



PHYSICS

BOOKS - NCERT EXEMPLAR

ELECTRICITY AND CIRCUITS

Multiple Choice Questions

1. Choose from the options a, b, c and d given in the figure which shows the correct direction of current.

A.



B.



C.



D.



Answer: B



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2. Choose the incorrect statement

- A. A switch is the source of electric current in a circuit.
- B. A switch help to complete or break the circuit.
- C. A switch helps us to use electricity as per our requirement.
- D. When the switch is open there is an air gap between its terminals

Answer: A



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3. In an electric bulb, light is produced due to the glowing of

- A. the glass case of the bulb
- B. the thin filament
- C. the thick wires supporting the filament
- D. gases inside glass case of the bulb

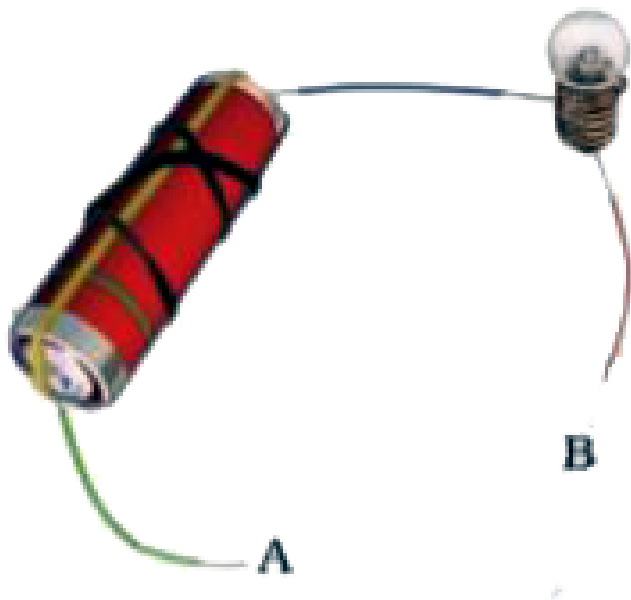
Answer: B



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4. In the following arrangement shown in figure the bulb will not glow if the ends A and

B are connected with



A. A steel spoon

B. A metal clip

C. A plastic clip

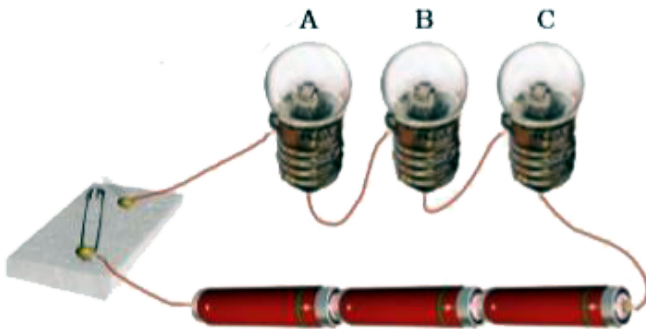
D. A copper wire

Answer: C



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5. In the circuit shown in Fig. 12.3, when the switch is moved to 'ON' position



A. the bulb A will glow first.

B. the bulb B will glow first.

C. the bulb C will glow first

D. all bulbs will glow together

Answer: D



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6. Filament of a torch bulb is

A. a metal case.

B. metal tip at the centre of the base.

C. two thick wires.

D. a thin wire.

Answer: D



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7. Paheli is running short of connecting wires.

To complete an electric circuit, she may use a

A. glass bangle.

B. thick thread

C. rubber pipe.

D. steel spoon

Answer: D

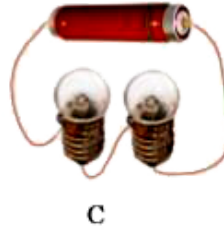


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Very Short Answer Questions

1. In which of the following circuits A, B and C given in Fig. 12.4, the cell will be used up very

rapidly?



A. A

B. B

C. C

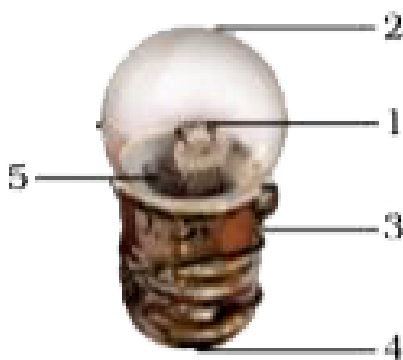
D. Both (b) and (c)

Answer: A



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2. Fig. 12.5 shows a bulb with its different parts marked as 1, 2, 3, 4 and 5. Which of them label the terminals of the bulb?



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Short Answer Questions

1. You are provided with a bulb, a cell, a switch and some connecting wires. Draw a diagram to show the connections between them to make the bulb glow.



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2. Will the bulb glow in the circuit shown in Fig. 12.6? Explain.



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3. An electric bulb is connected to a cell through a switch as shown in Fig. 12.7. When the switch is brought in 'ON' position, the bulb

does not glow. What could be the possible reason/s for it? Mention any two of them.



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4. A torch requires 3 cells. Show the arrangement of the cells, with a diagram,

inside the torch so that the bulb glows



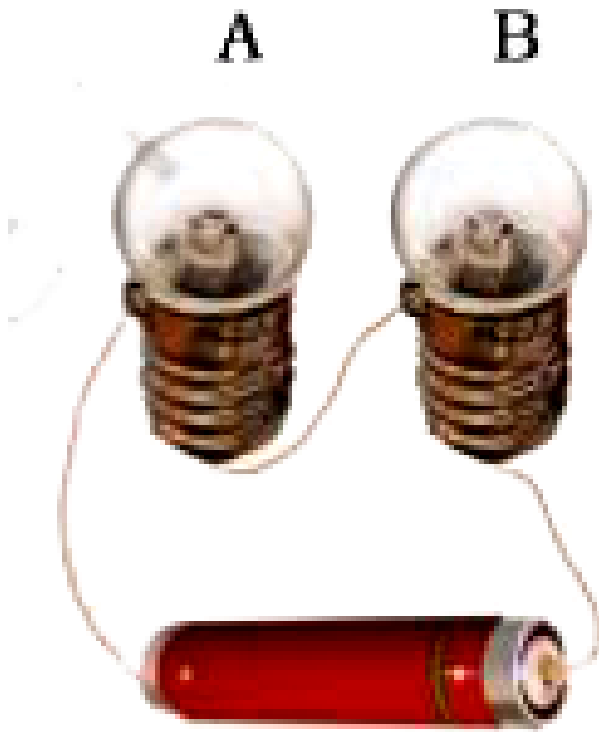
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5. When the chemicals in the electric cell are used up, the electric cell stops producing electricity. The electric cell is then replaced with a new one. In case of rechargeable batteries (such as the type used in mobile phones, camera and inverters), they are used again and again. How?



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6. Paheli connected two bulbs to a cell as shown in Fig. 12.8.



She found that filament of bulb B is broken.

Will the bulb A glow in this circuit? Give reason.

- A. bulb A will glow
- B. bulb B will glow
- C. bulb A will not glow
- D. both A and B option

Answer: D



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7. Why do bulbs have two terminals?



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8. Which of the following arrangement A, B, C and D given in Fig. 12.9 should not be set up?

Explain, why.



A



B



C



D

A. A

B. B

C. C

D. D

Answer: A



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9. A fused bulb does not glow. Why?



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10. Paheli wanted to glow a torch bulb using a cell. She could not get connecting wires, instead, she got two strips of aluminium foil. Will she succeed? Explain, how ?

A. Yes

B. No

C. Maybe

D. None of the above

Answer: A



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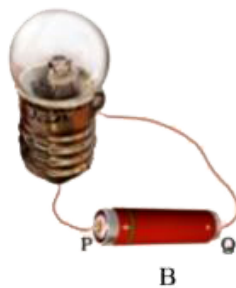
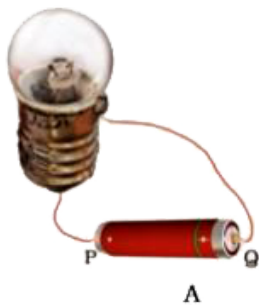
Long Answer Questions

1. Boojho has a cell and a single piece of connecting wire. Without cutting the wire in two, will he be able to make the bulb glow? Explain with the help of a circuit diagram.



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2. Fig. 12.10 A and B, show a bulb connected to a cell in two different ways.



(i) What will be the direction of the current through the bulb in both the cases. (Q to P or P to Q)

(ii) Will the bulb glow in both the cases?

(iii) Does the brightness of the glowing bulb depend on the direction of current through it?



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3. Think of six activities which use electric current. Also name the devices used to perform the activity.

Activity you perform	Device
Example : Get light	Torch
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____



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4. A torch is not functioning, though contact points in the torch are in working condition.

What can be the possible reasons for this?

Mention any three



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