

Producing New Cells Mark Scheme

<b>10.</b>	<b>A</b>
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(c)	Unspecialised/ undifferentiated/ not specialised	<b>1</b>	Not Acceptable - They can become specialised / They are totipotent etc.										
(d)	<table border="0" style="width: 100%;"> <tr> <td>Growth of new skin</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td>Transmission of nerve impulses</td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Muscle contraction</td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Repair of broken bones</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td>Production of insulin</td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>	Growth of new skin	<input checked="" type="checkbox"/>	Transmission of nerve impulses	<input type="checkbox"/>	Muscle contraction	<input type="checkbox"/>	Repair of broken bones	<input checked="" type="checkbox"/>	Production of insulin	<input type="checkbox"/>	<b>1</b>	Both required Extra ticks negate
Growth of new skin	<input checked="" type="checkbox"/>												
Transmission of nerve impulses	<input type="checkbox"/>												
Muscle contraction	<input type="checkbox"/>												
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<b>2.</b>	<b>A</b>
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<b>6.</b>	<b>A</b>
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1.	(a)	(i)	4	<b>1</b>	
		(ii)	4	<b>1</b>	Incorrect answer can only be awarded the mark if this number is the same as the response to a(i).
	(b)		Meristem(s)/shoot tip/root tip	<b>1</b>	Not roots/shoots alone. Additional wrong answers negate.

<b>9</b>	<b>A</b>
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<b>7.</b>	<b>D</b>
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<b>8.</b>	<b>C</b>
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2.	(a)	(i)	<input type="text" value="3"/> Pairs of chromatids are pulled apart	1	No penalty for any other number in any other place - ignore. More than one '3' negates
		(ii)	Spindle (fibre)	1	
	(b)		40	1	

7.			<ol style="list-style-type: none"> <li>1. Chromosomes/chromatids move to/ line up at/across the <u>equator</u>. (1)</li> <li>2. Spindle (fibres) form/attach/contract/shorten/pull. (1)</li> <li>3. (Pairs of) <u>chromatids</u> are separated/pulled apart. (1)</li> <li>4. Chromosomes move to poles/opposite ends of cell. (1)</li> <li>5. Nuclear membrane(s) form/develop OR 2 nuclei form. (1)</li> <li>6. Cytoplasm divides/splits. (1)</li> </ol>	4	<p>Any 4 marks from 6 but must include point 3 and any other three points to get full marks.</p> <p>Not acceptable - chromatids move to opposite poles.</p>
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