GCE A LEVEL MARKING SCHEME

SUMMER 2023

A LEVEL
GEOGRAPHY – COMPONENT 1
A110U10-1

INTRODUCTION

This marking scheme was used by WJEC for the 2023 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 1

SUMMER 2023 MARK SCHEME

Section A: Changing Landscapes

Either: Coastal Landscapes

1. (a) Use **Figure 1** to analyse variations in the impacts of coastal erosion.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
					5		**5**

The table shows information on some elements of coastal erosion in Nigeria. Candidates can gain credit for the provision of basic comparative statements but need to give valid analytical overview[s] to access the top Band.

Indicative content

Overview may include**:**
- Lagos has the highest overall economic impacts – 959 v 102 million US dollars
- Higher levels of erosion do not produce the most impact
- Coastal population is more important than rates of erosion in detrmining impacts.

Specific descriptive statements may include:
- Cross River has higher rates of erosion
- Lagos has higher losses for infrastructure
- Lagos has higher losses for agriculture.

Accept other valid descriptive/analytical comments.

Award the marks as follows:

Band	AO3 (5 marks)
3	**4-5 marks** Well-developed analysis of the impacts. Reference to overall pattern. Wide use of the resource to support the analysis of the changes.
2	**2-3 marks** Partial analysis of the impacts. Series of isolated comments. Partial use of the resource to support the analysis/description of the changes.
1	**1 mark** Limited statements with no use of the resource.
	0 marks Response not creditworthy or not attempted.

1. (b) Outline how sediment is transported by the coastal processes of (i) longshore drift and (ii) solution.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3.1		**Total**
	8						**8**

Indicative content

Candidates should give an explanation of both processes and outline how they transport sediment in a coastal environent.

- Longshore drift occurs when waves approach the coast at an angle**.** Incoming swash transports sediment up the beach at an angle as movement contains an up-beach component and a lateral component. Gravitational backwash then transports sediment back down the beach at 90' to the coastline. Sediment particles comes to rest some distance along the beach from the original starting point due to net lateral movement. Particle moves in a zig-zag fashion along the beach with each incoming wave. Responses may address different transportation processes/sorting.
- Solution is significant on coasts where there are limestones and calcium carbonate cemented rocks. May occur through biochemical reactions. May occur in colder climates as CO_2 has low solubility in warm waters. Dissolved $CaCO_3$ transported in the sea water by waves and currents that move it along coasts.

Marking guidance

Credit other valid approaches. Expect some imbalance in the answers. Candidates are likely to outline longshore drift in more detail. Imbalance should not preclude candidates from being awarded a mark in Band 3.

Award the marks as follows:	
Band	**AO1 (8 marks)**
3	**6-8 marks** Well-developed outline of two coastal processes. Well-annotated sketches / diagrams / maps may also be used and should be credited.
2	**3-5 marks** Partial outline of two coastal processes. Well-developed outline of either coastal process. Generalised sketches / diagrams / maps may also be used and should be credited.
1	**1-2 marks** Limited outline of two coastal processes. Basic sketches / diagrams / maps may also be used and should be credited.
	0 marks Response not creditworthy or not attempted.

2. (a) Use **Figure 2** in the **Resource Folder** to: (i) State the six-figure grid reference of the viewpoint. Write the answer in your booklet [1] (ii) Identify and locate, using four-figure grid references, **two** different landforms that suggest coastal erosion has taken place. Write the answer in your booklet [4]	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
					5		**5**

(i) 392 626 (1 mark). Allow a tolerance of 1 either way e.g. 391 625

(ii) Stack 37 64
Wave cut platform 37 61
Raised cliff 37 63
Bay 38 63
Beaches 38 62

Marking guidance

Award 1 mark for correct identification of each feature/landform and 1 mark for each accurate four-figure location up to 4 marks (2+2 marks). Allow benefit of the doubt where a candidate has correctly identifed a landform but uses an inaccurate grid reference. Credit two landforms in same grid square. Credit not given to six-figure grid references where these are given in response to (ii).
Credit not given if landform identification is unclear e.g. allow Stack of Skudiburgh but not Ru Chorachan.

2. (b) Suggest how seasonal variations in coastal processes may influence the characteristics of **one** coastal landform.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
			8				**8**

Indicative content

Candidates should show and apply knowledge and understanding of the seasonality of processes that can influence the characteristics of one selected landform. Answers should show knowledge of process and seasonality of process and may apply this with reference to a located landform. Selected landform can be from the map provided or other parts of the UK and beyond.

Possible approaches may include an outline of:

- Seasonality associated with storms, wave energy and erosional processes. Candidates may comment on the increased erosion and retreat of referenced cliffs or increased erosion of wave-cut platforms
- Some candidates may discuss the seasonal nature of beach profile and link these to the prevalence of destructive and constructive waves
- There may be some discussion of variation in the input of sediment by rivers and the changes in beaches, probably relating to the amount of sediment on beaches e.g. beaches next to Uig
- Seasonal patterns of weathering may be addressed to changes in cliff profiles or as inputs of material onto beaches below cliffs e.g. southern Uig Bay.

Credit other valid approaches.

Award the marks as follows:	
Band	**AO2.1b (8 marks)**
3	**6-8 marks** Well-developed response that identifies a valid landform and explains how seasonality of process may influence change in its form or character. Well-annotated sketches / diagrams / maps may also be used and should be credited.
2	**3-5 marks** Partial response that identifies a valid landform and explains how seasonality of process may influence change in its form or character. Generalised sketches / diagrams / maps may also be used and should be credited.
1	**1-2 marks** Limited response that identifies a valid landform and explains how seasonality of process may influence change in its form or character. Basic sketches / diagrams / maps may also be used and should be credited.
	0 marks Response not creditworthy or not attempted.

3. Assess the relative importance of fluvial processes in the formation of landforms in low energy coastal environments.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
	10			5			**15**

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
AO1 content encompassess knowledge and understanding of the role of fluvial processes in the development of landforms in low energy coastal environments which may include estuarine and sandy coastlines. Candidates are directed towards fluvial processes but may consider other processes and factors such as waves, currents and tides as well as the influence of biotic and human intervention. The balance of the content will depend upon the landform(s) chosen but candidates should demonstrate the ability to link the factors addressed to their characteritics and formation.

The content may include knowledge and understanding of:
- the characteristics of the chosen landforms – mud flats, salt marshes, river channels, creeks, bars, beaches and dune systems
- the formation of the chosen landforms
- the fluvial erosional, transportational and depositional processes involved
- the influence of waves, tides and currents
- the influence of biotic processes – fixation of sediment by plants
- the influence of human activity
- different types of estuary or low energy environments e.g. coastal plain/bar-built/ria.

AO2
AO2.1c content encompasses the application of knowledge and understanding to evaluate the importance of fluvial processes in the development of landforms in low energy coastal environments. Candidates may reach the conclusion on the importance of fluvial processes but a conclusion is not necessary in order to reach the top of Band 3.

The content may vary according to the landforms chosen but may include an examination of:
- the importance of fluvial processes compared to other factors
- relative importance of fluvial processes in different types of low energy environments
- the relative importance of different marine processes such as waves, tides and currents
- the importance of different factors over space
- the changing importance of different factors over different time periods.

Award the marks as follows:		
	AO1 (10 marks)	**AO2.1c (5 marks)**
Band	*Demonstrates knowledge and understanding of the processes and factors that influence the characteristics and formation of one or more depositional landforms in low energy coastal environments.*	*Applies knowledge and understanding to assess the importance of fluvial processes in the development of depositional landforms in low energy coastal environments.*
3	**7-10 marks** Demonstrates detailed and accurate knowledge and understanding that is relevant to the question. Demonstrates detailed and accurate knowledge and understanding of the processes and factors that influence the characteristics and formation of one or more landforms in low energy coastal environments. Demonstrates detailed and accurate knowledge and understanding using appropriate, accurate and well-developed examples. Well-annotated sketches / diagrams may be used and should be credited.	**4-5 marks** Applies knowledge and understanding to construct a well-developed discussion that is supported by evidence. Applies knowledge and understanding to produce a thorough and coherent examination of the importance of processes and factors that influence the characteristics and formation of landforms in low energy coastal environments.
2	**4-6 marks** Demonstrates accurate knowledge and understanding that is relevant to the question. Demonstrates accurate knowledge and understanding of the processes and factors that influence the characteristics and formation of one or more landforms in low energy coastal environments. Demonstrates accurate knowledge and understanding using examples. Sketches / diagrams may be used and should be credited.	**2-3 marks** Applies knowledge and understanding to construct a partial discussion that is supported by some evidence. Applies knowledge and understanding to produce a partial examination of the importance of processes and factors that influence the characteristics and formation of landforms in low energy coastal environments.
1	**1-3 marks** Demonstrates limited knowledge and understanding that is relevant to the question. Demonstrates limited knowledge and understanding of the processes and factors that influence the characteristics and formation of one or more landforms in low energy coastal environments. Demonstrates limited knowledge and understanding using limited examples. Basic sketches / diagrams may be used and should be credited.	**1 mark** Applies knowledge and understanding to construct a limited discussion supported by limited evidence. Applies knowledge and understanding to produce a limited examination of the importance of processes and factors that influence the characteristics and formation of landforms in low energy coastal environments.
	0 marks Response not creditworthy or not attempted.	**0 marks** Response not creditworthy or not attempted.

4. Examine the positive impacts of coastal processes on human activity.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
	10			5			**15**

Indicative content

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

AO1
AO1 content encompasses knowledge and understanding of the positive impacts of coastal processes on human activity. The impacts on human activity may focus on economic, social and environmental elements.

The content will depend upon the impacts chosen and may include:
- an outline of how coastal processes operate to impact positively upon human activity – these may refer to a variety of elements – wave and current action that may result in the formation of beaches, erosional processes that form coastal landforms, erosional and depositional processes that may form harbours, biotic activity that may form dunes/coral reefs/mangroves
- an outline of the positive economic impacts on human activity – beaches and tourism, harbours and trade/industy, mangroves and the protection of land from erosion, protection from erosion by beaches
- an outline of the positive social impacts on human activity – provision of environments that can be used for leisure such as dune systems or beaches, infrastructural developments that result from tourism and leisure, community empowerment as a result of organisation to combat coastal erosion
- an outline of the positive environmental impacts on human activity – dynamic landscapes are used as SSSI which preserve nature, tides and currents used to generate power e.g Rance.

AO2
AO2.1c content encompasses the application of knowledge and understanding to examine the positive impacts of coastal processes on human activity. A conclusion may be drawn in the context of positivity, but a conclusion is not necessary in order to reach the top of Band 3.

The content may vary according to location and impact but may include an examination of:
- the different positive impacts e.g. tourism and trade
- the positive nature of impacts in an economic, social and environmental context
- the difference in impact between places
- the changing impacts over time e.g. positive impacts may be short-term or may lead to negative issues e.g. overheating.

Marking guidance

Answers that drift into discussion of negative impacts of coastal activity are capped in Band 2 for AO1.

Award the marks as follows:

	AO1 (10 marks)	AO2.1c (5 marks)
Band	*Demonstrates knowledge and understanding of the positive impacts of coastal processes on human activity.*	*Applies knowledge and understanding to examine the positive impacts of coastal processes on human activity.*
3	**7-10 marks** Demonstrates detailed and accurate knowledge and understanding of the positive impacts of coastal processes on human activity. Demonstrates detailed and accurate knowledge and understanding using appropriate, accurate and well-developed examples. Well-annotated sketches / diagrams may be used and should be credited.	**4-5 marks** Applies knowledge and understanding to construct a well-developed discussion that is supported by evidence. Applies knowledge and understanding to produce a thorough and coherent assessment of the positive impacts of coastal processes on human activity.
2	**4-6 marks** Demonstrates partial knowledge and understanding of the positive impacts of coastal processes on human activity. Demonstrates partial knowledge and understanding using examples. Sketches / diagrams may be used and should be credited.	**2-3 marks** Applies knowledge and understanding to construct a partial discussion that is supported by some evidence. Applies knowledge and understanding to produce a partial assessment of the positive impacts of coastal processes on human activity.
1	**1-3 marks** Demonstrates limited knowledge and understanding of the positive impacts of coastal processes on human activity. Demonstrates limited knowledge and understanding using limited examples. Basic sketches / diagrams may be used and should be credited.	**1 mark** Applies knowledge and understanding to construct a limited discussion supported by limited evidence. Applies knowledge and understanding to produce a limited assessment of the positive impacts of coastal processes on human activity.
	0 marks Response not creditworthy or not attempted.	**0 marks** Response not creditworthy or not attempted.

Or: Glaciated Landscapes

5. (a) Use **Figure 3** to analyse variations in the potential impacts of glacial lake outburst floods.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
					5		**5**

The table shows information concerning the potential impacts of GLOFs in Nepal. Candidates can gain credit for the provision of basic comparative statements but need to give valid analytical overview[s] to access the top band.

Indicative content

Overview may include**:**
- Despite having similar expansion rates the potential impacts are not always the same
- Thulagi has slightly more expansion but has potentially more impact.

Specific descriptive statements may include:
- Thulagi has higher potential for agricultural damage
- Thulagi has lower potential for infrastructure damage
- GLOFs will affect more people for Thulagi than Imja Tsho
- Thulagi is expanding at a slightly faster rate than Imja Tsho.

Accept other valid descriptive/analytical comments.

Award the marks as follows:	
Band	**AO3 (5 marks)**
3	**4-5 marks** Well-developed analysis of the potential impacts. Reference to overall pattern. Wide use of the resource to support the analysis of the potential impacts.
2	**2-3 marks** Partial analysis of the potential impacts. Series of isolated comments. Partial use of the resource to support the analysis/description of the potential impacts.
1	**1 mark** Limited statements with no use of the resource.
	0 marks Response not creditworthy or not attempted.

5. (b) Outline how glaciers move by (i) internal deformation and (ii) basal sliding.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		Total
	8						**8**

Indicative content

Candidates should give an explanation of both processes and outline how they allow a glacier to move.

- Internal deformation is where the ice deforms under its own weight. It is the slow creep of ice due to slippage between and within crystals. It can also form through internal faulting of the ice and is the dislocation of individual crystals. The bottom of the ice crystal remains stationary, and this forms a base for movement. Gravity moves the top of the ice crystal downhill due to the shear stress placed on the crystal.

- Basal sliding is the sliding of a glacier over its base. It is accomplished through a number of processes:
  1. When a layer of water builds up at the interface between ice and rock which gives a reduction in friction.
  2. Enhanced basal creep where ice squeezes against a large bedrock obstacle causing an increase in pressure and plastic ice flow around the feature.
  3. Regelation flow where ice presses up against a bedrock obstacle leading to pressure increase with ice melting and re-freezing in the lee where pressure is lower.

Award the marks as follows:	
Band	**AO1 (8 marks)**
3	**6-8 marks** Well-developed outline of two processes by which glacier movement occurs. Well-annotated sketches / diagrams / maps may also be used and should be credited.
2	**3-5 marks** Partial outline of two processes by which glacier movement occurs. Well-developed outline of either process. Generalised sketches / diagrams / maps may also be used and should be credited.
1	**1-2 marks** Imited outline of two processes by which glacier movement occurs. Basic sketches / diagrams / maps may also be used and should be credited.
	0 marks Response not creditworthy or not attempted.

6. (a) Use **Figure 4** in the **Resource Folder** to: (i) State the six-figure grid reference of the viewpoint. Write the answer in your booklet. [1] (ii) Identify and locate, using four-figure grid references, **two** different landforms that suggest glacial erosion has taken place. Write the answers in your booklet. [4]	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
					5		**5**

Indicative content

(i) 989 989 (1 mark). Allow a tolernace of 1 either way e.g 988 989

(ii) Corrie 95 99
Backwall 94 97
U shape valley 98 95
Corrie lake 95 97
Arête 95 97
Hanging valley 98 97

Marking guidance

Award 1 mark for correct identification of each feature/landform and 1 mark for each accurate four-figure location up to 4 marks (2+2 marks). Allow benefit of the doubt where a candidate has correctly identifed a landform but uses an inaccurate grid reference. Credit two landforms in same grid square. Credit not given to six-figure grid references where these are given in response to (ii).

Credit not given if landform identification is unclear e.g. allow Coire Bhrochain or Lochan Uaine but not Sron Riach.

6. (b) Suggest how post-glacial processes may influence the characteristics of **one** glacial landform.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
			8				**8**

Indicative content

Candidates should show and apply knowledge and understanding of post-glacial processes and how they influence the characteristics of one selected landform. Answers should show knowledge of process and may apply this with reference to a located landform. Selected landform can come from the map or other parts of the UK and beyond.

Content may include:

- Description and explanation of freeze thaw weathering and the production of scree slopes via rock fall. Candidates may also refer to the impact of weathering on the free faces – retreat and angularity
- Description and explanation of the formation and characteristics of underfit streams – glacier has cut deep valley, water flows from uplands into glaciated valley, meanders across base of valley reworking sediments, cutting down into sediments, impinges on valley sides and erodes 'notches' in side of valley
- Answers that select a landform outside the maps extract may refer to the infilling of glacial lakes and reworking of glacial deposits.
- Accept modifications to landform associated with human activity e.g. extraction of sands and gravels from outwash deposits/eskers.

Credit other valid approaches.

Award the marks as follows:	
Band	**AO2.1b (8 marks)**
3	**6-8 marks** Well-developed discussion that identifies a valid landform[s] and explains the influence of post glacial processes operating since the last glaciation. Well-annotated sketches / diagrams / maps may also be used and should be credited.
2	**3-5 marks** Partial discussion that identifies a valid landform[s] and explains the influence of post glacial processes operating since the last glaciation. Generalised sketches / diagrams / maps may also be used and should be credited.
1	**1-2 marks** Limited discussion that identifies a valid landform[s] and explains the influence of post glacial processes operating since the last glaciation. Basic sketches / diagrams / maps may also be used and should be credited.
	0 marks Response not creditworthy or not attempted.

7. Assess the relative importance of processes of glacial deposition in the formation of landforms in lowland glacial landscapes.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
	10			5			**15**

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
AO1 content encompassess knowledge and understanding of the different processes of glacial deposition in lowland glacial environments. These environments often contain specific landforms such as till plains, eskers, drumlins, moraines, outwash plains and kames. The depositional processes that operate in this environment include subglacial deposition by lodgement, bulldozing of sediment, fluvioglacial processes, ablation and lacustrine deposition. Answers need to examine the role of different process in the formation of selected landforms. The balance of the content will depend upon the landforms chosen but candidates should demonstrate the ability to link the processes involved to their characteritics and formation.

The content may include knowledge and understanding of:
- the characteistics of the chosen landforms
- the processes of glacial deposition which may include glacial and fluvioglacial
- the formation of the chosen landforms
- the interaction of processes – eg fluvioglacial and lacustrine sedimentation
- post-glacial modification.

AO2
AO2.1c content encompasses the application of knowledge and understanding to assess the importance of different types of deposition in the formation of landforms in lowland glacial landscapes. Candidates may reach the conclusion that different methods are important but a conlcusion is not necessary in order to reach the top of Band 3.

The content may vary according to the landform but may include an assessment of:
- the importance of different glacial deposition processes
- the importance of interaction
- the relative importance of different processes in different zones of lowland glaciation
- the relative importance of post-glacial processes
- the importance of different factors over time.

Award the marks as follows:		
	AO1 (10 marks)	**AO2.1c (5 marks)**
Band	*Demonstrates knowledge and understanding of different processes of deposition and the formation of landforms in lowland glacial environments.*	*Applies knowledge and understanding to appraise through an examination of the importance of different processes of deposition in the formation of landforms in lowland glacial environments.*
3	**7-10 marks** Demonstrates detailed and accurate knowledge and understanding that is relevant to the question. Demonstrates detailed and accurate knowledge and understanding of different processes of deposition and the formation of landforms of glacial deposition. Demonstrates detailed and accurate knowledge and understanding using appropriate, accurate and well-developed examples. Well-annotated sketches / diagrams may be used and should be credited.	**4-5 marks** Applies knowledge and understanding to construct well-developed discussion that is supported by evidence. Applies knowledge and understanding to produce a thorough and coherent examination of the importance of different processes of deposition in the formation of landforms of glacial deposition.
2	**4-6 marks** Demonstrates partial knowledge and understanding that is relevant to the question. Demonstrates partial knowledge and understanding of different processes of deposition and the formation of landforms of glacial deposition. Demonstrates partial knowledge and understanding using examples. Sketches / diagrams may be used and should be credited.	**2-3 marks** Applies knowledge and understanding to construct a partial discussion that is supported by some evidence. Applies knowledge and understanding to produce a partial examination of the importance of different processes of deposition in the formation of landforms of glacial deposition.
1	**1-3 marks** Demonstrates limited knowledge and understanding that is relevant to the question. Demonstrates limited knowledge and understanding of the influence of different processes of deposition and the formation of landforms of glacial deposition. Demonstrates limited knowledge and understanding using limited examples. Basic sketches / diagrams may be used and should be credited.	**1 mark** Applies knowledge and understanding to construct a limited discussion supported by limited evidence. Applies knowledge and understanding to produce a limited examination of the importance of different processes of deposition in the formation of landforms of glacial deposition.
	0 marks Response not creditworthy or not attempted.	**0 marks** Response not creditworthy or not attempted.

8. Examine how glacial budgets vary over different timescales.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
	10			5			**15**

Indicative content

The specification requires candidates to have knowledge and understanding of variations in the glacial budget over a number of timescales. The scales include long, medium and short-term and focus on the causes of changes in the glacial budget. Some answers may reflect on the impact of human activity on present day budgets.

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
AO1 content encompasses knowledge and understanding of the causes of variations in the glacial budget and the processes that operate leading to advancement, retreat and equilibrium.

The content will depend upon the scales chosen and may include knowledge and understanding of:
- the causes of glaciations and interglacials which may address Milankovictch cycles [eccentricity axial tilt and precession], variations in solar input, tectonic causes including volcanic epochs and land/sea distribution impacting ocean currents
- medium term changes causing the LIA and MWP. LIA – lows in solar radiation, volcanic activity, Earth's orbit and tilt and inherent variability of climate. MWP – increased solar activity and decreased volcanic activity
- the annual glacial budget – inputs via new snow and ice, avalanching and wind blown snow and outputs via evaporation, sublimation, calving and meltwater. Reference may be made to the equilibrium line, advancing and retreating
- present day changes related to climate change.

AO2
AO2.1c content encompasses the application of knowledge and understanding to assess the relative importance of different time scales. A conclusion may be drawn in the context of the scales chosen but a conclusion is not necessary in order to reach the top of Band 3.

The content may vary according to the strategy but may include an assessment of:
- timescale in relation to magnitude of changes to the glacial budget
- different causes of change to the glacial budget
- time scale in relation to advancement and retreat
- the importance of human versus natural causes of change in the glacial budget.

Award the marks as follows:		
	AO1 (10 marks)	**AO2.1c (5 marks)**
Band	*Demonstrates knowledge and understanding of different timescales in the glacial budget.*	*Applies knowledge and understanding to assess relative importance of different timescales on the glacial budget.*
3	**7-10 marks** Demonstrates detailed and accurate knowledge and understanding of different timescales in the glacial budget. Demonstrates detailed and accurate knowledge and understanding using appropriate, accurate and well-developed examples. Well-annotated sketches / diagrams may be used and should be credited.	**4-5 marks** Applies knowledge and understanding to construct well-developed discussion that is supported by evidence. Applies knowledge and understanding to produce a thorough and coherent assessment of relative importance of different timescales on the glacial budget.
2	**4-6 marks** Demonstrates partial knowledge and understanding of different timescales in the glacial budget. Demonstrates partial knowledge and understanding using examples. Sketches / diagrams may be used and should be credited.	**2-3 marks** Applies knowledge and understanding to construct a partial discussion that is supported by some evidence. Applies knowledge and understanding to produce a partial assessment of relative importance of different timescales on the glacial budget.
1	**1-3 marks** Demonstrates limited knowledge and understanding of different timescales in the glacial budget. Demonstrates limited knowledge and understanding using examples. Sketches / diagrams may be used and should be credited.	**1 mark** Applies knowledge and understanding to construct a limited discussion supported by limited evidence. Applies knowledge and understanding to produce a limited assessment of relative importance of different timescales on the glacial budget.
	0 marks Response not creditworthy or not attempted.	**0 marks** Response not creditworthy or not attempted.

Section B: Changing Places

9. (a) Use **Figure 5** to analyse the pattern of gentrification.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
					5		**5**

Indicative content

Overview may include:
- Mainly coastal cities
- Cities with higher number of neighbourhoods gentrified are concentrated
- Cities with lower number of neighbourhoods gentrified are more dispersed
- Cities with lower number of neighbourhoods gentrified are inland.

Specific comments may include:
- Concentration on Pacific coast
- Concentration in California
- Outliers – Denver, Dallas, Austin
- Northern interior states have no gentrification shown.

Credit other valid approaches.

Award the marks as follows:	
Band	**AO3 (5 marks)**
3	**4-5 marks** Well-developed analysis of pattern of gentrification. Reference to overall pattern. Wide use of the resource to support the description.
2	**2-3 marks** Partial analysis of pattern of gentrification. Series of isolated comments. Partial use of the resource to support the description.
1	**1 mark** Limited statements with no use of the resource.
	0 marks Response not creditworthy or not attempted.

9. (b) Explain why cities with high levels of gentrification may experience social changes.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		Total
		8					**8**

Indicative content

Candidates should display an understanding of how gentrification leads to social changes.

Possible approaches may include:

- Movement of wealthier population into an area often leads to decrease in ethnic diversity. Redevelopment by local authorities or development companies often does the same.
- Changing retail and service character of a neighbourhood as professionals move into an area – urban pioneers bring in expensive shops and cafes which are inaccessible to original residents. These may then taken over by chain stores in later stages of gentrification.
- Housing becomes increasingly expensive and ethnic minority/poor population are forced into shrinking set of affordable neighbourhoods – often with detrimental impacts on health as housing can be of poorer quality, multiple let housing.
- Impacts on education as young wealthy workers move into an area – wealthy families may become more engaged with schools, may be more children which keep schools viable.
- Gentrified areas take on different identity – artsy, LGBTQ+, family friendly, creative etc – this attracts people with similar outlook.

Credit other valid approaches.

Award the marks as follows:	
Band	**AO2b (8 marks)**
3	**6-8 marks** Well-developed explanation of social changes due to gentrification. Well-annotated sketches / diagrams / maps may also be used and should be credited.
2	**3-5 marks** Partial explanation of social changes due to gentrification. Generalised sketches / diagrams / maps may also be used and should be credited.
1	**1-2 marks** Limited explanation of social changes due to gentrification. Basic sketches / diagrams / maps may also be used and should be credited.
	0 marks Response not creditworthy or not attempted.

10. (a) Use **Figure 6** to compare the age characteristics of the populations shown.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
					5		**5**

Indicative content

Comparisons may pick out differences for individual age groups but there should be some overview of the differences/similarities in the general structure of the pyramids beyond individual age ranges.

Overview may include:
- Young adults (20-29) / working population are the most significant group in both pyramids
- Relatively low proportion of children/young dependents in both
- significantly lower % of children/young dependents in Clifton than in Bristol as a whole
- similar % of ageing population in both.

Specific comments may include:
- largest group is 20-24 in both
- lower % of 0-4 in Clifton
- little difference in 65-69
- lower % of 40-54 in Clifton
- similar proportions of 70-75.

Marking guidance

Credit data manipulation to support comparisons.

Award the marks as follows:	
Band	**AO3 (5 marks)**
3	**4-5 marks** Well-developed comparison of the population structure of Clifton and Bristol. Overview of general structure provided. Comprehensive use of the resource to support the comparison.
2	**2-3 marks** Partial comparison of the population structure of Clifton. May be a series of isolated comparisons or comments. Partial use of the resource to support the comparison.
1	**1 mark** Limited statements with no use of the resource.
	0 marks Response not creditworthy or not attempted.

10. (b) Outline **two** inequalities associated with change in rural communities.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
	8						**8**

Indicative content

Looking for knowledge of two inequalities associated with change in rural communities which may involve housing, transport and service provision as well as demographic issues. Inequality related content of answers will vary according to focus of change addressed.

Change may take a variety of forms:
- changing population with counter-urbanisation
- changing technology e.g. broadband availability
- increase in second homes
- decrease in employment
- regeneration of rural communities.

Possible inequalities could include:
- inequalities in income related to increase in wealthy second home owners or counterurbanisation
- inequalities in access to services – schools and shops may close and original inhabitants may lose not be able to gain access to services in the community
- inequalities in access to housing as wealthy incomers are able to afford rising house prices or increased rents
- inequalities in transport as public transport is reduced
- demographic inequalities as communities change and family structures break down.

Credit other valid approaches.

Award the marks as follows:	
Band	**AO2.1b (8 marks)**
3	**6-8 marks** Clear and developed outline of two inequalities related to change in rural communities. Demonstrates accurate knowledge and understanding using appropriate and well-developed examples. Well-annotated sketches / diagrams / maps may also be used and should be credited.
2	**3-5 marks** Partial outline of two inequalities related to change in rural communities or clear and developed outline of one inequality related to change in rural communities. Partial knowledge and understanding using appropriate examples. Generalised sketches / diagrams / maps may also be used and should be credited.
1	**1-2 marks** Limited outline of one/two inequalities related to change in rural communities Limited knowledge and understanding using limited examples. Basic sketches / diagrams / maps may also be used and should be credited.
	0 marks Response not creditworthy or not attempted.

11. Examine ways in which place meanings and representations can influence change in one or more places.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
	10			5			**15**

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
AO1 content encompasses knowledge and understanding of different kinds of place meaning and representation, and the role of imagery, advertising and other representations in bringing change to places (most likely positive but occasionally negative). The content will depend upon examples chosen and may include knowledge and understanding of:

- Place representations and the meanings they hold or create (such as positive imagery in tourist adverts portraying a place as vibrant/exciting)
- Different kinds of place representation: books/texts, photographs, music, film/TV, poetry etc.
- Differences between formal ('official') representations and meanings (tourist board, government, corporate images and adverts) and informal representations (on social media, or in music, TV and films) by local people/groups or individual artists and film-makers
- The importance of place reimaging as part of urban or rural redevelopment and rebranding – representing places in new ways to attract a general or more niche audience (e.g. selective advertising aimed at younger/older groups; sports, music or food audiences; fans of hit TV shows or films made in certain places (visiting the 'real life' place where Peaky Blinders or Game of Thrones was filmed)
- Place meanings (positive or negative) due to perception or lived experience
- Problems due to negative meanings / representations in films or on TV or in other media.
- Different kinds of change – economic (positive or negative); demographic and social (more migrants may be attracted to an area where a popular show has been filmed), physical / environmental (e.g. construction of new visitor attractions linked with the re-imaging that is happening; more visitors could lead to trampling and biodiversity loss in rural areas).

AO2
AO2.1c content encompasses the application of knowledge and understanding to examine different kinds of change e.g., positive/negative; short-term/long-term. A conclusion may be drawn which provides an overview of the changes, but a conclusion is not necessary in order to reach the top of Band 3. The content may vary but may include an assessment of:

- the balance of positive and negative changes
- the different characteristics of change in different places
- the significance of any changes
- the long-term importance of any changes (some representations may be short-lived e.g., the end of a TV show may mean fewer tourists in future)
- different perspectives on the changes (some people may approve of new meanings/ representations/adverts, but others may not).

Award the marks as follows:		
	AO1 (10 marks)	**AO2.1c (5 marks)**
Band	*Demonstrates knowledge and understanding of place meanings and representations and their influence on change in places*	*Applies knowledge and understanding to appraise through an examination of place meanings and representations and their influence on change in places*
3	**7-10 marks** Demonstrates detailed and accurate knowledge and understanding of place meaning and representation and their influence on change in places. Demonstrates detailed and accurate knowledge and understanding using appropriate, accurate and well-developed examples. Well-annotated sketches / diagrams may be used and should be credited.	**4-5 marks** Applies knowledge and understanding to construct a well-developed discussion that is supported by evidence. Applies knowledge and understanding to produce a thorough and coherent examination of place meaning and representation and their influence on change in places.
2	**4-6 marks** Demonstrates accurate knowledge and understanding of place meaning and representation and their influence on change in places. Demonstrates partial knowledge and understanding using someexamples. Sketches / diagrams may be used and should be credited.	**2-3 marks** Applies knowledge and understanding to construct a partial discussion that is supported by some evidence. Applies knowledge and understanding to produce a partial examination of place meaning and representation and their influence on change in places.
1	**1-3 marks** Demonstrates limited knowledge and understanding of place meaning and representation and their influence on change in places. Demonstrates limited knowledge and understanding using limited examples. Basic sketches / diagrams may be used and should be credited.	**1 mark** Applies knowledge and understanding to construct a limited discussion that is supported by limited evidence. Applies knowledge and understanding to produce a limited examination of place meaning and representation and their influence on change in places.
	0 marks Response not creditworthy or attempted.	**0 marks** Response not creditworthy or attempted.

12. Assess the consequences of industrial decline in urban places.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		**Total**
	10			5			**15**

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
AO1 content encompasses knowledge and understanding of the impacts of industrial decline in urban areas. Answers may focus on one geographical area or contain a variety of examples.

The content will depend upon the places chosen and may include knowledge and understanding of:
- the causes of industrial decline in urban places such as globalisation, economic cycles, political policies, demographic change and automation
- economic impacts – unemployment, reduction in tax base, lack of spending power, local shops decline
- social impacts – drop in aspirations of young people, crime increase, drug and alcohol abuse, weaker educational achievement
- demographic impacts – migration of young and skilled
- political impacts – decrease in trust of government, growth of extreme views
- environmental impacts – building quality decline, derelict sites, vandalism
- possible positive impacts of industrial decline – decrease in pollution levels, replacement of outdated industrial units, improved health of populations
- attempts to overcome the impacts of decline.

AO2
AO2 content encompasses the application of knowledge and understanding to assess the impacts of industrial decline in urban places. A conclusion may be drawn in the context of the impacts chosen but a conlcusion is not necessary in order to reach the top of Band 3.

Content may vary according to examples selected but may include an assessment of:
- the different impacts of industrial decline
- the type and scale of impacts relative to different causes
- the interaction of impacts
- the impacts in different cities
- the changing impacts over time
- the ability to overcome the impacts.

Award the marks as follows:		
	AO1 (10 marks)	**AO2.1c (5 marks)**
Band	*Demonstrates knowledge and understanding of the impacts of industrial decline in urban places.*	*Applies knowledge and understanding to assess the impacts of industrial decline in urban places.*
3	**7-10 marks** Demonstrates detailed and accurate knowledge and understanding of the impacts of industrial decline in urban places. Demonstrates detailed and accurate knowledge and understanding using appropriate and well-developed examples. Well-annotated sketches / diagrams may be used and should be credited.	**4-5 marks** Applies knowledge and understanding to construct a well-developed discussion that is supported by evidence. Applies knowledge and understanding to produce a thorough and coherent assessment of the impacts of industrial decline in urban places.
2	**4-6 marks** Demonstrates partial knowledge and understanding of the impacts of industrial decline in urban places. Demonstrates partial knowledge and understanding using appropriate and partially developed examples. Generalised sketches / diagrams may be used and should be credited.	**2-3 marks** Applies knowledge and understanding to construct a partial discussion that is supported by some evidence. Applies knowledge and understanding to produce a partial assessment of the impacts of industrial decline in urban places.
1	**1-3 marks** Demonstrates limited knowledge and understanding of the impacts of industrial decline in urban places. Demonstrates limited knowledge and understanding using appropriate and limited examples. Basic sketches / diagrams may be used and should be credited.	**1 mark** Applies knowledge and understanding to produce a limited discussion with support from limited evidence. Applies knowledge and understanding to produce a limited assessment of the impacts of industrial decline in urban places.
	0 marks Response not creditworthy or not attempted.	**0 marks** Response not creditworthy or not attempted.