



QP CODE: 26019605



Reg No :

Name :

M.Sc DEGREE (CSS) EXAMINATION, MARCH 2026

Fourth Semester

M Sc Industrial Chemistry

**Core Courses - CH060401 - DRUG CHEMISTRY & PHARMACEUTICAL
TECHNOLOGY**

2020 Admission Onwards

4CF0C6AE

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

Weight 1 each.

1. What is agonist and antagonist in drug design?
2. What do you mean by gating? What are different types of ion channels?
3. Distinguish between Hard and Soft drugs.
4. Define bioisosterism with examples.
5. Give the application of 3D QSAR.
6. Differentiate between wet granulation and dry granulation in tablet manufacturing process.
7. Write the criteria followed to select polymers for Controlled release drug delivery systems.
8. What is Volhard's method?
9. Write a note on assay of Trimethoprim and Sulphamethoxazole in Tablets and Powders.
10. Enumerate any four applications of capillary electrophoresis in pharmaceutical analysis.

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

Weight 2 each.

11. What is cyclophosphamide? How is it works on tumor cells?





12. Write a short note on the drug action on structural proteins.
13. Discuss the importance of quantum mechanical calculations in drug design.
14. Describe about the scoring techniques in molecular docking.
15. Discuss the manufacturing defects of Hard gelatin capsules.
16. Briefly explain the aseptic procedure for the preparation of injectables.
17. Explain the principle involved in complexometric titrations in detail.
18. Discuss the factors influencing vibrational frequencies and its pharmaceutical applications.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

*Weight **5** each.*

19. What is a lead molecule? Discuss the various stages involved in identification of a lead molecule. How lead compounds are generated and optimized in drug discovery?
20. Describe any four molecular properties that derived from computed aided drug design.
21.
 - a) Explain the various methods used for the manufacturing of soft gelatin capsules.
 - b) Discuss the application of soft gelatin capsules.
22. Discuss how TLC is employed in determination of organic substances in pharmaceuticals.

(2×5=10 weightage)

