



CHEMISTRY

CH: 7 P BLOCK ELEMENTS

Class: XII

I Answer the following

1. Which one of PCl_4^+ and PCl_4^- is not likely to exist and why?
2. Of PH_3 and H_2S which is more acidic and why?
3. Why are the two S-O bonds in SO_2 molecule of equal length?
4. O_2 and F_2 both stabilize higher oxidation states of metals but O_2 exceeds F_2 in doing so. Give reason
5. Structures of Xenon fluorides cannot be explained by valence bond approach.
6. Helium is used in diving equipments. Why?
7. Why does PCl_3 fume in moisture?
8. BiCl_3 is more stable than BiCl_5 . Why?
9. Phosphorous shows high tendency for catenation. Why?
10. F_2 is more reactive than ClF_3 but ClF_3 is more reactive than Cl_2 . Why?
11. N_2 is found in gaseous state. Why?
12. Decomposition of ozone molecule is a spontaneous process. Why?
13. Write the structural difference between white phosphorous and red phosphorous.
14. Unlike xenon, no distinct chemical compound of helium is known. Why?
15. H_3PO_2 is stronger reducing agent than H_3PO_3 . Why?
16. NH_3 is more basic than PH_3 . Why?
17. Bond angle in NH_4^+ is higher than NH_3 . Why?
18. H_2S has lower boiling point than H_2O . Why?
19. Reducing character decreases from SO_2 to TeO_2 . Why?
20. HClO_4 is a stronger acid than HClO . Why?
21. BiH_3 is the strongest reducing agent amongst all the hydrides of group 15. Why?
22. Acidic character increases from HF to HI . Why?
23. There is large difference between the melting and boiling points of oxygen and sulphur. Why?
24. Which allotrope of phosphorous is more reactive and why?
25. Noble gases have very low boiling points. Why?