**Tarun Arora**  **R.L. Institute M :9416974837**

**Max Time : 1 hr** **Metals & Non - Metals Max Marks : 30**

**CODE : A**

1. **Multiple Choice Questions : [ 1 x 25 = 25 ]**
2. Identify the incorrect statements :

(i) In their pure state, metals have a shining surface.

(ii) Metals are generally soft.

(iii) Some metals can be beaten into thin sheets.

(iv) The ability of metals to be drawn into thin wires is called malleability.

|  |  |  |  |
| --- | --- | --- | --- |
| a) (i) & (iii) | b) (i) & (iv) | c) (ii) & (iv) | d) (ii) & (iii) |

1. Which of the following are most malleable metals ?

|  |  |  |  |
| --- | --- | --- | --- |
| (i) Sulphur | (ii) Gold | (iii) Phosphorus | (iv) Silver |
| a) mercury | b) carbon | c) iodine | d) bromine |

1. \_\_\_\_\_\_\_ is the most ductile metal.

|  |  |  |  |
| --- | --- | --- | --- |
| a) Mercury | b) Gold | c) Copper | d) Iodine |

1. Identify the correct statements :

(i) The wires that carry current in our homes have a coating of PVC or a rubber like material.

(ii) School bells are made of metals.

(iii) Metals do not conduct electricity.

(iv) The metal that produce a sound on striking a hard surface are said to be non-sonorous.

|  |  |  |  |
| --- | --- | --- | --- |
| a) (i) & (iii) | b) (i) & (ii) | c) (iii) & (iv) | d) Only (ii) |

1. The non-metal are either solids or gases except ­\_\_\_\_\_\_\_ which is a liquid.

|  |  |  |  |
| --- | --- | --- | --- |
| a) mercury | b) carbon | c) iodine | d) bromine |

1. Which of the following metals will melt if you keep them on your palm ?

|  |  |  |  |
| --- | --- | --- | --- |
| (i) Magnesium | (ii) Mercury | (iii) Caesium | (iv) Gallium |
| a) (i) & (iii) | b) (ii) & (iv) | c) (iii) & (iv) | d) (ii) & (iii) |

1. Identify the correct statements :

(i) When copper is heated in air, it combines with oxygen to form copper (II) oxide, a black oxide.

(ii) All metal oxides are soluble in water. Sodium oxide and potassium oxide dissolved in water to produce alkalies.

(iii) Aluminium oxide and zinc oxide, show both acidic as well as basic behavior.

(iv) All metals react with oxygen at the same rate.

|  |  |  |  |
| --- | --- | --- | --- |
| a) (ii) & (iv) | b) (i) & (iv) | c) (i) & (iii) | d) (ii) & (iii) |

1. Metals such as \_\_\_\_\_\_ and \_\_\_\_\_\_ react so vigorously that they catch fire if kept in the open. Hence to protect them and to prevent accidental fires, they are kept immersed in \_\_\_\_\_\_\_\_.

|  |  |
| --- | --- |
| a) phosphorus , magnesium , water | b) sodium , potassium , kerosene oil |
| c) sodium , potassium , water | d) tin , lead , alcohol |

1. When metal (Z) is added to dilute HCl solution, there is no evolution of gas, Metal (Z) is :

|  |  |  |  |
| --- | --- | --- | --- |
| a) K | b) Na | c) Ag | d) Zn |

1. Beakers A , B and C contain zinc sulphate, silver nitrate and iron (II) sulphate solutions respectively. Copper pieces are added to each beaker. Blue copper will appear in case of

|  |  |  |  |
| --- | --- | --- | --- |
| a) beaker A | b) beaker B | c) beaker C | d) all the beakers. |

1. Which of the following element is generally stored in kerosene due to its high reactivity with water & air ?

|  |  |  |  |
| --- | --- | --- | --- |
| a) Mg | b) Na | c) P | d) Ca |

1. Which metal does not react with dilute hydrochloric acid ?

|  |  |  |  |
| --- | --- | --- | --- |
| a) Iron | b) Sodium | c) Zinc | d) Copper |

1. Which of the following pairs will give displacement reaction ?

|  |  |
| --- | --- |
| a) NaCl solution and copper metal | b) MgCl2 solution and aluminium metal |
| c) FeSO4 solution and silver metal | d) AgNO3 solution and copper metal |

1. Which of the following reactions cannot occur ?

|  |  |
| --- | --- |
| a) 2 AgNO3 (aq) + Fe (s) → Fe(NO3)2 (aq) + 2 Ag (s) | b) CuSO4 (aq) + Zn (s) → ZnSO4 (aq) + Cu (s) |
| c) CuSO4 (aq) + 2 Ag (s) → Cu (s) + Ag2SO4 (aq) | d) 2 AgNO3 (aq) + Zn (s) → Zn(NO3)2 (aq) + 2 Ag (s) |

1. Hydrogen gas is not evolved when a metal react with nitric acid. It is because HNO3 is a strong oxidizing agent. It oxidizes the H2 produced to water and itself get reduced to any of the nitrogen oxides (N2O, NO, NO2). But \_\_\_\_\_\_\_ and \_\_\_\_\_\_\_ react with very dilute HNO3 to evolve H2 gas.

|  |  |  |  |
| --- | --- | --- | --- |
| a) Pb , Cu | b) Na , K | c) Mg , Mn | d) Al , Zn |

1. What happen when sodium is added to water ?

|  |  |
| --- | --- |
| a) Hydrogen is formed. | b) Sodium burns with a purple flame. |
| c) Sodium oxide is formed. | d) The solution turns blue. |

1. What is the chemical formula of the compound formed when 12X24 combines with 9Y19 ?

|  |  |  |  |
| --- | --- | --- | --- |
| a) XY | b) X2Y | c) XY2 | d) X2Y3 |

1. Which of the following is not a ionic compound ?

|  |  |  |  |
| --- | --- | --- | --- |
| a) Calcium oxide | b) Hydrogen chloride | c) Sodium chloride | d) Magnesium oxide |

1. Which of the following metals do not burn on heating ?

|  |  |  |  |
| --- | --- | --- | --- |
| a) Magnesium | b) Copper | c) Lithium | d) Sodium |

1. Mg2+ has

|  |  |
| --- | --- |
| a) 11 protons, 10 electrons | b) 12 protons, 10 electrons |
| c) 12 protons, 11 electrons | d) 11 protons, 12 electrons |

1. Which of the following metals do not react with cold as well as hot water ?

|  |  |  |  |
| --- | --- | --- | --- |
| a) Na | b) Ca | c) Mg | d) Fe |

1. What happens when calcium is treated with water ?

(i) It does not react with water.

(ii) It reacts violently with water.

(iii) It reacts less violently with water.

(iv) Bubble of hydrogen gas formed stick to the surface of calcium.

|  |  |  |  |
| --- | --- | --- | --- |
| a) (i) & (iv) | b) (ii) & (iii) | c) (i) & (ii) | d) (iii) & (iv) |

1. The composition of Aqua regia is :

|  |  |  |  |
| --- | --- | --- | --- |
| a) Dil. HCl : Conc. HNO3  3 : 1 | b) Conc. HCl : Dil. HNO3  3 : 1 | c) Conc. HCl: Conc. HNO3  3 : 1 | d) Dil. HCl : Dil. HNO3  3 : 1 |

1. Generally, non-metals are not lustrous. Which of the following non-metal is lustrous ?

|  |  |  |  |
| --- | --- | --- | --- |
| a) Sulphur | b) Oxygen | c) Nitrogen | d) Iodine |

1. Which among the following statements is incorrect for magnesium metal ?

a) It burns in oxygen with a dazzling white flame.

b) It reacts with cold water to form magnesium oxide and evolves hydrogen gas.

c) It reacts with hot water to form magnesium hydroxide and evolves hydrogen gas.

d) It reacts with steam to form magnesium hydroxide and evolves hydrogen gas.

1. **5 Mark Question** **[ 1 x 5 = 5 ]**
2. a) Show the formation of Na2O and CaO by the transfer of electrons.

b) What are the ions present in these compounds ?

**Tarun Arora**  **R.L. Institute M :9416974837**

**Max Time : 1 hr** **Metals & Non - Metals Max Marks : 30**

**CODE : B**

1. **Multiple Choice Questions : [ 1 x 25 = 25 ]**
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| a) (i) & (iii) | b) (ii) & (iv) | c) (iii) & (iv) | d) (ii) & (iii) |

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| a) Calcium oxide | b) Hydrogen chloride | c) Sodium chloride | d) Magnesium oxide |

1. Which among the following statements is incorrect for magnesium metal ?

a) It burns in oxygen with a dazzling white flame.

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d) It reacts with steam to form magnesium hydroxide and evolves hydrogen gas.

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b) What are the ions present in these compounds ?

**Answers**

**Metals & Non - Metals [CLASS = 10th ]**

**CODE : A CODE : B**

1. c 1. c

2. d 2. c

3. b 3. b

4. b 4. d

5. d 5. b

6. c 6. b

7. c 7. b

8. b 8. b

9. c 9. d

10. b 10. c

11. b 11. c

12. d 12. b

13. d 13. d

14. c 14. d

15. c 15. d

16. a 16. c

17. c 17. b

18. b 18. b

19. b 19. c

20. b 20. d

21. d 21. d

22. d 22. c

23. c 23. a

24. d 24. b

25. b 25. c