



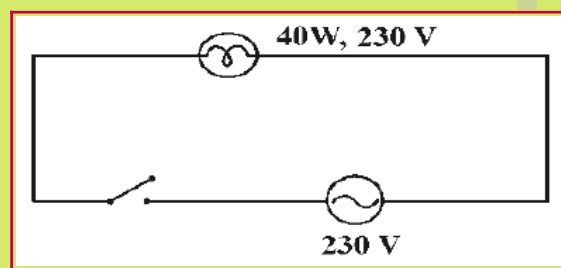
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Effects of Electric Current

1. Instruments that make use of heating effect of electric current are electric heating appliances.
 - a) Write any two examples for electric heating appliances.
 - b) Which alloy is used to make heating coils in heating appliances.
 - c) why do we use this alloy as heating coil.
2. Safety fuse is a device that protect circuit and appliances from danger due to excess flow of current through the circuit.
 - a) Which effect of current is used in safety fuse?
 - b) How is the fuse connected in a circuit?
(in parallel/series)
 - c) What must be the major feature of the substance used to make fuse wire?
 - d) Briefly explain how does a safety fuse make sure the safety of circuit and appliance.

- e) What is your opinion about using thick wire as fuse wire?
- f) Write the precautions to be taken while using fuse.

3. Observe the circuit given below:



- a) What is the power of the bulb in the circuit?
- b) What is the resistance of the bulb?
- c) When a 60 W bulb also is connected series in this circuit which bulb glows more brightly?

Justify your answer.

4. Filaments lamps are also called incandescent lamps.

- a) What is the meaning of the word 'incandescent'?
- b) Name the substance used for making filament?
- c) What are the features of this substance?
- d) What are the advantages of filling the bulbs with nitrogen after removing air from them?
- e) What is the major limitation of filament lamp?

5. Match the following

A	B	C
Fuse wire	Watt	$R=R_1+R_2+R_3$
Incandescent lamp	Decrease in effective resistance	I^2R
Heating device	tungsten	$1/R=1/R_1+1/R_2+1/R_3$
Resistors in series	Low melting point	Electric energy into heat energy
Power	Increase in effective resistance	Tin and Lead
Resistors in parallel	nichrome	Nitrogen

6. Bulb will glow if the broken filament will be connected together

**a)What happens to the length of the filament,
(increase/decrease)**

**b) What happens to the resistance of the filament,
(increase /decrease)**

c) What happens to the brightness of bulb, Justify your answer

7. Amperage indicates current bearing capacity of a conductor/electric device.

a) What do you meant by amperage?

b) An appliance of power 640w is used in a branch circuit. If the voltage is 230v, what is its amperage?

8. The marking on an electrical appliance is 800W, 200V.

a) If it works on 100 V, what will be the consumed power?

b) What is the power when it works on 50V ?

9. Nowadays LED bulbs are mostly used .

a) LED stands for -----

b) write down any three advantages of LED bulbs.