
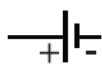


UNIT: 2 - ELECTRICITY

CLASS : VI

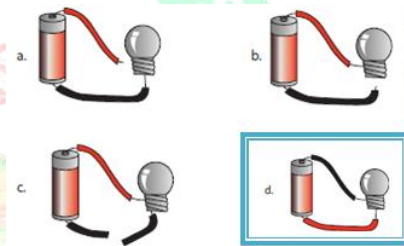
SUBJECT: SCIENCE

I. Choose the appropriate answer

- The device which converts chemical energy into electrical energy is
a. fan b. solar cell **c. cell** d. television
- Electricity is produced in
a. transformer **b. power station** c. electric wire d. television
- Choose the symbol for battery a.  b. 

Ans: a

- In which among the following circuits does the bulb glow?



Ans: d

- _____ is a good conductor
a. silver b. wood c. rubber d. plastic

II. Fill in the blanks





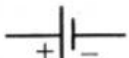
- Conductors** are the materials which allow electric current to pass through them.
- Flow of electricity through a closed circuit is **a complete electric circuit**.
- Key or Switch** is the device used to close or open an electric circuit.
- The long perpendicular line in the electrical symbol represents its **positive** terminal.
- The combination of two or more cells is called **a Battery**

III. True or False. If False, give the correct statement

- In a parallel circuit, the electricity has more than one path. **True**

2. To make a battery of two cells, the negative terminal of one cell is connected to the negative terminal of the other cell. **False**
3. The switch is used to close or open an electric circuit. **True**
4. Pure water is a good conductor of electricity. **False**
5. Secondary cell can be used only once. **False**

IV. Match the following

| S. No. | Symbol | Description |
|--------|---|--------------------|
| 1. |  | battery |
| 2. |  | bulb does not glow |
| 3. |  Open | open key |
| 4. |  | bulb glows |
| 5. |  | cell |

V. Arrange in sequence:

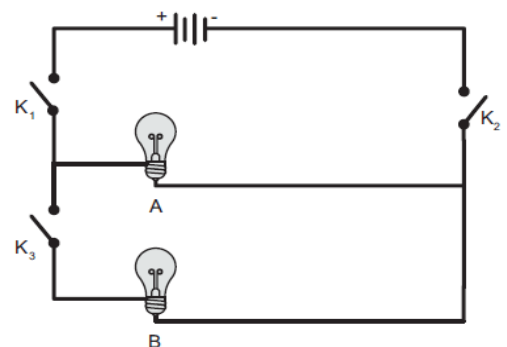
A Cell - A Device - Electrical Energy - is called - in to - Chemical Energy - That converts

A Device that converts chemical energy into electrical energy is called a cell.

VI. Give very short answer

1. In the given circuit diagram, which of the given switch(s) should be closed. So that only the bulb A glows.

Switches K_1 and K_2 should be closed.



2. Assertion (A) : It is very easy for our body to receive electric shock.
Reason (R) : Human body is a good conductor of electricity.

a. Both A and R are correct and R is the correct explanation for A.

b. A is correct, but R is not the correct explanation for A.

c. A is wrong but R is correct.

d. Both A and R are correct and R is not the correct explanation for A.

3. Can you produce electricity from lemon?

Yes, I Can you produce electricity from lemon.

4. Identify the conductor from the following figures.

The conductor is iron chain.



5. What type of circuit is there in a torch light?

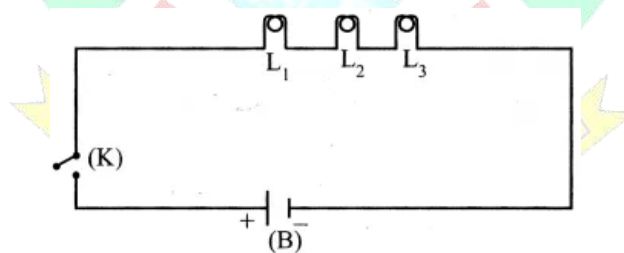
Simple circuit system is used in a torch light.

6. Circle the odd one out. Give reason for your choice.

Switch, Bulb, Battery, Generator are the components used to make simple circuit. Generator is used to generate electricity.

VII. Give short answer

1. Draw the circuit diagram for series connection.



2. Can the cell used in the clock gives us an electric shock? Justify your answer.

- ❖ The cell used in clock will not give us an electric shock because the voltage of that cell is very low nearly 1.5 v.
- ❖ So it will not affect our body.

3. Silver is a good conductor but it is not preferred for making electric wires. Why?

- ❖ Silver is a good conductor. But it is a costly metal.
- ❖ So it is not preferred for making electric wire.

VIII. Answer in detail

1. What is the source of electricity? Explain the various power stations in India?

1. Thermal Power stations

- In thermal power stations, the thermal energy generated by burning coal, diesel or gas is used to produce steam.
- The steam thus produced is used to rotate the turbine. While the turbine rotates, the coil of wire kept between the electromagnet rotates.
- Due to electro magnetic induction electricity is produced. Here heat energy is converted into electrical energy.

2. Hydel power stations

- In hydel power stations, the turbine is made to rotate by the flow of water from dams to produce electricity.
- Here kinetic energy is converted into electrical energy. Hydel stations have long economic lives and low operating cost.

3. Atomic power stations

- In atomic power stations, nuclear energy is used to boil water. The steam thus produced is used to rotate the turbine. As a result, electricity is produced.
- Atomic power stations are also called as nuclear power stations. Here nuclear energy is converted into mechanical energy and then electrical energy.

4. Wind mills

In wind mills, wind energy is used to rotate the turbine to produce electricity. Here kinetic energy is converted into electrical energy.

3. Write short notes on conductors and insulators.


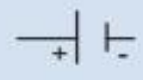

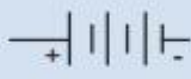

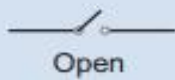

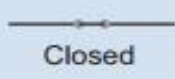





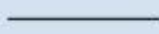
Conductors:

- The rate of flow of electric charges in a circuit is called electric current.
- The materials which allow electric charges to pass through them are called conductors.
- Examples: Copper, iron, aluminum, impure water, earth etc.,

Insulator (Non-Conductors):

- The materials which do not allow electric charges to pass through them are called insulators or non- conductors.
- Examples: plastic, glass, wood, rubber, china clay, ebonite etc.

2. Tabulate the different components of an electric circuit and their respective symbols.

| Sl.no. | Electric component | Figure | Symbol |
|--------|--------------------|---|---|
| 1 | Electric cell |  Cell |  |
| 2 | Battery |  Battery |  |
| 3 | Switch-open |  OFF ON |  Open |
| 4 | Switch-closed |  OFF ON |  Closed |
| 5 | Electric bulb |  |  |
| | |  |  |
| 6 | Connecting wires |  |  |

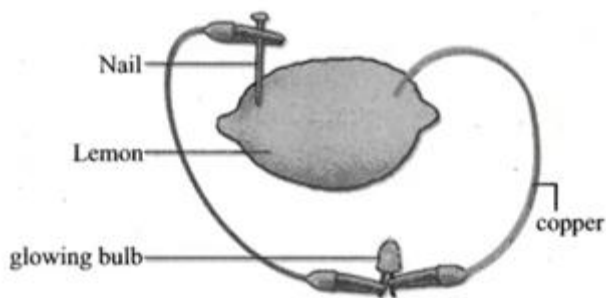
IX. Question based on Higher Order Thinking Skills

1. Rahul wants to make an electric circuit. He has a bulb, two wires, a safety pin and a piece of copper. He does not have any electric cell or battery. Suddenly he gets some idea. He uses a lemon instead of a battery and makes a circuit. Will the bulb glow?

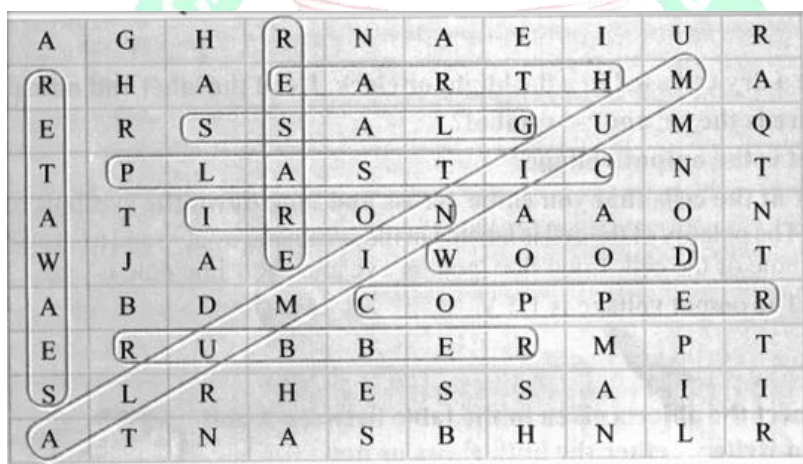
Yes the bulb will glow:

- Take a lemon. Squeeze it without breaking its skin. The squeezing action releases the juice inside the lemon needed as a the battery to work.

- Use a nail to make one hole in one end of the lemon and push a copper wire into that hole.
- Then, push the nail into the other end.
- Connect a bulb with one of the terminal with the copper wire and other terminal with the nail, as shown in the figure.
- Now the lemon generates a small amount of electricity and the bulb gl



X. Search ten words in the given word grid and classify them as conductors and insulators.



| S.No | Conductors | Insulators |
|------|------------|------------|
| 1 | Aluminum | Wood |
| 2 | Earth | Plastic |
| 3 | Copper | Rubber |
| 4 | Iron | Glass |
| 5 | Sea water | Eraser |