

Date Planned : __ / __ / __	Daily Tutorial Sheet-9	Expected Duration : 30 Min
Actual Date of Attempt : __ / __ / __	Level-2	Exact Duration : _____

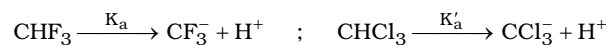
106. The plague of tin is the :  
 (A) conversion of stannous to stannic  
 (B) conversion of white tin to grey tin  
 (C) emission of sound while bending a tin rod  
 (D) atmospheric oxidation of tin
107.  $\text{H}_2\text{C}_2\text{O}_4(\text{B}) \xrightarrow{\Delta} \text{gas (A)} + \text{gas (B)} + \text{liquid (C)}$ . ▶  
 Gas (A) burns with a blue flame and is oxidised to gas (B)  
 Gas (A) +  $\text{Cl}_2 \longrightarrow (\text{D}) \xrightarrow{\text{NH}_3, \Delta} (\text{E})$   
 A, B, C and E are :  
 (A)  $\text{CO}_2, \text{CO}, \text{H}_2\text{O}, \text{HCONH}_2$  (B)  $\text{CO}, \text{CO}_2, \text{COCl}_2, \text{HCONH}_2$   
 (C)  $\text{CO}, \text{CO}_2, \text{H}_2\text{O}, \text{NH}_2\text{CONH}_2$  (D)  $\text{CO}, \text{CO}_2, \text{H}_2\text{O}, \text{COCl}_2$
108. Amphibole silicate structure has 'x' number of corner shared per  $\text{SiO}_4$  tetrahedron. The value of 'x' is :  
 (A) 2 (B)  $2\frac{1}{2}$  (C) 3 (D) 4 ▶
109. The silicate anion in the mineral kinoite is a chain of three  $\text{SiO}_4$  tetrahedral that share corners with adjacent tetrahedral. The mineral also contains  $\text{Ca}^{2+}$  ions,  $\text{Cu}^{2+}$  ions, and water molecules in a 1:1:1 ratio. Mineral is represented as :  
 (A)  $\text{CaCuSi}_3\text{O}_{10} \cdot \text{H}_2\text{O}$  (B)  $\text{CaCuSi}_3\text{O}_{10} \cdot 2\text{H}_2\text{O}$   
 (C)  $\text{Ca}_2\text{Cu}_2\text{Si}_3\text{O}_{10} \cdot 2\text{H}_2\text{O}$  (D) None of these
110.  $\text{BX}_3 + \text{NH}_3 \xrightarrow{\text{R.T.}} \text{BX}_3 \cdot \text{NH}_3 + \text{Heat of adduct formation } (\Delta H)$  ▶  
 The numerical value of  $\Delta H$  is found to be maximum for :  
 (A)  $\text{BF}_3$  (B)  $\text{BCl}_3$  (C)  $\text{BBr}_3$  (D)  $\text{BI}_3$

**Paragraph for Questions 111 – 113** ▶

In each of the following questions two Statements are given as Statement-1 and Statement-2. Examine the statements carefully and answer the questions according to the instructions given below:

- (A) Statement-1 is True, Statement-2 is True and Statement-2 is a correct explanation for Statement-1  
 (B) Statement-1 is True, Statement-2 is True and Statement-2 is NOT a correct explanation for Statement-1  
 (C) Statement-1 is True, Statement-2 is False  
 (D) Statement-1 is False, Statement-2 is True
111. **Statement-1** :  $\text{Al}(\text{OH})_3$  is amphoteric in nature.  
**Statement-2** : It cannot be used as an antacid.
112. **Statement-1** : Between  $\text{SiCl}_4$  and  $\text{CCl}_4$ , only  $\text{SiCl}_4$  reacts with water.  
**Statement-2** :  $\text{SiCl}_4$  is ionic and  $\text{CCl}_4$  is covalent.
113. **Statement-1** :  $\text{Pb}^{4+}$  compounds are stronger oxidising agents than  $\text{Sn}^{4+}$  compounds.  
**Statement-2** : The higher oxidation states for the group 14 elements are more stable for the heavier members of the group due to 'inert pair effect'.

\*114. Consider the following reactions



Then regarding given reactions which of the following statement(s) is/are correct :

- (A)  $K_a > K'_a$
- (B)  $\text{CHF}_3$  acts as a stronger bronsted acid than  $\text{CHCl}_3$
- (C)  $\text{CCl}_3^-$  is more stable than  $\text{CF}_3^-$
- (D)  $\text{CCl}_3^-$  is weaker Lewis base than  $\text{CF}_3^-$

115. Choose the correct order of C – C bond length in the given compounds :

- (A) Acetylene < ethylene < graphite < benzene < ethane
- (B) Acetylene < ethylene < benzene < graphite < ethane
- (C) Acetylene < graphite < ethylene < benzene < ethane
- (D) Acetylene < benzene < graphite < ethylene < ethane