

## Materials: Metals and Non-Metals

Question 1.

The metal having fastest rate of formation of bubbles of hydrogen with dil. HCl is

- (a) zinc
- (b) copper
- (c) magnesium
- (d) silver

▼ [Answer](#)

(c) magnesium

Magnesium is higher in reactivity series therefore the rate of formation of bubbles of hydrogen with dil HCl is fastest.

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Question 2.

The non-metal which has very high melting point is:

- (a) sulphur
- (b) iodine
- (c) phosphorus
- (d) graphite

▼ [Answer](#)

(d) graphite

Graphite is a non-metal having very high melting point.

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Question 3.

The non-metal which is good conductor of electricity is:

- (a) sulphur
- (b) iodine
- (c) phosphorus
- (d) graphite

▼ [Answer](#)

(d) graphite

Graphite is the only non-metal which is a good conductor of electricity.

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Question 4.

The non-metal which is liquid at room temperature is:

- (a) chlorine
- (b) bromine
- (c) iodine
- (d) carbon

▼ [Answer](#)

(b) bromine

Bromine is the non-metal which is liquid at room temperature.

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Question 5.

The colour of chlorine is:

- (a) yellow
- (b) white
- (c) green
- (d) yellowish green

▼ [Answer](#)

(d) yellowish green

The colour of chlorine is yellowish green.

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Question 6.

The metal which cannot be stored in packets is:

- (a) sodium
- (b) calcium
- (c) magnesium
- (d) zinc

▼ [Answer](#)

(a) sodium

Sodium cannot be stored in packets because it will catch fire.

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Question 7.

The metal which is poorest conductor of heat is:

- (a) mercury
- (b) zinc
- (c) lead
- (d) copper

▼ [Answer](#)

(c) lead

Lead is the metal which is poorest conductor of heat.

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Question 8.

Property of producing sound by metals is called:

- (a) malleability
- (b) sonority
- (c) ductility
- (d) none of these

▼ [Answer](#)

(b) sonority

Sonority is the property of producing sound by metals.

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Question 9.

The metal which develops a protective layer over its surface by reaction with air is:

- (a) zinc
- (b) aluminium
- (c) iron
- (d) silver

▼ [Answer](#)

(b) aluminium

Aluminium metal develops a protective layer of aluminium oxide over its surface by reaction with air.

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Question 10.

The metal not corroded by air, water and acid is :

- (a) copper
- (c) gold
- (b) zinc
- (d) aluminium

▼ [Answer](#)

(c) gold

Gold metal is not corroded by air, water and acid because one of the least reactive metals in reactivity series.

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Question 11.

The metal which is soft is:

- (a) sodium
- (c) silver
- (b) gold
- (d) copper

▼ [Answer](#)

(a) sodium

Sodium metal is soft whereas gold, silver and copper are solids.

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Question 12.

The correct statement is:

- (a) all metals are ductile
- (c) generally, metals are ductile
- (b) all non-metals are ductile
- (d) some non-metals are ductile

▼ Answer

(c) generally, metals are ductile

Generally, metals are ductile. Sodium, potassium, calcium etc. are not ductile.

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Question 13.

When copper is added to iron sulphate solution:

- (a) iron is displaced
- (b)  $\text{SO}_4$  is displaced
- (c) no reaction takes place
- (d) none of these

▼ Answer

(c) no reaction takes place

When copper is added to iron sulphate solution then no reaction takes place because copper is below iron in reactivity series.

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Question 14.

Arrange the following in the order of their decreasing chemical activity: magnesium, potassium, iron and gold.

- (a) magnesium, potassium, iron, gold
- (b) magnesium, iron, potassium, gold
- (c) potassium, magnesium, iron, gold
- (d) none of these

▼ Answer

(c) potassium, magnesium, iron, gold

Potassium, magnesium, iron, gold.

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Question 15.

Which of the following is true about metals:

- (a) metals generally have low melting point
- (b) metal generally have a shiny appearance
- (c) metals are poor conductors of heat and electricity
- (d) metals are non-malleable and non-ductiles

▼ Answer

(b) metal generally have a shiny appearance

Metals generally have a shiny appearance. They have high melting point, are good conductors of heat and electricity. They are malleable and ductile.

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Question 16.

Which one of the following is most ductile:

- (a) Aluminium

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

▼ [Answer](#)

(d) Gold  
Gold is most ductile.

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Question 17.

Which one of the following metals is most reactive and stored in kerosene oil:

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

▼ [Answer](#)

(d) Sodium  
Sodium is most reactive and stored in kerosene oil. Sodium reacts with air and water at room temperature.

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Question 18.

Which one of the following metals will not liberate hydrogen gas when attacked by dilute hydrochloric acid:

- (a) magnesium
- (b) zinc
- (c) copper
- (d) aluminium

▼ [Answer](#)

(c) copper  
Copper will not liberate hydrogen gas when attacked by dilute hydrochloric acid because it is very low in reactivity series.

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Question 19.

For rusting of iron:

- (a) only moisture is required
- (b) only air is required
- (c) both moisture and air is required
- (d) neither moisture nor air is required

▼ [Answer](#)

(c) both moisture and air is required  
Both moisture and air is required for rusting of iron.

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Question 20.

The property of metals by virtue of which metal can be hammered into very thin sheets is called:

- (a) ductility
- (b) malleability
- (c) lustre
- (d) sonorus

▼ [Answer](#)

(b) malleability

Malleability is the property of metals by virtue of which metals can be hammered into very thin sheets.

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Question 21.

Non-metals react with oxygen and form:

- (a) natural oxides
- (b) acidic oxides
- (c) basic oxides
- (d) none of these

▼ [Answer](#)

(b) acidic oxides

Non-metals react with oxygen and forms non-metallic oxides which are acidic in nature.

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Question 22.

Metals react with oxygen to form:

- (a) basic oxides
- (c) acidic oxides
- (b) neutral oxides
- (d) none of these

▼ [Answer](#)

(c) acidic oxides

Metals react with oxygen and form metallic oxides which are Basic in nature.

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Question 23.

Metals can form long wires. This property of metals is known as:

- (a) sonorous
- (c) malleability
- (b) ductility
- (d) none of these

▼ [Answer](#)

(b) ductility

Ductility is the property of metal to form long wires.

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Question 24.

The best electrical conductor is:

- (a) gold
- (b) silver
- (c) copper
- (d) aluminium

▼ [Answer](#)

(b) silver

Silver is the best conductor of electricity.

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Question 25.

Which of the following can be beaten into thin sheets ?

- (a) oxygen
- (b) carbon
- (c) aluminium
- (d) phosphorus

▼ [Answer](#)

(c) aluminium

Aluminium can be beaten into thin sheets because it is a metal whereas oxygen, carbon and phosphorus are non-metals.

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Question 26.

The metal which reacts violently with cold water is:

- (a) zinc
- (b) aluminium
- (c) sodium
- (d) copper

▼ [Answer](#)

(c) sodium

Sodium reacts violently with cold water because it is high in the reactivity series.

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Question 27.

A liquid metal is:

- (a) bromine
- (c) iodine
- (b) nitrogen
- (d) mercury

▼ [Answer](#)

(d) mercury

Mercury is liquid metal. Bromine, nitrogen and iodine are non-metals.

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Question 28.

The gas produced when metals react with sodium hydroxide is:

- (a) nitrogen
- (c) oxygen
- (b) hydrogen
- (d) water vapour

▼ [Answer](#)

(b) hydrogen

Hydrogen gas is produced when metals react with sodium hydroxide.

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Question 29.

The gas produced when metals reacts with dilute acids is:

- (a) nitrogen
- (b) carbon dioxide
- (c) oxygen
- (d) hydrogen

▼ [Answer](#)

(d) hydrogen

Hydrogen gas is produced when metals react with dilute acids.

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Question 30.

Sulphur reacts with hot concentrated nitric acid and produces:

- (a) sulphur dioxide
- (b) sulphur trioxide
- (c) nitrogen dioxide
- (d) sulphur dioxide and Nitrogen dioxide

▼ [Answer](#)

(d) sulphur dioxide and Nitrogen dioxide

Sulphur reacts with hot concentrated nitric acid and produces sulphur dioxide, nitrogen dioxide and water

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[Match the Column-A with Column-B:](#)

Question 1.

Column-A	Column-B
(a) Metal which is liquid at room temperature	(i) Iodine

(b) Non-metal which is liquid at room temperature	(ii) Sodium
(c) Non-metal which is solid at room temperature	(iii) Mercury
(d) Metal which is poor conductor of heat	(iv) Bromine
(e) A soft metal	(v) Lead

▼ Answer

Column-A	Column-B
(a) Metal which is liquid at room temperature	(iii) Mercury
(b) Non-metal which is liquid at room temperature	(iv) Bromine
(c) Non-metal which is solid at room temperature	(i) Iodine
(d) Metal which is poor conductor of heat	(v) Lead
(e) A soft metal	(ii) Sodium

Question 2.

Column-A	Column-B
(a) Gallium	(i) Gas at room temperature
(b) Potassium	(ii) Best conductor of heat
(c) Silver	(iii) Solid non-metal at room temperature
(d) Iodine	(iv) Soft metal
(e) Helium	(v) Melts on our palm

▼ Answer

Column-A	Column-B
(a) Gallium	(v) Melts on our palm
(b) Potassium	(iv) Soft metal
(c) Silver	(ii) Best conductor of heat
(d) Iodine	(iii) Solid non-metal at room temperature
(e) Helium	(i) Gas at room temperature

Question 3.

Column-A	Column-B
(a) Gold	(i) Thermometers
(b) Iron	(ii) Electric wire

(c) Aluminium	(iii) Wrapping food
(d) Copper	(iv) Jewellery
(e) Mercury	(v) Machinery

▼ [Answer](#)

Column-A	Column-B
(a) Gold	(iv) Jewellery
(b) Iron	(v) Machinery
(c) Aluminium	(iii) Wrapping food
(d) Copper	(ii) Electric wire
(e) Mercury	(i) Thermometers

State whether the following statements are True or False:

Question 1.

Aluminium foils are used to wrap food items.

▼ [Answer](#)

True

Question 2.

Immersion rods for heating liquids are made up of non-metallic substances.

▼ [Answer](#)

False

Question 3.

Copper can displace zinc from its salt solution.

▼ [Answer](#)

False

Question 4.

Sodium and potassium are stored in kerosene.

▼ [Answer](#)

True

Question 5.

The surface of most metals have shiny appearance.

▼ [Answer](#)

True

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Question 6.

Lemon pickle can be stored in an aluminium utensil.

▼ [Answer](#)

False

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Question 7.

Copper is used for electrical wiring.

▼ [Answer](#)

True

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Question 8.

Gold is not found in the free state.

▼ [Answer](#)

False

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Question 9.

Sodium does not occur in the free state.

▼ [Answer](#)

True

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Question 10.

Iron is used to construct bridges and houses.

▼ [Answer](#)

True

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Question 11.

Sodium reacts violently with cold water forming sodium hydroxide.

▼ [Answer](#)

True

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Question 12.

Less reactive metals displace more reactive metals from their compounds in aqueous solutions.

▼ [Answer](#)

False

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Question 13.

Non-metals react with oxygen to produce non-metallic oxides which are acidic in nature.

▼ [Answer](#)

False

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Question 14.

'Pop' sound indicates the presence of hydrogen gas.

▼ [Answer](#)

True

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Question 15.

The sulphurous acid turns red litmus blue.

▼ [Answer](#)

False

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[Fill in the blanks:](#)

Question 1.

All metals except ..... are solids at room temperature.

▼ [Answer](#)

mercury

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Question 2.

Melting point of most of the metals is ..... than non-metals.

▼ [Answer](#)

more

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Question 3.

Gold is at the ..... of the reactivity series of metals.

▼ [Answer](#)

bottom

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Question 4.

Iron needs ..... and ..... to rust.

▼ [Answer](#)

water and air

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Question 5.

The property which allows metals to be hammered into thin sheets is .....

▼ [Answer](#)

malleable

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Question 6.

Non-metals are ..... conductors of heat and electricity.

▼ [Answer](#)

poor

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Question 7.

Metals react with oxygen to produce ..... oxides.

▼ [Answer](#)

basic

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Question 8.

Zinc is ..... reactive than copper.

▼ [Answer](#)

more

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Question 9.

Iron displaces ..... from copper sulphate solution.

▼ [Answer](#)

copper

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Question 10.

Phosphorus is a very ..... non-metal.

▼ [Answer](#)

reactive

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Question 11.

Copper sulphate + Zinc → ..... + .....

▼ [Answer](#)

Zinc sulphate + Copper

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Question 12.

..... is the property of metals by which it can be drawn into wires.

▼ [Answer](#)

Ductility

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Question 13.

..... substances when hammered break into small pieces.

▼ [Answer](#)

Brittle

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Question 14.

Acid oxides are oxides which turn ..... litmus paper to .....

▼ [Answer](#)

blue, red

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Question 15.

Basic oxides are oxides which turn ..... litmus paper to .....

▼ [Answer](#)

red, blue

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Question 16.

The shiny appearance on the cut surface of metals is called .....

▼ [Answer](#)

metallic lustre

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Question 17.

Coal is ..... conductor of electricity.

▼ [Answer](#)

poor

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Question 18.

Metals react with acid to produce ..... gas.

▼ [Answer](#)

hydrogen

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Question 19.

..... reactive metals displace ..... reactive metals from their compounds in aqueous solutions.

▼ [Answer](#)

More, less

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Question 20.

Phosphorus is stored in .....

▼ [Answer](#)

water

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