NUMERICALS

1) The density of air is 1.28 g litre^{-1}. Express it in :

a) g cm^{-3} – $\frac{1.28 \text{ g litre}^{-1}}{1000 \text{ g cm}^{-3}}$ = 0.00128 g cm^{-3}

b) Kg m^{-3} – 1.28 x 1000 = 1.28 kg m^{-3}

2) The dimensions of a hall are 10 m x 7 m x 5 m. If the density of air is 1.11 kg m^{-3}, find the mass of air.

A- M = D x V

= 1.11 kg m^{-3} x (10 m x 7 m x 5 m)

= 1.11 kg m^{-3} x 350 m^{3} = 388.5 kg

3) The density of aluminium is 2.7 g cm^{-3}. Express in kg m^{-3}.

A- In kg m^{-3} = 2.7 x 1000 = 2700 kg m^{-3}

4) The density of alcohol is 600 kg m^{-3}. Express in g cm^{-3}.

A- In g cm^{-3} = $\frac{600}{1000}$ = 0.60 g cm^{-3}

5) A piece of zinc of mass 438.6 g has a volume of 86 cm^{3}. Calculate the density of zinc.

A- D = $\frac{M}{V}$ = $\frac{438.6}{86}$ = 5.1 g cm^{-3}

6) A piece of wood of mass 150 g has a volume of 200 cm^{3}. Find the density of wood in :

a) FCGS unit = 150 ÷ 100 = 150 × 1
200 40 200 100

a) CGS unit = 150 × 100 = 0.75 g cm^{-3}
200

100

b) SI unit = 0.75 × 1000 = 7.50 kg m^{-3}

7) Calculate the volume of wood of mass 6000 kg if the density of wood is 0.8 gm g cm^{-3}.

A- V = M = 6000 = 60000 = 7.5 m^3
D 0.8 8

8) Calculate the density of

Ans
09/09/21