

Question number	Answer	Mark
1(a)(i)	D	(1)

Question number	Answer	Mark
1(a)(ii)	C	(1)

Question number	Answer	Mark
1(a)(iii)	cerebrum	(1)

Question number	Answer	Mark
1(b)	An explanation that makes reference to: identification – knowledge (1 mark) and reasoning /justification – knowledge (1 mark): <ul style="list-style-type: none"> <li>embryonic stem cells can be stimulated to produce cells of the retina (1)</li> <li>which can be transplanted into a patient’s eye to replace the damaged cells (1)</li> </ul>	(2)

Question number	Answer	Mark
1(c)	Any <b>three</b> improvements from the following: <ul style="list-style-type: none"> <li>vary the time for computer usage (1)</li> <li>the activity used on the computer must be the same for each person (1)</li> <li>control the intake of food/drink/drugs before and during the test (1)</li> <li>repeat the test at different times of the day (1)</li> <li>repeat the test using more people (1)</li> </ul>	(3)

Question number	Answer	Additional guidance	Mark
1(d)(i)	<ul style="list-style-type: none"> <li><math>\frac{0.258 + 0.685 + 0.236 + 0.246 + 0.268}{5} = 0.339</math> (1)</li> <li>339 (ms) (1)</li> </ul>	award full marks for correct numerical answer without working	(2)

Question number	Answer	Mark
1(d)(ii)	<ul style="list-style-type: none"> <li>it is the median value</li> </ul>	(1)

Question Number	Answer	Mark
Q02(a)i	structure A – dendron / dendrite  structure B – nucleus  answers must be in the correct order	<b>(2)</b>

Question Number	Answer	Acceptable answers	Mark
<b>2(a)(ii)</b>	<b>B</b> <input checked="" type="checkbox"/> electrical impulses		<b>(1)</b>

Question Number	Answer	Acceptable answers	Mark
<b>2(a)(iii)</b>	A description to include:  <b>insulates</b> the (electrical) impulse / <b>insulates</b> the {axon / neurone} (from surrounding tissue) (1)  allows quicker (electrical) conductance (1)	accept: speeds up transmission / sends {impulses / signals} faster  ignore references to protection of the axon  ignore reference to messages	<b>(2)</b>

Question Number	Answer	Mark
Q02aiv	synapse(s) / synaptic cleft / synaptic gap	<b>(1)</b>

Question Number	Answer	Acceptable answers	Mark
<b>2(b)</b>	<p>A description linking four of the following</p> <p>{receptor} detects a stimulus (1)</p> <p>sensory neurone passes (impulse)to {relay neurone / spinal cord / CNS} (1)</p> <p>relay neurone in spinal cord /CNS (1)</p> <p>relay neurone passes (impulse) onto motor neurone (1)</p> <p>motor neurone passes (impulse) to {effector / muscle /gland} (1)</p> <p>{effector / muscle /gland} initiates response (1)</p>	<p>accept sensory neurone to motor neurone for 1 mark</p>	<b>(4)</b>

Total for question 2 = 10 marks