GCE A LEVEL MARKING SCHEME

AUTUMN 2021

A LEVEL
GEOGRAPHY – COMPONENT 2
A110U20-1

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INTRODUCTION

This marking scheme was used by WJEC for the 2021 examination. It was finalised after detailed discussion at examiners' conferences by all the examiners involved in the assessment. The conference was held shortly after the paper was taken so that reference could be made to the full range of candidates' responses, with photocopied scripts forming the basis of discussion. The aim of the conference was to ensure that the marking scheme was interpreted and applied in the same way by all examiners.

It is hoped that this information will be of assistance to centres but it is recognised at the same time that, without the benefit of participation in the examiners' conference, teachers may have different views on certain matters of detail or interpretation.

WJEC regrets that it cannot enter into any discussion or correspondence about this marking scheme.

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GCE A LEVEL GEOGRAPHY

COMPONENT 2: GLOBAL SYSTEMS AND GLOBAL GOVERNANCE

AUTUMN 2021 MARK SCHEME

Guidance for Examiners

Positive marking

It should be remembered that learners are writing under examination conditions and credit should be given for what the learner writes, as opposed to adopting an approach of penalising him / her for any omissions. It should be possible for a very good response to achieve full marks and a very poor one to achieve zero marks. Marks should not be deducted for a less than perfect answer if it satisfies the criteria of the mark scheme.

The mark scheme for this component includes both point-based mark schemes and banded mark schemes.

Point-based mark schemes

For questions that are objective or points-based the mark scheme should be applied precisely. Marks should be awarded as indicated and no further subdivision should be made. Each creditworthy response should be in red ink. Annotations must reflect the mark awarded for the question. The targeted assessment objective (AO) is also indicated.

Banded mark schemes

For questions with mark bands the mark scheme is in two parts.

The first part is advice on the indicative content that suggests the range of concepts, processes, scales and environments that may be included in the learner's answers. These can be used to assess the quality of the learner's response. This is followed by an assessment grid advising on bands and the associated marks that should be given in responses that demonstrate the qualities needed in the three AOs; AO1, AO2 and AO3, relevant to this component. The targeted AO(s) are also indicated, for example AO2.1c.

Banded mark schemes are divided so that each band has a relevant descriptor. The descriptor for the band provides a description of the performance level for that band. Each band contains marks. Examiners should first read and annotate a learner's answer to pick out the evidence that is being assessed in that question. Once the annotation is complete, the mark scheme can be applied. This is done as a two-stage process.

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Banded mark schemes Stage 1 – Deciding on the band

Beginning at the lowest band, examiners should look at the learner's answer and check whether it matches the descriptor for that band. Examiners should look at the descriptor for that band and see if it matches the qualities shown in the learner's answer. If the descriptor at the lowest band is satisfied, examiners should move up to the next band and repeat this process for each band until the descriptor matches the answer.

If an answer covers different aspects of different bands within the mark scheme, a 'best fit' approach should be adopted to decide on the band and then the learner's response should be used to decide on the mark within the band. For instance if a response is mainly in band 2 but with a limited amount of band 3 content, the answer would be placed in band 2, but the mark awarded would be close to the top of band 2 as a result of the band 3 content.

Examiners should not seek to mark candidates down as a result of small omissions in minor areas of an answer.

Banded mark schemes Stage 2 – Deciding on the mark

Once the band has been decided, examiners can then assign a mark. During standardising (marking conference), detailed advice from the Principal Examiner on the qualities of each mark band will be given. Examiners will then receive examples of answers in each mark band that have been awarded a mark by the Principal Examiner. Examiners should mark the examples and compare their marks with those of the Principal Examiner.

When marking, examiners can use these examples to decide whether a learner's response is of a superior, inferior or comparable standard to the example. Examiners are reminded of the need to revisit the answer as they apply the mark scheme in order to confirm that the band and the mark allocated is appropriate to the response provided.

Indicative content is not exhaustive, and any other valid points must be credited. In order to reach the highest bands of the mark scheme a learner need not cover all of the points mentioned in the indicative content but must meet the requirements of the highest mark band. Where a response is not creditworthy, that is contains nothing of any significance to the mark scheme, or where no response has been provided, no marks should be awarded

Where the specialised concepts are integral to knowledge and understanding, they are underlined in the indicative content.

The mark scheme reflects the layout of the examination paper. Mark questions 1, 2 and, either 3 or 4 in Section A. Mark questions 5, 6 and, either 7 or 8 in Section B. Mark one question in Section C.

Be prepared to reward answers that give **valid and creditworthy** responses, especially if these do not fully reflect the 'indicative content' of the mark scheme.

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Section A: Global Systems – Water and Carbon Cycles

1. (a) Use **Figure 1** to compare seasonal variations in climate for the two grassland areas.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
					5		**5**

Indicative content

AO3 content includes using the two sets of data in **Figure 1** to compare the extent of seasonal variations for the two temperate grassland areas.

- Both have a warmer, wetter season. This extends roughly from May until September in Saskatoon
- Saskatoon's variations are more extreme, with a stronger precipitation contrast between January and July
- Responses may manipulate data to provide an estimate of annual range(s) of temperatures
- Semipalatinsk has a slightly more complex rainfall pattern, with higher levels in June-July (summer) but also in November (late Autumn)
- Both have a summer maxima for precipitation.

Marking guidance

Near the upper end, answers that score well will make sustained and specific reference to the resource provided, carrying out an explicit analysis of the strength of the relationship.

Near the lower end, answers will display limited use of the resource with limited or no comparison.

Award the marks as follows:

Band	**Marks**	
3	**4-5**	Well-developed comparison of the two climates. Sustained use of data from the resource to support a seasonal analysis.
2	**2-3**	Partial comparison of the two climates (may be implied not explicit). Some use of data from the resource to support a seasonal analysis.
1	**1**	Limited statements with little or no use of data from the resource.
	0	Response not creditworthy or not attempted.

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1. (b) Outline impacts of human activity on the relative size of carbon stores in the tropical rainforest biome.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
	5						**5**

Indicative content

Likely AO1 content includes outlining of how:

- Deforestation removes the biomass carbon store but may leave a much larger litter store (debris from logging. etc.)
- However, sustainable forestry approaches/ecotourism can limit changes in store sizes
- Forest removal combined with the region's heavy precipitation (3000mm per annum) results in heavy leaching and removal of soil nutrients / soil itself in runoff. The result is a decreased soil nutrient/carbon store.

Credit any other valid points.

Marking guidance

Near the upper end, answers that score well will focus the explanation on the relative size of different carbon stores (most likely with reference to the Gersmehl nutrient cycle). Band 1-2 responses are more likely to be preoccupied with simple forest and soil losses without maintaining a sustained focus on carbon storage or considering other impacts (litter store changes; or changes in more sustainably managed or re-afforested areas).

Award the marks as follows:

Band	**Marks**	
3	**4-5**	Developed outlining of the relative size of two or more carbon stores. Applies developed knowledge and understanding of human activity's impact on the tropical rainforest biome and carbon cycle processes.
2	**2-3**	Partial outlining of the relative size of one or two carbon stores. Partial / partially accurate knowledge and understanding of human activity's impact on the tropical rainforest biome and/or carbon cycle processes.
1	**1**	Limited or no outlining of carbon storage. Limited or no knowledge and understanding of tropical rainforest.
	0	Response not creditworthy or not attempted.

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2. (a) (i) Use **Figure 2** to analyse how soil moisture condition varies for different rock types.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
					4		**4**

Indicative content

AO3 content includes analysing the data shown in **Figure 2**, which shows the presence/absence of saturated conditions at sites with four rock types (in two categories – impermeable and permeable).

- Impermeable rock types (granite, clay) are usually saturated
- Permeable chalk shows almost no saturation – 7/8 are unsaturated
- Permeable sandstone shows no clear pattern – 3 are saturated, 3 are not
- Overall, a generally strong influencing relationship can clearly be seen: saturation at most impermeable sites while the majority of permeable sites are not saturated.

Marking guidance

Near the upper end, answers that score well will make sustained and specific reference to the influence or rock type which can be inferred, including the strength of any links/relationship.

Near the lower end, answers will display limited use of the resource with limited or no overview of the influence of rock types.

Award the marks as follows:

Band	**Marks**	
3	**4**	Well-developed analysis of all rock types/categories. Sustained use of data from the resource to support an analysis of where saturation does and does not occur.
2	**2-3**	Partial analysis of rock types/categories. Some use of data from the resource to support an analysis of where saturation does and does not occur.
1	**1**	Limited statements with little or no use of data from the resource.
	0	Response not creditworthy or not attempted.

2. (a) (ii) State an appropriate statistical method to test for a relationship between rock type and soil moisture condition.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
Award 1 mark for any of the following					1		**1**
Chi-square / Chi-squared test (also credit Mann-Whitney).							

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2. (b) Suggest two reasons why soil saturation has occurred at some sites with a permeable rock type in **Figure 2**.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
		5					**5**

Indicative content

Likely AO2 applied knowledge and understanding content should focus on effects of possible reasons/factors explaining the pattern shown in Figure 2. Credit logical connections established between, for example, altitude, relief, vegetation, human factors.

- Permeable sites might be at the base of a slope - receiving sites for runoff
- Permeable rock may be underlain by an impermeable rock layer, limiting percolation
- A lack of vegetation and interception cover could result in water entering the soil and groundwater system at a faster rate than it can be transmitted
- Permeable sites might be at high latitude – less evaporation and greater inputs into soil stores
- The soil type may be poor at transmitting water / prone to waterlogging irrespective of rock type below (clay soils; soils with impermeable horizons / hard pans; trampled soils)
- In cold regions, permafrost might help explain saturation of surface layers.

Credit any other valid points. Arguments relating to differing lengths of rainfall/climatic variations may be credited provided candidate explains the catchment is large enough to have a range of climates.

Marking guidance

Near the upper end, answers that score highly will provide more detailed explanations using appropriate terminology and concepts, and will address two or more reasons.

Award the marks as follows:

Band	**Marks**	
3	**4-5**	Two well-explained reasons for soil saturation in permeable places. Applies developed knowledge and understanding of drainage basin characteristics and processes.
2	**2-3**	One or two partially explained reasons for soil saturation in permeable places. Some application of knowledge and understanding of drainage basin characteristics and processes.
1	**1**	One limited explanation of soil saturation. Fragmented or no applied knowledge and understanding.
	0	Response not creditworthy or not attempted.

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3. Discuss the interdependence of vegetation and soil within the water and carbon cycles.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
	10			10			**20**

Indicative Content
This is not prescriptive and candidates are not expected to cover all points for full marks. Credit other valid points not contained in the indicative content.

AO1
Candidates will provide a description and explanation of how vegetation and soil are linked and ultimately interdependent elements within the water and carbon cycles. The focus should therefore be upon physical processes which control the (re)cycling of water and carbon. This could include:

- water uptake from the soil by plant roots
- regulation of water's entry into the soil by interception cover thereby protecting soil from surface runoff (2.1.3)
- carbon transfer to the soil via leaf litter and root decay in different biomes
- carbon sequestration / carbon uptake by vegetation from the soil
- role of vegetation in the development of peat soils.

AO2
Candidates demonstrate application of knowledge and understanding through synthesis (relationships and connections) and evaluation. This may include:

- discussion of what is meant by interdependence (mutual reliance and associated interrelations and connections)
- discussion of how interdependent relationships vary in different contexts or biomes
- discussion of interdependence between the water cycle and carbon cycle
- reflection on the importance/value of this interdependence for long-term system operations and equilibrium
- reflection on ways in which interdependent relationships have been threatened / harmed / changed over time by human intervention or long-term natural changes.

Near the upper end, answers that score highly will show application of knowledge and understanding by explaining and discussing complex ideas, synthesising information, and coming to rational conclusions which discuss vegetation-soil interdependence using varying criteria and perspectives.

Responses in the middle range will show some application of knowledge and understanding to provide some discussion and synthesis, prior to drawing partially supported conclusions.

Near the lower end, responses provide very limited application of knowledge and understanding of physical systems to provide little or no discussion of the statement.

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Award the marks as follows:		
	AO1 (10 marks)	**AO2.1c (10 marks)**
Band	*Description and explanation of vegetation and soil in the carbon cycle and water cycle.*	*Discussion of interdependence of vegetation and soil.*
3	**7-10 marks** Demonstrates detailed and accurate knowledge and understanding of all elements of the question. Makes use of appropriate and well-developed examples and may include well-annotated diagram(s).	**7-10 marks** Applies knowledge and understanding to produce a thorough and coherent evaluation that is supported by evidence. Applies knowledge and understanding of water and carbon cycles to thoroughly and coherently discuss interdependence. Balanced coverage of the main issues leading to substantiated conclusions.
2	**4-6 marks** Demonstrates accurate knowledge and understanding of most elements of the question. Makes some use of examples and may include simple diagram(s).	**4-6 marks** Applies knowledge and understanding to produce a coherent but partial discussion. Applies knowledge and understanding of water and carbon cycles in a partially balanced way.
1	**1-3 marks** Demonstrates limited knowledge and understanding of some element of the question. Makes limited or no use of examples and may include a simple diagram.	**1-3 marks** Applies knowledge and understanding to produce a limited discussion. Applies knowledge and understanding of water and carbon cycles in an unbalanced way (one may be absent).
	0 marks Response not creditworthy or not attempted.	**0 marks** Response not creditworthy or not attempted.

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4. Discuss the varied effects of heavy precipitation on water and carbon stores at the local scale.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
	10			10			**20**

Indicative Content
This is not prescriptive and candidates are not expected to cover all points for full marks. Credit other valid points not contained in the indicative content.

AO1
Candidates will provide a description and explanation of possible effects of heavy rainfall on local (credit regional/national, but not global) carbon and water cycles stores. This may include:

- replenishment of drainage basin water stores
- replenishment of aquifers
- rainfall's role in maintaining the health of vegetation stores
- removal of carbon by water cycle movements e.g. leaf litter removal
- heavy rainfall and peat formation.

AO2
Candidates demonstrate application of knowledge and understanding through synthesis and evaluation. This may include:

- discussion of heavy precipitation as a cause of *positive* and *negative* impacts on system storage (including discussion of effects experienced by humans)
- discussion of prolonged precipitation over *centuries or millennia* e.g. carbonation of rocks
- discussion of varied effects in *contrasting contexts* (different biomes, altitudes, etc)
- reflection on the *meaning* of 'heavy precipitation' (high-duration or high-intensity precipitation, and the resulting effects of both for system stores; rain or snowfall, and impacts of snow on storage)
- reflection on cascading / knock-on effects within systems comprised of linked elements/stores.

Near the upper end, answers that score highly will show application of knowledge and understanding by explaining complex ideas, synthesising information, and coming to rational conclusions which discuss the varied effects, perhaps over varying timescales, using varying contexts and perspectives.

Responses in the middle range will show some application of knowledge and understanding to provide some discussion and synthesis, prior to drawing partially supported conclusions.

Near the lower end, responses provide very limited application of knowledge and understanding of physical systems to provide little or no discussion of the statement.

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Award marks as follows:		
	AO1 (10 marks)	**AO2.1c (10 marks)**
Band	*Description and explanation of local water and carbon stores affected by precipitation.*	*Discussion of varied local system effects using a range of contexts/timescales/criteria.*
3	**7-10 marks** Demonstrates detailed and accurate knowledge and understanding of all elements of the question. Makes use of appropriate and well-developed examples and may include well-annotated diagram(s).	**7-10 marks** Applies knowledge and understanding to produce a thorough and coherent discussion that is supported by evidence. Applies knowledge and understanding of water and carbon cycles to thoroughly and coherently discuss varied local effects. Balanced coverage of the main issues leading to substantiated conclusions.
2	**4-6 marks** Demonstrates accurate knowledge and understanding of most elements of the question. Makes some use of examples and may include simple diagram(s).	**4-6 marks** Applies knowledge and understanding to produce a coherent but partial discussion. Applies knowledge and understanding of water and carbon cycles in a partially balanced way.
1	**1-3 marks** Demonstrates limited knowledge and understanding of some element of the question. Makes limited or no use of examples and may include a simple diagram.	**1-3 marks** Applies knowledge and understanding to produce a limited discussion. Applies knowledge and understanding of water and carbon cycles in an unbalanced way (one may be absent).
	0 marks Response not creditworthy or not attempted.	**0 marks** Response not creditworthy or not attempted.

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Section B: Global Governance: Change and Challenges

5. (a) Analyse the pattern of population change shown in **Figure 3**.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
					5		**5**

Indicative content

Likely AO3 content includes analysis of the changes to the cities shown in Figure 3 and the possible pattern(s) which can be evidenced.

- There is considerable variation between and within regions, though all are growing
- Different regional trends can be identified (West Africa, Southern Africa, etc.)
- Cities with the largest number of people do not always have the highest growth rates
- Some very large cities with a relatively small growth rate are nonetheless projected to gain most new residents on account of their larger baseline population, notably Lagos
- West Africa shows marked variations in percentage growth from city to city, whereas in other African regions any variations are less notable.

Marking guidance

Near the upper end, answers that score well will analyse the resource thoroughly and will reflect explicitly on different projected growth rates (%) and numbers (millions). They may also analyse not just the pattern of change *across* Africa as a whole but also any variations *within* particular regions.

Near the lower end, answers will display limited use of the resource with limited or no analysis and interpretation, merely unselective data description.

Award the marks as follows:

Band	**Marks**	
3	**4-5**	A well-developed analysis of the pattern(s) (may provide a developed analysis of change between *and* within regions, using numbers *and* percentages). Wide use of the resource as evidence.
2	**2-3**	A partial analysis of the pattern(s). Partial use of the resource as evidence.
1	**1**	Limited statements with little or no use of evidence.
	0	Response not creditworthy or not attempted.

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5. (b) Outline **one** social challenge and **one** economic benefit which rural-urban migration creates for large cities in developing countries.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
	5						**5**

Indicative content

Likely AO1 content includes a range of costs and benefits.

Social challenge

- Provision of housing – in some case there are half a million new arrival per year; formal planning/ provision of housing on this scale is impossible, even for higher-income emerging economies
- Education / healthcare provision – local services rely on tax base of city residents, but many are informal / minimum wage earners and levying a charge is not always possible/desirable.

Economic benefit

- Rural migrant may have initially low expectations and are prepared to work for very low wages – this is the labour force which fuels the growth of MNC supply chains e g Rana Plaza in Dhaka.

Marking guidance

Near the upper end, answers that score highly will provide more detailed suggestions using appropriate global systems/governance terminology and possibly varied contexts.

Award the marks as follows:

Band	**Marks**	
3	**4-5**	Well-developed suggestions of one social challenge and one economic benefit. Applies developed knowledge and understanding of rural-urban migration into large cities.
2	**2-3**	Partial suggestions of one social challenge and/or one economic benefit. Some application of knowledge and understanding of rural-urban migration into large cities.
1	**1**	One limited suggestion of a social challenge or economic benefit. Fragmented or no applied knowledge and understanding.
	0	Response not creditworthy or not attempted.

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6. (a) Use **Figure 4** to analyse the changes over time in G-group membership.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
					5		**5**

Indicative content

Likely AO3 content includes analysis of G-group membership changes over time.

- Overall growth in the number of groups
- Increase in the size of the groups as more members join (thus G7 originally had 6 members)
- G8 group reduced in size to become G7 again – only example of reduced membership / a group which has ceased to be
- Changing mix of HIC, EE and LIC countries. Originally HICs only belonged to the G7/8, but the G20 has more recently combined HICs and EEs
- The expansion of G7 to G20 suggests a more inclusive/ representative/ democratic membership model of global governance.

Marking guidance

Near the upper end, answers that score well will analyse the resource thoroughly and may reflect on changes both in the number and nature of groups/member countries.

Near the lower end, answers will display limited use of the resource with limited or no analysis and interpretation, merely unselective data description.

Award the marks as follows:

Band	Marks	
3	**4-5**	A well-developed analysis of two or more ways in which membership has changed (most likely *number* of *groups* and *types of country*). Wide use of the resource as evidence.
2	**2-3**	A partial analysis of one or two ways in which membership has changed. Partial use of the resource as evidence.
1	**1**	Limited statements with little or no use of evidence.
	0	Response not creditworthy or not attempted.

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6. (b) Suggest why agreements promoting the sustainable use of Earth's oceans need the support of G20 countries.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
			5				**5**

Indicative content

Likely AO2 content will link specific agreements / treaties (or the general/hypothetical need for stronger agreements to protect a threatened global commons) with the power/influence/impacts of G20 countries (all of them, or particular examples e.g. Japan, China)

- G-20 represents world's largest consumer societies and around 4 billion people – their support is essential if global commons is to be protected e.g. plastic pollution
- China and India especially have great influence in terms of numbers; USA is the largest high-income consumer society. Their support is therefore vital if fish stocks are to be conserved
- Lack of support by any single G20 country can weaken a global agreement e.g. Japanese stance of whaling
- G20 can help set a global agenda which G77 and other will follow – soft power of global superpowers when it come influencing others, leading by example.

Marking guidance

Near the upper end, answers may show developed knowledge and understanding of sustainable ocean management agreements/issues, and why support from powerful/influential countries in essential for the creation of strong global governance.

Answers near the lower end may have very little knowledge and understanding of the GCs.

Award the marks as follows:

Band	**Marks**	
3	**4-5**	Developed outlining of specific or general agreements promoting sustainable use of Earth's oceans. Sustained focus on the importance of support from some/all G20 countries.
2	**2-3**	Partial outlining of specific or general agreements promoting sustainable use of Earth's oceans. Partial focus on the importance of support from some/all G20 countries.
1	**1**	Limited outlining of agreements promoting sustainable use of Earth's oceans. Limited /no focus on G20 countries.
	0	Response not creditworthy or not attempted.

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7. "Before the arrival of the internet, the world's countries and communities were far less connected than they are today." Evaluate this statement.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
	10			10			**20**

Indicative Content

This is not prescriptive and candidates are not expected to cover all points for full marks. Credit other valid points not contained in the indicative content.

AO1
Candidates will provide a description and explanation of connectivty between places on account of internet technologies. This may encompass:

- an overview of global flows including goods, money, people, ideas
- technology, migration and remittances
- seafloor cable data networks and their uses
- diaspora community linkages
- raising environmental awareness (social media, etc.).

AO2
Candidates demonstrate application of knowledge and understanding through synthesis and evaluation. This may include:

- evaluation of connections established prior to the internet e.g. naval and trade networks
- evaluation of past migration movements and cultural diffusion
- evaluation of the extent to which some communities are still not connected e.g. remote tribes
- reflection on the different kinds of connectivity (trade, culture, ideas) and the extent to which the internet has played a causal role in creating linkages
- reflection on the scale difference between connected countries and connected local communities.

Near the upper end, answers that score highly will show application of knowledge and understanding by explaining complex ideas, synthesising and evaluating information about countries/communities/connectivity, and coming to rational conclusions about how far the internet has given rise to new connections or merely accelerated/deepened existing links.

Responses in the middle range will show some application of knowledge and understanding of countries/communities/connectivity to provide some evaluation and synthesis, prior to drawing partially supported conclusions.

Near the lower end, responses provide very limited application of knowledge and understanding of the main issues/ideas to provide little or no evaluation of the statement.

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Award the marks as follows:		
	AO1 (10 marks)	**AO2.1c (10 marks)**
Band	*Description and explanation of connectivty between places on account of internet technologies*	*Evaluation of how far countries and communities are now connected in ways they were not in the past.*
3	**7-10 marks** Demonstrates detailed and accurate knowledge and understanding of all elements of the question. Makes use of appropriate and well-developed examples and may include well-annotated diagram(s).	**7-10 marks** Applies knowledge and understanding of migration and ocean governance to thoroughly and coherently evaluate the idea of connectivity. Balanced coverage of the main issues leading to substantiated conclusions.
2	**4-6 marks** Demonstrates accurate knowledge and understanding of most elements of the question. Makes some use of examples and may include simple diagram(s).	**4-6 marks** Applies knowledge and understanding to produce a coherent but partial evaluation. Applies knowledge and understanding of migration and ocean governance in a partially balanced way.
1	**1-3 marks** Demonstrates limited knowledge and understanding of some element of the question. Makes limited or no use of examples and may include a simple diagram.	**1-3 marks** Applies knowledge and understanding to produce a limited evaluation. Applies knowledge and understanding of migration and ocean governance in an unbalanced way (one may be absent).
	0 marks Response not creditworthy or not attempted.	**0 marks** Response not creditworthy or not attempted.

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8. "Global governance has done nothing to tackle crises and injustices in those places where help is most needed." Evaluate this statement, referring to both migration and ocean governance in your answer.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
	10			10			**20**

Indicative Content

This is not prescriptive and candidates are not expected to cover all points for full marks. Credit other valid points not contained in the indicative content.

AO1
Candidates will provide a description and explanation of different real and/or perceived crises/injustices linked with migration and ocean governance, and how far global governance has been able to mitigate these issues. This may include:

- actions to tackle injustices for refugees
- migration as a cause of conflict, and policies to manage migration
- governance of piracy hotspots
- attempts to manage injustices linked with uneven access to, and ownership of, oceans and their resources
- management of urban areas in receipt of displaced people / land grab movements.

AO2
Candidates demonstrate application of knowledge and understanding through synthesis and evaluation. This may include:

- evaluation of successes and failures according to differing criteria and/or perspectives
- evaluation of what is meant by global governance, crisis and injustice (the underlying assumptions of the statement)
- evaluation of which injustices/places are in most need of help/intervention, and why
- reflection on the scale difference between injustices for entire countries or local communities
- reflection on the different kinds of crisis and injustice (legal, economic, moral dimensions) and the extent to which global governance has tackled these successfully.

Near the upper end, answers that score highly will show application of knowledge and understanding by explaining complex ideas, synthesising and evaluating information about migration/oceans, and coming to rational conclusions about how far global governance has tackled the important issues.

Responses in the middle range will show some application of knowledge and understanding of migration/oceans to provide some evaluation and synthesis, prior to drawing partially supported conclusions.

Near the lower end, responses provide very limited application of knowledge and understanding of migration/oceans to provide little or no evaluation of the statement.

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Award the marks as follows:		
	AO1 (10 marks)	**AO2.1c (10 marks)**
Band	*Description and explanation of crises and injustices in migration/ocean contexts.*	*Evaluation of which places need help most, and how far global governance has worked*
3	**7-10 marks** Demonstrates detailed and accurate knowledge and understanding of all elements of the question. Makes use of appropriate and well-developed examples and may include well-annotated diagram(s).	**7-10 marks** Applies knowledge and understanding of migration and ocean governance to thoroughly and coherently evaluate crises, injustices and governance interventions Balanced coverage of the main issues leading to substantiated conclusions.
2	**4-6 marks** Demonstrates accurate knowledge and understanding of most elements of the question. Makes some use of examples and may include simple diagram(s).	**4-6 marks** Applies knowledge and understanding to produce a coherent but partial evaluation. Applies knowledge and understanding of migration and ocean governance in a partially balanced way.
1	**1-3 marks** Demonstrates limited knowledge and understanding of some element of the question. Makes limited or no use of examples and may include a simple diagram.	**1-3 marks** Applies knowledge and understanding to produce a limited evaluation. Applies knowledge and understanding of migration and ocean governance in an unbalanced way (one may be absent).
	0 marks Response not creditworthy or not attempted.	**0 marks** Response not creditworthy or not attempted.

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Section C: Challenges of the 21st Century

9. Discuss possible landscape changes affecting Greenland and other places as a result of the long-term melting of Greenland's ice.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
	8			12	10		**30**

Within the answer to question 9, candidates should use the resources in Figures 5, 6, 7 and 8 and apply their knowledge and understanding from across the whole specification in order to develop a sustained line of reasoning which is coherent, relevant, substantiated and logically structured.
The indicative content is not prescriptive and candidates are not expected to cover all points for full marks. Credit other valid points not contained in the indicative content.

AO3 may include:

- Analysis and interpretation of the projected environmental changes for Greenland shown in Figure 5
- Analysis and interpretation of the projected impacts of Greenland ice loss for physical systems shown or implied in Figure 6
- Analysis and interpretation of the distribution of coastal sea-level rises shown in Figure 7
- Possible landscape changes attributable to resource exploitation can be inferred from Figure 8
- Synthesis of Figures e.g. what the impact of a 7-metre rise (Figure 6) would be on Figure 7.

AO1 content includes knowledge and understanding of the landscape changes shown or implied in Figures 5-8, or other landscape changes studied as part of the course. This may include:

- System changes over time (C1 - landscapes)
- Specific landscape changes affecting Greenland's interior or other glacial places (ice ablation; moraines and till) or different coastlines (eustatic rises; processes of coastal erosion) (C1 - landscapes)
- Water and carbon cycle changes - warming climate / cryosphere loss (C2 – water and carbon cycles)
- Positive feedback effects (C2 – water and carbon cycles).

AO2 requires candidates demonstrate application of knowledge and understanding through discussion of how far flows have negative environmental impacts. Responses may include:

- Discussion of the spatial pattern of landscape changes resulting from sea-level rise
- Discussion of the time-scale for changes (decades to millennia) and the extent which ecosystems or societies may adapt, either in Greenland or coastal areas elsewhere
- Discussion of the rate of change linked with possible feedback accelerations
- Discussion of the costs and benefits/value of any landscape changes in Greenland
- Reflecting critically on different aspects of landscape change (landforms, ecosystems, settlement)
- Reflecting critically using other specialised geographic concepts such as equilibrium, threshold, sustainability and resilience.

The question requires that candidates progress beyond describing changes. At the upper end, answers that score highly will show application of knowledge and understanding by critically discussing (i.e. evaluating) the changes they have chosen to write about, synthesising information, and coming to rational conclusions which draw across the Specification.

Responses in the middle range will show some application of knowledge and understanding to provide some evaluation and synthesis from across the specification, prior to drawing partially supported conclusions.

Lower end responses provide very limited application of knowledge and understanding of possible impacts to provide little evaluation.

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Award the marks as follows:			
	AO1 [8 marks]	**AO2.1c [12 marks]**	**AO3 [10 marks]**
Band	*Knowledge and understanding of landscape changes e.g. those linked with cryosphere loss and/or sea-level rise.*	*Discussion of different possible aspects, timescales, contexts or consequences of landscape changes.*	*Landscape changes in Figures 5-8; extended writing skills.*
3	**7-8 marks** Demonstrates detailed and accurate knowledge and understanding of all elements of the question. Makes use of appropriate and well-developed examples and may include well-annotated diagram(s).	**9-12 marks** Applies knowledge and understanding to produce a coherent, thorough and sustained evaluation. Applies knowledge and understanding of Specification themes in a broad and well-balanced way.	**8-10 marks** Well-developed analysis of Figures 5-8 with sustained and detailed use of data. Well-constructed, coherent and logical arguments and substantiated conclusions.
2	**4-6 marks** Demonstrates accurate knowledge and understanding of most elements of the question. Makes some use of examples and may include simple diagram(s).	**5-8 marks** Applies knowledge and understanding to produce a coherent but partial evaluation. Applies knowledge and understanding of Specification themes in a narrower and partially balanced way.	**4-7 marks** Partial analysis of Figures 5-8 with some detailed use of data. Partial arguments and conclusions have been attempted.
1	**1-3 marks** Demonstrates limited knowledge and understanding of some element of the question. Makes limited or no use of examples and may include a simple diagram.	**1-4 marks** Applies knowledge and understanding to produce a limited evaluation. Applies limited knowledge and understanding of Specification themes in an unbalanced way.	**1-3 marks** Limited analysis of Figures 5-8 with some limited use of data. Limited arguments and conclusions, if any.
	0 marks Response not creditworthy or not attempted.	**0 marks** Response not creditworthy or not attempted.	**0 marks** Response not creditworthy or not attempted.

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10. Discuss possible political and economic benefits the USA might gain from acquiring the territory of Greenland.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
	8			12	10		**30**

Indicative Content

Within the answer to question 9, candidates should use the resources in Figures 5, 6, 7 and 8 and apply their knowledge and understanding from across the whole specification in order to develop a sustained line of reasoning which is coherent, relevant, substantiated and logically structured.
The indicative content is not prescriptive and candidates are not expected to cover all points for full marks. Credit other valid points not contained in the indicative content.

AO3 may include:

- Analysis and interpretation of the political and economic rationale for US foreign policy, and any anticipated benefits, in Figure 8
- Analysis and interpretation of the projected environmental changes for Greenland shown in Figure 5 (increased accessibility, land for settlement, etc.)
- Analysis and interpretation of changes shown or implied in Figure 6 which might make Greenland an asset, especially mining
- Analysis and interpretation of the coastal/glacial landscape changes shown in Figure 7 and their political/economic benefits for shipping / naval fleets (e.g. proximity to North-West Passage)
- Synthesis of Figures e.g. how the extent of cryosphere loss (Figures 5 and 6) is linked with the magnitude of possible benefits in Figure 7 (transport) and 8.

AO1 content includes knowledge and understanding of the landscape changes shown or implied in Figures 5-8, or other landscape changes studied as part of the course. This may include:

- Water and carbon cycle changes - warming climate / cryosphere loss (C2 – water and carbon cycles)
- Superpower states (C2 – global hubs)
- Strategic value of oceans and oceans floor resources (C2 – oceans)
- Physical system changes over time (C1 - landscapes).

AO2 requires candidates demonstrate application of knowledge and understanding through discussion of how far flows have negative environmental impacts. Responses may include:

- Discussion of the balance of possible economic and political benefits
- Discussion of links between political and economic power (and hard and soft power)
- Discussion of the time-scale for political and economic benefits (decades to centuries)
- Discussion of possible changes over time in Greenland's strategic value (reasons/potential benefits have varied over time, in line with changing global challenges)
- Reflecting critically on different ways in which the USA might benefit, and which are most important (access to resources, land for settlement, territorial waters, etc.)
- Reflecting critically using other specialised geographic concepts such as globalisation, adaptation, risk, resilience and sustainability.

The question requires that candidates progress beyond describing possible reasons. At the upper end, answers that score highly will show application of knowledge and understanding by critically discussing the possible reasons they have identified, synthesising information, and coming to rational conclusions which draw across the Specification.

Responses in the middle range will show some application of knowledge and understanding to provide some evaluation and synthesis from across the specification, prior to drawing partially supported conclusions.

Lower end responses provide very limited application of knowledge and understanding of rural change to provide little evaluation.

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Award the marks as follows:			
	AO1 [8 marks]	**AO2.1c [12 marks]**	**AO3 [10 marks]**
Band	*Knowledge and understanding of possible economic and political benefits of owning territory.*	*Discussion of benefits the US may gain from Greenland (may include an assessment of Greenland's value over varying timescales, or linkages between different benefits).*	*Possible benefits of acquiring Greenland for the US shown in, or implied by, Figures 5-8; extended writing skills.*
3	**7-8 marks** Demonstrates detailed and accurate knowledge and understanding of all elements of the question. Makes use of appropriate and well-developed examples and may include well-annotated diagram(s).	**9-12 marks** Applies knowledge and understanding to produce a coherent, thorough and sustained evaluation. Applies knowledge and understanding of Specification themes in a broad and well-balanced way.	**8-10 marks** Well-developed analysis of Figures 5-8 with sustained detailed use of data. Well-constructed, coherent and logical arguments and substantiated conclusions.
2	**4-6 marks** Demonstrates accurate knowledge and understanding of most elements of the question. Makes some use of examples and may include simple diagram(s).	**5-8 marks** Applies knowledge and understanding to produce a coherent but partial evaluation. Applies knowledge and understanding of Specification themes in a narrower and partially-balanced way.	**4-7 marks** Partial analysis of Figures 5-8 with some detailed use of data. Partial arguments and conclusions have been attempted.
1	**1-3 marks** Demonstrates limited knowledge and understanding of some element of the question. Makes limited or no use of examples and may include a simple diagram.	**1-4 marks** Applies knowledge and understanding to produce a limited evaluation. Applies limited knowledge and understanding of Specification themes in an unbalanced way.	**1-3 marks** Limited analysis of Figures 5-8 with some limited use of data. Limited arguments and conclusions, if any.
	0 marks Response not creditworthy or not attempted.	**0 marks** Response not creditworthy or not attempted.	**0 marks** Response not creditworthy or not attempted.

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