1. A block of wood floats in water with \( \left( \frac{4}{5} \right) \) of its volume submerged. If the same block just floats in a liquid, the density of the liquid (in kg m\(^{-3}\)) is
   (a) 1250  (b) 600  (c) 400  (d) 800

2. A piece of solid weighs 120 g in air, 80 g in water and 60 kg in a liquid. The relative density of the solid and that of the liquid are respectively
   (a) \( \frac{1}{2} \)  (b) \( \frac{3}{2} \)  (c) \( \frac{1}{2} \)  (d) \( \frac{3}{2} \)

3. A glass tube 80 cm long and open at both ends is half immersed in mercury. Then the top of the tube is closed and it is taken out of the mercury. A column of mercury 20 cm long then remains in the tube. The atmospheric pressure (in cm of Hg) is
   (a) 80  (b) 70  (c) 60  (d) 50

4. When a capillary tube is dipped in a liquid, the liquid rises to a height \( h \) in the tube. The free liquid surface inside the tube is hemispherical in shape. The tube is now pushed down so that the height of the tube outside the liquid is less than \( h \). Then the
   (a) liquid will come out of the tube like in a small fountain
   (b) liquid will ooze out of the tube slowly
   (c) free liquid surface inside the tube is hemispherical
   (d) the liquid will fill the tube but not come out of its upper end

5. Three vessels \( A, B \) and \( C \) of different shapes contain a water up to the same height as shown in the figure. \( P_A, P_B \) and \( P_C \) be the pressures exerted by the water at the bottom of the vessels \( A, B \) and \( C \) respectively. Then
   (a) \( P_A > P_B > P_C \)  (b) \( P_B > P_C > P_A \)  (c) \( P_C > P_B > P_A \)  (d) \( P_A = P_B = P_C \)

6. If \( W \), be the work to be done to form a bubble of volume \( V \) from a given solution. The work required to be done to form a bubble of volume 2 \( V \) is
   (a) \( 4^{\frac{3}{2}} W \)  (b) \( 4^{\frac{3}{2}} W \)  (c) \( 2^{\frac{1}{2}} W \)  (d) \( 2^{\frac{3}{2}} W \)

7. Angle of contact of a liquid with a solid depends on
   (a) solid only  (b) liquid only  (c) both on solid and liquid  (d) orientation of the solid surface in liquid

8. Bernoulli’s equation for steady, non-viscous, incompressible flow expresses the
   (a) conservation of linear momentum  (b) conservation of angular momentum  (c) conservation of energy  (d) conservation of mass

9. The work done in blowing a soap bubble of surface tension 0.06 N m\(^{-1}\) from 2 cm radius to 5 cm radius is
   (a) 3.1 mJ  (b) 1.25 mJ  (c) 2.51 mJ  (d) 4.55 mJ

10. Which of the following statement is not true about angle of contact?
    (a) The value of angle of contact for pure water and glass is zero.
    (b) Angle of contact increases with increase in temperature of liquid.
    (c) If the angle of contact of a liquid and a solid surface is less than 90°, then the liquid spreads on the surface of solid.
    (d) Angle of contact depend upon the inclination of the solid surface to the liquid surface.