MT EDUCARE LTD.

ICSE X SUBJECT : **CHEMISTRY**

PRACTICAL CHEMISTRY

Assignment Sheet

STEP UP ANSWERSHEET

12.

(i) i]

Test	Sodium Chloride Solution	Sodium Nitrate Solution
Conc. H_2SO_4 is added and heated.	Colourless gas evolved which gives dense white fumes with ammonia.	Reddish brown fumes evolved which liberates violet vapours from KI solution.

ii]

Test	Hydrogen Chloride Gas	Hydrogen Sulphide Gas
A rod dipped in ammonium hydroxide is brougth near the gas.	Dense white fumes of Ammonium Chloride are formed.	No reaction takes place.

iii]

Test	Calcium Nitrate Solution	Zinc Nitrate Solution
Ammonium Hydroxide is added first dropwise and then in excess.	No precipitation	Gelationous white ppt of $Zn(OH)_2$ is formed which is soluble in excess of NH_4OH.

iv]

Test	Carbon dioxide Gas	Sulphur dioxide Gas
The gas is passed through acidified solution of orange coloured $K_2Cr_2O_7$ solution.	No. change is observed.	Orange solution of $K_2Cr_2O_7$ turns green.

[2013]

(ii) (A) Carbon monoxide **[2013]**

13. (i)

Sodium Nitrate	Sodium Sulphite
No. effect.	A colourless gas with suffocating odour evolved that turns pink acidified potassium permanganate colourless.

(ii) Starch iodide paper turns blue-black.

(iii) Cation in P is Ca^{2+}

(iv) Gas Q is hydrogen sulphide **[2014]**

14. (i) Hydrogen sulphide
(ii) Lead acetate paper turns silvery black.
(iii) (a) A ì Cl^-
(b) B ì CO_3^{2-}
(c) C ì SO_4^{2-}

(iv) (a) W ì Zn^{2+}
(b) X ì Cu^{2+}
(c) Y ì Ca^{2+} or Mg^{2+}
(d) Z ì NH_4^+

[2015]

15. When barium chloride is added to sodium sulphate, white precipitate is formed. **[2016]**

16. (i) B = Non-volatile acid

(ii) A = Typical acid property

(iii) C = Oxidizing agent **[2016]**

17. (i) When NH_4OH solution is added drop by drop to copper sulphate solution, a pale blue precipitate is formed which is soluble in excess of NH_4OH and a deep blue or inky blue solution is formed with excess of ammonium hydroxide.

$$CuSO_4 + 2NH_4OH \longrightarrow Cu(OH)_2 + (NH_4)_2SO_4$$

$$Cu(OH)_2 + 4NH_4OH \longrightarrow [Cu(NH_3)_4](OH)_2 + 4H_2O$$

Copper sulphate solution forms a blue precipitate with sodium hydroxide solution. It is insoluble in excess of NaOH.

$$CuSO_4 + 2NaOH \longrightarrow Cu(OH)_2 + Na_2SO_4$$

Copper sulphate	Sodium hydroxide	Copper hydroxide	Sodium sulphate

(ii) On adding lead nitrate to both acids we will get a white precipitate. On heating the solution the one whose precipitate will redissolve will be dil.HCl and the one with insoluble precipitate will be dil.H_2SO_4.
Actually on adding lead nitrate to HCl, $PbCl_2$ precipitates out and on heating the solution it redissolves. But in case of H_2SO_4,$PbSO_4$ is formed which is insoluble even on heating it.

$$Pb(NO_3)_2 + 2HCl \longrightarrow PbCl_2 + 2HNO_3$$
(dil)

$$Pb(NO_3)_2 + H_2SO_4 \longrightarrow PbSO_4 + 2HNO_3$$
(dil)

[2017]

18. (i) Potassium chloride
(ii) Zinc carbonate **[2017]**

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