

Electromagnetism

Question Paper

Level	GCSE
Subject	Physics
Exam Board	Edexcel IGCSE
Module	Single Award (Paper 2P)
Topic	Magnetism & Electromagnetism
Sub-Topic	Electromagnetism
Booklet	Question Paper

Time Allowed: 16 minutes

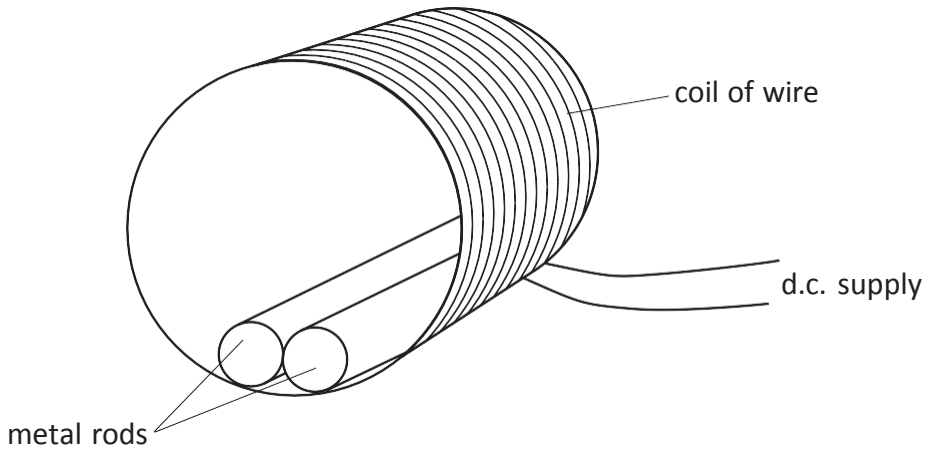
Score: /13

Percentage: /100

Grade Boundaries:

A*	A	B	C	D	E	U
>85%	75%	70%	60%	55%	50%	<50%

1. The diagram shows two identical metal rods placed inside a coil of wire.



(a) When a direct current is supplied to the coil, a magnetic field forms and the metal rods move apart.

Explain why the metal rods move apart.

(2)

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(b) When the current is switched off, the metal rods return to their starting places.

Suggest what material the metal rods are made from.

Explain your answer.

(3)

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(c) The direct current in the coil is replaced by an alternating current.

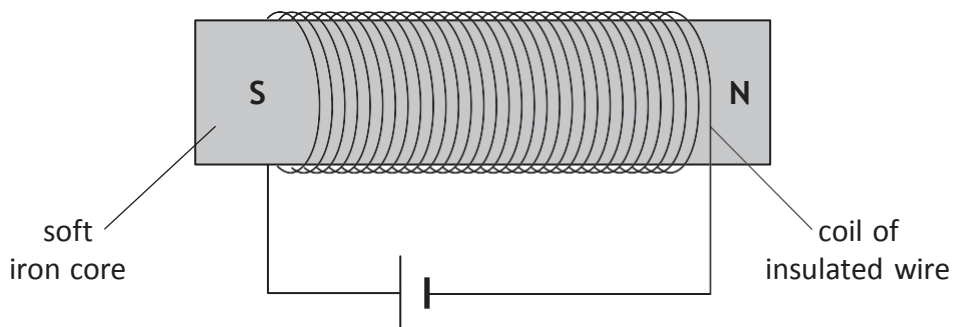
Explain what will happen to the magnetic field.

(2)

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(Total for Question 1 = 7 marks)

2. (a) The diagram shows a solenoid with a soft iron core connected in an electric circuit.



(i) On the diagram, draw field lines to show the shape and direction of the magnetic field produced by the solenoid.

(3)

(ii) Explain the effect of the soft iron core.

(1)

(b) A solenoid with a steel core can be used as an electromagnet.

When the current is switched on, the electromagnet picks up some steel paper clips.

Explain why the steel paper clips remain attached to the steel core when the current is switched off.

(2)

(Total for Question 2 = 6 marks)