Chemistry Worksheet Grade X
Metals and Non-Metals

1. Which property of metal is responsible for their thermal and electrical conductivity?
2. Why do silver articles become black after sometime when exposed to air?
3. Why does calcium floats on water?
4. From amongst the metals sodium, calcium, aluminium, copper and magnesium, name the metal
   a. Which reacts with metal only on boiling and
   b. Another which does not react even with steam.
5. (a) Show the formation of NaCl from sodium and chlorine atoms by the transfer of electrons.
   (b) Why sodium chloride has a high melting point?
   (c) Name the anode and cathode used in electrolytic refining of impure copper metal.
6. Why are ionic compounds usually hard? How is it that ionic compounds in the solid state do not conduct electricity but they do so when in molten state?
7. Give reasons for the following:
   a. School bells are made up of metals.
   b. Electrical wires are made up of copper.
8. What is meant by refining of metals? In the electrolytic refining of metal M, name the cathode, anode and electrolyte.
9. On adding dilute HCL acid to copper oxide powder the solution formed is blue-green. Predict the new compound formed which imparts a blue-green colour to the solution.
10. (a) Show on a diagram the transfer of electron between the atoms in the formation of MgO.
    (b) Name the solvent in which ionic compounds are generally soluble.
    (c) Why are aqueous solutions of ionic compounds able to conduct electricity?
11. What are amphoteric oxides? Choose the amphoteric oxides from- Na_2O, ZnO, Al_2O_3, CO_2, H_2O
12. Define amphoteric oxide, give two examples of such oxide.
13. Show the electronic transfers in the formation of MgCl2 from its elements.
14. Which of the following metals will melt at body temperature: gallium, magnesium, calcium, aluminium?
15. Name the two metals which react violently with cold water. Write any three observations you would make when such a metal is dropped into water. How would you identify the gas evolved, if any?
16. Give reasons for the following:
    a. Gold and silver are used for jewellery making.
    b. Carbonate and sulphide ores are usually converted into oxides prior to reduction during the process of extraction.