Practice Question Set For GCSE
Subject : Physics
Paper-1 Topic: GCSE Triple Science_Electricity (Low Demand Questions)

Name of the Student:_____
Max. Marks : 26 Marks **Time : 26 Minutes**

Mark Schemes

Q1.

(a) $R = \frac{36.0}{3}$

1

R = 12.0 (Ω)

1

(b) 0.1 Ω

1

(c) The measurements are grouped closely together

1

(d) The results give a straight line that would go through the origin.

1

(e) 84 (Ω)

allow an answer between 83 and 85 (Ω) inclusive

1

(f) decreases

1

decreases

1

[8]

Q2.

(a) kg

allow kilogram

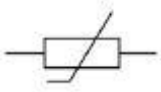
1

°C

allow degrees Celsius

1

(b)



1

(c) $P = 12^2 \times 15$

1

P = 2160 (W)

1

(d) The heating element in the kettle takes time to heat up

1

(e) **Level 3:** The method would lead to the production of a valid outcome. All key steps are identified and logically sequenced.

5–6

Level 2: The method would not necessarily lead to a valid outcome. Most steps are identified, but the method is not fully logically sequenced 3–4

3–4

Level 1: The method would not lead to a valid outcome. Some relevant steps are identified, but links are not made clear.

1–2

No relevant content

0

Indicative content:

- measure the mass of water using a balance
  or
  measure the volume of water using a measuring cylinder
- measure the initial temperature of the water
- pour the water into the kettle
- put temperature probe in the water
  or
  put a thermometer in the water
- switch kettle on
- record temperature
- measure time with a stopclock
- use an interval of 5 seconds

(f) $\Delta\Theta = 80$ (°C)

1

$E = 0.50 \times 4200 \times 80$

allow $E = 0.50 \times 4200 \times$ their value of $\Delta\Theta$

1

E = 168 000 (J)

allow an answer consistent with their value of $\Delta\Theta$

1

(g) m = 0.005 (kg)

1

$E = 0.005 \times 2\ 260\ 000$

this mark may score if m is not/incorrectly converted

1

E = 11 300 (J)

allow an answer consistent with their value of m

1

[18]