AQA, OCR, Edexcel

GCSE Science

GCSE Chemistry

Chemical cells and fuel cells

Answers

Mathsmadeeasy.co.uk

Total Marks: /19

Chemical cells and fuel cells

Q1: How do cells produce electricity?

A= cells contain chemicals which react to produce electricity.

(1 mark)

Q2: What two things is the voltage of a cell dependent upon?

A= Type of electrode (1 mark) and electrolyte (1 mark).

(2 marks)

Q3: Give the components that are needed for a cell to be made.

A= Two different metals (1 mark) in contact with an electrolyte (1 mark).

(2 marks)

Q4: How are batteries made using cells?

A= Two or more cells connected together in series (1 mark) to provide a greater voltage (1 mark).

(2 marks)

Q5: Label which statements are true or false.

In a non-rechargeable cell or battery, the chemical reactions stop when one of the reactants has been used up.

True

Acidic batteries are non-rechargeable.

False

Rechargeable cells and batteries can be recharged because the chemical reactions can continue because an electrical current is supplied.

False

(3 marks)

Q6: For the statements that were false, write the correct version.

A= Alkali batteries are non-rechargeable. / Acidic batteries can be rechargeable (1 mark)

Rechargeable cells and batteries can be recharged because the chemical reactions can **be reversed** (1 mark)

(2 marks)

Fuel Cells

Q7: Complete the following sentences.

Fuel cells are supplied by an **external (1 mark)** source of fuel (eg **hydrogen (1mark)**) and oxygen or **air (1 mark)**.

The fuel is oxidised **electrochemically (1 mark).**

Within the fuel cell the fuel is oxidised to produce a **potential difference (1 mark)**.

(5 marks)

Q8: Describe the reaction in a hydrogen fuel cell?

A= The oxidation of hydrogen (1 mark) to produce water (1 mark).

(2 marks)