Daily Homework - 16/07

1. $600\ kg/m^3 = \frac{600\ kg}{1m^3} = \frac{600 \times 1000\ g}{100 \times 100 \times 100\ cm^3}$

$= 0.6\ g/cm^3$.

2. Mass of wood = 150 g
Volume of wood = 200 cm3

a) Density $= \frac{m}{V} = \frac{150\ g}{200\ cm^3} = \frac{3}{4}\ g/cm^3$ (CGS unit)

$\frac{3}{4}\ g/cm^3 = \frac{3}{4} \times 1000\ kg/cm^3$

$= 750\ kg/cm^3$. (SI unit).

3. Given,
→ mass = 72g
→ Initial Volume of water = 24ml.
→ final Vol^{me} of water = 42ml.
∴ Vol^{me} of solid = 42ml - 24ml
= 18ml.
= 18 cm^3

a) Density $= \frac{M}{V} = \frac{72\ g}{18\ cm^3} = 4\ g/cm^3$.

A density bottle is a glass instrument used to find the density of any liquid. The bottle has a stopper and a glass body. When liquid is inserted inside it, it stores a fixed amount and rest of it drains out through the hole in its stopper. Its generally found of volume 50ml/25ml.