

Commentary on candidate evidence

The candidate evidence has achieved the following marks for each question of this course assessment component.

Question	Candidate response	Max mark	Mark awarded	Comments
2(a)	1	2	1	Breaking down DNA molecules suggests that all bonds in the DNA are broken and not just the hydrogen bonds. A temperature of 60 is not between 70 and 80.
2(a)	2	2	0	Both responses are clearly correct.
3(b)(i)	1	1	0	Codons are referred to rather than amino acids.
3(b)(i)	2	1	1	The response clearly indicates that the sequence of amino acids has changed.
3(b)(ii)	1	1	1	The response indicates that they are less efficient at breaking down the toxic compound.
3(b)(ii)	2	1	0	The 'it' in the response refers to alcohol and not acetaldehyde.
4(a)	1	2	1	The term 'amount' is used in the first response, therefore no

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				mark is awarded. The second response corresponds to point 4 in the marking instructions.
4(a)	2	2	2	The first response corresponds to point 5 and the second to point 1 in the marking instructions.
4(b)(i)	1	3	2	One mark is awarded for the axes as the scales and labels are correct. A second mark is awarded for the key as it distinguishes between group A and group B. The mark for correctly drawing the line is not awarded as the line for group A does not go through the point for 95kg.
4(b)(i)	2	3	2	Marks are awarded for a suitable key and for correctly plotting and drawing the lines. The axes mark is not awarded as the Y-axis scale is incorrect. This scale should have started at 45 not 0.
4(b)(ii)	1	1	1	The response is clearly correct.
4(b)(ii)	2	1	0	The response is a general conclusion relating to performance rather than one relating to the ability to raise weights. A conclusion in an investigation should always relate to the aim, which in this case was 'to test if protein supplements improved the

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				ability of leg muscles to raise weights'.
6(a)(iii)	1	2	2	The second and third points in the marking instructions are covered in the response given.
6(a)(iii)	2	2	1	One mark is awarded for stating that more ICSH is produced.
9(d)(i)	1	2	1	The mark is awarded for stating that insulin receptors become desensitised.
9(d)(i)	2	2	2	The first mark is awarded for stating that there is a decrease in insulin receptors, while the second mark is awarded for stating that there is a failure to convert glucose to glycogen.
11(a)(iii)	1	2	1	The mark is awarded for the heart rate increasing from 135 bpm to 270 bpm.
11(a)(iii)	2	2	2	Both trends are described and sufficient correct figures with units are provided.
13(c)(ii)	1	1	0	The response does not indicate that the T-lymphocytes induce/cause programmed cell death.
13(c)(ii)	2	1	0	The addition of 'injects with digestive enzymes' negates the otherwise correct response.

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14 B	1	9	3	<p>The following marks are awarded:</p> <p>Point 4 – line 2 – an inactive pathogen is regarded as a weakened pathogen.</p> <p>Point 1 – line 5 – in the 2nd sentence ‘this’ refers to vaccination mentioned in the previous sentence.</p> <p>Point b – line 9 – although the term ‘amount’ is used, it is not penalised in this extended response.</p> <p>Point d – the mark is not awarded as ‘catching it’ does not explicitly indicate that they are coming into contact with someone who has the disease.</p>
14 B	2	9	9	<p>Although 10 correct points are made, a maximum of 9 marks are available.</p> <p>The following marks are awarded:</p> <p>Section 1</p> <p>Point 4 – lines 1-2</p> <p>Point 5 – line 4</p> <p>Point 6 – line 5</p>

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				<p>Section 2</p> <p>Point 1 – lines 7-8 of section 1 and 1-4 of section 2 – candidate confirms memory cells are produced against pathogens in line 4 of Section 2 and it is only at this point the mark can be awarded.</p> <p>Point 3 – lines 8-12</p> <p>Point 2 – not awarded as the answer does not clearly indicate that it is the antigens that are used to create memory cells.</p> <p>Section 3</p> <p>Point b – lines 1-3</p> <p>Point d – lines 3-6</p> <p>Point f – lines 11-12</p> <p>Point e is not awarded as threshold is not linked to herd immunity.</p> <p>Section 4</p> <p>Point g – lines 1-2</p> <p>Point h – lines 1-4</p>