



Metals VS Non-Metals  
32 Questions

NAME : \_\_\_\_\_

CLASS : \_\_\_\_\_

DATE : \_\_\_\_\_

1. Which of these is a property of metals?

It's malleable

It can't conduct electricity

They are used in food

It's very brittle

2. Where are the non-metallic elements found in the periodic table?

In the middle

In the top rows

On the left-hand side

On the right-hand side

3. I have an object that is dull, brittle, and an insulator, what is it?

metalloid

non-metal

metal

matter

4. If you have a material that can conduct electricity well it is probably a...

Metalloid

Matter

Non-metal

Metal

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

TRUE

FALSE

6. Metals are ductile, meaning they can be drawn into wire

True

False

Never

7. At room temperature metals are \_\_\_\_\_.

plasma

gases

liquid

solid

8. Metals that can be used as wire are \_\_\_\_\_.

metallic

shiny

malleable

ductile

9.



When an object changes shape when struck by a hammer.





luster

malleable

brittleness

ductile

10.

| Sample | Appearance  | Physical Properties  |
|--------|---|--|
| 1      |  | <ul style="list-style-type: none"> <li>• Dull</li> <li>• Yellow</li> <li>• Powdery solid</li> <li>• Smells like eggs</li> <li>• Broken by hammer</li> </ul>                    |
| 2      |  | <ul style="list-style-type: none"> <li>• Silvery-gray</li> <li>• Solid</li> <li>• Shaped into a bar</li> <li>• Dented by hammer</li> </ul>                                     |
| 3      |  | <ul style="list-style-type: none"> <li>• Reddish-brown</li> <li>• Shiny solid</li> <li>• Shaped into a wire</li> <li>• Can be stretched</li> <li>• Dented by hammer</li> </ul> |
| 4      |  | <ul style="list-style-type: none"> <li>• Silvery-gray</li> <li>• Solid</li> <li>• Small round pellets</li> <li>• Flattened by hammer</li> </ul>                                |

which sample is most likely a nonmetal?

Sample 1

Sample 2

Sample 3

Sample 4

11.



This picture illustrates copper's

brittleness

malleability

ductility

12. Which of the following metals is used for making foil to pack foodstuff?

Aluminium

Mercury

Sodium

Copper

13. All of the following would classify an element as a metal except?

Dull

Luster

Malleable

Hard

14. Fluorine is used in many tooth pastes because it helps maintain healthy teeth. At room temperature it is gaseous, and does not conduct electricity. Based off these properties, it would be classified as?

A metal

A non metal

A metalloid

15. The list which contains only metals is .....

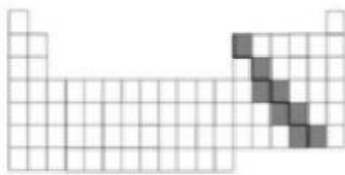
aluminium, copper, nitrogen

iron, oxygen, hydrogen

iron, silver, aluminium

iron, sulphur, copper

- 16.



Elements in the shaded area can best be described as -

Shiny and brittle, semiconductors

Insulators

Good conductors

17. The word "luster" refers to which property of matter?

The ability to conduct electrical or thermal energy

Capable of being drawn out into thin wires

The way a surface appears when it reflects light

Suitable for being shaped by beating or rolling

## 18. Metalloids \_\_\_\_\_

have no properties of metals.

have no properties of nonmetals.

have some properties of both metals and nonmetals.

none of the above

## 19. Unlike non-metals, most metals tend to —

conduct electricity and heat well.

be gases at room temperature.

break easily when hammered.

have less luster and shine.

## 20.

**Periodic table of the elements**

group 1\*

period

1 H 2 He

2 Li Be B C N O F Ne

3 Na Mg Al Si P S Cl Ar

4 K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

5 Rb Sr Y Zr Nb Mo Tc Ru Rh Pd Ag Cd In Sn Sb Te I Xe

6 Cs Ba La Hf Ta W Re Os Ir Pt Au Hg Tl Pb Bi Po At Rn

7 Fr Ra Ac Rf Db Sg Bh Hs Mt Ds Rg Cn Nh Fl Mc Lv Ts Og

lanthanoid series 6 Ce Pr Nd Pm Sm Eu Gd Tb Dy Ho Er Tm Yb Lu

actinoid series 7 Th Pa U Np Pu Am Cm Bk Cf Es Fm Md No Lr

\*Numbering system adopted by the International Union of Pure and Applied Chemistry (IUPAC) © Encyclopædia Britannica, Inc.

Where are the non-metallic elements found in the periodic table?

In the middle

In the top rows

On the left-hand side

On the right-hand side

21.



Which of the following is a property of a non-metal?

Conducts electricity and heats well

Can be hammered into thin sheets

Is brittle and breaks easily

Has a shiny, metallic luster

22. What physical properties are used to classify elements as metals, non-metals, or metalloids?

Color, smell, physical state

Reactivity, streak, hardness

Ability to burn, mass, density

Luster, conductivity, malleability

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

TRUE

FALSE

24.



This ion has

gained one electron

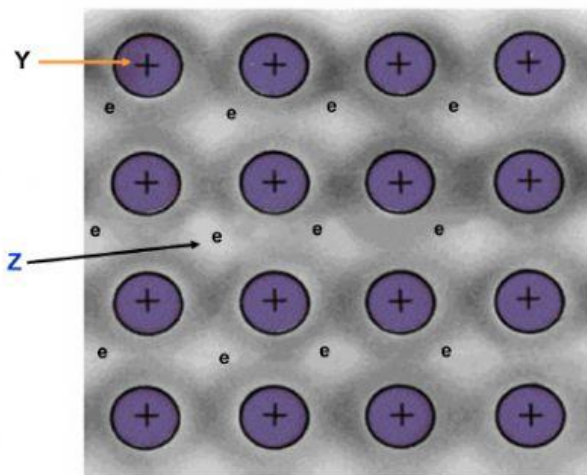
lost one electron

gained one proton

lost one proton



25.



What is Y?

Positive ions are immersed in the sea of electrons

Negative ions are immersed in the sea of electrons

Molecules are immersed in the sea of electrons

Atoms are immersed in the sea of electrons

26. Metallic bond is an electrostatic force between \_\_\_\_\_ metallic ions and the sea of delocalised electrons.

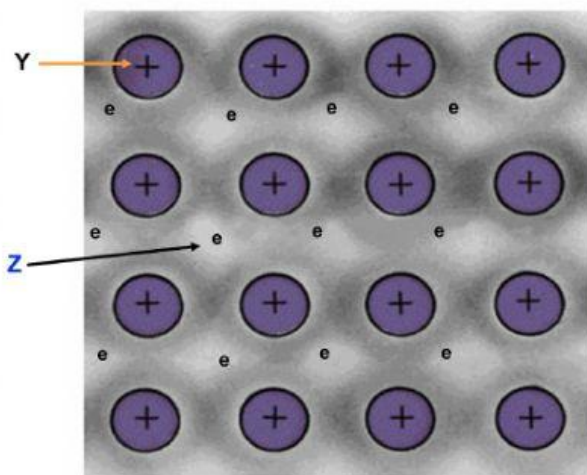
negative charge

positive charge

atom

molecule

27.



What is Z?

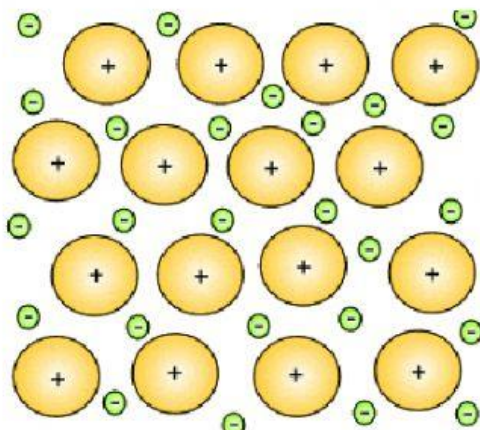
Free moving protons

Free moving atoms

Free moving neutrons

Free moving electrons

28.



What type of bond is illustrated above?

Metallic

Ionic

Covalent

Wiggly

29. A bond between a metal and a nonmetal is called a(n)

covalent bond

ionic bond

metallic bond

transfer bond

30.



Sodium chloride, NaCl

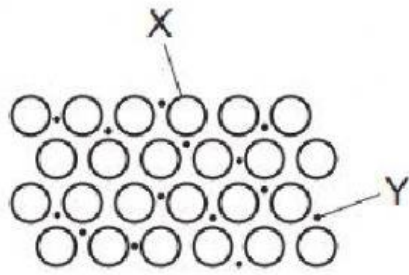
Ionic

Covalent

Metallic



31.



The diagram shows metallic bonding.

Which labels are correct?

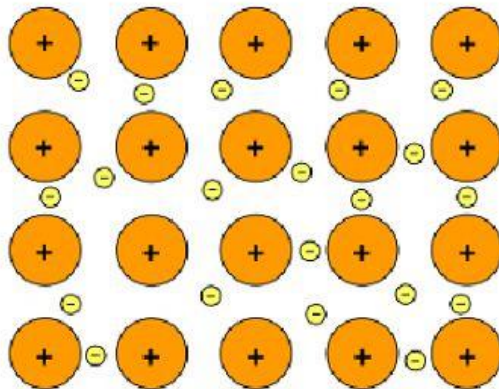
X: atomic nucleus Y: outer electron

X: metal atom Y: mobile electron

X: metal cation Y: mobile electron

X: positive ion Y: negative ion

32.



Which type of bonding allows for the conduction of electricity in the solid state?

Metallic

Ionic

Network Covalent

Molecular Covalent