INDIAN SCHOOL NIZWA - WORKSHEET

CHEMISTRY

CH:1 SOME BASIC CONCEPTS OF CHEMISTRY

Name: _____ Date:_____ Class: XI Sec: ___

1. State the following.
   a) Law of conservation of mass
   b) Law of constant proportion
   c) Law of multiple proportions
   d) Gay Lussac's law
   e) Avogadro's law
2. Define the following.
   a) Molarity
   b) Molality
   c) Mole fraction
   d) Normality
   e) Parts per million (ppm)
3. Calculate the mass of graphite that must be burnt to produce 17.4 g of CO_2.
4. Calculate the volume of O_2 at STP liberated by heating12.25 g of $KClO_3$.
5. Calculate the mass percentage of sodium, carbon and oxygen in sodiumbicarbonate, $NaHCO_3$.
6. An organic compound on analysis gave the following data. C = 24.27% H = 4.07 % and the rest is chlorine. Its molar mass is 98.96 g. Find its empirical & molecular formula.
7. Zn and HCl react according to the equation $Zn + 2HCl \rightarrow ZnCl_2 + H_2$
   If 0.3 mole of Zn are added to 0.52 mol of HCl, how many moles of H_2 are produced.
8. If 20 g of $CaCO_3$ is treated with 20 g of HCl, how many grams of CO_2 can be generated according to given equation $CaCO_3 + 2\ HCl \longrightarrow CaCl_2 + H_2O + CO_2$
9. How much volume of 12M HCl should be diluted to get 2 L of 5 M hydrochloric acid?
10. Calculate the molarity of a solution obtained by dissolving 1.6 g NaOH in 500 ml water.
11. Calculate the mole fraction of ethane in water when 6 g ethane is dissolved in 125 g water.
12. What is meant by limiting reagent? 0.1g of Mg is burnt in a closed vessel which contains 0.5g of O_2. Which is the limiting reagent? What is the amount of MgO formed?