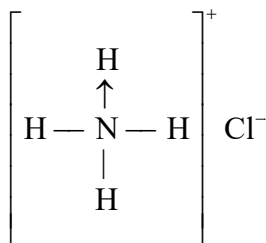


CHEMISTRY

81. (2)

NH_4Cl contains ionic, covalent bond and coordinate linkage.



82. (3)

The molecules having distorted geometry have dipole moment and those having regular geometry have zero dipole moment.

$\therefore \text{NH}_3, \text{CH}_3\text{Cl}$ and ClO_2 have distorted geometry

\therefore They have dipole moment.

$\therefore \text{BF}_3$ has regular triangular planar geometry.

The dipole moment of BF_3 is zero.

83. (2)

According to charge rule.

84. (2)

Calculated dipole moment,

$$\begin{aligned} \mu_{\text{cal}} &= 2.0 \times 10^{-10} \text{ m} \times 1.6 \times 10^{-19} \text{ C} \\ &= 3.2 \times 10^{-29} \text{ C-m.} \end{aligned}$$

Percentage of ionic character

$$= \frac{\mu_{\text{exp}}}{\mu_{\text{cal}}} \times 100 = \frac{5.12 \times 10^{-29}}{3.2 \times 10^{-29}} \times 100 = 16\%$$

85. (4)

Covalent character $\propto \frac{1}{\text{size of cation}}$ \propto size

of anion (according to Fajan's rule)

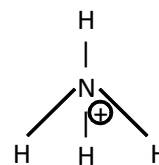
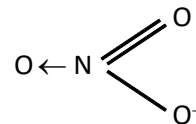
Lower the covalent character, higher will be ionic character.

Cl_2O , contains O^{2-} , NCl_3 contains N^{3-} , PbCl_2 contains Pb^{2+} and BaCl_2 contains Ba^{2+}

Hence, the order of covalent character is $\text{NCl}_3 > \text{Cl}_2\text{O} > \text{PbCl}_2 > \text{BaCl}_2$

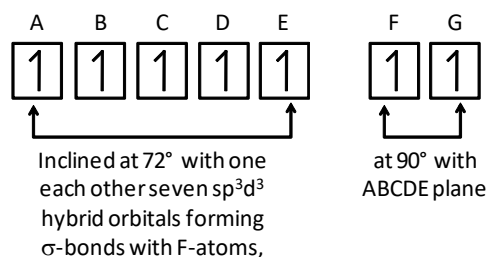
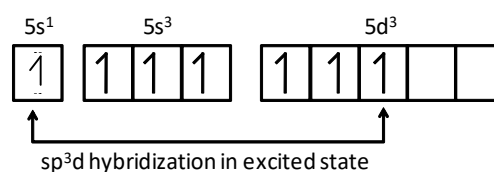
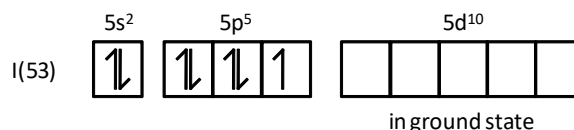
$\therefore \text{BaCl}_2$ has the greatest ionic character.

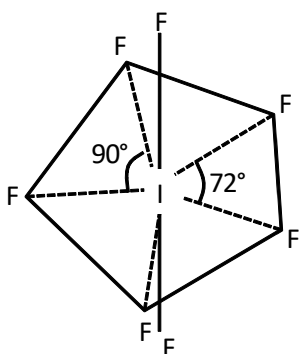
86. (2)



	σ -bond	Lone pair	Unpaired electron	Total
I	3	×	×	3 (sp^2)
II	2	×	×	2 (sp)
III	4	×	×	4 (sp^3)

87. (4)

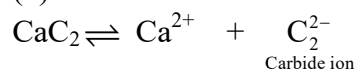
 IF_7 



88. (4)

Species	Hybridization of Xe	Lone pair on Xe	Bonding pairs
(1) XeO ₃	sp ³	1	3
(2) XeF ₄	sp ³ d ²	2	4
(3) XeF ₆	sp ³ d ³	1	6
(4) XeF ₂	sp ³ d	3 (Max.)	2

89. (1)



In carbide ion, two carbon atoms are joined by triple bond (If isoelectronic with N₂). — C≡C— with two π and one σ-bonds.

90. (4)

sp³d² hybridised molecule have octahedral geometry.


**PARISHRAMA
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