

12. The height of a chimney is 'h' meter and the observer is located at a distance of 's' metre. Its angle of elevation (θ) will be -
 a) $\theta = \tan^{-1}(s/h)$ b) $\theta = \tan^{-1}(h/s)$ c) $\theta = \sin^{-1}(s/h)$ d) $\theta = \cos^{-1}(s/h)$
13. If $x+y = 1$ and $x-y = 1$, the value of x and y will be -
 a) $x=0, y=1$ b) $x=2, y=2$ c) $x=1, y=0$ d) $x=2, y=-1$
14. If $x^2 - 4x + 4 = 0$; then value of x is -
 a) 8 or -8 b) 7 or -7 c) 4 d) 2
15. If the diagonal (d) of a cube is given, its volume will be -
 a) $d / 3 \sqrt{3}$ b) $d^2 / 3 \sqrt{3}$ c) $d^3 / 3 \sqrt{3}$ d) $d / \sqrt{3}$
16. When initial velocity (u) = 10m/sec, final velocity (v) = 0 and time taken (t) = 5 sec, Retardation will be -
 a) 1m/sec^2 b) 2m/sec^2 c) 3m/sec^2 d) 4m/sec^2
17. If the perimeter of a circle is 22 cm, its area will be -
 a) 38 cm^2 b) 38.5 cm^2 c) 39 cm^2 d) 40 cm^2
18. If the height of an equilateral triangle is $\sqrt{3}/2$ cm, its area will be -
 a) 43.3 cm^2 b) 4.33 cm^2 c) 433 cm^2 d) 0.433 cm^2
19. Total surface area of a cube is 54 cm^2 , its volume will be -
 a) 27 cm^3 b) 28 cm^3 c) 29 cm^3 d) 30 cm^3
20. The length, breadth and height of a rectangular solid are 20 cm, 15 cm and 10 cm respectively. Its whole surface will be -
 a) 1100 cm^2 b) 1200 cm^2 c) 1300 cm^2 d) 1400 cm^2
21. If $20:40:: x:10$; then x is -
 a) 10 b) 5 c) 2 d) 20
22. $\frac{5}{12} + \frac{12}{7}$ is equal to -
 a) 2.13095 b) 2.1308 c) 2.5673 d) 2.3342
23. If a ball of 100 gram is thrown from a height of 50 m, then it will strike to earth with a force of -
 a) 0.98 N b) 2.0 N c) 0.58 N d) None of these
24. If a falling body reaches the ground in 2 seconds, the location of the body will be at the height (h) of (Take $g = 10 \text{ m/sec}^2$) -
 a) 15 meter b) 20 meter c) 25 meter d) 30 meter
25. A cubical tank is filled with water. If each side of cube is 1 meter, weight of water will be -
 a) 800 kg b) 900 kg c) 1 tonne d) 10 tonne

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