

CHEMISTRY QUESTIONS FOR CLASS 10

(Based on: Metals and Non-metals)

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VERY SHORT ANSWER TYPE QUESTIONS (1 MARK)

1. A green layer is gradually formed on a copper plate left exposed to air for a week in a bathroom. What could this green substance be?

Answer. It is due to the formation of basic copper carbonate $[\text{CuCO}_3 \cdot \text{Cu}(\text{OH})_2]$.

2. A non-metal X exists in two different forms Y and Z. Y is the hardest natural substance, whereas Z is a good conductor of electricity. Identify X, Y and Z.

Answer. 'X' is carbon, 'Y' is diamond as it is the hardest natural substance and 'Z' is graphite as it is good conductor of electricity.

3. Metals generally occur in solid state. Name and write symbol of a metal that exists in liquid state at room temperature.

Answer. Mercury (Hg) exists in liquid state at room temperature.

4. Which of the following two metals will melt at body temperature (37 °C) ? Gallium, Magnesium, Cesium, Aluminium

Answer. Gallium and Cesium

5. From amongst the metals sodium, calcium, aluminium, copper and magnesium, name the metal

(a) which reacts with water only on boiling, and

(b) another which does not react even with steam.

Answer. (a) Magnesium reacts with water only on boiling.

(b) Copper does not react even with steam.

6. Which one of the following metals does not react with oxygen even at high temperatures?

(a) Calcium (b) Gold (c) Sodium

Answer. (b) Gold does not react with oxygen even at high temperatures.

7. Name any one metal which reacts neither with cold water nor with hot water, but reacts with heated steam to produce hydrogen gas.

Answer. Iron; $3\text{Fe}(\text{s}) + 4\text{H}_2\text{O}(\text{g}) \rightarrow \text{Fe}_3\text{O}_4(\text{s}) + 4\text{H}_2(\text{g})$

8. Why does calcium float in water?

Answer. It is because hydrogen gas is formed which sticks to surface of calcium, therefore it floats.

9. Name a non-metal which is lustrous and a metal which is non-lustrous. **Answer.** Iodine is a non-metal which is lustrous, lead is a non-lustrous metal.

10. Which gas is liberated when a metal reacts with an acid? How will you test the presence of this gas?

Answer. Hydrogen gas is formed. Bring a burning matchstick near to it, H₂ will burn explosively with 'pop' sound.

11. Name the metal which reacts with a very dilute HNO₃ to evolve hydrogen gas. Answer. Magnesium

12. Name two metals which are found in nature in the free state. Answer.(i) Gold (ii) Silver

13. What is the valency of silicon with atomic number 14? Answer. Its valency is equal to 4.

14. What is the valency of phosphorus with atomic number 15? Answer. Phosphorus has valency 3.

15. What is the valency of an element with atomic number 35? Answer. Its valency is 1.

16. Arrange the following metals in the decreasing order of reactivity: Na, K, Cu, Ag. Answer. K > Na > Cu > Ag

17. An element forms an oxide, A₂O₃ which is acidic in nature. Identify A as a metal or non- metal.

Answer. 'A' is non-metal as non-metallic oxides are acidic in nature.

18. A green layer is gradually formed on a copper plate left exposed to air for a week in a bathroom. What could this green substance be?

Answer. It is due to the formation of basic copper carbonate [CuCO₃.Cu(OH)₂].
