Atoms elements and compounds

Define:

- **Proton number (Atomic number):** It is the number of protons in the nucleus of an atom.
- **Nucleon number (Mass number):** It is the total number of protons and neutrons in the nucleus of an atom.
- **Isotope:** Atoms of the same element having the same number of protons but different number of neutrons are called as isotopes.
- **Elements :**Elements contain only one type of an atom
- **Mixture:** A mixture contains two or more elements that are not chemically bonded together. They do not have a fixed composition.
- **Compound:** A compound is a substance made up of two or more different types of elements joined together by chemical bonds.
- **Covalent bond:** A bond formed by sharing of electrons is called a covalent bond.
- **Ionic bond:** The bonding between oppositely charged ions is called ionic bonding.
- **Macromolecule:** Macromolecules are giant covalent structures
- **Metallic bonding:** The bonding that exists between the positive ions and the -vely charged electrons is called as metallic bonding,

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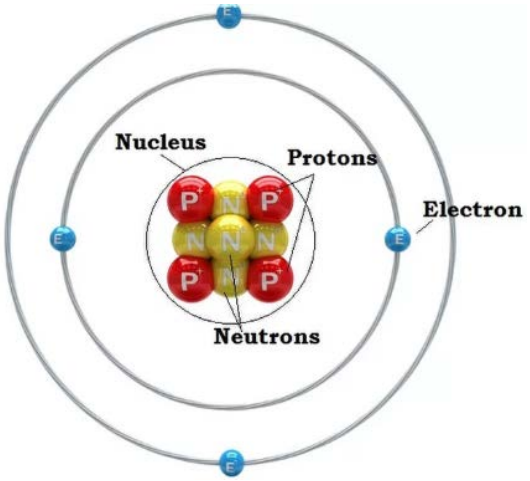
Structure of an atom

An atom is the smallest uncharged particle that can take part in a chemical change.



- An atom contains a centrally located nucleus.
- The nucleus contains positively charged protons and neutral neutrons.[Protons + neutrons= nucleon number or mass number]
- The electrons revolve around the nucleus in fixed orbits called electron shells or energy levels.
- An atom is electrically neutral as the number of protons (+vely charged) are equal to the number of electrons (-vely charged).
- Position of elements in the periodic table is based on their atomic number.

Subatomic particles	Symbol	Relative mass	Relative charge
PROTON	p	1	+1
NEUTRON	n	1	No charge
ELECTRON	e	0.00054	-1
