B.Sc. DEGREE EXAMINATION,NOVEMBER 2019
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 are Lissajous figures?
2. Define Damped vibrations.
3. Define Poissons Ratio.
4. State Hookes law.
5. Define co-efficient of viscosity.
6. Give the dimensional formula for surface tension.
7. Explain SONAR.
8. Define critical pressure.
9. State Biot- Savarts law.
10. Give the principle of potentiometer.
11. Define Bulk modulus.
12. Give any two postulates of kinetic theory of gases.

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

Answer any **FIVE** questions

13. Discuss the composition of two SHM along the line.
14. Derive the expression for torsional couple per unit twist.
15. Derive Poiseuilles formula.
16. Explain the production of ultrasonics waves.
17. Explain an experiment to calibrate the low range voltmeter using potentiometer.
18. Describe an experiment to compare viscosities of two liquids.
19. Explain the correction for pressure and volume in Vander waals equation.

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

Answer any **THREE** questions

20. Describe with necessary theory for the composition of two SHM at right angles to each other.
21. Describe the experiment to find the rigidity modulus of wire using torsional pendulum.
22. Explain the determination of surface tension and interfacial surface tension by drop weight method.
23. What are critical constants? Obtain the expressions of it.
24. Derive an expression for the magnetic field due to current carrying conductor.

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