

GCSE (9–1)

Geography A (Geographical Themes)

J383/02: The World Around Us

General Certificate of Secondary Education

2021 Mark Scheme (DRAFT)

This is a DRAFT mark scheme. It has not been used for marking as this paper did not receive any entries in the series it was scheduled for. It is therefore possible that not all valid approaches to a question may be captured in this version. You should give credit to such responses when marking learner's work.

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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 |
| ? | Unclear |
| ✗ | Cross |
| ▲ | Omission mark |
| L1 | Level 1 |
| L2 | Level 2 |
| L3 | Level 3 |
| L4 | Level 4 |
| DEV | Development |
| PLC | Relevant place detail |
| BOD | Benefit of doubt |
| IRRL | Significant amount of material which doesn't answer the question |
| | Vertical way line |
| C | Communicate findings |
| BP | Blank page |
| SEEN | Noted but no credit given |

Subject-specific Marking Instructions

| | 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. | <p>Detailed and accurate interpretation through the application of relevant knowledge and understanding.</p> <p>Detailed and accurate analysis through the application of relevant knowledge and understanding.</p> <p>Detailed and substantiated evaluation through the application of relevant knowledge and understanding.</p> <p>Detailed and substantiated judgement through the application of relevant knowledge and understanding.</p> |
| Thorough | A range of accurate knowledge that is relevant to the question. | A range of accurate understanding that is relevant to the question. | <p>Accurate interpretation through the application of relevant knowledge and understanding.</p> <p>Accurate analysis through the application of relevant knowledge and understanding.</p> <p>Supported evaluation through the application of relevant knowledge and understanding.</p> <p>Supported judgement through the application of relevant knowledge and understanding.</p> |
| Reasonable | Some knowledge that is relevant to the question. | Some understanding that is relevant to the question. | <p>Some accuracy in interpretation through the application of some relevant knowledge and understanding.</p> <p>Some accuracy in analysis through the application of some relevant knowledge and understanding.</p> <p>Partially supported evaluation through the application of some relevant knowledge and understanding.</p> <p>Partially supported judgement through the application of some relevant knowledge and understanding.</p> |
| Basic | Limited knowledge that is relevant to the topic or question. | Limited understanding that is relevant to the topic or question. | <p>Limited accuracy in interpretation through lack of application of relevant knowledge and understanding.</p> <p>Limited accuracy in analysis through lack of application of relevant knowledge and understanding.</p> <p>Un-supported evaluation through lack of application of knowledge and understanding.</p> <p>Un-supported judgement through lack of application of knowledge and understanding.</p> |

| Question | | Answer | Mark | Guidance |
|----------|-------|---|------|--|
| 1 | (a) | <p>The wood rat is connected to different types of plant (✓) such as the prickly pear cactus. The plants could be food/water sources (✓) and this shows that there are different sources of food for the wood rat (✓).</p> <p>The wood rat is connected to other animals (✓) which would indicate that it is prey for these animals (✓). This means that the wood rat will be a food source for the hawk and rattlesnake (✓).</p> | 3 | <p>3 x 1 (✓) for each valid explanation point interpreted from Fig. 1</p> <p>Development awarded with (✓) for further valid explanation of one idea/factor</p> |
| | (b) | (i) 2,413 (✓) | 1 | (✓) No margin of error given |
| | | (ii) 28 (✓) | 1 | (✓) |
| | (iii) | <p>High temperatures all year round (✓) Narrow temperature range (✓) High total annual rainfall (✓) High rainfall for each month (✓)</p> | 1 | <p>1 x 1 (✓) for one valid feature Data not required No credit for high temperatures or high rainfall unless linked to the whole year</p> |
| | (c)* | <p>CASE STUDY – threats to coral reef biodiversity</p> <p>Level 4 (10-12 marks)</p> <p>An answer at this level demonstrates comprehensive knowledge of threats to the biodiversity of a named coral reef /reefs (AO1) with a comprehensive understanding of how human activity threatens the biodiversity of the coral reef /reefs (AO2). There will be a comprehensive evaluation of the impact of these threats (AO3) with a comprehensive judgement as to the extent of the threat of human activity to the biodiversity of the coral reef/reefs (AO3).</p> <p>This will be shown by including well-developed ideas about threats to the biodiversity of named coral reef(s) and the impact of the threats.</p> | 12 | <p>Case study will be marked using 4 levels: Ideas must be coherently linked to a valid named coral reef or reefs.</p> <p>Indicative Content</p> <p>Human activities which threaten the biodiversity of a coral reef/reefs could include tourism, over-fishing, pollution and climate change.</p> <p>There will be an evaluation of the comparative seriousness of the threats to support a judgement about the extent of the threat posed by human activity. Ideas about attempts to mitigate the threats may be a valid element of the evaluation and judgement.</p> <p>Ideas and information given must be coherently linked to the named coral reef (s) for place specific detail credit.</p> |

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| | | <p>The answer must also include place-specific details about the threats to the biodiversity of a named coral reef (s). 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 threats to the biodiversity of a named coral reef /reefs (AO1) with a thorough understanding of how human activity threatens the biodiversity of the coral reef /reefs (AO2). There will be a thorough evaluation of the impact of these threats (AO3) with a thorough judgement as to the extent of the threat of human activity to the biodiversity of the coral reef/reefs (AO3).</p> <p>This will be shown by including some well-developed ideas about either threats to the biodiversity of named coral reef (s) or the impact of the threats, with developed ideas for the other question focus.</p> <p>The answer must also include place-specific details about the threats to the biodiversity of the named coral reef (s). 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>Example of well-developed ideas:</p> <p>The Andros Barrier Reef is a coral reef in the Bahamas. Human activities are a threat to the biodiversity of the coral reef. Contact with the coral reef from the hulls and anchors of fishing boats damages and destroys the coral. The impact of fishing is managed by National Parks and Marine Parks in the Andros Barrier Reef which restrict this human activity and replenish species such as the land crab. Another human threat to biodiversity is bleaching caused by global warming. When the water is too warm, corals expel the zooxanthellae living in their tissues causing the coral to turn completely white. This stops the flow of nutrients and eventually the coral reef dies. However the causes of global warming are outside the Andros Barrier Reef and cannot be managed at a local scale. The threat of climate change causing warmer sea temperatures could completely destroy the coral reef. This means that human activity is a very serious threat to the future biodiversity of the Andros Barrier Reef.</p> <p>Example developed ideas:</p> <p>The Andros Barrier Reef is a coral reef in the Bahamas. Contact with the coral reef from fishing boats damages and destroys the coral. The impact of fishing is managed by National Parks and Marine Parks in the Andros Barrier Reef which restrict this human activity and replenish species such as the land crab. Another human threat to biodiversity is bleaching caused by global warming. When the water is too warm, the coral turns completely white. The threat of climate change could completely destroy the coral reef. This means that human activity is a very serious threat to the Andros Barrier Reef.</p> <p>Example of simple ideas:</p> <p>Overfishing and tourism can threaten the biodiversity of the Andros Barrier Reef. Bleaching caused by global warming is</p> |
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| | | <p>Level 2 (4-6 marks) An answer at this level demonstrates reasonable knowledge of threats to the biodiversity of a named coral reef /reefs (AO1) with a reasonable understanding of how human activity threatens the biodiversity of the coral reef /reefs (AO2). There will be a reasonable evaluation of the impact of these threats (AO3) with a reasonable judgement as to the extent of the threat of human activity to the biodiversity of the coral reef/reefs (AO3).</p> <p>This will be shown by including some developed ideas about either threats to the biodiversity of named coral reef (s) or the impact of the threats, with simple ideas for the other question focus.</p> <p>Developed ideas but no place-specific details 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 threats to the biodiversity of a named coral reef /reefs (AO1) with a basic understanding of how human activity threatens the biodiversity of the coral reef /reefs (AO2). There will be a basic evaluation of the impact of these threats (AO3) with a basic judgement as to the extent of the threat of human activity to the biodiversity of the coral reef/reefs (AO3).</p> | | more serious as this can kill the coral reef. This shows that human activity is a serious threat. |
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| | | | <p>This will be shown by including simple ideas about threats to the biodiversity of a named coral reef (s) and the impact of the threats.</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</p> <p>No response worthy of credit.</p> | | |
| | |  | <p>Spelling, punctuation and grammar and the use of specialist terminology (SPaG) are assessed using the separate marking grid in Appendix 1.</p> | | |

| Question | | Answer | Mark | Guidance |
|----------|------|--|------|--|
| 2 | (a) | B: A city considered to be important in the global economic system (✓) | 1 | (✓) |
| | (b) | <p>Housing availability (✓) as there are cramped, unstable, squatter style buildings (DEV).</p> <p>Transport provision (✓) as there are narrow congested roads (DEV) / lack of pavements/pedestrian walkways (DEV).</p> <p>Waste management (✓) has there is no evidence of sanitation for cramped unhygienic looking housing areas (DEV).</p> <p>Congested roads / standing traffic fumes (DEV) could cause air pollution (✓).</p> | 2 | <p>1 x 1 (✓) for interpreting a valid challenge evident in Fig. 2</p> <p>1 x 1 (DEV) for describing relevant evidence from Fig. 2 explaining how this is a challenge for the city</p> |
| | (ii) | <p>Higher wages/more job opportunities in the city (✓) attracts people wanting a higher standard of living (DEV).</p> <p>Better health care/education in the city (✓) means families can have a better quality of life (DEV).</p> <p>Stories of successful migrants filter back to rural areas (✓) encouraging more people to migrate (DEV).</p> <p>Cities become transport hubs (✓) which makes it easier for migrants to travel there (DEV).</p> | 4 | <p>2 x 2 (✓) for relevant pull factors</p> <p>2 x 2 (DEV) for explaining how each pull factor causes rapid urbanisation in LIDCs.</p> |
| | (c) | <p>The highest percentages for people with access to the internet come in Northern America and Europe (✓), with the lowest percentage being in Middle Africa (✓) (C)</p> | 3 | <p>2 x 1 (✓) for describing the pattern of internet access (✓)</p> <p>1 x 1 (C) for communicating the answer in an appropriate and logical order</p> |
| | (ii) | <p>Access to the internet through computers and mobile phones is linked to income (✓) as it shows individuals, families and business can afford these devices (✓).</p> <p>Infrastructure needed for internet access shows investment in and provision of modern technology (✓).</p> | 2 | <p>2 x 1 (✓) for each valid idea to explain how internet usage shows evidence of economic development</p> <p>Development awarded with (✓) for further valid explanation of one idea/factor</p> |

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| | | Demand for internet access from individuals/business is linked to the consumption and provision of goods and services (✓). | | |
| | (iii) | Life expectancy (✓) will be higher in advanced countries (ACs) as people live for longer (DEV) Literacy rate (✓) so those who can read and write depend on access to education, which will vary (DEV) HDI (✓) countries with scores closer to 1 are ranked higher, such as Norway (DEV) Standard of living (✓) will be lower where people lack access to wealth and material goods (DEV) GDP (✓) higher average rates show a healthier (or more sizeable) economy in the country (DEV) | 2 | 1 x 1 (✓) for stating a relevant indicator of development 1 x 1 (DEV) for outlining how the indicator shows evidence of uneven development |
| | (d) | <p>Level 3 (4-6 marks) An answer at this level will show thorough of knowledge of reasons for uneven development (AO1), with a thorough understanding of how reasons caused uneven development (AO2). This will be shown by including some well-developed ideas about reasons for uneven development.</p> <p>Level 2 (3-4 marks) An answer at this level will show reasonable of knowledge of reasons for uneven development (AO1), with a reasonable understanding of how reasons caused uneven development (AO2). This will be shown by including developed ideas about reasons for uneven development.</p> <p>Level 1 (1-2 marks) An answer at this level will show basic of knowledge of reasons for uneven development (AO1), with a basic</p> | 6 | <p>The answer will be marked using 3 levels</p> <p>Indicative Content: The response will include information about factors which cause or have caused uneven development. These could include: colonialism, trade, exploitation of resources, aid. Explanations will be coherently linked to uneven development at a global or regional scale. Case study knowledge is not required. Relevant place specific detail and examples will be credited as developed or well-developed ideas. Credit for ideas which explain uneven development within a specific LIDC, such as core-periphery.</p> <p>Example of well-developed ideas. Colonialism created wealth and economic development for European countries whilst preventing their African colonies and people from benefitting from this. Past colonialism is the basis for unfair international trade which causes uneven development. African LIDCs rely on exporting raw materials to ACs. In return they import manufactured goods at higher costs and suffer balance of payment deficits. LIDCs in Africa</p> |

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| | | <p>understanding of how reasons caused uneven development (AO2).</p> <p>This will be shown by including simple ideas about reasons for uneven development.</p> <p>0 marks</p> <p>No response worthy of credit.</p> | | <p>still have their resources and workers exploited by Trans-national corporations based in Europe and the USA. The TNCs make large profits at the expense of the LIDCs in which they operate. These factors make it difficult for LIDCs to develop and profit from their own resources which continues to cause uneven development.</p> <p>Example of developed ideas.</p> <p>Colonialism created wealth and economic development for European countries whilst preventing their African colonies and people from benefitting from this. Past colonialism is the basis for unfair international trade which causes uneven development. This makes it difficult for LIDCs to develop and profit from their own resources which continues to cause uneven development.</p> <p>Example of simple ideas.</p> <p>European countries developed by taking over Africa countries and using their resources for development. This caused uneven development.</p> |
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| Question | | Answer | Mark | Guidance |
|----------|-------|--|------|---|
| 3 | (a) | (i) B: Modern Warming (✓) | 1 | (✓) |
| | | (ii) C: 0.8 (✓) | 1 | (✓) |
| | (iii) | The enhanced greenhouse effect has increased the level of greenhouse gases in the atmosphere (✓). These gases allow heat from the sun to pass through the atmosphere to warm the earth (✓). These gases absorb/trap outgoing radiation from the earth to increase global temperatures (✓). The enhanced greenhouse effect has increased / increases the amount of heat trapped by the natural greenhouse effect (✓). | 3 | 3 x 1 (✓) for each valid idea to explain how the enhanced greenhouse effect contributes to global warming (✓) No credit for sources of greenhouse gases or named greenhouses gases. |
| | (b) | Volcanic activity / ash from eruptions (✓) Variations in energy from the sun / sun spot activity (✓) Changes in the Earth's orbit (✓) The Milankovitch cycles (✓) Precession / wobble in the Earth's orbit (✓) Eccentricity / change from circular to elliptical orbit (✓) Axial tilt / variation in Earth's axial tilt (✓) | 2 | 2 x 1 (✓) for valid natural causes of climate change. Must include two different valid causes. No credit for explanation or detail of one cause. |
| | (c) | Temperatures are higher over tropical oceans (✓) This causes high rates of evaporation over the oceans (✓) Rapid evaporation/pressure gradient creates high wind speeds (✓) Tropical oceans have depths of at least 50-60 metres (✓) This provides a vast source of water for evaporation (✓) Rapid evaporation and condensation create high levels of precipitation (✓) | 4 | 4 x 1 (✓) for each valid idea to explain why tropical storms only occur over tropical oceans Development awarded with (✓) for further ideas or explanation of how the idea is linked to the formation of tropical storms |

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| (d)* | <p>CASE STUDY: El Niño/La Niña drought event</p> <p>Level 3 (6-8 marks) An answer at this level demonstrates reasonable knowledge of the causes of a named drought event (AO1), with thorough understanding of the El Niño/La Niña extreme weather conditions leading to the drought (AO2). There is a thorough analysis of whether the extreme weather conditions of El Niño/La Niña were the only cause (AO3).</p> <p>This will be shown by including some well-developed ideas about the causes of the drought event including El Niño/La Niña extreme weather conditions and whether the extreme weather conditions of El Niño/La Niña were the only cause.</p> <p>The answer must also include place-specific details about the causes of the drought event. 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 2 (3-5 marks) An answer at this level demonstrates reasonable knowledge of the causes of a named drought event (AO1), with reasonable understanding of the El Niño/La Niña extreme weather conditions leading to the drought (AO2). There is a reasonable analysis of whether the extreme weather conditions of El Niño/La Niña were the only cause (AO3).</p> | 8 | <p>Case study will be marked using 3 levels: Example must be a valid named drought event caused by El Niño/La Niña.</p> <p>Indicative Content Response will include information about the development of the extreme weather conditions of El Niño/La Niña and how these conditions created a drought event. There will also be some coverage of other causes of the drought event, such as population and demand for water, water consumption and uses of water, water supply issues, water stress and conflict over water supply. There will be place specific information about the El Niño or La Niña location and conditions and the place affected by the drought event. No credit for information about the impact of the drought event on people or the environment</p> <p>Example of well-developed ideas From 2002 to 2009 Australia experienced a prolonged drought event known as the 'Big Dry'. During El Niño the easterly trade winds weakened and the waters off eastern Australia cooled to create high pressure with descending air and stable dry conditions. This period of hot, dry weather created the drought conditions which became known as the 'Big Dry' over central and eastern Australia. Two million people live in the Murray-Darling river basin in Eastern Australia. Domestic uses of water such as washing cars and filling swimming pools put pressure on scarce supplies of water during the drought. However the main cause of the drought was El Niño, this triggered the drought conditions. During normal weather conditions there is enough water for farming and the population who live there.</p> <p>Example of developed ideas</p> |
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| | | <p>This will be shown by including developed ideas about the causes of the drought event including El Niño/La Niña extreme weather conditions and whether the extreme weather conditions of El Niño/La Niña were the only cause.</p> <p>Developed ideas but no place-specific details credited up to middle of level.</p> <p>There is a line of reasoning presented with some structure. The information presented is in the most part relevant and supported by some evidence.</p> <p>Level 1 (1-2 marks) An answer at this level demonstrates basic knowledge of the causes of a named drought event (AO1), with basic understanding of the El Niño/La Niña extreme weather conditions leading to the drought (AO2). There is a basic analysis of whether the extreme weather conditions of El Niño/La Niña were the only cause (AO3).</p> <p>This will be shown by including simple ideas about the causes of the drought event including El Niño/La Niña extreme weather conditions and whether the extreme weather conditions of El Niño/La Niña were the only cause.</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>From 2002 to 2009 Australia experienced a drought event known as the 'Big Dry'. During El Niño the easterly trade winds weakened and the waters off eastern Australia cooled to create high pressure with stable dry conditions. This created the drought conditions which became known as the 'Big Dry' in Australia. Two million people live in the Murray-Darling river basin in Eastern Australia and with lots of people using the water it put pressure on supplies of water during the drought. However El Niño triggered the drought conditions. During normal weather conditions there is enough water for the people who live there.</p> <p>Example of simple ideas The 'Big Dry' drought in Australia was caused by El Niño. This led to a long period of hot, dry weather. There was not enough water for people.</p> |
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| | | | 0 marks No response worthy of credit. | | |
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Appendix 1: Spelling, punctuation and grammar and the use of specialist terminology (SPaG) assessment grid

| High performance 3 marks |
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| <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 |
| Intermediate performance 2 marks |
| <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 |
| Threshold performance 1 mark |
| <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 |
| 0 marks |
| <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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