



GCSE

Geography A Geographical Themes

J383/02: The world around us

General Certificate of Secondary Education

Mark Scheme for June 2022

OCR (Oxford Cambridge and RSA) is a leading UK awarding body, providing a wide range of qualifications to meet the needs of candidates of all ages and abilities. OCR qualifications include AS/A Levels, Diplomas, GCSEs, Cambridge Nationals, Cambridge Technicals, Functional Skills, Key Skills, Entry Level qualifications, NVQs and vocational qualifications in areas such as IT, business, languages, teaching/training, administration and secretarial skills.

It is also responsible for developing new specifications to meet national requirements and the needs of students and teachers. OCR is a not-for-profit organisation; any surplus made is invested back into the establishment to help towards the development of qualifications and support, which keep pace with the changing needs of today's society.

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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PREPARATION FOR MARKING

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 component. These are posted on the RM Cambridge Assessment Support Portal <http://www.rm.com/support/ca>
3. Log-in to RM assessor and mark the **required number** of practice responses (“scripts”) and the **required number** of standardisation responses.

YOU MUST MARK 5 PRACTICE AND 10 STANDARDISATION RESPONSES BEFORE YOU CAN BE APPROVED TO MARK LIVE SCRIPTS.

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% deadlines. If you experience problems, you must contact your Team Leader without delay.
4. If you are in any doubt about applying the mark scheme, consult your Team Leader by telephone or the RM assessor messaging system, or by email.
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 a tick to confirm that the work has been seen.
7. Award No Response (NR) if:
 - there is nothing written in the answer spaceAward Zero '0' if:
 - anything is written in the answer space and is not worthy of credit (this includes text and symbols).

Team Leaders must confirm the correct use of the NR button with their markers before live marking commences and should check this when reviewing scripts.

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.**
If you have any questions or comments for your team leader, use the phone, the RM assessor messaging system, or e-mail.
9. *Assistant Examiners will send a brief report on the performance of candidates to their Team Leader 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:
- To determine the level** – start at the highest level and work down until you reach the level that matches the answer
 - To determine the mark within the level**, consider the following:

Descriptor	Award mark
On the borderline of this level and the one below	At bottom of level
Just enough achievement on balance for this level	Above bottom and either below middle or at middle of level (depending on number of marks available)
Meets the criteria but with some slight inconsistency	Above middle and either below top of level or at middle of level (depending on number of marks available)
Consistently meets the criteria for this level	At top of level







11. Annotations

Annotation	Meaning
	Tick, use to show where marks gained for all short answer questions, place where mark(s) gained
	Unclear, use to show mark(s) cannot be awarded as answer is illegible or unclear
	Cross, use for incorrect idea(s) for all short answer questions
	Omission mark to show key idea(s) missing from answer that prevents mark(s) being given
	Level 1 Annotate end of answer with L1 for overall level.
	Level 2 Annotate end of answer with L2 for overall level.
	Level 3 Annotate end of answer with L3 for overall level.
	Level 4 Annotate end of answer with L4 for overall level.
	Use for developed points for Q 2b) and 3a)ii) Use to show developed/well developed ideas for Q 1d) 2d) 3c)
	Use PLC to indicate place specific detail for Levels 2, 3 and 4, for Q1d) 2d) 3c)
	Benefit of doubt, use to show mark(s) given where answer lacked clarity
 	Significant amount of material which doesn't answer the question (with red colour highlighter)

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 	Use to indicate incorrect example or content for case study response (with red colour highlighter)
	Use to indicate valid ideas within a case study response if an incorrect example is given (green colour highlighter)
	Communicate findings = 1 mark for Q1a iii)
	Blank page this annotation must be used on all blank pages within an answer booklet and on each page of an additional object where there is no candidate response.
	Noted but no credit given. Also use for all unanswered question items, along with NR

12. 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 and its rubrics
- 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.

USING THE MARK SCHEME

Please study this Mark Scheme carefully. The Mark Scheme is an integral part of the process that begins with the setting of the question paper and ends with the awarding of grades. Question papers and Mark Schemes are developed in association with each other so that issues of differentiation and positive achievement can be addressed from the very start.

This Mark Scheme is a working document; it is not exhaustive; it does not provide 'correct' answers. The Mark Scheme can only provide 'best guesses' about how the question will work out, and it is subject to revision after we have looked at a wide range of scripts.

The Examiners' Standardisation Meeting will ensure that the Mark Scheme covers the range of candidates' responses to the questions, and that all Examiners understand and apply the Mark Scheme in the same way. The Mark Scheme will be discussed and amended at the meeting, and administrative procedures will be confirmed. Co-ordination scripts will be issued at the meeting to exemplify aspects of candidates' responses and achievements; the co-ordination scripts then become part of this Mark Scheme.

Before the Standardisation Meeting, you should read and mark a number of scripts, in order to gain an impression of the range of responses and achievement that may be expected.

In your marking, you will encounter valid responses which are not covered by the Mark Scheme: these responses must be credited. You will encounter answers which fall outside the 'target range' of bands for the paper which you are marking. Please mark these answers according to the marking criteria.

Please read carefully all the scripts in your allocation and make every effort to look positively for achievement throughout the ability range. Always be prepared to use the full range of marks.

LEVELS OF RESPONSE QUESTIONS:

The indicative content indicates the expected parameters for candidates' answers, but be prepared to recognise and credit unexpected approaches where they show relevance.

Using 'best-fit', decide first which set of level descriptors best describes the overall quality of the answer. Once the level is located, adjust the mark concentrating on features of the answer which make it stronger or weaker following the guidelines for refinement.

Highest mark: If clear evidence of all the qualities in the level descriptors is shown, the HIGHEST Mark should be awarded.

Lowest mark: If the answer shows the candidate to be borderline (i.e. they have achieved all the qualities of the levels below and show limited evidence of meeting the criteria of the level in question) the LOWEST mark should be awarded.

Middle mark: This mark should be used for candidates who are secure in the level. They are not 'borderline' but they have only achieved some of the qualities in the level descriptors.

Be prepared to use the full range of marks. Do not reserve (e.g.) highest level marks 'in case' something turns up of a quality you have not yet seen. If an answer gives clear evidence of the qualities described in the level descriptors, reward appropriately.

	AO1	AO2	AO3
Comprehensive	A range of detailed and accurate knowledge that is fully relevant to the question.	A range of detailed and accurate understanding that is fully relevant to the question.	Detailed and accurate interpretation through the application of relevant knowledge and understanding. Detailed and accurate analysis through the application of relevant knowledge and understanding. Detailed and substantiated evaluation through the application of relevant knowledge and understanding. Detailed and substantiated judgement through the application of relevant knowledge and understanding.
Thorough	A range of accurate knowledge that is relevant to the question.	A range of accurate understanding that is relevant to the question.	Accurate interpretation through the application of relevant knowledge and understanding. Accurate analysis through the application of relevant knowledge and understanding. Supported evaluation through the application of relevant knowledge and understanding. Supported judgement through the application of relevant knowledge and understanding.
Reasonable	Some knowledge that is relevant to the question.	Some understanding that is relevant to the question.	Some accuracy in interpretation through the application of some relevant knowledge and understanding. Some accuracy in analysis through the application of some relevant knowledge and understanding. Partially supported evaluation through the application of some relevant knowledge and understanding. Partially supported judgement through the application of some relevant knowledge and understanding.
Basic	Limited knowledge that is relevant to the topic or question.	Limited understanding that is relevant to the topic or question.	Limited accuracy in interpretation through lack of application of relevant knowledge and understanding. Limited accuracy in analysis through lack of application of relevant knowledge and understanding. Un-supported evaluation through lack of application of knowledge and understanding. Un-supported judgement through lack of application of knowledge and understanding.

Question			Answer	Mark	Guidance
1	(a)	(i)	Table (✓) Bar graph (✓) Divided/Proportional Bar graph (✓) Pie chart (✓) Choropleth map (✓)	1	1 x 1 (✓) for appropriate selection of way to display the imports data from Fig. 1 If a range of ways are given, only mark the first idea
		(ii)	D: Goods sold to other countries (✓)	1	1 x 1 (✓) for correct definition
		(iii)	Most exports go to Mexico and Canada (✓) these countries are close to the USA (✓)(C) Most exports go to other developed countries (✓) such as Canada and South Korea (✓)(C) Most exports go to nearby countries (✓) with some exports also going to countries further away such as western Europe (✓) (C)	3	2 x 1 (✓) for description of pattern of countries which are in the top fifteen trade partners for the USA, such as statements linked to distance from the USA, volume of exports, continental location, level of economic development. 1 x 1 (C) for communicating the answer in an appropriate and logical order. Two valid descriptive points needed for (C) One mark only for list of countries which the USA exports to (C) not awarded if answer lacks clarity, but 2 marks can be given for valid description points
	(b)		Trade with other countries brings money in to LIDCs/EDCs (✓) Trade can create jobs in LIDCs/EDCs (✓) Imports can provide resources/goods that LIDC/EDC does not have (✓) Imports of raw materials can be used to develop industries (✓) Imports of technology or machinery can be used to develop industries (✓) Exports can increase GNP/GNI per capita (✓)	4	4 x 1 (✓) for each valid idea for how international trade can influence economic development. Development awarded with (✓) for further valid explanation of one idea.

			<p>Money from trade can be invested in health care/education (✓)</p> <p>Low value of raw material exports from LIDCs can limit economic development (✓)</p> <p>Trade deficit if cost of imports is greater than exports(✓) this can create debt (✓)</p> <p>Trade could be controlled by TNCs who pay low wages (✓)</p> <p>TNCs may take profits out of the LIDC/EDC (✓)</p> <p>Imports of goods/services can stifle the development of industries and services within the LIDC/EDC(✓) this slows down economic development or creates dependency on imports (✓)</p>		
	(c)	(i)	2.8 (✓)	1	1 x 1 (✓) for correct number
		(ii)	C: 157% (✓)	1	1 x 1 (✓) for correct answer
		(iii)	People living in towns/cities (✓)	1	1 x 1 (✓) for valid definition of urban population No mark given for simply stating urban area
		(iv)	<p>Rural-urban migration is greater in LIDCs/EDCs (✓)</p> <p>Rural poverty and lack of opportunity are greater in EDCs/LIDCs developed countries and act as push factors (✓)</p> <p>EDC/LIDC urban pull factors are stronger (✓) they attract migrants looking for a better quality of life (✓)</p> <p>EDC/LIDC industrialisation causes migration to cities for jobs (✓)</p> <p>EDCs/LIDCs cities have higher internal growth rates (✓) migrants have larger numbers of children (✓)</p> <p>ACs had high rates of urban growth in the 1800s and 1900s (✓)</p> <p>Urban populations have stabilised or are in decline due to counter-urbanisation (✓)</p>	3	<p>3 x 1 (✓) for each valid idea to explain why less developed countries have higher rates of urbanisation</p> <p>Development awarded with (✓) for further valid explanation of one idea</p> <p>Credit valid ideas which explain why urban growth rates are lower in more developed countries</p> <p>Only credit push and/or pull factors if clearly linked to urban growth rates</p> <p>One mark only for valid lists of pull factors</p> <p>One mark only for valid lists of push factors</p>

(d)	<p>CASE STUDY: Ways of life in a city.</p> <p>Level 3 (5-6 marks)</p> <p>An answer at this level will demonstrate thorough knowledge of the ways of life in a named LIDC or EDC city (AO1), with a thorough analysis of the most important influences on ways of life in the chosen city (AO3).</p> <p>This will be shown by including well-developed ideas about ways of life in the chosen city and the most important influence on ways of life.</p> <p>The answer must also include place-specific detail about ways of life in the chosen city. Amount of relevant place-specific detail determines credit within level.</p> <p>Level 2 (3-4 marks)</p> <p>An answer at this level will demonstrate reasonable knowledge of the ways of life in a named LIDC or EDC city (AO1), with a reasonable analysis of the most important influences on ways of life in the chosen city (AO3).</p> <p>This will be shown by including developed ideas about ways of life in the chosen city and the most important influence on ways of life.</p> <p>Developed ideas but no place-specific detail credited up to middle of level.</p> <p>Level 1 (1-2 marks)</p> <p>An answer at this level will demonstrate basic knowledge of the ways of life in a named LIDC or EDC city (AO1), with a basic analysis of the most important influences on ways of life in the chosen city (AO3).</p>	<p>6</p> <p>The answer will be marked using 3 levels</p> <p>Indicative Content:</p> <p>City must be a large named settlement in a valid LIDC or EDC as defined by the IMF.</p> <p>Accept named parts/areas/places within a valid city.</p> <p>Factors which influence the ways of life in could include culture, ethnicity, housing, leisure and consumption. Credit references to city challenges and/or sustainable strategies if clearly linked to ways of life in a city.</p> <p>Detailed coverage of one factor can be awarded full marks.</p> <p>Use PLC for relevant knowledge linked to case study example.</p> <p>Maximum mid-Level 2 – 3 marks, if a valid named LIDC or EDC city is not given, for valid ideas about ways of life in a city.</p> <p>Example of well-developed ideas.</p> <p>Rosario is the second largest city in Argentina. Politics is an important influence on the way of life of the city. The socialist Che Guevara was born in Rosario, his revolutionary activities in Cuba and other countries mean that there is a tradition of socialist ideas in the city. This has influenced a strong trade union movement where workers stand up for their rights. The city's two football teams, Rosario Central and Newell's Old Boys are also</p>
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		<p>This will be shown by including simple ideas about ways of life in the chosen city and the most important influence on ways of life.</p> <p>0 marks</p> <p>No response worthy of credit.</p>	<p>important. Their barras bravas supporters are known for their violence and have links to organised crime in the city.</p> <p>Example of developed ideas.</p> <p>Politics is an influence on ways of life in Rosario. The trade unions are well organised to look after workers' rights. This is because a famous revolutionary, Che Guevara, was born in Rosario. Crime also effects the way of life in Rosario. The barras bravas are organised gangs who follow the city's football teams. They are responsible for high crime rates in the city and have a reputation for violence.</p> <p>Example of simple ideas.</p> <p>The barras bravas have caused high crime rates in the city of Rosario. They are the supporters of the city's football teams and are known for their violence.</p>
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Question		Answer	Mark	Guidance
2	(a)	B (✓)	1	1 x 1 (✓) for correct answer
	(b)	Over-fishing (✓) reduces fish stocks (DEV) which affects food webs (DEV) Tourism (✓) as boat hulls/anchors scrape the sea floor (DEV) and damages coral reef (DEV) Pollution / run-off (✓) causes cloudy water (DEV) which reduces penetration by sunlight/photosynthesis (DEV) Marine pollution (✓) as oil and chemicals from boats (DEV) harm wildlife and coral (DEV) Climate change/Global warming (✓) as higher water temperatures (DEV) cause coral bleaching (DEV)	3	1 x 1 (✓) for stating a valid threat to coral reef biodiversity 2 x 1 (DEV) for explanation of how the threat affects biodiversity If more than one threat is given, credit the highest scoring example
	(c)	Vegetation grows well in a rainforest (✓) due to high levels of rainfall (✓) Vegetation grows well in a rainforest (✓) due to high temperatures all year round (✓) Tree roots absorb rain water (✓) to enable trees to grow (✓) Transpiration of water from leaves(✓) provides moisture to cause rainfall (✓)	2	2 x 1 (✓) for one clearly explained link between plants and climate in a rainforest.
	(d*)	Level 4 (10-12 marks) An answer at this level demonstrates comprehensive knowledge of the features of the tropical rainforest that are valuable to humans and the planet (AO1) with a comprehensive understanding of the value of the tropical rainforest to humans and the planet (AO2). There will be a comprehensive evaluation of the value of the tropical rainforest to humans and the planet (AO3).	12	Case study will be marked using 4 levels: Indicative Content Valuable features of tropical rainforests include: biodiversity, economic activities, medicinal properties, importance to indigenous communities, contribution to economic development, impact on global climate and global climate change.

	<p>This will be shown by including well-developed ideas about the features of the tropical rainforest which are valuable and its value to humans and the planet.</p> <p>The answer must also include place-specific details about the tropical rainforest. Amount of relevant place-specific detail determines credit within the level.</p> <p>There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated.</p> <p>Level 3 (7-9 marks)</p> <p>An answer at this level demonstrates thorough knowledge of the features of the tropical rainforest that are valuable to humans and the planet (AO1) with a thorough understanding of the value of the tropical rainforest to humans and the planet (AO2). There will be a thorough evaluation of the value of the tropical rainforest to humans and the planet (AO3).</p> <p>This will be shown by including some well-developed ideas about the features of the tropical rainforest which are valuable and its value to humans and the planet, with developed ideas for other question foci.</p> <p>The answer will also include some place-specific details about the tropical rainforest. Amount of relevant place-specific detail determines credit within the level.</p> <p>There is line of reasoning presented with some structure. The information presented is in the most-part relevant and supported by some evidence.</p> <p>Level 2 (4-6 marks)</p>	<p>Credit references to threats to the rainforest and sustainable use and management if clearly linked to the value of rainforests.</p> <p>Example must be a valid named tropical rainforest or an area of a tropical rainforest.</p> <p>Response must include ideas about value of rainforest to both humans and the planet to achieve marks at the top of each level.</p> <p>Use PLC for relevant knowledge linked to case study example.</p> <p>Maximum of mid-Level 2 - 5 marks, if a valid case study example is not given, for valid ideas about valuable features of tropical rainforests.</p> <p>Example of well-developed ideas:</p> <p>The Peruvian Amazon in South America is of great value to humans and the planet. There are valuable resources such as hardwood timber and minerals including oil, natural gas and gold. These are exploited and exported to generate income and create jobs for the country of Peru. The Peruvian Amazon has 2,937 species of creature, 16% of these exist in no other country. This biodiversity is like a pharmacy as there are plants with medicinal properties, such as curare, which is used as a muscle relaxant in operating theatres. Like all rainforests, the Peruvian Amazon has a vital role in regulating the carbon cycle for the planet. The trees absorb large amounts of CO₂ from the air as they grow and synthesise. This reduces the amount of carbon in the atmosphere and is important in</p>
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		<p>An answer at this level demonstrates reasonable knowledge of the features of the tropical rainforest that are valuable to humans and the planet (AO1) with a reasonable understanding of the value of the tropical rainforest to humans and the planet (AO2). There will be a reasonable evaluation of the value of the tropical rainforest to humans and the planet (AO3).</p> <p>This will be shown by including some developed ideas about the features of the tropical rainforest which are valuable and its value to humans and the planet, with simple ideas for other question foci.</p> <p>Developed ideas but no place-specific detail credited up to middle of level.</p> <p>The information has some relevance and is presented with limited structure. The information is supported by limited evidence.</p> <p>Level 1 (1-3 marks) An answer at this level demonstrates basic knowledge of the features of the tropical rainforest that are valuable to humans and the planet (AO1) with a basic understanding of the value of the tropical rainforest to humans and the planet (AO2). There will be a basic evaluation of the value of the tropical rainforest to humans and the planet (AO3).</p> <p>This will be shown by including simple ideas about the features of the tropical rainforest which are valuable and its value to humans and the planet.</p> <p>Named example only receives no place specific detail credit.</p> <p>The information is basic and communicated in an unstructured way. The information is supported by limited evidence and the relationship to evidence may not be clear.</p>	<p>slowing the rate of global warming. Its resources, biodiversity and role in the carbon cycle mean that the Peruvian Rainforest is of great value to local people, the government and the planet, both economically and for the environment.</p> <p>Example developed ideas:</p> <p>The Peruvian Amazon in South America has valuable resources such as timber, oil, natural gas and gold. These create jobs and raise money for the country of Peru. The biodiversity of the rainforest is like a pharmacy as there are many plants with medicinal properties. The Peruvian Amazon has a vital role in regulating the carbon cycle for the planet. The trees absorb large amounts of CO₂ from the air. This helps to slow the rate of global warming. The Peruvian Rainforest is of value to local people, the government and the global environment.</p> <p>Example of simple ideas:</p> <p>The Peruvian Amazon has resources of value to humans, such as timber. The rainforest also stores carbon which helps to slow global warming for the whole planet.</p>
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			0 marks No response worthy of credit.		
			Spelling, punctuation and grammar and the use of specialist terminology (SPaG) are assessed using the separate marking grid in Appendix 1.	3	
Question			Answer	Mark	Guidance
3	(a)	(i)	Global warming (✓) Increased temperature (✓) Increases number of storms (✓) More intense storms (✓) Wetter winters (✓) Drier summers (✓)	1	1 x 1 (✓) for valid suggestion of how changes to greenhouse gas levels shown in Fig. 3 may have affected the global climate from 1985 to 2020 No credit for climate change
		(ii)	Heating (✓) burning fossil fuels (DEV) releases carbon dioxide into the atmosphere (DEV) Energy production (✓) burning fossil fuels (DEV) releases carbon dioxide into the atmosphere (DEV) Transport (✓) using petrol/fossil fuel (DEV) releases carbon dioxide into the atmosphere (DEV) Deforestation (✓) burning of wood associated with clearance (DEV) releases carbon dioxide into the atmosphere (DEV) Rice cultivation (✓) plants produce methane (DEV) releases methane into the atmosphere (DEV) Livestock production (✓) livestock produce methane (DEV) releases methane into the atmosphere (DEV) Landfill/rubbish tips (✓) decaying waste produces methane (DEV) releases methane into the atmosphere (DEV)	3	1 x 1 (✓) for a valid human activity responsible for increased greenhouse gas levels 2 x 1 (DEV) for explanation of how greenhouse gases are produced by the given human activity If more than one human activity is given, credit the highest scoring example
	(b)		Ice cores preserve samples of water molecules or bubbles of air/CO ₂ /oxygen from thousands of years ago (✓)	2	2 x 1 (✓) for valid ideas to explain how ice cores show evidence of climate change over longer periods of time


		Scientists analyse these samples to calculate the temperature when the snow fell thousands of years ago (✓)		
(c)*		<p>CASE STUDY: El Niño/La Niña drought event</p> <p>Level 4 (10-12 marks)</p> <p>An answer at this level demonstrates comprehensive knowledge of the effects of the drought on people and the environment and ways in which people have adapted to drought in the case study area (AO1). There will be comprehensive understanding of the methods used to adapt to the effects of drought on people and the environment (AO2) with a comprehensive evaluation the success of the methods (AO3).</p> <p>This will be shown by including well-developed ideas about the effects of the drought on people and the environment, the methods used and the success of these methods.</p> <p>The answer must also include place-specific details about the effects of the drought and the methods used. Amount of relevant place-specific detail determines credit within the level.</p> <p>There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated.</p> <p>Level 3 (7-9 marks)</p> <p>An answer at this level demonstrates thorough knowledge of the effects of the drought on people and the environment and ways in which people have adapted to drought in the case study area (AO1). There will be thorough understanding of the methods used to adapt to the effects of drought on people and the environment (AO2) with a thorough evaluation the success of the methods (AO3).</p>	12	<p>Case study will be marked using 4 levels:</p> <p>Example must be a valid named drought event caused by El Niño/La Niña. Can be regional, national or local scale.</p> <p>Indicative Content</p> <p>Response will include information about the effects of the drought event on people, such as farming and water supply and the environment, such as soil and vegetation. Methods covered must be coherently linked to the effects described.</p> <p>No credit for causes of drought.</p> <p>Use PLC for relevant knowledge linked to case study example.</p> <p>Maximum of mid-Level 2 - 5 marks, if a valid case study example is not given, for valid ideas about drought effects and methods.</p> <p>Example of well-developed ideas</p> <p>From 2002 to 2009 Australia experienced a prolonged drought event known as the 'Big Dry'. Rainfall was at 40-60% less than normal and the hardest hit were farmers. They were supported by the government paying up to \$1.7 million dollars a day in drought relief. This was successful as it helped farmers to stay in business during the drought. However, the number of dairy farms fell by half, many farmers sold their cattle and migrated to the cities. Worse still some farmers committed suicide. Domestic water consumption was also tackled through restrictions on</p>

		<p>This will be shown by including some well-developed ideas about the effects of the drought on people and the environment, or the methods used or the success of these methods, with developed ideas for other question foci.</p> <p>The answer will also include some place-specific details about the effects of the drought and the methods used. Amount of relevant place-specific detail determines credit within the level.</p> <p>There is line of reasoning presented with some structure. The information presented is in the most-part relevant and supported by some evidence.</p> <p>Level 2 (4-6 marks)</p> <p>An answer at this level demonstrates reasonable knowledge of the effects of the drought on people and the environment and ways in which people have adapted to drought in the case study area (AO1). There will be reasonable understanding of the methods used to adapt to the effects of drought on people and the environment (AO2) with a reasonable evaluation the success of the methods (AO3).</p> <p>This will be shown by including some developed ideas about the effects of the drought on people or the environment, or the methods used or the success of these methods, with simple ideas for the other question foci</p> <p>Developed ideas but no place-specific detail credited up to middle of level.</p> <p>The information has some relevance and is presented with limited structure. The information is supported by limited evidence.</p> <p>Level 1 (1-3 marks)</p>	<p>usage and the provision of water storage tanks for people's homes. These helped to raise people's awareness of the drought but had a limited impact on conserving water supplies. An expensive response was the construction of six desalination plants between 2006 and 2012. They created billions of litres of extra drinking water, but they were expensive to construct. Overall these ideas were successful as they helped people and businesses cope with the drought. They also raised awareness of water supply issues which may help with future droughts.</p> <p>Example of developed ideas</p> <p>During the Big Drought in Australia the rainfall was much less than normal. Farmers were supported by the government paying million dollars a day in drought relief. This was successful as it helped farmers to survive. However, many farmers sold their cattle and closed their farms. Worse still some farmers committed suicide. Another response was to increase water supply through building six desalination plants between 2006 and 2012. They increased the supply of fresh water but they cost millions of dollars to build and the creation of fresh water from sea water is expensive.</p> <p>Example of simple ideas</p> <p>Farmers suffered during the Big Dry drought in Australia. The government gave money to the farmers to help them survive the drought and stay in business. But many lost their cattle and had to close their farms.</p>
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J383/02

Mark Scheme

June 2022

		<p>An answer at this level demonstrates basic knowledge of the effects of the drought on people and the environment and ways in which people have adapted to drought in the case study area (AO1). There will be basic understanding of the methods used to adapt to the effects of drought on people and the environment (AO2) with a basic evaluation the success of the methods (AO3).</p> <p>This will be shown by including simple ideas about the effects of the drought on people or the environment, the methods used and the success of these methods.</p> <p>Named example only receives no place specific detail credit.</p> <p>The information is basic and communicated in an unstructured way. The information is supported by limited evidence and the relationship to evidence may not be clear.</p> <p>0 marks No response worthy of credit</p>		
		Spelling, punctuation and grammar and the use of specialist terminology (SPaG) are assessed using the separate marking grid in Appendix 1.	3	

Appendix 1

Spelling, punctuation and grammar and the use of specialist terminology (SPaG) assessment grid

<i>High performance 3 marks</i>
<ul style="list-style-type: none"> • Learners spell and punctuate with consistent accuracy • Learners use rules of grammar with effective control of meaning overall • Learners use a wide range of specialist terms as appropriate
<i>Intermediate performance 2 marks</i>
<ul style="list-style-type: none"> • Learners spell and punctuate with considerable accuracy • Learners use rules of grammar with general control of meaning overall • Learners use a good range of specialist terms as appropriate
<i>Threshold performance 1 mark</i>
<ul style="list-style-type: none"> • Learners spell and punctuate with reasonable accuracy • Learners use rules of grammar with some control of meaning and any errors do not significantly hinder overall • Learners use a limited range of specialist terms as appropriate
<i>0 marks</i>
<ul style="list-style-type: none"> • The learner writes nothing • The learner's response does not relate to the question • The learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning

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