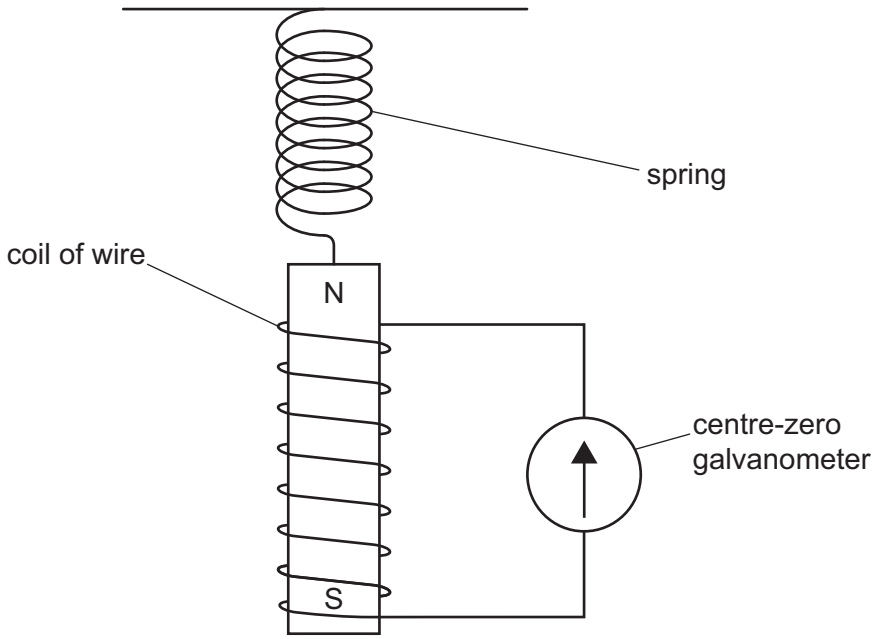
1 The diagram shows a magnet on the end of a spring and a coil of wire connected to a sensitive centre-zero galvanometer. The magnet can move freely through the coil.



(a) The magnet is pulled down and released.

Describe and explain what happens to the needle of the sensitive galvanometer.

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..... [4]

(b) The magnet is replaced with a stronger magnet.

State the effect of using a stronger magnet on what happens to the needle of the galvanometer.

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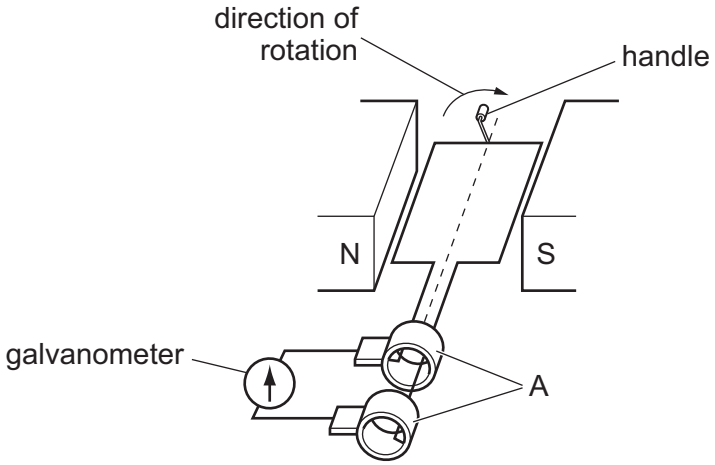
..... [1]

[Total: 5]

2 The diagram shows the same bar magnets with a coil of wire between them.



(a) The coil of wire is rotated in the direction shown in the diagram.

On the diagram, draw an arrow to show the direction of the current in the coil. Explain your answer.

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(b) Explain how rotating the coil in the diagram continuously causes the galvanometer needle to show an alternating current.

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..... [4]

[Total: 6]