

Name of the Student: _____

Max. Marks : 17 Marks

Time : 17 Minutes

Mark Schemes

Q1.

- | | | | |
|-----|------|---|------------|
| (a) | (i) | electrons | 1 |
| | | a positive | 1 |
| | (ii) | (forces are) equal
<i>accept (forces are) the same</i>
<i>forces are balanced is insufficient</i> | 1 |
| | | (forces act in) opposite directions
<i>accept (forces) repel</i>
<i>both sides have the same charge is insufficient</i> | 1 |
| (b) | | aluminium | 1 |
| | | | [5] |

Q2.

- | | | |
|-----|--|---|
| (a) | iron | 1 |
| | hairdryer | 1 |
| | kettle | 1 |
| | <i>answers can be in any order</i> | |
| (b) | (i) Y | 1 |
| | (ii) bar drawn with any height greater than Y
<i>ignore width of bar</i> | 1 |
| (c) | (bigger volume) takes more time (to boil)
<i>accept explanation using data from graph</i> | 1 |
| | (so) more energy transferred | |

do **not** accept electricity for energy

1

(and) this costs more money

ignore reference to cost of water

wasting more money because heating more water than needed is insufficient

1

[8]

Q3.

(a) £16.50

*allow **1** mark for correct substitution ie 110×15*

*an answer of 1650 gains **both** marks*

*an answer of 43.80 gains **both** marks*

*allow **1** mark for 292×15*

2

(b) 292

*allow **1** mark for correctly using the reading 53490*

ie $53782 - 53490$

accept £43.80 for both marks

2

[4]