Date Planned : __ / __ / __	Daily Tutorial Sheet-8	Expected Duration : 90 Min
Actual Date of Attempt : __ / __ / __	JEE Advanced (Archive)	Exact Duration :_____

106. For H_3PO_3 and H_3PO_4 the correct choice is : **(2002)**

(A) H_3PO_3 is dibasic and reducing **(B)** H_3PO_3 is dibasic and non-reducing

(C) H_3PO_4 is tribasic and reducing **(D)** H_3PO_3 is tribasic and non-reducing

107. Write balanced equations for the reaction of the following compounds with water : **(2002)**

(i) Al_4C_3 **(ii)** CaNCN **(iii)** BF_3

(iv) NCl_3 **(v)** XeF_4

108. Identify the following : **(2003)**

$$Na_2CO_3 \xrightarrow{SO_2} A \xrightarrow{Na_2CO_3} B \xrightarrow[\Delta]{\text{Elements S}} C \xrightarrow{I_2} D$$

Also mention the oxidation state of S in all the compounds.

109. $(Me)_2SiCl_2$ on hydrolysis will produce : **(2003)**

(A) $(Me)_2Si(OH)_2$ **(B)** $(Me)_2Si = O$

(C) $\dagger O-(Me)_2Si-O-]_n-$ **(D)** $Me_2SiCl(OH)$

110. The acid having $O-O$ bond is : **(2004)**

(A) $H_2S_2O_3$ **(B)** $H_2S_2O_6$ **(C)** $H_2S_2O_8$ **(D)** $H_2S_4O_6$

111. The number of lone pair of electrons in $XeOF_4$ is : **(2004)**

(A) 0 **(B)** 1 **(C)** 2 **(D)** 3

112. Pb and Sn are extracted from their chief ores by : **(2004)**

(A) carbon reduction and self reduction respectively

(B) self reduction and carbon reduction respectively

(C) electrolysis and self reduction respectively

(D) self reduction and electrolysis respectively

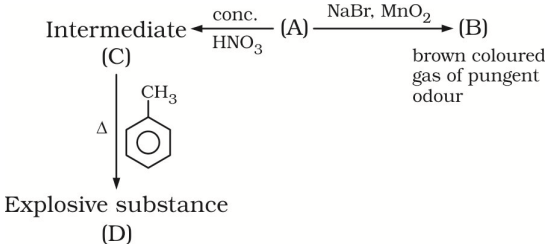
113. Which blue liquid is obtained on reacting equimolar amounts of two gases at $-30°C$? **(2005)**

(A) N_2O **(B)** N_2O_3 **(C)** N_2O_4 **(D)** N_2O_5

114. Which of the most thermodynamically stable allotropic form of phosphorus ? **(2005)**

(A) Red **(B)** White **(C)** Black **(D)** Yellow

115.



Identify (A), (B), (C) and (D). Give the reaction of (A) → (B) and (C) → (D). **(2005)**

116. How many grams of CaO are required to neutralize 852 g of P_4O_{10} ? Draw structure of P_4O_{10} molecule. **(2005)**

117. When PbO_2 reacts with conc. HNO_3 the gas evolved is : **(2005)**

(A) NO_2 **(B)** O_2 **(C)** N_2 **(D)** N_2O

118. How can the following reaction be made to proceed in forward direction ? **(2006)**

$$B(OH)_3 + NaOH \rightleftharpoons NaBO_2 + Na\left[B(OH)\right]_4 + H_2O$$

(A) addition of borax **(B)** addition of cis-1, 2diol

(C) addition of Na_2HPO_4 **(D)** addition of trans-1, 2-diol

119. Match the following : **(2006)**

Column-I		Column-II	
(A)	$Bi^{3+} \longrightarrow (BiO)^+$	**(p)**	Heat
(B)	$[AlO_2]^- \longrightarrow Al(OH)_3$	**(q)**	Hydrolysis
(C)	$[SiO_4]^{4-} \longrightarrow [Si_2O_7]^{6-}$	**(r)**	Acidification
(D)	$[B_4O_7]^{2-} \longrightarrow [B(OH)_3]$	**(s)**	Dilute by water

120. The percentage of p-character in the orbitals forming P – P bonds in P_4 is : **(2007)**

(A) 25 **(B)** 33 **(C)** 50 **(D)** 75