

Electricity Review Assignment

Chapter 9 Quiz

Part A: Modified True/False

Indicate whether each statement is true or false. If false, modify the statement to make the statement true.

- ___ 1. A neutral object has more negative charge than positive charge.
- ___ 2. A neutral object is repelled by an object with a positive charge.
- ___ 3. When a charged object is brought near, without touching a neutral object, that object is given the same charge by conduction.
- ___ 4. As the distance between two charged objects increases, the electric force between them decreases.

Part B: Multiple Choice

Circle the letter beside the answer that best answers the question or completes the statement.

5. Which of the following correctly identifies the particle with its electric charge?

	Particle	Electric Charge
(a)	electron	negative
(b)	proton	negative
(c)	neutron	negative
(d)	neutron	positive

6. When a negative vinyl strip is brought near a hanging neutral pith ball, the pith ball will be
- (a) repelled by the vinyl strip
 - (b) unaffected by the vinyl strip
 - (c) attracted to the vinyl strip
 - (d) first attracted to the vinyl strip and then repelled by the vinyl strip
7. Why does an acetate strip rubbed with a paper towel acquire a positive charge?
- (a) The acetate strip loses positive charge to the paper towel.
 - (b) The acetate strip loses negative charge to the paper towel.
 - (c) The acetate strip gains positive charge from the paper towel.
 - (d) The acetate strip gains negative charge from the paper towel.
8. Why are neutral dust particles attracted to television screens?
- (a) Friction causes a buildup of static electricity on the dust particles.
 - (b) The television screen is neutral and attracts the neutral dust particles.
 - (c) The television screen induces a separation of charge in the dust particles.
 - (d) A static charge is conducted from the television screen to the dust particles.

Chapter 9 Quiz (continued)

9. Which of the following is a good insulator?

- (a) iron (b) dry air
(c) copper (d) tap water

10. The electric force depends on the amount of charge and the distance between the charges. Which of the following pair of changes will always increase the force?

	Amount of Charge on Objects	Distance Between Charged Objects
(a)	decreases	decreases
(b)	decreases	increases
(c)	increases	decreases
(d)	increases	increases

11. Electrostatic precipitators are used to

- (a) remove ash particles from smoke
(b) generate sparks to ignite barbecues
(c) encourage rain to fall in desert areas
(d) settle sediments in liquids containing impurities

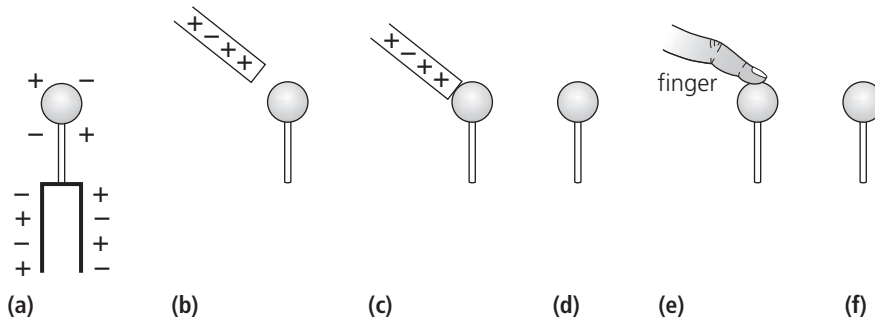
Part C: Short Answer Questions

Use complete sentences or diagrams to answer each question.

12. A negatively charged vinyl rod is brought toward a neutral pith ball. The pith ball is attracted to the rod and then flies away. Draw diagrams to explain why this occurred. (4 marks)

Chapter 9 Quiz (continued)

13. Complete the diagrams below to show how the leaves of a neutral electroscope shown in (a) would respond when: (b) a positive rod is brought near, (c) a positive rod touches the metal ball of the electroscope, (d) the rod is removed, (e) the metal ball is touched by a human finger, and (f) the metal ball is left untouched. Show the charges.



14. Describe how you could determine the charge on a charged object.

15. You have a negative strip and a neutral aluminum sphere on a stand. Explain how you could give the aluminum sphere a positive charge.
