Electromagnetism – 2019 June

1. 0625/42/M/J/19/No.9

(a) Describe how to demagnetise a bar magnet using alternating current (a.c.) in a coil.

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..... [3]

(b) Fig. 9.1 shows a simple direct current (d.c.) motor.

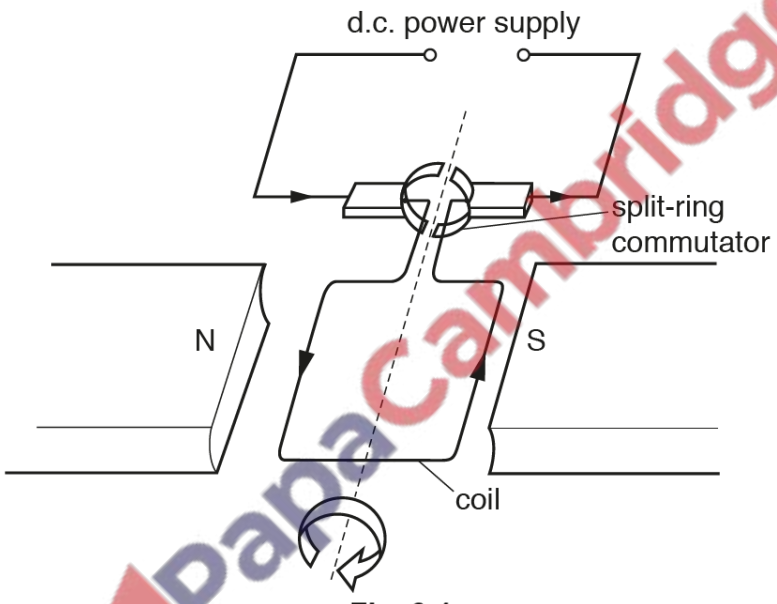

Fig. 9.1

(i) Explain the purpose of the split-ring commutator.

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..... [3]

(ii) The voltage of the power supply is increased.

State the effect this has on the motor.

..... [1]

[Total: 7]

2. Fig. 11.1 shows a relay.

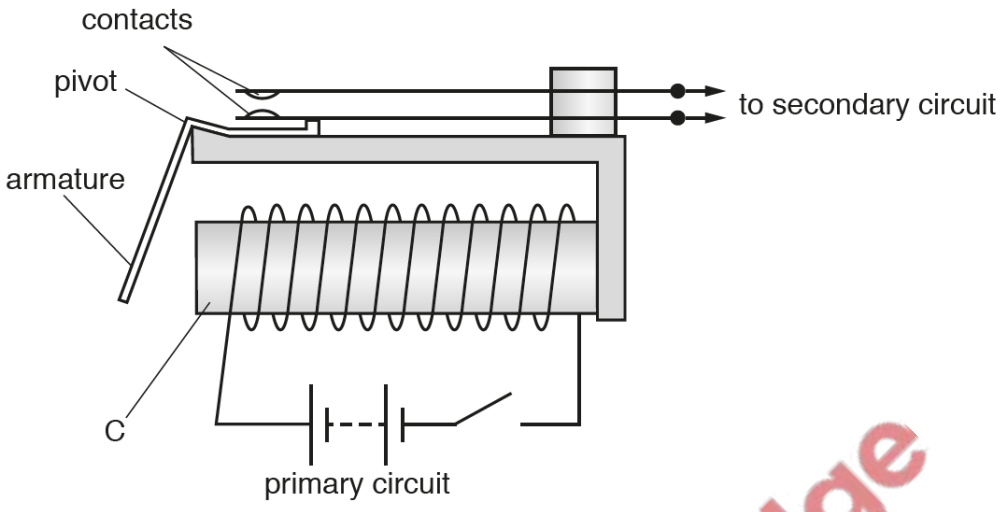

Fig. 11.1

(a) The statements describe the action of a relay. They are **not** in the correct order.

P Current in the coil creates an electromagnet.

Q Secondary circuit is completed.

R Armature pivots, closing the contacts.

S Part C attracts the armature.

T The switch in the primary circuit is closed.

Place the statements in the correct order. One has been done for you.

		S		

[3]

(b) Fig. 11.1 includes the part labelled C, which is made from a metal.

State the name of the metal and explain why this metal is used in the electromagnet.

metal .....

explanation .....

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[2]

[Total: 5]