



Ultimate KCET Crash Course 2026

Class: 11th

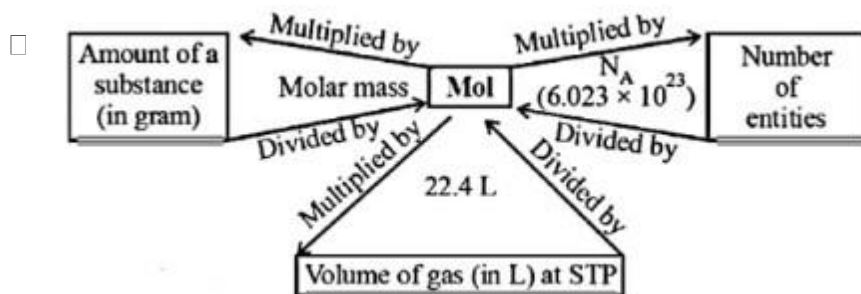
Subject: Chemistry

Chapter: Some Basic Concepts Of Chemistry

Average Atomic Mass : Average relative atomic mass of element = $\frac{\sum \% \text{ abundance} \times \text{atomic mass}}{100}$

Average relative atomic mass of element = $\frac{\text{weight of the substance in grams}}{\text{gram molecular weight of the substance}}$

Molecular Mass = $\frac{\text{Mass of one molecule of a substance}}{\frac{1}{12} \times \text{mass of one carbon atom}}$



Molecular weight of a substance = 2 X vapour density

Volume (litres) of a gas at S.T.P = $\frac{\text{weight of the gas in grams}}{\text{gram molecular weight of the gas}} \times 22.4$

Number of molecules present in the given volume of the gas at S.T.P = $\frac{\text{Volume of the gas in cc}}{22400} \times 6.023 \times 10^{23}$

$\% \text{ wt. element} = \frac{\text{Atomic weight}}{\text{Gram molecular mass}} \times 100$

$\% \text{ yield} = \frac{\text{Actual yield}}{\text{Theoretical yield}} \times 100$

Molecular formula = (Empirical formula) n

□ where $n = \frac{\text{Mol. wt.}}{\text{Emp. formula wt.}}$

□ Methods of Expressing Concentrations

□ $w / w\% = \frac{\text{Weight of the solute in grams}}{\text{weight of the solutions in gram}} \times 100$

□ $v / v\% = \frac{\text{volume of the solute in ml}}{\text{volume of the solutions in ml}} \times 100$

□ $w / v\% = \frac{\text{Weight of the solute in grams}}{\text{volume of the solutions in ml}} \times 100$

□ Molarity (M) = $\frac{\text{Weight of the solute in grams}}{\text{Gram molecular weight of solute}} \times \frac{1000}{\text{volume in (ml)}}$

□ Normality (N) = $\frac{\text{Weight of the solute in grams}}{\text{Gram equivalent weight of solute}} \times \frac{1000}{\text{volume in (ml)}}$

□ Molality (m) = $\frac{\text{Weight of the solute in grams}}{\text{Gram molecular weight of solute}} \times \frac{1000}{\text{weight of solution (gr)}}$

□ Mole fraction $X_n = \frac{n_1}{n_1 + n_2}$

□ Where $n_1 = \text{no. of moles of solute}$

$n_2 = \text{no. of moles of solvent}$



PW Web/App - <https://smart.link/7wwosivoicgd4>

Library- <https://smart.link/sdfez8ejd80if>