



CHEMISTRY

CH: P BLOCK ELEMENTS

Class: XI

1. What is inert pair effect?
2. Atomic radius of Ga is less than Al though Ga is below Al in the group. Why?
3. PbI_4 does not exist. Why?
4. What are the reasons for the anomalous behavior of carbon atom?
5. Draw the structure of a) boric acid b) diborane.
6. Why does BF_3 act as a Lewis acid?
7. Give reasons for the following.
 - i) $Co(NO_3)_3$ can be transported in aluminium containers.
 - ii) A mixture of dilute NaOH and Al pieces is used to open drain.
 - iii) Diamond is used as an abrasive.
 - iv) There is phenomenal decrease in ionization enthalpy from carbon to silicon.
8. What are a) silicones b) silicates c) zeolites?
9. Write equations for the following reactions.
 - a) Boric acid is heated.
 - b) Silicon dioxide is treated with hydrogen fluoride.
 - c) CO is heated with ZnO.
10. Which one of PCl_4^+ and PCl_4^- is not likely to exist and why?
11. N_2 is found in gaseous state. Why?
12. NH_3 is more basic than PH_3 . Why?
13. Bond angle in NH_4^+ is higher than NH_3 . Why?
14. Why does PCl_3 fume in moisture?
15. $BiCl_3$ is more stable than $BiCl_5$. Why?
16. BiH_3 is the strongest reducing agent amongst all the hydrides of group 15. Why?