

GCSE Physics A (Gateway)

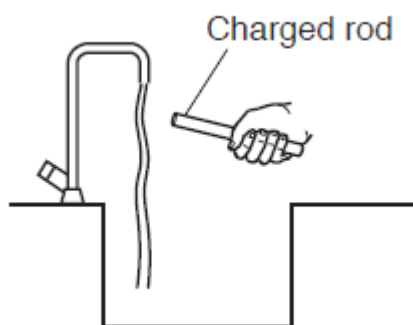
J249/03 Physics A P1-P4 and P9 (Higher Tier)

Question Set 3

1

This question is about electrostatic charges.

A charged rod is brought towards a gentle stream of water from a tap.



(a) Explain how the charged rod affects the stream of water.

Water is made up of polar molecules, so the charged rod will attract one side of each water molecule, and so the water will bend towards the rod. *

(b) (i) Write down the conditions needed for charge to flow through a conductor.

1. Circuit must be closed [2]
2. A potential difference.

(ii) Calculate the charge that flows past a point in a circuit with a 5.0A current for five minutes.

$$Q = It = 5 \times (5 \times 60) \\ = 1500$$

Answer = 1500 C

[4]

Total Marks for Question Set 3: 9

* This is because opposite charges attract.

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