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

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Exam Preparation and Free Resources

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

Mark Schemes

Q1.

(a) the store of chemical energy in the battery has reduced

1

(b) P = 3.90 × 1.86

1

P = 7.254

allow 7.25 or 7.3

1

W

1

(c) **comparison with compact power source**

5 times as many charges

1

(only) twice the mass

allow (only) twice as heavy as the compact

1

comparison with the high capacity power source

although half the number of charges

1

(only) one third the mass

allow (only) a third as heavy as the high capacity

1

or

calculation of charge / mass ratio for large power source

$= \frac{5}{200}$ (1)

allow mass / charge ratio

$= \frac{200}{5}$

= 0.025 (1)

allow 40

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calculation of charge / mass ratio for high capacity and compact power sources (1)

allow mass / charge ratio

charge / mass ratio greatest for large source (1)

allow lowest mass / charge ratio

[8]

Q2.

(a) (casing is) not made of metal

allow (casing is) made of plastic
allow they are double insulated

1

little / no chance of electric shock

1

(b) charge flow = current × time

allow the equation given in symbols

1

(c) Q = 2.95 × 60

*an answer of 177 scores **2** marks*

1

Q = 177 (C)

allow 180 (C)

1

(d) straight line with a different positive gradient

must go through the first and third quadrant

1

straight line with positive gradient through the origin

1

(e)



1

(f) the particles vibrate about a fixed position regular arrangement

allow the particles are in a regular arrangement

1

(the particles change) to being free to move around

allow correct description of translational kinetic energy

1

(g) L = 200 000 (J/kg)

1

E = 500 × 200 000

allow 1 × 10^8 (J)

1

E = 100 000 000 (J)

*allow correct calculation for incorrect conversion or no conversion of L for **2** marks*

1

*an answer of 100 000 000 scores **3** marks*

[13]

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