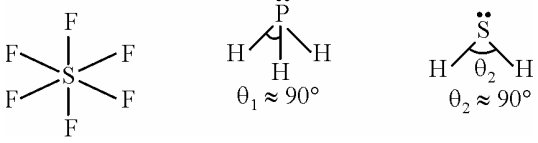
16.(D) SF_6



Remember it as a fact.

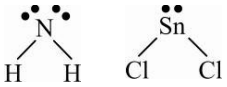
17.(D) Count total no. of electrons in CO_2 = $6 + 8 + 8 = 22$

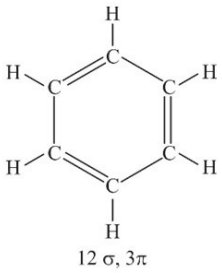
Total no. of electron in N_3^- : $7 + 7 + 7 + 1 = 22$

Total no. of electron in CNO^- : $6 + 7 + 8 + 1 = 22$

Total no. of electron in NCN^{2-} : $7 + 6 + 7 + 2 = 22$

Hence, all the three species are iso electronic as the total no. of electrons are equal.

18.(B) $NH_2^{\ominus}$ has bent shape like $SnCl_2$. 

19.(B) 

12 σ, 3π

20.(C) $Pb \longrightarrow [Xe]\ 4f^{14}\ 5d^{10}\ 6s^2\ 6p^2$; $Pb^{2+} \longrightarrow [Xe]\ 4f^{14}\ 5d^{10}\ 6s^2\ 6p^0$

It means 1st, 2nd, 3rd and 4th shells are fully filled and 5th shell has $\longrightarrow 18e^-s$ and 6th shell has $\longrightarrow 2e^-s$

21.(D) $Zn^{2+} \longrightarrow [Ar]\ 3d^{10}$; $Cu^+ \longrightarrow [Ar]\ 3d^{10}$; $Ag^+ \longrightarrow [Kr]\ 4d^{10}$

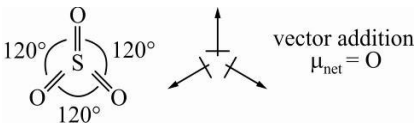
22.(B) Hydrogen in covalent compound $\longrightarrow H-Cl$

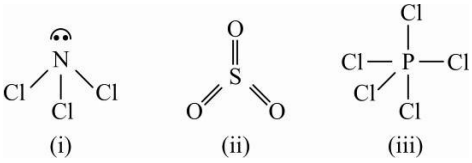
Hydrogen in ionic compound $\longrightarrow$ NaH

23.(C) $\left[\ddot{O} = N = \ddot{O} \right]^+$

24.(B) $O = C = O$, $Cl - \underset{\displaystyle Cl}{\overset{\displaystyle Cl}{\underset{|}{\overset{|}{C}}}} - Cl$, $Cl - Cl$ All of these contain covalent bonds.

NH_4Cl, AlF_3 and CaO contain ionic bonds.

25.(C) 

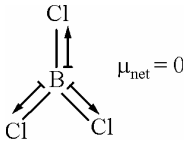
26.(D) 

(i) (ii) (iii)

Out of (i), (ii) and (iii) only (ii) and (iii) are symmetrical

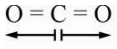
27.(D) Polarising power $\propto \frac{\text{Cation charge}}{\text{Cation radius}}$

$Al^{3+} \longrightarrow$ maximum charge, smallest radius

28.(A) 

$\mu_{net} = 0$

29.(C) Apply Fazan's rule, - large cation and small anion.

30.(B) 

$\mu_{net} = 0$