polymers.
18. Literature survey is the most significant step in a research process, Explain?

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

Weight 5 each.

19. Write a note on anion binding host in supramolecular chemistry.
20. Write a note on Green alternatives to organic synthesis.
21. Explain a) biosynthesis of PGE₂ and PGF₂α b) synthesis of β-carotene c) synthesis of cyanin.
22. Discuss the chemistry and significance of dendrimers.

(2×5=10 weightage)

