## MCQs Metals and Non-Metals

1. Aluminium is used for making cooking uten¬sils. Which of the following properties of alu¬minium are responsible for the same?  
(i) Good thermal conductivity  
(ii) Good electrical conductivity  
(iii) Ductility  
(iv) High melting point  
(a) (i) and (ii)  
(b) (i) and (iii)  
(c) (ii) and (iii)  
(d) (i) and (iv)

**Answer**

2. The most abundant metal in the earth’s crust is  
(a) Iron  
(b) Aluminium  
(c) Calcium  
(d) Sodium

**Answer**

3. The poorest conductor of heat among metals is  
(a) Lead  
(b) Mercury  
(c) Calcium  
(d) Sodium

**Answer**

4. Which property of metals is used for making bells and strings of musical instruments like Sitar and Violin?  
(a) Sonorousness  
(b) Malleability  
(c) Ductility  
(d) Conductivity

**Answer**

5. Al2O3 + 2NaOH → …… + H2O  
(a) Al(OH)3  
(b) Na2O  
(c) NaAlO2  
(d) AlNaO2

**Answer**

6. Which of the following is the correct arrange-ment of the given metals in ascending order of their reactivity?  
Zinc, Iron, Magnesium, Sodium  
(a) Zinc > Iron > Magnesium > Sodium  
(b) Sodium > Magnesium > Iron > Zinc  
(c) Sodium > Zinc > Magnesium > Iron  
(d) Sodium > Magnesium > Zinc > Iron

**Answer**

7. Which of the following pairs will give dis-placement reactions?  
(a) FeSO4 solution and Copper metal  
(b) AgNO3 solution and Copper metal  
(c) CuSO4 solution and Silver metal  
(d) NaCl solution and Copper metal

**Answer**

8. Non-metals form covalent chlorides because  
(a) they can give electrons to chlorine  
(b) they can share electrons with chlorine  
(c) they can give electrons to chlorine atoms to form chloride ions  
(d) they cannot share electrons with chlorine atoms

**Answer**

9. Which of the following oxide(s) of iron would be obtained on prolonged reaction of iron with steam?  
(a) FeO  
(b) Fe2O3  
(c) Fe3O4  
(d) Fe2O3 and Fe2O4

**Answer/ Explanation**

10. Which of tire following are not ionic compounds?  
(i) KCl  
(ii) HCl  
(iii) CCl4  
(iv) NaCl  
(a) (i) and (ii)  
(b) (ii) and (iii)  
(c) (iii) and (iv)  
(d) (i) and (iii)

**Answer**

11. The electronic configuration of three elements X, Y and Z are as follows:  
X = 2, 4, Y = 2, 7, Z = 2,1 Which two elements will combine to form an ionic compound and write the correct formula,  
(a) X2Y  
(b) YZ  
(c) XZ3</sub  
(d) Y2Z

**Answer**

12. The highly reactive metals like Sodium, Potas-sium, Magnesium, etc. are extracted by the  
(a) electrolysis of their molten chloride  
(b) electrolysis of their molten oxides  
(c) reduction by aluminium  
(d) reduction by carbon

**Answer**

13. Which of the following non-metal is lustrous?  
(a) Sulphur  
(b) Oxygen  
(c) Nitrogen  
(d) Iodine

**Answer**

14. Example of an amphoteric oxide is:  
(a) Na2O  
(b) K2O  
(C) Al2O3  
(d) MgO

**Answer**

15. Which one among the following is an acidic oxide?  
(a) Na2O  
(b) CO  
(c) CO2  
(d) Al2O3

**Answer**

16. The atomic number of an element ‘X’ is 12. Which inert gas is nearest to X?  
(a) He  
(b) Ar  
(c) Ne  
(d) Kr

**Answer/ Explanation**

17, The process in which a carbonate ore is heated strongly in the absence of air to convert it into metal oxide is called  
(a) Roasting  
(b) Reduction  
(c) Calcination  
(d) Smelting

**Answer**

18. Oxides of moderately reactive metals like Zinc, Iron, Nickel, Tin, Copper etc. are reduced by using  
(a) Aluminium as reducing agent  
(b) Sodium as reducing agent  
(c) Carbon as reducing agent  
(d) Calcium as reducing agent

**Answer**

19. In thermite welding a mixture of …… and …… is ignited with a burning magnesium ribbon which produces molten iron metal as large amount of heat is evolved.  
(a) iron (III) oxide and aluminium powder  
(b) iron (II) oxide and aluminium powder  
(c) iron (III) chloride and aluminium powder  
(d) iron (III) sulphate and aluminium powder

**Answer**

20. Galvanisation is a method of protecting iron from rudftng by coating with a thin layer of  
(a) Galium  
(b) Aluminium  
(c) Zinc  
(d) Silver

**Answer**

21. An element X is soft and can be cut with a knife. This is very reactive to air and cannot be kept open in air. It reacts vigorously with water. Identify the element from the following  
(a) Mg  
(b) Na  
(c) P  
(d) Ca

**Answer**

22. Reaction between X and Y forms compound Z. X loses electron and Y gains electron. Which of the following properties is not shown by Z?  
(a) Has high melting point  
(b) Has low melting point  
(c) Conducts electricity in molten state  
(d) Occurs as solid

**Answer/ Explanation**

23. The electronic configurations of three ele¬ments X, Y and Z are X — 2, 8; Y — 2, 8, 7 and Z — 2, 8, 2. Which’of the following is correct?  
(a) X is a metal  
(b) Y is a metal  
(c) Z is a non-metal  
(d) Y is a non-metal and Z is a metal

**Answer/ Explanation**

24. Amalgam is an alloy of  
(a) Copper and Tin  
(b) Mercury  
(c) Lead and Tin  
(d) Copper and Zinc

**Answer**

25. Copper objects lose their shine and form green coating of  
(a) Copper oxide  
(b) Copper hydroxide and Copper oxide  
(c) Basic Copper carbonate  
(d) Copper carbonate

**Answer**

Fill in the blanks

1. Elements can be classified as ……… and ……. .  
2. Two examples of metals which are poor conductors of heat are ………, ……… .  
3. Two metals which melt when kept on the palm are ………, ……… .  
4. A non-metal which is a good conductor of electricity is ……… .  
5. Metals can form positive ions by ……… .  
6. A non-metal which is lustrous is ……… .  
7. A metal which burns in air with a dazzling white flame is ……… .  
8. Metals above hydrogen in the activity series can displace ……… from dilute acids.  
9. The extraction of metals from their ores and then refining them for use is known as ……… .  
10. ……… is an allotroph of carbon and is the hardest natural substance.  
11. Metals which are so soft that they can be cut with a knife are ………, ………  
12. Metal oxides ……… and ……… dissolve in water to form alkalis.

Answers

1. metals, non-metals  
2. Lead, Mercury  
3. Gallium, Caesium  
4. Graphite  
5. losing electrons  
6. Iodine  
7. Magnesium  
8. Hydrogen  
9. metallurgy  
10. Diamond  
11. Sodium, Potassium  
12. Sodium Oxide and Potassium oxide