Question Number	Answer		Mark
12	Use of $pV = NkT$ [must see substitution of values of p, k and T]	**(1)**	**5**
	Conversion of temperature to kelvin	**(1)**	
	Use of $\rho = \frac{m}{V}$ [allow substitution of mass of one molecule]	**(1)**	
	Use of $m = N \times$ mass of a molecule	**(1)**	
	$\rho = 180$ kg m^{-3}	**(1)**	
	Example of calculation $\rho = \frac{N \times 5.3 \times 10^{-26}\ \text{kg}}{V} = \frac{p \times 5.3 \times 10^{-26}\ \text{kg}}{kT}$ $\therefore \rho = \frac{1.4 \times 10^{7}\text{Pa} \times 5.3 \times 10^{-26}\ \text{kg}}{1.38 \times 10^{-23}\text{m}^2\ \text{kg}\ \text{s}^{-2}\ \text{K}^{-1} \times (273 + 25)\text{K}} = 180.4\ \text{kg m}^{-3}$		
	Total for question 12		**5**