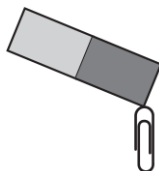


Magnets and Magnetic Fields (H)

1. A magnet is used to pick up a paperclip.



Which statement explains why the paperclip is picked up?

- A The magnet is a permanent magnet and the opposite pole has been induced at the top of the paperclip.
- B The magnet is a permanent magnet and the same pole has been induced at the top of the paperclip.
- C The magnet is a temporary magnet and the opposite pole has been induced at the top of the paperclip.
- D The magnet is a temporary magnet and the same pole has been induced at the top of the paperclip.

Your answer

[1]

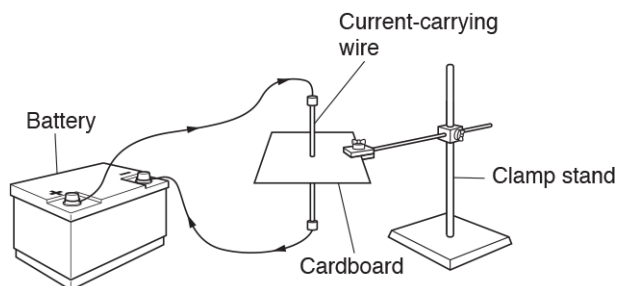
2. Which of these factors affects the strength of the magnetic field around a current-carrying wire?

- A Direction of the current only
- B Size of the current only
- C Distance from the wire only
- D Size of the current and distance from the wire

Your answer

[1]

3 (a). A student sets up an experiment to investigate the magnetic field around a current-carrying wire.



i. Describe how the student could use this experiment and a compass to investigate the magnetic field produced by the wire.

[3]

ii. Draw the shape of the field which would be found around **this** wire.

[2]

(b). The behaviour of a magnetic compass is evidence that the core of the Earth is magnetic. Explain why.

[2]

4. Which does **not** increase the magnetic effect of a solenoid?

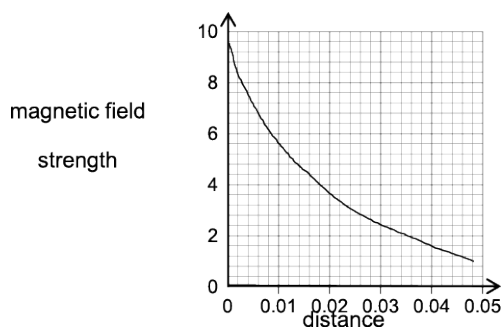
- A Increasing the cross-sectional area of the solenoid
- B Increasing the current in the solenoid
- C Increasing the number of turns on the solenoid
- D Putting a soft iron core in the solenoid

Your answer

[1]

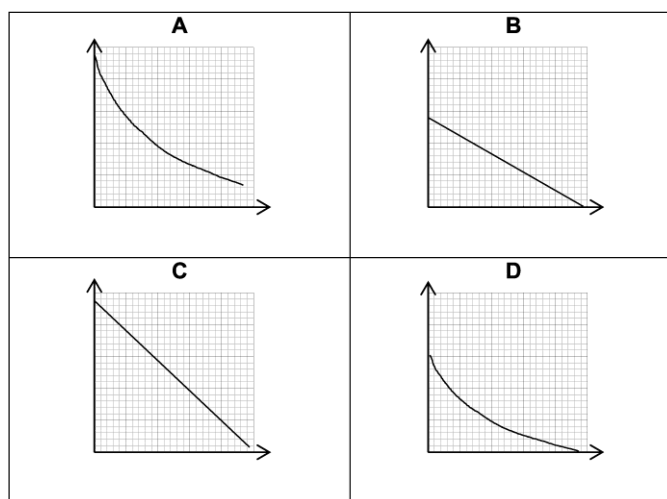
5. A student measures the magnetic field strength around a current carrying conductor at increasing distances from the conductor.

She plots her results.



The current in the conductor is decreased and a new graph plotted.

Which is the correct graph?



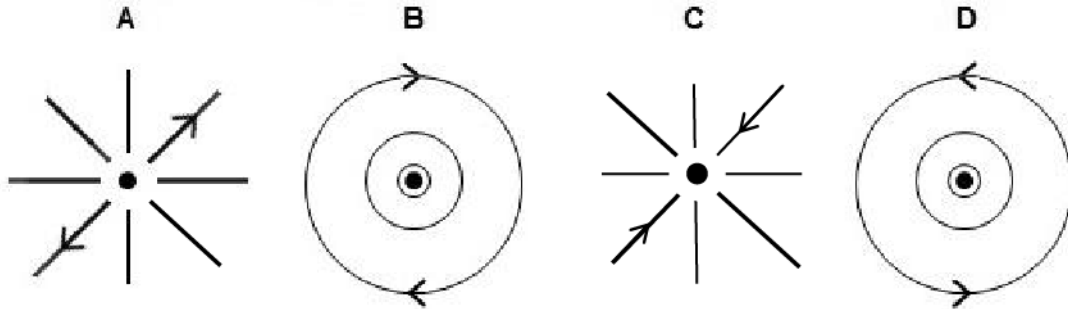
Your answer

[1]

6. The diagram shows a wire carrying an electric current.



Which diagram shows the magnetic field viewed from above, with the current coming towards you?



Your answer

[1]

END OF QUESTION PAPER