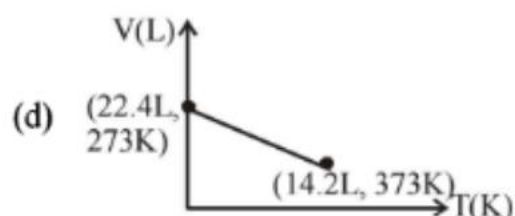
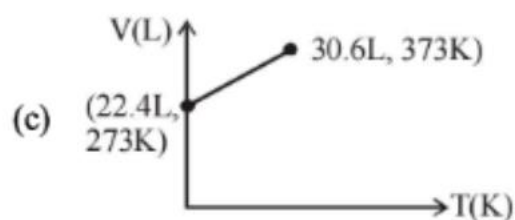
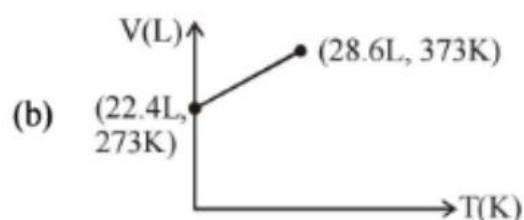
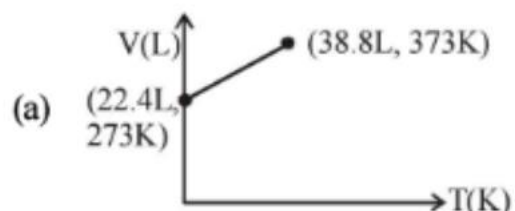


Previous JEE question 12

Which of the following volume (V) - temperature (T) plots represents the behaviour of one mole of an ideal gas at one atmospheric pressure ? (2002S)

**(c) TIPS/Formulae :**

Find the volume by either

$V = RT/P$ ($PV = RT$) or $P_1V_1 = P_2V_2$ and match it with the values given in graph to find correct answer.

Volume of 1 mole of an ideal gas at 273 K and 1 atm is 22.4 L and that at 373 K and 1 atm pressure is calculated as ;

$$V = \frac{RT}{P} = \frac{0.082 \times 373}{1} = 30.58L \approx 30.6 L$$