CHEMISTRY

Class XII (ASSIGNMENT - 3)

P-BLOCK ELEMENTS (Contd)

Q1. Complete and balance the following reactions:

I. $XeF_2 + H_2O \longrightarrow$
II. $XeF_4 + H_2O \longrightarrow$
III. $XeF_6 + H_2O \longrightarrow$
IV. $XeOF_4 + H_2O \longrightarrow$

Q2.Draw the structures of H_3PO_4 and H_3PO_3 and explain their bascity with reference to their structures.

Q3. a) Write balanced equation for the preparation of XeF_2 and XeF_4.

b) What is the shape and state of hybridization of Xe in XeF_2, XeF_4, and XeF_6?

Q4. Account for the following

i) PH_3 is a weaker base than NH_3
ii) SF_6 exist but OF_6 does not
iii) Sulphur exhibits tendency for catenation but oxygen does not.

[Hints:

i) The atomic size of "N" is smaller than that of P atom. Hence electron density is higher than that of "P" and donation of electrons becomes easier.

ii) "O" belongs to 2^{nd} period and lacks vacant "d".

iii) Due to smaller size of "O" atom there is greater lone pair-bond pair repulsion in O-O bond than that in S-S bond.]

Instructions: Complete the answers of the assignments 1, 2, 3 in your chemistry class work copy. The above Assignment -3 is continuation of the text Assignment -2 (P-Block elements) and is not related to the video assignment (Chapter: Solution). In your next text assignment-4 you will receive problems pertaining to Chapter: solution (Colligative Proprties).