

CHAPTER-1

SOME BASIC CONCEPTS OF CHEMISTRY

GLOSSARY :

- ➔ **Accuracy** : Accuracy is a related term which refers to the closeness of a single measurement to its true value.
- ➔ **Avogadro number** : Number of molecules in a sample of 32 g. of oxygen contains 6.022×10^{23} . This number is a standard figure and is known as Avogadro number.
- ➔ **Compound** : The substance comprised of two or more type of particles (atoms) is known as compound. e.g. H_2O . The different type of particles combines with each other to form a compound.
- ➔ **Homogeneous mixture** : When the components of the mixture possess the same physical state and form homogeneous structure is known as homogenous mixture.
- ➔ **Heterogeneous mixture** : When the components of the mixture possess different physical states and do not possess uniform structure is known as heterogeneous mixture.

- ➔ **Isotopes** : Elements possessing the same number of protons but different number of neutrons are known as isotopes. **OR** Elements with same atomic numbers but different mass numbers are also known as isotopes.
- ➔ **Isobars** : Elements with different atomic numbers but similar mass numbers are known as isobars.
- ➔ **Law of definite proportion** : A percentage of constituent atoms remain the same in a compound irrespective of the method of preparation.
- ➔ **Law of multiple proportion** : When two elements combine to form more than one compound, then for a definite mass of one element, masses of other combining elements are in the ratio of small integers.
- ➔ **Mixture** : Every component of a mixture retains its own property. The mixture exhibit the properties of both the components present in a mixture.
- ➔ **Mole** : A sample of an element contains number of atoms. Scientists have not taken into consideration only single atom or a molecule but have preferred a unit for comparison of the masses of atoms or molecules. This unit is known as a mole.

- ➔ **Molarity** : The solution is said to be one molar when one gram mole of the substance is dissolved in one litre solution.
- ➔ **Normality** : When 1 gram equivalent weight of the substance is dissolved in one litre of the solution. It is known as one normal solution.
- ➔ **Precision** : Precision refers to the closeness of the set of values obtained from identical measurement.
- ➔ **Scientific notation method** : Very large or very small numbers are very common in chemistry. Therefore it is necessary to express them conveniently and accurately. For this purpose number is expressed in the form of $N \times 10^n$, where N is a number known as digit term. This method of expression of number is known as scientific notation method.
- ➔ **Significant figure** : The precision of a measurement is indicated by number of figures used to record it. The digits in a properly recorded measurement are known as significant figures.