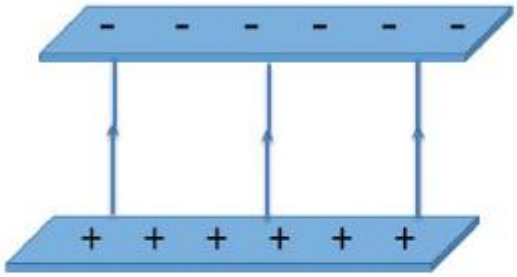
Practice Question Set For GCSE
**Subject : Physics**
**Paper-2 Topic : 11_Static Electricity**



**Name of the Student**:_____
**Max. Marks : 18 Marks** **Time : 18 Minutes**

Mark Schemes

Q1.

| Question Number | Answer | Additional Guidance | Mark |
|---|---|---|---|
| |  <br>at least three vertical straight lines (equally spaced) (1)<br><br>**with**<br>at least one arrow in the right direction (1) | judge by eye<br><br>any arrow in the wrong direction = 1 mark max | **(2)** |

Q2.

| Question number | Answer | Additional guidance | Mark |
|---|---|---|---|
| | at least three **radial** lines from the charge (1)<br><br>direction shown away from the charge (1) | do not allow curved lines<br>ignore circles without arrows<br><br>consistently | **(2)**<br>**AO1.2** |

Q3.

| Question number | Answer | Additional guidance | Mark |
|---|---|---|---|
| **(i)** | (size of) charge on Q is greater than (size of charge) on P (1)<br><br>P has (overall) negative charge and Q has (overall) positive charge (1) | in any order<br><br>Q has more charge / stronger field than P<br><br>accept abbreviations such as +'ve, -'ve<br><br>charge on P is opposite to charge on Q | **(2)**<br>**AO3** |

| Question number | Answer | Additional guidance | Mark |
|---|---|---|---|
| **(ii)** | (force of) attraction on (object) P from (object) Q (1) | | **(1)**<br>**AO1** |

Q4.

| Question Number | Answer | Acceptable answers | Mark |
|---|---|---|---|
| **(a)** | C (gain electrons) | | **(1)** |

| Question Number | Answer | Acceptable answers | Mark |
|---|---|---|---|
| **(b)** | An explanation linking<br>• (Force of) attraction (1)<br>• (plates have) opposite charge (to dust) (1) | Plates have a positive charge<br>Ignore different charge | **(2)** |

| Question Number | Answer | Acceptable answers | Mark |
|---|---|---|---|
| **(c)(i)** | transferred to plate / lost (1) | neutral / become discharged | **(1)** |

| Question Number | Answer | Acceptable answers | Mark |
|---|---|---|---|
| **(c)(ii)** | An explanation linking any two of<br>• Metal is a conductor (1)<br>• Electrons / ( negative ) charge moves (through the plates/ wire) (1)<br>• Towards the voltage supply / earth /ground (1) | Metal not an insulator<br>Plates / charges are earthed | **(2)** |

| Question Number | Answer | Acceptable answers | Mark |
|---|---|---|---|
| **(d)** | Substitution:<br>$Q = 1.2 \times 10^{-3} \times 40$ (1)<br>Evaluation:<br>0.048 or $4.8 \times 10^{-2}$ (1)<br>C / coulombs (1) | Give 2 marks for correct answer with no working shown<br>Unit mark is independent<br>Allow for 1 mark 48 ( with incorrect or no units)<br>Allow for 2 marks 48 C<br>Allow for all 3 marks 48 mC | **(3)** |

Q5.

| Question number | Answer | Mark |
|---|---|---|
| | An explanation that combines identification – application of knowledge (1 mark) and reasoning/justification – application of understanding (1 mark):<br><br>• (negatively charged) door attracts (positively charged) paint (droplets) (1)<br><br>Plus any **one** of the following:<br><br>• therefore (positively charged) paint (droplets) follow lines of force and coat both sides of the car door (1)<br>• since electric field (or lines of force) directed towards the (car) door, then positive paint will move to the door (1)<br>• as electric field (or lines of force) touches all parts of the (car) door hence the positive paint will coat all parts of the door (1) | **(2)** |