



WORKSHEET

Full marks 31

Name _____ Class _____ Roll no. _____ Date _____ Marks _____ / 31

[4]

battery earthing electric circuit electric discharge electrons electrostatic force
generator positively protons static electricity

[5]

[1]

- [1]

[1]

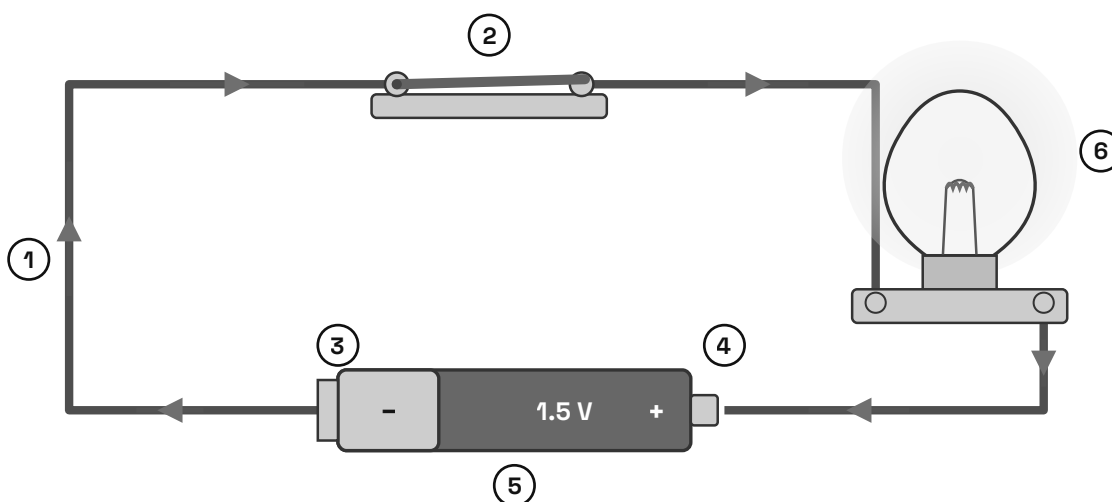
- a. Cells are joined in parallel to light a bulb for a long time.
- b. More cells are joined in parallel to make a bulb brighter.
- c. Cells are joined in series to light a bulb brightly for a long time.
- d. Most electrical appliances have their cells in parallel.



- iv. Which of these statements is true? [1]
- Current flows from the positive terminal to the negative terminal, and this is called the flow of electrons.
 - The flow of protons from the positive terminal to the negative terminal is current electricity.
 - The flow of electrons from the negative terminal to the positive terminal of a cell, round a circuit, is current electricity.
 - Electrons flow sometimes from the positive terminal to the negative, and sometimes back, in a circuit with a cell.
- v. A torch needs 3 V. You have two 1.5 V cells. How should you join them? [1]
- in series, so that their voltages add up to 3 V
 - in parallel, so that the voltage adds up to 3 V
 - in parallel, so that the torch lasts longer at 3 V
 - it doesn't matter how they are joined

3 Label the diagram [3]

The diagram shows a simple electric circuit. Write the names of the parts numbered 1 to 6. Each carries 0.5 mark.



- | | |
|----------|----------|
| 1. _____ | 2. _____ |
| 3. _____ | 4. _____ |
| 5. _____ | 6. _____ |

4 Very short answers [3]

Write very short answers to the following questions.

- a. What charge does a proton have? [1]



b. How many volts does an ordinary dry cell give? [1]

c. Of which metal is a lightning rod and its strip made? [1]

5 Short answers [8]

Write short answers to the following questions.

a. Write any two differences between current electricity and static electricity. [2]

b. Give a reason: it is dangerous to stay under a tall tree or beside a tall building during lightning. [2]

c. Give a reason: pieces of paper are attracted to a comb after it has been used to comb dry hair. [2]

d. What is a combination of cells? Why is it done? [2]

6 Long answer [4]

Write a long answer to the following question.

What is lightning? How is it produced? Explain.



7 Numerical problem

[2]

A toy needs 4.5 V. How many 1.5 V cells must be joined in series to run it? What voltage would the same cells give if they were joined in parallel?

Answer:

8 Think

[2]

Before a fuel tanker fills or empties at a depot, a cable is clamped to it and joined to a metal rod in the ground. Why?

9 Activity: More cells in series (Activity 8.4)

(not marked)

Number of cells in series	Brightness of the bulb	Total voltage
1		
2		
3		

What did you find?

