

Answer on Question #52261-Physics-Other

The term 'short circuit' refers to

shortening the length of the connecting wires

contact between live and neutral wires without load

breaking of the earth wire

breaking of the fuse wire

Answer: contact between live and neutral wires without load.

7 To insulate fuse wire, which of the following materials is commonly used?

plastic

cloth

porcelain

paper

Answer: porcelain.

8 The electric potential difference across an appliance is given in

ohm

volt

ampere

watt

Answer: volt.

9 A geyser with power rating of 3.5kW is running on a 240V mains. Calculate the current drawn by the geyser

14.60A

6.86A

840.00A

8.40A

Solution

$$I = \frac{P}{U} = \frac{3.5\text{kW}}{240\text{V}} = 14.60\text{A}.$$

Answer: 14.60A.

10 An auditorium is provided with the following appliances: two 600 W water dispensers, eight 90 W electric fans, fourteen 40 W lighting bulbs and two 300 W air conditioners. Calculate the current drawn by the appliances and select the most suitable fuse for

77mA and 6A - fuse

7.4A and 10A - fuse

12.8A 15A - fuse

6.7A 13A – fuse

Solution

$$W = VI = 2 \cdot 600 + 8 \cdot 90 + 14 \cdot 40 + 2 \cdot 300 = 3080W.$$

$$I = \frac{W}{V} = \frac{3080}{220} = 14 A.$$

Answer: 12.8A 15A – fuse.

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