

## Chapter 08

# Chemical

# Bonding

### Ionic Bond:

- Ionic bond is formed between two atoms of dissimilar elements. It means extremely reactive metals and extremely reactive non-metals.

**Ex.** NaCl is an ionic compound.

- According to the octet rule, atoms of every element tries to get an octet configuration. To get eight electrons in its valency shell elements may lose or gain electrons and form cations or anions.
- In NaCl,

Sodium electronic configuration is 2, 8, 1. If sodium loses one electron, the second shell gets an octet configuration.

- Sodium loses one electron and forms cation  $\text{Na}^+$ .
- Chlorine has 17 electrons. Its electronic configuration is 2, 8, 7.
- If Chlorine gain '1' electron, it attains nearest inert gas configuration.
- Chlorine gains '1' electron and forms  $\text{Cl}^-$ .
- When these ions approach together, there exist an electrostatic force of attraction between cation and anion and they exist together. This bonding is known as ionic bond.
- It is even represented as electrostatic bond (or) electrovalent bond.

**Ex.**  $\text{MgCl}_2$ 

- Magnesium is second group element. Its electronic configuration is 2, 8, 2. By losing '2' electrons magnesium forms cation  $\text{Mg}^{+2}$ .

