B.Sc. DEGREE EXAMINATION,APRIL 2020
II Year III Semester
Allied Physics - I

Time : 3 Hours **Max.marks :60**

Section A $(10 \times 1 = 10)$ Marks

Answer any **TEN** questions

1. What is meant by centrifugal forces?
2. What are Lissajous figures?
3. Define modulus of elasticity.
4. What is Non uniform bending?
5. Give units and dimensions of surface tension.
6. What is viscous force?
7. Mention any two postulates of kinetic theory of gases.
8. Write any two uses of ultrasonics.
9. State the principle of potentiometer.
10. State Bio-Savart's law.
11. Define simple harmonic motion.
12. Write the unit for magnetic field.

Section B $(5 \times 4 = 20)$ Marks

Answer any **FIVE** questions

13. Write the uses of Lissajous figures.
14. Derive the relation between Elastic constants.
15. Explain Drop weight method.
16. Obtain an expression for Vanderwaal's equation of state.
17. Explain the calibration of low range voltmeter using potentiometer.
18. Compare centripetal and centrifugal forces.
19. Describe the experimental to determine the Young's modulus by Non uniform bending.

Section C $(3 \times 10 = 30)$ Marks

Answer any **THREE** questions

20. Discuss, with necessary, the compositions of two Simple Harmonic motions along a line and . . . ...at right angles to each other.

21. Describe, with necessary, the experiment to determine the rigidity modulus of a wire using . . . . . . torsion pendulum.

22. Derive an expression for Poissuille's formula to determine the coefficient of viscosity of . . . ...liquid.

23. What are ultrasonic waves? Explain Piezo-electric method of production of ultrasonic . . . . . . waves.

24. Describe briefly the field along the axis of a coil.

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