

INDIAN SCHOOL NIZWA
CHEMISTRY: WORK SHEET 1
CHAPTER-1 SOME BASIC CONCEPTS IN CHEMISTRY

DATE: _____ NAME _____ CLASS: XI

1. State and explain the law of Definite proportions .
2. State and explain the Law of Multiple Proportions
3. State and explain the Law Gay Lussac's Law
4. Explain Avogadro Law.
5. What weight of Ca contains the same number of atoms as are present in 3.2g of sulphur?
6. Calculate the percentage composition of calcium nitrate.
7. A sample of gaseous substance weighing 0.5g occupies a volume of 1.12l at stp. Calculate the molar mass of the substance.
8. What mass of CuO will be obtained by heating 12.35g of CuCO₃. (At.mass of Cu=63.5)
9. KClO₃ on heating decomposes to give KCl and O₂. What is the volume of O₂ at STP liberated by 0.1mole of KClO₃.
10. Zn and HCl react according to the equation $Zn + 2HCl \longrightarrow ZnCl_2 + H_2$
If 0.3 mole of Zn are added to 0.52 mol of HCl, how many moles of H₂ are produced.
11. Calculate the molality and molarity of 93% H₂SO₄(Weight /volume). The density of solution is 1.84g/ml.
12. What volume of O₂ is needed to cause the complete combustion of 200ml of ethyne also calculate the volume of CO₂ formed.
13. An acid contains C, H &O. A 4.25g of sample is completely burnt. It gives 8.45g of CO₂ and 3.46g of H₂O. What is the mass percentage of each element? The molar mass of the compound is 88g. Find the molecular formula of the compound.
14. What is meant by limiting reagent? 0.1g of Mg is burnt in a closed vessel which contains 0.5g of O₂. Which is the limiting reagent? What is the amount of MgO formed?
15. 3g of H₂ react with 29g of O₂ to yield H₂O.
 - i) Which is the limiting reagent ?
 - ii) Calculate the amount of one of the reactants which remains unreacted.
 - iii) Calculate the maximum amount of H₂O formed.