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Time :1 hr Class XII Chemistry M.M. 38

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 behaviour? [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 does 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? [1]

12. Why does $R_3P = O$ exist but $R_3N = O$ does not (R = alkyl group)? [1]

13. Can PCl_5 act as an oxidising as well as a reducing agent? Justify. [1]

14. Why **are** Sf_6 can't hydrolysed but Sf_4 can be hydrolysed [1]

15. Write the reactions of F_2 and Cl_2 with water. [2]

16. How is ozone estimated quantifiably. [2]

17. How does Cl_2 reacts with NaOH differently [2]

18. 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.

19. 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.

20. When on compound A dilute HCl it gives pungent smelling gas B when pass through hydrogen sulphide gives yellow ppt.C also When B gas pass through acidified $KMnO_4$ pink color is discharged. Identify A,B,C and write the reaction involved [3]

21. Write the reaction involved in preparation of HNO_3 How does HNO_3 react with Cu and Zn under deferent condition ? [4]

22. Fill in the blanks [6]

(i) $XeF_6 + 2H_20 \rightarrow$

(ii) $CsF + XeF_6 \rightarrow$

(iii) $XeF_4 + SbF_5 \rightarrow$

(iv) Na $\underset{aq}{Br}$ $+F_2 \rightarrow$

(v) NaI +Br2 $\rightarrow$

(vi) H2S+So2 $\rightarrow$