Date Planned : __ / __ / __	Daily Tutorial Sheet-12	Expected Duration : 90 Min
Actual Date of Attempt : __ / __ / __	JEE Advanced (Archive)	Exact Duration :_____

165. The order of the oxidation state of the phosphorus atom in H_3PO_2, H_3PO_4, H_3PO_3 and $H_4P_2O_6$ is : **(2017)**

(A) $H_3PO_4 > H_3PO_2 > H_3PO_3 > H_4P_2O_6$ **(B)** $H_3PO_2 > H_3PO_3 > H_4P_2O_6 > H_3PO_4$

(C) $H_3PO_3 > H_3PO_2 > H_3PO_4 > H_4P_2O_6$ **(D)** $H_3PO_4 > H_4P_2O_6 > H_3PO_3 > H_3PO_2$

***166.** The colour of the X_2 molecules of group 17 elements changes gradually from yellow to violet down the group. This is due to : **(2017)**

(A) the physical state of X_2 at room temperature changes from gas to solid down the group

(B) decrease in HOMO-LUMO gap down the group

(C) decrease in $\pi^* - \sigma^*$ gap down the group

(D) decrease in ionization energy down the group

***167.** The correct statement(s) about the oxoacids, $HClO_4$ and HClO, is(are) : **(2017)**

(A) the conjugate base of $HClO_4$ is weaker base than H_2O

(B) the central atom in both $HClO_4$ and HClO is sp^3 hybridized

(C) $HClO_4$ is formed in the reaction between Cl_2 and H_2O

(D) $HClO_4$ is more acidic than HClO because of the resonance stabilization of its anion

Paragraph for Q. 168 to 169

Upon heating $KClO_3$ in the presence of catalytic amount of MnO_2, a gas W is formed. Excess amount of W reacts with white phosphorus to give X. The reaction of X with pure HNO_3 gives Y and Z.

168. Y and Z are, respectively : **(2017)**

(A) N_2O_5 and HPO_3 **(B)** N_2O_3 and H_3PO_4

(C) N_2O_4 and H_3PO_3 **(D)** N_2O_4 and HPO_3

169. W and X are, respectively : **(2017)**

(A) O_2 and P_4O_6 **(B)** O_2 and P_4O_{10} **(C)** O_3 and P_4O_6 **(D)** O_3 and P_4O_{10}

170. The compound(s) which generate(s) N_2 gas upon thermal decomposition below 300°C is(are) : **(2018)**

(A) NH_4NO_3 **(B)** $(NH_4)_2Cr_2O_7$ **(C)** $Ba(N_3)_2$ **(D)** Mg_3N_2

171. Based on the compounds of group 15 elements, the correct statement(s) is(are) : **(2018)**

(A) Bi_2O_5 is more basic than N_2O_5

(B) NF_3 is more covalent than BiF_3

(C) PH_3 boils at lower temperature than NH_3

(D) The N – N single bond is stronger than the P – P single bond

172. The total number of compounds having at least one bridging oxo group among the molecules given below is_____. **(2018)**

N_2O_3, N_2O_5, $H_5P_3O_{10}$, $H_2S_2O_3$, $H_2S_2O_5$, $H_4P_2O_5$, P_4O_6, P_4O_7

173. Among $B_2H_6, B_3N_3H_6, N_2O, N_2O_4, H_2S_2O_3$ and $H_2S_2O_8$ the total number of molecules containing covalent bond between two atoms of the same kind is _____. **(2019)**

174. At 143 K, the reaction of XeF_4 with O_2F_2 produces a xenon compound Y. The total number of lone pair(s) of electrons present on the whole molecule of Y is _____. **(2019)**