

Name of the Student: _____

Max. Marks : 18 Marks

Time : 18 Minutes

Mark Schemes

Q1.

- | | | |
|-----|---|------------|
| (a) | 4 N to the right | 1 |
| (b) | (i) bigger than | 1 |
| | equal to | 1 |
| | (ii) reduces it | 1 |
| | increases air resistance / drag / force C | |
| | <i>accept parachute has large(r) (surface) area</i> | 1 |
| | | [5] |

Q2.

- | | | |
|-----|--|------------|
| (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] |

Q3.

- | | | |
|-----|---|---|
| (a) | 96 (m) | 1 |
| (b) | (i) similar shape curve drawn <u>above</u> existing line going <u>through (0,0)</u> | |

*allow 1 mark for any upward smooth curve or straight upward line
above existing line going through (0,0)*

2

(ii) Rain on the road

1

- (c) (i) all three lines correctly labelled
allow 1 mark for one correctly labelled

top line – **C**
accept 1.2

middle line – **B**
accept 0.9

bottom line – **A**
accept 0.7

2

(ii) any **two** from:

- (table has) both variables are together
accept tired and music as named variables
- both (variables) could / would affect the reaction time
accept cannot tell which variable is affecting the drive (the most)
- cannot tell original contribution
- need to measure one (variable) on its own
accept need to test each separately
- need to control one of the variables
fair test is insufficient

2

[8]