

Homework

Q1 Ans \rightarrow The density of air is 1.28 g/litre

$$\text{It is in } \text{g cm}^{-3} = \frac{1.28}{1000} = 0.00128 \text{ g cm}^{-3}$$

$$\text{b) } 1.28 \text{ g/litre} = \frac{1.28}{1000} \times 1000 = 1.28 \text{ kg m}^{-3}$$

Q2 Ans \Rightarrow Density = $\frac{\text{Mass}}{\text{Volume}}$; $D \times V = M$

$$1.11 \text{ kg m}^{-3} \times 10 \times 9 \times 5 = 388.5 \text{ kg}$$

Q3 Ans \Rightarrow Density of aluminium = 2.7 g cm^{-3}

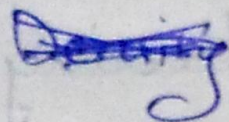
$$\text{Density of aluminium in } \text{kg m}^{-3} =$$

$$2.7 \times 1000 = 2700 \text{ kg m}^{-3}$$

Q4 Ans \rightarrow Density of alcohol = 600 kg m^{-3}

$$\text{In } \text{g/cm}^3 = \frac{600}{1000} = 0.6 \text{ g cm}^{-3}$$

5. Density = $\frac{\text{Mass}}{\text{Volume}}$



$$D = \frac{438.6 \text{ g}}{86 \text{ cm}^3} = 5.07 \text{ g cm}^{-3}$$

6. $D = \frac{M}{V}$

a) In C.G.S Unit = $\frac{150}{200} = 0.75 \text{ g cm}^{-3}$

b) In S.I Unit (kg m^{-3}) = $0.75 \times 1000 = 750 \text{ kg m}^{-3}$