WORKSHEET 2

CHAPTER 3 – ACIDS, BASES AND SALTS

A. Tick (✓) the correct option.

1. The colour of zinc hydroxide is
   a. dull white.
   b. gelatinous white.
   c. chalk white.
   d. greyish white.
2. The formula of the compound formed when zinc hydroxide dissolves in NH_4OH is
   a. $[Zn(NH_3)_4]SO_4$.
   b. $[Zn_2(NH_3)_4]SO_4$.
   c. $[Zn(NH_4)_2]SO_4$.
   d. $[Zn(NH_4)_4]SO_4$.
3. $Zn(OH)_2$ and $Pb(OH)_2$ can be distinguished from each other by treating them with
   a. caustic soda sol.
   b. caustic potash sol.
   c. ammonium hydroxide sol.
   d. calcium hydroxide sol.
4. The colour of the solutions of Fe(III) salts is generally
   a. reddish brown.
   b. light green.
   c. light blue.
   d. dark blue.
5. An amphoteric oxide is one which
   a. reacts with acids only to form salt and water.
   b. reacts with alkalis only to form salt and water.
   c. reacts with acids as well as alkalis to form salt and water.
   d. reacts with acids as well alkalis to form salt and hydrogen.

B. Fill in the blanks from the choices given within the brackets.

1. The hydroxide which is soluble in excess of NaOH is _____ $[Al(OH)_3/Fe(OH)_2/Cu(OH)_2]$
2. A salt which will not react with NH_4OH solution is _____ $(NH_4Cl/CuCl_2/ZnCl_2/AlCl_3)$
3. A hydroxide which on treating with excess of NH_4OH forms inky blue solution is _____ $[Zn(OH)_2/Fe(OH)_2/Fe(OH)_3/Cu(OH)_2]$
4. An alkali which could be used to distinguish between soluble salts of zinc and lead is _____ $(NaOH/NH_4OH/KOH)$
5. An oxide of a metal which is amphoteric in nature is _____ $(PbO/Pb_3O_4/PbO_2)$

Name: ..... Teacher's signature: .....

Class: ..... X ..... Date: .....

C. From the formulae listed below, choose one, in each case, corresponding to the salt having the given description.

$AgCl$, $CuCO_3$, $CuSO_4 \rightarrow 5H_2O$, KNO_3, $NaCl$, $NaHSO_4$, $Pb(NO_3)_2$, $ZnCO_3$, $ZnSO_4 \cdot 7H_2O$

1. An acid salt.
2. An insoluble chloride.
3. On treating with concentrated sulphuric acid, this salt changes from blue to white.
4. On heating, this salt changes from green to black.
5. This salt gives nitrogen dioxide on heating.

D. Write equation of dilute sulphuric acid with

1. copper (II) oxide.
2. magnesium hydroxide.
3. zinc carbonate.
4. potassium hydrogen carbonate.
5. sodium sulphite.

E. Give suitable word/words for the statements given below.

1. A compound which on dissolving in water furnishes hydronium ions as the only positively charged ions.
2. An acid which furnishes 3 hydronium ions per molecule on ionisation.
3. An acid which undergoes partial dissociation, on dissolving in water.
4. A water soluble base, which furnishes hydroxyl ions.
5. The number of H^+ ions of an acid which react completely with one molecule of base to form salt and water as the only products.

ANSWERS

WORKSHEET 2

A. Tick (✓) the correct option.

1. b
2. a
3. c
4. a
5. c

B. Fill in the blanks from the choices given within the brackets.

1. $Al(OH)_3$
2. NH_4Cl
3. $Cu(OH)_2$
4. $[NH_4OH]$
5. PbO

C. From the formulae listed below, choose one, in each case, corresponding to the salt having the given description.

1. $NaHSO_4$
2. AgCl
3. $CuSO_4 \cdot 5H_2O$
4. $CuCO_3$
5. $Pb(NO_3)_2$

D. Write equation of dilute sulphuric acid with

1. $CuO + H_2SO_4(dil) \rightarrow CuSO_4 + H_2O$
2. $Mg(OH)_2 + H_2SO_4(dil) \rightarrow MgSO_4 + 2H_2O$
3. $ZnCO_3 + H_2SO_4(dil) \rightarrow ZnSO_4 + H_2O + CO_2$
4. $2KHCO_3 + H_2SO_4(dil) \rightarrow K_2SO_4 + 2H_2O + CO_2$
5. $Na_2SO_3 + H_2SO_4(dil) \rightarrow Na_2SO_4 + H_2O + SO_2$

E. Give suitable word/words for the statements given below.

1. Acid
2. Tribasic acid
3. Weak acid
4. Alkali
5. Acidity of a base