

26024101



26024101



Reg. No.....

Name.....

M.Sc. DEGREE (C.S.S.) EXAMINATION, MAY 2026

Fourth Semester

Faculty of Science

Branch III : Chemistry

CH4E02—ADVANCED ORGANIC CHEMISTRY

(2016—2018 Admissions—Mercy Chance)

Time : Three Hours

Maximum Weight : 30

Section A

*Answer any **ten** questions
Each question carries a weight of 1.*

1. What are the forces involved in molecular recognition ?
2. What is meant by Targeted drug delivery ?
3. Discuss the concepts, atom economy.
4. What are the advantages of microwave assisted organic synthesis ?
5. What is the principle of XRD ?
6. Illustrate the asymmetric Diels-Alder reactions.
7. Why replication of DNA is important ?
8. What is meant by DNA sequencing ?
9. What is anticoagulant therapy ?
10. What are the drugs for cancer ?
11. What are the applications of dendrimers ?
12. What are the characteristics of research ?
13. What is the necessity of Chemical Abstract in research ?

(10 × 1 = 10)

Turn over





26024101

Section B

*Answer any **five** questions*

Each question carries a weight of 2.

14. Discuss the applications of supramolecular complexes in medicine
15. Discuss the various green solvents used in syntheses
16. Discuss the use of SEM and TEM in the characterization of nanomaterials
17. Describe the asymmetric Aldol condensation pioneered by Evans
18. Illustrate the different methods for primary structure determination of peptides
19. Discuss the structure, action and uses of penicillin
20. What are conducting polymers ? Discuss their applications
21. Discuss the necessary contents of a thesis

(5 × 2 = 10)

Section C

*Answer any **two** questions.*

Each question carries a weight of 5.

- 22 (a) Explain the importance of molecular recognition in protein.
(b) Explain the Principles of Green Chemistry.
- 23 (a) Explain the various methods of synthesis of nanomaterials.
(b) Describe the enantioselective catalytic hydrogenation developed by Noyori and Knowels.
- 24 (a) Explain the methods of synthesis of camphor and atropine.
(b) Explain the various steps involved in drug design.
- 25 (a) Explain the methods of synthesis of dendrimers
(b) Explain the various types of research.

(2 × 5 = 10)

