



STD 10– FIRST BELL – CHEMISTRY

READINESS CLASS-02

Electronic configuration & Stability

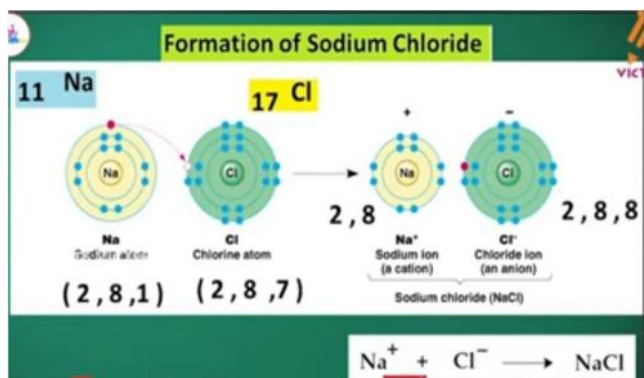
- Compounds are more stable.
- The arrangement of eight electrons in the outermost shell of atoms is called **octet electronic configuration**.
- Octet electron configuration in an atom is stable.
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Element	Atomic Number	Electronic Configuration
Helium	2	2
Neon	10	2,8
Argon	18	2,8,8

- Helium atoms are stable but they contain only one shell (the maximum number of electrons accommodated in the first shell is 2).
- The attractive force that holds together the atoms in a molecule is called chemical bonding.

Formation of NaCl

- Sodium atoms donate electrons to form Na^+ ions (Cations).
- $\text{Na} \rightarrow \text{Na}^+ + 1\text{e}^-$
- Chlorine accepts an electron to form chloride ions (Cl^-) (Anions)
- $\text{Cl} + 1\text{e}^- \rightarrow \text{Cl}^-$



- Ionic bond is a chemical bond formed by electron transfer.
- Compounds formed by ionic bonding are called ionic compounds.

Valency

- The number of electrons lost, gained, or shared by an atom during chemical reaction is its valency.

Group No	Outermost electron	Valency
1	1	1
2	2	2
13	3	3
14	4	4
15	5	3
16	6	2
17	7	1
18	8	0

HOME WORK

1. Analyse the formation of Magnesium chloride ? (Atomic number Mg =12 , Chlorine =17)

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