

Chapter 12. Electricity And Circuits

Very Short Q&A:

Q1: Electric cell is the source of _____.

Ans: Electricity

Q2: What are the two terminals of electric cell?

Ans: Negative terminal and positive terminal.

Q3: An electric cell produce electricity from chemical stored in it. (TRUE/FALSE)

Ans: True

Q4: The metal cap is _____ terminal of electric cell and metal disc is _____ terminal.

Ans: Positive, negative

Q5: The filament of bulb is made up of _____.

Ans: Tungsten.

Q6: The switch is said to be 'ON' when it allows current to pass through it. (TRUE/FALSE)

Ans: True

Q7: In an electric circuit the direction of current is taken to be from _____ to _____ terminal of electric cell.

Ans: Positive to negative.

Q8: The thin coiled wire that gives off light is called _____ of the bulb.

Ans: Filament

Q9: To break the flow of current in a circuit, _____ is used.

Ans: Switch

Q10: There are _____ terminals in an electric cell.

Ans: 2

Q11: What is a switch?

Ans: The simple device that either breaks the circuit or completes it is called switch.

Q12: Name any two electrical gadgets that have switches built into them.

Ans: Torch and oven

Q13: Give any two examples of conductors of electricity.

Ans: Copper and aluminium

Q14: Is air a conductor or insulator?

Ans: Air is insulator

Q15: Which of the following is good conductor of electricity: Rubber, wood, graphite

Ans: Graphite

Q16: What are conductors?

Ans: Materials that allow electric current to pass through them are called conductors.

Q17: Electric wires are made up of _____ but they are covered with _____.

Ans: Conductor, insulator.

Q18: Which part of electric cell or bulb can be connected to form a circuit?

Ans: The two terminals-negative and positive.

Q19: What are insulators?

Ans: Materials that do not allow electric current to pass through them are called insulators.

Q20: Which of the following is not good conductor of electricity:

Copper, aluminium, mercury, rubber

Ans: Rubber

Q21: Give two examples of insulators.

Ans: Rubber and plastic

Q22: Electricians must wear _____gloves while repairing electric switch.

Ans: Rubber

Q23: The materials which do not allow electric current to pass through them are called _____.

Ans: Insulators

Q24: In an electric bell, _____energy is transformed into _____energy.

Ans: Electrical, magnetic

Q25: Cotton and thermo Col are good conductors of electricity.(TRUE/FALSE)

Ans: False

Q26: Electric _____is a path along which current flows.

Ans: Circuit

Q27: Switch can break electricity flow.(TRUE/FALSE)

Ans: True

Q28: The material that allows electric current to pass through it is called _____.

Ans: Conductor

Q29: Our body is _____of electricity.

Ans: Conductor

Q30: All metals are good conductors. Is the statement true? Give example.

Ans: Yes. For example-iron, copper etc.

Q31: Which materials can be used to cover electric wires, plug tops, switches etc?

Ans: Insulators such as plastic, rubber etc.

Q32: Gold is a conductor. (TRUE/FALSE)

Ans: True

Q33: What are electric wires made up of?

Ans: Electric wires are made up of copper, aluminium.

Q34: Name any three components of electric circuit.

Ans: Electric cell, wire and electric bulb.

Short Q&A:

Q1: What will happen if we join two terminals of electric cell directly through a wire?

Ans: If we join two terminals of electric cell directly through a wire, the chemical in an electric cell get used up very fast and the cell will stop working.

Q2: What is an electric circuit?

Ans: Arrangement that provides a complete path for electricity to pass (current to flow) is known as electric circuit.

Q3: Explain how the bulb glows in circuit when it is connected to an electric cell?

Ans: When the terminals of the bulb are connected with that of electric cell by wires, a current pass through the filament of the bulb and it makes the bulb glow.

Q4: How can an electric bulb get fused?

Ans: An electric bulb may get fused due to break in its filament. A break in the filament of bulb means break in the path of current between the terminals of electric cell.

Q5: Why rubbers and plastic used to cover electric wires and plug tops?

Ans: Rubbers and plastic are used to cover electric wires and plug tops because they are insulators and do not allow electric current to pass when we touch plugs and switches.

Q6: Why is distilled water used in the batteries and not the tap water?

Ans: Because distilled water acts as an insulator as it is purest water. Whereas tap water has salts and impurities and acts as a conductor.

Q7: Why is handle of tools like screw driver, pliers are covered with plastic or rubber?

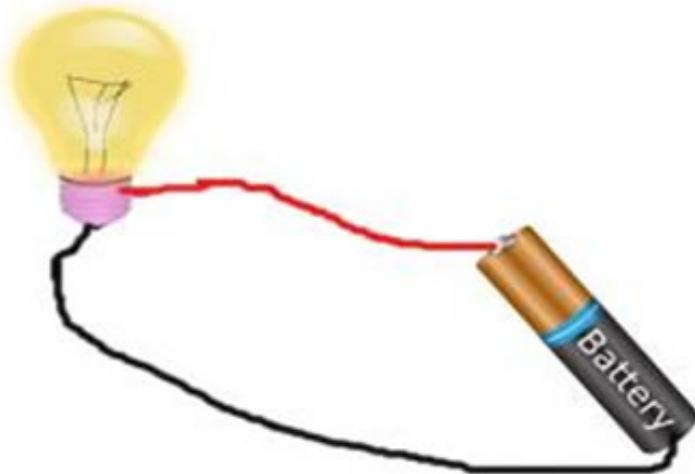
Ans: Because they are insulators and avoid direct contact with electric current while touching electric wires.

Q8: Generally what can be components of an electric circuit?

Ans: Components of electric circuit can be following:

- a. A cell or a battery
- b. Connecting wires made of copper or aluminium
- c. Switch
- d. Bulb or other electric device

Q9: Would bulb glow in the circuit given below? Why or why not?



Ans: Yes, bulb will glow because current will flow from two terminals of the bulb.

Q10: What is the function of an electric switch?

Ans: It is a simple device that either breaks the circuit or completes it. For example-in a microwave or toy cars we have switches to turn it ON or OFF.

Q11: What is an electric cell? How many terminals it has?

Ans: An electric cell is a device that converts chemical energy into electrical energy. It has two metal plates indicating two terminals-negative and positive. It has chemical inside it.

Q12: Statement is true or false:

- a. Bulb has one terminal.
- b. Electrolyte is present in the cell.
- c. Copper is good conductor of electricity.
- d. Circuit shows the path of current.

Ans:

- a. False
- b. True
- c. True
- d. True.

Q13: Match the following:

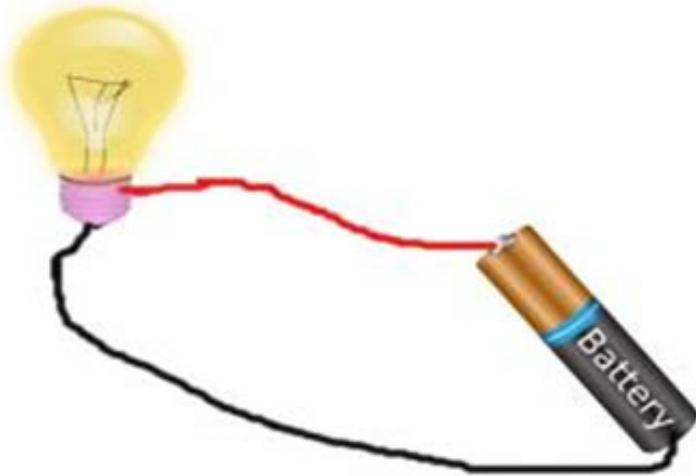
A	B
1. Circuit	a. Electrolyte
2. Switch	b. Path of current
3. Bulb	c. Break the circuit
4. Electric cell	d. Filament

Ans:

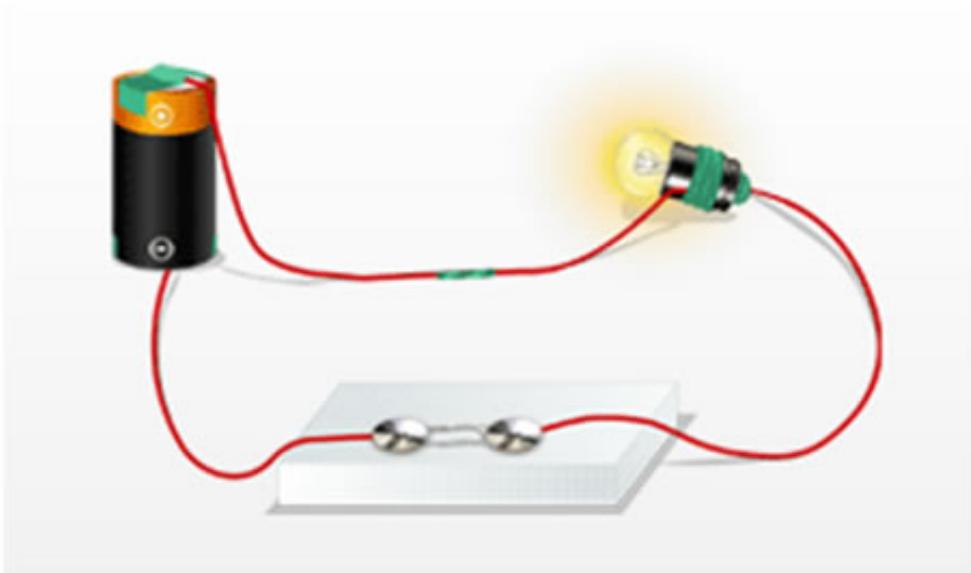
A	B
1. Circuit	a. Path of current
2. Switch	b. Break the circuit
3. Bulb	c. Filament
4. Electric cell	d. Electrolyte

Q14: Draw a diagram to show a circuit.

Ans:



Q15: Explain why bulb will glow in the arrangement shown:



Ans: Because the switch is ON and therefore current will flow.

Q16: Classify the following as conductor or insulator:
Eraser, coin, glass, pencil, needle, key, iron nail, plastic scale

Ans:

Conductor-coin, needle, key, iron nail
Insulator-eraser, glass, pencil, plastic scale

Long Q&A:

Q1: What is the difference between conductor and an insulator? Explain with examples.

Ans: Materials that allow electric current to pass through them are called conductors. For example iron, copper etc. Metals are good conductors. Materials that do not allow electric current to pass through them are called insulators. For example-rubber, plastic etc.