Practice Question Set For GCSE
Subject : Physics
Paper-1 Topic: Particle Model Of Matter (Standard demand)

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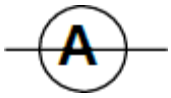
Name of the Student:_____
Max. Marks : 21 Marks **Time : 21 Minutes**

Mark Schemes

Q1.

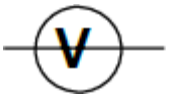
(a) (i) ammeter symbol correct and drawn in series



accept
*do **not** accept lower case a*

1

voltmeter symbol correct and drawn in parallel with the material



*do **not** accept*

1

(ii) adjust / use the variable resistor
accept change the resistance

or
change the number of cells
accept battery for cell
accept change the pd / accept change the voltage
accept increase / decrease for change

1

(b) (i) 37.5 (Ω)
accept answer between 36 and 39 inclusive

1

(ii) 5.6(25) **or** their (b)(i) × 0.15
*allow **1** mark for correct substitution ie 37.5 **or** their (b)(i) × 0.15 provided no subsequent step shown*

2

(c) (i) the thicker the putty the lower the resistance
answer must be comparative
accept the converse

1

(ii) any **one** from:

- measuring length incorrectly
  accept may be different length
- measuring current incorrectly

*do **not** accept different currents*

- measuring voltage incorrectly
  *do **not** accept different voltage*
- ammeter / voltmeter incorrectly calibrated
- thickness of putty not uniform
  *do **not** accept pieces of putty not the same unless qualified*
- meter has a zero error
  *do **not** accept systematic / random error*
  accept any sensible source of error eg putty at different temperatures
  *do **not** accept human error without an explanation*
  *do **not** accept amount of putty not same*

1

[8]

Q2.

(a) (i) conduction

1

convection

1

correct order only

(ii) to keep the ceramic bricks hot for a longer time

1

(b) (i) $E = P \times t$

18.2

*allow **1** mark for correct substitution ie 2.6 × 7 provided that no subsequent step is shown*

2

(ii) 91 (p)
or their (b)(i) × 5 correctly calculated
accept £0.91
*do **not** accept 0.91 without £ sign*

1

(c) $E = m \times c \times \theta$

2 250 000

*allow **1** mark for correct substitution ie 120 × 750 × 25 provided that no subsequent step is shown*
answers 2250 kJ or 2.25 MJ gain both marks

2

[8]

Q3.

(a) **B**

*no mark for **B** - marks are for the explanation*
*first two mark points can score even if **A** is chosen*

draught increases (the rate of) evaporation

accept more evaporation happens

accept draught removes (evaporated) particles faster

*do **not** accept answers in terms of particles gaining energy from the fan / draught*

1

evaporation has a cooling effect

accept (average) <u>kinetic</u> energy of (remaining) particles decreases

1

so temperature will fall faster / further

1

(b) larger surface area

1

increasing the (rate of) evaporation

accept more / faster evaporation

accept easier for particles to evaporate

or

for water to evaporate from

accept more particles can evaporate

accept water / particles which have evaporated are trapped (in the bag)

answers in terms of exposure to the Sun are insufficient

1

[5]