

## Candidate 2

### Question 1(a)

The candidate was awarded **1 out of 1 mark** for a correct response.

### Question 1(b)

The candidate was awarded **0 out of 1 mark** for an incorrect response.

### Question 1(c)(i)

The candidate was awarded **1 out of 1 mark**.

The discussion of percentage change alone refers to the results – but 'reduces antibody diversity' is a valid conclusion.

### Question 1(c)(ii)

The candidate was awarded **0 out of 1 mark** for an incorrect response.

### Question 1(d)(i)

The candidate was awarded **1 out of 1 mark** for a correct response.

### Question 1(d)(ii)

The candidate was awarded **1 out of 2 marks**.

Data has been given for the range for both M mild and M sev but no comparative statement has been given.

### Question 1(d)(iii)

The candidate was awarded **0 out of 1 mark** for an incorrect response.

### Question 2(a)

The candidate was awarded **1 out of 1 mark** for a correct response.

### Question 2(b)

The candidate was awarded **1 out of 1 mark** for a correct response.

### Question 2(c)(i)

The candidate was awarded **1 out of 1 mark** as they discuss the proportion of cells killed.

**Question 2(c)(ii)**

The candidate was awarded **1 out of 1 mark** for a correct response.

**Question 2(c)(iii)**

The candidate was awarded **1 out of 1 mark** as they have given an example of membrane proteins (receptors and ion channels).

**Question 3(a)**

The candidate was awarded **1 out of 1 mark** for a correct response.

**Question 3(b)**

The candidate was awarded **1 out of 1 mark**.

'Unit' is acceptable – sub-unit would not be.

'Bound' does not equal tightly-bound, but the mark is awarded for referring to haemoglobin being needed for oxygen-binding.

**Question 3(c)**

The candidate was awarded **1 out of 1 mark** for a correct response.

**Question 3(d)(i)**

The candidate was awarded **0 out of 1 mark**.

The first section does not give an inference as to the impact of 2,3-DPG.

They also discuss rate.

**Question 3(d)(ii)**

The candidate was awarded **0 out of 1 mark**.

Note that increasing oxygen delivery is in the stem of the question.

**Question 4(a)**

The candidate was awarded **1 out of 1 mark** for a correct response.

**Question 4(b)**

The candidate was awarded **1 out of 1 mark** for a correct response.

**Question 4(c)(i)**

The candidate was awarded **0 out of 1 mark** as there was no discussion of concentration gradient.

**Question 4(c)(ii)**

The candidate was awarded **0 out of 1 mark** for an incorrect response.

**Question 5**

The candidate was awarded **5 out of 5 marks**.

Marks were awarded for points 1, 2, 3, 4, 5, 6, 7 and 8 (any 5 can be awarded a mark).

**Question 6(a)**

The candidate was awarded **2 out of 3 marks**.

Marks were awarded for points 1 and 2.

- ◆ Point 2 – ‘cell to begin depolarisation’ is improved through the statement regarding knowledge of membrane depolarisation at the beginning of the response.

Marks were not awarded for:

- ◆ Point 4 – is describing the role of the voltage gated sodium channels in the depolarisation wave. This is not the part of the story covered by the question.

The question covers initiation **not** propagation.

**Question 6(b)(i)**

The candidate was awarded **1 out of 1 mark** for a correct response.

**Question 6(b)(ii)**

The candidate was awarded **0 out of 1 mark** for an incorrect response.

**Question 7(a)(i)**

The candidate was awarded **1 out of 1 mark** for a correct response.

**Question 7(a)(ii)**

The candidate was awarded **1 out of 1 mark** for a correct response.

**Question 7(b)(i)**

The candidate was awarded **0 out of 1 mark** as cell repair is not the same as DNA repair.

**Question 7(b)(ii)**

The candidate was awarded **2 out of 2 marks**.

Mark 1 was awarded for the action of Rb.

Mark 2 was awarded for the impact on the cell cycle.

Mark 1 is the converse of the second option for the first mark in the marking instructions.

**Question 7(c)(i)**

The candidate was awarded **1 out of 1 mark** for a correct answer.

**Question 7(c)(ii)**

The candidate was awarded **0 out of 1 mark** as there is no reference to unvaccinated.

**Question 8(a)**

The candidate was awarded **1 out of 1 mark** for a correct response.

**Question 8(b)(i)**

The candidate was awarded **1 out of 1 mark** for a correct response.

**Question 8(b)(ii)**

The candidate was awarded **1 out of 1 mark** for a correct response.

**Question 8(c)**

The candidate was awarded **1 out of 1 mark** for a correct response.

The response is equivalent to the second option in the marking instructions.

**Question 8(d)**

The candidate was awarded **0 out of 1 mark**.

'Only the carbohydrates' does not give an indication of soluble vs insoluble carbohydrates.

**Question 8(e)**

The candidate was awarded **0 out of 1 mark** as there is no reference to water.

**Question 8(f)**

The candidate was awarded **0 out of 1 mark**.

No mark is awarded for 'another banana from the same bunch' as this is a repeat.

**Question 8(g)**

The candidate was awarded **1 out of 1 mark**.

Temperature alone is acceptable.

**Question 9(a)(i)**

The candidate was awarded **1 out of 1 mark** for a correct response.

**Question 9(a)(ii)**

The candidate was awarded **1 out of 1 mark** for a correct response.

**Question 9(b)(i)**

The candidate was awarded **1 out of 1 mark** for a correct response.

**Question 9(b)(ii)**

The candidate was awarded **0 out of 1 mark**.

The candidate has ticked an incorrect box as well as the correct box.

**Question 10(a)**

The candidate was awarded **0 out of 1 mark**.

The response should have stated 'reproduction from female' instead of 'reproduction of female'.

**Question 10(b)**

The candidate was awarded **1 out of 1 mark** for a correct response.

**Question 10(c)(i)**

The candidate was awarded **1 out of 1 mark** for a correct response.

**Question 10(c)(ii)**

The candidate was awarded **0 out of 1 mark** as there is no discussion of the impact of increased variation.

**Question 11(a)**

The candidate was awarded **1 out of 1 mark** for a correct response.

**Question 11(b)**

The candidate was awarded **1 out of 1 mark** for a correct response.

**Question 11(c)(i)**

The candidate was awarded **1 out of 1 mark** for a correct response.

**Question 11(c)(ii)**

The candidate was awarded **0 out of 1 mark** as they have not referred to the change brought about by the treatment.

**Question 11(d)**

The candidate was awarded **1 out of 2 marks**.

The candidate made no comparison of numbers landing.

**Question 12(a)**

The candidate was awarded **0 out of 1 mark** for an incorrect response.

**Question 12(b)**

The candidate was awarded **1 out of 1 mark** for a correct response.

**Question 12(c)**

The candidate was awarded **1 out of 1 mark**.

The statement in the first sentence is just enough for this mark to be awarded.

**Question 12(d)**

The candidate was awarded **3 out of 3 marks**.

Marks were awarded for points 1, 2, 3, 4 and 5 (any 3 from 5 can be awarded a mark).

**Question 13(a)(i)**

The candidate was awarded **0 out of 1 mark** for an incorrect response.

**Question 13(a)(ii)**

The candidate was awarded **1 out of 1 mark** for a correct response.

**Question 13(b)**

The candidate was awarded **1 out of 1 mark** for a correct response.

**Question 13(c)**

The candidate was awarded **1 out of 1 mark** for a correct response.

**Question 14B(i)**

The candidate was awarded **4 out of 4 marks**.

Marks were awarded for points 1, 2, 3, 4, 5 and 6 (any 4 can be awarded a mark).

Marks were not awarded for:

- ◆ Point 7 – no mention of frequency.

**Question 14B(ii)**

The candidate was awarded **5 out of 5 marks**.

Marks were awarded for points a, b, c, d, e, f and g (any 5 can be awarded a mark).

**Total marks awarded: 58/80**