

TENDER HEART HIGH SCHOOL, SEC-33B, CHD.

CHAPTER- 2

SUBJECT- CHEMISTRY

CLASS- IX

TEACHER- ANAMIKA

28/10/24

COVALENT BOND:-

The chemical bond that is formed between two combining atoms by mutual sharing of one or more pair of electrons is called covalent bond

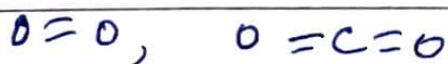
Covalent bonds are of following three types:-

- a) Single Covalent bond
- b) Double " "
- c) Triple " "

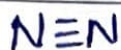
A single covalent bond is formed by sharing of one pair of electrons between atoms. e.g.



Double bond is formed by the sharing of two pair of electron b/w atom.



Triple bond is a combination of three single bond.



Non-Polar Covalent Compound:- It is formed when shared pair of electron are equally distributed b/w two atoms.

e.g. H_2 , Cl_2 , O_2

Polar Covalent bond:-

The covalent compound are said to be polar when shared pair of e^- are not at equal distance between two atoms.

Note:- The more the electronegativity difference b/w two atoms forming a bond the more polar nature of molecule.

2. Since polar covalent bond has both positive and negative poles, it is also known as dipole molecule.

Conditions for the formation of a covalent bond:-

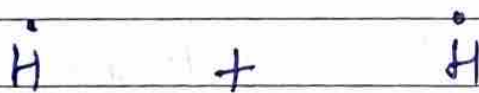
1. Both atoms should have four or more electron in outermost shell.

2. Both the atoms should have high electro negativity.
3. Both atoms should have high electron affinity.
4. Both atoms should have high ionization energy.
5. The electronegativity difference between the combining atoms should either be zero or negligible.

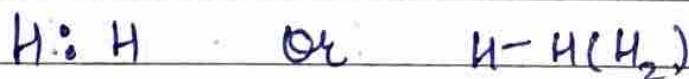
Some Covalent molecules and their structure

1. Hydrogen molecule

Before combination

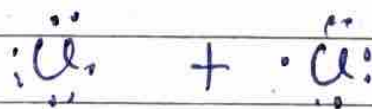


After combination

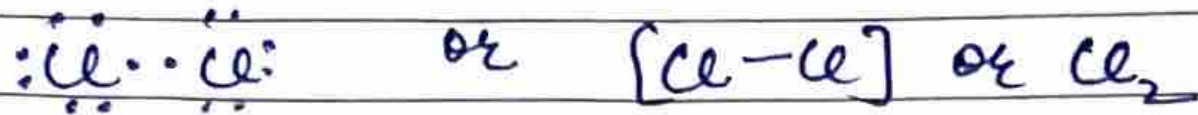


2. chlorine molecule

Before combination

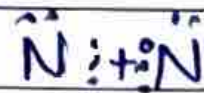


After combination



3. Nitrogen molecule

Before combination



After combination

