

Answer on Question # 52273, Physics, Other

Task:

6 What current does the 1000 watts light bulb draw from 240 V mains

- a. 4.17kW
- b. 4.17 mm
- c. 4.17 ohms
- d. 4.17A

Answer: d. 4.17A

$$P=U*I, \text{ so } I=P/U=1000/240=4.17A$$

7 How much current is drawn from a 240 V- mains by an appliance whose power rating is 130W?

- a.0.54 A
- b. 1.85 A
- c. 0.36 A
- d. 2.12 A

Answer: a.0.54 A

$$P=U*I, \text{ so } I=P/U=130/240=0.54A$$

8 Calculate the fuse rating for a fuse which is required to protect an appliance whose power rating is 1.2 kW and operated on a 240 V- mains given that the fuse rating is 120 per cent of the calculated current

- a.13A
- b. 6A
- c. 16A
- d. 2A

Answer: b. 6A

$$P=U*I, \text{ so } I=P/U=1200/240=5A$$

$$\text{fuse current rating for a fuse} = 5*1.2 = 6A$$

9 Calculate the total load on the circuit to which 30 light bulbs each of 120W, 20 fans each of 90W and 2 Air conditioner each of 1.5kW are connected and runs on a 240 V mains

- 11.2 kW
- 5.3 kW
- 3.8 kW
- 8.4 kW

Answer: 8.4 kW

10 A geyser with power rating of 2.5 kW is running on a 240 V - mains. Calculate the resistance to the flow of current offered by the geyser

- a.23.04 ohms
- b.16.80 ohms
- c.36.15ohms

d. 8.24 ohms

Answer: a.23.04 ohms

Power= U^2/R , so $R= U^2/P=23.04$ ohms

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