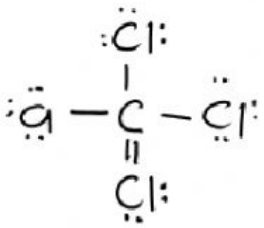
Question 5 b (iv)

Predict the molecular geometry, bond angle, polarity and type of IMF of the CCl_4

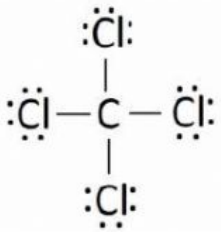
C is in Group 14

Cl is in Group 17

- Total Valence Electron:_____
- Calculate Formal charge for each atom and choose the correct Lewis structure of **CCl_4** _____



(A)

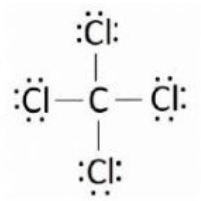


(B)

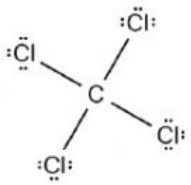
- Electron pair arrangement at central atom C:

  _____ **bonding pairs** electrons.
  Basic shape is _____

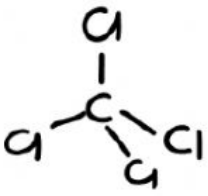
- VSEPR: The **repulsion** between the bonding pairs electrons is _____.
- State the shape of molecule _____ and choose the correct molecular geometry of **CCl_4** _____



(D)

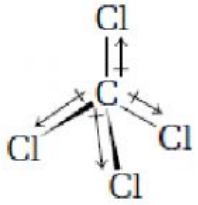


(E)



(F)

- Every Cl-C-Cl bond angle is _____ °



- _____is more electronegative than _____
- Dipole moment can _____ each other.
- Net dipole moment ($\mu = 0$)
- Therefore it is a _____ molecule.
- Intermolecular forces in CCl_4: _____

Note:

Hydrogen bond = HB

Dipole-dipole force= DDF

London Dispersion forces = LDF