



GCSE (9–1)

Geography A (Geographical Themes)

J383/02: The world around us

General Certificate of Secondary Education

Mark Scheme for November 2020

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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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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
L1	Level 1 Annotate end of answer with L1 for overall level.
L2	Level 2 Annotate end of answer with L2 for overall level.
L3	Level 3 Annotate end of answer with L3 for overall level.
L4	Level 4 Annotate end of answer with L4 for overall level.
DEV	Use for developed points for Q1d) 3b) 3c) Use to show developed/well developed ideas for Q 1e) 2b) 3e)
PLC	Use PLC to indicate place specific detail for Levels 2, 3 and 4, for Q1e) and Q2b)
BOD	Benefit of doubt, use to show mark(s) given where answer lacked clarity
IRRL	Significant amount of material which doesn't answer the question (with red colour highlighter)
✗	Use to indicate incorrect example or content for case study response (with red colour highlighter)
	Use to indicate valid example for case study response (green colour highlighter)
C	Communicate findings = 1 mark for Q1a)
BP	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.
SEEN	Noted but no credit given, use for answers worth two or more marks, where no credit is given

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.

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.

	A01	A02	A03
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)	Total annual precipitation	113 mm	3	3 x 1 (✓) for each correct number from Fig. 1
			Highest temperature	4°C (✓)		
			Lowest temperature	−28°C		
			Temperature range	32°C (✓)		
			Number of months with temperature below 0°C	9 (✓)		
		(ii)	Hot desert (✓)	1	1 x 1 (✓) for correct ecosystem Accept desert	
		(iii)	Temperatures below 0° C stop/inhibit plant growth (✓) 9/12 months below 0° C means a short growing season (✓) Sub- zero temperature mean that soil is frozen/permafrost (✓) Plants cannot take root/grow (✓) Sub-zero temperatures mean that precipitation is snow/ice (✓) cannot be absorbed by plant roots (✓) Low annual precipitation (✓) not enough moisture for plants (✓) Low sunlight (✓) photosynthesis inhibited for growth (✓) Lack of nutrients in soil (✓)	2	2 x 1 (✓) for each valid idea to explain why polar climate restricts plant growth Ideas must be linked to plant growth Development awarded with (✓) for further valid explanation of one idea/factor	
	(b)		Precipitation/rainfall is the source of water (✓) Some water lands on leaves and is evaporated back into the atmosphere (✓) Some water may soak into the soil (✓) Plant roots absorb moisture from rain which falls to ground(✓) Transpiration from plants returns water to the atmosphere(✓) Heat causes water vapour to rise and condense rapidly(✓) This causes heavy rain/convectional rain(✓) Convectional rain falls daily/regularly meaning that rainforests have a constant supply of water (✓) Rainforest plants recycle the water(✓) Water may leave the rainforest via run off/streamflow (✓)	4	4 x 1 (✓) for each valid explanation point about the water cycle in the tropical rainforest Development awarded with (✓) for further valid explanation or detail	

	(c)*	Case study: coral reef management Level 3 (6-8 marks) An answer at this level demonstrates thorough knowledge (AO1) of threats to biodiversity and attempts to manage the threats in a coral reef with reasonable understanding (AO2) of the sustainability of attempts to manage threats to biodiversity in a coral reef. There will be a thorough evaluation of the sustainability of attempts to manage threats to biodiversity in a coral reef (AO3). This will be shown by including well-developed ideas about the sustainability of attempts to manage threats to biodiversity in a coral reef. The answer must also include place-specific details for a coral reef. Amount of relevant place-specific detail determines credit within level. There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated. Level 2 (3-5 marks) An answer at this level demonstrates reasonable knowledge (AO1) of threats to biodiversity and attempts to manage the threats in a coral reef with reasonable understanding (AO2) of the sustainability of attempts to manage threats to biodiversity in a coral reef. There will be a reasonable evaluation of the sustainability of attempts to manage threats to biodiversity in a coral reef (AO3). This will be shown by including developed ideas about the sustainability of attempts to manage threats to biodiversity in a coral reef. Developed ideas but no place-specific detail credited up to middle of level.	Case study will be marked at 3 levels: Example must be a valid named coral reef Indicative Content Response will include information about the threats to the biodiversity of the coral reef and management ideas to mitigate these threats, with comments about the sustainability of the management ideas. A range of threats and methods may be considered, or one method in response to a specific threat. Threats could include over-fishing, pollution, tourism, climate change. Attempts to manage threats to the biodiversity of a coral reef could include national parks, marine parks, local/indigenous projects Ideas must be coherently linked to the named coral reef chosen. Accurate information such as location and size of reef, named places, named projects, data about threats and/or management success will be credited as place specific detail. No credit for speculative ideas Maximum of mid-Level 2 - 4 marks if no valid named coral reef given but valid ideas about coral reef interdependence. Example of well-developed ideas: Tourism and over fishing threaten the biodiversity of the Andros Barrier Reef in the Bahamas. In places the coral reef has been destroyed by the hulls and anchors of boats involved in the harvesting of sponges. Oil and chemical discharges from deep sea fishing boats have also damaged the reef and affected the biodiversity of the coral and fish species. The Andros West Side National Park was set up to manage part of the coral reef. Areas of the reef are now protected and activities such as fishing, scuba diving and collecting wildlife are controlled. In the Exuma Cays Land and Sea Park a coral nursery has been established to conserve threatened coral species prior to being planted back in the coral reef. These ideas are environmentally sustainable as they protect the biodiversity of the coral reef and its species
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		There is a line of reasoning presented with some structure. The information presented is in the most part relevant and supported by some evidence. Level 1 (1-2 marks) An answer at this level demonstrates basic knowledge (AO1) of threats to biodiversity and attempts to manage the threats in a coral reef with basic or no understanding (AO2) of the sustainability of attempts to manage threats to biodiversity in a coral reef. There will be a basic or no evaluation of the sustainability of attempts to manage threats to biodiversity in a coral reef (AO3). This will be shown by including simple ideas about the sustainability of attempts to manage threats to biodiversity in a coral reef. Named example only receives no place specific detail credit. 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. 0 marks No response worthy of credit.		for the future. This will also ensure that controlled tourism can continue to benefit the local people making this socially and economically sustainable. Example of developed ideas: Tourism and over fishing threaten the biodiversity of the Andros Barrier Reef in the Bahamas. The coral reef has been destroyed by the hulls and anchors of boats involved in the harvesting of sponges. Oil and chemical discharges from deep sea fishing boats have also damaged the reef and affected the biodiversity of the coral and fish species. The Andros West Side National Park was set up to manage part of the coral reef. Areas of the reef are now protected and activities such as fishing, scuba diving and collecting wildlife are controlled. These ideas are environmentally sustainable as they protect the biodiversity of the coral reef and its species for the future. This will also ensure that sustainable tourism can continue to benefit the local people. Example of simple ideas: On the Andros Reef coral has been damaged by the hulls and anchors of boats. Parts of the reef are now protected with controls of fishing and scuba diving. This will protect the biodiversity of the coral reef for the future.
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Question			Answer	Mark	Guidance
2	(a)	(i)	B: Dar es Salaam (✓)	1	(✓)
		(ii)	C: Cairo (✓)	1	(✓)
		(iii)	Push factors are negative features that cause people to leave less developed rural areas to improve their quality of life (✓) Pull factors are positive features that attract people to move to urban areas to improve their quality of life (✓) Poor quality farm land causes migration, people leave to avoid hunger/starvation for themselves and their families (✓) urban areas have more secure sources of food and/or alternative employment to earn a living (✓) A lack of health care services causes people to move to urban areas for better medical care (✓) to improve the health/life expectancy of themselves and their children (✓) People move to urban areas as there are better educational services and opportunities(✓) this is linked to better career prospects in urban areas(✓) leading to higher incomes and a better quality of life(✓) Young people are frustrated by the lack of services, opportunities and entertainment in rural areas (✓) urban areas are more interesting, exciting and dynamic places(✓) Large numbers of migrants, their increased life expectancy and higher fertility rates cause urban populations to grow rapidly(✓)	4	4 x 1 (✓) for each valid idea to explain how push and pull factors cause of rapid urbanisation in LIDCs Response must cover push and pull factors for full marks. Maximum of 3 marks for detailed coverage of push or pull factors only Development awarded with (✓) for further valid explanation or detail. Credit 'mirror points' about the same push/pull factor if part of a developed explanation. No credit for simple references to examples of push/pull factors, if not part of an explanation.

	(b)*		Case Study: LIDC or EDC development Level 4 (10-12 marks) An answer at this level will show comprehensive knowledge of political and social factors for a named LIDC or EDC (AO1), with comprehensive understanding of how political and social factors influenced the economic development of the country (AO2). There will be a comprehensive analysis of the influence of political development and social factors on the economic development of the country (AO3). This will be shown by including well-developed ideas about political and social factors and their influence on the economic development of the country. The answer must also include place-specific details about the named LIDC or EDC. Amount of place-specific detail determines credit with the level There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated. Level 3 (7-9 marks) An answer at this level will show thorough knowledge of political and social factors for a named LIDC or EDC (AO1), with thorough understanding of how political and social factors influenced the economic development of the country (AO2). There will be a thorough analysis of the influence of political development and social factors on the economic development of the country (AO3). This will be shown by including well-developed ideas about either political and social factors or their influence on the economic development of the country and developed ideas about the other question focus.	12	Case study will be marked 4 levels: Indicative Content Country must be a valid named LIDC or EDC as defined by the IMF. Political development will include information about the country's past and present government and how government policies have influenced economic development. Social factors will include access to education and healthcare provision and how they have influenced economic development. The analysis will cover the positive and negative effects of political and social factors on the country's economic development. Ideas and information given must be coherently linked to the named LIDC or EDC. Accurate information such as named governments or politicians, named programmes, data about education, health care and economic development will be credited as place specific detail. No credit given for other factors which influence economic development such as climate and international aid. Maximum of mid-Level 2 - 5 marks if no valid named LIDC or EDC given but how political and social factors influence economic development Example of well-developed ideas: In the past the Derg government had a negative influence on Ethiopia's economic development. They partly caused a famine which killed over a million people. The Derg were removed in the 1990s and Ethiopia now has a more democratic government. Programmes have been set up to help farmers to grow more crops to make them wealthier and improve food supplies. The government negotiated a peace treaty with Eritrea. This made the country more stable and

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		The answer must also include place-specific details about the named LIDC or EDC. Amount of place-specific detail determines credit with the level There is line of reasoning presented with some structure. The information presented is in the most-part relevant and supported by some evidence. Level 2 (4-6 marks) An answer at this level will show reasonable knowledge of political and social factors for a named LIDC or EDC (AO1), with reasonable understanding of how political and social factors influenced the economic development of the country (AO2). There will be a reasonable analysis of the influence of political development and social factors on the economic development of the country (AO3). This will be shown by including developed ideas about either political and social factors or their influence on the economic development of the country and simple ideas about the other question focus. Developed ideas but no place-specific details credited up to the middle of the level. The information has some relevance and is presented with limited structure. The information is supported by limited. Level 1 (1-3 marks) An answer at this level will show basic knowledge of political and social factors for a named LIDC or EDC (AO1), with basic understanding of how political and social factors influenced the economic development of the country (AO2). There will be a basic analysis of the influence of political development and social factors on the economic development of the country (AO3). This will be shown by including simple ideas about political and social factors and their influence on the economic development of the country.		encouraged outside investment to create jobs. The Education Development Plan has improved school attendance and opportunities for girls. This will create a more educated workforce for the future, but Ethiopia still has an adult literacy rate of 36 percent. Changes in politics and education have helped Ethiopia's economic development with an increase in GNI per capita of about 11 percent per year from 2005 onwards. However there are still people living in poverty today and Ethiopia's wealth per person is lower than most other Sub-Saharan countries. Example of developed ideas: The government had a negative influence on Ethiopia's economic development in the 1980s. Their farming policies partly caused the famine in 1984 which killed over a million people. Ethiopia now has a more democratic government. Farmers have been helped to grow more crops to make them wealthier and improve food supplies. The Education Development Plan has improved school attendance and opportunities for girls. This will create a more educated workforce for the future, but Ethiopia still has a high adult literacy rate. Changes in politics and education have helped to increase Ethiopia's GNI per capita. However, there are still many people living in poverty today. Example of simple ideas: The past government of Ethiopia partly caused a famine which killed over a million people. The present government have a development plan to end poverty. They have helped farmers to grow more food and more children now attend school. This will help the economic development of Ethiopia.	

			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. 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)		D: trap heat from the earth in the atmosphere (✓)	1	(✓)
	(b)	(i)	East Midlands (✓)	1	(✓)
		(ii)	23% (✓) is the correct answer 111,356 divided by 448,382 x 100 (DEV) = 22.97169	2	1 x 1 (✓) for correct answer 1 x 1 (DEV) for valid working out
		(iii)	Climate change is increasing global temperatures (✓) Higher temperatures cause increased melting of polar ice/ice caps (✓) Melt water from polar ice/ice caps causes sea levels to rise (✓)	3	3 x 1 (✓) for each valid idea to explain how rising sea levels can be a consequence of climate change

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		(iv)	Crop failures/decreasing crop yields (✓) People suffer from hunger/famine (✓) Increase in frequency and severity of river flooding (✓) Increase in frequency and severity of coastal flooding (✓) Increase in frequency and severity of severe weather events (✓), such as droughts (✓), tropical storms (✓) heat waves (✓) Increased migration of people linked to flooding and severe weather events (✓) Landslides/loss of housing as permafrost melts (✓) Loss of jobs such as tourism due to beach erosion (✓), ski resort closure (✓) Loss of wildlife habitats (✓) Decline in animal species/extinction (✓) Spread of tropical diseases towards temperate latitudes (✓) Access to natural resources in polar regions (✓) Open winter shipping lanes in Arctic Ocean (✓) Wider range of crops possible in temperate latitudes (✓)	2	2 x 1 (✓) for each valid possible consequence of climate change Two separate ideas needed for full marks Ideas can be social, economic or environmental No credit for detail or development of one idea No credit for coastal flooding or rising sea levels Credit positive consequences
	(c)	(i)	Frozen River Thames indicates that past temperatures were much colder than present day (✓) higher present day temperatures are evidence of climate change/global warming (✓) Painting may be supported with other images and /or written accounts from the same time (✓) Painting is an image which may not be accurate (✓) No indication of time period for duration of frozen River Thames (✓) May be an isolated or anomalous cold spell in 1684 not typical of the past climate (✓)	4	4 x 1 (✓) for each valid idea about the reliability of Fig. 4 as evidence for climate change Development awarded with (✓) for further explanation or detail of a valid idea
		(ii)	Ice cores from Antarctica or Greenland (✓) Composition of ice cores help scientists to calculate past atmospheric temperatures to compare with present (dev) Tree rings (✓) width of tree rings can indicate past temperatures, narrow = cooler, wider = warmer (dev)	2	1 x 1 (✓) for a valid source of evidence for climate change 1 x 1 (DEV) for explanation of how this provides evidence of climate change

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		Extent of polar ice coverage for sea ice/ice sheets/ice shelves (✓) reductions in the area of coverage indicate increased melting due to climate change (dev) Glacial retreat (✓) higher rates of retreat indicate increased melting due to climate change (dev) Diaries and written observations (✓) provide first hand evidence of the effects of past climate(s) to compare with the present day (dev)		
	(d)	Level 3 (5-6 marks) An answer at this level demonstrates thorough knowledge of the extreme weather conditions associated with tropical storms (AO1) with thorough understanding of the causes of the extreme weather conditions linked to tropical storms (AO2). This will be shown by including well-developed ideas about the causes of extreme weather conditions linked to tropical storms. Level 2 (3-4 marks) An answer at this level demonstrates reasonable knowledge of the extreme weather conditions associated with tropical storms (AO1) with reasonable understanding of the causes of the extreme weather conditions linked to tropical storms (AO2). This will be shown by including developed ideas about the causes of extreme weather conditions linked to tropical storms. Level 1 (1-2 marks) An answer at this level demonstrates basic knowledge of the extreme weather conditions associated with tropical storms (AO1) with basic understanding of the causes of		This will be marked using 3 levels: Indicative Content Extreme weather conditions associated with tropical storms are high winds and heavy rainfall. The causes of these extreme conditions are linked to air and sea temperatures, ocean depth and the processes of evaporation, condensation and precipitation. Case study knowledge of a tropical storm event is not required but can be credited as developed ideas if relevant. Example of well-developed ideas: The extreme conditions associated with tropical storms are high wind speeds and heavy rainfall. The most severe tropical storms can exceed 150 mph wind speeds and over 1,000mm of rain can fall in 24 hours. High wind speeds and heavy rainfall are caused by rapid evaporation and condensation. Tropical storms form over areas of warm, deep ocean water north and south of the equator. High temperatures cause rapid evaporation of the ocean water. The rising warm, moist air cools and condenses to form storm clouds up to 15,000 metres high. The spiralling, rising air around the eye generates high wind speeds and the storm clouds release heavy rainfall causing extreme weather conditions.

		the extreme weather conditions linked to tropical storms (AO2). This will be shown by including simple ideas about the causes of extreme weather conditions linked to tropical storms. 0 marks No response worthy of credit.		Example of developed ideas: The extreme conditions associated with tropical storms are high wind speeds and heavy rainfall. Tropical storms form over areas of warm, deep ocean water. High temperatures cause rapid evaporation of the ocean water. The rising warm, moist air cools and condenses to form storm clouds. The spiralling, rising air around the eye generates high wind speeds and heavy rainfall causing extreme weather conditions. Example of simple ideas: Rapid evaporation of deep ocean water causes the high wind speeds and heavy rainfall that are associated with tropical storms.
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APPENDIX 1

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

High performance 3 marks
• 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
Intermediate performance 2 marks
• 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
Threshold performance 1 mark
• 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
0 marks
• 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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