
CBSE TEST PAPER-05

CLASS – X Science (Metals and Non-Metals)

1. In addition to iron, stainless steel contains: (1)
 - (a) nickel and chromium
 - (b) Copper and tin
 - (c) aluminium and magnesium
 - (d) Carbon and magnesium
2. The correct decreasing order of the metals in the activity series is: (1)
 - (a) Ca, Mg, Ni, Fe
 - (b) Ni, Ca, Mg, Fe
 - (c) Ca, Mg, Fe, Ni
 - (d) Mg, Ca, Fe, Ni
3. Which of the following oxides is amphoteric in nature? (1)
 - (a) Na_2O
 - (b) MgO
 - (c) CaO
 - (d) Al_2O_3
4. A student puts one big iron nail each in four test tubes containing solution of zinc sulphate, aluminium sulphate, copper sulphate and iron sulphate. A reddish brown coating was observed only on the surface of iron nail which was put in the solution of: (1)
 - (a) Zinc sulphate
 - (b) Iron sulphate
 - (c) copper sulphate
 - (d) Aluminium sulphate
5. Iron nail clipped in a solution kept in a test tube. After half an hour it was observed that the colour of the solution was changed. The solution in test tube was that of: (1)
 - (a) Zinc sulphate
 - (b) Copper sulphate

- (c) Iron sulphate
(d) Aluminium sulphate
6. Why does copper not liberate hydrogen on reaching with dilute sulphuric acid? (2)
7. Why are non-metals gaseous at room temperature? (2)
8. Both calcium and magnesium are heavier than water but still float over it. Explain. (2)
9. What is thermit reaction? (2)
10. Why is titanium metal called as strategic metal? Mention two of its properties which makes it so special. (3)
11. (a) What is corrosion? (3)
(b) How is corrosion caused
(c) Complete the reaction $2\text{Fe} + \frac{3}{2}\text{O}_2 + x\text{H}_2\text{O} \rightarrow$
12. (1) Choose metal from the reactivity series which will not react with steam. (3)
(2) Choose one metal which will safely react with dilute sulphuric acid.
(3) Name the salt formed when you chosen metal in (2) reacts with sulphuric acid.
13. A copper plate was dipped into a solution of AgNO_3 . After sometime a black layer was deposited on the copper plate. State the reason for it. Write the chemical equation for the reaction involved. (3)
14. Hydrogen gas is evolved by reacting a piece of magnesium ribbon with water: (5)
(1) Describe how could show that the gas collected is hydrogen.
(2) Write a symbol equation for the reaction taking place between magnesium and water.
(3) Suggest how the appearance of magnesium would change after a week.
(4) A few drops of universal indicator solution were added to water in the beaker. What colour would expect to see and what pH would this colour indicate?