

# MATTER, ELECTRICITY, AND ELECTROMAGNETISM TEST



## 1.- What is matter made of?

- a) Neutrons and Protons      b) Atoms      c) Electrons, neutrons, and protons

## 2.- When it is electricity created?

- a) When electrons move from the orbit of an atom's nucleus to another.      b) When protons move from the orbit of an atom's nucleus to another.      c) When neutrons move from the orbit of an atom's nucleus to another.

## 3.- What's a mixture?

- a) It is a substance made up of two or more types of matter chemically combined.      b) It is a substance made up of two or more types of objects not chemically combined.      c) It is a substance made up of two or more types of matter not chemically combined.

## 4.- What is a homogeneous mixture?

- a) A mixture that has a consistent colour and texture.      b) A mixture that has the same properties as others.      c) A mixture that has not a consistent colour but a very consistent texture.

## 5.- What is a heterogeneous mixture?

- a) A mixture that has a consistent colour and texture.      b) A mixture that has not a consistent texture but a very consistent colour.      c) A mixture that has a varied colour and texture.

## 6.- What are the ways in which we can separate mixtures?

- a) Filtration, distillation, and evaporation.      b) Filtration, evaporation, distillation, and dissolution.      c) Filtration, distillation, and dissolution.

## 7.- What type of method would you use to separate the following substances?

Ground coffee from water	_____
Paper clips from rubber bands	_____
Salt from seawater	_____
Rice from flour	_____
Water from alcohol	_____
Iron filings from sand	_____

8.- You have been lost in a desert and your only drinkable substance is a bottle of wine. As you are a good explorer, you know that the alcoholic drinks dehydrate you. How can you separate the alcohol from the rest of the wine? Explain your answer.

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## 9.- What is a chemical change?

- a) When two substances combined, and it can be reversed.
- b) When two substances combine, and they only can be separated by dissolution.
- c) When two substances are combined, and they create a new substance that cannot be reversed in any way.

## 10.- What are the types of chemical reactions?

- a) Exothermal and Endothermal.
- b) Combustion, oxidation and fermentation
- c) Exothermal and combustion.

## 11.- What is combustion?

- a) It is a chemical reaction in which oxygen mix with any kind of fuel and produces thermal energy.
- b) It is a chemical reaction in which oxygen mix with any kind of fuel and produces endothermal energy.
- c) It is a chemical reaction in which oxygen loses one or more electrons and produces thermal energy.

## 12.- What's oxidation?

- a) It is a chemical reaction in which some food reacts to oxygen.
- b) It is a chemical reaction in which bodies react to metal and oxygen.
- c) It is a chemical reaction in which some metal or food react to oxygen.

## 13.- What types of oxidation do exist?

- a) Thermal oxidation and Rusting.
- b) Rusting and oxidation in fruit.
- c) Fruit oxidation and rotten food.

## 14.- What's fermentation?

- a) It is a chemical reaction in which a yeast or bacteria transform the internal structure of some food creating a new substance.
- b) It is a chemical reaction in which a fungi or bacteria transform the internal structure of some food creating a new substance.
- c) It is frenzy.

## 15.- How do water changes from state to state?

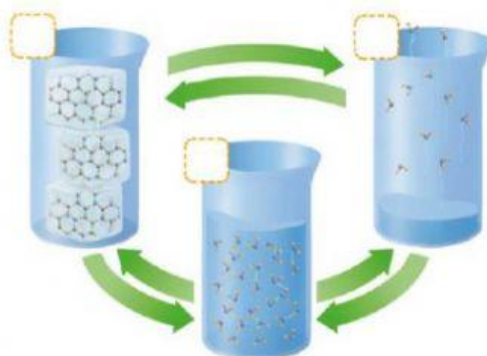
- a) From gas to solid you must put it into the fridge and wait; and from solid to gas it is impossible to do.
- b) From liquid to solid water freeze at  $0^{\circ}\text{C}$  and from liquid to gas water evaporates at  $100^{\circ}\text{C}$ .
- c) There are no changes of you do not put an extra substance into the water to make a chemical reaction.

## 16.- Read the sentences and complete them with the correct state. Then match each state to its drawing.

The atoms are further apart from each other and move fast in all directions in a \_\_\_\_\_

Atoms move around each other, but are still close together in a \_\_\_\_\_

The atoms are packed together and move only slightly in a \_\_\_\_\_



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17.- Choose the correct words to complete the sentences.

An atom is made up of protons, \_\_\_\_\_ and neutrons.

electrons

nucleus

charges

Objects that have the same number of protons and electrons are \_\_\_\_\_.

positively charged

negatively charged

electrically neutral

If two objects are positively charged, they \_\_\_\_\_ each other.

repel

attract

rub

Magnets have two poles, north and \_\_\_\_\_.

south

east

west

Opposite poles \_\_\_\_\_ each other.

repel

attract

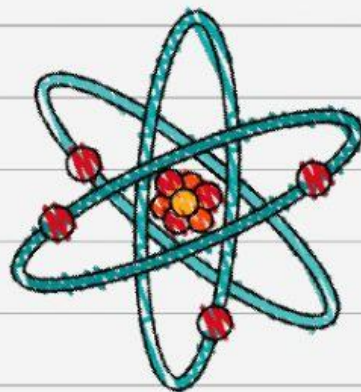
attack

The area around a magnet where it exerts its force is called a magnetic \_\_\_\_\_.

camp

field

zone





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18.- Choose the best answer.

**What is an artificial magnet?**

- a) It is a magnet made by people.      b) It is a magnet that occurs in nature, for example the Magnetite.      c) It is a magnet that acquires its magnetism after being in contact with nature.

**What is a permanent magnet?**

- a) It is a magnet that is attracted by another magnet.      b) It is a magnet that only has temporary magnetic force.      c) It is a magnet that never loses its magnetism.

**What is magnetic field?**

- a) It is the area around a magnet where its force has an effect.      b) It is the area around a magnet where it can be attracted by another magnet.      c) It is the area around a magnet where the force disappears.

19.- Choose the magnetic materials.

