IV. Answer briefly.

1. State the law of conservation of mass.

2. State the law of constant proportions.

3. Write the properties of anode rays.

4. Define valency of an element with respect to hydrogen.

5. Define the term ions or radicals.

2.

3.

during the chemical change was stated by a French chemist **Lavoisier** in 1774. It states that **during any chemical change, the total mass of the products is equal to the total mass of the reactants.** In other words the law of conservation of mass means that mass can

proposed by the scientist Joseph Proust in 1779. It states that in a pure chemical compound the elements are always present in definite proportions by mass. He observed all the compounds with two or more elements

Properties of Anode rays

3 [Anode rays travel in straight lines.

- Anode rays are made up of material particles.
- Anode rays are deflected by electric and magnetic fields. Since, they are deflected towards the negatively charged plate, they consist of positively charged particles.
- The properties of anode rays depend upon the nature of the gas taken inside in the discharge tube.] 3

is selected as the standard. Valencies of the other elements are expressed in terms of hydrogen. Thus, valency of an element can also be defined as the number of hydrogen atoms which combine with one atom of it. In hydrogen chloride molecule, one hydrogen

atoms of different elements collectively lose or gain electrons to acquire positive or negative charge. Thus we can say, an atom or a group of atoms when they either lose or gain electrons, get converted into ions or radicals 5

4.8 Chemical Equation

A chemical equation is a short hand representation of a chemical reaction with the help of chemical symbols and formulae.

Every chemical equation has two components: