Work Sheet : Moles and Stoichiometry

1- Find the mass of Calcium Nitrate and volume of CO_2 gas formed, when 200·0g of Calcium Carbonate reacts with 1200·0 cm^3 of 0·250 mol/dm^3 of nitric acid.

2 200 cm^3 of ammonia gas reacts with 100 cm^3 of 0·15 mol/dm^3 of phosphoric acid. Find mass of ammonium phosphate formed

3. 300g of Aluminium Carbonate reacts with 200 cm^3 of 0·5 mol/dm^3 of hydrochloric acid.
   a) Find mass of Aluminium Chloride formed
   b) Find volume of CO_2 gas formed

4- 10g of Mg exactly neutralizes 500 cm^3 of phosphoric acid.
   a) Find the concentration of phosphoric acid
   b) Find mass of magnesium phosphate formed
   (c) Find volume of Hydrogen gas formed.

5. Find the mass of $NH_3 (g)$ formed when 300 cm^3 of $N_2(g)$ and 500 cm^3 of $H_2 (g)$ react.

6. 3·0g of Iron (III) oxide and 500 cm^3 of carbon monoxide react. Carbon di oxide and Fe are the only products formed.
   a) Find the limiting reactant
   b) Find the mass of Iron formed
   c) Find vol of CO_2 gas formed.

7- 100 cm^3 of 2·5 mol/dm^3 of Calcium nitrate is added to 200 cm^3 of 1·5 mol/dm^3 of sodium carbonate. Calculate the mass of precipitate formed.