

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

SECTION A

QUESTION 1

1.1 Write the **LETTER** (A, B, C or D) of the correct answer on the line provided.

1.1.1 When an electric current flows through water in an electrolytic cell, water is broken down to ...

- A water vapour.
- B hydrogen and oxide.
- C hydrogen and oxygen.
- D copper and chlorine.

Answer: _____ (1)

1.1.2 The **SOLUTION** in an electrolytic cell through which the electric current flows.

- A Electrolyte
- B Electrolysis
- C Electrode
- D Electrolytic cell

Answer: _____ (1)

1.1.3 The carbon rod which conducts the electric current into the solution in an electrolytic cell.

- A Electrolyte
- B Electrode
- C Electrolysis
- D Electrolytic cell

Answer: _____ (1)

1.2 Give the **CORRECT TERM** for each of the descriptions.

1.2.1 The type of circuit that provides two or more pathways for the current to flow through.

Answer: _____ (1)

1.2.2 Circuit components that oppose the flow of electric current.

Answer: _____ (1)
[5]

SECTION B

QUESTION 2

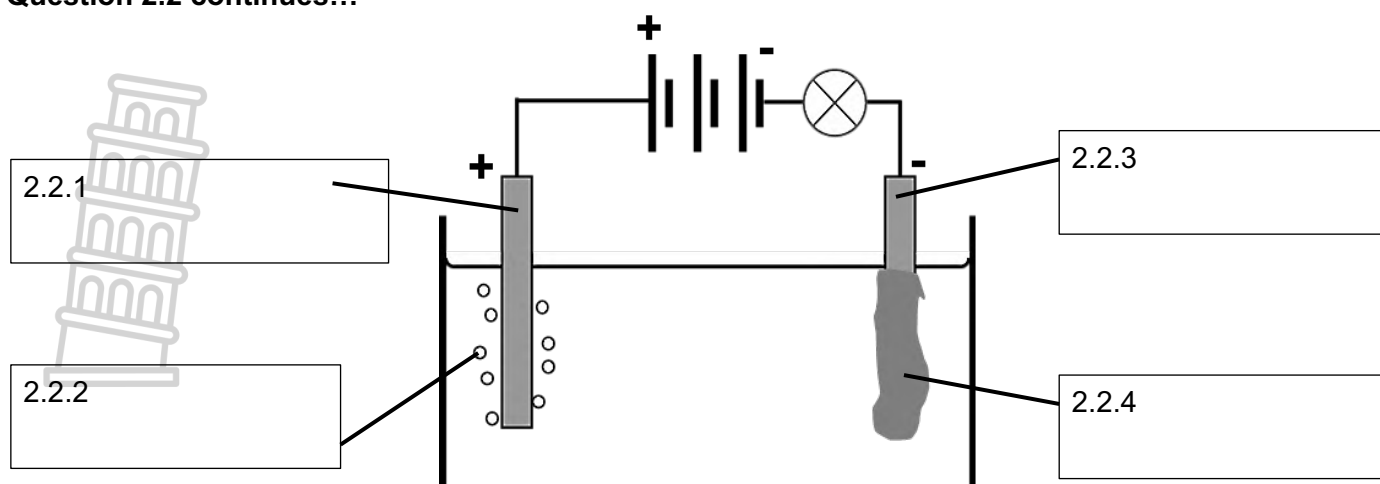
2.1 Name the **PROCESS** that takes place when an electric current breaks down a compound.

(1)

2.2 The diagram on the next page shows an electrolytic cell with a blue copper chloride solution. Use the words in the word box to label parts 2.2.1 to 2.2.4 on the diagram.

Anode	Cathode	Chlorine gas	Copper metal
-------	---------	--------------	--------------

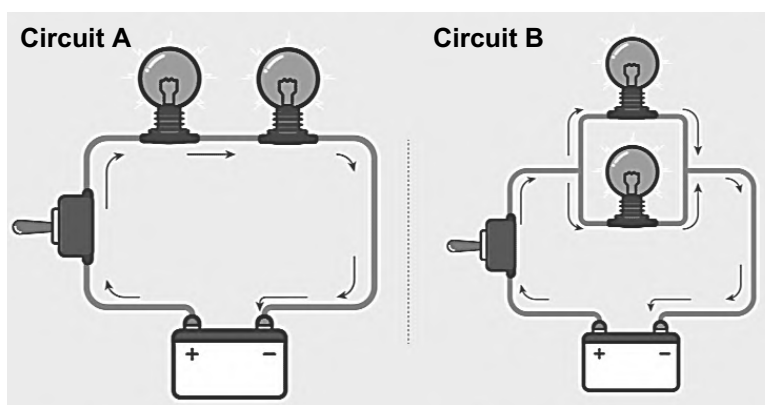
Question 2.2 continues...



(4)

2.3 Study **Circuit A** and **Circuit B**.

You may assume that Circuits A and B have identical batteries and bulbs, and all the bulbs in both circuits are glowing.



2.3.1 Explain why the bulbs in Circuit A glow dimmer than the bulbs in Circuit B.

(2)

2.3.2 In the open space below, draw a circuit diagram to illustrate **Circuit B**. Use the correct SYMBOL for each circuit component.



(2)
[10]

TOTAL MARK: 15

MEMORANDUM

SECTION A

QUESTION 1

- 1.1.1 C ✓ (1)
1.1.2 A ✓ (1)
1.1.3 B ✓ (1)

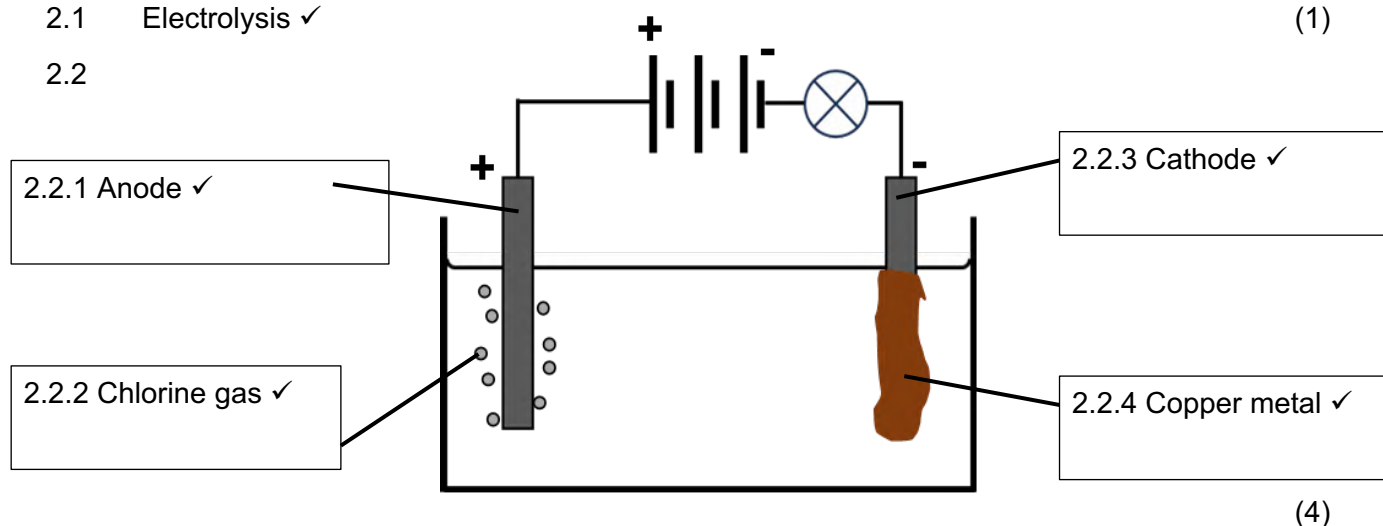
- 1.2.1 Parallel (circuit) ✓ (1)
1.2.2 Resistors (**Accept:** Bulbs) ✓ (1)
[5]

SECTION B

QUESTION 2

- 2.1 Electrolysis ✓ (1)

2.2

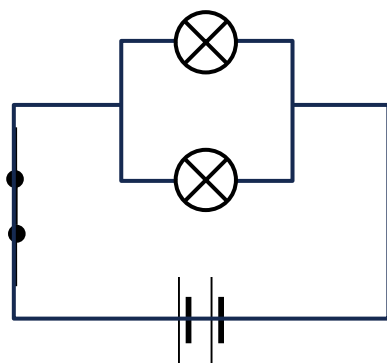


- 2.3.1 The bulbs in Circuit A are connected in **series** ✓; not in parallel as in Circuit B. The **overall resistance in Circuit A is higher** ✓ than in Circuit B, and the bulbs glow dimmer.

OR

- The **overall resistance in Circuit B is lower than in Circuit A** ✓ because the **bulbs are in parallel**. ✓ Therefor the bulbs in Circuit B are brighter than in Circuit A. (2)

2.3.2



Marking criteria:

TWO bulbs in parallel. ✓

CLOSED switch ✓ (bulbs glow; current is flowing).

Battery / One or more cells in series. ✓

NOTE: Components can be arranged in any order.

(2)
[10]

TOTAL MARK:

15