33.XeO3F2

34. XeOF4

35. XeO3

36.XeO4

37.XeF5

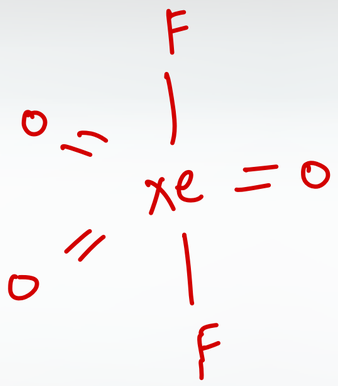
+

38.XeF5

(33) SN = 5

Hyb: sp^3d

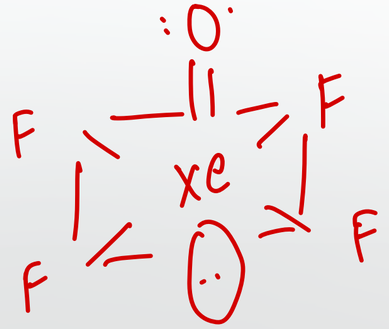
Shape: TBP



(34) SN = 6

Hyb: sp^3d^2

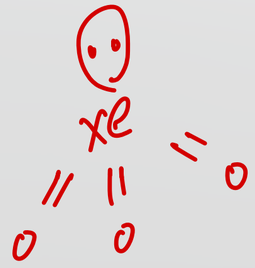
Shape: Square pyramidal



(35) SN = 4

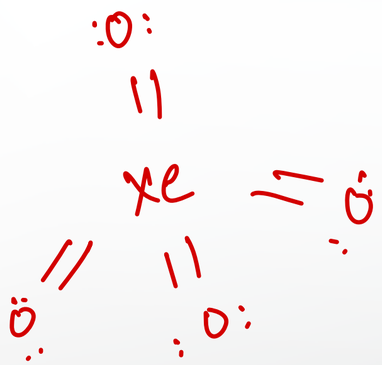
Hyb: sp^3

Shape: Trigonal pyramidal



Chemical Bonding

(36)

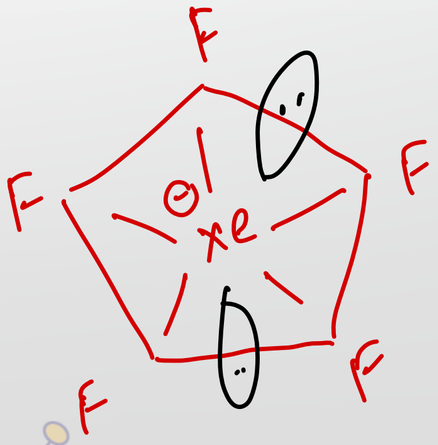


Hyb: sp^3

Shape: Tetrahedral.

SN = 4

(37)



Hyb: sp^3d^3

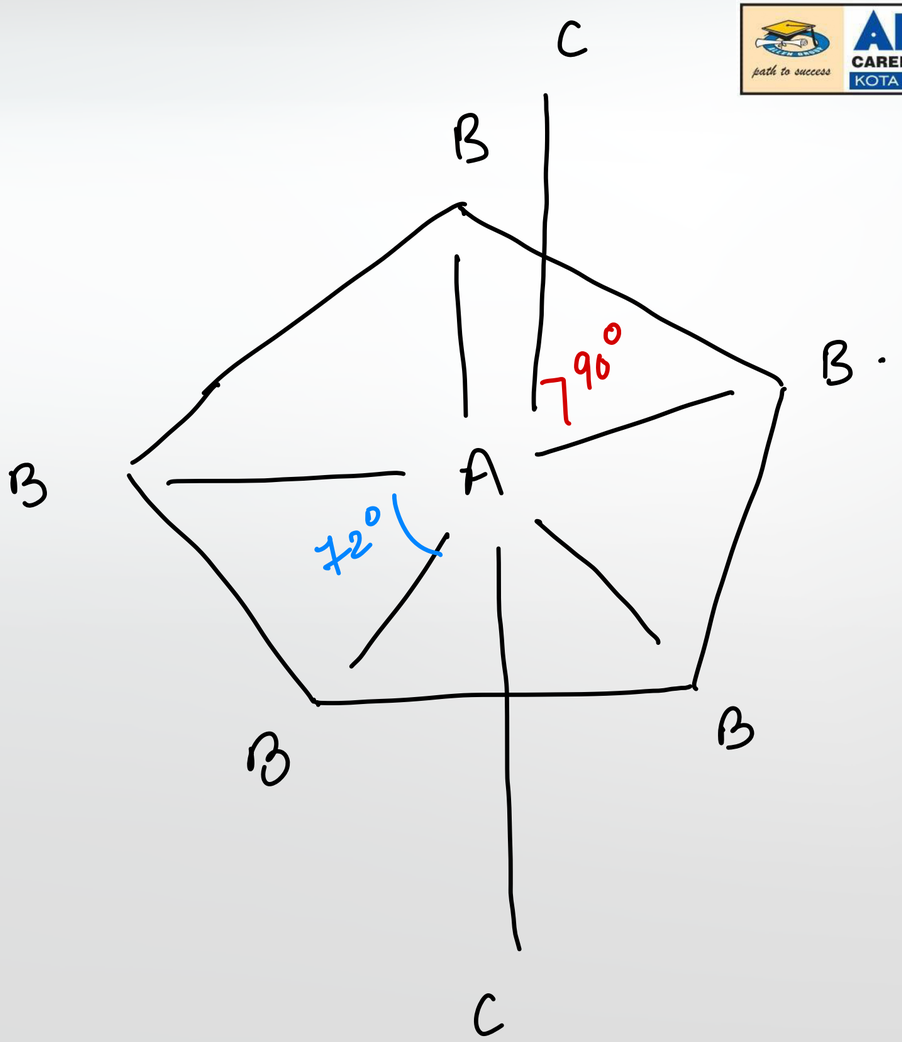
Shape: pentagonal planar.

SN: $\sigma + lp$

$= 5 + 2$

$= 7$

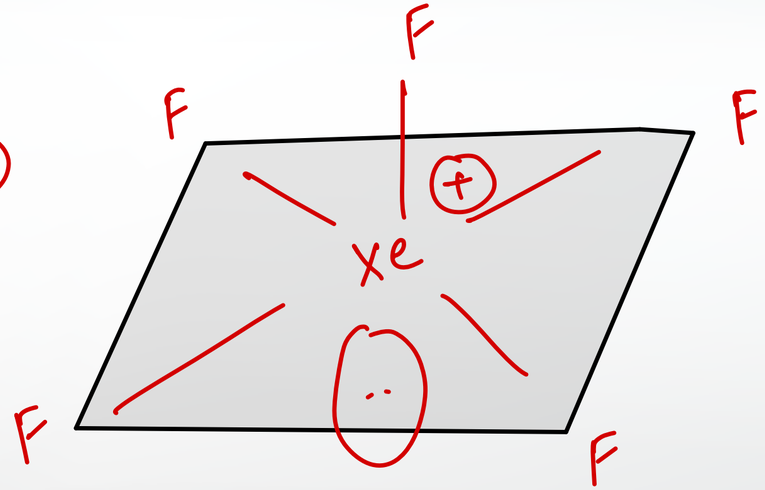
Hyb: sp^3d^3



* $BL \propto \frac{1}{BA}$.

* $BL_{(ax)} < BL_{(eq)}$

(38)



Hyb: Sp^3d^2

Shape: Square pyramidal.

39. BrF5

40 .[I(CN)2]$^-$

41. POCl3

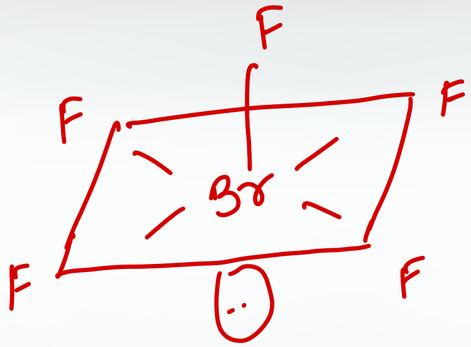
42.C2H6

43. C2H4

44.C2H2

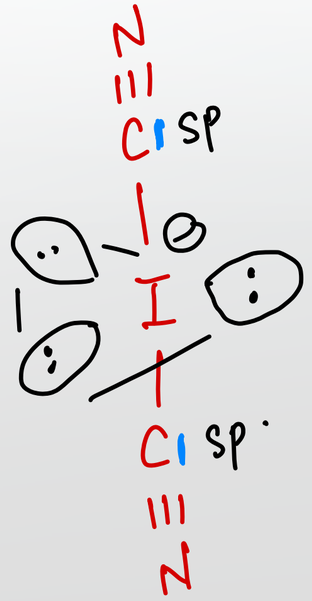
(39) SN = 6

Hyb: sp^3d^2



Geo: Square pyramidal.

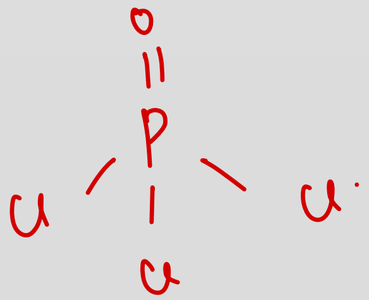
(40)



(I) Hyb: sp^3d.

Shape: Linear.

(41)

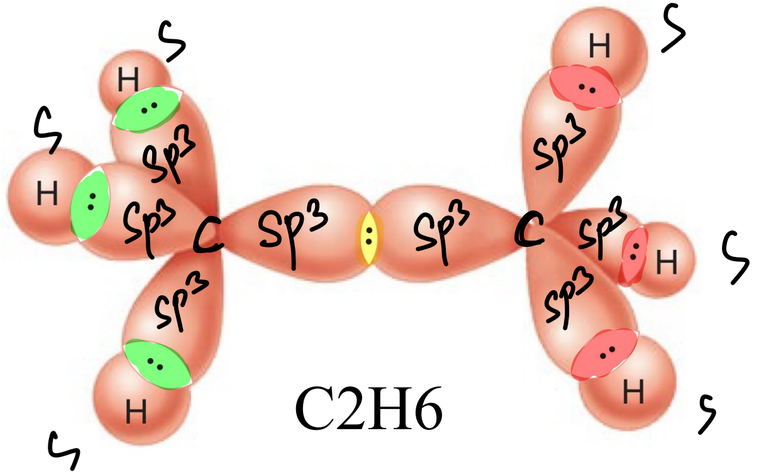


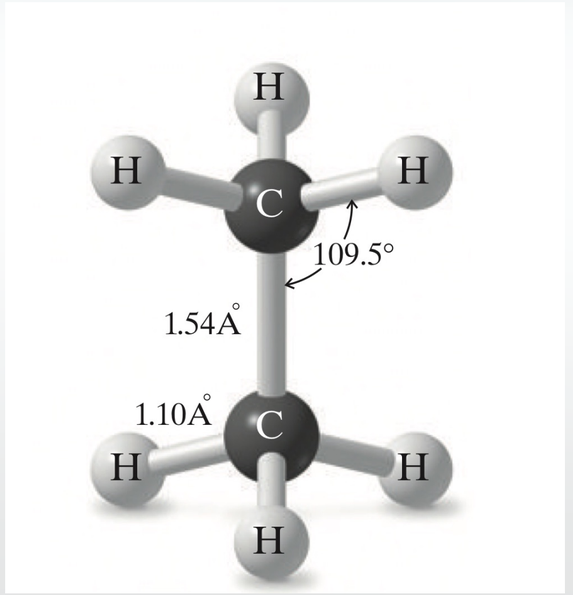
SN : 4.

Hyb: sp^3

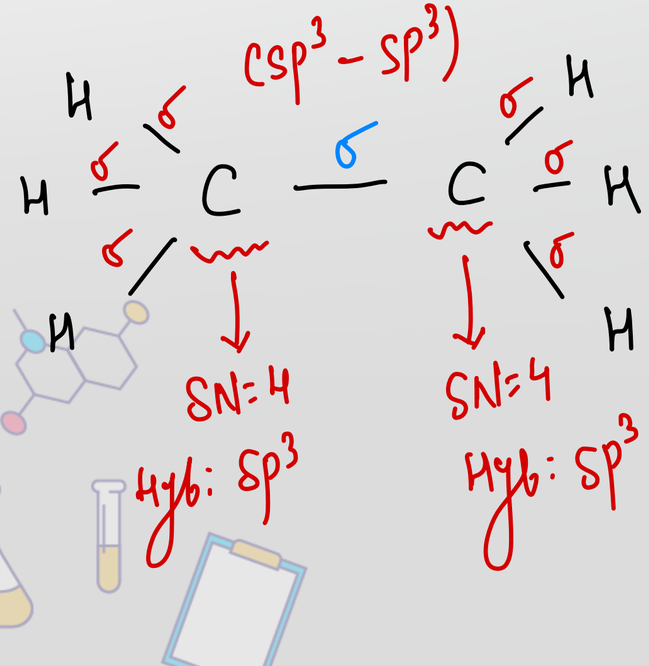
Geo: Tetrahedral.

Chemical Bonding

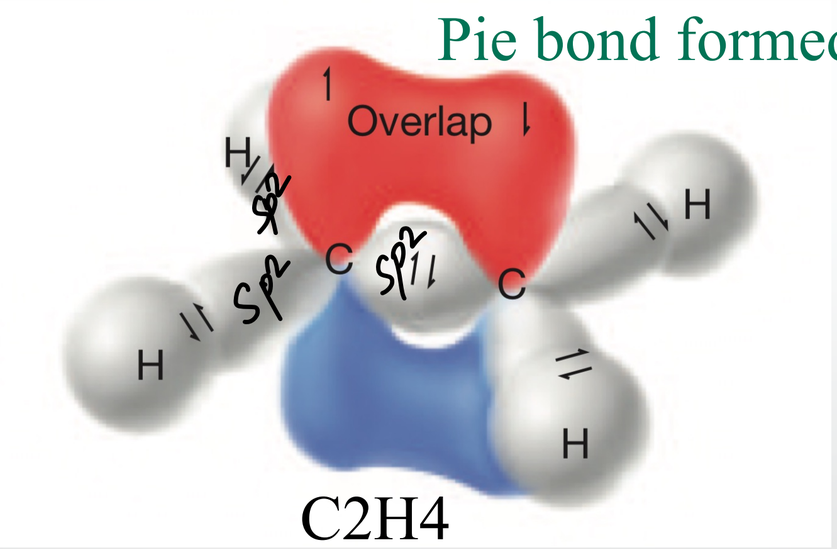




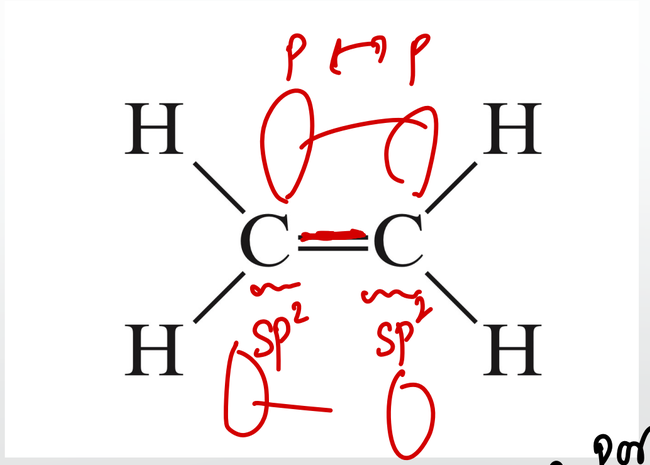
(42)



Pie bond formed by p-p sidewise overlapping



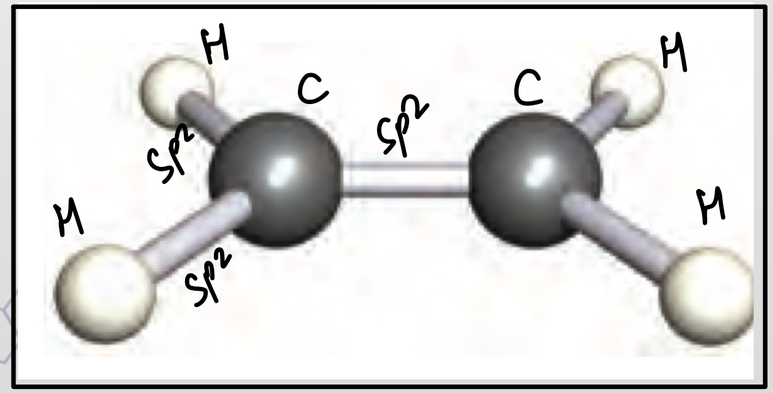
C2H4



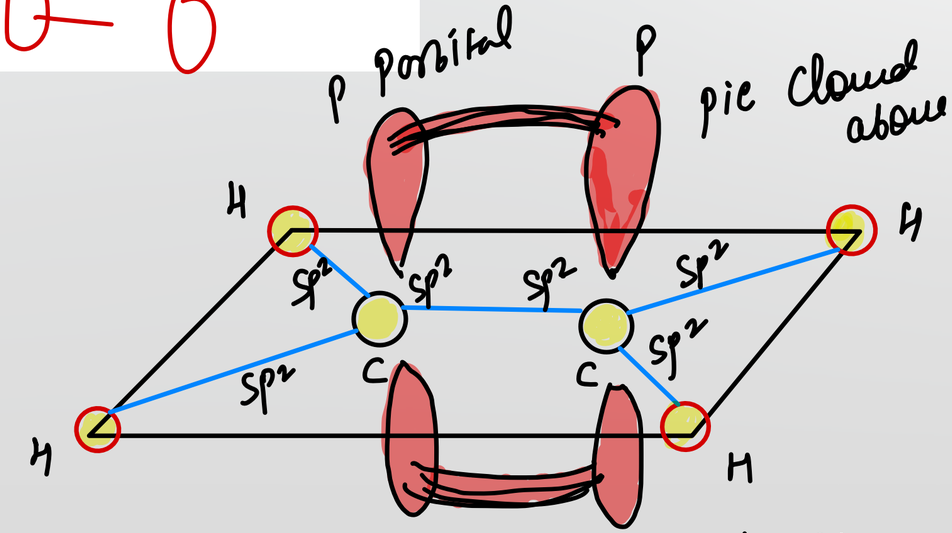
(σ) sp^2 = Hybrid orbital

CT Bond.

pure p Atomic orbital.

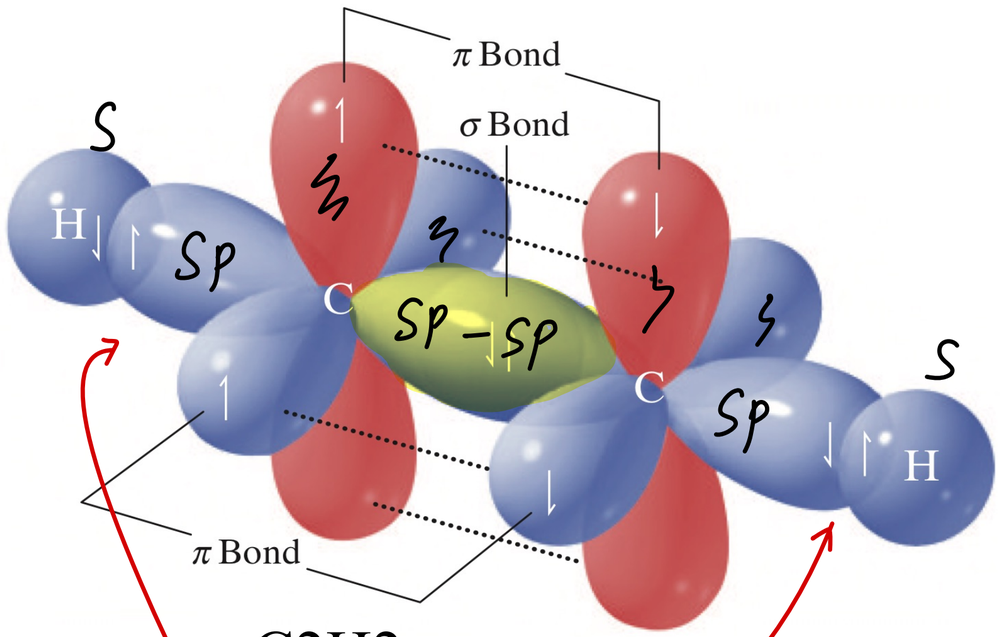


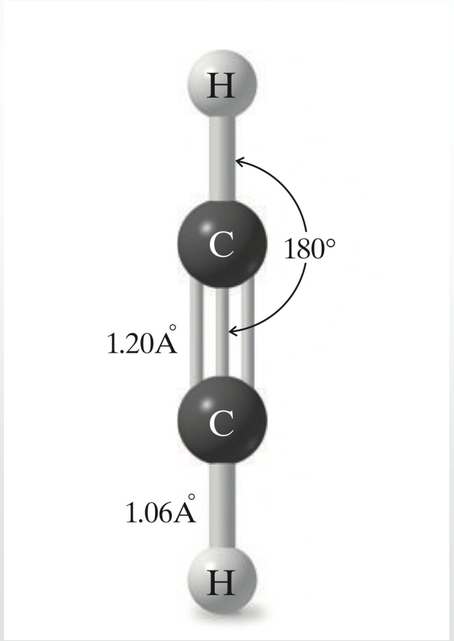
Planar molecule



pie Cloud above & below the plane.

planar.





H — C(1) ≡ C — H

SN: 2 (1)

Hyb: sp

SN: 2

Hyb: sp

C [He] $2s^2$ $2p^2$

G.S.

C* [He] $2s^1$ $2p^3$

F.E.S

Hybridization : 2 (sp)

Chemical Bonding

C [He] $2s^2$ $2p^2$

6 4s

C [He] $2s^1$ $2p^3$

6 FES

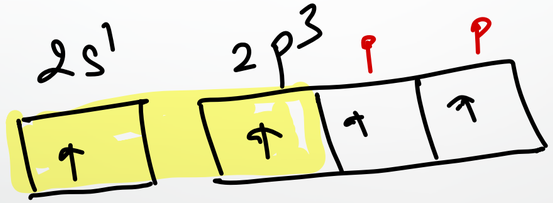
2 (sp)

C [He] $2s^2$ $2p^2$

6

C [He] $2s^1$ $2p^3$

6 FES



2 (sp)

45. ICl_4^-

46. SF_2

47. XeF_3^+

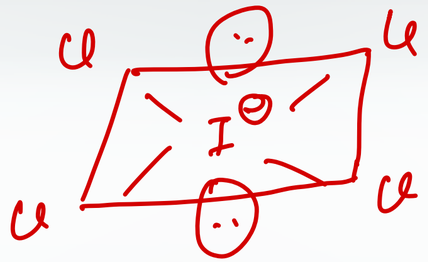
48. ICl_4^+

49. $XeO_2F_2^{+2}$

50. IF_5

(45) SN = 4 + 2 = 6

Hyb: sp^3d^2



Geo: Square planar.

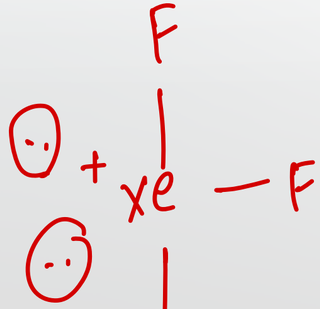
(46) SN = 4

Hyb: sp^3

Geo: Bent / V / Angular.

(47) SN = 3 + 2 = 5

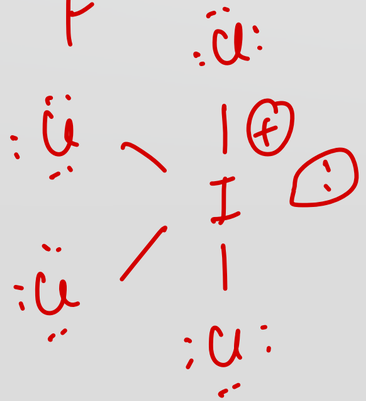
Hyb: sp^3d.



Geo: T shape.

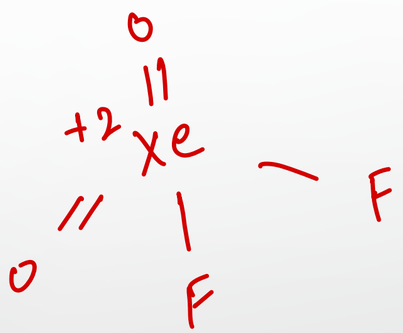
(48) SN = 4 + 1 = 5

Hyb: sp^3d.



Geo: See-saw.

(49) $XeO_2F_2^{2+}$



SN = 4

Hyb: sp^3

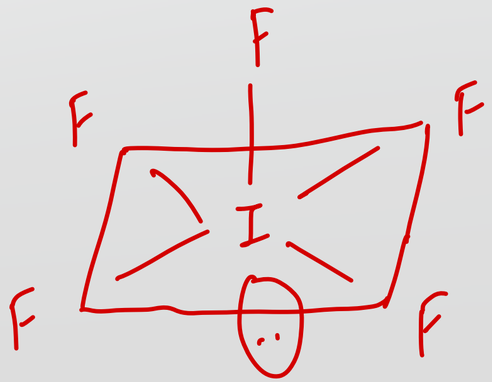
Geol shape: tetrahedral.

(50) IF_5

SN : 5 + 1

= 6

Hyb : sp^3d^2



Geo: square pyramidal.

51. $SiCl_4$

52. POF_3

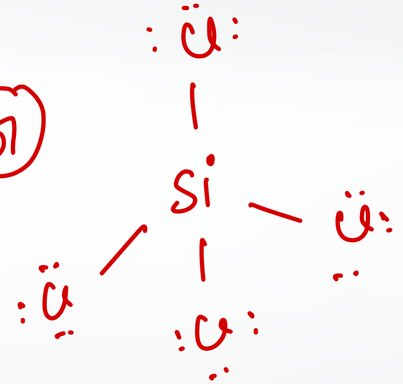
53. $C(CN)_4$

54. $\bar{P}F_6$

55. HCN

56. H_3BO_3

(51)



SN = 4

Hyb: sp^3

Shape: Tetrahedral.

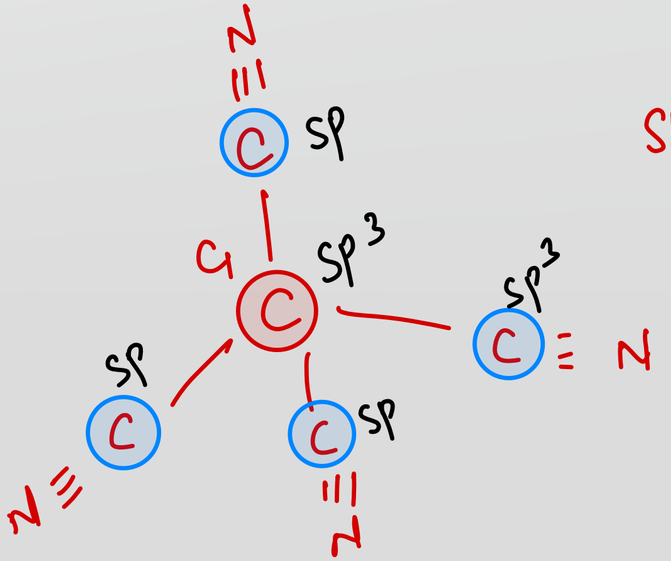
(52)

SN = 4

Hyb: sp^3

Shape: Tetrahedral.

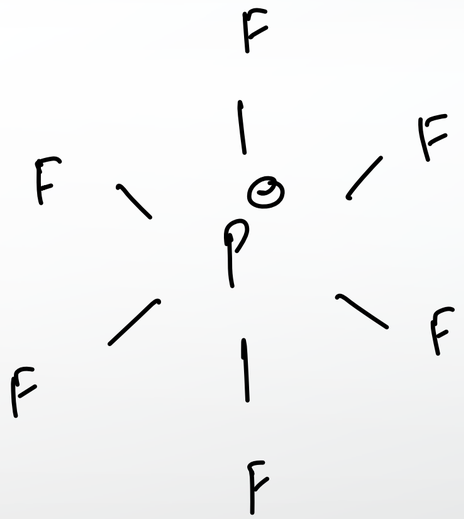
(53)



SN : 4

Hyb: C_1 : sp^3

(54)



Hyb: sp^3d^2

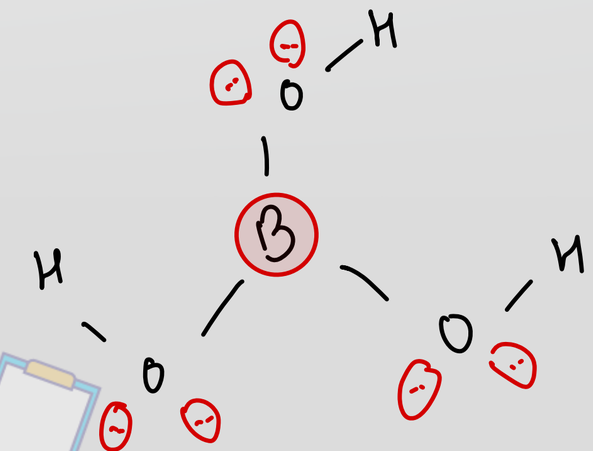
Geo: octahedral.

(55)

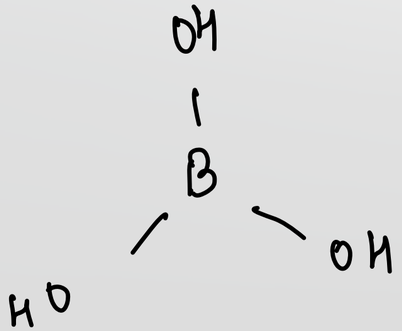
Hyb: sp

Geo: linear.

(56)



Hyb: sp^2



57. SiO_2

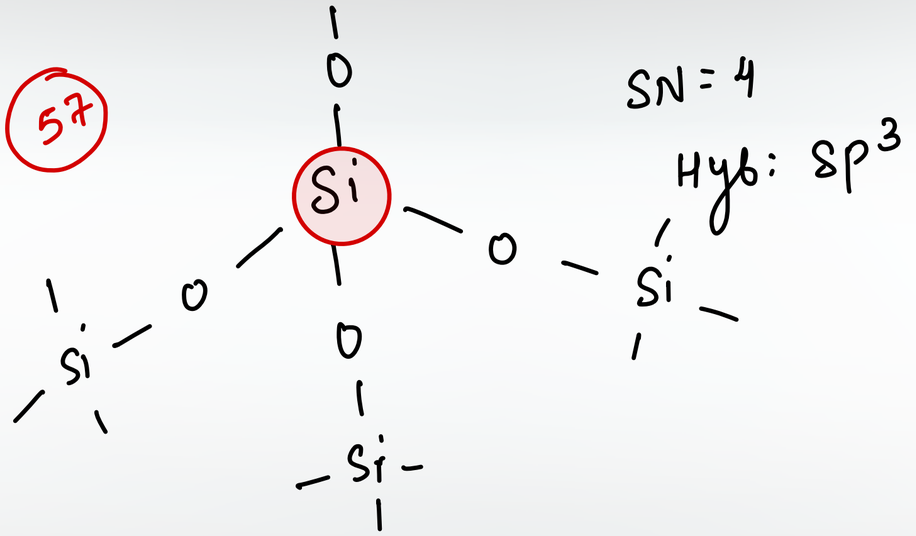
58. $\bar{N}H_2$(amide ion)

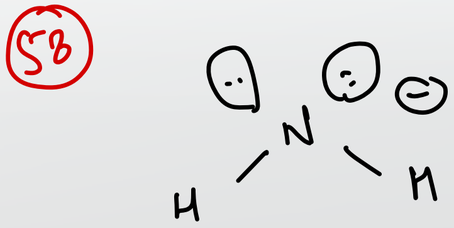
59. N_2H_4 (hydrazine)

60 .$SOCl_2$(Thionyl chloride)

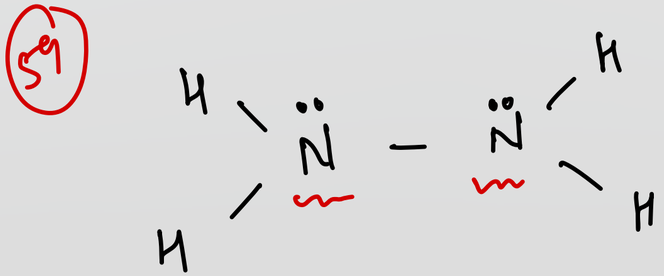
61.SO_2Cl_2 (sulfuryl chloride)

62. PCl_2F_3

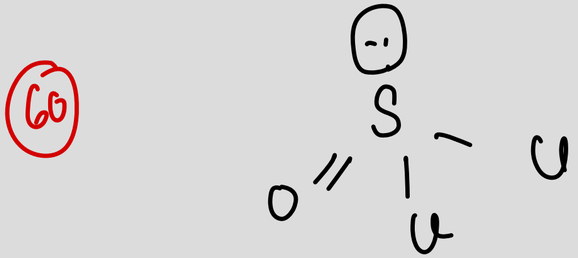




SN = 4
Hyb : sp^3
Geo : V Bent / Shape



SN = 4
Hyb : sp^3



SN = 4
Hyb : sp^3
Geo : Trigonal pyramidal