

GCE

Geography

H081/01: Landscape and place

Advanced Subsidiary GCE

Mark Scheme for November 2020

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This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

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Annotations

Annotation	Meaning
	Point has been seen and noted
	Indicates a whole answer for which there is no credit
	Must be used on all blank pages where there is no candidate response
	Development of a point
	Irrelevant; a significant amount of material that does not answer the question
	Level 1
	Level 2
	Level 3
	Level 4
	No place specific detail
	Rubric error (place at start of Question not being counted)
	Highlighting AO2 credit as advised. This is used in conjunction with the highlight tool for identifying AO1
	Point mark questions where indicated by the tick in the mark scheme

Subject Specific Marking Instructions

INTRODUCTION

Your first task as an Examiner is to become thoroughly familiar with the material on which the examination depends. This material includes:

- the specification, especially the assessment objectives
- the question paper and its rubrics
- the mark scheme.

You should ensure that you have copies of these materials.

You should ensure also that you are familiar with the administrative procedures related to the marking process. These are set out in the OCR booklet **Instructions for Examiners**. If you are examining for the first time, please read carefully **Appendix 5 Introduction to Script Marking: Notes for New Examiners**.

Please ask for help or guidance whenever you need it. Your first point of contact is your Team Leader.

USING THE MARK SCHEME

Please study this Mark Scheme carefully. The Mark Scheme is an integral part of the process that begins with the setting of the question paper and ends with the awarding of grades. Question papers and Mark Schemes are developed in association with each other so that issues of differentiation and positive achievement can be addressed from the very start.

This Mark Scheme is a working document; it is not exhaustive; it does not provide 'correct' answers. The Mark Scheme can only provide 'best guesses' about how the question will work out, and it is subject to revision after we have looked at a wide range of scripts.

The Examiners' Standardisation Meeting will ensure that the Mark Scheme covers the range of candidates' responses to the questions, and that all Examiners understand and apply the Mark Scheme in the same way. The Mark Scheme will be discussed and amended at the meeting, and administrative procedures will be confirmed. Co-ordination scripts will be issued at the meeting to exemplify aspects of candidates' responses and achievements; the co-ordination scripts then become part of this Mark Scheme.

Before the Standardisation Meeting, you should read and mark in pencil a number of scripts, in order to gain an impression of the range of responses and achievement that may be expected.

In your marking, you will encounter valid responses which are not covered by the Mark Scheme: these responses must be credited. You will encounter answers which fall outside the 'target range' of Bands for the paper which you are marking. Please mark these answers according to the marking criteria. Please read carefully all the scripts in your allocation and make every effort to look positively for achievement throughout the ability range. Always be prepared to use the full range of marks.

LEVELS OF RESPONSE QUESTIONS:

The indicative content indicates the expected parameters for candidates' answers, but be prepared to recognise and credit unexpected approaches where they show relevance.

Using 'best-fit', decide first which set of level descriptors best describes the overall quality of the answer. Once the level is located, adjust the mark concentrating on features of the answer which make it stronger or weaker following the guidelines for refinement.

Highest mark: If clear evidence of all the qualities in the level descriptors is shown, the HIGHEST Mark should be awarded.

Lowest mark: If the answer shows the candidate to be borderline (i.e. they have achieved all the qualities of the levels below and show limited evidence of meeting the criteria of the level in question) the LOWEST mark should be awarded.

Middle mark: This mark should be used for candidates who are secure in the level. They are not 'borderline' but they have only achieved some of the qualities in the level descriptors.

Be prepared to use the full range of marks. Do not reserve (e.g.) highest level marks 'in case' something turns up of a quality you have not yet seen. If an answer gives clear evidence of the qualities described in the level descriptors, reward appropriately.

Quality of extended response will be assessed in questions marked with an (*). Quality of extended response is not attributed to any single assessment objective but instead is assessed against the entire response for the question.

	AO1	AO2	AO3	Quality of extended response
Comprehensive	A wide range of detailed and accurate knowledge that demonstrates fully developed understanding that shows full relevance to the demands of the question. Precision in the use of question terminology.	Knowledge and understanding shown is consistently applied to the context of the question, in order to form a: clear, developed and convincing analysis that is fully accurate. clear, developed and convincing interpretation that is fully accurate. detailed and substantiated evaluation that offers secure judgements leading to rational conclusions that are evidence based.	Quantitative, qualitative and/or fieldwork skills are used in a consistently appropriate and effective way and with a high degree of competence and precision.	There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated.
Thorough	A range of detailed and accurate knowledge that demonstrates well developed understanding that is relevant to the demands of the question. Generally precise in the use of question terminology.	Knowledge and understanding shown is mainly applied to the context of the question, in order to form a : clear and developed analysis that shows accuracy. clear and developed interpretation that shows accuracy. detailed evaluation that offers generally secure judgements, with some link between rational conclusions and evidence.	Quantitative, qualitative and/or fieldwork skills are used in a suitable way and with a good level of competence and precision.	There is a line of reasoning presented with some structure. The information presented is in the most-part relevant and supported by some evidence.

Reasonable	Some sound knowledge that demonstrates partially developed understanding that is relevant to the demands of the question. Awareness of the meaning of the terms in the question.	Knowledge and understanding shown is partially applied to the context of the question, in order to form a: sound analysis that shows some accuracy. sound interpretation that shows some accuracy. sound evaluation that offers generalised judgements and conclusions, with limited use of evidence.	Quantitative, qualitative and/or fieldwork skills are used in a mostly suitable way with a sound level of competence but may lack precision.	The information has some relevance and is presented with limited structure. The information is supported by limited evidence.
Basic	Limited knowledge that is relevant to the topic or question with little or no development. Confusion and inability to deconstruct terminology as used in the question.	Knowledge and understanding shows limited application to the context of the question in order to form a: simple analysis that shows limited accuracy. simple interpretation that shows limited accuracy. Un-supported evaluation that offers simple conclusions.	Quantitative, qualitative and/or fieldwork skills are used inappropriately with limited competence and precision.	The information is basic and communicated in an unstructured way. The information is supported by limited evidence and the relationship to the evidence may not be clear.

Question			Answer	Mark	Guidance
1	(a)	(i)	Study Fig. 1 which shows sand movements in the coastal system between Winterton and Thorpeness, a length of coastline in East Anglia, UK. Using evidence from Fig. 1, describe the pattern of sand movement. Features of the pattern of sand movement include: - dominant southerly littoral drift (between 80,000 and 120,000 cu m / yr) (✓) - anomalous littoral movement northwards between Southwold and Lowestoft (40,000 cu m / yr) (✓) - offshore movements near Great Yarmouth, Lowestoft and Thorpeness (✓) - onshore movement near Southwold (✓) - land derived flows in the areas to the north and south of Southwold (✓)	3 AO3 x3	AO3 – 3 marks 3 x 1 (✓) for each valid descriptive point. Use of data required for maximum mark.
1	(a)	(ii)	Explain <u>two</u> possible sources of inputs of sand into this coastal system. Possible sources of inputs of sand include: - cliff retreat / erosion - river load - marine transport from off-shore - human activity such as beach recharge - dune erosion	4 AO2 x4	AO2 – 4 marks 2 x 1 (✓) for stating appropriate sources of inputs of sand into the coastal system. 2 x 1 (DEV) for showing understanding of the link between each source of sand input and movement of the sand into the coastal system. Two sources of sand inputs plus explanations are required for full marks.
	(b)		Explain the formation of cliffs. Level 3 (6–8 marks) Demonstrates thorough knowledge and understanding of how cliffs are formed. This will be shown by including well-developed ideas about the formation of cliffs.	8 AO1 x8	AO1 – 8 marks Indicative content Knowledge and understanding of the formation of cliffs could potentially include:

		Level 2 (3–5 marks) Demonstrates reasonable knowledge and understanding of how cliffs are formed. This will be shown by including developed ideas about the formation of cliffs. Level 1 (1–2 marks) Demonstrates basic knowledge and understanding of how cliffs are formed. This will be shown by including simple ideas about the formation of cliffs. 0 marks No response or no response worthy of credit.		• a landform of coastal erosion where destructive waves break repeatedly on steeply sloping coastlines • wave erosion processes such as abrasion, hydraulic action and pounding cause undercutting between the low and high tide levels forming a wave-cut notch • for example, abrasion occurs when waves armed with rock particles scour the coastline; rock rubbing against rock • continued undercutting weakens support for the rock strata above the notch, leading to collapse and the formation of a relatively steep slope / cliff face • regular removal of debris at the foot of the cliff ensures that the cliff profile remains steep • debris removal also ensures that the cliff retreats inland parallel to the coast • geology (lithology and structure) influences the shape of the cliff profile • sub-aerial processes may influence the profile of the upper part of the cliff Explanation may be helped by a labelled and/or annotated diagram(s), but there is no requirement for this.
	(c)*	To what extent is shoreline management the main cause of change in coastal landscape systems? AO1 Level 3 (6–8 marks) Demonstrates thorough knowledge and understanding of shoreline management strategies and other factors in causing change in coastal landscape systems. The answer should include accurate place-specific detail. Level 2 (3–5 marks)	14 AO1 x8 AO2 x6	Indicative content AO1 – 8 marks Knowledge and understanding of shoreline management strategies and other factors in causing change in coastal landscape systems could potentially include: • shoreline management strategies and their impact on transfers of energy and sediment, and on coastal landforms

		Demonstrates reasonable knowledge and understanding of shoreline management strategies and other factors in causing change in coastal landscape systems. The answer should include some place-specific detail which is partially accurate. Level 1 (1–2 marks) Demonstrates basic knowledge and understanding of shoreline management strategies and other factors in causing change in coastal landscape systems. There is an attempt to include place-specific detail but it is inaccurate. 0 marks No response or no response worthy of credit. AO2 Level 3 (5–6 marks) Application of knowledge and understanding is thorough. Analysis is clear, developed and convincing. Evaluation of shoreline management strategies and other factors in causing change in coastal landscape systems is detailed and substantiated. Judgements are		○ hard engineering such as groyne construction on wave energy, transport of beach material, and the form of beaches ○ hard engineering such as sea wall, revetment, rip rap on wave energy, currents in the nearshore zone, beach profiles, coastal squeeze, mass movement of cliff material and cliff profiles ○ soft engineering such as beach recharge on wave energy, beach size and profile ○ soft engineering such as managed retreat and realignment which restore mudflats and salt marshes as sediment sinks ● other factors which cause change in the system ○ climate change including the impact of rising sea level and increasing frequency of climatic hazards ○ human impact in destruction of natural habitats / coastal ecosystems such as dunes, mangroves, wetlands ○ impact of tourism such as resort development ○ impact of construction related to energy or port development ○ off-shore dredging and its impact on the sediment budget ○ sand mining and its impact on the sediment budget and on coastal landforms AO2 – 6 marks Application of knowledge and understanding to analyse and evaluate the significance of shoreline management strategies and other factors in causing change in coastal landscape systems could potentially include:
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		secure and evidence based leading to rational conclusions. Level 2 (3–4 marks) Application of knowledge and understanding is reasonable. Analysis is sound with some development that is mostly relevant. Evaluation of shoreline management strategies and other factors in causing change in coastal landscape systems is sound but partial. Judgements are generalised with some use of evidence leading to appropriate conclusions. Level 1 (1–2 marks) Application of knowledge and understanding is basic. Analysis is simple with little or no development. Evaluation of shoreline management strategies and other factors in causing change in coastal landscape systems is weak or absent. Judgements, if present, are unsupported leading to simple conclusions. 0 marks No response or no response worthy of credit. Quality of extended response Level 3 There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated. Level 2 There is a line of reasoning with some structure. The information presented is mostly relevant and substantiated. Level 1 There is little or no line of reasoning without structure. The information presented has little or no relevance and is superficial.		- the relative significance of various shoreline management strategies on coastal landscape systems - the relative significance of other factors on coastal landscape systems - understanding of these impacts on the coastal landscape from the systems perspective; change in one element is likely to have further related consequences - understanding that changes brought about by various factors affect geomorphic processes, flows of material and flows of energy in the system and coastal landforms - the idea that landforms and other elements of the coastal landscape system are dynamic and the consequences may vary over time - some consequences of shoreline management and other factors are intentional while other effects may be unintentional - the impacts of shoreline management and other factors may vary with scale
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Question			Answer	Mark	Guidance
2	(a)	(i)	Study Fig. 2 which shows surface profiles of the Obruchev glacier for 1963 and 2008. The Obruchev glacier is a corrie glacier system in the Ural Mountains, northern Russia. Using evidence from Fig. 2, describe the changes in the surface profiles of the glacier between 1963 and 2008. Features of change in the surface profiles of the glacier include: - the glacier snout had retreated up-valley by approx. 200m (900 – 700) (✓) - the altitude of the glacier snout had increased from 400m in 1963 to 420m in 2008 (✓) - overall the surface of the glacier had lowered – between approx. 30 and 50m (✓) - the slope of the glacier surface had become much steeper near the backwall (✓) - greatest loss of ice depth was in the lower part of the glacier (50m) and least in the upper glacier (30m) (✓)	3 AO3 x3	AO3 – 3 marks 3 x 1 (✓) for each valid descriptive point. Use of data required for maximum mark.
	(a)	(ii)	Explain two possible sources of inputs of debris into this corrie glacier system. Possible sources of inputs of debris include: - rock falls / scree / avalanches - plucking of the back wall / side / floor of the basin - glacio-fluvial sediment - Aeolian deposits of fine material - debris deposited during previous inter-glacial	4 AO2 x4	AO2 – 4 marks 2 x 1 (✓) for stating appropriate sources of inputs of debris into the corrie glacier system. 2 x 1 (DEV) for showing understanding of the link between each source of debris input and its movement into the corrie glacier system. Two sources of debris inputs plus explanations are required for full marks.

	(b)	Explain the formation of arêtes. Level 3 (6–8 marks) Demonstrates thorough knowledge and understanding of how arêtes are formed. This will be shown by including well-developed ideas about the formation of arêtes. Level 2 (3–5 marks) Demonstrates reasonable knowledge and understanding of how arêtes are formed. This will be shown by including developed ideas about the formation of arêtes. Level 1 (1–2 marks) Demonstrates basic knowledge and understanding of how arêtes are formed. This will be shown by including simple ideas about the formation of arêtes. 0 marks No response or no response worthy of credit.	8 AO1 x8	AO1 – 8 marks Indicative content Knowledge and understanding of the formation of arêtes could potentially include: • an arête is a narrow, steep-sided ridge formed by glacial erosion • it is formed in upland areas, at relatively high altitude, and in relatively resistant rock • it is formed between two corries which are back-to-back or side-by-side • the armchair-shaped corries may have a steep back wall • during a period of glaciation the process of plucking makes the back wall increasingly steep • this also causes the back walls of two adjacent corries to retreat, forming the ridge or arête between them • rock falls of weathered debris (frost shattered) from either the exposed rock above a corrie glacier or during the post-glacial period sharpen the 'knife-edged' ridge Explanation may be helped by a labelled and/or annotated diagram(s), but there is no requirement for this.
	(c)*	To what extent is human activity the main cause of change in periglacial landscape systems? AO1 Level 3 (6–8 marks) Demonstrates thorough knowledge and understanding of use by people and other factors in causing change in periglacial landscape systems. The answer should include accurate place-specific detail.	14 AO1 x8 AO2 x6	Indicative content AO1 – 8 marks Knowledge and understanding of use by people and other factors in causing change in periglacial landscape systems could potentially include: • use of periglacial landscapes by people and their impacts on geomorphic processes, flows of energy, flows of material and landforms

		Level 2 (3–5 marks) Demonstrates reasonable knowledge and understanding of use by people and other factors in causing change in periglacial landscape systems. The answer should include some place-specific detail which is partially accurate. Level 1 (1–2 marks) Demonstrates basic knowledge and understanding of use by people and other factors in causing change in periglacial landscape systems. There is an attempt to include place-specific detail but it is inaccurate. 0 marks No response or no response worthy of credit. AO2 Level 3 (5–6 marks) Application of knowledge and understanding is thorough. Analysis is clear, developed and convincing. Evaluation of use by people and other factors in		○ resource extraction such as oil affects energy flows by release and burning of gas during drilling which contributes to an enhanced greenhouse effect ○ oil extraction, transportation via pipeline, and associated urban development produce heat which leads to thawing of permafrost, subsidence and solifluction ○ urban, industrial and airstrip developments cause removal of vegetation cover leading to thermokarst landscapes including the formation of alases ○ material flows include extraction of gravel from stream and river beds for use as gravel pads. This leads to imbalance in fluvial systems affecting erosion, deposition and hydrology ● other factors which cause change in the system ○ climate change in previous time periods which has led to periglacial landform development such as patterned ground and pingos ○ subsequent modification of periglacial landforms by processes associated with the present climate such as ognips ○ seasonal change which may affect processes such as mass movement of material in the summer active layer or frost heave during winter months ○ natural plant succession unaffected by human activity AO2 – 6 marks Application of knowledge and understanding to analyse and evaluate use by people and other factors in causing change in periglacial landscape systems could potentially include:
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		causing change in periglacial landscape systems is detailed and substantiated. Judgements are secure and evidence based leading to rational conclusions. Level 2 (3–4 marks) Application of knowledge and understanding is reasonable. Analysis is sound with some development that is mostly relevant. Evaluation of use by people and other factors in causing change in periglacial landscape systems is sound but partial. Judgements are generalised with some use of evidence leading to appropriate conclusions. Level 1 (1–2 marks) Application of knowledge and understanding is basic. Analysis is simple with little or no development. Evaluation of use by people and other factors in causing change in periglacial landscape systems is weak or absent. Judgements, if present, are unsupported leading to simple conclusions. 0 marks No response or no response worthy of credit. Quality of extended response Level 3 There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated. Level 2 There is a line of reasoning with some structure. The information presented is mostly relevant and substantiated. Level 1 There is little or no line of reasoning without structure. The information presented has little or no relevance and is superficial.		• the relative significance of the impacts of their use by people on periglacial landscape systems • the relative significance of the impacts of other factors on periglacial landscape systems • understanding of these impacts on the periglacial landscape from the systems perspective; change in one element is likely to have further related consequences • understanding that changes brought about by various factors affect geomorphic processes, flows of material and flows of energy in the system and periglacial landforms • the idea that landforms and other elements of the periglacial landscape system are dynamic and the consequences may vary over time • the impacts of use of periglacial environments by people and other factors may vary with scale • the idea that use of periglacial environments by indigenous populations has had very limited impact on the landscape system since, until recently, they have practiced traditional subsistence economies • claims by governments and oil companies that exploitation and development has been made less intrusive by use of modern technology
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Question			Answer	Mark	Guidance
3	(a)	(i)	Study Fig. 3 which shows suspended sediment in Wadi El Hammam, a wadi system in the semi-arid area of northern Algeria. Using evidence from Fig. 3, describe the pattern of suspended sediment. Features of the pattern of suspended sediment include: - strongly seasonal pattern - high amounts in late summer / autumn and low amounts in winter, spring, early summer (✓) - marked change / large difference between periods of high and low amounts (✓) - relatively short period of high amounts in the four months August to November (✓) - relatively long period of low amounts - eight months December to July, 20-50,000 tons/mnth (✓) - extreme values range from lowest amounts in December and January (1,000 tons) to highest amounts in September and October (1.1m tons) (✓)	3 AO3x3	AO3 – 3 marks 3 x 1 (✓) for each valid descriptive point. Use of data required for maximum mark.
	(a)	(ii)	Suggest <u>two</u> possible sources of inputs of sediment into this wadi system. Possible sources of inputs of sediment include: - products of mechanical weathering such as salt crystal growth, insolation weathering and freeze-thaw, stored in situ and transported in flash floods - mass movement on steep slopes such as rockfalls and debris flows	4 AO2 x4	AO2 – 4 marks 2 x 1 (✓) for stating an appropriate source of input of sediment into the wadi system. 2 x 1 (DEV) for showing understanding of the link between each source of sediment input and its movement into the wadi system. Two sources of sediment inputs plus explanations are required for full marks.

		- material produced by high energy fluvial erosion of banks and bed of the wadi and any tributaries - transport of fine-grained products produced by Aeolian erosion - material transported by sheet wash over surfaces with limited vegetation cover		
	(b)	Explain the formation of pedestal rocks. Level 3 (6–8 marks) Demonstrates thorough knowledge and understanding of how pedestal rocks are formed. This will be shown by including well-developed ideas about the formation of pedestal rocks. Level 2 (3–5 marks) Demonstrates reasonable knowledge and understanding of how pedestal rocks are formed. This will be shown by including developed ideas about the formation of pedestal rocks. Level 1 (1–2 marks) Demonstrates basic knowledge and understanding of how pedestal rocks are formed. This will be shown by including simple ideas about the formation of pedestal rocks. 0 marks No response or no response worthy of credit.	8 AO1 x8	AO1 – 8 marks Indicative content Knowledge and understanding of the formation of pedestal rocks could potentially include: - pedestal rocks are isolated mushroom-shaped rocks, formed in mid- and low-latitude deserts - they are formed by processes of wind (Aeolian) erosion such as corrasion / abrasion - Aeolian corrasion is the abrasive action of wind-blown sand against rocks - corrasion / abrasion is more effective in dry conditions where there is sparse vegetation cover, enabling higher sediment load to be available for entrainment by the wind - since sand grains are transported by saltation the sand-blasting effect is confined to a couple of metres above the ground - therefore the narrower base of the mushroom-shaped rock is explained by the undercutting effects of saltating sand grains - this process is aided by weathering concentrated at the base of rocks where moisture is more freely available - rock type and structure may be a factor where an overlying layer of rock is more resistant Explanation may be helped by a labelled and/or annotated diagram(s), but there is no requirement for this.

	(c)*	To what extent are attempts to secure water supply the main cause of change in dryland landscape systems? AO1 Level 3 (6–8 marks) Demonstrates thorough knowledge and understanding of attempts to secure water supply and other factors that cause change in dryland landscape systems. The answer should include accurate place-specific detail. Level 2 (3–5 marks) Demonstrates reasonable knowledge and understanding of attempts to secure water supply and other factors that cause change in dryland landscape systems. The answer should include some place-specific detail which is partially accurate. Level 1 (1–2 marks) Demonstrates basic knowledge and understanding of attempts to secure water supply and other factors that cause change in dryland landscape systems. There is an attempt to include place-specific detail but it is inaccurate. 0 marks No response or no response worthy of credit.	14 AO1 x8 AO2 x6	Indicative content AO1 – 8 marks Knowledge and understanding of attempts to secure water supply and other factors that cause change in dryland landscape systems could potentially include: - attempts to secure water supply and their impacts on geomorphic processes, flows of energy, flows of material and landforms - damming of rivers and lake creation affects flows of water such as flow regimes below dams becoming daily rather than seasonal - damming of rivers affects flows of sediment such as reduction of sediment load downstream and disruption of equilibrium in balance of inputs of sediment and outputs of eroded material affecting fluvial landforms - geomorphic processes are affected below dams; the absence of floods causes loss or degradation of sand bars in river channels; also debris fans from tributaries encroach since they are not now removed - loss of sand bars and river floods have starved dune systems down valley of Aeolian sediment - geomorphic processes are affected above dams; rising lake waters flood tributary wadis, raising base level, reducing the size of wadi catchments, hence stream energy and erosion rates are decreased and aggradation of channels and pediments increases - other factors which cause change in the system
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			AO2 Level 3 (5–6 marks) Application of knowledge and understanding is thorough. Analysis is clear, developed and convincing. Evaluation of attempts to secure water supply and other factors that cause change in dryland landscape systems is detailed and substantiated. Judgements are secure and evidence based leading to rational conclusions. Level 2 (3–4 marks) Application of knowledge and understanding is reasonable. Analysis is sound with some development that is mostly relevant. Evaluation of attempts to secure water supply and other factors that cause change in dryland landscape systems is sound but partial. Judgements are generalised with some use of evidence leading to appropriate conclusions. Level 1 (1–2 marks) Application of knowledge and understanding is basic. Analysis is simple with little or no development. Evaluation of attempts to secure water supply and other factors that cause change in dryland landscape systems is weak or absent. Judgements, if present, are unsupported leading to simple conclusions.		○ landforms have been influenced by previous pluvial conditions, including inselbergs and pediments – further modified by return to present day climate ○ landscapes have been influenced by colder climatic conditions including periglacial features of frost shattering, nivation, and solifluction ○ human activity through tourism and recreation may affect landforms such as sand dunes and fragile cryptobiotic crusts and xerophytic plants AO2 – 6 marks Application of knowledge and understanding to analyse and evaluate attempts to secure water supply and other factors that cause change in dryland landscape systems could potentially include: • the relative significance of attempts to secure water supply on dryland landscape systems • the relative significance of other factors on dryland landscape systems • understanding of these impacts on the dryland landscape from the systems perspective; change in one element is likely to have further related consequences • understanding that changes brought about by various factors affect geomorphic processes, flows of material and flows of energy in the system and dryland landforms • the idea that landforms and other elements of the dryland landscape system are dynamic and the consequences may vary over time • the impacts of attempts to secure water supply and other factors may vary with scale
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		0 marks No response or no response worthy of credit. Quality of extended response Level 3 There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated. Level 2 There is a line of reasoning with some structure. The information presented is mostly relevant and substantiated. Level 1 There is little or no line of reasoning without structure. The information presented has little or no relevance and is superficial.		
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Question			Answer	Mark	Guidance
4	(a)		Explain how <u>one</u> type of local community group can shape its own neighbourhood. - residents associations (✓) resident input into local plans to meet the needs of the community (DEV) housing and service requirements (DEV) environmental / recreation / transport / safety issues (DEV) - heritage associations (✓) preservation of a particular building, stretch of canal or railway (DEV) may generate interest and funding from local / county council (DEV) involves input / participation of local residents (DEV) - environmental groups (✓) for conservation of a park or woodland (DEV) create partnerships with landscape architects (DEV) encourages participation / collaboration over local plans (DEV) - local political organisations such as town councils (✓) involved in planning new housing / provision of services (DEV) use of social media / website to consult residents easily / discreetly e.g. opinion surveys (DEV) crowdsourcing data (DEV) - volunteer groups to sustain local services (✓) running a community centre (DEV) sustaining a village store / public house (DEV) enhance communal value of rural post offices (DEV)	4 AO1 x4	AO1 – 4 marks 1 x 1 mark (✓) for identifying one type of local community group / organisation. 3 x 1 mark (DEV) for explaining ways that the local community group can shape its own neighbourhood. Exemplification is not essential but it may be creditworthy where it demonstrates knowledge and understanding of the ways in which a local community group can shape its own neighbourhood.
4	(b)	(i)	Study Fig. 4A, which shows UK economic growth, 1979-2019. Using Fig. 4A, identify <u>one</u> period of economic recession. Accept any period below, based upon the observable scale of the graph: 1979/80-1981; drop in real GDP from 1979 by 4% down to -2% in 1980	1 AO3 x1	AO3 – 1 mark 1 x 1 mark (✓) for a statement which identifies one period of economic recession by dates and / or percentage decline in real GDP. There has been clear analysis of the evidence in Fig. 4A.

			1990-1991; a drop in real GDP from 1989 by 3% down to -1% in 1991 2008-2009; drop in real GDP from 2007 by 8% down to -5% in 2009		Note: Anything above the 0% is still growth (even if it is lower than previous)
4	(b)	(ii)	Suggest <u>two</u> possible impacts of economic recession on social inequality. Periods of economic recession such as 1979-1980, 1988-1991 and 2007-2009 are periods when social inequalities increase. The possible impacts could include: - health disparities (✓) lower skilled more likely to become unemployed, higher skilled more able to retain jobs / have access to job opportunities; there is a strong link between unemployment and health / mental health / well-being (DEV) - wealth disparities (✓) households with lower income / lower disposable income more likely to have to cut back on luxuries / leisure / entertainment (DEV) - inequalities in access to services (✓) households with unemployed / lower income families, which may continue after recession, have more limited access to health, education, transport services than less vulnerable households (DEV) - housing inequalities (✓) households affected by unemployment / low income during recession have less choice in where they can live e.g. renting in inner city v wealthier owner occupiers of outer suburbs (DEV) - spatial inequality in service provision (✓) job losses may be concentrated in particular areas / structural unemployment / unskilled job losses leading to service decline in the area affected (DEV)	4 AO2x4	AO2 – 4 marks 2x1 (✓) for identification of the impacts of economic recession on social inequality. 2x1 (DEV) for explaining the impacts of economic recession on inequality. Links to the graph could include duration, intensity, timing, cyclical nature of economic recession.

4	(c)	Study <u>Fig. 4B</u>, the OS map, which is a formal representation of Buxton in Derbyshire and <u>Fig. 4C</u>, the literary text, which is an informal representation of the same town. Using evidence from <u>Figs. 4B and 4C</u>, contrast the formal and informal representations of Buxton. Level 3 (5-6 marks) Demonstrates thorough application of knowledge and understanding to provide a clear and developed analysis that shows accuracy in contrasting the formal and informal representations of place (AO2). Demonstrates thorough investigation and interpretation of the resource to fully evidence formal and informal representations of Buxton. There must be sound ideas linking resource evidence to the contrasts (AO3). Level 2 (3-4 marks) Demonstrates reasonable application of knowledge and understanding to provide sound analysis that shows some accuracy in contrasting the formal and informal representations of place (AO2). Demonstrates reasonable investigation and interpretation of the resource to evidence formal and informal representations of Buxton. There must be limited ideas linking resource evidence to the contrasts (AO3). Level 1 (1-2 marks) Demonstrates basic application of knowledge and understanding to provide simple analysis that shows	6 AO2 x4 AO3 x2	Indicative content AO2 – 4 marks Application of knowledge and understanding to analyse contrasts in the formal and informal representations of Buxton could potentially include: • map provides detailed coverage of all buildings and land uses / text is selective • map has been surveyed precisely (OS is GB's official mapping agency) / text has approximate recollections • text refers to building materials, aspects of architecture and additional information which cannot be portrayed on the map • text uses descriptive language which provides images which are not evident on the map • text includes additional historic information whereas the map on its own cannot show change so easily AO3 – 2 marks Evidence from investigation and interpretation of the resources could potentially include: <i>Fig. 4B the OS 1:25 000 map</i> • housing types • public buildings / services • open spaces / parks / amenities • tourist / recreational features • named suburbs <i>Fig. 4C the literary text</i> • mostly built of stone • old, delightful, splendid, grand, striking • building with dome, once a hospital	

		limited accuracy in contrasting the formal and informal representations of place (AO2). Demonstrates basic investigation and interpretation of the resource to provide limited evidence of formal and informal representations of Buxton. There are limited ideas with limited or no link to resource evidence (AO3). 0 marks No response or no response worthy of credit.		• opera house, hotels • crescent reminiscent of Bath Max 2 marks (AO3) for basic identification of information from the resources only.
4	(d)*	'The impacts of structural economic change on people and place have been largely environmental.' Discuss this statement with reference to <u>one</u> country or region. AO1 Level 3 (6–8 marks) Demonstrates thorough knowledge and understanding of the environmental and other impacts of structural economic change in one country or region. The answer should include accurate place-specific detail. Level 2 (3–5 marks) Demonstrates reasonable knowledge and understanding of the environmental and other impacts of structural economic change in one country or region. The answer may include some place-specific detail which is partially accurate. Level 1 (1–2 marks) Demonstrates basic knowledge and understanding of the environmental and other impacts of structural economic change in one country or region. There may be an attempt to include place-specific detail but it is inaccurate. 0 marks No response or no response worthy of credit.	14 AO1 x8 AO2 x6	Indicative content AO1 – 8 marks Knowledge and understanding of the environmental and other impacts of structural economic change could potentially include: <i>Environmental:</i> • derelict land • contaminated brownfield sites • slum housing / clearance in older industrial areas • urban regeneration • transformation to a low carbon economy • cleaner air quality / improvement in health <i>Socio-economic:</i> • factory closures / industrial decline / deindustrialisation • structural unemployment / job losses in manufacturing • fall in household incomes • increased social inequality • growth in service industries

			AO2 Level 3 (5–6 marks) Application of knowledge and understanding is thorough. Analysis is clear, developed and convincing. Evaluation of the environmental and other impacts of structural economic change is detailed and substantiated. Judgements are secure and evidence based leading to rational conclusions. Level 2 (3–4 marks) Application of knowledge and understanding is reasonable. Analysis is sound with some development that is mostly relevant. Evaluation of the environmental and other impacts of structural economic change is sound but partial. Judgements are generalised with some use of evidence leading to appropriate conclusions. Level 1 (1–2 marks) Application of knowledge and understanding is basic. Analysis is simple with little or no development. Evaluation of the environmental and other impacts of	• improved transport infrastructure / planning <i>Demographic:</i> • population decline / out-migration • ageing population • later, in-migration to inner city areas • and growth in youthful population <i>Cultural:</i> • increasing ethnic diversity • segregation of ethnic / cultural groups in inner city • religious landscape / built environment • ethnic based food shops, restaurants and services AO2 – 6 marks Application of knowledge and understanding to analyse and evaluate the environmental and other impacts of structural economic change could potentially include: • the impact on different aspects of the environment • the costs as well as the benefits • the short-term impacts and the long-term impacts • the impacts on other different factors (socio-economic, demographic and cultural) • the idea that all or many of these impacts are linked / interrelated • the differing scale of the impacts
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		structural economic change is weak or absent. Judgements, if present, are unsupported leading to simple conclusions. 0 marks No response or no response worthy of credit. Quality of extended response Level 3 There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated. Level 2 There is a line of reasoning with some structure. The information presented is mostly relevant and substantiated. Level 1 There is little or no line of reasoning without structure. The information presented has little or no relevance and is superficial.		
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Question			Answer	Mark	Guidance
5	(a)	(i)	Study Fig. 5, a photograph which shows part of Scarborough where a geographical investigation is to be undertaken. Using evidence from Fig. 5, state and justify an appropriate geographical question for investigation in this area. The following topics could form the basis of possible investigations: Either in physical geography, such as sediment analysis, slope profiles, microclimate, vegetation Or in human geography, such as perception studies, place identity, social inequality, housing, service provision	4	AO3 – 4 marks 1 x 1 mark for stating a valid / appropriate geographical question. 3 x 1 mark (DEV) for justification, with credit per point, using evidence from the photograph or practical considerations

			Or a combination of physical and human issues such as impact of tourism, impact of management strategies Justification of the question itself and why the area is suitable for investigation of it might include: • its geographical content • appropriate scale • researchable • practicality of data collection in this area, such as nature of the features, access to sites, risk • nature of the question itself – requiring both description and explanation		
		(ii)	State <u>one</u> type of primary data and <u>one</u> source of secondary data that you would use for the investigation in (a)(i). Possible examples include, <i>Primary:</i> urban land use, housing types, distribution of services, people's views / perceptions size / roundness of sediment, angle of slope facets, temperature <i>Secondary:</i> OS maps, Goad maps, manipulated ONS census data such as % statistics for lower layer output areas, Scarborough Borough Council statistics such as Council Tax bands, land use satellite images	2	AO3 – 2 marks 1 x 1 mark for stating one appropriate type of primary data 1 x 1 mark for stating one source of secondary data The response depends on the nature of the investigation in (a)(i). There is a wide range of possibilities but each must be appropriate to the nominated investigation and relatively easily available to AS candidates.
		(iii)	Explain how timing might be a consideration in collecting primary data for the investigation in (a)(i).	6	AO3 – 6 marks

		Level 3 (5–6 marks) Demonstrates thorough understanding of timing considerations in the collection of data to investigate the geographical question suggested. Level 2 (3–4 marks) Demonstrates reasonable understanding of timing considerations in the collection of data to investigate the geographical question suggested. Level 1 (1–2 marks) Demonstrates basic understanding of timing considerations in the collection of data to investigate the geographical question suggested. 0 marks No response or no response worthy of credit		Timing considerations should be linked to methods of primary data collection appropriate to the investigation in (a)(i). These could potentially include: - time of sampling the data – such as time of day / week for traffic or pedestrian counts, and time of year / season for vegetation sampling or beach profiles - frequency of data collection – such as number of recordings at one site to show variation - duration of the data collection at a site – such as a ten minute pedestrian count - risk assessment – such as timing of high tide re access to a site Generic discussion of timing without reference to the investigation in (a)(i), max top L1.
	(b)	With reference to a fieldwork investigation you have carried out, assess how useful your results were in answering your original question. Level 4 (10–12 marks) Demonstrates a comprehensive evaluation of the usefulness of the results in answering the original question. This will be shown by well-developed ideas about the fieldwork investigation and the usefulness of the results in answering the original question. Level 3 (7–9 marks) Demonstrates a thorough evaluation of the usefulness of the results in answering the original question. This will be shown by well-developed ideas about either the fieldwork investigation or the usefulness of the results in answering the original question - and developed ideas about the other question focus.	12	AO3 – 12 marks A wide range of geographical fieldwork investigations is possible / acceptable: <i>Ideas about the fieldwork investigation</i> Expect some discussion of the basis / background to the investigation, such as: - clear statement of original question/any hypotheses/aims - location / site - types of primary / secondary data collected - methodology including sampling design - actual results Not all are required for L4, but factors which are relevant might be valuable in setting the context of the chosen investigation.

		Level 2 (4–6 marks) Demonstrates a reasonable evaluation of the usefulness of the results in answering the original question. This will be shown by developed ideas about either the fieldwork investigation or the usefulness of the results in answering the original question - and simple ideas about the other question focus. Level 1 (1–3 marks) Demonstrates a basic evaluation of the usefulness of the results in answering the original question. This will be shown by simple ideas about the fieldwork investigation and the usefulness of the results in answering the original question. 0 marks No response or no response worthy of credit.	<i>Usefulness of results in answering the original question</i> Discussion about the usefulness of the results could include: • accuracy and reliability • relevance • suitability for analysis (descriptive, patterns, trends, mapping, graphical, statistical testing) • links to possible explanation • sampling design • sample size • links to the original question / aims Also credit discussion of other features / factors which, in retrospect, should have been measured.
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