

TOPIC: Static electricity, Circuits & Current electricity

Components of circuits, Heating and Magnetic effect

MARKS: 15

Name and Surname: _____ Gr. 8 _____ Date: _____

SECTION A

QUESTION 1

1.1 Match the description in COLUMN A with the correct term in COLUMN B.

Write only the LETTER (A - D) next to the question number (1.1.1 – 1.1.3) in the open spaces provided below.

COLUMN A		COLUMN B	
1.1.1	The movement of electric charge through a conducting wire.	A	A closed circuit
1.1.2	A circuit in which electric current flows.	B	Static electricity
1.1.3	Electric charge that builds up on the surface of an object and stays in one place.	C	Electric current
		D	An open circuit

ANSWERS: 1.1.1 _____ 1.1.2 _____ 1.1.3 _____ (3)

1.2 Give the correct WORD or TERM for each of the following statements.

1.2.1 A component that provides electrical energy in a circuit. Answer: _____ (1)

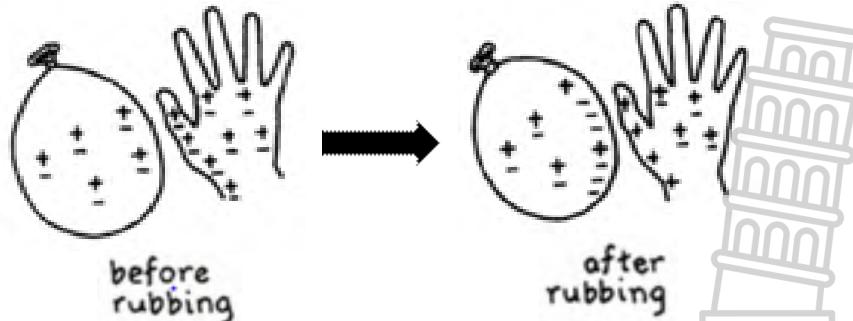
1.2.2 A component that opposes the flow of electric current in a circuit.

 Answer: _____ (1)
 [5]

SECTION B

QUESTION 2

2.1 The pictures below show a hand and a balloon BEFORE and AFTER rubbing them together



2.1.1 Indicate with a tick (✓) the type of charge on the BALLOON BEFORE RUBBING.

 Balloon Positive Negative Neutral (1)

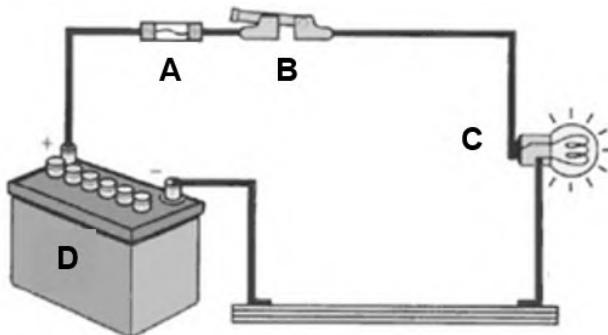
2.1.2 Indicate with a tick (✓) the type of charge on the HAND AFTER RUBBING.

 Hand Positive Negative Neutral (1)

2.1.3 UNDERLINE the correct word in each of the brackets to complete the sentence.

In the picture above, (**electrons / protons**) were transferred FROM the (**balloon / hand**) TO the (**balloon / hand**) due to friction. (2)

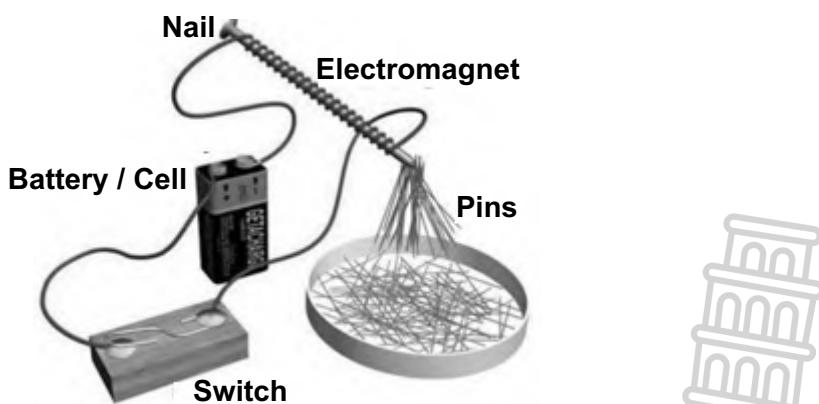
2.2 In the picture below, a fuse (a thin piece of wire) is connected with other components in an electrical circuit.



2.2.1 Identify the fuse in the above circuit (only write A, B, C or D): _____ (1)

2.2.2 Explain the function of the fuse in the picture above by describing what happens if the current in the circuit becomes too high. (2)

3. Study the diagram of an electromagnet below



3.1 What effect of electric current is demonstrated in the above diagram?

3.2 Is the switch in the diagram open or closed? _____ (1)

3.3 Give a reason for your answer in question 3.2.

(1)

[10]

TOTAL MARKS: 15

NATURAL SCIENCES

GRADE 8

INFORMAL TEST 3.1

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MEMORANDUM

SECTION A

QUESTION 1

- 1.1.1 C ✓ (1)
 1.1.2 A ✓ (1)
 1.1.3 B ✓ (1)
 1.2.1 Battery / Cell ✓ (1)
 1.2.2 Resistor ✓ (1)
[5]

SECTION B

QUESTION 2

- 2.1.1 Neutral ✓ (1)
 2.1.2 Positive ✓ (1)
 2.1.3 In the picture above, electrons✓ were transferred FROM the hand TO the balloon✓ due to friction. (2)
 2.2.1 A ✓ (1)
 2.2.2 The fuse will heat up and melt off ✓ and break the circuit.✓ (2)
 3.1 Magnetic effect✓ (1)
 3.2 Closed✓ (1)
 3.3 The current is flowing✓ because the electromagnet attracts the pins. (1)
[10]



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