(b) Why does the heating element in the kettle get hot when its electrical supply is switched on?

(2)

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(c) The power of the heating element in the kettle is 2000 W when it is connected to a 230 V mains supply.

(i) State the equation linking power, current and voltage.

(1)

(ii) Show that the current in the heating element is approximately 9 A.

(2)

Current = ... A

(iii) The plug of the kettle has a fuse.

Fuses are available in values of

1 A 3 A 7 A 13 A

Identify the fuse that is the most suitable for this kettle, and explain why.

(2)

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(Total for Question 7 = 8 marks)