Electrostatics – 2020 IGCSE 0625

1. March/2020/Paper_12/No.29

A polythene rod becomes negatively charged when it is rubbed with a cloth.

Which statement explains this?

A The rod gains electrons.

B The rod loses electrons.

C The rod gains protons.

D The rod loses protons.

2. June/2020/Paper_11/No.29

Three statements about electric charge are given.

1 An ammeter directly measures how much electric charge is in an object.

2 A moving electric charge can be detected by an ammeter.

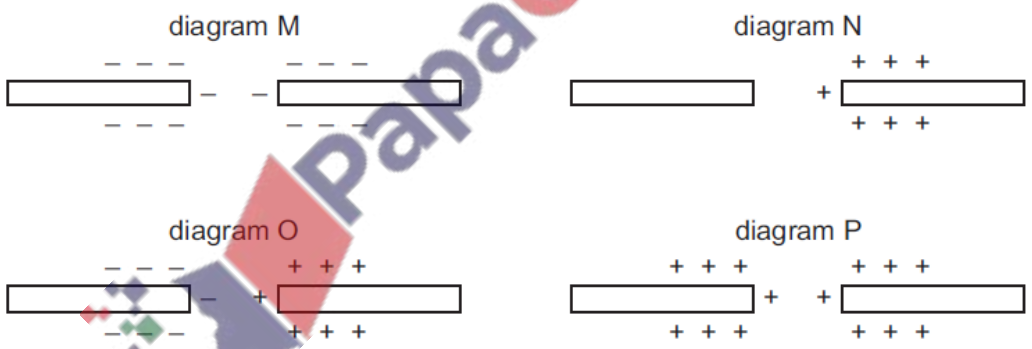
3 A flow of electric charge is an electric current.

Which statements are correct?

A 1 and 2 only **B** 1 and 3 only **C** 2 and 3 only **D** 1, 2 and 3

3. June/2020/Paper_11/No.30

Each of the four diagrams M, N, O and P shows a separate pair of insulating rods. Each rod is charged as shown.



In which **two** arrangements do the pairs of rods experience a force of repulsion?

A M and N **B** O and P **C** M and P **D** N and O

4. June/2020/Paper_12/No.29

A cloth is used to rub an uncharged plastic rod.

Both the rod and the cloth become charged.

Why does the plastic rod become negatively charged and the cloth become positively charged?

A The rod gains electrons and the cloth gains positive charges.

B The rod gains electrons and the cloth loses electrons.

C The rod loses electrons and the cloth gains electrons.

D The rod loses electrons and the cloth loses positive charges.

5. June/2020/Paper_13/No.29

What happens when the wire is touched onto the sphere?

A Electrons flow from earth to the sphere.

B Electrons flow from the sphere to earth.

C Positive charges flow from earth to the sphere.

D Positive charges flow from the sphere to earth.

6. June/2020/Paper_22/No.28

A cloth is used to rub an uncharged plastic rod.

Both the rod and the cloth become charged.

Why does the plastic rod become negatively charged and the cloth become positively charged?

A The rod gains electrons and the cloth gains positive charges.

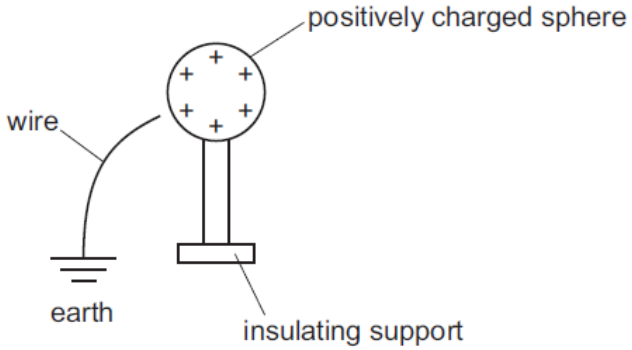
B The rod gains electrons and the cloth loses electrons.

C The rod loses electrons and the cloth gains electrons.

D The rod loses electrons and the cloth loses positive charges.

7. June/2020/Paper_23/No.28

The diagram shows a positively charged conducting sphere and a wire connected to earth.



What happens when the wire is touched onto the sphere?

A Electrons flow from earth to the sphere.

B Electrons flow from the sphere to earth.

C Positive charges flow from earth to the sphere.

D Positive charges flow from the sphere to earth.

8. June/2020/Paper_31/No.9(b)

(b) Three balls P, Q and R are electrically charged. The balls are suspended by threads of insulating material. Fig. 9.3 shows the arrangement.

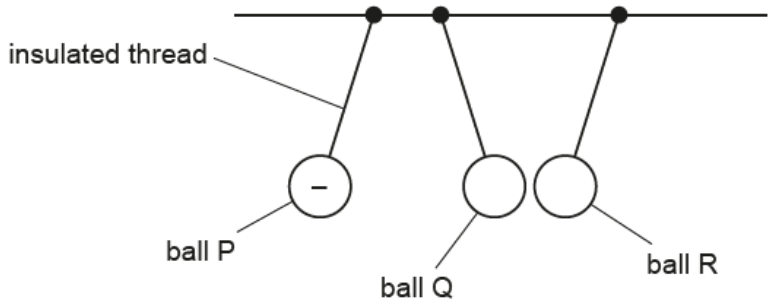


Fig. 9.3

Ball P is negatively charged.

(i) State the charge on ball Q and the charge on ball R.

ball Q .....

ball R .....

[2]

(ii) Explain your answer for part **(i)** for the charge on ball Q.

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..... [2]

9. June/2020/Paper_43/No.8

(a) **(i)** Describe what is meant by an *electric field*.

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..... [1]

(ii) State what is meant by the *direction* of an electric field.

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..... [1]

(b) Fig. 8.1 shows a polystyrene ball covered with aluminium paint. The polystyrene ball is suspended between two charged metal plates by an insulated thread.

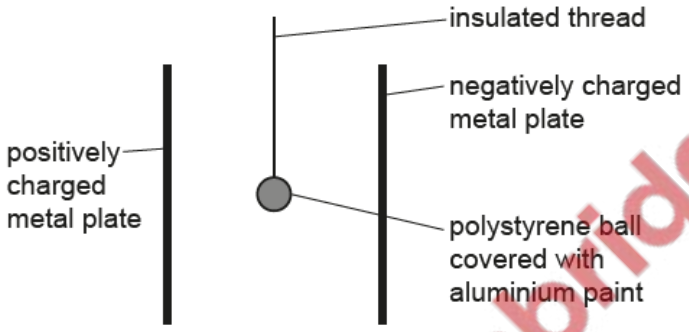

Fig. 8.1

The ball oscillates between the two charged plates.

Explain why the ball oscillates.

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..... [4]

(c) There is a current of 0.29A in an electrical circuit.

Calculate the time taken for a charge of 15 C to flow through the electrical circuit.

time = ... [3]

[Total: 9]