

**10A 2012**

/ means OR eg. green / blue – answer needs green OR blue  
 ( ) means additional, not really required eg. Gauze (mat) – gauze would be sufficient  
 : means AND eg. red : hot - answer needs red and hot.

| Question  | Evidence   | Marks  |
|-----------|--|--|
| One       | electrical<br>light<br>sound<br>heat   | All correct<br>2 marks<br>2-3<br>correct 1<br>mark |
| Two (a)   | Force P is air resistance and force Q is gravity   | 1 mark   |
| (b) (i)   | sponge<br>it exerts the least force on the dummy   | 1 mark<br>1 mark                                   |
| (ii)      | To make a fair test / it is a controlled variable / make the results fair  | 1 mark   |
| (iii)     | it will decrease<br>there is less weight (force) / lighter dummy has less weight   | 1 mark<br>1 mark                                   |
| Three (a) | (i) B<br>(ii) A  | both<br>correct 1<br>mark                          |
| (b)       | it will still light  | 1 mark   |
| (c)       | if one light stops working/breaks, the rest will still work/light up   | 1 mark   |
| (d)       | (i) move backwards (left)<br>(ii) plastic is not attracted to the magnet / if metal car was used it would get attracted to the magnet  | 1 mark<br>1 mark                                   |
| Four (a)  | arch<br>loop   | both<br>correct 1<br>mark                          |
| (b)       | oils<br>dust   | both<br>correct 1<br>mark                          |
| (c)       | <input checked="" type="checkbox"/> push you finger onto an ink pad<br><input checked="" type="checkbox"/> poll your finger onto white paper   | 1 mark<br>(both<br>correct)                        |
| (d)       | For comparison with the fingerprints found the crime scene / to eliminate prints that belong to the innocent people that could be found at the crime scene (this would narrow down to fewer prints to pursue suspects) | 1 mark   |
| Five (a)  | lava   | 1 mark   |
| (b)       | igneous  | 1 mark   |

|            |  |                               |
|------------|--|-------------------------------|
| (c)        | soil is fertile (for farming)  | 1 mark                        |
| Six (a)    | so that it can be absorbed / pass into the blood stream  | 1 mark                        |
| (b)        | E, D, C  | 1 mark –<br>2 or 3<br>correct |
| (c)        | A  | 1 mark                        |
| Seven (a)  | iron oxide   | 1 mark                        |
| (b)        | iron / oxygen  | 1 mark                        |
| (c)        | chemical : a <b>new substance</b> is formed / iron oxide is a new substance / there is a colour change / the reaction cannot be easily reversed                  | 1 mark                        |
| Eight (a)  | carbon dioxide   | 1 mark                        |
| (b)        | any 2 from: to keep the plant cool / for photosynthesis / to transport nutrients / keep plant cells firm (or equivalent idea about turgidity or lack of wilting) | 1 mark<br>1 mark              |
| (c)        | xylem  | 1 mark                        |
| (d)        | root hair  | 1 mark                        |
| Nine (a)   | 41.1 g   | 1 mark                        |
| (b)        | distance between device and paper towel / same “room temperature”  | 1 mark                        |
| (c)        | <input checked="" type="checkbox"/> improve the reliability of the experiment  | 1 mark                        |
| (d)        | <input checked="" type="checkbox"/> the hair dryer because the average mass of water lost after five minutes was the highest                                     | 1 mark                        |
| Ten (a)    | (i) lemon juice / vinegar  | 1 mark                        |
|            | (ii) Because lemon juice / vinegar are acidic : will neutralise the (basic wasp) sting (reducing the pain)   | 1 mark                        |
| (b)        | lemon juice / vinegar  | 1 mark                        |
| Eleven (a) | (i) A :<br>(ii) (because it is the only one which is) made up of <b>only one type of atom</b>  | 1 mark                        |
| (b)        | CH <sub>4</sub> or H <sub>4</sub> C  | 1 mark                        |