

7th . WS-1 foundation + materials

Task

⑭ Given mass = 500 kg

and $L=10\text{m}$; $b=5\text{m}$; $H=2\text{m}$

$\therefore$ volume of the body = $L \times b \times H$

$$= 10 \times 5 \times 2 = 100 \text{ m}^3$$

⑮ Density of the body = $\frac{\text{Mass}}{\text{Volume}}$

$$\Rightarrow \text{Density} = \frac{500}{100} = 5 \text{ kg/m}^3$$

⑯ As the mass of the body is doubled, then the density also doubled i.e. density = $2 \times 5 = 10 \text{ kg/m}^3$

⑰ Given mass = 5 kg

Acceleration = 2 m/s^2

$\therefore$ Force = mass $\times$ acceleration

$$= 5 \times 2$$

$$= 10 \text{ N}$$

Task

Advanced:-

① $0.25 \text{ quintal} = 0.25 \times 100 = 25 \text{ kg}$

② $8.7 \text{ metric ton} = 8.7 \times 1000 = 8700 \text{ kg}$

③ $15 \text{ metric ton} = 15 \times 10 \text{ quintal} = 150 \text{ quintal}$