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

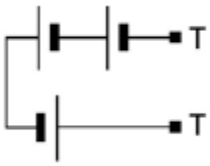
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Name of the Student:_____
Max. Marks : 18 Marks **Time : 18 Minutes**

Mark Schemes

Q1.

(a) 3rd box from the left ticked



1

(b) correct symbol drawn in series with other components
symbol must have upper case A

1

(c) (i) 9 + 3 = 12V
reason only scores if this mark scored

1

pd of battery is shared between the variable resistor and fixed resistor
accept $V_1 + V_2$ = pd of the battery
accept p.d. is shared in a series circuit
accept voltage for p.d.

1

(ii) 600
reason only scores if this mark scored

1

p.d. of supply shared equally when resistors have the same value
or
ratio of the p.d. is the same as the ratio of the resistance

1

(iii) 0.015
or
their (c)(i) ÷ (their (c)(ii) + 200) correctly calculated
*allow **2** marks for correct substitution ie 12 = I × 800*
or
their (c)(i) = I × (their (c)(ii) + 200)
*allow **1** mark for total resistance = 800 (Ω) or their (c)(ii) + 200*
or
*allow **1** mark for a substitution of 12 = I × 200*
or

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their (c)(i) = I × 200

or

alternative method using the graph

V = 3 V (1)

3 = I × 200 (1)

3

[9]

Q2.

(a) pin

made from brass because it is (hard and) a (good electrical) conductor

accept copper for brass

metal is insufficient

heat conductor on its own negates

1

outer case

plastic/rubber because it is a (good electrical) insulator

heat insulator on its own negates

1

(b) (i) live

1

(ii) makes it hot/warm

melts is insufficient

1

(iii) 8.7

accept an answer that rounds to 8.7

*allow **1** mark for correct substitution ie 2000 = 230 × I*

*an answer of 0.0087 **or** 0.009 **or** 3.0(4) **or** 5.65 **or** 5.7 gains **1** mark*

2

(c) a (large) current goes from the live wire to the earth wire

accept metal case for live wire

accept a current goes from live to earth

do not accept electricity for current

1

(which causes) the fuse to (overheat and) melt

accept blow for melt

break is insufficient

do not accept snap / blow up for melt

1

(d) reduce chance of an electric shock

accept to reduce the risk of an accident

accept prevent electric shock

accept prevent electrocution

accept prevent or reduce the risk of an (electrical) fire

accept an electric shock can kill you

accept it can kill you

accept so you can use it safely

1

[9]

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