Higher

GCSE

Biology B Twenty First Century Science

J257/04: Depth in Biology (Higher Tier)

General Certificate of Secondary Education

Mark Scheme for June 2025

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This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

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MARKING INSTRUCTIONS

PREPARATION FOR MARKING
RM ASSESSOR

1. Make sure that you have accessed and completed the relevant training packages for on-screen marking: *RM Assessor Online Training: OCR Essential Guide to Marking*.

2. Make sure that you have read and understood the mark scheme and the question paper for this unit. These are available in RM Assessor

3. Log-in to RM Assessor and mark the **required number** of practice responses ("scripts") and the **required number** of standardisation responses.

MARKING

1. Mark strictly to the mark scheme.

2. Marks awarded must relate directly to the marking criteria.

3. The schedule of dates is very important. It is essential that you meet the RM Assessor 50% and 100% (traditional 40% Batch 1 and 100% Batch 2) deadlines. If you experience problems, you must contact your Team Leader (Supervisor) without delay.

4. If you are in any doubt about applying the mark scheme, consult your Team Leader by telephone, email or via the RM Assessor messaging system.

5. **Crossed-Out Responses**

Where a candidate has crossed out a response and provided a clear alternative then the crossed-out response is not marked. Where no alternative response has been provided, examiners may give candidates the benefit of the doubt and mark the crossed-out response where legible.

Rubric Error Responses – Optional Questions

Where candidates have a choice of question across a whole paper or a whole section and have provided more answers than required, then all responses are marked and the highest mark allowable within the rubric is given. Enter a mark for each question answered into RM Assessor, which will select the highest mark from those awarded. *(The underlying assumption is that the candidate has penalised themselves by attempting more questions than necessary in the time allowed.)*

Multiple-Choice Question Responses

When a multiple-choice question has only a single, correct response and a candidate provides two responses (even if one of these responses is correct), then no mark should be awarded (as it is not possible to determine which was the first response selected by the candidate).
When a question requires candidates to select more than one option/multiple options, then local marking arrangements need to ensure consistency of approach.

Contradictory Responses

When a candidate provides contradictory responses, then no mark should be awarded, even if one of the answers is correct.

Short Answer Questions (requiring only a list by way of a response, usually worth only one mark per response)

Where candidates are required to provide a set number of short answer responses then only the set number of responses should be marked. The response space should be marked from left to right on each line and then line by line until the required number of responses have been considered. The remaining responses should not then be marked. Examiners will have to apply judgement as to whether a 'second response' on a line is a development of the 'first response', rather than a separate, discrete response. *(The underlying assumption is that the candidate is attempting to hedge their bets and therefore getting undue benefit rather than engaging with the question and giving the most relevant/correct responses.)*

Short Answer Questions (requiring a more developed response, worth two or more marks)

If the candidates are required to provide a description of, say, three items or factors and four items or factors are provided, then mark on a similar basis – that is downwards (as it is unlikely in this situation that a candidate will provide more than one response in each section of the response space).

Longer Answer Questions (requiring a developed response)
Where candidates have provided two (or more) responses to a medium or high tariff question which only required a single (developed) response and not crossed out the first response, then only the first response should be marked. Examiners will need to apply professional judgement as to whether the second (or a subsequent) response is a 'new start' or simply a poorly expressed continuation of the first response.

6. Always check the pages (and additional objects if present) at the end of the response in case any answers have been continued there. If the candidate has continued an answer there, then add the annotation 'SEEN' to confirm that the work has been seen and mark any responses using the annotations in section 11.

7. There is a NR (**No Response**) option. Award NR (No Response):

   - if there is nothing written at all in the answer space
   - OR if there is a comment which does not in any way relate to the question (e.g., 'can't do', 'don't know')
   - OR if there is a mark (e.g., a dash, a question mark) which is not an attempt at the question.

   Note: Award 0 marks – for an attempt that earns no credit (including copying out the question).

8. The RM Assessor **comments box** is used by your Team Leader to explain the marking of the practice responses. Please refer to these comments when checking your practice responses. **Do not use the comments box for any other reason.**

9. Assistant Examiners will send a brief report on the performance of candidates to their Team Leader (Supervisor) via email by the end of the marking period. The report should contain notes on particular strengths displayed as well as common errors or weaknesses. Constructive criticism of the question paper/mark scheme is also appreciated.

10. For answers marked by levels of response:

Read through the whole answer from start to finish, using the Level descriptors to help you decide whether it is a strong or weak answer. The indicative scientific content in the Guidance column indicates the expected parameters for candidates' answers, but be prepared to recognise and credit unexpected approaches where they show relevance. Using a 'best-fit' approach based on the skills and science content evidenced within the answer, first decide which set of level descriptors, Level 1, Level 2 or Level 3, best describes the overall quality of the answer.

Once the level is located, award the higher or lower mark:

The higher mark should be awarded where the level descriptor has been evidenced and all aspects of the communication statement (in italics) have been met.

The lower mark should be awarded where the level descriptor has been evidenced but aspects of the communication statement (in italics) are missing.

In summary:

The skills and science content determines the level.

The communication statement determines the mark within a level.

Level of response questions on this paper are **2(d)** and **7(c)**.

11. Annotations available in RM Assessor

Annotation	Meaning
	Correct response
	Incorrect response
	Omission mark
BOD	Benefit of doubt given
CON	Contradiction
RE	Rounding error
SF	Error in number of significant figures
ECF	Error carried forward
L1	Level 1
L2	Level 2
L3	Level 3
NBOD	Benefit of doubt not given
SEEN	Noted but no credit given
I	Ignore

12. Abbreviations, annotations and conventions used in the detailed Mark Scheme (to include abbreviations and subject-specific conventions).

Annotation	Meaning
/	alternative and acceptable answers for the same marking point
✓	Separates marking points
DO NOT ALLOW	Answers which are not worthy of credit
IGNORE	Statements which are irrelevant
ALLOW	Answers that can be accepted
( )	Words which are not essential to gain credit
__	Underlined words must be present in answer to score a mark
ECF	Error carried forward
AW	Alternative wording
ORA	Or reverse argument

13. **Subject-specific Marking Instructions**

INTRODUCTION

Your first task as an Examiner is to become thoroughly familiar with the material on which the examination depends. This material includes:

- the specification, especially the assessment objectives
- the question paper
- the mark scheme.

You should ensure that you have copies of these materials.

You should ensure also that you are familiar with the administrative procedures related to the marking process. These are set out in the OCR booklet **Instructions for Examiners**. If you are examining for the first time, please read carefully **Appendix 5 Introduction to Script Marking: Notes for New Examiners**.

Please ask for help or guidance whenever you need it. Your first point of contact is your Team Leader.

The breakdown of Assessment Objectives for GCSE (9-1) in Biology B:

	Assessment Objective
AO1	**Demonstrate knowledge and understanding of scientific ideas and scientific techniques and procedures.**
AO1.1	Demonstrate knowledge and understanding of scientific ideas.
AO1.2	Demonstrate knowledge and understanding of scientific techniques and procedures.
AO2	**Apply knowledge and understanding of scientific ideas and scientific enquiry, techniques and procedures.**
AO2.1	Apply knowledge and understanding of scientific ideas.
AO2.2	Apply knowledge and understanding of scientific enquiry, techniques and procedures.
AO3	**Analyse information and ideas to interpret and evaluate, make judgements and draw conclusions and develop and improve experimental procedures.**
AO3.1	Analyse information and ideas to interpret and evaluate.
AO3.1a	Analyse information and ideas to interpret.
AO3.1b	Analyse information and ideas to evaluate.
AO3.2	Analyse information and ideas to make judgements and draw conclusions.
AO3.2a	Analyse information and ideas to make judgements.
AO3.2b	Analyse information and ideas to draw conclusions.
AO3.3	Analyse information and ideas to develop and improve experimental procedures.
AO3.3a	Analyse information and ideas to develop experimental procedures.
AO3.3b	Analyse information and ideas to improve experimental procedures.

<table>
<tr><th colspan="3">Question</th><th>Answer</th><th>Marks</th><th>AO element</th><th>Guidance</th></tr>
<tr><td>1</td><td>(a)</td><td></td><td>
<table>
<tr><th></th><th>Dependent variable</th><th>Independent variable</th><th>Neither</th></tr>
<tr><td>Distance between lamp and eye (m)</td><td></td><td></td><td>✓</td></tr>
<tr><td>Light brightness (lumens)</td><td></td><td>✓</td><td></td></tr>
<tr><td>Pupil diameter (mm)</td><td>✓</td><td></td><td></td></tr>
</table>
✓✓</td><td>2</td><td>2.2</td><td>All three correct = 2 marks
One or two correct = 1 mark</td></tr>
<tr><td></td><td>(b)</td><td></td><td>(Length of) time (exposed to light) ✓
OR
Type of light source / colour of light ✓
OR
(Same) person / (same) right/left eye ✓</td><td>1</td><td>3.3a</td><td>ALLOW same lamp
IGNORE lamp/light unqualified
ALLOW idea of controlling/excluding other light sources

IGNORE age, sex, ethnicity, eye colour, eye health
DO NOT ALLOW same room unqualified</td></tr>
<tr><td></td><td>(c)</td><td></td><td>First check the answer on the answer line.
If answer = 960 (lumens) award 2 marks

2 x 480 OR 4 x 240
OR
(80 ÷ 100) × 1200 ✓

= 960 (lumens) ✓</td><td>2</td><td>2.2</td><td>Check table if nothing written on answer line

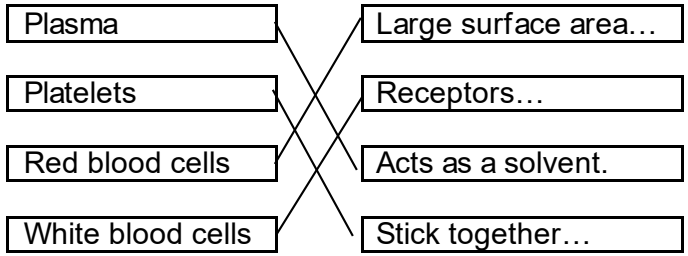
ALLOW other valid methods for calculating the percentage</td></tr>
<tr><td></td><td>(d)</td><td></td><td>Measure from a photograph / video of the eye
OR
Use a pupillometer ✓</td><td>1</td><td>3.3b</td><td>ALLOW idea of measuring on safety glasses</td></tr>
</table>

Question			Answer	Marks	AO element	Guidance
1	(e)		Any **three** from: description of the trend (pupil diameter decreases as brightness increases) **OR** idea that the prediction fits/continues the trend ✓ 1200 lumens is very bright / is brighter than 960 lumens / is brighter than anything tested in the investigation ✓ idea that pupil diameter would (therefore) be smaller than 4 mm ✓ idea that 2 mm would actually occur at > 1200 lumens **OR** > 100 % light level ✓ this (reflex action) protects the retina/eye from damage/bright light ✓ only a small amount of light needs to pass through the pupil (to the retina) to enable us to see when it's this bright ✓	**3**	**3.1b**	**ALLOW** 1200 = 100% if compared to the lumens for another % **ALLOW** 2 mm if compared to 4 mm **ALLOW** any other stated number smaller than 4 mm

Question			Answer	Marks	AO element	Guidance
2	(a)		Plant ✓	1	2.1	
	(b)		It is not living / alive. **OR** It is not a <u>living</u> organism. ✓	1	2.1	**ORA** e.g. “it needs to be living/alive to be biotic” **DO NOT ALLOW** “organism” unqualified **IGNORE** idea that it does not grow **IGNORE** is not made of cells
	(c)		ref. to photosynthesis **OR** needs light to make its own food/glucose/carbohydrate ✓	1	2.1	**IGNORE** the plant needs light to grow **DO NOT ALLOW** ref. to energy being made/produced

Question			Answer	Marks	AO element	Guidance
2	(d)*		Please refer to the marking instructions on page 4 of this mark scheme for guidance on how to mark this question. **Level 3 (5–6 marks)** Explains why the plant needs water. **AND** Explains how the plant gets water, including a detailed explanation of how water is cycled through the bottle garden ecosystem. *There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated.* **Level 2 (3–4 marks)** Explains why the plant needs water. **AND** Explains simply how the plant gets water. *There is a line of reasoning presented with some structure. The information presented is relevant and supported by some evidence.* **Level 1 (1–2 marks)** Explains why the plant needs water. **OR** Explains how the plant gets water. *There is an attempt at a logical structure with a line of reasoning. The information is in the most part relevant.* **0 marks** *No response or no response worthy of credit.*	**6**	**2 x 3.1a** **4 x 2.1**	**AO3.1a Analysing and interpreting the information and diagram presented** **AO2.1 Applying knowledge and understanding of photosynthesis and the water cycle** For example: [AO2.1] *Why the plant needs water:* • for photosynthesis • photosynthesis equation • to make food/glucose/carbohydrate/starch • ref. to splitting water in first stage of photosynthesis • for transport of substances within the plant • for transpiration (stream) • for translocation • for filling up cells / staying turgid / preventing wilting / making cytoplasm • as a solvent / it's where chemical reactions occur • idea of regulating temperature/cooling *How the plant gets water:* • [AO3.1a] there is water in the (moist) soil • [AO2.1] water (from soil) is absorbed by roots (by osmosis) • [AO2.1] water moves up stem to leaves (by transpiration / through xylem) • [AO2.1] water is lost from leaves into air (by evaporation/transpiration) (through stomata) • [AO2.1] some water in soil evaporates into air • [AO3.1a] (the bung/seal means all) the water (vapour) stays inside the bottle • [AO3.1a] water (vapour) in the air inside the bottle condenses (to liquid water) on the walls

Question			Answer	Marks	AO element	Guidance
						• [AO2.1] condensation/drops of water run down the walls back into the soil / comparison to water cycle stages of precipitation and runoff • [AO2.1] idea that water is cycled (through soil, plant roots, stem, leaves, air, and back to soil) • [AO2.1] water is (also) made by (aerobic) respiration (in plant cells)

Question			Answer	Marks	AO element	Guidance
3	(a)		Heart **AND** Vein **AND** Capillary ✓	1	1.1	All three correct for 1 mark
	(b)			2	1.1	One or two lines = 1 mark Three or four lines = 2 marks **IGNORE** branching lines **IGNORE** any box with more than one line joined to it
	(c)		Idea that would not be able to fight/ be more vulnerable to/destroy pathogens/named pathogens **OR** would get more/be more vulnerable to infections/(communicable) diseases ✓	1	2.1	**DO NOT ALLOW** references to fighting infections **IGNORE** 'sick'

Question			Answer	Marks	AO element	Guidance
4	(a)		eyepiece (lens) ✓ objective (lens) ✓	2	1.2	
	(b)		A D B C ✓✓	2	1.2	D second step = 1 mark B before C = 1 mark
	(c)	(i)	40 (x) ✓	1	2.2	
		(ii)	**First check the answer on the answer line.** **If answer = 81 (stomata per mm^2) award 3 marks** area = 2 × 1.5 = 3 (mm^2) ✓ density = 243 ÷ 3 ✓ = 81 (stomata per mm^2) ✓	3	2.2	 **ALLOW** 243 ÷ their area **ALLOW** ECF for answer from incorrect area
		(iii)	count (mean) number of stomata in a small section / field of view / sample ✓ multiply this by the number of samples in the leaf ✓ **OR** work out the area of the whole leaf ✓ and times it by the density (calculated in (ii)) ✓	2	3.3a	 **ALLOW** number of stomata = (mean) number in sample x (total area of leaf ÷ area of sample) for 2 marks

Question			Answer	Marks	AO element	Guidance
		(iv)	Any **one** from: quicker ✓ too many to count all of them ✓ idea that likely to make errors when trying to count all of them / not likely to be any more accurate than an estimate ✓	**1**	**3.1b**	**DO NOT ALLOW** "easier" unexplained **ALLOW** saves time / faster
	(d)	**(i)**	electron (microscope) ✓	**1**	**1.1**	**ALLOW** SEM / TEM **DO NOT ALLOW** electronic/electric/electro microscope
		(ii)	has (much) higher magnification / resolution ✓	**1**	**1.1**	**DO NOT ALLOW** "more powerful" unqualified as this is implied by the question stem for part (d) **IGNORE** references to 'zoom'
		(iii)	0.01 mm ✓	**1**	**1.2**	
	(e)		ref. to photosynthesis (happening in the light) ✓ open stomata allow gas exchange / carbon dioxide in (for photosynthesis) / allow (waste) oxygen out ✓	**2**	**2.1**	**IGNORE** references to transpiration
	(f)		Any **one** from: reduce water loss / reduce transpiration / prevent wilting/dehydration ✓ prevent entry of bacteria/pathogens / reduce risk of disease ✓	**1**	**2.1**	 **ALLOW** reduce evaporation of water/evapotranspiration

Question			Answer	Marks	AO element	Guidance
5	(a)		2.2 (%) **AND** 2017 ✓	1	3.1a	**ALLOW** range between 2.15 – 2.25
	(b)		**First check the answer on the answer line.** **If answer = 0.13 (%/year) award 2 marks** (4.5 – 2.0) ÷ 19 = 0.13157895 ✓ = 0.13 (%/year) to 2 sig. fig. ✓	2 **2.2** **1.2**		 **ALLOW** 1 mark for clear evidence of incorrect answer correctly rounded to 2 significant figures.
	(c)		Any **one** from: a higher percentage of women are severely obese than men ✓ obesity levels increased at a faster rate for women than for men ✓ overall rate of change for men was 0.08 %/year ✓	1	3.2b	 **DO NOT ALLOW** there are more obese women **ALLOW** 0.07631579 to any number of sig. figs.
	(d)		prediction that CVD numbers increased ✓ (because) obesity increased and obesity is a risk factor / cause for / more likely to get / CVD **OR** (because) obesity increased and many of the same risk factors for obesity are also risk factors for CVD ✓	2	3.2a	 **ALLOW** answers referring to (positive) correlation **ALLOW** examples of risk factors, e.g. high fat diet, lack of exercise, high cholesterol, smoking, alcohol

Question			Answer	Marks	AO element	Guidance
	(e)		(collect data from) sample(s) / use sampling ✓ make sure (sample) large **OR** make sure (sample) is representative sample ✓	2	1.1	**ALLOW** surveys / questionnaires / look at hospital records **ALLOW** examples that covey the idea that it would be representative, e.g. idea of including different ages / ethnicities / areas of country etc.

<table>
<tr><th colspan="3">Question</th><th>Answer</th><th>Marks</th><th>AO element</th><th>Guidance</th></tr>
<tr><td>6</td><td>(a)</td><td></td><td>bacterium / bacteria ✓</td><td>1</td><td>1.1</td><td></td></tr>
<tr><td></td><td>(b)</td><td></td><td>(waxy) cuticle OR antimicrobial substances ✓</td><td>1</td><td>1.1</td><td>ALLOW closing stomata</td></tr>
<tr><td></td><td>(c)</td><td></td><td><table><tr><th></th><th>Nitrate ions</th><th>Sugars</th><th>Water</th></tr><tr><td>Phloem</td><td>(✓)</td><td>✓</td><td>✓</td></tr><tr><td>Xylem</td><td>✓</td><td></td><td>✓</td></tr></table> ✓ ✓</td><td>2</td><td>1.1</td><td></td></tr>
<tr><td></td><td>(d)</td><td></td><td>trees without the genetic variant will die (due to crown gall disease) / trees with the genetic variant will survive ✓

(those that survive) reproduce and pass on the genetic variant to their offspring ✓

the genetic variant will become more common in each (new) generation ✓</td><td>3</td><td>2.1</td><td></td></tr>
</table>

Question			Answer	Marks	AO element	Guidance
7	(a)		Meristem cells ✓	1	1.1	
	(b)		Any **three** from: go through mitosis / divide (to make new cells) ✓ become differentiated/specialised ✓ switch genes on/off ✓ to make cells/tissues with particular functions ✓	3	1.1	**ALLOW** become any/particular type(s) of cell **ALLOW** named cells/tissues

Question			Answer	Marks	AO element	Guidance
7	(c)*		Please refer to the marking instructions on page 4 of this mark scheme for guidance on how to mark this question. **Level 3 (5–6 marks)** Describes in detail why the tree will **not** have identical features/phenotype/appearance. **AND** Describes in detail why the tree will be genetically identical / will have identical genome/genes/alleles. *There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated.* **Level 2 (3–4 marks)** Description includes the idea that tree will **not** have identical features/phenotype/appearance. **AND** Description includes the idea that the tree will be genetically identical / will have identical genome/genes/alleles. *There is a line of reasoning presented with some structure. The information presented is relevant and supported by some evidence.* **Level 1 (1–2 marks)** Only describes reasons why the tree will **not** be identical. **OR** Only describes reasons why the tree **will** be identical. *There is an attempt at a logical structure with a line of reasoning. The information is in the most part relevant.* **0 marks** *No response or no response worthy of credit.*	**6**	**3 x 1.1** **3 x 2.1**	**AO1.1 Demonstrating knowledge and understanding of mitosis and cell differentiation** For example: • new cells made by mitosis/cell division • new cells have the same genome/genes/alleles/are genetically identical • all the same genes are present even though some are switched on/off during differentiation / as cells become specialised • **so** the regrown tree will be genetically identical/have the same genome to the original tree • unless there is a mutation **AO2.1 Applying knowledge and understanding of how the interaction of genome and environment influences phenotype** For example: • genome and environment will both affect the tree's features/phenotype/appearance • most features are affected by the environment • environmental factors would affect the regrown tree's features/growth/phenotype/examples of environmental features, e.g. amount of light, water, temperature, weather/climate, nutrients, disease/pathogens, predation/grazing, damage etc. • **so** the regrown tree's features/phenotype/appearance will **not** be identical to the original tree

Question			Answer	Marks	AO element	Guidance
8	(a)		R -- dominant allele ✓ Rr -- heterozygous genotype ✓ rr -- homozygous recessive genotype ✓ wrinkled peas -- recessive phenotype ✓	4	2.1	**IGNORE** branching lines **IGNORE** any example box with more than one line joined to it.
	(b)		correct Punnett square for step 1 ✓ probability = 0 ✓ correct Punnett square for step 2 ✓ ratio = 3:1 ✓	4	2.2 3.2b 2.2 3.2b	Punnet square for step 1: R R / r Rr Rr / r Rr Rr **OR** r r / R Rr Rr / R Rr Rr Punnet square for step 2: R r / R RR Rr / r Rr rr
	(c)	(i)	mRNA ✓ ribosomes ✓ amino acids ✓	3	1.1	

Question			Answer	Marks	AO element	Guidance
8	(c)	(ii)	Any **two** from: used genome sequencing / idea of working out the (base/nucleotide) sequence of the complete genome/DNA ✓ idea of comparing plants with round peas and wrinkled peas ✓ look for a sequence that is only found in plants with round peas / look for a sequence that is different in plants with round vs. wrinkled peas ✓	**2**	**2.1**	
		(iii)	Any **three** from: the sequence of bases/nucleotides has been changed / idea that nucleotides might be read in different sets of three ✓ will code for different (sequence of) amino acids (in the enzyme) ✓ this will change the shape of the enzyme / change the shape of the active site (of the enzyme) ✓ the enzyme's active site will no longer be the correct shape to fit its substrate / no enzyme substrate complexes made ✓	**3**	**2.1**	**ALLOW** triplet code read incorrectly

Question			Answer	Marks	AO element	Guidance
9	(a)		Any **two** from: Increased rainfall / temperature alters ecosystems/habitats✓ Increased rainfall / temperatures force the movement of plants and animals to higher altitudes / from original habitat ✓ Higher rainfall / temperatures may increase the risk from disease / organisms unable to survive / become extinct ✓ Example of effect of increased temperatures / rainfall e.g. causes coral bleaching, reduction in arctic sea ice, rising sea levels, drought, floods ✓	**2**	**1.1**	
	(b)		Any **two** from: (claim supported because) both lakes are increasing in surface area / getting larger ✓ (claim supported because) distance between the two lakes is decreasing ✓ (claim supported because) lakes getting closer at 0.7 km/year so likely to join within 18-19 years (after 2020) ✓ (claim supported because) the last measurement was in 2020 so the lakes will now be even larger / closer together ✓ (annual) rate of increase of surface area / distance apart is decreasing ✓	**2**	**3.1b**	

Question			Answer	Marks	AO element	Guidance
	(c)	(i)	Any **two** from: microalgae are the producers in the lake / in the food chain ✓ the microalgae/producers make all the biomass ✓ consumers/crocodiles depend upon the microalgae/producers for food/biomass ✓	**2**	**3.1a**	 **ALLOW** explanation of how food chain would be disrupted
	(c)	(ii)	the (salt)water in Lake B has a much higher salt concentration (than Lake A) **OR** there will be a large increase in the salt concentration of the water (when the lakes join) ✓ **AND** any **three** from**:** the microalgae are not <u>adapted</u> to live/function in water with such a high salt concentration ✓ water will move out of the microalgae/cells / from the dilute (salt) solution inside the cells to the concentrated (salt) solution outside ✓ by osmosis ✓ the cells will shrink / shrivel / become dehydrated / become crenated ✓	**4**	**3.1a** **3 x 2.1**	 **ORA** **DO NOT ALLOW** “the cells will die” without explanation of why **DO NOT ALLOW** unexplained references to the salt being poisonous/toxic

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