Practice Paper (Chemistry)

1. Calculate the molecular masses of the following compounds:
    a. H_2CO_3
    b. Magnesium Sulphate
    c. $Al_2(CO_3)_3$
    d. $Al(HCO_3)_3$
    e. $(CH_3COO)_2Ca$
    f. H_2S
    g. $HClO_3$
    h. NaCl
    i. K_2SO_4
    j. (HCOO)Na
2. Calculate the no of moles present in
    a. 10gms of water
    b. 150gms of sulphuric acid
    c. 1Kg of Oxygen gas
3. How many grams of sulphur dioxide (SO_2) can be prepared by burning 160g of sulphur.
4. Is the molar mass of H^+ ion and hydrogen atom H different? Give reasons.
5. How many grams of water vapour will be obtained if 20moles water is evaporated?
6. How many CO_2 molecules are present in 110g of the gas?
7. How many electrons will be required to convert 5mol chlorine gas(Cl_2) to chloride ion (Cl^-)?
8. 9.033×10^{23} atoms of Helium gas will posses what mass?
9. If an element X exixts in two isotopic forms having masses 50 amu and a amu. The average atomic mass of X comes out to be 52.50u. Calculate the value of a if one with the mass a amu has 70% existence in any sample taken at random.
10. How much water (in mols) should be added to a container having 8mol Chlorine gas such that the total mass of container becomes 1Kg. Given mass of container = 200g.