



QP CODE: 25050572



25050572

Reg No :

Name :

MSc DEGREE (CSS) EXAMINATION DECEMBER 2025

First Semester

M Sc ENVIRONMENT SCIENCE AND MANAGEMENT

**Core Courses - ES010103 - ENVIRONMENTAL CHEMISTRY, INSTRUMENTATION
AND ANALYTICAL TECHNIQUES.**

2019 Admission Onwards

6695BC9E

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

Weight 1 each.

1. Explain chemical kinesis.
2. Elaborate the term Chemical potential.
3. What is green house effect?
4. What is Eutrophication?
5. Recommend on gravimetric methods.
6. What is the difference between a turbiditymetry and a nephelometry ?
7. Name two examples for dosimetry and write its principle.
8. What is thin layer chromatography ?
9. Distinguish between green chemical products and green methodologies.
10. Analyze the application of green chemistry.

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

Weight 2 each.

11. What is Stoichiometry.? Give exmaple and illustrate it.
12. Explain the chemistry of Ozone layer.
13. Discuss the weathering process.
14. Compare the different types of volumetric analysis.





15. Explain the working of X ray fluorescence.
16. Illustrate the parts in electrophoresis and what is the applicational purpose of gel electrophoresis?
17. Define flow cytometry. Give an account on fixation, sectioning, and staining.
18. Discuss the 12 principles of Green chemistry.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

*Weight **5** each.*

19. Summarize a detailed on basic kinetic laws.
20. Explain the process of pedogenesis and soil profile.
21. Compare electrometric methods of pH and conductance measurements.
22. Distinguish between a light and electron microscope ,and explain its application and principle.

(2×5=10 weightage)

