

Question Number	Answer	Mark
4 (a) (i)	<ol style="list-style-type: none"> <li>1. centre of point added to graph at 700<math>\mu</math>m for 10% ;</li> <li>2. error bar from 720 <math>\mu</math>m to 680 <math>\mu</math>m ;</li> <li>3. points correctly joined by neat ruled straight lines ;</li> </ol>	(3)

Question Number	Answer	Mark
4 (a) (ii)	<ol style="list-style-type: none"> <li>1. up to 10% sucrose, {an increase in sucrose increases (mean) length of pollen tube / positive correlation } / eq ;</li> <li>2. greatest increase between 5% and 10%/ eq ;</li> <li>3. greatest (mean length of pollen tube) at 10% / eq ;</li> <li>4. idea that above 10% the pollen tubes are shorter e.g. negative effect or correlation ;</li> <li>5. credit correct manipulation of the data e.g. 570-580 <math>\mu</math>m longer when grown in 10% sucrose compared to 0% sucrose ;</li> <li>6. appropriate comment on significance of overlapping {error / range} bars between {5% and 30% / 10% and 20%} ;</li> </ol>	(3)

Question Number	Answer	Mark
4(b)	<ol style="list-style-type: none"> <li>1. idea of {forms a pathway/ grows down } through the style / eq ;</li> <li>2. grows towards { ovary / ovule / micropyle / egg cell / eq} ;</li> <li>3. reference to digestive enzymes;</li> <li>4. transports {generative nucleus / haploid nuclei / male gametes / eq} / eq ;</li> <li>5. fuses with embryo sac (membrane) / tip breaks down when it enters the micropyle / allows male nuclei to enter embryo sac /eq ;</li> </ol>	(3)

Question Number	Answer	Mark
5 (a) (i)	Archaea / Archaeobacteria / eq ;	(1)

Question Number	Answer	Mark
5 (a)(ii)	Peer review / conclusions drawn from data are { logical / valid / eq } / data are {acceptable / reliable} / check for plagiarism ;	(1)

Question Number	Answer	Mark
5 (a)(iii)	<p>Any two from:</p> <ol style="list-style-type: none"> <li>1. (scientific) conference/ poster / presentation/ seminar / lecture ;</li> <li>2. internet / eq, e.g. websites - blogs ;</li> <li>3. book / scientific magazine ;</li> </ol>	(2)