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 - 2024
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. What is meant by over voltage ? Discuss its significance in electrode position of metals.
2. Explain the principle and technique of Vacuum distillation with a neat diagram.
3. Highlight the principle of thin layer chromatography. How TLC is performed.
4. Outline the principle of Ion-exchange chromatography and its advantages.
5. Explain the principle of Thermometric titration .Discuss the titration of HCl with NaOH by this method.
6. Define sublimation. Explain its principle and technique with an example.
7. Discuss the relative advantages of TLC over column chromatography.
8. Explain why temperature is an important variable in Gas chromatography.

Section C

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

9. (a) Describe briefly the technique of polarography.
   (b) Write the advantages of dropping mercury electrode. (7+3)
10. (a) Draw and explain the TGA curve expected for the following
    (i) $AgNO_3$ (ii) $CaC_2O_4.H_2O$ (b) Explain how DTA differs from TGA. (6+4)
11. Explain the following techniques in detail :
    (a) Recrystallization (b) Fractional distillation (5+5)
12. (a) Highlight the importance of R_f value.
    (b) How a two dimensional paper chromatographic method is carried out. (4+6)
13. Explain the principle of HPLC. How it is useful in separation of mixture.

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