Magnetism – 2019 June

1. 0625/32/M/J/19/No.8

(a) Fig. 8.1 shows the magnetic field pattern around a bar magnet.

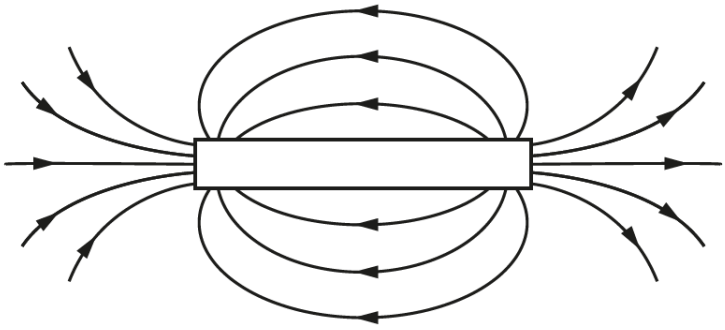

Fig. 8.1

(i) On Fig. 8.1, mark the North and South poles of the magnet. Use the letter N for the North pole and S for the South pole. [1]

(ii) A small bar of unmagnetised iron is placed next to a bar magnet, as shown in Fig. 8.2.

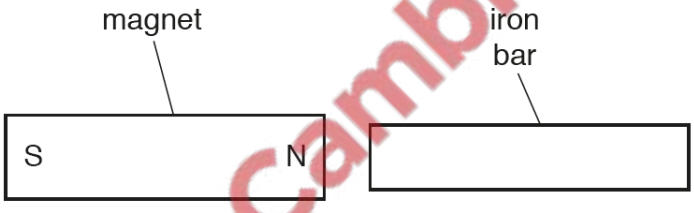

Fig. 8.2

The iron bar moves towards the magnet.

Explain why the iron bar moves.

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..... [2]

(b) Fig. 8.3 shows a coil of wire wrapped around an iron core. A student uses these to make an electromagnet.

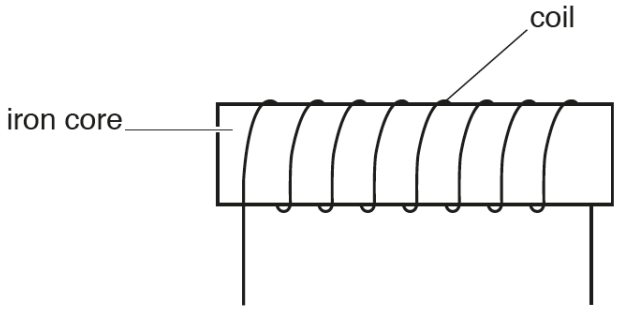

Fig. 8.3

(i) Complete the diagram in Fig. 8.3 to show how it could be used to make an electromagnet. [1]

(ii) State **one** advantage of an electromagnet compared to a permanent magnet.

..... [1]

[Total: 5]