CLASS X CHEMISTRY ASSIGNMENT

METALS AND NON METALS

Q1 Two wires of equal length ,one of copper and the other of some alloy have the same thickness.Which one can be used for (i) electrical transmission lines (ii) electric heating device? Why?

Q2 Write the chemical equations for reactions taking place when

i. Manganese dioxide is heated with aluminium.
ii. Steam is passed over red hot iron.
iii. Aluminum Oxide is reacted with Sodium hydroxide
iv. Calcium reacts water
v. Iron reacts with dil. Sulphuric acid

Q3Name two metals which react violently with cold water .Write any three observations which would you make when such metal is dropped in cold water. How would you identify the gas evolved,if any,during the reaction.

Q4 Name a metal in each case;

i. It does not react with cold as well as hot water but reacts with steam
ii. It does not react with water
iii. It reacts with dil.HNO_3 to evolve H_2 gas.

Q5When calcium metal is added to water ,the gas evolved does not catch fire but the same gas evolved on adding sodium metal to water catches fire .Why is it so?

Q6 Give reasons for the following

(i)To make hot water tanks,copper is used and not steel.
(ii)Lemon is used for restoring the shine of tarnished copper decorations
(iii)Addition of some silver to pure gold for making ornaments.

Q7 In what forms are metals found in nature? With the help of examples,explain how metals react with oxygen and dilute acids. Also write chemical equation for the reactions.

Q8 Explain how the following metals are obtained from their compounds by reduction process:

(i)Metal X which is low in reactivity series.
(ii)Metal Y which is in the middle of series.
(iii)Metal Z which is high in reactivity series.

Q9 With a labelled diagram describe an activity to show that metals are good conductor of electricity

.Q10 Account for the following

(i)Hydrogen gas is not evolved when a metal reacts with nitric acid.
(ii)The reaction of iron(III) oxide with aluminium is used to join cracked iron parts of machines.

Q11 Explain electrolytic refining of copper . Draw a well labeled diagram for the set up.

Q12 Which of the following will form acidic oxide? P, K, Na, Ca
Q13 Define the term alloy .Write two advantages of making alloy.
Q14 Name the constituents of the following alloys
(i)Brass
(ii)Stainless steel
(iii)Bronze
Q15 Show the formation of
NaCl from sodium and chlorine atoms by the transfer of electrons.

Q17. What happens when:

i. Cinnabar is heated
ii. Manganese dioxide is heated with aluminium powder.
iii. Zinc carbonate ic calcined.
iv. Iron nail is dipped in copper sulphate solution.