

## Commentary on candidate 1 evidence

The candidate evidence has achieved the following marks for each question.

Question	Mark available	Mark Awarded	Comments
1(a)	1	1	
1(b)	1	1	
1(c)(i)	1	1	
1(c)(ii)	1	1	
1(d)	2	1	
2(a)	1	1	
2(b)	1	1	
2(c)	2	0	No marks were awarded as the candidate's answer is not related to the production of protein by the ribosome.
2(d)	1	1	
3B	4	4	Four marks were awarded for the following points:  1 – Lines 3, 4 and 5 'Competitive inhibitors ...enzymes active site'. 2 – Lines 5 and 6 'preventing the substrate from binding'. 3 – 'Lines 6, 7 and 8 'Increasing substrate ...competitive inhibition'. 5 – Lines 9, 10 and 11 'Feedback inhibition ...of the reaction'.
4(a)(i)	1	1	
4(a)(ii)	1	1	
4(b)(i)	1	0	
4(b)(ii)	2	0	
5(a)	2	1	One mark was awarded for the name only – as 'genetically isolated' is not equivalent to populations not being able to breed with each other.
5(b)(i)	1	0	
5(b)(ii)	1	0	
5(c)	1	0	
6(a)	1	1	
6(b)	2	2	
6(c)	1	1	
6(d)	1	0	
7(a)(i)	1	1	
7(a)(ii)	1	0	

Question	Mark available	Mark Awarded	Comments
7(a)(iii)	1	1	
7(b)	1	0	
7(c)	1	0	
7(d)	1	1	
8(a)	2	1	Only the first mark was awarded. The candidate's reference 'from 80 minutes' instead of <i>from 60</i> minutes, is incorrect for the second mark.
8(b)(i)	1	1	
8(b)(ii)	1	0	
8(c)	1	1	
9(a)	1	1	
9(b)(i)	1	0	
9(b)(ii)	1	1	The candidate's answer 'more ATP are produced than are required' is equivalent to made/used, and so the mark was awarded.
9(b)(iii)	2	1	The mark was awarded for the first statement. The second mark was not awarded as the citric acid cycle negates function of NAD.
9(c)(i)	1	1	
9(c)(ii)	1	0	
10(a)	1	0	
10(b)	1	0	No mark was awarded – see additional guidance in the marking instructions 'Not – Enzymes work fastest at optimum temperature'.
10(c)(i)	1	1	
10(c)(ii)	1	0	
10(c)(iii)	1	0	
10(c)(iv)	2	1	
11(a)	1	1	
11(b)	1	1	
11(c)	1	0	
11(d)	1	0	
11(e)	1	1	In this instance, the candidate's answer 'length of day' is taken to mean <i>photoperiod</i> .
11(f)	1	1	
12(a)(i)	1	1	
12(a)(ii)	1	0	
12(b)	3	3	
12(c)	1	0	
12(d)	2	1	The first mark was not awarded for applying sunscreen to one colony rather than the plate of cells.

13(a)	1	1	
13(b)(i)	1	1	
13(b)(ii)	1	1	
13(c)(i)	2	1	
13(c)(ii)	1	0	No mark was awarded as the word 'Prey' negates the rest of the candidate's answer.
14(a)(i)	1	1	
14(a)(ii)	1	0	No mark was awarded as the candidate made no mention of food/energy, etc.
14(b)(i)	1	1	
14(b)(ii)	1	0	
14(c)	2	2	The candidate's answer 'bitten and contracting the disease' is indicating that it is being passed on.
15(a)(i)	1	0	
15(a)(ii)	1	0	
15(b)	2	1	The first mark was not awarded as the candidate makes no mention of the monkey's own danger during this behaviour.
15(c)	1	0	No mark was awarded as it is not clear from the candidate's answer that the young have not learnt the skills yet.
15(d)	2	1	One mark was awarded for appeasement behaviour.
16B(i)	2	2	Two marks were awarded for the following points:  1 – Line 6 'there is a lack of genetic diversity'. 2 – Lines 1 and 2 'significant amount of a species is killed', as this is equivalent to reduced population.  A mark was not awarded for the following point:  4 – Lines 4 and 5 'recovery is possible ...to inbreeding', as there is no reference to the effect on reproductive rates.
16B(ii)	5	2	Two marks were awarded for the following points:  a – Lines 10 and 11 'a habitat is divided into smaller sections'. f – Lines 21 and 22 'Habitat corridors ...between habitat fragments'.  A mark was not awarded for the following point:  d – Lines 26 and 27 'Habitat fragments can increase genetic diversity', as this incorrect

			statement is in direct contrast to, and negates, the labelling in the diagram.
<b>Total</b>	<b>95</b>	<b>54</b>	