GCE A LEVEL MARKING SCHEME

SUMMER 2024

A LEVEL
GEOGRAPHY - UNIT 3
1110U30-1

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About this marking scheme

The purpose of this marking scheme is to provide teachers, learners, and other interested parties, with an understanding of the assessment criteria used to assess this specific assessment.

This marking scheme reflects the criteria by which this assessment was marked in a live series and was finalised following detailed discussion at an examiners' conference. A team of qualified examiners were trained specifically in the application of this marking scheme. The aim of the conference was to ensure that the marking scheme was interpreted and applied in the same way by all examiners. It may not be possible, or appropriate, to capture every variation that a candidate may present in their responses within this marking scheme. However, during the training conference, examiners were guided in using their professional judgement to credit alternative valid responses as instructed by the document, and through reviewing exemplar responses.

Without the benefit of participation in the examiners' conference, teachers, learners and other users, may have different views on certain matters of detail or interpretation. Therefore, it is strongly recommended that this marking scheme is used alongside other guidance, such as published exemplar materials or Guidance for Teaching. This marking scheme is final and will not be changed, unless in the event that a clear error is identified, as it reflects the criteria used to assess candidate responses during the live series.

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WJEC GCE A LEVEL GEOGRAPHY

UNIT 3 – GLOBAL SYSTEMS AND GLOBAL GOVERNANCE

SUMMER 2024 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 unit 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 ticked in red ink. Do not use crosses to indicate answers that are incorrect. 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.

The second part is 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 unit. The targeted AO(s) are also indicated, for example AO2.1c.

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Assessment Objective	Strands	Elements
AO1 Demonstrate knowledge and understanding of places, environments, concepts, processes, interactions and change, at a variety of scales.	N/A	This AO is a single element.
AO2 Apply knowledge and understanding in different contexts to interpret, analyse and evaluate geographical information and issues.	N/A	1a - Apply knowledge and understanding in different contexts to analyse geographical information and issues.
		1b - Apply knowledge and understanding in different contexts to interpret geographical information and issues.
		1c - Apply knowledge and understanding in different contexts to evaluate geographical information and issues
AO3 Use a variety of relevant quantitative, qualitative and fieldwork skills to: • investigate geographical questions and issues • interpret, analyse and evaluate data and evidence • construct arguments and draw conclusions.	1 - investigate geographical questions and issues	N/A
	2 - interpret, analyse and evaluate data and evidence	
	3 - construct arguments and draw conclusions	

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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.

Banded mark schemes Stage 1 – Deciding on the band

When deciding on a band, the answer should be viewed holistically. 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 also provided for banded mark schemes. 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.

The specialised concepts from the specification that apply in the indicative content are underlined.

The mark scheme reflects the layout of the examination paper. Mark questions 1 and 2 and either 3 or 4 in Section A plus questions 5 and 6 and either 7 or 8 in Section B. In Section C, mark either question 9 or 10. If the candidate has responded to all questions in either Section A, B or B, mark all these responses. Award higher marks attained; further possible rubric infringements will be discussed at the marking conference.

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

1a) Outline how Spearman's Rank Correlation Coefficient could be used to further analyse the relationship shown in **Figure 1a**.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
					3		**3**

Indicative content

Candidates are likely to suggest that:

- SRCC will distinguish between a positive and a negative (1) correlation (1)
- SRCC examines the degree to which two data sets are correlated (1)
- Use of significance tables can be used to verify whether the result is meaningful or is just down to chance (1)

Marking guidance

Credit comments on how SRCC shows correlation/relationship/association (1), positive/negative (1) strength (1) and significance (1). Statements that ascertain identification of 'pattern' should not be credited. Credit other valid points not contained in the indicative content.

1.b) Explain how antecedent rainfall may influence the shape of a storm hydrograph.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
	4						**4**

Indicative content

Candidates are expected to be familiar with a range of climatic factors including the impact of antecedent conditions. They should recognise that:

- If the basin's soil was already saturated because of previous rainfall, then overland flow would have occurred early on in the storm event, resulting in a short lag time, steep rising limb and a high peak, and a steep recession limb (flashy) hydrograph
- Where low intensity rainfall occurs on relatively dry ground, the resulting hydrograph is likely to be relatively flat
- High intensity rainfall on dry ground, will result in a flashy hydrograph.

Marking guidance

Max Band 2 for no reference to hydrograph shape. Credit up to Band 2 for recognising relationship between rainfall and hydrograph shape. Allow full credit for approaches that cover rainfall only AND wet/dry conditions. Credit other valid points not contained in the indicative content.

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Award the marks as follows:		
Band	**Marks**	
3	**3-4**	Demonstrates detailed and accurate knowledge and understanding of how antecedent rainfall/ influences the shape of storm hydrographs. Well annotated sketches / diagrams / maps may also be used and should be credited.
2	**2**	Demonstrates partial knowledge and understanding of how antecedent rainfall may influence the shape of storm hydrographs. Generalised sketches / diagrams / maps may also be used and should be credited.
1	**1**	Demonstrates limited knowledge and understanding of antecedent rainfall and/or hydrograph shape with basic statements. Basic sketches / diagrams / maps may also be used and should be credited.
	0	Response not creditworthy or not attempted.

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2. (a) Explain the role of **two** stores within the drainage basin system.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3	**Total**
	5					**5**

Indicative content

Candidates are expected to demonstrate an understanding of a number of stores within the drainage basin system:

- interception store: leaf and plant surfaces
- vegetation store: water held in the biomass itself
- surface store: water collected on the surface of the ground in depressions and hollows as well as snow cover
- soil moisture store: water held in pore spaces in the soil
- channel store: water held in the river channel/glacier (cryosphere) itself at any moment in time
- groundwater store: water stored in solid rock and in any superficial deposits.

They should acknowledge the varying size of these stores dependent on:

- type and density of vegetation: different species of plants (and trees) with have greater/ lesser ability to store water; greater volume of vegetation affords greater opportunity for water storage
- soil type and degree of compaction: soils such as clay can store the most water whereas sandy soils the least
- geology: sedimentary rocks such as chalk will store large amounts of water in contrast to impermeable rocks such as granite.

Marking guidance

Do not expect balance for full marks. 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. Candidates are not expected to give detailed explanations of the points included in their answers.

Award the marks as follows:

Band	**Marks**	
3	**4-5**	Demonstrates detailed and accurate knowledge and understanding of the role of stores within the drainage basin system. Demonstrates accurate knowledge and understanding using appropriate and developed examples.
2	**2-3**	Demonstrates partial knowledge and understanding of the role of stores within the drainage basin system. Detailed knowledge and understanding of **one** store could get to the top of this band, Demonstrates mostly accurate knowledge and understanding using some examples.
1	**1**	Demonstrates limited knowledge and understanding of processes of the role of stores within the drainage basin system. Demonstrates limited knowledge and understanding with limited examples.
	0	Response not creditworthy or not attempted.

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2b) Suggest **two** reasons why peatlands such as those shown in **Figure 2** need to be managed.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
		5					**5**

Indicative content

Candidates are required to study the management of peatlands thus recognising how important they are for maintaining biodiversity. It is likely that they have studied UK-based examples, however, they may have contrasting examples through which assessment is drawn.

The question asks for reasons for management, **and thus implies the candidates to recognise the importance of management**, so they are expected to provide detail relating to real-life example(s) of peatland management and to show understanding of such management projects; for instance, contributing to a reduction in long-term greenhouse gas emissions targets. Alternatively, they may identify that such projects may facilitate local and national governments offsetting greenhouse gas emissions produced by economic activity.

Candidates may explain this management as 'ecosystem service' approach to conservation, and why this is important in contributing to efforts to mitigate climate change and manage biodiversity.

In practice, restoration efforts usually comprise re-establishment of plant cover dominated by species such as sphagnum mosses and the re-wetting of drained peatlands by raising and stabilising the local water table to manage flooding; candidates should explain why such projects are important.

Examples are likely to include Natural Resources Wales who coordinate the Wales Peatland Action Group in the uplands of Migneint, Hiraethog, Elennydd and Berwyn and lowland sites on Anglesey and the Llyn Peninsula, among others. Their work involves a wide range of partners - including the Welsh Government, NRW, The Wildlife Trusts, RSPB, the National Trust, National Parks (including management for leisure purposes), Local Authorities and all the farmers and other land managers so critical to the survival of these unique places.

Marking guidance

Do not expect balance for full marks 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.

Award the marks as follows:

Band	**Marks**	
3	**4-5**	Suggestions show detailed understanding of why management of peatlands is an important strategy for restoration of the carbon store.
2	**2-3**	Suggestions show partial understanding of why management of peatlands is an important strategy for restoration of the carbon store. Detailed knowledge and understanding of **one** reason could get to the top of this band,
1	**1**	Suggestions show partial understanding of why management of peatlands is an important strategy for restoration of the carbon store.
	0	Response not creditworthy or not attempted.

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3. Examine how water transfers between land, ocean, atmosphere and cryosphere vary over different timescales.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
	10			8			**18**

Indicative Content

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.

AO1
AO1 content encompasses knowledge and understanding of the controls of the transfers between the four components of the global water cycle and the rates at which these transfers occur. Development of this may include:

- Understanding of seasonal variation in rainfall amounts e.g. monsoon climates across tropical latitudes, year-round precipitation in the UK climate (ocean to atmosphere to land)
- Understanding of year-to-year rainfall variability e.g. El Niño in the Pacific Basin (atmosphere to land transfers are greatly reduced for a period of time)
- Understanding of longer-term changes in rainfall and aridity e.g. areas such as the Sahel experiencing even less rainfall and areas such as the UK, even more rainfall (atmosphere to land)
- Understanding of water transfers from land to ocean and accompanying sea level rise e.g. Greenland ice sheet (cryosphere to ocean).

AO2
Candidates demonstrate application of knowledge and understanding through an examination of the processes that control the transfers between land, ocean, atmosphere and cryosphere. Responses may include:

- Examination of the processes resulting in seasonal variations such as the annual monsoon to occur and the differences in occurrence of these processes in those years when the monsoon fails (equilibrium, resilience and sustainability)
- Examination of the naturally occurring southern oscillation resulting in cooler water being replaced by warmer water along the coast of Peru, meanwhile warmer water near Australia and Indonesia becomes cooler (causality, feedback and systems)
- Examination relating to the long-term changes some of the meteorological variations are in fact a result of human-induced climate change (mitigation and sustainability) to include changes in precipitation patterns but also ice sheet melt and the consequent rise in sea levels.
- Examination of the long-term changes occurring at ice sheets: Greenland and Antarctic. If Greenland ice sheet were to melt, it would cause a sea level rise of 6m whereas if the Antarctic one were to melt, sea levels would rise by a further 60m.

Marking guidance

Near the upper end, answers that score highly will show application of knowledge and understanding by **examining** complex, interlinked factors, synthesising information, and may come to rational conclusions (dependent on processes which control transfers within and between land, ocean, atmosphere and cryosphere).

Responses in the middle range will show some application of knowledge and understanding to provide some evaluation and synthesis and may draw partially supported conclusions.

Near the lower end, responses provide very limited application of knowledge and understanding of processes which control transfers within and between land, ocean, atmosphere and cryosphere.

Credit other valid approaches.

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Award the marks as follows:		
Band	**AO1 (10 marks)**	**AO2.1c (8 marks)**
	Demonstrates knowledge and understanding of the processes which control transfers over time (temporal transfers) within and between land, ocean, atmosphere and cryosphere.	*Applies knowledge and understanding to examine the processes which control transfers over time (temporal transfers) within and between land, ocean, atmosphere and cryosphere.*
3	**7-10 marks** Mostly accurate knowledge and understanding of the processes which control transfers over time (temporal transfers) within and between land, ocean, atmosphere and cryosphere. Developed exemplification. Well annotated sketches / diagrams may be used. Spelling, punctuation and grammar used with a high degree of accuracy.	**6-8 marks** Well-developed and structured examination of the processes which control transfers over time (temporal transfers) within and between land, ocean, atmosphere and cryosphere.
2	**4-6 marks** Partial knowledge and understanding of the processes which control transfers over time (temporal transfers) within and between land, ocean, atmosphere and cryosphere. Generalised exemplification. Simple sketches / diagrams may be used. Spelling, punctuation and grammar used with a reasonable degree of accuracy.	**4-5 marks** Partial or unbalanced examination of the processes which control transfers over time (temporal transfers) within and between land, ocean, atmosphere and cryosphere.
1	**1-3 marks** Limited knowledge and understanding of the processes which control transfers over time (temporal transfers) within and between land, ocean, atmosphere and cryosphere. Limited exemplification. Basic sketches / diagrams may be used. Spelling, punctuation and grammar used with limited degree of accuracy.	**1-3 marks** Limited examination of the processes which control transfers over time (temporal transfers) within and between land, ocean, atmosphere and cryosphere.
	0 marks Response not creditworthy or not attempted.	**0 marks** Response not creditworthy or not attempted.

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4. Examine the impacts of recent increases in the atmospheric carbon store on the water cycle and oceans.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3	**Total**
	10			8		**18**

Indicative Content

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.

AO1

AO1 content encompasses knowledge and understanding of the impacts of recent increases in the atmospheric carbon store on the water cycle and oceans. Development of this may include:

- Amount, type and patterns of precipitation (including extreme weather events): in a warmer world, more evaporation takes place over the oceans, there is increased precipitation in some places e.g. many of the weather recording stations in drainage basins such as the River Dee record increased amount of rainfall as well an increase in storm events (e.g. Storms Ellen and Francis occurring within 6 days of one another in August 2020)
- River discharge: as a result of increased amounts precipitation, river discharges are higher, particularly in places with underlying geology of impermeable rock e.g. much of western UK including Wales
- Sea level rise: sea levels have always been higher during warm periods and lower during cold periods leading to eustatic change as a result of thermal expansion and worldwide glacial melting
- Acidification of the oceans: estimates that approximately one-third of the CO_2 that has been released into the atmosphere by human activity has diffused into the oceans, resulting increased acidity which is harmful to coral reef organisms and other sensitive species.

AO2

Candidates demonstrate application of knowledge and understanding through an examination of the impacts of recent increases in the atmospheric carbon store on the water cycle and oceans. Responses may include:

- Examination of the **relative impacts** on human activity and on biomes (both arguably more impactful in LICs) where pressure of growing populations and governments with short-term local priorities (education, healthcare) results in local impacts continuing and absence of mitigation policies (<u>resilience</u>, <u>thresholds</u> and <u>sustainability</u>)
- Examination relating to exemplification of impacts such as wildfires in western USA / Australia and increased flooding in UK
- Examination of the **relative significance** of the impacts of increases in atmospheric carbon store on the water cycle vis à vis on the oceans (<u>adaptation</u>, <u>equilibrium</u>, <u>feedback</u> and <u>resilience</u>).

Marking guidance

Near the upper end, answers that score highly will show application of knowledge and understanding by e xamining complex, interlinked factors, synthesising information, and may come to rational conclusions (dependent on the different impacts of increases in atmospheric carbon store)

Responses in the middle range will show some application of knowledge and understanding to provide some evaluation and synthesis and may draw partially supported conclusions.

Near the lower end, responses provide very limited application of knowledge and understanding of the impacts of increases in atmospheric carbon store.

Credit other valid approaches.

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Award the marks as follows:		
Band	**AO1 (10 marks)**	**AO2.1c (8 marks)**
	Demonstrates knowledge and understanding of the impacts of increases in atmospheric carbon store on water cycle and oceans	*Applies knowledge and understanding to examine the impacts of increases in atmospheric carbon store on water cycle and oceans*
3	**7-10 marks** Mostly accurate knowledge and understanding of the impacts of increases in atmospheric carbon store on water cycle and oceans. Developed exemplification. Well annotated sketches / diagrams may be used. Spelling, punctuation and grammar used with a high degree of accuracy.	**6-8 marks** Well-developed and structured examination of the impacts of increases in atmospheric carbon store on water cycle and oceans
2	**4-6 marks** Partial knowledge and understanding of the impacts of increases in atmospheric carbon store on water cycle and oceans. Generalised exemplification. Simple sketches / diagrams may be used. Spelling, punctuation and grammar used with a reasonable degree of accuracy.	**4-5 marks** Partial or unbalanced examination of the impacts of increases in atmospheric carbon store on water cycle and oceans.
1	**1-3 marks** Limited knowledge and understanding of the impacts of increases in atmospheric carbon store on water cycle and oceans. Limited exemplification. Basic sketches / diagrams may be used. Spelling, punctuation and grammar used with limited degree of accuracy.	**1-3 marks** Limited examination of the impacts of increases in atmospheric carbon store on water cycle and oceans.
	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) Describe how flows of technology influence the growth of globalisation.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
	4						**4**

Indicative content

There are 4 'global flows' identified in the specification; this question examines one of them. Students should be able to:

- Suggest that flows of technology are the foundation of trade and subsequent comparative advantage as well as product / service specialisation e.g. digital technology in Silicon Valley, financial markets in London.
- Suggest that flows of technology in relation to transport can influence globalisation in terms of flows of goods and people (including tourism).
- Suggest that increasing flows of money, data and ideas have been facilitated by growth of technology relating to MNCs and increasing internet/mobile phone use for retail, communication and entertainment e.g. Netflix, Tik Tok and social media platforms.

Marking guidance

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.

Award the marks as follows:

Band	**Marks**	
3	**3-4**	Demonstrates detailed and accurate knowledge and understanding of how global flows of technology influence the growth of globalisation.
2	**2**	Demonstrates partial knowledge and understanding of how global flows of technology influence the growth of globalisation.
1	**1**	Demonstrates limited knowledge and understanding of how global flows of technology influence the growth of globalisation.
	0	Response not creditworthy or not attempted.

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5. (b) Outline the role of colonial links as a recent driver of migration.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
	5						**5**

Indicative content

Candidates are expected to show an understanding of:

- The collapse of the British Empire (1950s – 1970s) resulted in the UK receiving migrants from many of its former colonies including the Commonwealth. Family/community links to current UK residents continues to be an important driver for ongoing migration
- Migrants coming to fulfil specific gaps in the post-war workforce e.g. London Underground recruited bus drivers in Kingston, Jamaica via Windrush
- The continued large demand for textile workers in the Midlands, many of whom came from India, Pakistan and Bangladesh to join existing family members already settled in the UK
- The new National Health Service needing to recruit trained medical staff, many of whom were doctors from India, Pakistan and parts of Africa
- Language can be an important driver of migration (English as an official language of Commonwealth countries, French and Spanish of other colonial nations); familial ties and identity with the 'mother country' may be important drivers
- The importance of colonial links has decreased over time.

Marking guidance

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.

Award the marks as follows:		
Band	**Marks**	
2	**4-5**	Well-developed and structured explanation of the role of colonial links as a recent driver of migration.
2	**2-3**	Partial explanation of the role of colonial links as a recent driver of migration.
1	**1**	Limited explanation of colonial links and links to migration.
	0	Response not creditworthy or not attempted.

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6. (a) Use **Figure 3** to calculate the percentage of data that originate in Taiwan.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
					3		**3**

Indicative content

Total for Taiwan
201 + 146 + 87 (1) = 434 (1+1 for selecting correct data)

434 /3353 x 100 = 12.94% / 13% / 12.9% (1) (full credit given with no % sign)

Marking guidance

Award full 3 marks for correct answer with no workings. Credit alternative routes to the answer.

6. (b) Suggest why supranational institutions (such as the UN and NATO) are important for the governance of the Earth's oceans.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
			5				**5**

Indicative content

Candidates are expected to apply their knowledge and understanding of supranational institutions in order to appraise the importance of such institutions in governance of the Earth's oceans.

- The UN is non-legislative organisation(s) / intergovernmental organisation and thus can make recommendations (only)
- The UN creates agreements / treaties signed up to by its members, these are non-binding
- Role of UNESCO in protecting the Earth's oceans e.g. Marine Protected Areas
- The UN's role in global governance is largely through the Convention on the Law of the Sea (UNCLOS relating to EEZ within 200 nautical miles of the coast / continental shelf)
- NATO promotes enables members to consult and cooperate on defence and security-related issues to resolve problems, and ultimately prevent conflict through building trust amongst partners
- NATO is committed to peaceful resolution of disputes; if diplomatic efforts fail, it has the military power to undertake crisis-management operations
- Other supranational institutions may be evidenced, for example a recognition that the EU's administration of its territorial waters in order to impose fishing quotas, administered via the Marine Directive.

Marking guidance

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.

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Award the marks as follows:		
Band	**Marks**	
3	**4-5**	Demonstrates detailed understanding of supranational institutions and why they are important as governors of the Earth's oceans. Demonstrates accurate knowledge and understanding using appropriate, and developed examples.
2	**2-3**	Demonstrates partial knowledge of supranational institutions as governors of the Earth's oceans. Demonstrates knowledge and understanding using appropriate examples.
1	**1**	Demonstrates limited knowledge of supranational institutions as governors of the Earth's oceans. Demonstrates limited knowledge and understanding using examples.
	0	Response not creditworthy or not attempted.

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7. Examine the relative importance of economic injustice as a cause of recent refugee movements.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
	10			8			**18**

Indicative Content

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.

AO1
AO1 content encompasses knowledge and understanding of the causes of refugee movements (these may include IDPs). Development of this may include:

- Financial Hardships Poverty is a major cause of the global refugee crisis. e.g. Venezuelan Refugee Crisis, more than 4 million people have left Venezuela since 2015; what was once Latin America's fastest rising economy now has more than 32 million people being unable to afford food.
- Hunger in East Africa people are fleeing because crops have failed, and they have no food with which to feed their family
- Political unrest following the Arab Spring across the Middle East (started in Libya)
- Geopolitical causes – post-colonial borders left some ethnic groups divided in African nations such as Kenya and Tanzania
- Religious intolerance, e.g. Israel and Palestine, ongoing suppression of Palestinian peoples results in 1000s living in refugee camps in Lebanon
- Civil war e.g. Syria 2011 when rebel groups demanded the resignation of President Asad, EU, US, Russia and Saudi involvement has fuelled the conflict further
- Violation of Human Rights Many countries face a severe violation of human rights at the hands of the rich and powerful. Often carried out by people who hold a position of authority and are fuelled by greed, corruption and power and can include forcibly evicting people from their homes e.g. clearance of informal housing in Harare, Zimbabwe
- Climate change as a major factor for the refugee crisis. UN General Assembly in December 2018 directly addressed this growing concern. It recognised that 'climate, environmental degradation and natural disasters increasingly interact with the drivers of refugee movements.'
- Natural hazards / disaster e.g. Nepal earthquake 2014; Typhoon Haiyan 2015
- Persecution and discrimination: racial. social, religious, and political persecution e.g. LGBTQ community from Uganda, Muslims being persecuted in Myanmar.

AO2
Candidates demonstrate application of knowledge and understanding through an assessment of the most/least significant cause. Responses may include:

- Examination of the relative importance of economic vs social causes of refugee movements (causality, globalisation, identity, mitigation, resilience)
- Examination of the relative importance of human vs physical causes of refugee movements (causality, globalisation, identity, mitigation, resilience).

Marking guidance

Near the upper end, answers that score highly at will show application of knowledge and understanding by **examining** the complexity of causes of refugee movements and how it is a challenge (for authorities) to distinguish between economic migration and refugee movements.

Responses in the middle range will show some application of knowledge and understanding to provide some evaluating and synthesis and may draw partially supported conclusions.

Near the lower end, responses provide very limited application of knowledge and understanding of the causes of refugee movements. Credit other valid approaches.

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Award the marks as follows:		
Band	**AO1 (10 marks)**	**AO2.1c (8 marks)**
	Demonstrates knowledge and understanding of the causes of refugee movements.	*Applies knowledge and understanding to appraise through examining the complex causes of refugee movements.*
3	**7-10 marks** Mostly accurate knowledge and understanding of the causes of refugee movements. Developed exemplification. Spelling, punctuation and grammar used with a high degree of accuracy.	**6-8 marks** Well-developed and structured examination of the complex causes of refugee movements.
2	**4-6 marks** Partial knowledge and understanding of the causes of refugee movements. Generalised exemplification. Spelling, punctuation and grammar used with a reasonable degree of accuracy.	**4-5 marks** Partial or unbalanced examination of the causes of refugee movements.
1	**1-3 marks** Limited knowledge and understanding of the importance of the causes of refugee movements. Limited exemplification. Spelling, punctuation and grammar used with limited degree of accuracy.	**1-3 marks** Limited examination of the causes of refugee movements.
	0 marks Response not creditworthy or not attempted.	**0 marks** Response not creditworthy or not attempted.

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8. Assess the extent to which the distribution and ownership of major ocean resources benefits some states but not others.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
	10			8			**18**

Indicative Content
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.

AO1
AO1 content encompasses knowledge and understanding of the ways in which the distribution and ownership of major ocean resources benefits some states but not others. Development of this may include:

- Coastal waters are rich in mineral deposits generally within the adjacent nation's EEZ e.g. diamonds off coast of South Africa, gold off the coast of Alaska
- Oil and gas reserves are found in many shallow and deeper offshore locations e.g. Canada, Australia, Brazil and Angola permit TNCs to drill for oil in deep water close to their shoreline
- Landlocked countries have no EEZ and therefore no access to ocean resources e.g. fish stocks.

AO2
Candidates demonstrate application of knowledge and understanding through an evaluation of the benefits or hardships resulting from ownership of major ocean resources. Responses may include:

- Assessing the relative effectiveness of UNCLOS in managing nation's claim for sovereignty of resources e.g. Russia claiming oil reserves in the Arctic (inequality)
- Assessing how some countries (e.g. Venezuela and Angola) are too poor to take advantage of their ocean resources and are at risk of being exploited by TNCs (inequality)
- Assessing the relative effectiveness of UNCLOS in managing nations' claims in the event of overlapping EEZs e.g. China and the Philippines in the South China Sea (mitigation)
- Assessing the conflict whereby states own overseas territories and may claim an EEZ around one of these (interdependence)
- Assessing the changing awareness of the need for effective governance of oceans considering the strategic value of oceans (mitigation and risk).

Marking guidance
Near the upper end, answers that score highly will show application of knowledge and understanding by **assessing** detailed and possibly interlinked benefits, synthesising information, and may come to rational conclusions (dependent on the resources discussed).

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

Near the lower end, responses provide very limited application of knowledge and understanding of how the distribution and ownership of major ocean resources benefits some states but not others; conclusions are likely to be limited.

Credit other valid approaches.

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Award the marks as follows:		
Band	**AO1 (10 marks)**	**AO2.1c (8 marks)**
	Demonstrates knowledge and understanding of the distribution and ownership of major ocean resources.	*Applies knowledge and understanding to appraise through assessing the benefits (or drawbacks) of* the distribution and ownership of major ocean resources.
3	**7-10 marks** Mostly accurate knowledge and understanding of the distribution and ownership of major ocean resources. Developed exemplification. Spelling, punctuation and grammar used with a high degree of accuracy.	**6-8 marks** Well-developed and structured assessment of how the distribution and ownership of major ocean resources benefits some states but not others.
2	**4-6 marks** Partial knowledge and understanding of the distribution and ownership of major ocean resources. Generalised exemplification. Spelling, punctuation and grammar used with a reasonable degree of accuracy.	**4-5 marks** Partial or unbalanced assessment of how the distribution and ownership of major ocean resources benefits some states but not others.
1	**1-3 marks** Limited knowledge and understanding of the distribution and ownership of major ocean resources. Limited exemplification. Spelling, punctuation and grammar used with limited degree of accuracy.	**1-3 marks** Limited assessment of how the distribution and ownership of major ocean resources benefits some states but not others.
	0 marks Response not creditworthy or not attempted.	**0 marks** Response not creditworthy or not attempted.

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Section C: 21st Century Challenges

9. The main risks to our planet are caused by people. Discuss.	AO1	AO2.1 a	AO2.1 b	AO2.1 c	AO3.1	AO3.2	**Total**
	10			10		6	**26**

Indicative Content

Within the answer to question 9, candidates should use Figures 4, 5, 6 and 7 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 of the different demands for water – by region and category (Figure 4)
- Analysis of the risks presented by volcanic activity (Figure 5)
- Analysis of opportunities presented by aquifer management project in Bangladesh (Figure 6)
- Analysis of afforestation as a solution to some of the Earth's challenges (Figure 7)
- Synthesis of the Figures e.g. identifying the short- and long-term solutions / impacts (Figures 4, 5, 6 and 7).

AO1 content includes knowledge and understanding of the changes shown in Figures 4, 5, 6 and 7 or other changes studied as part of the course. This may include:

- Role of drainage basins and management thereof in overcoming some of the increasing demands for water in different world regions (3.1.1, 3.1.3, 3.1.5)
- Need for governance institutions in managing Global Commons (3.2.6)
- Challenges in managing continuity and change in rural and urban areas (2.1.8 and 2.1.10)
- Risk to the planet presented by mis-management of carbon stores in different biomes (3.1.7)
- Vulnerability to tectonic hazards (4.1.2 – 4.1.5).

AO2 requires candidates to demonstrate application of knowledge and understanding through discussion of the role of risk and management thereof in presenting solutions to some of the world's challenges. Responses may include:

- Assessment of whether water demand can be managed in the future
- Assessment of whether tree planting initiatives offer a solution to risks associated with climate change
- Assessment of the spatial variations in both the challenges and solutions (some areas may have fewer challenges; others more challenges) and the extent of the impact of these challenges on a range of places.

Marking guidance

The question requires that candidates progress beyond recognising threats / risks associated with some of our 21st Century Challenges. At the upper end, answers that score highly will show application of knowledge and understanding by assessing the information provided in the resources, 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 assessment and synthesis from across the specification, prior to drawing partially supported conclusions.

Lower end responses provide very limited application of knowledge and understanding of the challenges presented to provide little assessment.

Credit any other valid approaches.

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Award the marks as follows:			
Band	**AO1 [10 marks]**	**AO2 [10 marks]**	**AO3 [6 marks]**
	Knowledge and understanding of the causes of the risks faced by the Earth Figures 4, 5, 6 and 7	*Apply AO2.1c to assess the causes of the risks faced by the Earth*	*Apply AO3 to analyse the role of sustainability as a solution to a range of environmental challenges using Figures 4, 5, 6 and 7*
3	**8-10 marks** Mostly accurate knowledge and understanding of the causes of the risks faced by the Earth. Mostly accurate knowledge and understanding of a variety of risks on a range of places. Developed exemplification.	**8-10 marks** Well-developed and structured assessment of the causes of the risks faced by the Earth. Well-developed and structured assessment of the impact of these risks on a range of places.	**5-6 marks** Well-developed analysis of the causes of the risks faced by the Earth. Detailed use of data. Spelling, punctuation and grammar used with a high degree of accuracy.
2	**4-7 marks** Partial knowledge and understanding of the causes of the risks faced by the Earth. Partial knowledge and understanding of a variety of risks on a range of places. Generalised knowledge of examples.	**4-7 marks** Partial or unbalanced assessment of the causes of the risks faced by the Earth. Partial or unbalanced assessment of the impact of these risks on a range of places.	**3-4 marks** Partial or unbalanced analysis of the causes of the risks faced by the Earth. Generalised use of data. Spelling, punctuation and grammar used with a reasonable degree of accuracy.
1	**1-3 marks** Limited knowledge and understanding of the causes of the risks faced by the Earth. Limited knowledge and understanding of a variety of risks on a range of places. Limited exemplification.	**1-3 marks** Limited assessment of the causes of the risks faced by the Earth. Limited assessment of the impact of these risks on a range of places.	**1-2 marks** Limited analysis of the causes of the risks faced by the Earth. Limited or no use of data Spelling, punctuation and grammar used with limited accuracy.
	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. To what extent can the increasing risks to our planet be managed in different places?	AO1	AO2.1 a	AO2.1 b	AO2.1 c	AO3.1	AO3.2	**Total**
	10			10		6	**26**

Indicative Content

Within the answer to question 10, candidates should use Figures 4, 5, 6 and 7 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 of the risks posed by water insecurity *per se* and the associated risks of pollution caused by human activity (Figure 4)
- Analysis of afforestation as a management solution to some of the Earth's challenges (Figure 5)
- Analysis of opportunities presented by aquifer management project in Bangladesh (Figure 6)
- Analysis of whether the risks presented by volcanic activity can be managed (Figure 7)
- Synthesis of the Figures (Figures 4, 5, 6 and 7).

AO1 content includes knowledge and understanding of the changes shown in Figures 4, 5, 6 and 7 or other changes studied as part of the course. This may include:

- Role of drainage basins and management thereof in mitigating against the threats of water insecurity and water pollution in different world regions. (3.1.1, 3.1.3, 3.1.5)
- Need for governance institutions in mitigating against threats to the Global Commons (3.2.6)
  - Rural places such as the Sahel, unable to overcome the challenge of desertification
  - Urban places such as Frankfurt and San Francisco in utilising 'smart cities' technology to overcome threats (2.1.6)
- Challenges in managing threats to rural and urban areas (2.1.8 and 2.1.10)
- Threats to management of Earth's systems in rural and urban areas as a consequence of IDP movements (3.2.4)
- Vulnerability of rural and urban communities to the threats of tectonic hazards (4.1.2 – 4.1.5)
- Role of carbon stores in different biomes and their use in mitigating against climate change (3.1.7).

AO2 requires candidates demonstrate application of knowledge and understanding through assessment of the extent to which threats to rural and urban communities can be mitigated against.

Responses may include:

- Assessment of the extent of the threat provided by water usage and the readiness of water managers (governments and private enterprise) to mitigate against these risks
- Assessment of the range of threats to the Earth (as identified by the SDGs) and whether these might have more impact / mitigation potential in different places
- Assessment of whether the consequences of natural and human causes of IDPs can be mitigated against
- Assessment of whether initiatives such as SUDS provide a tool for mitigating against water insecurity / flooding in different places
- Assessment of whether small scale initiatives like tree planting might be sufficient to provide a long-term solution to some of the risks to the Earth's ecosystem services
- Assessment of the spatial variations of these threats, whether different types of places e.g. rural or urban areas are more at risk.

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Marking guidance

The question requires candidates progress beyond explaining the extent of risks to rural and / or urban areas. At the upper end, answers that score highly will show application of knowledge and understanding by assessing the extent to which urban areas demonstrate greater resilience than rural areas, 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 assessment and synthesis from across the specification, prior to drawing partially supported conclusions.

Lower end responses provide very limited application of knowledge and understanding of risks posed to the Earth's systems to provide little assessment.

Credit any other valid approaches.

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Award the marks as follows:			
Band	**AO1 [10 marks]**	**AO2 [10 marks]**	**AO3 [6 marks]**
	Knowledge and understanding of the extent to which the Earth's risks can be managed in different places using Figures 4, 5, 6 and 7	*Apply AO2.1c to assess the extent to which the Earth's risks can be managed in different places*	*Apply AO3 to analyse the factors affecting the extent to which the Earth's risks can be managed in different places using Figures 4, 5, 6 and 7*
3	**8-10 marks** Mostly accurate knowledge and understanding of the extent to which the Earth's risks can be managed in different places. Developed exemplification.	**8-10 marks** Well-developed and structured assessment of the extent to which the Earth's risks can be managed in different places.	**5-6 marks** Well-developed analysis of the factors affecting the extent to which the Earth's risks can be managed in different places. Detailed use of data. Spelling, punctuation and grammar used with a high degree of accuracy.
2	**4-7 marks** Partial knowledge and understanding of the extent to which the Earth's risks can be managed in different places. Generalised knowledge of examples.	**4-7 marks** Partial or unbalanced assessment of the extent to which the Earth's risks can be managed in different places.	**3-4 marks** Partial or unbalanced analysis of the factors affecting the extent to which the Earth's risks can be managed in different places. Generalised use of data. Spelling, punctuation and grammar used with a reasonable degree of accuracy.
1	**1-3 marks** Limited knowledge and understanding of the extent to which the Earth's risks can be managed in different places. Limited exemplification.	**1-3 marks** Limited assessment of the extent to which the Earth's risks can be managed in different places.	**1-2 marks** Limited analysis of the factors affecting the extent to which the Earth's risks can be managed in different places. Limited or no use of data Spelling, punctuation and grammar used with limited accuracy.
	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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