

Question Number	Answer	Additional Guidance	Mark
<b>6(a)</b>	<ol style="list-style-type: none"> <li>1. cellulose (molecule) is a { polymer / chain / eq } of <math>\beta</math>-glucose / eq ;</li> <li>2. cellulose molecules held together { by hydrogen bonds / as microfibrils } ;</li> <li>3. idea of arrangement of microfibrils in { parallel / net / mesh / criss cross / eq } ;</li> <li>4. reference to { matrix / hemicelluloses / pectin / eq } ;</li> </ol>	<ol style="list-style-type: none"> <li>1. ACCEPT many <math>\beta</math>-glucose</li> <li>4. IGNORE lignin</li> </ol>	<b>(3)</b>

Question Number	Answer	Additional Guidance	Mark
<b>6(b)(i)</b>	<ol style="list-style-type: none"> <li>1. { group of / many / several / eq } cells ;</li> <li>2. idea that the cells in a tissue { work together / eq } for a common function ;</li> </ol>		<b>(2)</b>

Question Number	Answer	Additional Guidance	Mark
<b>6(b)(ii)</b>	<ol style="list-style-type: none"> <li>1. idea that lignin holds the { fibres / microfibrils } together ;</li> <li>2. lignin keeps { fibres / microfibrils } parallel / eq ;</li> </ol>		<b>(2)</b>

Question Number	Answer	Additional Guidance	Mark
<b>6(c)(i)</b>	<ol style="list-style-type: none"> <li>1. { hollow / no cytoplasm / eq } ;</li> <li>2. idea that vessels { have no end walls / are open at the ends } ;</li> <li>3. vessels { have pits / are strong so that they do not collapse } ;</li> <li>4. lignin makes the walls waterproof / eq ;</li> </ol>	<ol style="list-style-type: none"> <li>1. IGNORE dead, tube ACCEPT has a lumen</li> <li>3. ACCEPT strong to keep tube open</li> </ol>	<b>(2)</b>

Question Number	Answer	Additional Guidance	Mark
<b>6(c)(ii)</b>	<ol style="list-style-type: none"> <li>1. nitrate for production of { amino acids / protein / DNA / nucleic acids / bases / eq } ;</li> <li>2. calcium for { pectate / pectin / middle lamella } ;</li> <li>3. magnesium for chlorophyll ;</li> </ol>	<ol style="list-style-type: none"> <li>1. ACCEPT chlorophyll, enzymes</li> </ol>	<b>(3)</b>