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

Name of the Student:_____
Max. Marks : 21 Marks **Time : 21 Minutes**

Mark Schemes

Q1.

(a) ammeter and voltmeter symbols correct

1

voltmeter in parallel with wire

1

ammeter in series with wire

1

(b) **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

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

- length measured
- length varied
- current measured
- potential difference measured
- repeat readings
- calculate resistance for each length
- $\text{resistance} = \frac{\text{potential difference}}{\text{current}}$
- plot a graph of resistance against length

- hazard: high current
- may cause wire to melt / overheat
- may cause burns (to skin)
- use low currents

(c) the temperature of the wire would not change

1

(d) the accuracy of the student's results would be higher

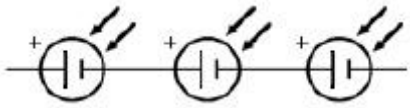
1

the resolution of the length measurement would be higher

1

[12]

Q2.

(a) 

1

(b) $\text{current} = \frac{0.70}{2.5}$

1

current = 0.28 (A)

*an answer of 0.28 (A) scores **2** marks*

1

(c) 0.60 (V)

1

product of potential difference and current gives highest value

1

(d) $\text{efficiency} = \frac{\text{useful power output}}{\text{total power input}}$

1

(e) $0.20 = \frac{\text{useful power output}}{2.4}$

1

useful power output = 0.20 × 2.4

1

useful power output = 0.48 (W)

*an answer of 0.48 (W) scores **3** marks*

1

[9]