

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.

B.Sc.(Chemistry) END SEMESTER EXAMINATIONS APRIL-2023

SEMESTER - II

**22UCHCT2004 - ANALYTICAL CHEMISTRY II**

Total Duration : 2 Hrs 30 Mins.

Total Marks : 60

### Section B

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

1. Define electrode potential and discuss the effect of concentration on it.
2. Explain any six applications of electro deposition.
3. Analyze the factors affecting the TGA and DTA curves.
4. Describe fractional distillation and mention their importance.
5. Illustrate the different types of paper chromatography with neat sketch.
6. Distinguish thin layer chromatography and column chromatography.
7. Classify the various types of cation exchange resins and anion exchange resins used in ion exchange chromatography.
8. Discuss the applications of HPLC (any six).

### Section C

Answer any **THREE** questions ( $3 \times 10 = 30$  Marks)

9. State the principle involved in dropping mercury electrode. How do you find out the diffusion coefficient? Explain the significance of half-wave potential and diffusion current-application.
10. Elaborate the applications of TGA and DTA in analytical chemistry.
11. Describe the use of soxhlet extraction in separating mixture of solutions. Illustrate the theory with neat diagram.
12. Explain the column preparation for separating the mixture of compounds. Analyze the factors affecting the column efficiency.
13. Discuss the principle, experimental techniques, instrumentation and applications of gas chromatography.

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