Magnetism – 2022 November IGCSE 0625

1. Nov/2022/Paper_21/No.5

Which statement is **not** a method for magnetising an iron bar?

A Place the bar next to a magnet and hammer the bar.

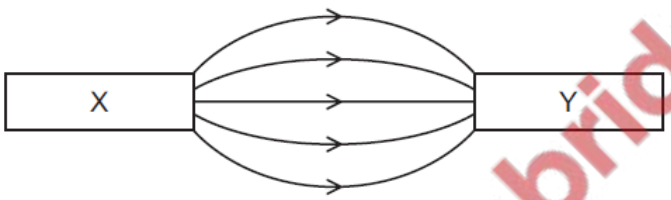
B Place the bar inside a solenoid. Switch on an alternating current (a.c.) in the coil and gradually reduce the current.

C Place the bar inside a solenoid. Switch on a direct current (d.c.) in the coil and gradually reduce the current.

D Stroke the bar repeatedly with a magnet.

2. Nov/2022/Paper_22/No.25

Two magnets X and Y are placed end to end on a bench. The diagram shows the magnetic field pattern between the poles of the magnets.



Which row shows the direction of the forces exerted on X and Y by the magnetic field?

	force on X	force on Y
A	→	→
B	→	←
C	←	→
D	←	←

3. Nov/2022/Paper_23/No.25

A student is to demagnetise a bar magnet. She tries four different ways.

1 hammering the magnet

2 heating the magnet

3 passing direct current through the magnet

4 placing the magnet in water

Which methods will demagnetise the magnet?

A 1, 2 and 3 **B** 1 and 2 only **C** 1 and 4 **D** 2 and 3 only

PapaCambridge

4. Nov/2022/Paper_31/No.7

(a) A student has a bar magnet and a metal bar with ends X and Y. The student moves each pole of the bar magnet, in turn, to be close to end X of the metal bar.

Fig. 7.1 and Fig. 7.2 show the force between the magnet and the bar in each case.

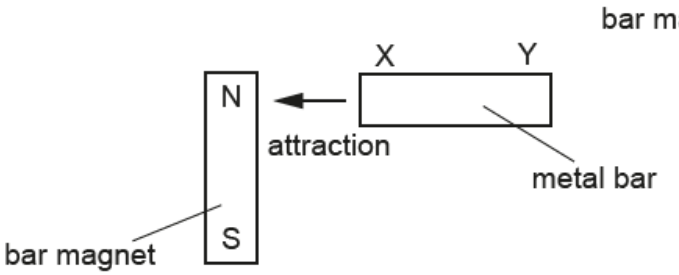


Fig. 7.1

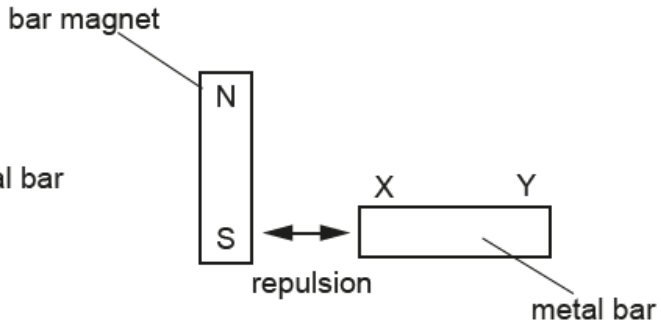


Fig. 7.2

State and explain what you can deduce about the metal bar.

Use the information shown in Fig. 7.1 and Fig. 7.2.

.....

.....

..... [2]

(b) Fig. 7.3 shows two bar magnets on a piece of card.

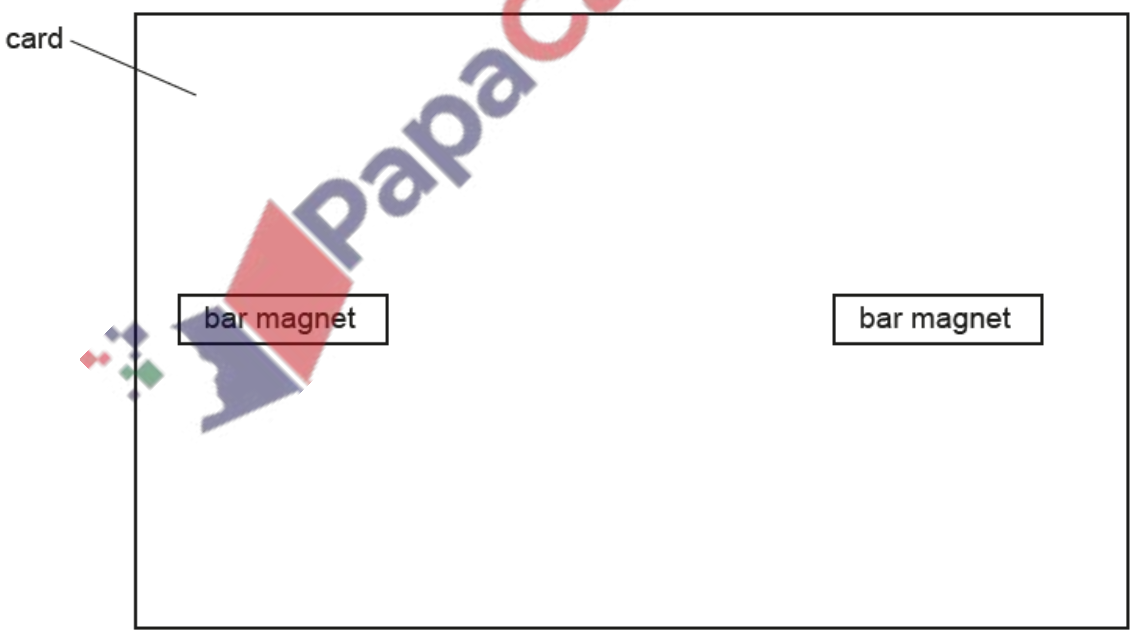


Fig. 7.3

PapaCambridge

Describe an experiment to show the pattern of the magnetic field between the bar magnets.

.....

.....

..... [3]

[Total: 5]

PapaCambridge

5. Nov/2022/Paper_42/No.7

This question is about the magnetic fields around bar magnets. Fig. 7.1 shows two positions used by a student doing an experiment.

Fig. 7.1

(a) Fig. 7.2 shows a magnet, labelled magnet 1, placed on position 1.

Fig. 7.2

On Fig. 7.2, draw lines to show the pattern of the magnetic field produced by magnet 1. Place arrows on the lines to show the direction of the field. [3]

(b) Magnet 1 is removed from position 1. Fig. 7.3 shows another magnet, labelled magnet 2, placed on position 2.

Fig. 7.3

On Fig. 7.3, draw, at the right-hand end of position 1, a line with an arrow to show the direction of the magnetic field produced by magnet 2. [1]

PapaCambridge

(c) Fig. 7.4 shows magnet 1 placed on position 1 and magnet 2 placed on position 2.

Fig. 7.4

(i) State the direction of the force that the N pole of magnet 2 exerts on the N pole of magnet 1.

..... [1]

(ii) Justify your answer to **(c)(i)**.

.....

..... [1]

[Total: 6]

PapaCambridge