O Level Combined Physics MCQs

Static Electricity Test 1.0

Q1

An insulating rod carries a positive charge after it is rubbed with a woollen cloth.

Which statement correctly describes the transfer of charges?

A Positive charges are transferred from the cloth to the rod.

B Positive charges are transferred from the rod to the cloth.

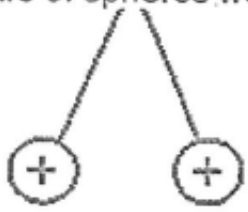
C Electrons are transferred from the rod to the cloth.

D Electrons are transferred from the cloth to the rod.

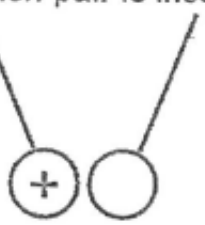
Q2

Four pairs of spheres were placed near one another. Which pair is incorrect?

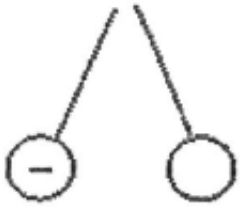
(A)



(C)



(B)



(D)

Legend:

 Positively charged sphere

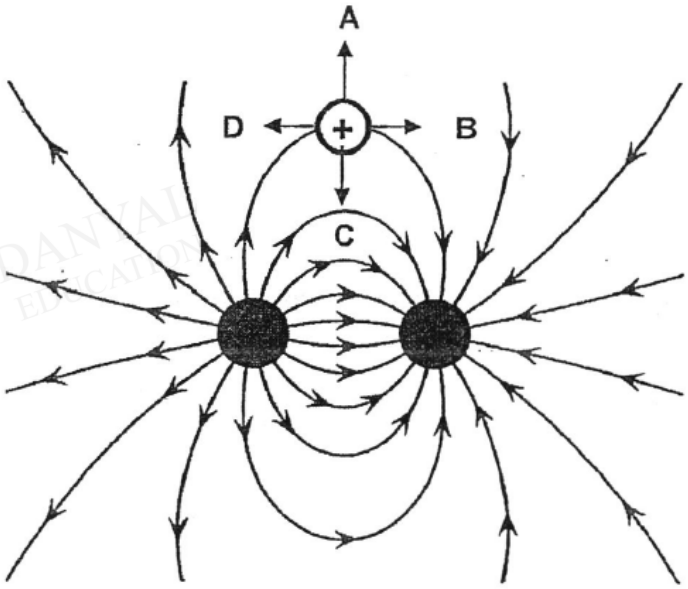
 Negatively charged sphere

 Electrically neutral sphere

Q3

The following diagram shows an electric field between two charges. A positive test charge is placed between the field.

Which of the following shows the electric force experienced by the positive test charge?



Q4

A plastic rod is rubbed with a cloth. At the end of the process, the rod is found to be positively charged and the cloth is found to be negatively charged.

This involves the movement of _____.

A positive charge from the cloth to the rod

B positive charge from rod to the cloth

C negative charge from the rod to the cloth

D negative charge from cloth to the rod

Q5

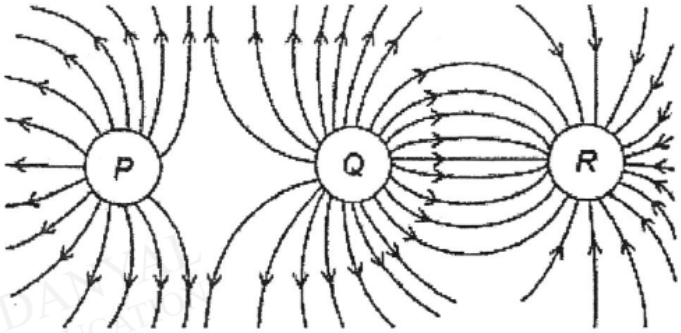
A plastic rod is rubbed with a dry piece of cloth and the rod becomes positively charged.

What happened to the rod and the cloth?

	the rod	the cloth
A	gained protons	lost protons
B	lost protons	gained electrons
C	gained electrons	lost electrons
D	lost electrons	gained electrons

Q6

The figure below shows the pattern of electric field produced by three charged spheres.

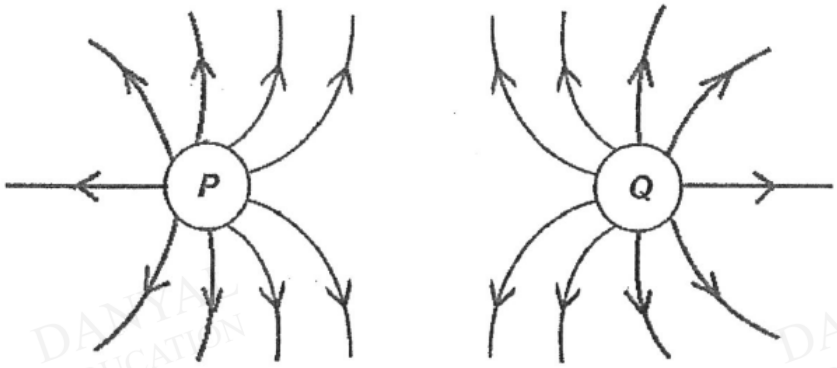


Which of the following correctly shows the charge on each sphere?

	P	Q	R
A	+	+	-
B	-	-	+
C	-	+	-
D	+	-	+

Q7

The diagram shows the electric field lines between two electrical charges *P* and *Q*.



Which of the following statements about the charges *P* and *Q* is correct?

	P	*Q*
A	negative	negative
B	negative	positive
C	positive	negative
D	positive	positive

Q8

A polythene rod repels an inflated balloon hanging from a nylon thread.

What charges must the rod and the balloon carry?

A The balloon is charged but the rod is not.

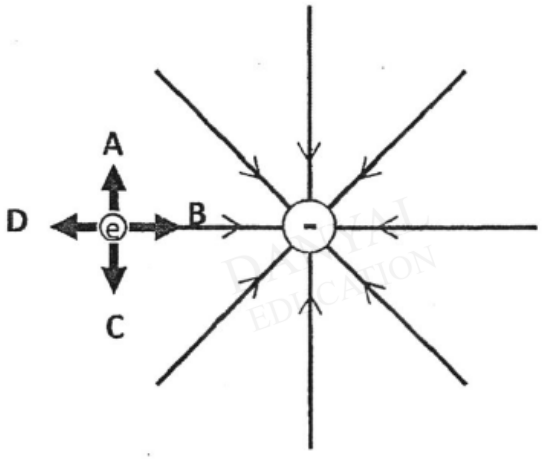
B The rod and the balloon carry like charges.

C The rod and the balloon carry opposite charges.

D The rod is charged but the balloon is not.

Q9

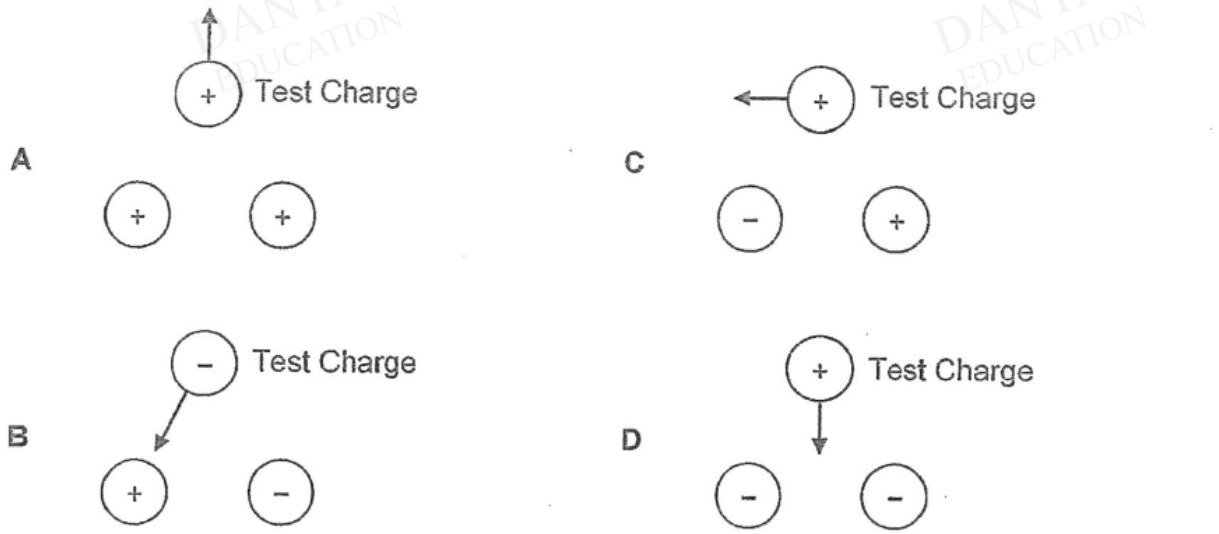
An electron is placed near a point charge as shown below. In which direction will the electron move?



Q10

A positive test charge is placed in the immediate region of two point charges.

Which of the following does not show the correct direction of the resultant electrostatic force acting on the positive test charge?



Answers

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Q1 C

Q2 B

Q3 B

Q4 C

Q5 D

Q6 A

Q7 D

Q8 B

Q9 D

Q10 B