

# Magnetism

## Question Paper

Level	GCSE
Subject	Physics
Exam Board	Edexcel IGCSE
Module	Double Award (Paper 1P)
Topic	Magnetism & Electromagnetism
Sub-Topic	Magnetism
Booklet	Question Paper

**Time Allowed:** 26 minutes

**Score:** /22

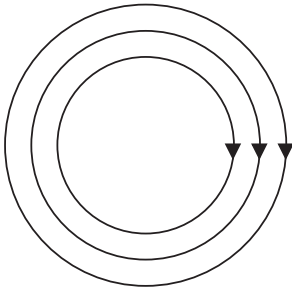
**Percentage:** /100

**Grade Boundaries:**

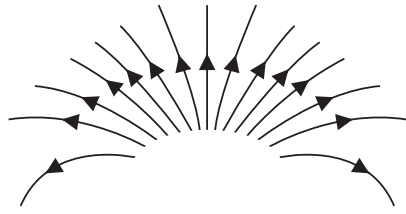
A*	A	B	C	D	E	U
>85%	75%	70%	60%	55%	50%	<50%

1. A magnetic field pattern can be shown using lines.

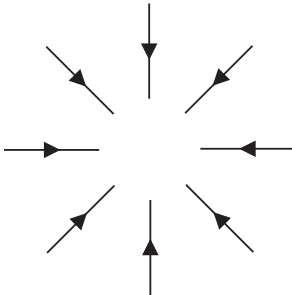
(a) The diagram shows some magnetic field patterns.



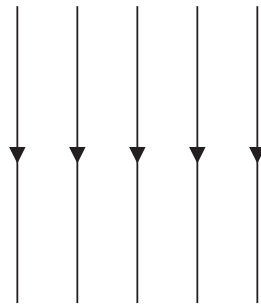
A



B



C



D

Which pattern shows a **uniform** magnetic field? Explain your answer.

(2)

Pattern .....

Explanation .....

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(b) Explain how to produce a uniform magnetic field.

(3)

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**2.**

(a) Some units can be written in different ways.

(i) A power of 1 watt is the same as

(1)

- A** 1 joule per coulomb (1 J/C)
- B** 1 joule per second (1 J/s)
- C** 1 newton per square metre (1 N/m<sup>2</sup>)
- D** 1 newton per kilogram (1 N/kg)

(ii) A pressure of 1 pascal is the same as

(1)

- A** 1 joule per coulomb (1 J/C)
- B** 1 joule per second (1 J/s)
- C** 1 newton per square metre (1 N/m<sup>2</sup>)
- D** 1 newton per kilogram (1 N/kg)

(b) Magnetic fields can be indicated using lines.

(i) The arrow on a magnetic field line shows

(1)

- A** the direction of a magnetic field
- B** the electrostatic attraction
- C** the presence of an electric current
- D** the strength of a magnetic field

(ii) Equal spaces between magnetic field lines show that the magnetic field

(1)

- A** has uniform strength
- B** goes from a S-pole to a N-pole
- C** must be caused by a current
- D** must be caused by a bar magnet

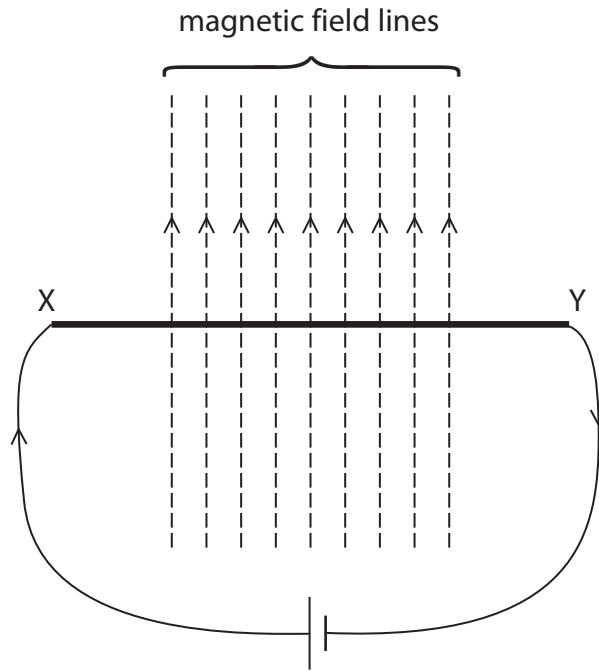
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**(Total for Question 2 = 4 marks)**



(b) A metal rod, X Y, is placed in a magnetic field as shown.

Wires from a cell are connected to the ends of the rod so that there is a current from X to Y.



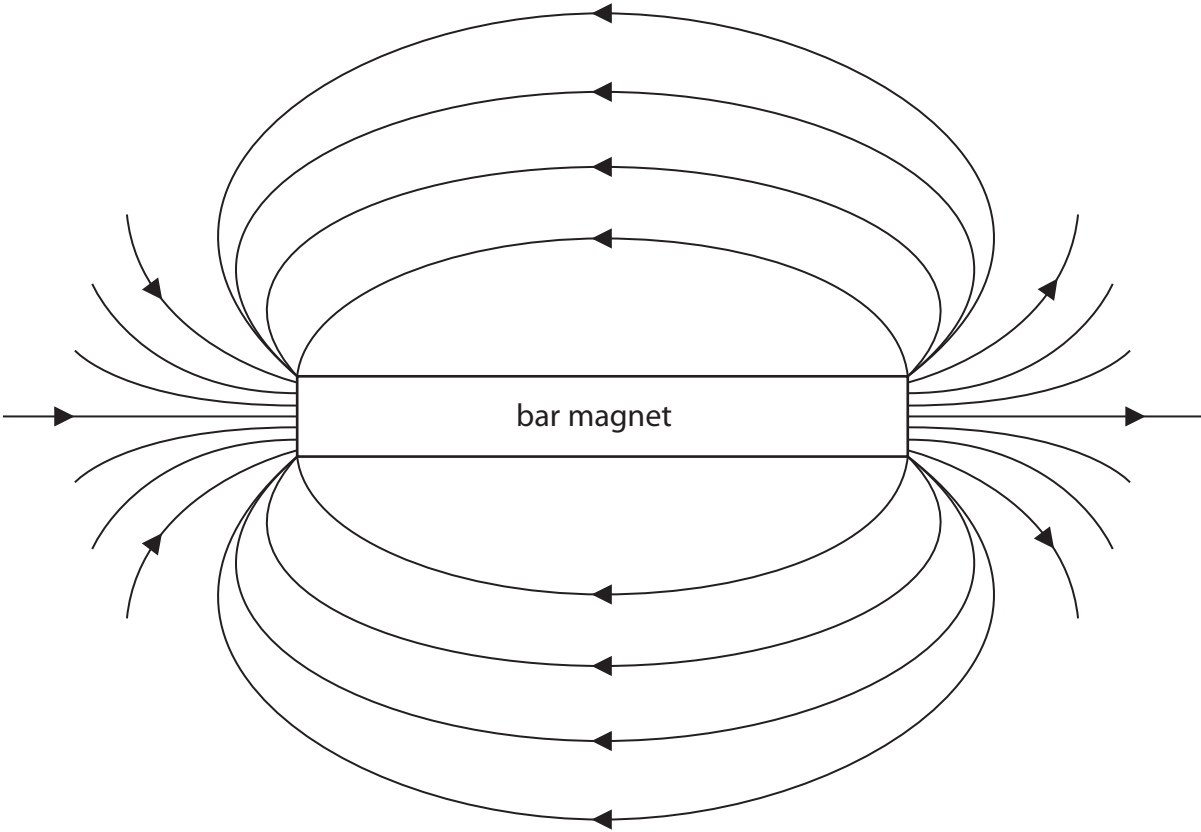
Describe the effect on the rod.

(2)

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(Total for Question 3 = 8 marks)

4. The diagram shows the magnetic field pattern around a bar magnet.



(a) Complete the diagram above by labelling the poles on the bar magnet.

(2)

(b) Describe an experiment to investigate the shape of the magnetic field pattern of a bar magnet.

You may draw a diagram to help your answer.

(3)

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**(Total for Question 4 = 5 marks)**