

Practice Challenge - Subjective

Subject: Phy

Topic : Electricity Exam Preparation

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Class: X

Time: 00:20 hrs

1. Which uses more energy, a 250 W TV set in 1 h, or a 1200 W toaster in 10 minutes?
2. Explain:
Why are the conductors of electric heating devices, such as bread-toasters and electric irons, made of an alloy rather than a pure metal?
3. Why do we use tungsten filament in bulb or lamps ?
4. In a premise, 5 bulbs each of 100 W, 2 fans each of 60 W, 2 A.Cs each of 1.5 kW are used for 5 h per day. Find:
 - (a) total power consumed per day,
 - (b) total power consumed in 30 days.
 - (c) total electric energy consumed in 30 days.
 - (d) the cost of electricity at the rate of Rs 6.25 per unit.
5. Several electric bulbs designed to be used on a 220 V electric supply line, are rated 10 W. How many lamps can be connected in parallel with each other across the two wires of 220 V line if the maximum allowable current is 5 A?
6. Two lamps, one rated 100 W at 220 V, and the other 60 W at 220 V, are connected in parallel to an electric mains supply. What current is drawn from the line if the supply voltage is 220 V?

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7. An electric heater of resistance 8Ω draws 15 A from the service mains 2 hours. Calculate the rate at which heat is developed in the heater.
8. What is the role of fuse, used in series with any electrical appliance? Why should a fuse with defined rating not be replaced by one with a larger rating?

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