"ज्ञान, विज्ञानआणिसुसंस्कारयासाठीशिक्षणप्रसार"

शिक्षणमहर्षी-डॉ .साळुंखेबापूजी

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DEPARTMENT OF PHYSICS

QUESTION BANK

B. Sc. – I, (Paper-III), DSC-III Properties of Matters

Long Questions:

1) What is cantilever? Obtain an expression for the depression at torsional pendulum.
2) Give the method to determine the elastic constants by Searle's method.
3) Explain molecular theory of surface tension.
4) Explain the terms surface tension and surface energy.
5) State and Explain Bernoulli's theorem.
6) Explain any two applications of Bernoulli's theorem.
7) Discuss viscosity and coefficient of viscosity. Explain streamline and turbulent flow.
8) Explain Poiseullies experiment of determining rate of flow of liquid through a capillary.
9) Obtain an expression for modulus of rigidity of a wire using torsional pendulum.
10) Describe Jaeger's method for measuring the surface tension of a liquid.

Short Questions:

1) Write a note on torsional oscillation.
2) State and explain Hooks law. Explain stress-strain diagram.
3) Write the factors affecting surface tension.
4) Define angle of contact for a liquid in contact with a solid.

5) Discuss streamline flow and turbulent flow.

6) Explain Reynolds number.

7) Discuss the terms i) Coefficient of viscosity ii) velocity gradient

   iii) Critical velocity.

8) What is viscosity? What is dynamic and kinematic viscosity?

9) Obtain expression for depression of the beam supported at both the ends.

10) Write a note on venturimeter.