

Answer ALL questions.

1 Mains electricity is used in circuits at home.

(a) Double insulation is needed for safety when there is

(1)

- ☐ **A** no circuit breaker
- ☐ **B** no earth connection
- ☐ **C** no fuse
- ☐ **D** no switch

(b) A fuse is used so that

(1)

- ☐ **A** an earth connection is not needed
- ☐ **B** the appliances are more efficient
- ☐ **C** the circuit cannot overheat if there is a fault
- ☐ **D** the user cannot touch a live wire

(c) Most lamps at home have their own switch.

This is because the lamps are connected

(1)

- ☐ **A** in parallel
- ☐ **B** in series
- ☐ **C** to a fuse
- ☐ **D** to an earth wire

(Total for Question 1 = 3 marks)

