

SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN
(AUTONOMOUS)

(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)
Chromepet, Chennai — 600 044.

M.Sc. - END SEMESTER EXAMINATIONS NOVEMBER - 2022
SEMESTER - I

22PCHET1001 - Analytical Techniques in Chemistry

Total Duration : 2 Hrs 30 Mins.

Total Marks : 60

Section A

Answer any **SIX** questions ($6 \times 5 = 30$ Marks)

1. Analyses F – test and Q – test.
2. Construct the principle and application of polarography.
3. What are merits and the factors affecting TGA curves?
4. Elucidate the application of Atomic Absorption Spectroscopy.
5. Discuss the theory and application of thin layer chromatography.
6. Write an theory and application of Cyclic Voltammetry.
7. Elaborate the principle, condition and application of thermometric titration.
8. Explain the factors affecting R_f value and give it's significance.

Section B

Part A

Answer any **TWO** questions ($2 \times 10 = 20$ Marks)

9. Manipulate the factors affecting R_f value and give its significance.
10. Express the various components of TGA.
11. Explain the application of Koopman's theorem for N₂ Molecule.
12. Discuss the separation of chloride and bromide by ion exchange chromatography.

Part B

Compulsory question ($1 \times 10 = 10$ Marks)

13. i.) Discuss the various type of error. How will you reduce errors in gravimetric analysis.
ii.) Find the standard deviation for a subset having the following six values:
7.720; 7.725; 7.736; 7.719; 7.742 and 7.751.
