

Test Paper 7

1. Define viscosity?
2. What is the significance of Reynolds's Number?
3. Give two areas where Bernoulli's theorem is applied?
4. Water flows faster than honey. Why?
5. What is Stoke's law and what are the factors on which viscous drag depends?
6. Water flows through a horizontal pipe of which the cross – section is not constant. The pressure is 1cm of mercury where the velocity is 0.35m/s. Find the pressure at a point where the velocity is 0.65m/s.
7. What is terminal velocity and derive an expression for it?
8. What is equation of continuity? Water flows through a horizontal pipe of radius, 1cm at a speed of 2m/s. What should be the diameter of nozzle if water is to come out at a speed of 10m/s?
9. What is Bernoulli's theorem? Show that sum of pressure, potential and kinetic energy in the streamline flow is constant?