

QP CODE: 26019344



Reg No :

Name :

M.Sc DEGREE (CSS) EXAMINATION, MARCH 2026

Fourth Semester

M Sc APPLIED CHEMISTRY

ELECTIVE - CH840403 - ADVANCED APPLIED CHEMISTRY

2019 Admission Onwards

F2BA6FB1

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

Weight 1 each.

1. What do you mean by the term detergency?
2. What are natural resins?
3. What are varnishes?
4. What are the isolates from essential oils?
5. Give any four application of phytochemicals.
6. How can we estimate the fat content in milk?
7. What is vacuum pasturization?
8. Give any one method for the synthesis of ionic liquids.
9. Explain the green alternative for aldol condensation.
10. State the basic principles of nanochemistry.

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

Weight 2 each.

11. Write a note on (a) Laundry soap (b) toilet soap
12. Write a short note on (a) Enzyme detergents (b) compact detergents
13. Briefly explain the flavor of (a) coffee (b) cocoa.





14. Write a note on the chemical nature and source of (a) balsam of Peru (b) Styrax balsam.
15. Briefly explain the synthesis of (a) chloramphenicol (b) streptomycin
16. Write down the theory of churning.
17. Explain the green alternatives for the following rearrangement reaction (a) pinacol-pinacolone rearrangement (b) benzyl-benzilic acid rearrangement.
18. Write notes on biomimetic nanotechnology.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

Weight 5 each.

19. Explain with equation the interaction taking on the application of surface active agents at Liquid-gas, Liquid-liquid and Liquid-solid interface.
20. Describe various methods for descriptive sensory analysis. Mention its advantages and disadvantages.
21. Explain (a) composition (b) constituents (c) physical properties of milk
22. Discuss the bottom -up and top-down procedures for preparation of nanomaterials with examples.

(2×5=10 weightage)

