

Question Number	Answer	Mark
<b>8 (a)(i)</b>	<ol style="list-style-type: none"> <li>1. (increasing or doubling nitrate ion concentration) decreased mitosis / negative correlation / eq ;</li> <li>2. manipulation of the data (e.g. by 6 cells (per 500 cells) / reduces by 24%) ;</li> </ol>	<b>(2)</b>

Question Number	Answer	Mark
<b>8 (a)(ii)</b>	<ol style="list-style-type: none"> <li>1. only two concentrations were used / additional nitrate ion concentrations should be used ;</li> <li>2. no {trend / eq} (as only 2 data sets) ;</li> <li>3. If one of the two sets of data was {anomalous / eq} ;</li> <li>4. reference to one with no nitrate ions present ;</li> </ol>	<b>max (2)</b>

Question Number	Answer	Mark
<b>8 (a)(iii)</b>	<p>Two appropriate safety risks given ; ;</p> <p>One appropriate precaution, linked to one of the risks above ;</p>	<b>(3)</b>

Question Number	Answer	Mark
<b>8 (b)</b>	<ol style="list-style-type: none"> <li>1. 3 + / sensible range of nitrate ion concentrations ;</li> <li>2. reference to repeats (at each concentration) ;</li> <li>3. reference to uniformity of seedlings (e.g. all from same parent plant, same age, same original root length) ;</li> <li>4. idea that solution used should contain other mineral ions / named mineral ions ;</li> <li>5. mention one other variable maintained / kept constant (e.g. temp, all run for same length of time, light intensity, volume of mineral solution) ;</li> <li>6. reference to mechanism of judging root {growth /eq} (to measure optimum nitrate concentration) ;</li> </ol>	<b>max (3)</b>