

CLASS 8 (PHYSICS)

Units of density:

$$D (\rho) = \text{MASS} / \text{VOLUME}$$

$$= m/v$$

$$= \text{kg} / \text{m}^3$$

Conversion of S.I. (kgm^{-3}) to C.G.S (g cm^{-3}):

We know that,

$$1\text{kg} = 1000 \text{ g}$$

$$1 \text{ m} = 100 \text{ cm}$$

$$\text{Therefore, } 1 \text{ kgm}^{-3} = 1\text{kg} / \text{m}^3$$

$$= 1000 \text{ g} / 100\text{cm} \times 100\text{cm} \times 100\text{cm}$$

$$= 1 / 1000 \text{ g cm}^{-3}$$

$$= 10^{-3} \text{ g cm}^{-3}$$

So to convert 1 kg m^{-3} into 1 g cm^{-3} , we divide it by 1000. Similarly, for converting 1 g cm^{-3} to 1 kg m^{-3} we multiply it by 1000.

Assignment:

Q. No. 1 Convert the density of water from CGS unit to SI unit.

QNo. 2) J Numerical Problems