Level - 2
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- **106.(B)** Conversion of white tin to grey tin is called plague of tin.
- **107.(C)**  $H_2C_2O_4 \xrightarrow{\Delta} CO + CO_2 + H_2O$ (A) (B) (C)
  - CO burns with a blue flame

$${\rm CO} + {\rm Cl}_2 \xrightarrow{\hspace{0.5cm} {\rm COCl}_2} \xrightarrow{\hspace{0.5cm} {\rm NH}_3} {\rm NH}_2 {\rm CONH}_2$$

- **108.(B)** Number of shared oxygen per tetrahedron in Amphibole Silicate is 2.5.
- 109.(C) Kinoite mineral contains silicate anion. Silicate is a chain of three  $SiO_4$  tetrahedral that shares corners with adjacent anion. Silicate share corners with adjacent tetrahedral. Therefore formula is  $Si_3O_{10}^{8-}$ .
- **110.(D)**  $\Delta H$  will be maximum for  $BI_3$  because of its maximum Lewis acidic character.
- **111.(C)** As Al(OH) $_3$  is amphoteric in nature hence, it can act as an antacid. Al(OH) $_3$  + 3H $^+$   $\longrightarrow$  Al $^{3+}$  + 3H $_2$ O
- 112.(C) SiCl<sub>4</sub> reacts with water due to vacant d-orbitals available with Si and no such vacant d-orbitals are available with carbon, hence CCl<sub>4</sub> does not react with water. Although, both SiCl<sub>4</sub> and CCl<sub>4</sub> are covalent.
- 113.(C) In group 13, 14, 15 as we descend down in group, the higher oxidation state becomes less stable due to inert pair effect. Therefore, lead show +2 as stable oxidation state. Hence,  $Pb^{4+}$  act as a strong oxidizing agent, itself reduced to  $Pb^{2+}$  very easily. Only statement I is correct and statement II is a incorrect.
- **114.(CD)**  $K'_a > K_a$

$$CHF_3 \xleftarrow{\quad K_a \quad} CF_3^- + H^+$$

$$F 
ightharpoonup F$$
Stabilized by inductive effect of F-atoms

$$CHCl_3 \xrightarrow{K'_a} CCl_3^- + H^+$$

Cl Stabilized by 
$$2p_{\pi} - 3p_{\pi}$$
 back bonding

**115.(B)** Bond length is inversely proportional to bond order.