

Physics

① Define the term density of a substance.

→ density, mass of a unit volume of a material substance. The formula for density is $d = M/V$ where d is density.

② Name the SI unit of density. How is it related to gcm^{-3} ?

→ The SI unit of kilogram per cubic metre and the CGS unit of gram per cubic centimetre are probably the most commonly used units for density.

③ The density of brass is 8.4 gcm^{-3} what do you mean by this statement?

→ The density of the body is the amount of matter it contains for each unit of its volume. When we say density of brass is 8.4 gm/cm^3 it means that 1 cm^3 of brass.

④ Arrange the following substances in order of their increasing density.
Iron, cork, brass, water, mercury.

⇒ Mercury, water, cork, Iron, brass.

⑤ How does the density of a liquid or gas vary with temp?

⇒ When temp varies, the volume of the liquid changes. So, due to this change in volume, the density varies with the change in temp.

⑥ A given quantity of liquid is heated. Which of the following quantity will vary and how?

⇒ But its more you heat now when heat we get heat to the liquid. What we see we have to sit over here the B point, as it is the volume of the liquid into it.

⑦ Describe an determine density of the material of a coin.

→ The density of a coin can be known easily by measuring the weight of the coin in the air and the weight of the coin displaced by the amount of water. Density is the ratio of mass to the volume. Therefore, measure the weight of the coin in the air by a precision scale as M . Get a beaker full of water and weigh it.

2) What is density bottle? How is it used to find the density of a liquid?

→ density bottles are mainly used to determine the density of liquids of moderate viscosity. They are not volumetric instruments. However they are calibrated to contain a definite volume as in the case of volumetric flasks.