CBSE TEST PAPER-03

CLASS – X Science (Metal and Non-metals)

1. Chemically rust is (1)
   (a) Hydrated ferrous oxide (b) Hydrated ferric oxide
   (c) only ferric oxide (d) none of these

2. Heating pyrites to remove sulphur is called (1)
   (a) Smelting (b) Calcination
   (c) Liquation (d) Roasting

3. Setting of Plaster of Paris takes place due to (1)
   (a) Solder (b) Bronze
   (c) Brass (d) Bell metal

4. Some crystals of $CuSO_4$ were dissolved in water. The color of the solution obtained would be (1)
   (a) Green (b) Red
   (c) Blue (d) Brown

5. Most abundant metal on the surface of the earth (1)
   (a) Iron (b) Aluminium
   (c) Calcium (d) Sodium

6. Give reason why platinum, gold and silver are used to make jewellary. (2)

7. Why copper is used to make hot water tanks and not steel? (2)

8. Can all minerals of a metal act as ores? Justify. (2)

9. How does Galvanisation check rusting of iron? (2)

10. A group of a students looked at different metals and metal sulphate solutions given is a tabular form. From the data, answer the following : (3)

Metal	Metal sulphate solution	Colour
1) Chromium	Chromium sulphate	Green
2) Cobalt	Cobalt sulphate	Pink
3) Copper	Copper sulphate	Blue
4) Magnesium	Magnesium sulphate	Colourless

(a) Which metal reacted with all other sulphate solution?
(b) Which metal did not react with any other metal sulphate solution?
(c) Arrange the metals in decreasing order of reactivity.

11. (1) A metal that gets covered with a protective film of its oxide. (Al, Cu, Ag) (3)
(2) A metal which burns in air with golden flame (Zn, K, Na)
(3) A metal which can displace hydrogen from boiling water as well as steam. (K, Zn, Fe)

12. Write one point of difference between electrolytic reduction and reduction with carbon. Give one example of each. (3)

13. (a) Arrange the following metals in decreasing order of their reactivity (3)
Cu, Ca, Mg, Na, Zn.
(b) You are provided with three metals: sodium, magnesium and copper. Using only water as the reactant how will you identify each of them?
(c) Which metal listed in (i) is most likely to occur in the native state.

14. Sample pieces of five metals A, B, C, D and E were added to the tabulated solutions separately. The results observed are shown in the table : (5)

Metal	$FeSo_4$	$CuSO_4$	$ZnSO_4$	$AgNO_3$	$Al(SO_4)$
A	No Change	No Change	No Change	Coating on metal	No Change
B	Grey Deposit On metal	Brown coating on metal	No Change	Coating on metal	No Change
C	No Change	No Change	No Change	No change	No Change
D	No Change	————	No Change	Coating on metal	No Change
E	————	Brown coating	New coating	New coating	No Change

Based on the observations recorded in the table, and answer the following:
(1) Which is the most reactive metal?
(2) Which is the least reactive metal?
(3) What would be observed if metal D were added to a solution of copper (II) sulphate?
(4) What would be observed if metal E were added to a solution of iron (II) sulphate?
(5) Arrange the metals A, B, C, D and E in decreasing order to their reactivity?