GCE A LEVEL MARKING SCHEME

SUMMER 2022

A LEVEL
GEOGRAPHY – COMPONENT 2
A110U20-1

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.

GCE A LEVEL GEOGRAPHY

COMPONENT 2: 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 component includes both point-based mark schemes and banded mark schemes.

Point-based mark schemes

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

Banded mark schemes

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

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

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

Banded mark schemes Stage 1 – Deciding on the band

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

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

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

Banded mark schemes Stage 2 – Deciding on the mark

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

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

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

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

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

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

Advance Information

Areas of content suggested as **key areas** of focus for revision and final preparation in relation to the Summer 2022 examinations are indicated within this mark scheme. Where additional specification references to those included in the advance information notice are included, these references are in italics.

Section A: Global Systems – Water and Carbon Cycles

1. (a) (i) Use **Figure 1** to calculate the percentage of carbon consumed by grassland animals which is then transferred to the soil. Write the answer in your booklet. Show your working. Skills: 2.3	AO1	AO2.1a	AO2.1b	AO2.1c	AO3	**Total**
Award the marks as follows:					2	**2**

Indicative content

- 1 mark for identification of uptake (160) and decay (100) data
- 1 mark for the correct answer.

For example:
100/160 x 100 (1) = 62.5 (1)
160 ÷ 100 (1) = 1.6 (0)

1. (a) (ii) Analyse the evidence in **Figure 1** which shows the system is in equilibrium. Content: 2.1.10	AO1	AO2.1a	AO2.1b	AO2.1c	AO3	**Total**
Award the marks as follows:					3	**3**

Indicative content

- 1 mark for demonstrating understanding of system equilibrium / balance.
- 1 mark for manipulating the data to support the analysis
- 1 mark for identifying all of the whole system inputs and outputs.

For example: There is one input into the system of 500 g/m^2 and three outputs of 60, 80 and 360 g/m^2. [1 mark]. 60 + 80 + 360 = 500 [1 mark]. Therefore, the inputs and outputs are the same and thus the system as a whole is balanced [1 mark].

1. (a) (iii) Suggest two reasons why carbon losses due to water flows may increase if the vegetation **in Figure 1** is removed. Content: 2.1.7, 2.1.9	AO1	AO2.1a	AO2.1b	AO2.1c	AO3	**Total**
		5				**5**

Indicative content

Likely AO2 applied knowledge and understanding content should focus on effects of possible reasons/factors why water flows (e.g. leaching and run-off losses) in Figure 1 (currently 80g/m^2) might increase in the absence of vegetation cover. Credit logical connections established between, for example, the loss of grassland and the loss of animal habitats and interception cover.

- Soil erosion and carbon loss may occur due to increased surface run-off / overland flow, owing to decreased interception cover now the grassland has gone. Carbon is then washed away in the form of litter and organic matter.
- Increased infiltration and throughflow because there is no grass cover to slow down water movement any more. This then results in greater carbon losses due to leaching.
- Deprived of their food supply, herbivores may die, and their remains which contain carbon could also be washed away by heavy rain and runoff.
- If burned, some of the carbonised remains of the grasses may enter the soil store, leading in turn to higher system throughout and outputs of carbon.
- The greatest increases may occur soon after removal; later on, losses may be limited as there will be no carbon uptake from the atmosphere, and so the sequence of flows halts.

Credit any other valid points.

Marking guidance

Near the upper end, answers that score highly will provide more detailed explanations using appropriate carbon and water cycle terminology and concepts, as shown in the example answers above. They will provide two reasons in a balanced and clear way.

Award the marks as follows:

Band	Marks	
3	**4-5**	Two well-explained and clear reasons for increased soil carbon losses. Applies developed knowledge and understanding of physical processes.
2	**2-3**	One clear or two partially clear reasons for increased soil carbon losses. Some application of knowledge and understanding of physical processes.
1	**1**	One limited or fragmented reason for increased soil carbon losses. Fragmented or no applied knowledge and understanding.
	0	Response not creditworthy or not attempted.

2. (a) Use **Figure 2** to analyse changes in the extent of Arctic sea ice over time. Skills: 3.6	AO1	AO2.1a	AO2.1b	AO2.1c	AO3	**Total**
					5	**5**

Indicative content

AO3 content includes analysing the data shown in **Figure 2**, which shows monthly/seasonal changes in the extent of sea ice, along with evidence for longer-term changes between 1979 and 2019.

- Overall, the extent of the ice has been reducing over the longer-term irrespective of which month/season.
- Provides supporting data of this decline e.g. Peak has fallen from around 16.3 to 14.4 million km^2 between 1979 and 2019.
- Clear seasonal changes are always evident.
- Provides supporting data of this seasonality from any/all years e.g. 1979 March maximum is just over 16 million km^2 and 1979 September minimum is around 7 million km^2.
- Maximum always reached at end February / early March; minimum in September-October.
- May manipulate data to support the idea of long-term/decadal negative change/retreat e.g. in 2019 the extent of the ice is always 2-3 million km^2 less than in 1979, irrespective of the season/month.

Marking guidance

Near the upper end, answers that score well will make sustained and specific reference to change over both timescales. Supporting data are used selectively and/or manipulated in aid of the analysis.

Near the lower end, answers will display limited use of the resource with limited or no overview of the two timescales (monthly/seasonal and longer-term/decadal).

Award the marks as follows:

Band	Marks	
3	**4-5**	Well-developed and clear analysis of monthly/seasonal and longer-term changes. Sustained use/manipulation of data to support a clear analysis.
2	**2-3**	Partial or unclear analysis of monthly and/or longer-term changes. Sustained use of data to support a partial or unclear analysis.
1	**1**	Limited analysis of any clear changes. Little use of data to support the analysis.
	0	

2. (b) Outline how long-term changes in the size of Earth's cryosphere (ice store) affects the size of other major water stores. Skills: 2.1.1	AO1	AO2.1a	AO2.1b	AO2.1c	AO3	**Total**
	5					**5**

Indicative content

Likely AO1 content includes outlining of:

- different major water stores including lakes, oceans, atmosphere, vegetation, groundwater, and their relative sizes (e.g. oceans hold 97% of water currently)
- different parts of the cryosphere e.g. land ice, sea ice, permafrost
- the water cycle as a closed system where changes to one store impact on other stores
- increases in ocean storage during warm periods when ice-cover has been less
- likely changes in other stores during warm periods with a reduced cryosphere size e.g. increased biomass and atmosphere store (warm air can have higher humidity)
- changes during colder glacial periods e.g. cryosphere expansion and sea-level fall.

Credit any other valid points.

Marking guidance

Near the upper end, answers that score well will outline changes affecting two or more stores (not just oceans). They will clearly outline the changes in size and processes responsible. They might show understanding of different types of cryosphere storage and might use supporting data (percentages).

Near the lower end, answers will show limited knowledge and understanding of major water stores (may only make generalised statements about changes in sea level). May merely 'mirror' one or two simple points (sea-level falls when cryosphere expands - and vice-versa).

Award the marks as follows:

Band	Marks	
3	**4-5**	Developed and clear outlining of changes to two or more other major water stores. Applies developed and clear knowledge and understanding of global water cycle stores, processes and connections.
2	**2-3**	Partial outlining of the changing size of one or two other major water stores. Partial / partially accurate knowledge and understanding of global water cycle stores, processes and connections.
1	**1**	Limited or no outlining of water storage changes. Limited or no knowledge and understanding of global water cycle stores, processes and connections.
	0	Response not creditworthy or not attempted.

3. 'Recent increases in the atmospheric carbon store are the main cause of local water shortages.' Discuss this statement. Suggested focus: 2.1.3, 2.1.5, 2.1.9, 2.1.10	AO1	AO2.1a	AO2.1b	AO2.1c	AO3	**Total**
	10			10		**20**

Indicative content

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

AO1
Candidates will provide a description and explanation of the causes of water shortages in different local contexts. The focus should therefore be upon causality and the different physical and human processes which control the storage and cycling of water. This could include:

- longer-term climate change as a cause of deficit within the water cycle (2.1.5)
- naturally occurring seasonal or longer-term precipitation patterns that result in hydrological deficits, including hydrographs and river regimes (2.1.5, 2.1.3)
- human causes of water cycle deficit including aquifer depletion and the failure of recharge strategies (2.1.5)
- climate change impacts on patterns of precipitation and links between carbon and water cycles at the local scale (2.1.9)
- possible positive feedback loops, for example vegetation dieback during drought resulting in further growth of the atmospheric carbon store (2.1.10).

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

- discussion of the extent to which other causes are the dominant influence in some contexts e.g. local aquifer depletion due to population growth
- discussion of the extent to which water shortages are already occurring which are in line with IPCC predictions e.g. drier summers in UK localities/regions
- discussion of the extent to which it is really possible to attribute individual extreme weather events to long-term climate change, or whether there is still uncertainty
- reflection on how far 'the main cause' may vary from context to context or over time
- reflection on ways in which different causes are connected and inter-linked, resulting in a complex overall picture in some contexts.

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

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

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

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

4. 'Climate is the most important factor influencing the formation of peatlands and their survival.' Discuss this statement. Suggested focus: 2.1.2, 2.1.3. 2.1.8	AO1	AO2.1a	AO2.1b	AO2.1c	AO3	**Total**
	10			10		**20**

Indicative content

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

AO1
Candidates will provide a description and explanation of factors which influence the initial formation of peatlands, and factors which can affect their survival over time. This may include:

- processes of peat formation and carbon storage (2.1.8)
- water cycle flows and processes associated with high levels of soil moisture and groundwater storage resulting from climatic factors (high precipitation, low evaporation) (2.1.2)
- relevant catchment characteristics including porosity and permeability of soils and rock types, slopes, vegetation and land use (2.1.3)
- human activity resulting in peat extraction and damage, and restoration efforts (2.1.8)
- climate change impacts and peat degradation (resulting in more terrestrial carbon emissions and feedback loops) (2.1.10).

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

- discussion of the importance of high precipitation (climate) for peat formation
- discussion of the relative importance of other factors influencing peat formation and survival, especially relief, altitude and parent material
- discussion of the time-scale over which peat may naturally form and survive
- discussion of the growing relative influence of human factors on peatlands at both local (land use) and global (climate change) scales
- reflection on the extent to which the relative importance of climatic factors may vary from place to place, at varying scales, or over time.

Near the upper end, answers that score highly will show application of knowledge and understanding by discussing complex evidence and ideas, synthesising information, and coming to rational conclusions about peat formation and survival, perhaps over varying timescales, using varying contexts and perspectives.

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

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

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

Section B: Global Governance – Change and Challenges

5. (a) (i) Describe the pattern shown in **Figure 3**. Skills: 3.2	AO1	AO2.1a	AO2.1b	AO2.1c	AO3	**Total**
Award the marks as follows:					3	**3**

Indicative content

- 1 mark for an overview e.g. there is 4G coverage in the majority of countries / most countries / nearly all countries (do not credit 'a large number' or 'a lot' as we cannot infer it is the majority)
- 1 mark for a description of the pattern of exceptions e.g. small cluster in southeast Africa; group in northwest Africa; mainly north of equator (do not credit a list of names unless a pattern is also being described).
- 1 mark for manipulation of data e.g. 8 countries lack services; the largest cluster of exceptions is made up of 3 countries.

For example: 'Nearly all (1) have got 4G with the exception of a few, such as 3 countries (1) who are clustered in the west (1)'

5. (a) (ii) Outline **one** limitation of the choropleth map used in **Figure 3**. Skills: 3.2	AO1	AO2.1a	AO2.1b	AO2.1c	AO3	**Total**
Award up to 2 marks for an outlined limitation.					2	**2**

Indicative content

- Availability is not shown at the regional/local level with countries (1) which implies that 4G is available throughout territories when in fact coverage is most likely uneven (1).
- Key does not show the quality of service (1) e.g. the key could distinguish between states where services are available in 50% of areas, 25% of areas, etc. (1).

Marking guidance

Credit any other valid limitation which relates to the presentation / visualisation of data.
Award 1 mark only for simple points about the lack of country names, cities or other geographical data.
Do not credit answers which focus on the quality of data collection in African countries, or the map being out of date; the focus should be the mapping technique which was used to show the 2019 data.

5. (a) (iii) Suggest ways in which poor quality internet connectivity could affect rural-urban migration flows for some countries in **Figure 3**. Content: 2.2.5	AO1	AO2.1a	AO2.1b	AO2.1c	AO3	**Total**
		5				**5**

Indicative content

Likely AO2 applied knowledge and understanding content should focus on technology as a factor creating a shrinking world for potential migrants and the implications of low access to communications technology in some developing countries. Credit logical connections established between, for example, access to technology and the migration decision-making process.

- Lack of internet services in rural areas could result in some people migrating to urban areas if internet connectivity is important to them in some ways e.g. work or educational purposes. For example, access to higher education using remote learning.
- Internet services may convey knowledge of what cities can offer to people living in rural areas (employment, bright lights), thereby encouraging rural-urban migration.
- Internet services may additionally provide information about travel routes to cities.
- However, mobile internet services could have the opposite effect: by improving access to online education, health, employment etc. for rural people. This might reduce out-migration flows.
- Rural residents may also encounter negative online representations of city life, which might also reduce rural-urban migration flows.
- Reduced circulation of information between family members who have already migrated to cities and those who remain in rural areas – thereby dampening the 'bridgehead' migration effect.

Credit any other valid points.

Marking guidance

Near the upper end, answers that score highly will provide more complex or nuanced suggestions, such as recognition that connectivity may not necessarily lead to increased rural-urban flows. At full marks, answers should be explicitly focused on the context provided, which is Figure 3 (middle-income and low-income countries / African continent).

Award the marks as follows:

Band	Marks	
3	**4-5**	Well-developed suggestions of two or more ways in which low internet connectivity could affect rural-urban migration flows for countries in Figure 3. Applies developed knowledge and understanding of rural-urban migration.
2	**2-3**	Partial suggestions of one or two ways in which low internet connectivity may affect rural to urban migration flows. Some application of knowledge and understanding of rural-urban migration.
1	**1**	One limited suggestion of a way in which low internet connectivity may affect migration flows. Fragmented or no applied knowledge and understanding.
	0	Response not creditworthy or not attempted.

6. (a) (i) Use **Figure 4** to calculate the value of X to two decimal places. Write the value for X in your answer booklet. Skills: 2.4	AO1	AO2.1a	AO2.1b	AO2.1c	AO3	**Total**
Award 1 mark for the correct answer.					1	**1**
2.40 (also credit non-rounded 2.39)						

6. (a) (ii) Use **Figure 4** to analyse variations in the estimated mass of floating plastic waste. Skills: 2.5	AO1	AO2.1a	AO2.1b	AO2.1c	AO3	**Total**
					4	**4**

Indicative content

Likely AO3 analysis content will include comparisons and manipulation of the surface mass and density data in order to highlight significant variations.

- There are significant ranges in both of the waste columns, ranging from 96.4 million kg in S Atlantic to 12.7 million kg in N Pacific (total mass) and from 0.16 kg/km^2 in N Pacific to 7.96 kg/km^2 in Mediterranean (mass/area).
- Overall, the highest pollution per km^2 is found in the smallest marine area which is the Mediterranean, while the lowest pollution per kg is in the largest areas, the N and S Pacific.
- The combined N and S Atlantic have the most floating plastic waste, which at more than 150 million kg is more than all the other marine areas put together.
- The Pacific has less plastic in relation to its size than the Atlantic; both parts of the Pacific have a much lower mass of waste per km^2 than the Atlantic.

Marking guidance

At the upper end, answers that score well will analyse the whole resource. They will do more than list or rank the data, and will make comparisons or analytic connections. Added together, the first two bullet points (above) provide a guide to what might be expected at the top of the mark range.

Near the lower end, answers will display limited engagement with the data in Figure 6, for example by unselectively listing the data in one or both columns

Award the marks as follows:

Band	Marks	
3	**4**	A well-developed and clear analysis of the variations shown in Figure 4. Wide use of the resource as evidence.
2	**2-3**	A partial or unclear analysis of the variations shown in Figure 4. Partial use of the resource as evidence.
1	**1**	Limited statement(s) about Figure 4 Little or no use of evidence.
	0	Response not creditworthy or not attempted.

6. (b) Outline why large plastic garbage patches have developed in some ocean areas. Content: 2.2.10	AO1	AO2.1a	AO2.1b	AO2.1c	AO3	**Total**
	5					**5**

Indicative content

Likely AO1 content will include knowledge of the sources and causes of plastic waste combined with an understanding of the role of ocean (gyre) currents.

- Throwaway non-recyclable plastic has been accumulating in oceans for many decades, helped by the way that the material does not physically break down / apart quickly.
- Over time, economic development processes have meant that more societies have adopted the use of throwaway plastic e.g. single-use water bottles.
- Important point sources include run-off from coastal megacities and discharge of major rivers.
- Ocean gyre currents play an important role in the growth of garbage patches.
- North Pacific Gyre, for example, is a clockwise ocean current, creating a circular movement of water with a diameter of around 10,000 km; the Pacific Garbage Patch is found within this area.

Marking guidance

Near the upper end, answers may show developed knowledge and understanding of both the human sources of plastic pollution and the physical processes that help large pollution patches to develop.

Answers near the lower end may have very little knowledge and understanding of plastic garbage patches or may write about generic beach pollution.

Award the marks as follows:

Band	Marks	
3	**4-5**	Developed outlining of the physical and human reasons why plastic accumulates in oceans. Sustained focus on the development of large plastic garbage patches.
2	**2-3**	Partial outlining of the physical and/or human reasons why plastic accumulates in oceans. Partial focus on the development of large plastic garbage patches.
1	**1**	Limited outlining of the physical or human reasons why plastic accumulates in oceans. Limited /no focus on the development of large plastic garbage patches.
	0	Response not creditworthy or not attempted.

7. 'Powerful countries tend to ignore the international rules they have agreed to follow.' To what extent do you agree? Refer to both ocean governance and migration in your answer. Suggested focus: 2.2.2, 2.2.6, 2.2.8	AO1	AO2.1a	AO2.1b	AO2.1c	AO3	**Total**
	10			10		**20**

Indicative content

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

AO1
Candidates will provide a description and explanation of the actions and influence of superpower states over global governance and global issues. This may encompass:

- an overview of what it means to be a powerful country / superpower state (2.2.2) and what is meant by international rules / global governance (2.2.6)
- attitudes of different countries towards refugees and UNHCR rules
- superpower involvement in contested ocean resource issues e.g. the establishment of sovereign rights (including over the continental shelf or areas like South China Sea) and Arctic Ocean ownership (2.2.8)
- role of powerful countries in protection of the Global Commons (*2.2.9*, *2.2.10*)
- key role of superpower states in the establishment of global governance treaties and agreements e.g. UNHCR (*2.2.4*) and UN, EU, G7, G20, NATO and other global groups (2.2.6).

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

- evaluation of the extent to which some global groups, agreements, treaties have been broken by USA, UK and other G20 nations e.g. issues ranging from whaling to refugees
- evaluation of the extent to which different powerful countries may break different international rules, conventions and norms (e.g. US, China, Russia; Japan's stance on whaling)
- evaluation of the extent to which the Global Commons are most threatened by the major superpower economies due to their huge economies/footprints
- reflection on the growing influence of emerging economies e.g. China who had less influence of the creation of post-war global laws and agreements
- reflection on the relative importance of different kinds of influence e.g. hard and soft power, including changes over time in their importance.

Near the upper end, answers that score highly will show application of knowledge and understanding by explaining complex evidence and ideas, synthesising and evaluating information about powerful countries and particular global governance issues/rules, and coming to rational conclusions about the extent to which the statement is true or not.

Responses in the middle range will show some application of knowledge and understanding of global power and governance issues to provide some evaluation and synthesis, prior to drawing partially supported conclusions.

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

Award the marks as follows:		
	AO1 (10 marks)	**AO2.1c (10 marks)**
Band	*Description and explanation of powerful countries and the international rules they helped to create.*	*Evaluation of the extent to which powerful countries always break international rules.*
3	**7-10 marks** Demonstrates detailed and accurate knowledge and understanding of all elements of the question (expect a good balance between migration and ocean governance content at *top end* of this band). Makes use of appropriate and well-developed examples and may include well-annotated diagram(s).	**7-10 marks** Applies knowledge and understanding to thoroughly and coherently evaluate power and governance issues. Balanced coverage of the main issues leading to substantiated conclusions.
2	**4-6 marks** Demonstrates accurate knowledge and understanding of most elements of the question. Makes some use of examples and may include simple diagram(s).	**4-6 marks** Applies knowledge and understanding to produce a coherent but partial evaluation. Applies knowledge and understanding in a partially balanced way.
1	**1-3 marks** Demonstrates limited knowledge and understanding of some element of the question. Makes limited or no use of examples and may include a simple diagram.	**1-3 marks** Applies knowledge and understanding to produce a limited evaluation. Applies knowledge and understanding in an unbalanced way.
	0 marks Response not creditworthy or not attempted.	**0 marks** Response not creditworthy or not attempted.

8. 'International migration has always been the most important driver of global economic growth over time.' To what extent do you agree? Refer to both migration and ocean governance in your answer. Suggested focus: 2.2.1, 2.2.3, 2.2.6, 2.2.7	AO1	AO2.1a	AO2.1b	AO2.1c	AO3	**Total**
	10			10		**20**

Indicative content

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

AO1
Candidates will provide a description and explanation of different causes and influences over global economic growth and development, and how far international migration has been the most important driver. This may include:

- different types of global flow: goods, money, people, information, ideas (2.2.1)
- economic consequences of international migration and linked flows (remittances, ideas) at varying scales (2.2.3)
- importance of maritime trade including the global historical role of the UK's fleets and trading empire (2.2.6)
- seafloor cable data networks and their importance today (2.2.7)
- role of rural-urban migration in the growth of cities and global hubs which drive global economic growth e.g. EPZs *(2.2.5).*

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

- evaluation of the positive and/or negative economic role of international migration in different time-periods, or at varying spatial scales
- evaluation of the relative importance of physical trade (ocean container traffic) and digital trade / flows of information (ocean undersea cables), both now and in the past (e.g. during British Empire maritime era)
- evaluation of which flows matter most in particular contexts, and why this is the case
- reflection on the spatial and scalar interactions between local-scale rural-urban-migration, the growth of global hubs and megacities, and ultimately the growth of a global economy
- reflection on the way international migration flows are linked with other flows (ocean trade, ideas, skills, money, culture) and are arguably a root cause of multiple flows within global systems.

Near the upper end, answers that score highly will show application of knowledge and understanding by explaining complex ideas, synthesising and evaluating information about global systems/flows, and coming to rational conclusions about how far migration matters most for global economic growth.

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

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

Award the marks as follows:		
	AO1 (10 marks)	**AO2.1c (10 marks)**
Band	*Description and explanation of international migration and other global flows/drivers including oceanic trade and data transfers.*	*Evaluation of the extent to which international migration is the main driver of global economic growth over time.*
3	**7-10 marks** Demonstrates detailed and accurate knowledge and understanding of all elements of the question (expect a good balance between migration and ocean governance content at *top end* of this band). Makes use of appropriate and well-developed examples and may include well-annotated diagram(s).	**7-10 marks** Applies knowledge and understanding to thoroughly and coherently evaluate the causes of global economic growth over time. Balanced coverage of the main issues leading to substantiated conclusions.
2	**4-6 marks** Demonstrates accurate knowledge and understanding of most elements of the question. Makes some use of examples and may include simple diagram(s).	**4-6 marks** Applies knowledge and understanding to produce a coherent but partial evaluation. Applies knowledge and understanding in a partially balanced way.
1	**1-3 marks** Demonstrates limited knowledge and understanding of some element of the question. Makes limited or no use of examples and may include a simple diagram.	**1-3 marks** Applies knowledge and understanding to produce a limited evaluation. Applies knowledge and understanding of in an unbalanced way.
	0 marks Response not creditworthy or not attempted.	**0 marks** Response not creditworthy or not attempted.

Section C: Challenges of the 21st Century

9. Evaluate the economic risks which globalisation has brought to different places and societies. Skills: 3.6, 8.3, 8.4 Suggested focus: 1.3.4, 2.1.9, 2.2.1, 2.2.3, 2.2.4	AO1	AO2.1a	AO2.1b	AO2.1c	AO3	**Total**
	8			12	10	**30**

Within the answer to question 9, candidates should use the resources in Figures 5, 6, 7 and 8 and apply their knowledge and understanding from across the whole specification in order to develop a sustained line of reasoning which is coherent, relevant, substantiated and logically structured.

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

AO3 may include:
- analysis and interpretation of the historical decline in US manufacturing work shown in Figure 5
- analysis and interpretation of the migration 'brain drain' experienced by Jamaica shown in Figure 6
- analysis and interpretation of the steady rise in global carbon emissions shown in Figure 7 and its implications for places and societies all across the planet
- analysis and interpretation of the global scale of the risks suggested by Figure 8
- synthesis of Figures e.g. possibility that a major computer virus (Figure 8) might contribute to a decline in global GDP (Figure 6).

AO1 content includes knowledge and understanding of the economic risks shown or implied in Figures 5-8, or other risks linked with globalisation studied as part of the course, including C3 options. This may include:
- deindustrialisation of UK cities due to global shift (C1 – changing places)
- growth of global systems and the shrinking world effect (C2 – global governance)
- migration costs and benefits including remittances (C2 – global governance)
- impacts of increasing atmospheric carbon storage e.g. permafrost melting / cryosphere loss (C2 – water and carbon cycles).

AO2 requires candidates demonstrate application of knowledge and understanding through an evaluation of the severity, scale or extent of different economic risks. Responses may include:
- evaluation of the impacts of deindustrialisation for different places and over varying timescales
- evaluation of the extent to which the economic losses of the brain drain are offset by migrant remittances
- evaluation of the size and timing of the economic impacts which climate change is projected to bring to societies at varying scales
- evaluation of the size and timing of the economic impacts which computer or biological viruses may bring to societies at varying scales
- reflecting critically on whether the risks are ultimately offset by economic benefits or not
- reflecting critically using other specialised geographic concepts such as sustainability and resilience.

The question requires that candidates progress beyond describing economic impacts/risks. At the upper end, answers that score highly will show application of knowledge and understanding by critically evaluating the risks 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/risks to provide little evaluation.

Award the marks as follows:			
	AO1 [8 marks]	**AO2.1c [12 marks]**	**AO3 [10 marks]**
Band	*Knowledge & understanding of globalisation e.g. global shift, migration flows.*	*Evaluation of the economic risks (e.g. their severity, scale or duration) for different places.*	*Specific economic risks/ impacts/issues in Figures 5-8; extended writing skills.*
3	**7-8 marks** Demonstrates detailed and accurate knowledge and understanding of all elements of the question. Makes use of appropriate and well-developed examples and may include well-annotated diagram(s).	**9-12 marks** Applies knowledge and understanding to produce a coherent, thorough and sustained evaluation. Applies knowledge and understanding of Specification themes in a broad and well-balanced way.	**8-10 marks** Well-developed analysis of Figures 5-8 with sustained and detailed use of data. Well-constructed, coherent and logical arguments and substantiated conclusions.
2	**4-6 marks** Demonstrates accurate knowledge and understanding of most elements of the question. Makes some use of examples and may include simple diagram(s).	**5-8 marks** Applies knowledge and understanding to produce a coherent but partial evaluation. Applies knowledge and understanding of Specification themes in a narrower and partially balanced way.	**4-7 marks** Partial analysis of Figures 5-8 with some detailed use of data. Partial arguments and conclusions have been attempted.
1	**1-3 marks** Demonstrates limited knowledge and understanding of some element of the question. Makes limited or no use of examples and may include a simple diagram.	**1-4 marks** Applies knowledge and understanding to produce a limited evaluation. Applies limited knowledge and understanding of Specification themes in an unbalanced way.	**1-3 marks** Limited analysis of Figures 5-8 with some limited use of data. Limited arguments and conclusions, if any.
	0 marks Response not creditworthy or not attempted.	**0 marks** Response not creditworthy or not attempted.	**0 marks** Response not creditworthy or not attempted.

10. Evaluate ways of reducing people's vulnerability to the negative impacts of globalisation. Skills: 3.6, 8.3, 8.4 Suggested focus: 1.3.4, 2.2.1, 2.2.3, 2.2.4	AO1	AO2.1a	AO2.1b	AO2.1c	AO3	**Total**
	8			12	10	**30**

Indicative content

Within the answer to question 10, candidates should use the resources in Figures 5, 6, 7 and 8 and apply their knowledge and understanding from across the whole specification in order to develop a sustained line of reasoning which is coherent, relevant, substantiated and logically structured.
The indicative content is not prescriptive and candidates are not expected to cover all points for full marks. Credit other valid points not contained in the indicative content.

AO3 may include:
- analysis and interpretation of the negative impacts for US manufacturing workers shown in Figure 5
- analysis and interpretation of Jamaica's vulnerability to the migration 'brain drain' shown in Figure 6
- analysis and interpretation of the global GDP and global carbon emissions trends shown in Figure 7
- analysis and interpretation of people's vulnerability to the hazard/risks shown in Figure 8
- synthesis of Figures e.g. the extent to which communities suffering deindustrialisation (Figure 5) might become more vulnerable to other risks e.g. competition for jobs because of immigration (Figure 6).

AO1 content includes knowledge and understanding of the negative impacts shown or implied in Figures 5-8, or other themes studied as part of the course, including their C3 options. This may include:
- strategies to regenerate deindustrialised places suffering from the cycle of deprivation e.g. UK cities (C1 – changing places)
- policies that aim to limit the negative impacts of migration (C2 – global governance)
- global governance actions to address inequality and injustice for vulnerable groups e.g. displaced people and refugees, indigenous people (C2 – global governance)
- possible ways of managing impacts of increasing atmospheric carbon storage on vulnerable environments and people e.g. afforestation schemes (C2 – water and carbon cycles) or coasts or glaciers at risk of retreating (C1 - landscapes).

AO2 requires candidates demonstrate application of knowledge and understanding through an evaluation of the real or projected success or otherwise of the suggested strategies/ways of reducing vulnerability. Responses may include:
- evaluation of the management of deindustrialised places over varying time-scales
- evaluation of the extent to which migration policies can or should prevent a brain drain from occurring
- evaluation of climate change management at local and global scales
- evaluation of the success or otherwise of efforts to protect vulnerable people from the global spread of computer or biological viruses
- reflecting critically on whether, on balance, globalisation and global systems continue to mainly drive vulnerable people into poverty and ill health, despite mitigation efforts
- reflecting critically using other specialised geographic concepts such as sustainability and resilience.

The question requires that candidates progress beyond describing strategies/ways of managing globalisation and the problems it creates. At the upper end, answers that score highly will show application of knowledge and understanding by critically evaluating the likely success/failure of the ways/strategies 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 ways/strategies to provide little evaluation.

Award the marks as follows:			
	AO1 [8 marks]	**AO2.1c [12 marks]**	**AO3 [10 marks]**
Band	*Knowledge and understanding of the negative impacts of globalisation.*	*Evaluation of strategies/ways to manage globalisation to reduce social vulnerability.*	*Negative impacts for vulnerable people shown or implied by Figures 5-8; extended writing skills.*
3	**7-8 marks** Demonstrates detailed and accurate knowledge and understanding of all elements of the question. Makes use of appropriate and well-developed examples and may include well-annotated diagram(s).	**9-12 marks** Applies knowledge and understanding to produce a coherent, thorough and sustained evaluation. Applies knowledge and understanding of Specification themes in a broad and well-balanced way.	**8-10 marks** Well-developed analysis of Figures 5-8 with sustained detailed use of data. Well-constructed, coherent and logical arguments and substantiated conclusions.
2	**4-6 marks** Demonstrates accurate knowledge and understanding of most elements of the question. Makes some use of examples and may include simple diagram(s).	**5-8 marks** Applies knowledge and understanding to produce a coherent but partial evaluation. Applies knowledge and understanding of Specification themes in a narrower and partially-balanced way.	**4-7 marks** Partial analysis of Figures 5-8 with some detailed use of data. Partial arguments and conclusions have been attempted.
1	**1-3 marks** Demonstrates limited knowledge and understanding of some element of the question. Makes limited or no use of examples and may include a simple diagram.	**1-4 marks** Applies knowledge and understanding to produce a limited evaluation. Applies limited knowledge and understanding of Specification themes in an unbalanced way.	**1-3 marks** Limited analysis of Figures 5-8 with some limited use of data. Limited arguments and conclusions, if any.
	0 marks Response not creditworthy or not attempted.	**0 marks** Response not creditworthy or not attempted.	**0 marks** Response not creditworthy or not attempted.