

Current Electricity (KS3)

Section A – Recall (1–2 marks each)

Q1 (1 mark)

What is electric current?

Q2 (1 mark)

What unit is current measured in?

Q3 (1 mark)

What unit is the potential difference (voltage) measured in?

Q4 (1 mark)

What unit is resistance measured in?

Q5 (2 marks)

State TWO components commonly used in electrical circuits.

Q6 (2 marks)

State TWO differences between series and parallel circuits.

Section B – Understanding (2–3 marks each)

Q7 (3 marks)

Explain what happens to current where branches meet in a parallel circuit.

Q8 (2 marks)

Explain the difference between conductors and insulators of electricity.

Q9 (3 marks)

Explain what resistance does in a circuit, and give its unit of measurement.

Section C – Application (3 marks each)

Q10 (3 marks)

Use the formula:

Resistance = potential difference ÷ current

A bulb has a potential difference of 6 V and a current of 2 A.
Calculate the resistance.

Q11 (3 marks)

Use the formula:

Potential difference = current × resistance

A resistor has a resistance of 5 Ω and a current of 3 A.
Calculate the potential difference.

Q12 (3 marks)

Use the formula:

Current = potential difference $\div$ resistance

A resistor has a potential difference of 12 V and a resistance of 3 Ω .
Calculate the current.

Q13 (3 marks)

A lamp has a current of 2 A and a resistance of 8 Ω .
Calculate the potential difference.

Q14 (3 marks)

A heater has a potential difference of 24 V and a current of 6 A.
Calculate the resistance.

Q15 (3 marks)

A resistor has a potential difference of 18 V and a resistance of 6 Ω .
Calculate the current.

Q16 (3 marks)

In a parallel circuit a total current of 15 A enters a junction.

9 A flows through one branch.

Calculate the current in the second branch.

Q17 (3 marks)

A circuit has a potential difference of 20 V and a current of 4 A.

Calculate the resistance.

Section D – Extended Response (6 marks)

Q18 (6 marks)

Explain how battery and bulb ratings, potential difference, current and resistance are related in electrical circuits.

Total: ____ / 46
Percentage: ____%