

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 - NOV'2024

SEMESTER - III

20UCHAT3003 - Allied Physics - I

Total Duration : 2 Hrs.30 Mins.

Total Marks : 60

Section B

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

1. Define simple harmonic motion. Give its characteristics.
2. Show how Lissajous figures may be produced & demonstrated.
3. Calculate energy stored in a stretched wire.
4. Classify the different moduli of elasticity.
5. Explain terminal velocity. Find its expression.
6. Compute the theory of lubrication.
7. Solve correction for pressure using VanderWaal's equation of state of a gas.
8. Determine the loss of energy on sharing of charges between two capacitors.

Section C

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

9. Describe the composition of two simple harmonic motions of equal time periods at right angles to each other. Discuss the different important cases.
10. Apply the concept of torsion, describe an experiment to determine the rigidity modulus by torsional pendulum.
11. Determine the surface tension & interfacial surface tension by drop-weight method.
12. Apply magnetostriction method, how you produce ultrasonic waves.
Give its applications.
13. Evaluate the magnetic induction at a point on the axis of a circular coil with a neat diagram.
