

- G. The weight of a block is 120N. When immersed completely in water, the weight becomes 80N. What is the relative density of the material of the block?
 a. $3/2$ b. 2 c. 6 d. 3
- H. An object of weight W and density ρ is submerged in a liquid of density σ , its apparent weight will be,
 a. $W(\rho - \sigma)$ b. $\frac{(\rho - \sigma)}{W}$ c. $W(1 - \frac{\sigma}{\rho})$ d. $W(1 - \frac{\rho}{\sigma})$
- I. For a body floating in water, the apparent weight is equal to
 a. *Actual weight* b. *Weight of liquid displaced*
 c. *More than real weight* d. *Zero*
- J. The weight of a block is 120N. When immersed completely in water, the weight becomes 80N. What is the relative density of the material of the block?
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Surface Tension

11. When a liquid is cooled, its surface tension
 a. increases b. decreases c. remains same d. decreases to minimum and then increases
12. With the rise in temperature, the surface tension of a liquid
 a. increases b. decreases c. remains constant d. becomes zero
13. What is the reason for the water droplet to be spherical?
 a. pressure b. viscosity c. terminal velocity d. surface tension
14. Oil kept in a frying pan spread and moves easily when it is hot. It is due to
 a. decrease in viscosity of oil b. decrease in surface tension of oil
 c. increase in viscosity of oil d. increase in the angle of contact
15. Two capillary tubes made of the same material but different radii were dipped into water,
 a. the liquid rises more in the capillary tube of a larger radius
 b. the liquid rise more in the capillary tube of a smaller radius
 c. the liquid rise equally in both
 d. can't be predicted
16. The surface energy of a soap bubble is proportional to its radius, R as
 a. R b. R^2 c. R^3 d. $R^{1/2}$
17. Waterproofing agent changes the angle of contact from
 a. acute to obtuse value b. obtuse to acute value
 c. obtuse to $\pi/2$ d. acute to $\pi/2$
18. If two drops are combined to form a big drop, the ratio of the surface energy of 2 drops to that of the big drop is:
 a. 2:1 b. 1:2 c. 1:1 d. 2:1
19. Water rises in a capillary tube to a height of 3 cm. If the tube is inclined to the surface of an angle of 30° , the liquid will rise into the tube up to liquid's
 a. 3 cm b. 6 cm c. 1.5 cm d. 4.5 cm
20. Two soap bubbles of unequal sizes are blown at the end of a tube and the contact between them is opened
 a. the smaller bubbles collapse gradually and the larger bubble increases
 b. the larger bubble collapses and the smaller bubble gradually increases
 c. both bubbles decrease in size
 d. both bubbles increase in size
21. 1000 small water drops of equal size combine to form a big drop. The ratio of the final surface energy to the total initial surface energy is
 a. 10:1 b. 1: 10 c. 1000: 1 d. 1: 1000