

GCSE Physics: Electricity and Circuits

Priority Learning

Worksheet

Name: _____ Date: _____

Question:	1	2	3	Total
Marks:	6	10	9	25
Score:				

Aims of this worksheet:

- Practicing definitions.
- Practicing "explain" exam style questions.
- Practicing the principles of electricity and currents.

1. Define the following terms.

(a) Current

(1 mark)

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(b) Voltage

(1 mark)

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(c) Resistance

(1 mark)

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(d) Ohm's Law

(2 marks)

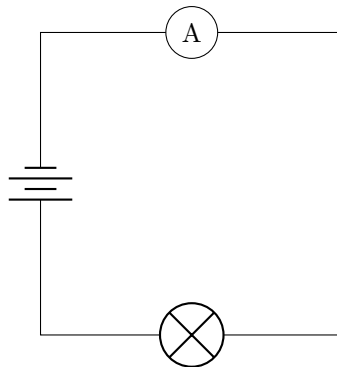
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(e) Charge

(1 mark)

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2. The circuit below shows a lamp in series with an ammeter. A student wants to determine the resistance of the lamp.



(a) Add 1 component to the circuit that would allow the student to conduct the experiment and explain how they would find the resistance of the lamp.

(3 marks)

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- (b) The student now wants to know for what values the lamp obeys Ohm's Law. How might they do this? (4 marks)

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- (c) What would happen to the reading on the ammeter as the lamp heated up? Explain your answer. (3 marks)

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3. The resistance of light dependent resistors (LDR) changes depending on how much light they receive.

- (a) Suggest a use for an LDR. (1 mark)

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- (b) A student wants set up a circuit with a light dependent resistor, a voltmeter, a variable resistor, an ammeter and two 12V cells. Draw the circuit below.

(c) They wanted to see if the LDR obeyed Ohm's Law by varying the light going into the LDR.

i. We want to keep the voltage across the LDR the same, explain why we want to do this. (1 mark)

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ii. What is the independent variable in this experiment? (1 mark)

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iii. What is the dependent variable in this experiment? (1 mark)

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iv. What is the control variable in this experiment? (1 mark)

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Explain how they might conduct the experiment. (4 marks)

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