

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. END SEMESTER EXAMINATIONS NOVEMBER-2022

SEMESTER - II

20UCHCT2004 - General Chemistry-IV

Total Duration : 2 Hrs 30 Mins.

Total Marks : 60

Section A

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

1. Distinguish enantiomers from diastereomers. Give examples.
2. Illustrate symmetry elements with appropriate examples.
3. Explain Claude's method of liquefaction of gases.
4. Derive an equation for Maxwell distribution of molecular velocities.
5. How will you determine surface tension by capillary rise method.
6. Classify liquid crystals and briefly explain.
7. Give an account of anomalous behaviour of beryllium.
8. Calculate the pH of a solution containing 50 ml of 0.2 M acetic acid and 50 ml of 0.1 M NaOH. ($K_a = 1.8 \times 10^{-5}$)

Section B

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

9. Explain optical activity by taking tartaric acid as an example.
10. Derive Van der waal's equation and give its limitations.
11. i) How will you determine viscosity of a liquid by Ostwald viscometer.
ii) Explain the effect of temperature and pressure on viscosity.
12. Compare the physical properties of various alkali metals and relate with its reactivity.
13. Define degree of ionization. Discuss various factors influencing degree of ionization.

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