

**Chem Revision Test 1**

**Time : 60 mins**

**Max Marks : 30**

Q1.

(a) Calculate molecular mass of  $\text{CH}_4$  2 mark

(b) Determine empirical formula of an oxide of iron which has 69.9% iron and 30.1% dioxygen by mass. 3 mark

Q2. How much copper can be obtained from 100g of copper sulphate ( $\text{CuSO}_4$ ) (Cu atomic mass = 63.5 amu )

2 marks

Q3. Determine

A) No. of moles of carbon atoms present in 2 moles of ethane (  $\text{C}_2\text{H}_6$ ).

B) No. of molecules of ethane in 2 moles of ethane.

4 marks

Q4 What is concentration of glucose ( $\text{C}_6\text{H}_{12}\text{O}_6$ ) in mol/l if its 50g are dissolved in enough water to make a final volume up to 10L?

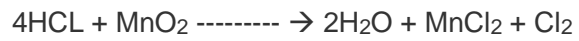
3 marks

Q5 What do you mean by significant figures ? How many significant numbers are present in 0.0035 and 310.

3 marks

Q6. Calculate the number of atoms in 30 moles of He. 2 marks

Q7. Chlorine is prepared in the laboratory by treating manganese dioxide ( $\text{MnO}_2$ ) with aqueous hydrochloric acid according to the reaction.



How many grams of HCl react with 20 g of manganese dioxide ? ( Atomic number of Mn = 55 amu )

3 marks

- Q8.** A. State Avagadro's law.  
B. State two factors which introduce uncertainty into measured figures.  
C. What Is SI unit of Molarity ?  
D. Calculate the number of moles in 44.8 litres of  $\text{SO}_2$  at STP.

4 marks

**Q9.** Calculate the number of carbon and oxygen atoms present in 11.2 litres of  $\text{CO}_2$ .

4 marks