Date Planned : __ / __ / __	Daily Tutorial Sheet-1	Expected Duration : 90 Min
Actual Date of Attempt : __ / __ / __	JEE Advanced (Archive)	Exact Duration :_____

1. Ammonia gas can be dried by : **(1978)**

(A) conc. H_2SO_4 **(B)** PCl_5 **(C)** $CaCl_2$ **(D)** quick lime

2. Which are the incorrect statements ? **(1978)**

(A) NO is heavier than O_2

(B) The formula of heavy water is D_2O

(C) Nitrogen diffuses faster than oxygen through an orifice

(D) NH_3 can be used as refrigerant

3. Account for the following. Limit your answer to two sentences. **(1979)**

(i) Hydrogen bromide cannot be prepared by the action of concentrated sulphuric acid on sodium bromide.

(ii) When a blue litmus paper is dipped into a solution of hypochlorous acid, it first turns red and then later gets decolourised.

4. **(A)** State, with balanced equations, what happens when : **(1979)**

(i) Tin is treated with moderately concentrated nitric acid.

(ii) Silver treated with hot concentrated sulphuric acid.

(iii) Aluminium is reacted with hot concentrated caustic soda solution.

(iv) Ammonium dichromate is heated

(v) Hydrogen sulphide is passed through a solution of potassium permanganate acidified with dilute sulphuric acid.

(B) Write balanced equations involved in the preparation of :

(i) Anhydrous aluminium chloride from alumina.

(ii) Bleaching powder from slaked lime.

(iii) Tin metal from classiterite.

(iv) Chlorine from sodium chloride

(v) Nitric oxide from nitric acid.

5. The reddish brown coloured gas formed when nitric oxide is oxidised by air is : **(1979)**

(A) N_2O_5 **(B)** N_2O_4 **(C)** NO_2 **(D)** N_2O_3

6. Explain the following in not more than two sentences. **(1980)**

(i) Conc. HNO_3 turns yellow in sunlight.

(ii) Bleaching powder loses its bleaching property when it is kept in an open bottle for a long time.

7. Which of the following is most stable to heat ? **(1980)**

(A) HCl **(B)** HOCl **(C)** HBr **(D)** HI

8. White P reacts with caustic soda. The products are PH_3 and NH_2PO_2. The reaction is an example of : **(1980)**

(A) Oxidation **(B)** Reduction

(C) Oxidation and reduction **(D)** Neutralisation

9. A solution of KBr is treated with each of the following. Which one would liberate bromine : **(1980)**

(A) Cl_2 **(B)** HI **(C)** I_2 **(D)** SO_2

10. Which of the following is coloured ? **(1980)**

(A) NO **(B)** N_2O **(C)** SO_3 **(D)** None of these

11. Lead pencil contains : **(1980)**

(A) Pb **(B)** FeS **(C)** Graphite **(D)** PbS

12. HBr and HI reduce sulphuric acid, HCl can reduce $KMnO_4$ and HF can reduce : **(1981)**

(A) H_2SO_4 **(B)** $KMnO_4$ **(C)** $K_2Cr_2O_7$ **(D)** None of these

13. Give reasons : Sulphur melts to a clear mobile liquid at 119°C, but on furthur heating above 160°C, it becomes viscous. **(1981)**

14. Give structural formula for the following :

(i) Phosphorous acid, H_3PO_3 **(ii)** Pyrophosphoric acid, $H_4P_2O_7$ **(1981)**

15. Show with equations how the following compound is prepared (equation need not be balanced) : Sodium thiosulphate from sodium sulphite. **(1982)**