Revision

Chapter-1

Q-1 Define the term density of a substance.

Ans- Density is the mass of a unit volume of a material substance

Q-2 State the S.I and C.G.S Unit of Density and and how they are related?

Ans- The S.I unit of density is kgm^{-3} and the C.G.S unit is gcm^{-3}

Relationship between kgm^{-3} and gcm^{-3} :-

$1kg = 1000g$

or $1g = \frac{1}{1000} kg$

and $1m^3 = (100cm)^3$

$= 100 \times 100 \times 100 cm^3$

$= 10,00,000 cm^3$

or $\frac{1}{1}cm^3 = \frac{1}{10,00,000} m^3$

Now, $1g\,cm^{-3} = \frac{1g}{1\,cm^3}$

$= \frac{\frac{1}{1000}\,kg}{\frac{1}{10,00,000}\,m^3} = \frac{10,00,000}{1000}\,kgm^{-3}$

$= 1000\,kgm^{-3}$

Thus, $1g\,cm^{-3} = 1000\,kg\,m^{-3}$

Q-3 How does the density of water change when heated from 0°C to 4°C?

Ans - The density of water decreases and contracts on heating from 0°C to 4°C.

Q-4 How density will change with temperature?

Ans - Almost all solids, liquids and gas expands on heating with temperature and its density is increased except water.

Q5 The mass of 5 l water is 5 kg, find the density of water in grams per centimetre cube

Sol (1 l = 1000 ml)
5 l = 5000 ml

Sol 1 ml = 1 cm^3
5000 ml = 5000 cm^3

1 kg = (1000 g)
So, 5 kg = 5000 g

Sol Density = $\frac{Mass}{Volume}$

$= \frac{5000}{5000}\,gcm^{-3}$

Ans = $1\,gcm^{-3}$

Chapter - 2

Q-1 Differentiate between Mass and Weight.

Ans-

	Mass	Weight
i)	Mass ~~is a~~ of an object is the matter contained in it.	Weight is the force by which Earth attracts a body.
ii)	Mass is same everywhere.	Weight isn't same everywhere
iii)	S.I unit of Mass is kg (kilogram)	S.I. unit of Weight is N (Newton)

Q-2 How Rest and Motion are related to each other?

Ans- An object can be in motion relative to one set of objects while at rest relative to some other set of objects.