

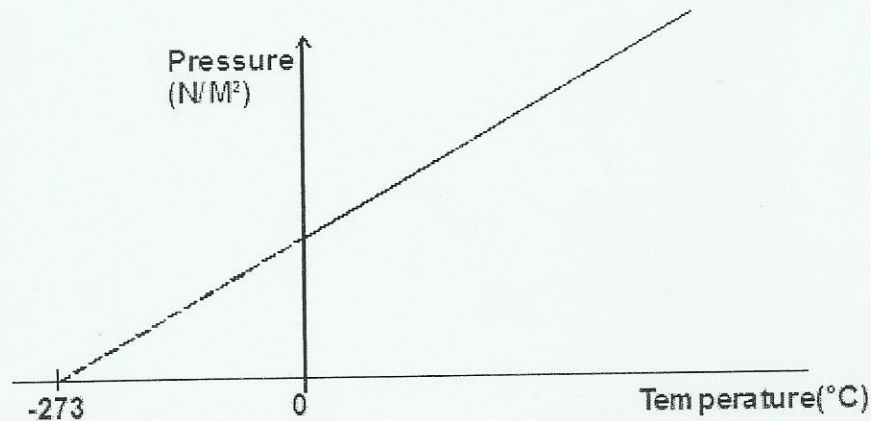
7. When floating in a liquid of relative density 0.8 a rod displaces 90cm^3 ; what volume will it displace when it floats in a liquid of relative density 1.2? (3marks)

$$\begin{aligned} \text{Wt of hydrometer} &= \text{Wt of fluid disp.} \\ &= 90 \times 10^{-6} \times 800 \times 10 \\ &= 0.72 \text{ N} \end{aligned}$$

$$\begin{aligned} \rho \text{ of Liquid} &= 1.2 \times 1000 = 1200 \text{ kg m}^{-3} \\ \text{Wt disp} &= 0.72 \text{ N} \end{aligned}$$

$$V = m/\rho = \frac{0.072}{1200} = 0.00006 \text{ m}^3$$

8.



State the law represented in figure above.

(1 mark)

Charles' Law.

9. Alcohol was placed in a flask fitted with an air tight cork as shown in figure 5.

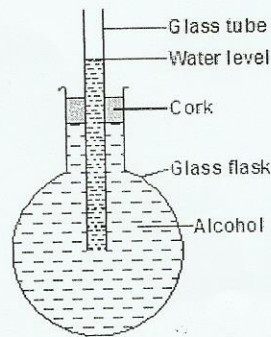


Fig 5

State and explain what would be observed if the flask was cooled.

(3 marks)

- The water level rises then falls.
- The flask contracts causing the rise
- Later the water contracts dropping the