

Electricity: Charges

⚠ This is a preview of the draft version of the quiz

Started: Nov 4 at 10:37am

Quiz Instructions

Question 1

1 pts

Two balloons are suspended from the ceiling and hang side by side. The balloons are separated and both are rubbed with rabbit fur. Which of the follow best describes the expected behavior of the balloons when released to hang next to each other again?

- the balloons will repel each other because they both have like charges
- the balloons will repel each other because they now have opposite charges
- the balloons will attract each other because they now have opposite charges
- the balloons will attract each other because they both have like charges

Question 2

1 pts

If you rub a plastic rod like an ink pen vigorously against a piece of wool, it will acquire a charge. If you then move that ink pen close to tiny pieces of paper or hole punches, the pieces of paper will lift off of the table and be attracted to the

pen. Which of the following best describes how electrically neutral pieces of paper can be influenced by a charged object?

- the charge on the pen interrupts the gravitational force on the paper
- the paper can acquire a charge from touching the table
- the paper gains a charge from the pen
- the charge on the pen polarizes the pieces of paper

Question 3**1 pts**

An oxygen nucleus has 6 electrons orbiting it. What is the charge on the oxygen atom?

- 2
- 1
- +1
- +2

Question 4**1 pts**

Select all of the statements that are true.

- Negatively (-) charged atoms are attracted to negatively charged atoms (-).
- Positively (+) charged atoms are attracted to positively charged atoms (+).
- Negatively (-) charged atoms are attracted to positively charged atoms (+).
- Positively (+) charged atoms are attracted to negatively charged atoms (-).

Question 5**1 pts**

A particular atom has 17 neutrons, 29 electrons, and 8 more protons than neutrons. What is atom's charge?

- 0
- 4
- +4
- +8

Question 6**1 pts**

A balloon initially holds a negative charge of 0.25 C. When it is held next to an uncharged electroscope, you would expect

- the leaves to increase in separation.

- the negatively charged leaf to raise.
- the positively charged leaf to raise.
- the leaves to move closer together.

Question 7**1 pts**

Total charge is _____ constant in any process.

- Always
- Rarely
- Never
- Sometimes

Question 8**1 pts**

A piece of copper has free-moving electrons. These are electrons that can move from atom to atom within the piece of metal. This property of copper means that it is a good

- conductor
- filament

insulator buffer**Question 9****1 pts**

What is the charge on the nucleus of a single gold atom?

 $0.5 \times 10^{17} \text{ C}$ $1.3 \times 10^{-17} \text{ C}$ $1.3 \times 10^{17} \text{ C}$ $0.5 \times 10^{-17} \text{ C}$ **Question 10****1 pts**

When a charged object is brought near an insulator, the insulator is said to be polarized if

 the molecules of the insulator oppose the charged object. the charge is transmitted through the insulator. the molecules of the insulator orient themselves based on the charge of the object.

the insulator acquires a charge from a connection to ground.

Not saved

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