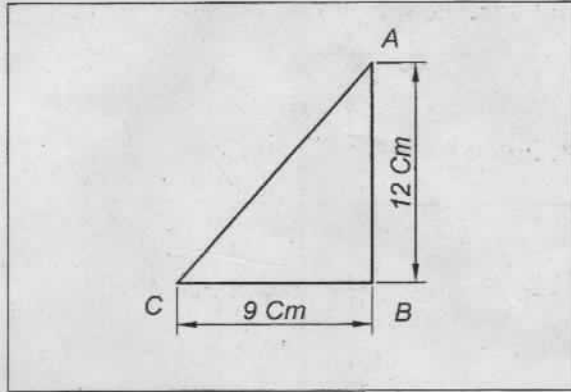


16. The first order of levers, the fulcrum is between power and the feeort, example of this is —
 a. Lemon squeezer
 b. wheel barrow
 c. common balance
 d. safety valve
17. In a triangle shown, AB is perpendicular to BC. If BC = 9 cm and AB the height s equal to 12 cm, find the value of its diagonal AC —



- a. 10 cm
 b. 12 cm
 c. 13 cm
 d. 15 cm

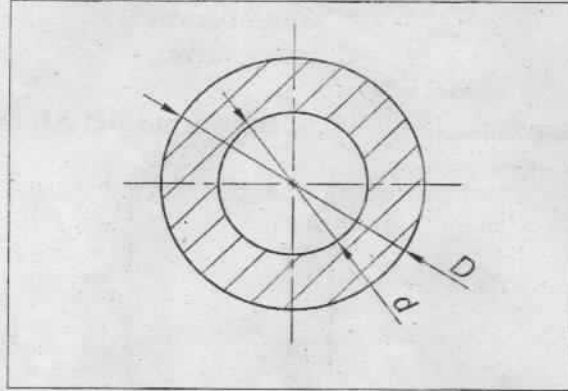
18. Which of the following is NOT an electrical quantity —
 a. Voltage
 b. Current
 c. Distance
 d. Power
19. Calculate the power (P) in watts if a resistor conducts a current 0.8 Amps at 120 Volts —
 a. 96 watts
 b. 9.6 watts
 c. 0.96 watts
 d. 0.096 watts
20. A spherical C.I of 20 cm diameter is melted and cast into a conical moulds, the base of which is 30 cm. Find the height of the cone —
 a. 15.78 cm
 b. 16.78 cm
 c. 17.78 cm
 d. 18.78 cm

$S = \frac{1}{2} \times bh$
 $= \frac{1}{2} \times 9 \times 12$

$P = I \times R$
 $0.8 \times 120 = 96$

21. If a load F 1200 kg is lifted by an effort of 300 kg by a simple machine having velocity ratio of 5, then its efficiency is —
 a. 80%
 b. 75 %
 c. 70%
 d. 65%

22. What is the formula to find the area of the circular ring as shown in the figure?



- a. $\frac{\pi}{2} (D^2 - d^2)$ b. $\frac{\pi}{4} (D^2 - d^2)$
- c. $\frac{\pi(D-d)}{2}$ d. $\frac{\pi(D-d)}{4}$
23. Choose among the following formulas the correct one for the relationship between degrees centigrade to Fahrenheit —
- a. $\frac{C}{100} = \frac{F-32}{180}$ b. $\frac{C}{100} = \frac{32-F}{180}$
- c. $\frac{100}{C} = \frac{32-F}{180}$ d. $\frac{C}{100} = \frac{180}{F-32}$
24. Volume of the cylinder is equal to —
- a. $\pi r^2 h$ b. $\frac{1}{3} \pi r^2 h$
- c. $\frac{2}{3} \pi r^2 h$ d. $\frac{3}{4} \pi r^2 h$
25. Theoretically if the mechanical advantage, velocity ratio of a machine are equal in magnitude, what will be its efficiency —
- a. 70 % b. 80%
- c. 90% d. 100%
