

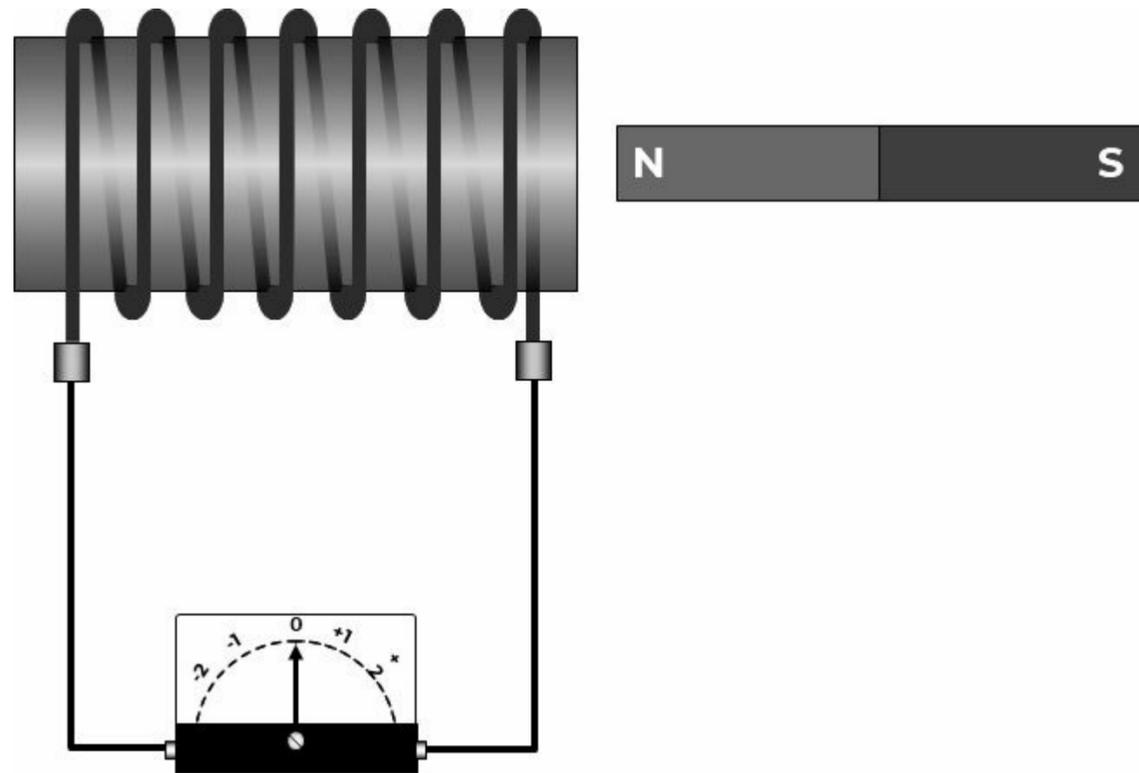
Physics - Key stage 4 - Magnetism

Electromagnetic Induction (Physics only)

Mr van Hoek



The generator effect



A potential difference will be _____ if the magnet is moved into the coil.

An electric current will flow if the ends of the coil are connected to an external _____.

A _____ will not be induced if the magnet is held _____ inside the coil.

An induced current generates a _____ that opposes the original change, either the _____ of the conductor or the change in magnetic field.



Independent Practice

1. Describe three ways to increase the size of the induced potential difference?
1. Describe the ways that the direction of the induced potential difference can be reversed?
1. Explain why a potential difference can be induced by either a coil moving within a magnetic field, or by a magnet being moved within a coil



Put these steps into the correct order

	... cut across lines of magnetic flux in an upwards direction a positive ...
	... will be negative. The continuous rotation and repetition makes an alternating current.
1	The coil is rotated in a magnetic field. When the turns of the coil ...
	... an external circuit a current flows. When the turns of the coil ...
	... potential difference is induced in the wire. If the wire is connected to...
	... cut across the lines of magnetic flux downwards, the potential difference ...



Exam question

Which of the following is not needed to generate a.c. in an alternator?

- A. changing magnetic field
- B. coil of wire
- C. commutator
- D. rotating magnet

OCR, Specimen, J249/03

Additional answers and guidance not checked by OCR



Exam question

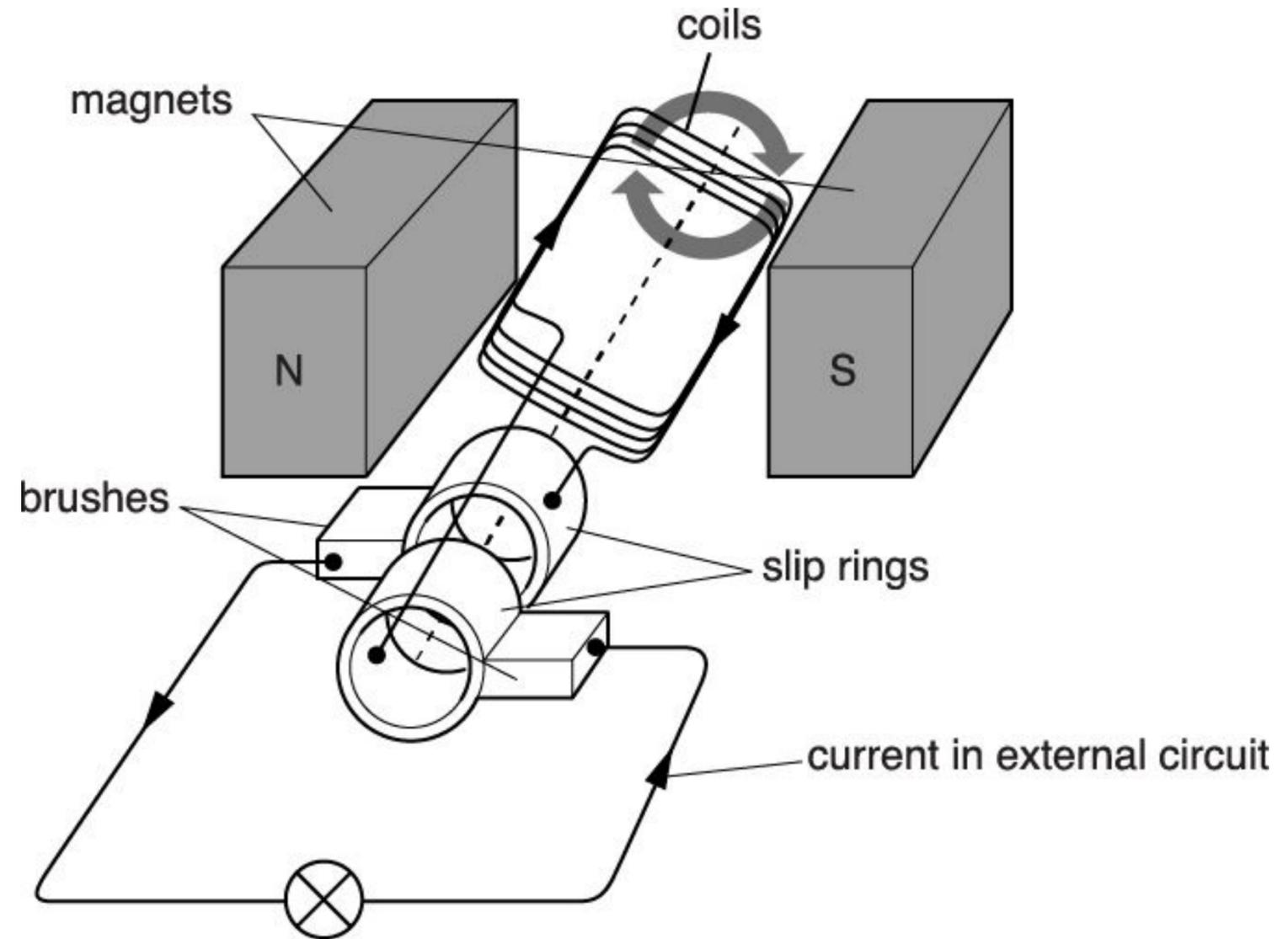
AC generators are used to generate electricity.

Here is a diagram of a small AC generator.

Explain how this AC generator works.

Use all the labels in the diagram in your explanation.

[2 marks]



OCR, June 2015, J752/02

Additional answers and guidance not checked by OCR

