

Chapter 3

Metals and Nonmetals

M.M - 100

Time- 1 Hr

Q.1. Which of the following is not a property of metals-

- (a) Metals are good conductor of electricity
- (b) Metals have high melting point
- (c) Metals are malleable and ductile
- (d) Metals are brittle

Ans.- (d) Metals are brittle

Explanation- Brittleness is not the property of metals but it is the property of non-metals.

Q.2. Which of the following is a property of non-metals-

- (a) Non-metals are good conductor of electricity
- (b) Non-metals have high melting point
- (c) Non-metals are malleable and ductile
- (d) Non-metals are brittle

Ans.- (d) Non-metals are brittle

Explanation- Brittleness is the property of non-metals.

Q.3. Which of the following is the most malleable metal-

- (a) Copper
- (b) Gold
- (c) Silver
- (d) Iron

Ans.- (b) Gold

Explanation- Gold is the most malleable metals of nature.

Q.4. Which of the following is a liquid metal-

- (a) Cu
- (b) Hg
- (c) Ag
- (d) Au

Ans.- (b) Hg

Explanation- Mercury (Hg) is a liquid metal.

Q.5. Which of the following is an essential component of amalgam-

- (a) Cu
- (b) Hg
- (c) Ag
- (d) Au

Ans.- (b) Hg

Explanation- The alloy of a metal with mercury (Hg) is called amalgam.

Q.6. Which of the following metals does not form amalgam-

- (a) Cu (b) Na
(c) Fe (d) Mg

Ans.- (C) Fe

Explanation- Almost all the metal form amalgam with mercury (Hg). But, the metals like (Iron) Fe, Platinum (Pt), Tungsten (W) and Tantalum (Ta) do not form amalgam.

Q.7. Which of the following is an amphoteric oxide-

- (a) Cu_2O (b) Na_2O
(c) FeO (d) Al_2O_3

Ans.- (d) Al_2O_3

Explanation- In general, metal oxides are basic in nature but, BeO , Al_2O_3 , ZnO , PbO , SnO etc. are amphoteric in nature.

Q.8. Which of the following is not an amphoteric oxide-

- (a) BeO (b) Na_2O
(c) SnO (d) Al_2O_3

Ans.- (b) Na_2O

Explanation- Na_2O is a basic oxide.

Q.9. Which of the following is a neutral oxide-

- (a) NO (b) N_2O
(c) CO (d) All the above

Ans.- (d) All the above

Explanation- In general, non-metal oxides are acidic in nature but, NO , N_2O , CO , and H_2O are neutral oxides.

Q.10. Which of the following is an acidic oxide-

- (a) NO (b) N_2O
(c) CO_2 (d) All the above

Ans.- (c) CO_2

Explanation- CO_2 is an acidic oxide while, NO and N_2O are neutral oxides.

Q.11. Which of the following is the least reactive metal ?

- (a) Cu (b) Mg
(c) Pb (d) Fe

Ans.- (a) Cu

Explanation- Copper (Cu) occupies the lowest position in reactivity series. Hence, it would be the least reactive metal.

Q.12. Which of the following occupies the highest position in activity series ?

- (a) K (b) Mg
(c) Pb (d) Fe

Ans.- (a) K

Explanation- Potassium being the most reactive metal, occupies the highest position in reactivity series.

Q.13. Which of the following reacts with cold water-

- (a) Na (b) K
(c) Ca (d) All the above

Ans.- (d) All the above

Explanation- Potassium (K), sodium (Na) and calcium (Ca) metals being highly reactive, react even with cold water to form their hydroxides and release H₂ gas .

Q.14. Which of the following does not react with cold water-

- (a) Na (b) K
(c) Ca (d) Mg

Ans.- (d) All the above

Explanation- Potassium (K), sodium (Na) and calcium (Ca) metals being highly reactive, react even with cold water to form their hydroxides and release H₂ gas while, magnesium (Mg) being relatively less reactive, does not react with cold water, but it reacts with hot water to form its hydroxides and releases H₂ gas.

Q.15. Which of the following does not react with water ?

- (a) Cu (b) Pb
(c) Ag (d) All the above

Ans.- (d) All the above

Explanation- Copper (Cu), lead (Pb), Silver (Ag) and gold (Au) being less reactive metals, do not react with water.

Q.16. Which of the following metals react with steam to form their oxides ?

- (a) Cu (b) Pb
(c) Fe (d) All the above

Ans.- (C) Fe

Explanation- Metals like aluminium, iron and zinc do not react either with cold or hot water. But they react with steam to form the metal oxide and hydrogen.





Q.17. Which of the following burns in air with a dazzling white flame ?

- (a) Ca (b) Mg
(c) Na (d) K

Ans.- (b) Mg

Explanation- Magnesium burns in air with a dazzling white flame.



Q.18. Which of the following metals does not replace hydrogen from dilute acids ?

- (a) Mg (b) Na
(c) Zn (d) Cu

Ans.- (d) Cu

Explanation- Copper (Cu) is below hydrogen in reactivity series. Hence, it is less reactive than hydrogen and does not replace hydrogen from dilute acids.

Q.19. Which of the following is not an oxide ore ?

- (a) Galena (b) Haematite
(c) Bauxite (d) Tin stone

Ans.- (a) Galena

Explanation- Galena is a sulphide ore.

Q.20. Which of the following is not concentrated by hydraulic washing ?

- (a) Galena (b) Haematite
(c) Bauxite (d) Tin stone

Ans.- (a) Galena

Explanation- Galena (PbS) being a sulphide ore is concentrated by froth floatation method. Bauxite is concentrated by chemical leaching, while rest two are concentrated by hydraulic washing (gravity separation).

Q.21. Which of the following is concentrated by chemical leaching ?

- (a) Galena (b) Haematite
(c) Bauxite (d) Tin stone

Ans.- (c) Bauxite

Explanation- Galena (PbS) being a sulphide ore is concentrated by froth floatation method. Bauxite is concentrated by chemical leaching, while rest two are concentrated by hydraulic washing (gravity separation).

Q.22. Which of the following is an acidic flux ?

- (a) Lime
- (b) Lime stone
- (c) Sand
- (d) All the above

Ans.- (c) Sand

Explanation- Sand (SiO_2) is an acidic flux, while rest two are basic flux.

Q.23. Which of the following is an ore of iron ?

- (a) Galena
- (b) Haematite
- (c) Bauxite
- (d) Tin stone

Ans.- (b) Haematite

Explanation- Galena (PbS) is the ore of lead, bauxite ($\text{Al}_2\text{O}_3 \cdot 2\text{H}_2\text{O}$) is the ore of aluminium, haematite (Fe_2O_3) is the ore of iron while, tin stone (SnO_2) is the ore of tin.

Q.24. The flux used in metallurgy of iron from haematite is-

- (a) Lime
- (b) Lime stone
- (c) Sand
- (d) None of the above

Ans.- (b) Lime stone

Explanation- The flux used in metallurgy of iron from haematite is lime stone (CaCO_3).

Q.25. Which of the following is extracted by cyanide process ?

- (a) Lead
- (b) Tin
- (c) Gold
- (d) Copper

Ans.- (c) Gold

Explanation- Gold is extracted by cyanide process.