

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 NOVEMBER -2023

SEMESTER - I

22UCHCT1002- Analytical Chemistry - I

Total Duration : 2 Hrs 30 Mins.

Total Marks : 60

Section B

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

1. How is the handling and storage of flammable and corrosive Chemicals done at laboratory?
2. List out different methods for the minimization of systematic errors and explain.
3. What is Complexometric titration? How to determine the hardness of water by using EDTA.
4. What is masking agent? Explain with suitable examples and give its uses.
5. What are the factors affecting degree of ionization.
6. What are interfering anions? How are they eliminated?
7. Explain the characteristics of a precipitate and precipitating agent.
8. a) Discuss about common ion effect.
b) Define Buffer solutions.

Section C

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

9. a) Discuss the general precautions for avoiding accidents.
b) Explain the disposal of toxic waste and poisons.
10. a) "Precision always accompanies accuracy but high degree of precision does not mean accuracy" - Justify the statement.
b) The normality of a solution is determined by four separate titrations and the results are 0.2041, 0.2049, 0.2039 and 0.2043. Calculate the Mean, Median, Range, Standard deviation and coefficient of variation.
11. a) What is a primary and secondary standard? What requirements should be satisfied as a primary standard?
b) Discuss any one theory of indicators.

(5+5)

Contd...

12. a) What is meant by Post precipitation? How is it differ from co-precipitation.
b) Discuss with suitable example for solubility and ionic product.
13. Write any one test for the following anions and cations.
a) Phosphate b) borate c) Copper d) Calcium

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