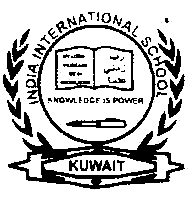
**INDIA INTERNATIONAL SCHOOL – MANGAF**



**CHEMISTRY** **HOLIDAY HOME WORK GRADE 11**

1)Calculate the number of moles in the following masses

i)7.85g of Fe ii) 6.5g of Ca

2) How much KClO3 must be heated to produce 2.24 L of Oxygen gas at S.T.P?

3)Calculate energy of 2 mole of photons of radiation whose frequency is 5×1014 HZ

4) Explain de- Broglie equation.

5) Define diagonal relationship .

6) Explain the nature of oxides of metals ,non metals and metalloids.

7)Explain why cations are smaller and anions are larger size than parent atom.

8) An organic compound has the following percentage composition C = 12.36%, H = 2.13%, Br = 85%. Its vapour density is 94. Find its molecular formula.

9) Calculate the mass of NaOH required to make 500 ml of 0.5M aqueous solution. (Molar mass of NaOH = 40)

10) a) Define 1 mol. b) What is the number of hydrogen atoms in 1 mole of methane (CH4)? c) Calculate the amount of carbon dioxide formed by the complete combustion of 80g of methane as per the reaction: CH4 (g) + 2O2 (g) CO2 (g) + 2 H2O (g) (Atomic mass of C = 12.01u, H = 1.008u, O = 16u)

11) 28 g of nitrogen is mixed with 12 g of hydrogen to form ammonia as per the reaction,

N2 + 3 H2 ------🡪 2NH3. Which is the limiting reagent in this reaction?

12) Calculate the molarity of a solution containing 8 g of NaOH in 500 mL of water

13)a) Find the number of oxygen atoms in 4 g of O2.

b) Which is heavier, one oxygen atom or 10 hydrogen atoms?

14) The mass of an electron is 9.1 X 10 kg. If its K.E. is 3.0 X10 –25 J, calculate its wavelength

15) Calculaute the amount of carbondioxide released when 50g of Calcium carbonate reacts with 35g of hydrochloric acid .