

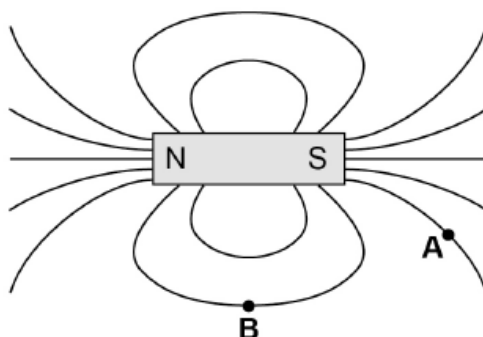
AQA - Magnetism and electromagnetism – GCSE Physics

1. June/2021/Paper_2F/No.7(7.1_7.4)

0 7

Figure 16 shows the magnetic field pattern around a bar magnet.

Figure 16



0 7 . 1

Draw an arrow at point **A** and point **B** to show the direction of the magnetic field at each point.

[1 mark]

0 7 . 2

A bar magnet produces its own magnetic field.

Complete the sentence.

Choose the answer from the box.

[1 mark]

an electromagnet	an induced magnet	a permanent magnet
------------------	-------------------	--------------------

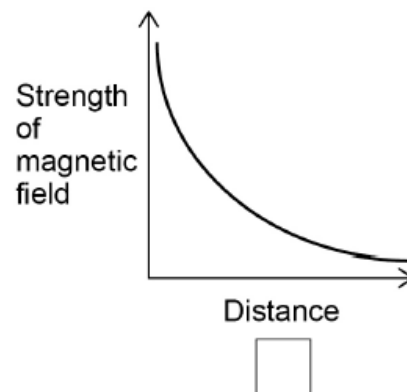
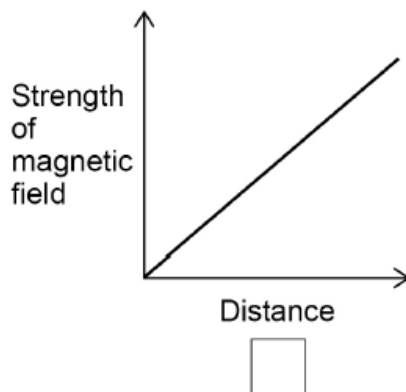
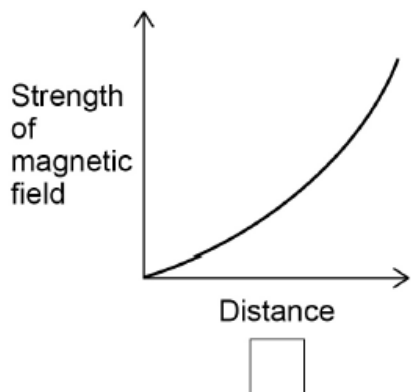
A bar magnet is an example of _____.

0 7 . 3 Which graph shows how the strength of the magnetic field varies with distance from the bar magnet?

Give a reason for your answer.

[2 marks]

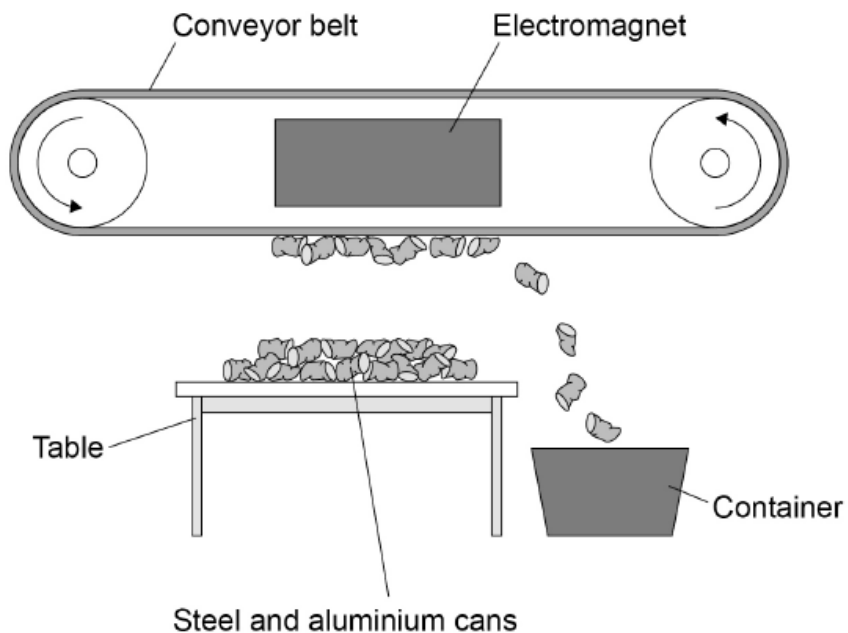
Tick (✓) one box.



Reason _____

Figure 17 shows an electromagnet being used to separate aluminium cans from steel cans.

Figure 17



0 7 . 4

Explain how the electromagnet and conveyor belt are used to separate the steel cans from the aluminium cans.

[2 marks]

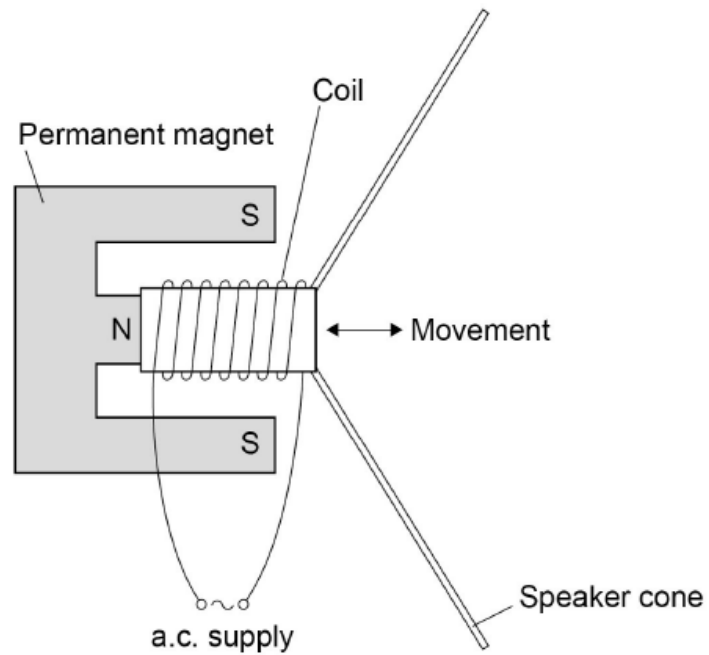
2. June/2021/Paper_2H/No.8

0 8

A student made a moving-coil loudspeaker.

Figure 15 shows a diagram of the loudspeaker.

Figure 15



0 8 . 1

What is the name of the effect used by the moving-coil loudspeaker to produce sound waves?

[1 mark]

- 0 8 . 3 A student investigated how the loudness of sound from the loudspeaker depends on:
- the number of turns on the coil
 - the frequency of the supply.

Table 2 shows the results.

Table 2

Number of turns	Frequency of supply in Hz	Loudness of sound in arbitrary units
100	200	32
200	400	47
300	600	63

Explain why the results **cannot** be used to make a valid conclusion.

[2 marks]

3. June/2021/Paper_2H/No.9

0 9

A teacher demonstrated how a magnetic field can cause a copper rod to accelerate.

The teacher placed the copper rod on two brass rails in a magnetic field.

The copper rod was able to move.

Figure 16 shows the equipment used.

Figure 16

