

## **Chemistry model paper for Interview:**

### **Fundamental particles of an atom:**

(i)-Electron (ii)-PROTON (iii)-NEUTRON

**ELECTRON:** It is a negatively charged particle moving around the nucleus in shell.

**PROTON:** It is a positively charged particle present in the nucleus of an atom

**NEUTRON:** It is the neutral particle present in the nucleus of an atom

**ATOMIC NUMBER (Z):** The number of protons in the nucleus of an atom or the number of electron moving around in orbit is called the atomic number Atomic number. Atomic number Z is written as subscript on the left side of chemical symbol

EXAMPLE:  ${}_6\text{C}$  ,  ${}_7\text{N}$  (ATOMIC NO OF CARBON 6, ATOMIC NO NITROGEN 7)

**MASS NUMBER (A):** The sum of number of neutrons and protons in the nucleus of an atom is called mass number.

**Physical Change:** A change in which no new or different product is formed .This change is temporary and reversible.

Example: Butter melts in warm toast.

**Chemical Change:** A chemical change that results in the formation of at least one or more new products .This change is irreversible.

**Compounds:** when two or more than two elements combine chemically in definite ratio by weight compound is formed .Examples:  $\text{H}_2\text{O}$

**Mixture:** When two or more than two substances combine chemically in definite ratio by weight mixture is formed.

Examples: Air

**Elements:** A substance which can not be further broken is called element.

Examples: Hydrogen (H), oxygen (O)

**Chemical Equations:** Chemical equation is a short hand method of describing the chemical reaction in terms of symbol Examples:  $\text{Zn} + \text{H}_2\text{SO}_4 \text{-----} \rightarrow \text{ZnSO}_4 + \text{H}_2$

### **Chemical Bonding:**

There are three types of chemical bonds

1. Ionic bond
2. Covalent bond
3. Co-ordinate covalent bond

**Ionic Bonding:** Bond which is formed by the transfer of electron from one atom to other is called ionic bond.

**Covalent Bond:** Bond which is formed due to sharing of electrons between two atoms is called covalent BOND.

**Co-ordinate covalent bond:** Bond in which the electrons of shared pair come from one of the two atoms is called co-ordinate covalent bond.

**Electrolysis:** A process in which movements the ions take place towards their respective electrodes to undergo changes under the influence of an applied electric field is called electrolysis.

**Solution:** A homogenous mixture of two or more substance is called solution  
.Examples: In 5 % aqueous solution of sugar, water is solvent and sugar is solute.

**Acids:** Acids is a substance which dissolved in water gives ( $H^+$ ) ions  
.Examples: Hydrochloric acid (HCL)

**Bases:** A base is a compound which gives ( $OH^-$ ) ions in aqueous solution as the only hydroxyl negatively charged ions.

Examples: sodium Hydro-oxide NaOH

**Salts:** A salt is an ionic compound which if soluble in water. Dissociates to give a positive ions and negative ions

Examples:  $HCL + KOH \rightarrow KCL + H_2O$     Acid + Base  $\rightarrow$  Salt +  $H_2O$

### **BASIC S.I UNITS.**

Physical quantities	NAME OF UNIT	SYMBOL
Length	Meter	m
Mass	Kilogram	Kg
Amount of substance	gram	g
Volume	Liter	L

### **CONVERSION OF UNITS:**

Length	1 Meter	100 Cm
	1 centimeter	10 mm
	1 Km	1000 m
Mass	1 Kilogram	1000 gm
	1 gram	1000 mg
Volume	1 Liter	1000 ml