Std - X

D.A.V. International School

Assessment Sheet Ch: Chemical equation and reaction]

Science

1 Balance the following equations

a) Aluminium metal reacts with copper(II) Chloride to form Aluminium Chloride and copper

Skeletal equation :

Balanced equation :

b) Barium Chloride reacts with Potassium sulphate to form Barium sulphate and Potassium chloride

Skeletal equation :

Balanced equation :

c) Hydrogen sulphide gas burns in air to give water and sulphur dioxide gas.

Skeletal equation :

Balanced equation :

2 Balance the equations and also name the type of Reaction

a) $Pb(NO_3)_{2(s)} \xrightarrow{heat} PbO + NO_2(g) + O_2(g)$

Balanced equation

Type of Reaction

b) $Zn_{(s)} + AgNO_{3(aq)} \longrightarrow Zn(NO_3)_{2(aq)} + Ag_{(s)}$

balanced equation :

Type of Reaction :

Assignment sheet No-1 Chemical Rx. and Equation Std-X

1. Name the species oxidised and Reduced in the following reaction

a) $Fe_2O_3 + 2Al \longrightarrow 2Fe + Al_2O_3$

b) $H_2S + Cl_2 \longrightarrow 2HCl + S$.

c) $H_2S + SO_2 \rightarrow 3S + 2H_2O$

2. Green coating on copper in Rainy season is formed due to formation of _____

3. How Rancidity can be prevented?

4. Which of the following is an Exothermic Rx.

a) Dilution of an acid b) Evaporation of water c) Sublimation of Camphor d) Rx. of water with Quick lime.

5. a) Limestone = $CaCO_3$; Lime water =

b) $CuSO_4 \cdot 5H_2O$ = Blue vitriol ; $FeSO_4 \cdot 7H_2O$ =

6. c) $CaCO_3 \longrightarrow CaO + CO_2$ (Thermal decomposition Rx.)

$2H_2O \longrightarrow 2H_2 + O_2$ (- - - - - - - - -)

$2AgBr \rightarrow 2Ag + Br_2$ (- - - - - - - - -)

7. Why do we store silver chloride in dark coloured bottles.

8. Silver articles turn black when kept in open for few days
a) Name the black substance formed with its chemical formula.
b) also name the phenomenon involved.

9. Identify the type of Chemical Reaction

a) $Cl_2 + 2NaBr \longrightarrow 2NaCl + Br_2$

b) $Zn + 2HCl \rightarrow ZnCl_2 + H_2$

c) $2CuO \rightarrow 2Cu + O_2$

Revision Sheet X Chemistry

Chapters : Chemical Equation and reaction & Acid, Bases & Salts.

1) What will happen when Lead nitrate is heated in dry test tube. Write the name and color of gas.

2) An element A forms two oxides AO and AO_2. The oxide is neutral whereas the oxide AO_2 is acidic is nature. What would you call A is metal or a non metal

3) Name the acid present in
a) ant sting b) Tamarind.

4) Balance the equation

$$MnO_2 + HCl \longrightarrow MnCl_2 + H_2O + Cl_2$$

5) What are the products formed when magnesium metal reacts with water? Why do the pieces of metal start floating during the reaction ?

6) Give reason (a) A magnesium ribbon should be cleaned before burning in air

b) Blue colour of copper sulphate solution changes when iron nails are dipped in it

7) a) What happens when quick lime is added to water

b) Write chemical equation

c) Which type of reaction is this ?

8 Write balanced equation

a) Chlorine is passed over dry slaked lime

b) Sodium bicarbonate is heated

c) Sodium carbonate reacts with dilute hydrochloric acid

9 Write the chemical equation involved in the preparation of sodium hydroxide

Name the process.

10 a) Name the compound formed when Silver corrodes b) Copper corrodes

11 Describe with the help of experiment the conditions required for rusting of iron.

12 Write constituents of following alloys

a) Brass b) Solder c) Bronze d) Stainless steel

13 You might have noted than when copper powder is heated in a china dish, the surface of copper powder becomes coated with a black color substance

i) How has this black coloured substance formed

ii) What is that black substance

iii) Write the chemical equation of the reaction that takes place

DAV International School

Subject - Chemistry

Assignment no. - 3

Date - [redacted]

Std - X

Topic - Metals & Non metals

1. Which of the following metal forms Amphoteric oxide ?
   a) Copper b) Silver c) Aluminium d) Iron.

2. Beakers A, B and C contain Zinc Sulphate, Silver nitral and Iron sulphate solution resp. Copper pieces are added to each beaker. Blue colour will appear in case of
   a) Beaker A b) Beaker B c) Beaker C d) All the beakers.

3. The correct order of Electrical Conductivity is
   a) Al > Au > Cu > Ag
   b) Cu > Ag > Al > Au
   c) Au > Ag > Al > Cu
   d) Ag > Cu > Au > Al.

4. A metal X which is used in Thermite process, when heated with oxygen gives an oxide Y, which is amphoteric in nature. Identify X & Y. Write down the reactions of oxide Y with HCl and NaOH.

5. Compound X and aluminium are used to join railway tracks. (a) Identify the compound X (b) Name the reaction. (c) Write down the reaction.

6. Give Reason :
   A metal sulphide is converted to its oxide to extract the metal from sulphide ore.

7. A solution of $CuSO_4$ is kept in an iron pot After few days, Iron pot was observed to have a number of holes. give Explaination for this observation.

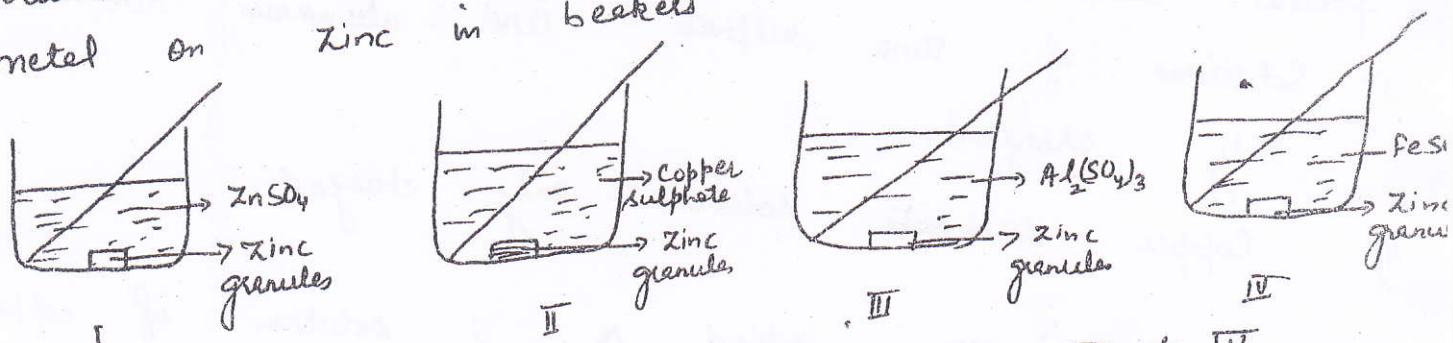
8. If copper metal is heated over flame, it develops a coating. What is the colour and composition of this coating.

CLASS X
Chemistry

Reactivity of Metals

MCQ related to practical

1) Zinc granules were added to zinc sulphate, copper sulphate, aluminium sulphate and iron sulphate solutions. You would obsesve the deposition of metal on zinc in beakers



1) I and III 2) II & IV 3) I & II 4) III & IV.

2) A copper sulphate solution is added to a test tube containing a cleaned iron nail. The correct description regarding deposition of copper on the iron nail would be that it starts depositing
1) at the top of the nail 3) in the middle of the nail
2) from the head of the nail 4) anywhere on the nail

3) When an aluminium strip is kept immersed in freshly prepared ferrous sulphate solution taken in a test tube the change which is observed is.
1) the green solution slowly turns brown
2) the lower end of the test tube become slightly war
3) A colourless gas with smell of burning sulphur observed
4) light green solution changes to blue.

4) Solutions of ferrous sulphate, zinc sulphate, copper sulphate and aluminium sulphate were separately taken in four test tube and some iron nails were placed in each of the solutions After few minutes it would be

1) all four solutions changed.
2) solutions of zinc sulphate, copper sulphate and aluminium sulphate changed and that of ferrous sulphate did not change.
3) Solutions of zinc sulphate and aluminium sulphate only changed.
4) Copper sulphate solution only changed.

5) Iron fillings were added to a solution of copper sulphate. After 10 minutes, it was observed that the blue colour of the solution changes and a layer gets deposited on iron fillings. The colour of the solution and that of coating would respectively be
1) Yellow and green
2) Brown and blue
3) Red and greenish blue
4) Green and reddish brown.

6) When you place an iron nail in copper sulphate solution, the reddish brown coating formed on the nail is
1) soft and dull
2) hard and flaky
3) smooth and shining
4) rough and granular.

7) To show that zinc is more reactive than copper the correct procedure is to
1) prepare copper sulphate solution and dip zinc strip and dip copper in it.