

21.07.23



QP CODE: 23004202



Reg No :

Name :

M Sc DEGREE (CSS) EXAMINATION, JUNE 2023

Fourth Semester

M Sc CHEMISTRY

Elective - CH800402 - ADVANCED ORGANIC CHEMISTRY

2019 ADMISSION ONWARDS

27C215C8

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

Answer any **eight** questions.

Weight **1** each.

1. How does hydrophobic effect act as a glue in molecular recognition?
2. Mention the industrial applications of cyclodextrin.
3. Give examples of sonochemical reactions.
4. What is the difference between Biosynthesis and Biogenesis?
5. Suggest an example for enantioselective catalytic hydrogenation by Noyori and Knowels.
6. Give the method of synthesis of quercetin.
7. What are the bases present in DNA? Give their structure.
8. What are the four main drug actions?
9. What are Hyperbranched polymers? Give two examples.
10. What is ScienceDirect?

(8×1=8 weightage)

Part B (Short Essay/Problems)

Answer any **six** questions.

Weight **2** each.

11. Write a note on siderophores and rhodopsin.
12. Write a note on the synthesis of Ibuprofen.
13. Write on the biosynthesis of morphine



14. Explain briefly about asymmetric Diel's Alder reaction.
15. Give the synthesis of camphor and atropine
16. Write the structure of Zidovudin. Explain the uses, sideeffects and mode of action.
17. Differentiate between convergent and divergent approaches for Dendrimer synthesis.
18. Explain the role of theory in scientific research

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

*Weight **5** each.*

19. Write a short note on (a) Crown ethers (b) Cryptands (c) Spherands (d) Calixarenes
20. Explain the twelve principles of green chemistry.
21. Describe the following in detail a) DNA sequencing b) DNA profiling c) Polymerase Chain Reaction d) Human Genome Project
22. Briefly explain the classification, synthesis and applications of Dendrimers and Dendritic polymers.

(2×5=10 weightage)