



e-Edge Education Centre, www.eeeclases.info

Time :1:30 hrs

Class XII

Chemistry

M.M. 31

1. Why are pentahalides more covalent than trihalides? [1]
2. Why is N_2 less reactive at room temperature? [1]
3. How does ammonia react with a solution of Cu^{2+} ? [1]
4. Why does PCl_3 fume in moisture? [1]
5. Write the order of thermal stability of the hydrides of Group 16 elements. [1]
6. Which form of sulphur shows paramagnetic behavior? [1]
7. When HCl reacts with finely powdered iron, it forms ferrous chloride and not ferric chloride. Why? [1]
8. Why is helium used in diving apparatus? [1]
9. Why has it been difficult to study the chemistry of radon? [1]
10. Why NH_3 form hydrogen bond but PH_3 does not? [1]
11. The HNH angle value is higher than HPH, HAsH and HSbH angles. Why? [2]
12. Why does $R_3P=O$ exist but $R_3N=O$ does not (R = alkyl group)? [1]
13. Can PCl_5 act as an oxidizing as well as a reducing agent? Justify. [1]
14. Write the reactions of F_2 and Cl_2 with water. [2]
15. Write the reaction involved in preparation of HNO_3 How does HNO_3 react with Cu and Zn under different condition? [4]
16. Arrange the following in the order of property indicated for each set: [3]
 - (i) F_2, Cl_2, Br_2, I_2 - increasing bond dissociation enthalpy.
 - (ii) HF, HCl, HBr, HI - increasing acid strength.
 - (iii) $NH_3, PH_3, AsH_3, SbH_3, BiH_3$ – increasing base strength.
17. Write balanced equations for the following: [2]
 - (i) NaCl is heated with sulphuric acid in the presence of MnO_2 .
 - (ii) Chlorine gas is passed into a solution of NaI in water.
18. Fill in the blanks [6]
 - (i) $XeF_6 + 2H_2O \rightarrow$
 - (ii) $CsF + XeF_6 \rightarrow$
 - (iii) $XeF_4 + SbF_5 \rightarrow$
 - (iv) $NaBr_{aq} + F_2 \rightarrow$
 - (v) $NaI + Br_2 \rightarrow$
 - (vi) $H_2S + SO_2 \rightarrow$