

CARBON AND ITS COMPOUNDS

X th SCIENCE

DR S.PRASAD



CARBON AND ITS COMPOUNDS

- **-Atomic number-6**
- **Chemical nature of element depend on valence electron.**
- **Carbon either loose 4 electron or gain 4electron to form compound.**
- **If carbon loose four electron, it required large amount of energy and six proton hold only two electron.**
- **If carbon gain 4 electron it is difficult to hold 10 electron by six proton only.**
- **To overcome this problem carbon neither lose nor gain ,but it sharing the electron to get stable configuration.**

VERSATILE NATURE OF CARBON

- **Carbon form large number of compounds than other element because have unique properties---**

1. **Catenasation (self linkage)-it form long chain of carbon atom.**
2. **Formation of multiple bond- due to small size of carbon atom have ability to form single ,double or triple bond to other carbon.**
3. **Covalency-form covalent bond.**

These properties separate carbon compound from other element as organic compound.

COVALENT BOND

A bond which formed by the sharing of electron is called covalent bond and such compound is covalent compound.

TYPES OF COVALENT BOND

1. Single covalent bond- A bond formed by sharing of one electron.



Electronic dot formula

structural formula

molecular formula

2 Double covalent bond- sharing of two electron (total shared electron is 4)



3 TRIPLE COVALENT BOND- SHARING OF THREE ELECTRON

N N

N = N N₂

ELECTRONIC DOT FORMULA OR LEWIS

Show the valence electron during the sharing of electron