GCE A LEVEL MARKING SCHEME

SUMMER 2022

A LEVEL (NEW)
GEOGRAPHY - UNIT 3
1110U30-1

INTRODUCTION

This marking scheme was used by WJEC for the 2022 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.

UNIT 3: GLOBAL SYSTEMS AND GLOBAL GOVERNANCE

SUMMER 2022 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.

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	

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.

SECTION A: GLOBAL SYSTEMS

1. (a) Use **Figures 1a and 1b** to compare the flows of water. Content: 3.1.2 Skills 8.2	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
					3		**3**

Indicative content

In the natural hydrological cycle shown, infiltration is the second largest flow within the system (1)
runoff is the smallest flow (1)
In the urbanised hydrological cycle, runoff is much bigger than infiltration (1)
More processes in the natural cycle than the urbanised one (1)
Precipitation is largest input (flow) into both natural cycle than the urbanised cycle (1)

Might approach by comparing flows:
Infiltration represents a very large flow in the natural cycle whereas it it much smaller in the urbanised cycle (1) + (1) for explicit comparison
Runoff is small in the natural cycle whereas it it much larger in the urbanised cycle (1)

Credit other valid points.
Max. 2 marks if no clear comparison

(b) Suggest how **two** different land uses influence river discharge. Content: 3.1.3	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
		5					**5**

Indicative content

Land uses – these will likely include reference to urban vs rural areas and / or the impact of dams; candidates may differentiate between types of rural (or urban) land use, for example forestry compared to arable farming.

Credit other valid points.

Marking guidance

As this is an AO2.1a question, candidates need to **apply** their knowledge and understanding to **analyse** the geographical information contained in the diagram. No link made between discussion and river discharge max. B2 3 marks.

Award the marks as follows:	
Band	**AO2.1a (5 marks)**
3	**4-5 marks** Demonstrates detailed analysis of how landuse can influence river discharge. Demonstrates accurate knowledge and understanding how landuse can influence river discharge. Well annotated sketches / diagrams / maps may also be used and should be credited.
2	**2-3 marks** Demonstrates some analysis of how landuse can influence river discharge. Demonstrates mostly accurate knowledge and understanding how landuse can influence river discharge. Generalised sketches / diagrams / maps may also be used and should be credited.
1	**1 mark** Demonstrates limited analysis of how landuse can influence river discharge. Demonstrates limited knowledge how landuse can influence river discharge.
	Response not creditworthy or not attempted.

2. (a) Outline **two** causes of recent increases in the atmospheric carbon store. Content: 3.1.9	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
Can score (3) for one cause plus (1) for a second cause OR (2) for each cause	4						**4**

Indicative content

Candidates should demonstrate their understanding of recent increases in the atmospheric carbon store on account of anthropogenic greenhouse gas emissions:

- Carbon dioxide is increasing as a result of human activities involving the burning of fossil fuels (1) as well as deforestation (1), destruction of moorland (peat) environments (1).
- Methane (CH_4) is increasing as a result of intensive agriculture particularly cattle farming and rice farming (1) and decomposition of landfill waste (1).
- Volcanic eruptions release CO_2 into the atmosphere (1).

Credit other valid points.

(b) Explain how temperature and precipitation influence the size of carbon stores in temperate grasslands. Content: 3.1.7	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
	5						**5**

Indicative content

Exchanges of carbon between **atmosphere, biosphere and soil** vary greatly according to season.

Temperature:

- The mean monthly temperature can vary significantly with summer temperatures reaching 22ºC whilst in winter temperatures can drop to as low as -5ºC; during the winter the grasses die back to their roots so photosynthesis ceases so the atmospheric carbon store **increases,** conversely in the summer, the carbon store **decreases** when photosynthesis is occurring.
- Some plant respiration occurs through plant roots – especially in Spring once the **soil** begins to warm up (increasing atmospheric carbon store).

Precipitation:

- This is an important control on the loss of carbon from below ground pools through soil respiration and ultimately also litter decomposition; the more rainfall a grassland gets, typically the more above ground production it has so the greater the size of the carbon store.
- Location of temperate grasslands are found on leeward side of mountain systems which act as a barrier to westerly flowing moist air, thereby giving rise to a rain shadow (limiting precipitation).
- Low average annual rainfall (around 500mm or below) leading to less leaching.

Credit other valid points.

Marking guidance

If only one element discussed in detail – max. Band 2 for 3 marks.

Award the marks as follows:	
Band	**AO1 (5 marks)**
3	**4-5 marks** Demonstrates detailed and accurate knowledge and understanding of how temperature and precipitation influence the size of carbon stores in temperate grassland. Demonstrates accurate knowledge and understanding using appropriate and developed examples (locations or species). Well annotated sketches / diagrams / maps may also be used and should be credited.
2	**2-3 marks** Demonstrates some knowledge and understanding of how temperature and precipitation (or detailed knowledge of one) influence the size of carbon stores in temperate grassland. Demonstrates mostly accurate knowledge and understanding using some examples (locations or species). Generalised sketches / diagrams / maps may also be used and should be credited.
1	**1 mark** Demonstrates limited knowledge and understanding of how temperature and precipitation influence the size of carbon stores in temperate grassland. Basic sketches / diagrams / maps may also be used and should be credited.
	Response not creditworthy or not attempted.

3. With reference to **one or more** drainage basins, examine the factors influencing river regime characteristics Content: 3.1.3	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
	10			8			**18**

Indicative content

AO1
AO1 content encompasses knowledge of regime characteristics and understanding of the factors affecting the river regime. Candidates are expected to appreciate that climate, season, geology, vegetation and landuse will all influence the river regime characteristics. Answers will vary according to the choice of drainage basin(s). Development of this may include knowledge and understanding of:

- how climate (hot/cold, wet/dry) will influence the characteristics of the regime
- how precipitation (type, amount, duration & intensity, temperature, evaporation, transpiration and antecedent conditions) will influence the characteristics of the regime
- how geology (porosity and permeability) will influence the characteristics of the regime
- how vegetation (type, density) will influence the characteristics of the regime
- how landuse (urban / rural, forestry / arable) will influence the characteristics of the regime
- natural seasonal cycles and that the system is unlikely to maintain equilibrium over a 12-month period
- in contrast to the global-scale water cycle, the drainage basin is an open system (thresholds) and that river regimes can be simple and complex (scale, adaptation and causality).

AO2
Candidates demonstrate application of knowledge and understanding through an examination of the relative importance of the factors that influence river regime characteristics. Responses may include:

- Discussion of the relative impact of different physical/human factors on these characteristics (thresholds)
- Assessment as to which factor(s) will have the biggest / least impact on river regime characteristics (thresholds; system; adaptation)
- Discussion of changing importance of different factors over time – impacts of seasonal variations or longer-term climate change (scale) on the river regime characteristics
- Discussion that some of these factors might affect **either** some rivers and not others **and / or** might affect different sections of the river (upper/middle/lower course or rural/urban) (scale).

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 possibly coming to rational conclusions about the reasons for variations in river regime characteristics.

Responses in the middle range will show some application of knowledge and understanding of river regime characteristics to provide some evaluation and synthesis, prior to possibly drawing partially supported conclusions.

Near the lower end, responses provide very limited application of knowledge and understanding of river regime characteristics provide little evaluation.

Credit other valid approaches.

Award the marks as follows:		
Band	**AO1 (10 marks)**	**AO2.1c (8 marks)**
	Demonstrates knowledge and understanding of the factors influencing river regime characteristics.	*Applies knowledge and understanding to appraise through an examination of the factors influencing river regime characteristics.*
3	**7-10 marks** Mostly accurate knowledge and understanding of the factors affecting river regime characteristics. 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 factors affecting river regime characteristics, how these factors can be change in response to a variety of human and natural influences. Well-developed and structured examination of the relative importance of the factors influencing river regime characteristics.
2	**4-6 marks** Partial knowledge and understanding of the factors affecting river regime characteristics. 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 factors affecting river regime characteristics, how these factors can be change in response to a variety of human and natural influences. Partial or unbalanced examination of the relative importance of the factors influencing river regime characteristics.
1	**1-3 marks** Limited knowledge and understanding of the factors affecting river regime characteristics. 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 factors affecting river regime characteristics, how these factors can be change in response to a variety of human and natural influences. Limited examination of the relative importance of the relative importance of the factors influencing river regime characteristics.
	0 marks Response not creditworthy or not attempted	**0 marks** Response not creditworthy or not attempted

4. Examine the impacts of recent changes in the atmospheric carbon store on the water cycle. Content: 3.1.9	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
	10			8			**18**

Indicative content

AO1

AO1 content encompasses knowledge and understanding of feedback within and between the water and carbon cycles. The question asks for recent changes in the atmospheric carbon store, which should be interpreted as increasing levels of carbon dioxide. Development of this may include knowledge and understanding of:

- Short term (scale) changes to the cycles and the significance of these changes, including diurnal and seasonal changes of climate, temperature, sunlight and foliage
- Longer term (millions of years) understanding of climate change (adaptation) changes in the water and carbon cycles, including changes to stores and flows (scale)
- Recognition that human activities cause changes in the availability of water and carbon (including fossil and terrestrial) stores, such as the use of these as resources
- Recent changes in the atmospheric carbon cycle (increasing amounts of CO2) will lead to impacts on the water cycle, these are likely to include:
- Amount, type and patterns of precipitation:
    - In a warmer world, more evaporation takes place over the oceans, climate scientists believe rainfall patterns are changing in many parts of the world as oceans warm up.
    - UK average rainfall has not changed since 18th Century: in last 30 years, winter rainfall has fallen in heavy events
    - Climate change predictions for the UK suggest that the total amount of precipitation may not change but patterns may become more seasonal
    - Consensus that globally there are increasing numbers of extreme weather events
- River discharge:
    - Since 1980s, UK river flooding has increased during winter (size and duration)
    - Lower river discharges in southern England as less frontal rain in summer
    - Where high-intensity convectional rain can be expected, this does little to replete soil water and groundwater stores – rivers exhibit 'flashy' responses to rainfall
- Sea level rise:
    - Thermal expansion of oceans and glacial melting are expected to bring eustatic sea level rise (approx. 3mm p.a.)
- Understanding of water cycling between the land, oceans and atmosphere through open and closed systems
- Understanding of carbon cycling between the land, oceans and atmosphere through open and closed systems
- Understanding that positive feedback will have negative impact on the system(s) and conversely that negative feedback will have a positive impact on the system(s) (risk and resilience)
- The specialised concepts that might be reflected in the concept of systems are likely to include: equilibrium; adaptation, causality and thresholds in relation to the water cycle and the carbon cycle.

AO2

Candidates demonstrate application of knowledge and understanding through an examination of the factors causing feedback within and between the water and carbon cycles. Responses may include:

- Discussion of the varying impacts of changes in the carbon store on the water cycle over time – seasonal variations or longer-term climate change, i.e. appreciation of scale in size and time
- Discussion of the significance of these impacts, some which will have devastating consequences whereas others might be far less reaching or simply occurring at a local scale
- Discussion of the complexity of the interlinkages of between the two systems and therefore that changes (positive or negative) within one system will have impacts on the other (positive or negative) dynamic equilibrium.

Marking guidance

Near the upper end, answers that score highly will show application of knowledge and understanding by **assessing** complex, interlinked factors, synthesising information, and may come to rational conclusions dependent on the feedback within and between the water and carbon cycles

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

Near the lower end, responses provide very limited application of knowledge and understanding of deficit within the water cycle to provide little evaluation.

Credit other valid approaches.

Award the marks as follows:		
	AO1 (10 marks)	**AO2.1c (8 marks)**
Band	*Demonstrates knowledge and understanding of the impacts of recent changes in the atmospheric carbon store on the water cycle*	*Applies knowledge and understanding to appraise through an examination of the impacts of recent changes in the atmospheric carbon store on the water cycle*
3	**7-10 marks** Mostly accurate knowledge and understanding of the impacts of recent changes in the atmospheric carbon store on the water cycle. Developed exemplification demonstrating an understanding of the complexity of the issue. 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 recent changes in the atmospheric carbon store on the water cycle. Well-developed and structured examination of the relative importance of factors affecting recent changes in the atmospheric carbon store on the water cycle. Well-developed and structured examination of changing importance over time – seasonal variations or longer-term climate change eliciting positive or negative changes.
2	**4-6 marks** Partial knowledge and understanding of the impacts of recent changes in the atmospheric carbon store on the water cycle. Generalised exemplification demonstrating some awareness of complexity of the issue. 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 recent changes in the atmospheric carbon store on the water cycle. Partial or unbalanced examination of the relative importance of factors affecting recent changes in the atmospheric carbon store on the water cycle. Partial or unbalanced examination of changing importance over time – seasonal variations or longer-term climate change eliciting positive or negative changes.
1	**1-3 marks** Limited knowledge and understanding of the impacts of recent changes in the atmospheric carbon store on the water cycle. Limited exemplification demonstrating limited awareness of complexity of the issue. Basic sketches / diagrams may be used. Spelling, punctuation and grammar used with limited degree of accuracy.	**1-3 marks** Limited examination of how meteorological factors can affect the mass balance of the water cycle and contribute to deficit or surplus. Limited examination of the relative importance of factors affecting recent changes in the atmospheric carbon store on the water cycle. Limited examination of changing importance over time – seasonal variations or longer-term climate change eliciting positive or negative changes.
0	**0 marks** Response not creditworthy or not attempted.	**0 marks** Response not creditworthy or not attempted.

SECTION B: GLOBAL GOVERNANCE: CHANGE AND CHALLENGES

5. (a) Suggest how an increase in remittances, as shown in **Figure 3**, may reduce global economic inequalities. Content: 3.2.3	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
			5				**5**

Indicative content

Specification suggests discussion of the range of flows (money, ideas and technology) that reduce (or exacerbate) global economic inequalities. Candidates should focus on the flow of money from host countries to source countries. This money is most frequently used to pay for education and in countries where remittance rates are the highest (e.g. El Salvador), school drop-out rates are the lowest. With improvements in education, those in source countries are able obtain better qualifications and skills and therefore ultimately have a better quality of life, thus reducing the gap between host and source countries. Similarly, remittances may be used to provide funding for health care and home improvements, both of which reduce the gap in standard of living between source and host country. It is sometimes argued that remittances may increase inequality, because it is the rich who can migrate and send back remittances, making recipients even richer.

Marking guidance

This resource is provided as a stimulus. Near the upper end, answers could make sustained and specific reference to the resource, but this not necessary for full marks.

Award the marks as follows:

Band	Marks	AO2.1a (5 marks)
2	**3-5**	Well-developed and structured evaluation of how remittances may reduce (or increase) inequalities.
1	**1-2**	Partial or unbalanced evaluation of how remittances may reduce (or increase) inequalities.
	0	Response not creditworthy or not attempted.

(b) Outline how transport helps to create a shrinking world for migrants. Content: 3.2.1	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
	5						**5**

Indicative content

AO1 content includes a range of possible factors influencing global migration flows including transport (as well as communication and media representation).

- Likely recognition of how new developments in transport facilitate relative ease of travel (including dedicated bus services between UK and Poland; availability of budget airlines; ease of booking tickets via mobile apps)
- Awareness of how new developments in transport have reduced travel time (examples of aircraft types e.g. propellor planes / Concorde etc.)
- Recognition of increased accessibility of transport for migrants e.g. European high speed train network allows rapid connectivity across Europe in hours (rather than previously, days)

Credit other valid approaches.

Award the marks as follows:

Band	Marks	AO1 (5 marks)
2	**4-5**	Well-developed and structured outline of how transport helps to create a shrinking world for migrants.
1	**1-3**	Partial or unbalanced outline of how transport helps to create a shrinking world for migrants.
	0	Response not creditworthy or not attempted.

6. (a) (i) Calculate the range in the volume of trade between China's top ten ports in 2018? Skills: 2.10	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
					1		**1**

Indicative content

The biggest is Shanghai with 42.01 million containers
The smallest is Lianyungang with 4.75 million containers
Range is 42.01 – 4.75 = 37.26

(ii) Calculate the percentage change of trade (millions of containers) passing through Shanghai port between 2012 and 2018.Give your answer to 1 decimal place. Skills: 2.3	AO1	AO2.1a	AO2.1b	AO2.1c	AO3.1		**Total**
					2		**2**

Indicative content

(42.01 - 32.53) / 32.53 x 100 = 29.14 (**29.1%** increase)

Award 1 mark only if not given correctly to 1 decimal place – 29% or 29.14% or 29.2%

Award 2 marks for correct final answer (to 1 decimal place).

(b) Outline **two** local strategies to manage marine waste. Content: 3.2.10	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
	4						**4**

Indicative content

Likely AO1 content will depend on the **local** strategies identified e.g.:

The Plastiki: The Plastiki is an innovative catamaran which included using 12,500 post-consumer plastic bottles for buoyancy. Their mission is to witness some of the most devastating waste accumulation on our planet, including the Pacific Garbage Patch.

Give Me Tap: the idea is you buy a reusable bottle (£7) made from recycled aluminium from the Give Me Tap website and take it into any cafe or restaurant which has signed up as a "provider" of the scheme. The bottle is then filled with tap water for free, which helps reduce the plastic wastage in landfill sites and saves you money. 70% of the cost of each bottle is then channelled back into independent water projects helping communities across Africa to install clean water pumps. Through their 'Giving Back' strategy GiveMeTap give 70% of the price of the bottle sales are used to fund independent water projects.

The Honolulu Strategy: This is a framework for a comprehensive and global effort to reduce the ecological, human health, and economic impacts of marine debris globally and acts as guidance to local organisations attempting to manage marine waste.

7. Assess the consequences of international economic migration on source countries. Content: 3.2.3	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
	10			8			**18**

Indicative content

AO1

AO1 content encompasses knowledge and understanding of a range of consequences of international migration on the migrant's home country. These will include flows of money, ideas and technology as well as interdependence of economic, social, political and environmental structures between source and host countries.

Development of this may include:

- Understanding the impacts of remittances at the household level; increased spending power can help reduce both the depth and severity of poverty as well as act as an insurance in the case of disaster (climatic, natural hazards): mitigation and adaptation to risk
- Recognising that the initial 'brain drain' may result in 'brain gain' as ideas filter back to the source country or migrants return home: globalisation
- Identifying that flows of technology may facilitate communication between migrants and their families (including email and affordable telephone calls) as well practical equipment that may facilitate increased productivity (i.e. agricultural work): globalisation, inequality
- Loss of skilled labour: The biggest negative impact on the country of exit perhaps is the fact that young graduates (or skilled labour and professional) leave to offer their services to other countries. In many developing countries, doctors, nurses, engineers and very bright professionals are lost to other countries. sustainability
- Population and markets: Businesses do better with bigger markets and more buyers. A growing and healthy population often provides the needed market for economic growth and development. When the youth leave, the population stalls and demand for some goods and services fall. inequality
- Social/Family: When parents leave, children and other dependents suffer the most, as they lose out on the important psychological development that they need from good parenting. Many of the children are exposed to social vices at an early age because there is no parental control. Sustainability
- Understanding the pivotal role of the diaspora community in enabling access of the source country to international financing, facilitating networking as well as philanthropic remittances such as funding for schools, healthcare and social infrastructure: sustainability
- Awareness that the flow of ideas (e.g new business ventures or new academic disciplines) between migrants and their home country can be an invisible remittance from the diaspora community: interdependence.

AO2

Candidates demonstrate application of knowledge and understanding through an assessment of the consequences of out-migration on source countries. Responses may include:

- Assessment of the relative importance of the consequences of flows of money, ideas and technology for source communities - which may make it hard to reach a conclusion overall (globalisation)
- Assessment of social consequences of out-migration on different groups for example over time on migrant networks; on women, on demographic structure; on health (risk and thresholds) Recognition that these may vary over time
- In their assessment (AO2 comment) they may demonstrate knowledge and understanding of other factors such as impact of diaspora communities, colonial and Commonwealth links and their influence on the source countries. They are likely to acknowledge the complexity of this issue.

Marking guidance

Near the upper end, answers that score highly at will show application of knowledge and understanding by **assessing** complex, interlinked consequences, synthesising information, and may come to rational conclusions.

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

Near the lower end, responses provide very limited application of knowledge and understanding of the impact of migration on source countries and thus evaluation is limited.

Credit other valid approaches.

Award the marks as follows:

	AO1 (10 marks)	**AO2.1c (8 marks)**
Band	*Demonstrates knowledge and understanding of the consequences of international economic migration on source countries.*	*Applies knowledge and understanding to appraise through assessing the consequences of international economic migration on source countries.*
3	**7-10 marks** Mostly accurate knowledge and understanding of the consequences of international economic migration on source countries. 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 assessment of the consequences of international economic migration on source countries. Well-developed and structured assessment of interlinked factors such as impacts of flows of money, ideas and technology. Well-developed and structured assessment of the increased economic, social, political and environmental interdependence. Well-developed and structured assessment of other factors impacting the source countries as a result of out-migration.
2	**4-6 marks** Partial knowledge and understanding of the consequences of international economic migration on source countries. 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 assessment of the consequences of international economic migration on source countries. Partial or unbalanced assessment of interlinked factors such as impacts of flows of money, ideas and technology. Partial or unbalanced assessment of the increased economic, social, political and environmental interdependence. Partial or unbalanced assessment of other factors impacting the source countries as a result of out-migration.

1	**1-3 marks** Limited knowledge and understanding of the consequences of international economic migration on source countries. Limited exemplification. Basic sketches / diagrams may be used. Spelling, punctuation and grammar used with limited degree of accuracy.	**1-3 marks** Limited assessment of the consequences of international economic migration on source countries. Limited assessment of interlinked factors such as such as impacts of flows of money, ideas and technology. Limited assessment of the increased economic, social, political and environmental interdependence. Limited assessment of other factors impacting the source countries as a result of out-migration
0	**0 marks** Response not creditworthy or not attempted.	**0 marks** Response not creditworthy or not attempted.

8. Examine the success of efforts to manage sea cables and global flows of shipping. Content: 3.2.7	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
	10			8			**18**

Indicative content

AO1
AO1 content encompasses knowledge and understanding of domestic and international (UN/EU) efforts to manage global flows of shipping, sea cables. Development of this may include:

- Understanding of the need to manage the growth of smuggling of goods such as narcotics, counterfeit property, stolen goods and endangered wildlife: causality and globalisation
- Understanding of the efforts to regulate the movement of such goods: Interpol, CITES, Princes William and Harry's campaigns: risk and threshold
- Appreciating the scale and impact of the people smuggling industry
- Appreciating efforts to mitigate migration flows by Europol and NGOs working in the Mediterranean where 90% of migrants use services of criminal networks to secure passage
- Recognising changing trends and regulation of shipping i.e. issues related to overcapacity and environmental impacts of 'shipbreaking' in India and Bangladesh: threshold, interdependence and sustainability
- Understanding the growth and consequent risks of the undersea cable data networks: globalisation, resilience, causality and interdependence and the practical efforts and responsibility for protection of undersea cable data networks i.e. role of MNCs such as google, Facebook and Vodaphone who own undersea cable data networks: globalisation and interdependence.

AO2
Candidates demonstrate application of knowledge and understanding through an examination of the success of these efforts. Responses may include:

- Examination of the success of efforts to mitigate oil tanker spills and of clean-up operations
- Examination of the mixed success of attempts to manage piracy e.g. fewer incidents near Somalia but more near Asia
- Examination of the success of efforts by the UN to coordinate management of the ocean element of the global commons e.g. International Ship and Port Security Code which was implemented by the UN international Maritime Organisation
- Examination of the extent to which aims are achieved in some contexts, but problems persist overall
- Examination of whether mitigation of problems can take place or merely adaptation (e.g. tackling poverty or conflict in East Africa to reduce piracy)
- Examination of the successful impact of strategies at different scales (local to global)
- Examination of the success or otherwise of practical efforts and responsibility for protection of undersea cable data networks in the event of natural events such as earthquakes triggering undersea landslides and tsunamis which may adversely affect undersea cable data networks: globalisation, resilience, causality and interdependence.

Marking guidance

Near the upper end, answers that score highly will show application of knowledge and understanding by examining detailed and possibly interlinked actions, synthesising information, and arriving at a proper **discussion** (dependent on the issue contexts that are included).

Responses in the middle range will show some application of knowledge and understanding to provide some discussion and synthesis, prior to possibly arriving at a partially supported evaluation. Near the lower end, responses provide very limited application of knowledge and understanding of refugees/illegal flows to provide little evaluation.

Discussion related to causes will gain some credit as long as it is used to demonstrate how / why strategies are sustainable. Credit other valid approaches.

Award the marks as follows:		
	AO1 (10 marks)	**AO2.1c (8 marks)**
Band	*Demonstrates knowledge and understanding of domestic and international (UN/EU) efforts to manage global flows of shipping, people and ideas.*	*Applies knowledge and understanding to appraise through examining the successes of domestic and international (UN/EU) efforts to manage global flows of shipping, people and ideas.*
3	**7-10 marks** Mostly accurate knowledge and understanding of domestic and international (UN/EU) efforts to manage global flows of shipping, people and ideas. 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 evaluation of the successes of domestic and international (UN/EU) efforts to manage global flows of shipping, people and ideas. Clear recognition and evaluation of the complexity of challenges presented by management of global flows of shipping, people and ideas.
2	**4-6 marks** Partial knowledge and understanding of domestic and international (UN/EU) efforts to manage global flows of shipping, people and ideas. 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 evaluation of the successes of domestic and international (UN/EU) efforts to manage global flows of shipping, people and ideas. Implied recognition and evaluation of the complexity of challenges presented by management of global flows of shipping, people and ideas.
1	**1-3 marks** Limited knowledge and understanding of domestic and international (UN/EU) efforts to manage global flows of shipping, people and ideas. Limited exemplification. Basic sketches / diagrams may be used. Spelling, punctuation and grammar used with limited degree of accuracy.	**1-3 marks** Limited evaluation of the successes of domestic and international (UN/EU) efforts to manage global flows of shipping, people and ideas. Implied acknowledgement of the complexity of challenges presented by management of global flows of shipping, people and ideas.
0	**0 marks** Response not creditworthy or not attempted.	**0 marks** Response not creditworthy or not attempted.

SECTION C: CHALLENGES OF THE 21ST CENTURY

9. Discuss ways in which environmental change can be both a cause and a consequence of global flows.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
	10			10	6		**26**

Indicative content

Within the answer to question 9, candidates should use the resources in Figures 4, 5, and 6 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 causes and consequences of the flows shown in the photograph in Figures 4
- Analysis of causes and consequences of flows of people by air as identified in Figure 5.
- Analysis of causes and consequences of climate change on regions identified on the map, likely source regions of climate refugees shown in Figure 6
- Synthesis of Figures e.g. some countries likely to out-source waste and water (Figure 5); likely impact of climate change on (indigenous) populations and those from low lying island nations (Figures 5 & 6).

AO1 content includes knowledge and understanding of the flows shown in Figures 4-6 or other flows and impacts studied as part of the course. This may include:

- Environmental change can be a cause of global flows (U3 – displacement of people as a result of global systems causing environmental change)
- Environmental change can be a consequence of global flows (U3 – impact on the environment of mechanised agriculture, MNCs and land grabs)
- Environmental change can be a cause of global flows (U1 – migration as a result of landscape changes: glaciated landscapes or coastal landscapes)
- Environmental change can be a consequence of global flows (U1 – migration caused by attractiveness of landscapes: glaciated landscapes or coastal landscapes)
- Environmental change can be a consequence of global flows (U1 – tectonic events resulting in out-migration)
- Environmental change can be a cause of global flows (U2 – places; outsourcing of manufacturing)
- Environmental change can be a consequence of global flows (U2 – places; outsourcing of manufacturing)
- Environmental benefits for local places in UK of global shift of polluting industries (U2 – places).

AO2 requires candidates to demonstrate application of knowledge and understanding through discussion of the ways in which environmental change can be both a cause and a consequence of global flows. Responses may include:

- Discussion of how far some flows impact the destination country
- Discussion of how those exporting water have a responsibility to ensure that there is a supply for those who rely on it
- Discussion of how some of the areas which are most severely impacted by human induced climate change are not responsible for its occurrence.
- Discussion of the impact of non-indigenous communities on fragile areas such as the Arctic.
- Discussion of uneven social vulnerability and resilience to any negative causes and consequences
- Reflecting critically using other specialised geographic concepts such as temporal scale, risk, etc.

Marking guidance

The question requires that candidates progress beyond describing economic causes and negative consequences. At the upper end, answers that score highly will show application of knowledge and understanding by critically discussing (i.e. evaluating) the impacts 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.

Award the marks as follows:

	AO1 [10 marks]	**AO2.1c [10 marks]**	**AO3 [6 marks]**
Band	*Knowledge and understanding of global flows and the environment*	*Apply AO2.1c to discuss how environmental change can be both a cause and a consequence of global flows*	*Apply AO3 to analyse the factors affecting environmental causes and consequences of global flows in Figures 4-6*
3	**8-10 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).	**8-10 marks** Well-developed and structured discussion of the way(s) in which environmental change can be both a cause and a consequence of global flows. A rational and substantiated conclusion will be evident. Applies knowledge and understanding of specification themes in a broad and well-balanced way.	**5-6 marks** Well-developed analysis of Figures 4-6 with sustained and detailed use of data. Well-annotated sketches / diagrams may be used. Spelling, punctuation and grammar used with a high degree of accuracy.
2	**4-7 marks** Demonstrates accurate knowledge and understanding of most elements of the question. Makes some use of examples and may include simple diagram(s).	**4-7 marks** Partial or unbalanced discussion of the way(s) in which environmental change can be both a cause and a consequence of global flows. Conclusions may be partial. Applies knowledge and understanding of specification themes in a narrower and partially balanced way.	**3-4 marks** Partial analysis of Figures 4-6 with some detailed use of data. Simple sketches / diagrams may be used. Spelling, punctuation and grammar used with a reasonable degree of accuracy.
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** Limited discussion of the way(s) in which environmental change can be both a cause and a consequence of global flows. Conclusions are likely to be limited in scope Applies limited knowledge and understanding of specification themes in an unbalanced way.	**1-2 marks** Limited analysis of Figures 4-6 with some limited use of data. Basic sketches / diagrams may be used. 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.

10. To what extent has globalisation resulted in interdependency between people and places?	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
	10			10	6		**26**

Indicative content

Within the answer to question 10, candidates should use the resources in Figures 4, 5 and 6 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 interdependency between source and destination people and places as a result of flows of plastic / waste shown in the photograph in Figure 4
- Analysis of the interdependency between likely source and destination places of the flows of people travelling on British Airways European routes in Figure 5
- Analysis of the interdependency between regions responsible for causing the environmental change (resulting from human induced climate change) and those people and places affected by it as shown in Figure 6
- Synthesis of Figures e.g. some countries likely to out-source waste and this may be to areas most at risk of impacts of climate change (Figures 4 & 5)

AO1 content includes knowledge and understanding of the flows resulting from globalisation shown in Figures 4-6 or other flows and interdependencies studied as part of the course. This may include:

- Interdependency between places and people as a result of water and carbon cycles and systems (U3 water & carbon cycles)
- Mutual benefits / disadvantages of immigration for host and source countries (U3 - migration)
- Interdependency of people and the environment in the Arctic and the impact of resource extraction on people and the environment (U3 – management of oceans)
- Ways in which people living in fragile landscapes are reliant upon the landscape (U1 – tectonics, glaciated and coastal landscapes)
- Connections between places in the UK and other countries (U2 - places)

AO2 requires candidates demonstrate application of knowledge and understanding through evaluation of the extent to which globalisation has resulted in interdependency between people and places.

Responses may include:

- Evaluating the extent to which globalisation gives rise to interdependence
- Evaluating the extent to which some interdependent relations are more one-sided than others
- Evaluating the extent to which countries within regions (e.g. EU) are especially interdependent
- Evaluating the extent to which some places remain isolated from globalisation and associated networks
- Evaluating the extent to which interdependency is changing/lessening (e.g. Trump's USA)
- Reflecting critically using other specialised geographic concepts such as scale, risk, etc.

Marking guidance

The question requires that candidates progress beyond describing possible connections. At the upper end, answers that score highly will show application of knowledge and understanding by critically evaluating the flows and interdependencies they have selected, 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.

Award the marks as follows:			
	AO1 [10 marks]	**AO2.1c [10 marks]**	**AO3 [6 marks]**
Band	*Knowledge & understanding of flows associated with globalisation resulting interdependency of people and places.*	*Apply AO2.1c to discuss the extent to which flows associated with globalisation have resulted in interdependency between people and places.*	*Apply AO3 to analyse the interdependency between people and places in Figures 4-6.*
3	**8-10 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).	**8-10 marks** Well-developed and structured discussion of the extent to which flows associated with globalisation have resulted in interdependency between people and places. A rational and substantiated conclusion will be evident. Applies knowledge and understanding of specification themes in a broad and well-balanced way.	**5-6 marks** Well-developed analysis of Figures 4-6 with sustained detailed use of data. Well-annotated sketches / diagrams may be used. Spelling, punctuation and grammar used with a high degree of accuracy.
2	**4-7 marks** Demonstrates accurate knowledge and understanding of most elements of the question. Makes some use of examples and may include simple diagram(s).	**4-7 marks** Partial or unbalanced discussion of the extent to which flows associated with globalisation have resulted in interdependency between people and places. Conclusions may be partial Applies knowledge and understanding of specification themes in a narrower and partially balanced way.	**3-4 marks** Partial analysis of Figures 4-6 with some detailed use of data. Simple sketches / diagrams may be used. Spelling, punctuation and grammar used with a reasonable degree of accuracy.
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** Limited discussion of the extent to which flows associated with globalisation have resulted in interdependency between people and places. Conclusions are likely to be limited in scope Applies limited knowledge and understanding of specification themes in an unbalanced way.	**1-2 marks** Limited analysis of Figures 4-6 with some limited use of data. Basic sketches / diagrams may be used. 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.