



Online Class Supporting Materials

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CLASS : 10

CHEMISTRY :4

UNIT : REACTIVITY SERIES AND ELECTROCHEMISTRY

Topic : Reactions of metals with water.

- 1) You are given metal pieces of **Na, Mg and Cu.**
 - a) Which metal react with cold water?
 - b) Which metal react with hot water?
 - c) Identify the metal which does not react with cold water and hot water.
 - d) Which gas is produced by the reaction of Na with water?
 - e) Predict the colour change when phenolphthalein solution is added to the solution obtained by the reaction of sodium with water. Give reason.
 - f) Write the balanced chemical equation of reaction of sodium with water.
 - g) Which gas is produced by the reaction of Mg with hot water?
 - h) Chemical equation of reaction of Mg with hot water is given below. Balance this equation.



- l) Arrange these three metals in the decreasing order
Of their reactivity towards water.

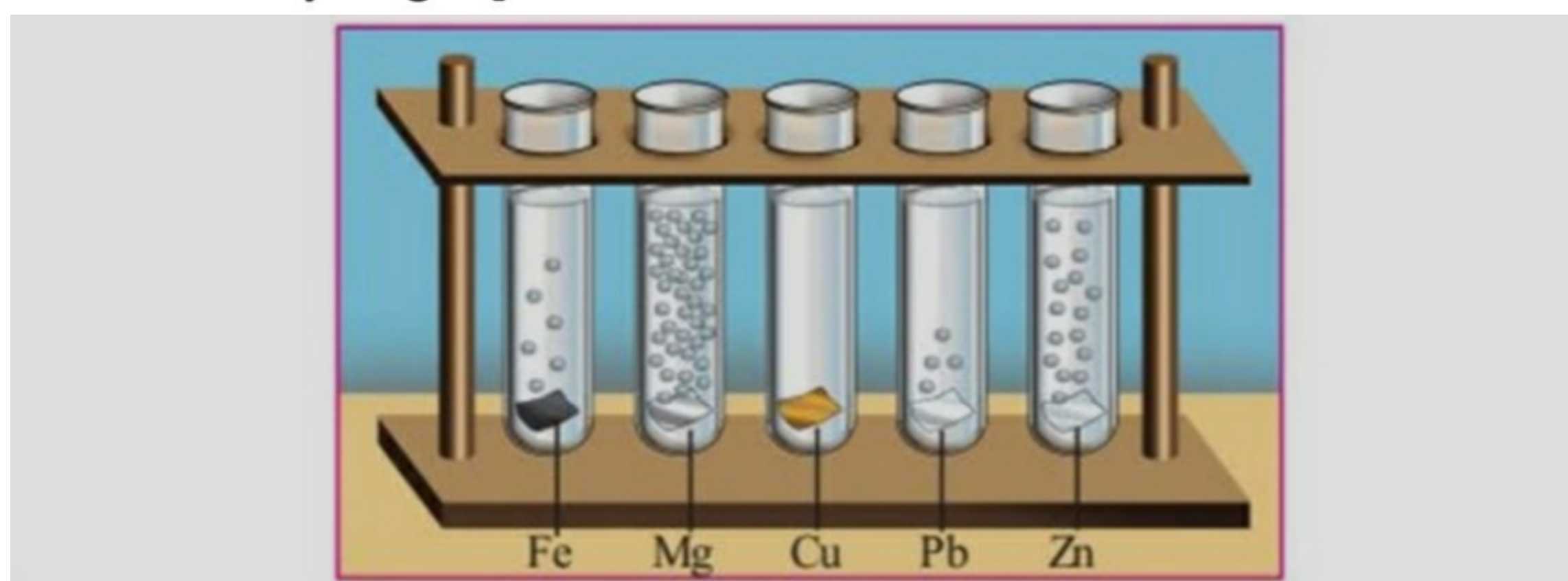
Topic : Reactions of metals with air.

- 1) What is metallic luster ?
- 2) Freshly cut portion of sodium metal colour fades after some time. Write the balanced chemical equations of reactions involving in this process. [Hint : sodium react with components of air such as oxygen, moisture, CO₂]
- 3) Why is sodium kept immersed in kerosene?
- 4) Mg react with oxygen to form an oxide coating over it. Write the balanced chemical equation of this reaction.
- 5) Arrange the following metals in their decreasing order of reactivity towards air.

Na, Mg, Al, Cu, Au

Topic : Reactions of metals with Acids.

- 1) The figure of reaction of some metals with dilute hydrochloric acid is given below. Observe the figure and find the following.
[Hint : bubbles of the test tube represent the formation of hydrogen]



- a) Did the rate of formation of bubbles in all test tube are same?
- b) Which gas is formed by the reactions of metals with acids?
- c) Which metal vigorously react with dilute HCl ?
- d) Identify the metal which does not react with dilute HCl.
- e) Write the balanced chemical equation of reaction of Mg with dilute HCl.
- f) The chemical equation of reaction of Zn with dilute HCl is given below. Balance this reaction.



- g) Arrange the above metals in their decreasing order of reactivity with dilute HCl.