

SEC 4 BIOLOGY PRELIMINARY EXAMINATION 2020 PAPER 3

Qn	Answer	Marker's comments						
1(a)(i)	<div><div><div>- Neat table [1] with column headings at appropriate positions [1]</div><div>- Correct Trend [1]</div></div><table><tr><td>Yeast mixture</td><td>Number of bubbles released in 2 minutes</td></tr><tr><td>A</td><td>SS results 0 bubbles (accepted range 0-3)</td></tr><tr><td>B</td><td>SS results: 36 bubbles</td></tr></table></div>	Yeast mixture	Number of bubbles released in 2 minutes	A	SS results 0 bubbles (accepted range 0-3)	B	SS results: 36 bubbles	
Yeast mixture	Number of bubbles released in 2 minutes							
A	SS results 0 bubbles (accepted range 0-3)							
B	SS results: 36 bubbles							
1(a)(ii)	<p>There is a <u>smaller number of bubbles released from B than A</u> (or based on students' answers in 1ai) [1].</p> <p>A high temperature of water at 70°C, <u>denatured the enzymes in yeast</u> [1].</p> <p><u>Less aerobic respiration</u> to release <u>carbon dioxide bubbles</u> [1].</p>							
1(a)(iii)	<p><u>Attach a syringe</u> at the end of the delivery tube to measure the volume of gas released.</p>							
1(a)(iv)	<p>Any 2 of below:</p> <ul style="list-style-type: none">- Volume of mixture in the syringe was read at eye-level to reduce parallax error- No mixing of syringes to prevent contamination- To remove air bubbles in the syringe by moving the liquid up and down/ draw mixture slowly							

1(b)	<p>Size of drawing more than 2/3 of space (> 6.0 cm), with sharp, continuous lines [1]</p> <p>Accurate drawing (3 layers drawn; transverse section with seeds radiating from center) [1]</p> <p>Correct labelling of at least two parts e.g. flesh / seed / skin/ placenta [1]</p> <p>Magnification line measures <u>longest width</u> of drawing and is drawn outside of drawing [1]</p>	
2(a)(ii)	<p>Magnification calculated with <u>working</u> shown (length of drawing / length of actual) [1]</p> <p>Final value to 1 d.p with an 'x' in front [1]</p>	<p>Students need to be reminded that magnification has to be written in ONE DECIMAL PLACE, with an 'x' in front.</p>