| Date Planned : __ / __ / __ | Daily Tutorial Sheet-6 | Expected Duration : 90 Min |
|---|---|---|
| Actual Date of Attempt : __ / __ / __ | JEE Advanced (Archive) | Exact Duration :_____ |

**76.** Gradual addition of KI solution to $Bi(NO_3)_3$ solution initially produces a dark brown precipitate which dissolves in excess of KI to give a clean yellow solution.
Write chemical equations for the above reactions. **(1996)**

**77.** Draw the structure of $P_4O_{10}$ and identify the number of single and double $P-O$ bonds. **(1996)**

**78.** Sodium thiosulphate is prepared by : **(1996)**
**(A)** reducing $Na_2SO_4$ solution with $H_2S$
**(B)** boiling $Na_2SO_3$ solution with S in alkaline medium
**(C)** neutralising $H_2S_2O_3$ solution with NaOH
**(D)** boiling $Na_2SO_3$ solution with S in acidic medium

**79.** Which of the following halides is least stable and has doubtful existence ? **(1996)**
**(A)** $CI_4$ **(B)** $GeI_4$ **(C)** $SnI_4$ **(D)** $PbI_4$

**80.** Which one of the following oxides is neutral ? **(1996)**
**(A)** CO **(B)** $SnO_2$ **(C)** ZnO **(D)** $SiO_2$

**81.** Which one of the following species is not a pseudohalide ? **(1997)**
**(A)** $CNO^-$ **(B)** $RCOO^-$ **(C)** $OCN^-$ **(D)** $NNN^-$

**82.** A soluble compound of a poisonous element M, when heated with $Zn/H_2SO_4$ gives a colourless and extremely poisonous gaseous compound N, which on passing through a heated tube gives a silvery mirror of element M. Identify M and N. **(1997)**

**83.** Write balanced equation for the reactions : Phosphorus is treated with concentrated nitric acid.
OR
Manufacture of phosphoric acid from phosphorus. **(1997)**

**84.** Complete the following chemical equation :
**(a)** $KI + Cl_2 \rightarrow$ **(b)** $KClO_3 + I_2 \rightarrow$ **(1997)**

**85.** White phosphorus $(P_4)$ has : **(1998)**
**(A)** six $P-P$ single bonds **(B)** four $P-P$ single bonds
**(C)** four lone pairs of electrons **(D)** PPP angle of 60°

**86.** Sodium nitrate decomposes above 800°C to give : **(1998)**
**(A)** $N_2$ **(B)** $O_2$ **(C)** $NO_2$ **(D)** $Na_2O$

**87.** Reaction of phosphoric acid with $Ca_5(PO_4)_3F$ yields a fertilizer "triple superphosphate". Represent the same through balanced chemical equation. **(1998)**

**88.** Thionyl chloride can be synthesized by chlorinating $SO_2$ using $PCl_5$. Thionyl chloride is used to prepare anhydrous ferric chloride starting from its hexahydrated salt. Alternatively, the anhydrous ferric chloride can also be prepared from its hexahydrated salt by treated with 2, 2-dimethoxypropane. Discuss all this using balanced chemical equations. **(1998)**

**89.** Write balanced equation for the reactions : $P_4O_{10} + PCl_5 \rightarrow$ **(1998)**

**90.** **Statement-1 :** F atom has less electron affinity than Cl atom.

**Statemant-2 :** Additional electrons are repelled more effectively by 3p-electrons in Cl atom than by 2p-electrons in F atom. **(1998)**

**(A)** Statement-1 is True, Statement-2 is True; Statement-2 is a correct explanation for Statement-1

**(B)** Statement-1 is True, Statement-2 is True; 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