



MIRACLE Learning Centre



Static Electricity WS1

Name: _____

Class (Day and Time) : _____

Static Electricity WS1

Section A

For each question, four options are given. Choose the most suitable option.

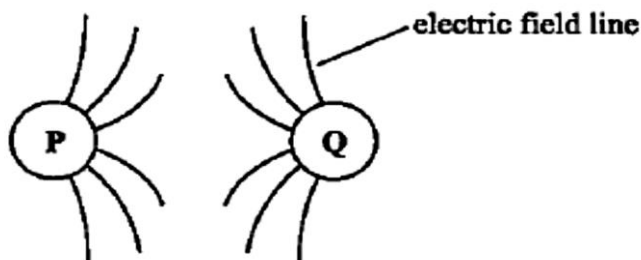
- Which of the following is true about force in an electric field?
 - It is a form of energy
 - It is pull or push
 - It is a type of contract force
 - It exists around positive charge only
- Which of the following statements is true about the particles in an atom?
 - Protons have positive charges
 - Electrons repel protons
 - Neutrons attract electrons
 - Protons repel neutrons
- Which of the following combinations is possible?

	Charge P	Charge Q	Effect
A.	Positive	Positive	Attraction
B.	Positive	Negative	Attraction
C.	Negative	Negative	Attraction
D.	Negative	Positive	Repulsion
- When an unknown particle, M, is placed in an electric field of an isolated positive charge, it moves away as shown in the diagram below.



What could the identity of M be?

- Neutron
 - Electron
 - Proton
 - Atom
- When two unknown charges, P and Q, are placed near each other, the electric field exhibits the pattern as shown below.



Which of the following is the best conclusion about the identities of P and Q?

- A. Both are unlike charges
- B. Both are like charges
- C. Both are negative charges
- D. Both are positive charges

6. Which of the following labelling is true?

Positive charge

Negative charge

- | | | |
|----|----------------------------|----------------------------|
| A. | Proton | Atom which gains electrons |
| B. | Atom which loses electrons | Proton |
| C. | Atom which gains electrons | Atom which loses electrons |
| D. | Electron | Proton |

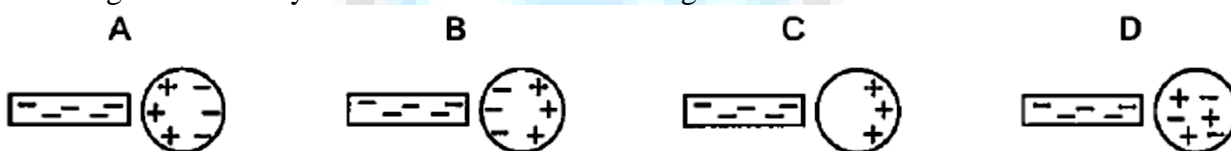
7. Which of the following substance is used to determine the direction of electric field of an isolated charge?

- A. Negative test charge
- B. Electron test charge
- C. Atom test charge
- D. Positive test charge

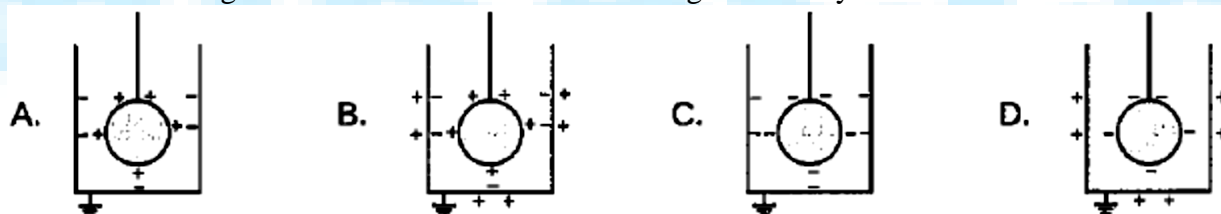
8. Which of the following substances will be repelled in an electric field of a positive charge?

- A. Neutron
- B. Electron
- C. Proton
- D. Atom

9. A negative charged polythene rod is brought near an insulated conductor without touching it, which of the diagrams correctly show the distribution of charges?



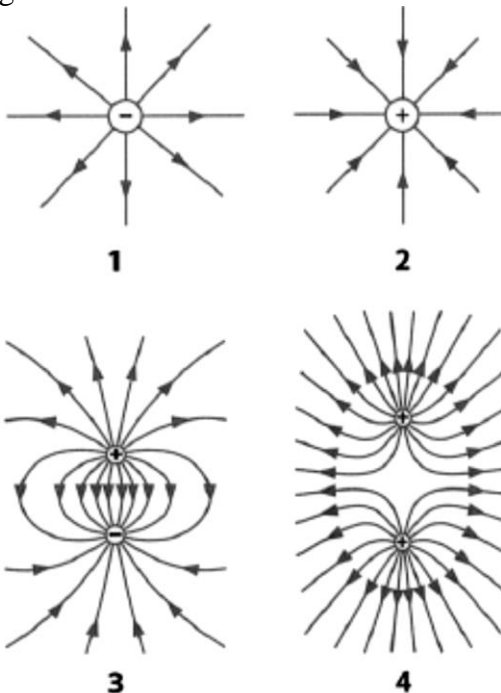
10. A charged sphere is placed inside a metal container by an insulated thread. The container is earthed. Which of the diagrams shows the distribution of charges correctly?



11. Which of the following statements about charge is false?

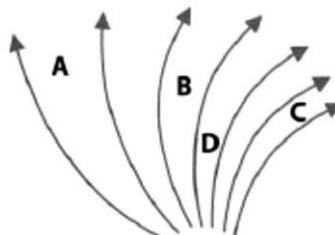
- A. Charge is measured in Coulomb
- B. An object that has equal amount of positive and negative charges is overall neutral
- C. Like charges attract
- D. A charge produces an electric field around it

12. Which of the following field diagrams is incorrect?

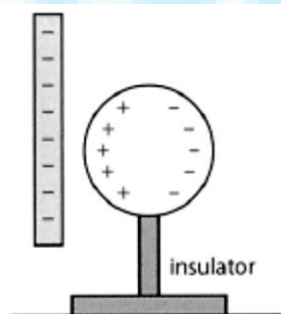


- A. 1 and 2 only
- B. 1, 2 and 4 only
- C. 3 and 4 only
- D. 2 and 3 only

13. A, B, C and D are four regions inside an electric field. Which region has the weakest field strength?



14. When a negatively charged rod is brought close to a metal sphere on an insulating stand, the left and right sides of the sphere become charged.

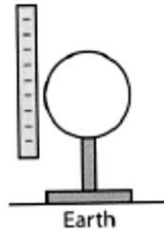


Which of the following description of charge movement is correct?

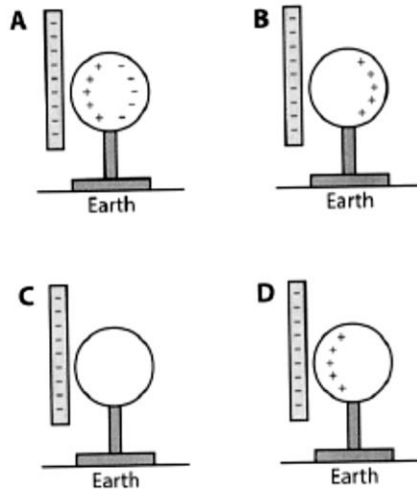
- A. Positive charges move from right to left in the sphere.
- B. Negative charges move from left to right in the sphere.
- C. The positive charges move to the left and the negative charges move to the right of the sphere.

D. Positive charges in the sphere are attracted to the left by the rod, then some negative charges jump from the rod to the sphere and move to the right of the sphere.

15. A conducting sphere is mounted on a conducting stand. A negatively charged rod is brought near it.



Which of the following diagrams show the outcome correctly?



16. What can be concluded if a metal rod is negatively charged?
A. It has electrons only.
B. It has more electrons than protons.
C. It has electrons and neutrons only
D. It has protons only.
17. A negatively charged rod is able to attract a piece of metal. What is/are the possible charge of this piece of metal?
1. Negatively charged
2. Positively charged
3. Neutral
A. 1 only
B. 2 only
C. 2 and 3 only
D. All of the above
18. Which of the following is not able to attract a drop of water?
A. Another drop of water
B. A positively charged piece of plastic
C. A negatively charged piece of metal
D. A positively charged piece of metal
19. A piece of silk is being rubbed with a plastic rod. The silk then attracts a negatively charged rod. Which statement is true?