



# INDIAN SCHOOL NIZWA - WORKSHEET

## PHYSICS

CH: 3- ELECTRICITY: CIRCUITS

AND THEIR COMPONENTS

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Class: VII Sec: \_\_\_\_

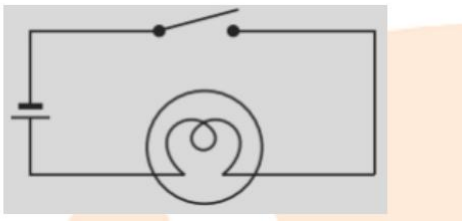
- An electric bulb glows when:
  - The circuit is open
  - The circuit is closed
  - The circuit has no battery
  - The switch is off
- Which device is used to open or close a circuit?
  - Bulb
  - Battery
  - Switch
  - Wire
- In a circuit, electric current flows from:
  - Positive terminal to negative terminal
  - Negative terminal to positive terminal
  - Both directions at the same time
  - None of the above
- If one bulb fuses in a series circuit of three bulbs, the other bulbs:
  - Glow dimmer
  - Glow brighter
  - Do not glow
  - Glow normally
- A student connects a battery, switch, and bulb in a circuit. The bulb glows only when the switch is pressed. Explain the role of the switch here.
- A circuit has a switch, a battery, and a bulb. You notice that even when the switch is in the 'ON' position, the bulb does not glow. List at least three possible reasons for this failure and how you would systematically test each one.
- Answer the following questions based on the passage given below:



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Rohan connected a torch bulb to a cell using wires. However, the bulb did not glow. On checking, his teacher found that one end of the wire was not connected properly to the cell's terminal. After fixing it, the bulb glowed.

- a) Why did the bulb not glow at first?
  - b) What do we call such a circuit where current does not flow?
  - c) What is the condition required for a bulb to glow in a circuit?
  - d) Draw a simple circuit diagram showing a cell, a switch, and a bulb.
8. Why does an LED glow only when connected in a particular direction?
  9. Will the bulb glow in the given circuit? If not, give reason.



10. Name two conductors and two insulators. Why are electric wires covered with plastic or rubber?
11. Fathima made a circuit with a cell, switch, and bulb. When she turned the switch 'ON,' the bulb didn't light up. List three possible reasons for this and suggest how she can fix it.
12. A student connects a switch, a bulb, and a cell. But the bulb does not glow even though the circuit is closed. He then replaces the bulb with another one, and it glows. Why did this happen?
13. If the plastic covering of an electric wire is removed, why is it unsafe to touch the wire?