

O Level Pure Physics MCQs

Practical Electricity Test 1.0

Q1

The diagram shows the label on an electric iron.

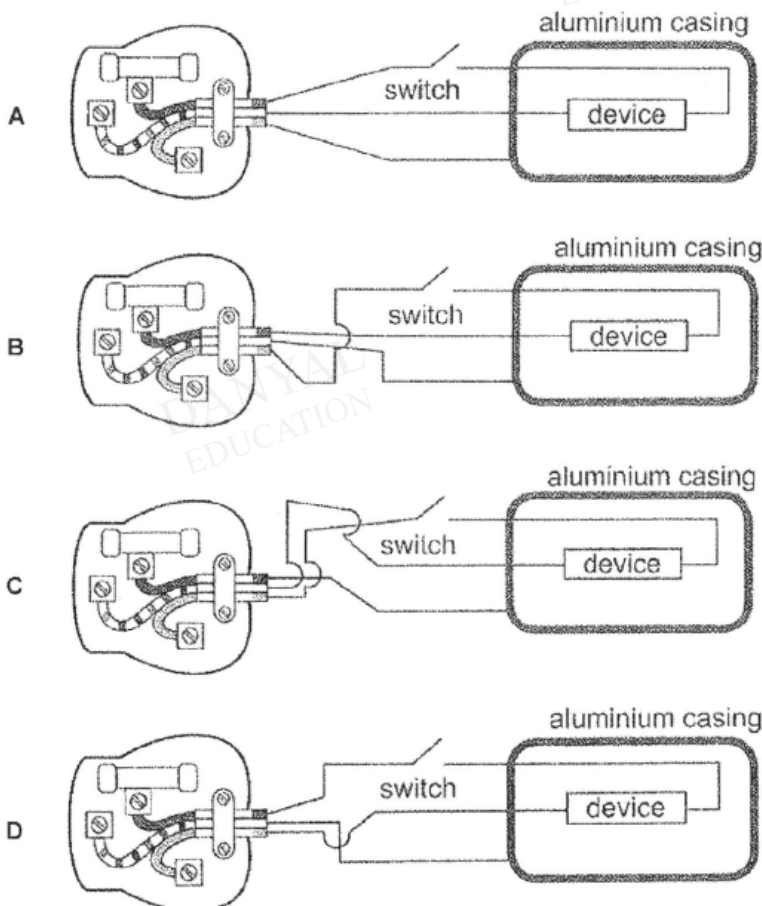
ELECTRIC IRON	
Operating Voltage	240 V
Power	2.8 kW
Fuse Rating	13 A

This iron is used for 12 hours every month. The cost of 1 kWh of electrical energy is 25 cents. Which of these statements is true about the electric iron?

- A The fuse will blow because the fuse rating is too low.
- B The energy dissipated in the iron every month is 120 kJ.
- C The iron is 90% efficient.
- D It costs \$8.40 every month to use the iron.

Q2

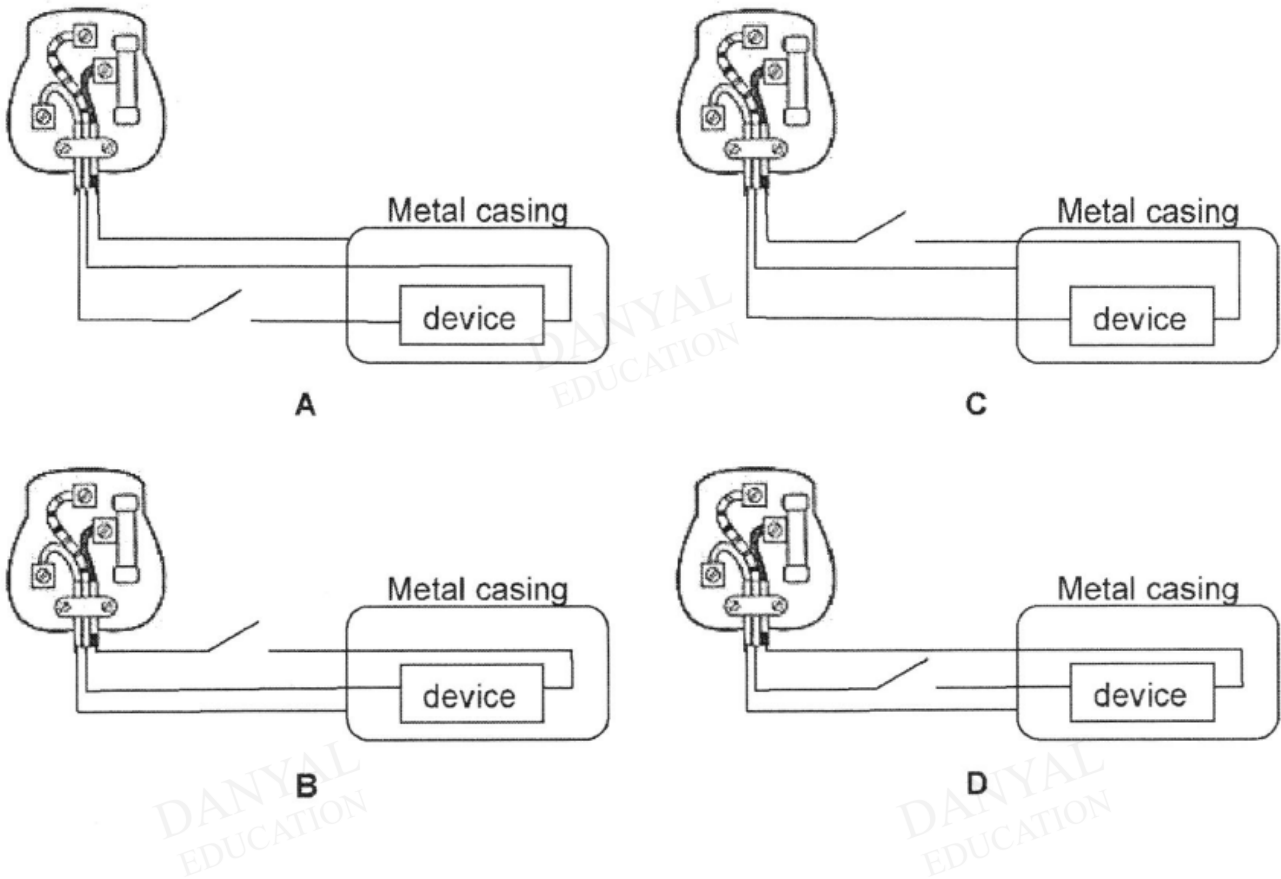
Which one of the following electrical appliances is correctly wired to a three-pin plug?



Q3
 An electrical household appliance uses 43.2 MJ of electrical energy after 4 hours of operation. If it costs 25 cents/kWh, find the electrical power of the appliance and the cost of energy usage.

	electrical power / kW	cost / \$
A	3	0.75
B	3	3.00
C	12	3.00
D	12	0.75

Q4
 Which of the following is correctly wired?



Q5
 Four 200 W lamps and two 120 W fans are switched on for 8 hours.
 What is the total cost if the energy consumption is 15 cents per kWh?

- | | | | |
|----------|---------|----------|----------|
| A | \$ 0.15 | B | \$ 1.25 |
| C | \$ 3.84 | D | \$ 12.48 |

Q6

A fuse is connected to the neutral wire of a fan. Which of the following statement(s) is/are correct?

- I The fan will not operate if the fuse blow
- II The fan will be safe to touch when the fuse blow
- III The fan will still be connected to the high voltage source when the fuse blow.

A I and III only **B** II and III only **C** I and II only **D** I, II and III

Q7

If one unit of electrical energy costs 50 cents, what is the cost of operating a 200 W lamp for 6 hours and a 1 KW fan for 4 hours?

A \$0.62 **B** \$2.60 **C** \$5.00 **D** \$7.00

Q8

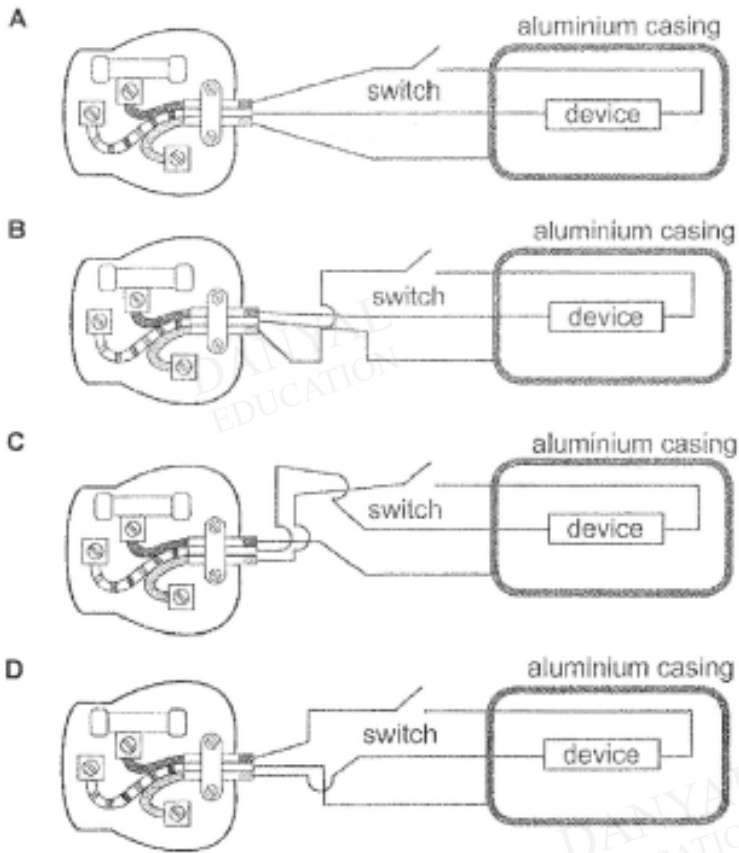
A 1.9 kW vacuum cleaner and a 200 W television is connected in parallel to a 240 V mains.

Which will be a suitable fuse rating for the mains?

- A** 7 A
- B** 8 A
- C** 9 A
- D** 10 A

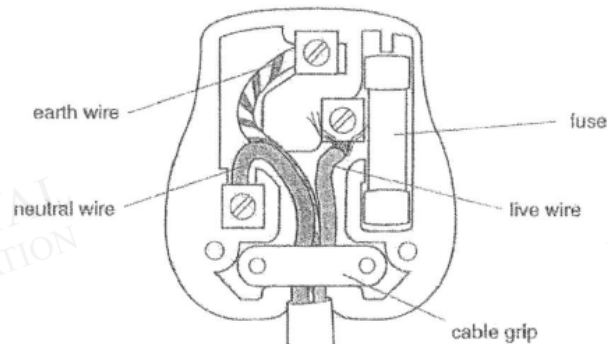
Q9

Which device is correctly wired to a three-pin plug?



Q10

The following shows a three pin plug of a kettle whose live wire has not been connected properly.



The exposed copper wires of the exposed live wire touch the neutral pin. Which of the following will occur?

- A The metal casing of the kettle will be at high potential and pose an electrocution risk.
- B The current increases and the fuse will blow to prevent any electrical fire risk.
- C The earth wire will divert the high current to the ground to prevent any electrical risk.
- D The neutral wire will divert the high current to the ground to prevent any electrical risk.

Answers

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Q1 D

Q2 D

Q3 B

Q4 C

Q5 B

Q6 A

Q7 B

Q8 C

Q9 D

Q10 B

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