

Metals and Non-metals

Question 1.

Chemically rust is

- (a) Hydrated ferrous oxide
- (b) Hydrated ferric oxide
- (c) only ferric oxide
- (d) none of these

▼ [Answer](#)

- (b) Hydrated ferric oxide
-

Question 2.

Setting of Plaster of Paris takes place due to

- (a) Solder
- (b) Bronze
- (c) Brass
- (d) Bell metal

▼ [Answer](#)

- (a) Solder
-

Question 3.

Heating pyrites to remove sulphur is called

- (a) Smelting
- (b) Calcination
- (c) Liquation
- (d) Roasting

▼ [Answer](#)

- (d) Roasting
-

Question 4.

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](#)

- (c) Ne
-

Question 5.

During smelting, an additional substance is added which combines with impurities to form a fusible product. It is known as

- (a) Slag
- (b) Mud
- (c) Gangue
- (d) Flux

▼ [Answer](#)

(d) Flux

Question 6.

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) X_2Y
- (b) YZ
- (c) XZ_3
- (d) $Y_{23}Z$

▼ [Answer](#)

(b) YZ

Question 7.

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](#)

(b) Na

Question 8.

Galvanisation is a method of protecting iron from rusting by coating with a thin layer of

- (a) Galium
- (b) Aluminium
- (c) Zinc
- (d) Silver

▼ [Answer](#)

(c) Zinc

Question 9.

The electronic configurations of three elements 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](#)

(c) Z is a non-metal

Question 10.

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

(c) Basic Copper carbonate

Question 11.

Which of the statements about the reaction,
 $\text{ZnO} + \text{CO} \rightarrow \text{Zn} + \text{CO}_2$ is correct ?

- (a) ZnO is being oxidised
- (b) CO is being reduced
- (c) CO_2 is being oxidised
- (d) ZnO is being reduced

▼ Answer

(d) ZnO is being reduced

Question 12.

In extraction of copper, the flux used is

- (a) CaO
- (b) SiO_2
- (c) FeO
- (d) FeSiO_3

▼ Answer

(b) SiO_2

Question 13.

Metal always found in free state is:

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

▼ Answer

(a) Gold

Question 14.

The earthy impurities associated with mineral used in metallurgy are called

- (a) Slag
- (b) Flux
- (c) Gangue
- (d) Ore

▼ Answer

(c) Gangue

Question 15.

A mineral is known as ore if metal

- (a) Cannot be produced from it
- (b) Can be produced from it
- (c) Can be extracted from it profitably
- (d) Is very costly

▼ Answer

(c) Can be extracted from it profitably

Question 16.

Which of the following is the correct arrangement of the given metals in ascending order of their reactivity?

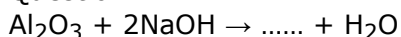
Zinc, Iron, Magnesium, Sodium

- (a) Zinc > Iron > Magnesium > Sodium
- (b) Sodium > Magnesium > Iron > Zinc
- (c) Sodium > Zinc > Magnesium > Iron
- (d) Sodium > Magnesium > Zinc > Iron

▼ Answer

(d) Sodium > Magnesium > Zinc > Iron

Question 17.



- (a) $\text{Al}(\text{OH})_3$
- (b) Na_2O
- (c) NaAlO_2
- (d) AlNaO_2

▼ Answer

(c) NaAlO_2

Question 18.

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

(b) they can share electrons with chlorine

Question 19.

The highly reactive metals like Sodium, Potassium, 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

(a) electrolysis of their molten chloride

Question 20.

Which of the following oxide(s) of iron would be obtained on prolonged reaction of iron with steam?

- (a) FeO
- (b) Fe_2O_3

- (c) Fe_3O_4
- (d) Fe_2O_3 and Fe_2O_4

▼ [Answer](#)

- (c) Fe_3O_4
-

Question 21.

An iron nail was suspended in CuSO_4 solution and kept for a while the solution is

- (a) Remained blue and coating was found on the nail.
- (b) turned green and a coating was formed on the nail
- (c) remained blue and no coating was formed on the nail
- (d) turned green and no coating was formed on the nail

▼ [Answer](#)

- (b) turned green and a coating was formed on the nail
-

Question 22.

Which one among the following is an acidic oxide?

- (a) Na_2O
- (b) CO
- (c) CO_2
- (d) Al_2O_3

▼ [Answer](#)

- (c) CO_2
-

Question 23.

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](#)

- (c) Calcination
-

Question 24.

The sulphide ore among the following is

- (a) haematite
- (b) bauxite
- (c) argentite
- (d) zinc blende

▼ [Answer](#)

- (d) zinc blende
-

Question 25.

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

- (c) Carbon as reducing agent
-

Question 26.

Most abundant metal on the surface of the earth

- (a) Iron
- (b) Aluminium
- (c) Calcium
- (d) Sodium

▼ Answer

- (b) Aluminium
-

Question 27.

Some crystals of CuSO_4 were dissolved in water. The color of the solution obtained would be

- (a) Green
- (b) Red
- (c) Blue
- (d) Brown

▼ Answer

- (c) Blue
-

Question 28.

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

- (a) iron (III) oxide and aluminium powder
-

Question 29.

Zone refining is used for the

- (a) concentration of an ore
- (b) Reduction of metal oxide
- (c) Purification of metal
- (d) Purification of an ore

▼ Answer

- (c) Purification of metal
-

Question 30.

In the thermite process, the reducing agent is

- (a) Nickel
- (b) Zinc

- (c) Sodium
- (d) Aluminium

▼ [Answer](#)

- (d) Aluminium
-

Question 31.

A student adds one big iron nail each in four test tubes containing solution of zinc sulphate, aluminium sulphate, copper sulphate and iron sulphate. A reddish brown coating was observed only on the surface of iron nail which was added in the solution of:

- (a) Zinc sulphate
- (b) Iron sulphate
- (c) copper sulphate
- (d) Aluminium sulphate

▼ [Answer](#)

- (c) copper sulphate
-

Question 32.

The correct decreasing order of the metals in the activity series is:

- (a) Ca, Mg, Ni, Fe
- (b) Ni, Ca, Mg, Fe
- (c) Ca, Mg, Fe, Ni
- (d) Mg, Ca, Fe, Ni

▼ [Answer](#)

- (c) Ca, Mg, Fe, Ni
-

Question 33.

The most abundant metal in the earth's crust is

- (a) Iron
- (b) Aluminium
- (c) Calcium
- (d) Sodium

▼ [Answer](#)

- (b) Aluminium
-

Question 34.

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](#)

- (a) Sonorousness
-

Question 35.

The poorest conductor of heat among metals is

- (a) Lead

- (b) Mercury
- (c) Calcium
- (d) Sodium

▼ [Answer](#)

- (a) Lead
-

Question 36.

Metal always found in free state is:

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

▼ [Answer](#)

- (a) Gold
-

Question 37.

Malachite is an ore of:

- (a) Iron
- (b) Copper
- (c) Mercury
- (d) Zinc

▼ [Answer](#)

- (b) Copper
-

Question 38.

A basic lining is given to a furnace by using

- (a) Calcined dolomite
- (b) Copper sulphate
- (c) Haematite
- (d) Silica

▼ [Answer](#)

- (a) Calcined dolomite
-

Question 39.

The slag obtained during the extraction of copper pyrites is composed mainly of

- (a) Cu_2S
- (b) FeSiO_3
- (c) CuSiO_3
- (d) SiO_2

▼ [Answer](#)

- (b) FeSiO_3
-

Question 40.

Which of the following non-metal is lustrous?

- (a) Sulphur
- (b) Oxygen

- (c) Nitrogen
- (d) Iodine

▼ [Answer](#)

- (d) Iodine
-

Question 41.

The common method for extraction of metals from the oxide ore is

- (a) Reduction with carbon
- (b) reduction with hydrogen
- (c) reduction with aluminium
- (d) electrolytic method

▼ [Answer](#)

- (a) Reduction with carbon
-

Question 42.

Example of an amphoteric oxide is:

- (a) Na_2O
- (b) K_2O
- (c) Al_2O_3
- (d) MgO

▼ [Answer](#)

- (c) Al_2O_3
-