



GCSE MARKING SCHEME

SUMMER 2022

**GEOGRAPHY - UNIT 1
3110U10-1**

INTRODUCTION

This marking scheme was used by WJEC for the 2022 examination. It was finalised after detailed discussion at examiners' conferences by all the examiners involved in the assessment. The conference was held shortly after the paper was taken so that reference could be made to the full range of candidates' responses, with photocopied scripts forming the basis of discussion. The aim of the conference was to ensure that the marking scheme was interpreted and applied in the same way by all examiners.

It is hoped that this information will be of assistance to centres but it is recognised at the same time that, without the benefit of participation in the examiners' conference, teachers may have different views on certain matters of detail or interpretation.

WJEC regrets that it cannot enter into any discussion or correspondence about this marking scheme.

WJEC GCSE GEOGRAPHY – UNIT 1

SUMMER 2022 MARK SCHEME

Instructions for examiners of GCSE Geography when applying the marking scheme

1. Positive marking

It should be remembered that learners are writing under examination conditions and credit should be given for what the learner writes, rather than adopting the approach of penalising him/her for any omissions. It should be possible for a very good response to achieve full marks and a very poor one to achieve zero marks. Marks should not be deducted for a less than perfect answer if it satisfies the criteria of the mark scheme.

GCSE Geography marking schemes are presented in a common format as shown below:

This box contains the sub-question.	The columns to the right indicate the assessment objective(s) targeted by the question and its mark tariff.					
3 (a) (i) Describe the location of the island of Lefkada.	AO1.1	AO1.2	AO2	AO3	Accuracy	Total
Credit up to two valid statements based on map evidence. Credit accurate use of compass points max 1. Credit accurate use of scale line max 1.	In western Greece (1) In Ionian Sea (1) north of Cephalonia (1) 275km (+/-10) from Athens (1) 280km (+/-10) from Thesaloniki (1)			2		2

This box contains the rationale i.e. it explains the principles that must be applied when marking each sub-question. The examiner must apply this rationale when applying the marking scheme to the response.

This box contains the candidates' expected responses for point-based marking. For some sub-questions, those with a closed question, this box will indicate the only response that is acceptable. For more open ended sub-questions this box will illustrate a number of likely responses that are credit worthy. It may be that this list will be extended at the examiner's conference after actual scripts have been read. For banded mark schemes this box contains indicative content. For further details see below under Banded mark schemes Stage 2.

2. Tick marking

Low tariff questions should be marked using a points-based system. Each credit worthy response should be ticked in red pen. The number of ticks **must** equal the mark awarded for the sub-question. The mark scheme should be applied precisely using the expected outcomes box as a guide to the responses that are acceptable. Do **not** use crosses to indicate answers that are incorrect. If the candidate has not attempted the question then the examiner should strike through the available dotted lines with a diagonal line.

3. Banded mark schemes

Banded mark schemes are divided so that each band has a relevant descriptor. The descriptor for the band provides a description of the performance level for that band. Each band contains a range of marks. Examiners should first read and annotate a learner's answer to pick out the evidence that is being assessed in that question. **Do not use ticks** on the candidate's response. Once the annotation is complete, the mark scheme can be applied. This is done as a two-stage process.

Stage 1 – Deciding on the band

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

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

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

Stage 2 – Deciding on the mark

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

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

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

4. Assessing Writing

The quality of writing is assessed through two separate strands:

- (i) Communicating and organising
- (ii) Writing accurately

- (i) **Communicating and organising** is assessed in items that have a tariff of 6, 8 or 10. These responses should be viewed holistically when deciding on a mark band (see stage 1 above). The definitions below clarify what is meant by the terminology in these descriptors.

Meaning: to have clarity the text must be legible. The meaning of statements should be clear and not require re-reading to make sense.

Purpose: the response should take into account what is required by the question. For example, evaluation requires consideration of pros/cons or the justification of a decision may be assisted by arguments. A suitable tone is adopted for reporting on scientific investigation in Unit 3.

Structure: well-planned responses have an overall structure with use of paragraphs to indicate portions of the response such as introduction, main arguments and conclusion. Chains of reasoning provide a logical structure within paragraphs. Signposting links sections together and is used to assist the reader.

- (ii) **Writing accurately** takes into account the candidate's use of specialist language. It also takes into account the accuracy of the candidate's spelling, punctuation and grammar. This assessment is restricted to specific items (one item in each unit). The descriptors for writing accurately are printed in the mark scheme for each relevant item. In applying these descriptors learners may only receive marks for responses that are in the context of the demands of the question; that is, where learners have made a genuine attempt to answer the question.

5. Marking Core and Options questions

Core Themes Mark **both** questions

Options Themes Learners are instructed to answer **one** question. If the candidate has responded to both questions then the examiner must mark both questions. Award the higher mark that has been attained.

SECTION A (Core Themes)

Core Theme 1, Question 1

1. (a) (i) In which of the following grid squares do the rivers Afon Dulais and Afon Tywi meet? Tick the correct answer in the box below.	AO1.1	AO1.2	AO2	AO3	Accuracy	Total
				1		1
Credit this response only, however indicated. No marks if more than one answer given.	7131					

1. (a) (ii) Give the direction of flow of the Afon Dulais.	AO1.1	AO1.2	AO2	AO3	Accuracy	Total
				1		1
Credit this response only, however indicated. No marks if more than one answer given.	South-east /SE (1) Allow SSE					

1. (a) (iii) Describe the relief (shape of the land) in Box A shown on the map. Use map evidence.	AO1.1	AO1.2	AO2	AO3	Accuracy	Total												
				4		4												
Use the descriptors below, working upwards from the lowest band.	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Band</th> <th style="width: 10%;">Marks</th> <th style="width: 80%;">Descriptor</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">3-4</td> <td>More sophisticated description with changing pattern communicated well. Use of map evidence supports description.</td> </tr> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">1-2</td> <td>Simple descriptive statements communicated in a basic way with little linkage between points. Limited map evidence to support points made.</td> </tr> <tr> <td></td> <td style="text-align: center;">0</td> <td>Award 0 marks if the answer is incorrect or wholly irrelevant.</td> </tr> </tbody> </table>						Band	Marks	Descriptor	2	3-4	More sophisticated description with changing pattern communicated well. Use of map evidence supports description.	1	1-2	Simple descriptive statements communicated in a basic way with little linkage between points. Limited map evidence to support points made.		0	Award 0 marks if the answer is incorrect or wholly irrelevant.
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2	3-4	More sophisticated description with changing pattern communicated well. Use of map evidence supports description.																
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	0	Award 0 marks if the answer is incorrect or wholly irrelevant.																
	Candidates should show understanding of contour patterns and how they relate to the shape of the valley. At the top level there must be map evidence in the form of height, reference to spacing or value of contours, or a grid reference. There could also be recognition of the valley as V shaped. They may also recognise differences such as the gentler slopes as the river nears the confluence with the River Tywi. This is not essential, but inclusion would imply sophisticated description. Descriptive comments will include higher and steep with contours close together. Note also the candidate's ability to communicate their observations of map evidence as described in the AO3 descriptor.																	

1. (a) (iv) The process of abrasion takes place in the Afon Dulais. Describe this process.	AO1.1	AO1.2	AO2	AO3	Accuracy	Total
	2					2
Credit one mark for each valid point. Reserve one mark for reference to load.	Transported load/rocks/pebbles (1) to erode channel/river bed (1)					

1. (b) (i) The distance between Llanwrda and Llandovery railway stations is 12 cm on the map. Calculate the actual distance in kilometres. Show your working.	AO1.1	AO1.2	AO2	AO3	Accuracy	Total
		2				2
Credit only this answer for one mark. Award second mark for working. Award one mark for working if answer is incorrect if candidate demonstrates understanding of the concept. Use of any logical stepped working is acceptable.	1cm = 50 000cm = 500m = 0.5km 12cm = 6km					

1. (b) (ii) Suggest how the route of railway line has been affected by landforms. Use map evidence to help your answer.	AO1.1	AO1.2	AO2	AO3	Accuracy	Total												
			3			3												
Use the descriptors below, working upwards from the lowest band.	<p>The railway line clearly follows the natural route of the River Tywi valley using the flat land afforded by the floodplain to provide easier building. Some candidates may observe that the railway is supported on embankments in places and they may infer that this is to protect it from potential flooding as it is built on the floodplain. Bridges have had to be constructed as the line runs very close to the river channel. Reference to any two of these points should be enough to enter band 2. Map evidence to support the description could take the form of place names, grid references, contour lines or other features from the key that are relevant to the railway line and landforms.</p>																	
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1. (b) (iii) Different processes change river landforms. Suggest why landforms in Box B have changed over time. Use evidence from the map to support your answer.			AO1.1	AO1.2	AO2	AO3	Accuracy	Total
					6			6
Use the descriptors below, working upwards from the lowest band.			<p>This question requires candidates to apply their knowledge and understanding of river processes and landforms to a distinct area on the map. Box B is dominated by the meandering River Tywi and candidates should refer to some (though not necessarily all) of the landforms here which include the floodplain, meanders with river cliffs and slip-off slopes and some may even note the presence of small ox-bow lakes/meander scars. The emphasis on processes should lead them to consider deposition as a dominant process in this part of the valley which builds up deposits to form the slip-off slopes and thus, the floodplain in lower energy conditions. There may be reference to lateral erosion which obviously supports this process. Credit map evidence to support the analysis in the form of grid references, locations, contours or other features from the key which illustrate the points being made.</p>					
Band	Marks	Descriptor						
3	5-6	Detailed application of knowledge and understanding which analyses landforms clearly linked to relevant processes in the box. Map evidence is used effectively to support the points made.						
2	3-4	Shows some ability to apply knowledge and understanding of river landforms which broadly refers to box B on the map. Limited analysis of landforms which are not directly linked to process. The response has merit but lacks detail or depth. Some but limited use made of map information to support points.						
1	1-2	Simple statements with only cursory reference to landforms from the map area.						
	0	Award 0 marks if the answer is incorrect or wholly irrelevant.						

1. (c) (i) Give the correct label for box A. Tick the correct answer from the box below.			AO1.1	AO1.2	AO2	AO3	Accuracy	Total
			1					1
Credit this response only, however indicated. No marks if more than one answer given.			Interception					

1. (c) (ii) Identify one flow and one store of water in a drainage basin.	AO1.1	AO1.2	AO2	AO3	Accuracy	Total
	2					2
Award one mark for each correct answer. Take care not to award two flows or two stores.	Flow: Throughflow/infiltration/(surface) run-off/overland flow (1) Store: Groundwater/soil moisture/lake/surface store/interception/river channel/vegetation (1)					

1. (c) (iii) Changes in weather and climate can affect the balance between stores and flows in a drainage basin in the UK. Explain why.	AO1.1	AO1.2	AO2	AO3	Accuracy	Total															
		6				6															
Use the descriptors below, working upwards from the lowest band.	The question requires candidates to demonstrate understanding of the changing balance between stores and flows in relation to different conditions of weather. At the top band, candidates may link this to the likelihood of flooding taking place. Understanding is based on the balance between water placed in storage which moves slowly through the system and water which flows more quickly into rivers to lead to flooding. Heavy rainfall is likely to compact soil and saturate the ground more quickly leading to increased surface run-off while lighter rainfall is more likely to infiltrate and enter storage. Snow and ice is stored water which could flow quickly rather than infiltrate once melting occurs. Seasonal differences may be referred to where warm and dry conditions in summer lead to more evaporation and helps create more storage capacity whilst wetter conditions in winter lead to saturation of soil which fills up the soil and groundwater stores encouraging greater surface run-off. There are other scenarios that could be used to illustrate the balance but credit should be given for the quality of understanding and explanation of the balance between the stores and flows in response to changing climate and weather conditions.																				
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End of Question 1

	5	6	9	8		28
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Core Theme 2, Question 2

2. (a) (i) Tick three statements from the box below that are true.	AO1.1	AO1.2	AO2	AO3	Accuracy	Total
	2			3		3
Award one mark for each correct answer. Deduct one mark for every additional response ticked.	<p>Most of central and west Wales consists of remote rural settlements. Around 10% of Wales can be classed as urban More urban settlements are in south-east and north-east Wales</p>					
2. (a) (ii) Tick two characteristics of a rural settlement from the list below.	AO1.1	AO1.2	AO2	AO3	Accuracy	Total
	2					2
Award one mark for each correct answer. Deduct one mark for every additional response ticked.	<p>Low population density Surrounded by farmland and countryside</p>					
2. (a) (iii) Give one reason why mid-Wales is mainly rural.	AO1.1	AO1.2	AO2	AO3	Accuracy	Total
		2				2
Award one mark for valid reason and a second mark for elaboration of this. Do not credit two separate reasons. Most of the points listed could be combined to provide a valid and elaborated reason with the use of a suitable connective.	<p>Hilly/mountainous/upland (1) so more remote (1) transport/communications difficult (1) difficult to link to other urban areas (1) harder to build on (1) only smaller settlements possible (1) leads to smaller populations (1) dominated by agriculture (1)</p>					
2. (b) (i) Describe the pattern of journey times to accident and emergency (A&E) hospitals for people living in Wales.	AO1.1	AO1.2	AO2	AO3	Accuracy	Total
				3		3
Award one mark for each valid point.	<p>Quicker/easier access closer to urban areas or named settlement (1) especially in north/south (1) longer travelling times in rural areas or named settlement (1) mid Wales or named settlement (1) quantified example (1) shorter times along main roads (1)</p>					

2. (b) (ii) Access to health care is a challenge facing people who live in remote rural areas of Wales. Describe two other challenges.	AO1.1	AO1.2	AO2	AO3	Accuracy	Total
	4					4
<p>Credit two statements with up to two marks for each awarded elaboration. (1+1) (1+1) (1+1+1) + 1</p> <p>Look for economic, or social challenges for initial points. Credit development points only if they take answer further.</p>	<p>Lack of other services (1) eg banking/shops/post office, etc (1) public transport (1) few employment opportunities (1) low paid agricultural jobs (1) poverty/deprivation (1) poor phone/internet connections (1) isolation (1) leads to mental health issues (1) school closures (1) access to education (1) Ageing population / fewer younger (1) Weaker transport links (1) Higher/increasing house prices (1) Second homes (1) development of any point (max 2)</p>					

2. (b) (iii) Explain why the increasing importance of urban areas is contributing to deprivation in rural areas of Wales.	AO1.1	AO1.2	AO2	AO3	Accuracy	Total															
		6				6															
<p>Use the descriptors below, working upwards from the lowest band.</p> <table border="1"> <thead> <tr> <th>Band</th> <th>Marks</th> <th>Descriptor</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>5-6</td> <td>Good understanding and explanation which shows some sophistication. Meaning is clear. Response has purpose, is organised and well structured.</td> </tr> <tr> <td>2</td> <td>3-4</td> <td>Some understanding but response may lack depth and detail and only have partial explanation. Meaning is generally clear. The response is structured.</td> </tr> <tr> <td>1</td> <td>1-2</td> <td>Valid statements show limited understanding of links between urban and rural areas. Meaning may lack clarity in parts. Statements are linked by a basic structure.</td> </tr> <tr> <td></td> <td>0</td> <td>Award 0 marks if the answer is incorrect or wholly irrelevant.</td> </tr> </tbody> </table>	Band	Marks	Descriptor	3	5-6	Good understanding and explanation which shows some sophistication. Meaning is clear. Response has purpose, is organised and well structured.	2	3-4	Some understanding but response may lack depth and detail and only have partial explanation. Meaning is generally clear. The response is structured.	1	1-2	Valid statements show limited understanding of links between urban and rural areas. Meaning may lack clarity in parts. Statements are linked by a basic structure.		0	Award 0 marks if the answer is incorrect or wholly irrelevant.	<p>As urban areas expand, and services are concentrated in them their sphere of influence becomes wider and more dominant and leads to greater isolation of rural areas. Most high paid jobs are in urban areas which means that younger people leave rural areas contributing to an ageing of the population in rural areas. Urban areas also have retailing and entertainment functions demanded by those who live and work in them which contributes to a lack of demand for them in rural areas causing them to close. Councils tend to invest less money in rural areas because they spend in towns so roads and housing can decline in quality. Urban dwellers often buy second homes in rural areas which are only lived in for part of the time and further reduces demand for services and inflate house prices for rural dwellers. Candidates may refer to the cycle of rural deprivation which results from the concentration of services into urban areas.</p>					
Band	Marks	Descriptor																			
3	5-6	Good understanding and explanation which shows some sophistication. Meaning is clear. Response has purpose, is organised and well structured.																			
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2. (c) Strategies that have been used to improve town centre high streets have been successful. To what extent do you agree?

AO1.1	AO1.2	AO2	AO3	Accuracy	Total
		8		3	11

Use the descriptors below, working upwards from the lowest band.

Band	Marks	Descriptor
4	7-8	Balanced analysis and sophisticated judgement. A range of detailed and elaborated points are made both for and against the statement. Information in the resources is interpreted and analysed thoroughly and perceptively. Conclusion is justified using a sophisticated chain of reasoning. Meaning is unambiguous. The response has clear purpose, is fluent and logically structured.
3	5-6	Elaborated analysis and reasoned judgement. A range of elaborated points are made on one side of the argument in detail or both sides of the argument in less detail. Information in the resources is interpreted carefully and used to good effect to support the argument. A reasoned and valid conclusion is made and is based on the evidence. Meaning is clear. The response has purpose, is organised and well structured.
2	3-4	Valid but limited analysis and simple judgement. Valid points are made on one or both sides of the argument but are superficial. A few points are elaborated but lacking in sophistication. There is valid but limited interpretation of information in the resource. Meaning is generally clear. The response is structured.
1	1-2	Basic analysis and judgement. Valid but basic and simplistic points made with little or no elaboration. Meaning may lack clarity in parts. Statements are linked by a basic structure.
	0	Award 0 marks if the answer is incorrect or wholly irrelevant.

Candidates should apply their knowledge and understanding of strategies designed to improve town and city centres and halt their decline in the face of competition from out of town and/or other forms of retailing. They should consider a range of strategies which could be confined to the resource, such as pedestrianisation and improvements to the physical environment but they may consider strategies that go beyond the resources such as traffic calming, permitting street entertainment, improvements to parking, park and ride schemes or special events, like Christmas markets although these are not exclusive. They must consider potential advantages and disadvantages of different strategies and then consider how successful these have been in the light of continued pressures in the high street indicated by the other resources. They could consider the information in the graphs which suggests that the decline of high streets is continuing despite strategies being used. However, the graphs also indicate that many stores are opening as well as closing so the situation is not necessarily as simple as it may seem. Different strategies might be more suitable depending on the level of decline experienced and the type of town/city in which they are deployed. There should be an attempt to offer a conclusion which either suggests the most appropriate strategy or perhaps, a suggestion that in some circumstances, town and city centres are beyond saving. This might include consideration of other pressures like out of town or other forms of retailing, eg online which are contributing to the problems being faced by traditional types of retailing. It is also likely that candidates will refer to the impact of the covid-19 pandemic on many town centres over the past two years in accelerating decline in many retail functions and the closure of many local and national retailers. In some cases this has led to further decline but in others it is leading to new and sometimes innovative functional changes in many town centres.

At the higher levels, look for the ability to give a balanced viewpoint and eventually come to a reasoned judgement. The judgement could be stated at the start of the answer but failure to provide one should limit the response to band 2.

Options Theme 3, Question 3

3. (a) (i) How many tsunamis were caused by earthquakes of magnitude 6 - 6.5?		AO1.1	AO1.2	AO2	AO3	Accuracy	Total
					1		1
Credit any answer in this range.	(accept 131 to 134)						

3. (a) (ii) Give the modal class of earthquake magnitudes that caused tsunamis.		AO1.1	AO1.2	AO2	AO3	Accuracy	Total
					1		1
Credit only this answer.	6.5 - 7.0						

3. (a) (iii) Give two reasons why a histogram was used to present this data rather than a bar chart.		AO1.1	AO1.2	AO2	AO3	Accuracy	Total
					2		2
Award one mark for each valid point.	Data is continuous/not discrete (1) In form of frequency/distribution (1) (frequency must be in context of data) Data in ranges/grouped (1) Equal intervals (1)						

3. (a) (iv) Explain why fewer tsunamis are caused by low magnitude earthquakes.		AO1.1	AO1.2	AO2	AO3	Accuracy	Total
			2				2
Award one mark for valid reason and additional mark for development.	Low because insufficient energy generated (1) so wave is smaller/not formed (1)						

3. (b) (i) Describe the location of Mauna Loa, the largest of Hawaii's volcanoes.	AO1.1	AO1.2	AO2	AO3	Accuracy	Total
				2		2
Award one mark for each valid point.	South/east of Hawaiian islands (1) largest island (1) Big Island (1) correct direction from other named volcano (1) correct distance from other named volcano (1) west/south-west of Big Island (1)					

3. (b) (ii) Mauna Loa is an example of a shield volcano. Describe two features of a shield volcano.	AO1.1	AO1.2	AO2	AO3	Accuracy	Total
	4					4
Credit any two valid features of a shield volcano with up to two marks for each awarded for elaboration (i.e. 2 + 2 or 3+1). Ensure development points take the answer forward as creditworthy geographical knowledge.	<p>Shape: Gentle sloping sides (1) very wide base (1) resembling upturned shield (1) central summit vent (1) flank vents/fissures (1)</p> <p>Composition: layers of basaltic lava flows (1) basic/non-acidic (1) non-viscous lava (1) flows long distances (1) effusive/not explosive (1) low gas content (1) no layers of ash (1) low silica content (1)</p> <p>Location: Constructive plate boundaries (1) or hot-spots (1)</p> <p>Other features: lava tubes (1) less dangerous to people (1) ropey lava (1)</p> <p>Development of any point (max 2)</p>					

3. (b) (iii) The Hawaiian Islands have been created by a volcanic hot-spot. Explain why hot spots can create chains of volcanoes.	AO1.1	AO1.2	AO2	AO3	Accuracy	Total												
		4				4												
Use the descriptors below, working upwards from the lowest band.	<table border="1"> <thead> <tr> <th>Band</th> <th>Marks</th> <th>Descriptor</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>3-4</td> <td>Elaborated statements which show good understanding of relationship between plate tectonics, hot-spot and island formation.</td> </tr> <tr> <td>1</td> <td>1-2</td> <td>Simple statements showing some linkage between plate tectonics and islands.</td> </tr> <tr> <td></td> <td>0</td> <td>Award 0 marks if the answer is incorrect or wholly irrelevant.</td> </tr> </tbody> </table> <p>A volcanic hotspot is an area in the mantle from which heat rises as a thermal plume from deep below the crust. Magma, rises through cracks in the crust and erupts to form volcanoes. As the tectonic plate moves over the stationary hot spot, the volcanoes are rafted away and new ones form in their place. This results in chains of volcanoes forming in a line with older volcanoes becoming dormant and then extinct as they move away from the hotspot. Candidates must demonstrate understanding that the hotspot is stationary and the plate moves across it for entry into band 2. Although a diagram is not asked for, candidates who choose to draw one to illustrate the process should be awarded credit.</p>						Band	Marks	Descriptor	2	3-4	Elaborated statements which show good understanding of relationship between plate tectonics, hot-spot and island formation.	1	1-2	Simple statements showing some linkage between plate tectonics and islands.		0	Award 0 marks if the answer is incorrect or wholly irrelevant.
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3. (c) Volcanic lava flows present the most serious dangers to people and the economy. To what extent do you agree with this statement? Use the Resource Box to support your answer. You may also refer to examples you have studied.			AO1.1	AO1.2	AO2	AO3	Accuracy	Total
					8			8
Use the descriptors below, working upwards from the lowest band.			Candidates should apply their knowledge and understanding of volcanic hazards to form an opinion and a justified conclusion to the statement. There is no requirement for them to use additional material but this should be given credit where it enhances the argument and contributes to the viewpoint taken. On the one hand, volcanic lava flows are large scale hazards which cannot be prevented. They can cause significant damage to infrastructure and farmland as shown in the resources and, in the case of Hawaii, seriously affect the tourism economy if people choose not to visit because of the potential dangers to life. They may cite the large number of settlements shown in the map which could lie in the path of lava flows, thus putting people in danger. Candidates may also suggest that lava flows from more explosive volcanic eruptions in other parts of the world can and do endanger life. However, there is plenty of information in the resources to suggest that lava flows are less dangerous to life and that people can be evacuated away from them. The ability of science to understand volcanic activity, exemplified by the HVO enables evacuation plans to be formulated and ensures that people are effectively prepared to manage the hazard. Candidates may elaborate on this by referring to methods used by scientists to support this and add weight to the argument. The resource suggests that few people were affected by the 2018 eruption and candidates may link this to the relative safety of this type of eruption compared to others. Candidates may conclude that the economic impact is invariably greater than the human impact. Credit the quality of the argument and the evidence presented towards reaching a valid conclusion.					
Band	Marks	Descriptor						
4	7-8	Balanced analysis and sophisticated judgement. A range of detailed and elaborated points are made both for and against the statement. Information in the resources and any implications are interpreted and analysed thoroughly and perceptively. Conclusion is justified using a sophisticated chain of reasoning. Meaning is unambiguous. The response has clear purpose, is fluent and logically structured.						
3	5-6	Elaborated analysis and reasoned judgement. A range of elaborated points are made on one side of the argument in detail or both sides of the argument in less detail. Information in the resources is interpreted carefully and used to good effect to support the argument. A reasoned and valid conclusion is made and is based on the evidence. Meaning is clear. The response has purpose, is organised and well structured.						
2	3-4	Valid but limited analysis and simple judgement. Valid points are made on one or both sides of the argument but are superficial. A few points are elaborated but lacking in sophistication. There is valid but limited interpretation of information in the resource. Conclusion is made but is simplistic and with limited justification. Meaning is generally clear. The response is structured.						
1	1-2	Basic analysis and judgement. Valid but basic and simplistic points made with little or no elaboration. Basic conclusion is made but no justification. Meaning may lack clarity in parts. Statements are linked by a basic structure.						
	0	Award 0 marks if the answer is incorrect or wholly irrelevant.						

End of Question 3

	4	6	8	6		24
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Options Theme 4, Question 4

4. (a) (i) How many wind gusts had a wind speed between 10–20m/s?	AO1.1	AO1.2	AO2	AO3	Accuracy	Total
				1		1
Credit any answer in this range.	2500 [2450-2550] (1)					

4. (a) (ii) Give the modal class of wind speed.	AO1.1	AO1.2	AO2	AO3	Accuracy	Total
				1		1
Credit only this answer.	20 -30 (1)					

4. (a) (iii) Give two reasons why a histogram was used to present this data rather than a bar chart.	AO1.1	AO1.2	AO2	AO3	Accuracy	Total
				2		2
Award one mark for each valid point.	Data is continuous/not discrete (1) In form of frequency/distribution (1) (frequency must be in context of data) Data in ranges/grouped (1) Equal intervals (1)					

4. (a) (iv) Explain why the strength of wind concerns some people who live in coastal communities.	AO1.1	AO1.2	AO2	AO3	Accuracy	Total
		2				2
Award one mark for each valid point.	Increases wave energy (1) and therefore risk of flooding from storm surge (1) Poorly constructed homes (1) as they live in more deprived communities (1) Wind may blow down trees/debris (1) which could damage homes (1) Development max 1					

4. (b) (i) Describe the areas of Bangladesh at risk from coastal flooding.	AO1.1	AO1.2	AO2	AO3	Accuracy	Total
				2		2
Award one mark for each valid point.	South (1) Bay of Bengal (1) up to 200km inland (1) Barguna (1) Mouth of Ganges (1) Delta (1) Islands (1)					

4. (b) (ii) Describe one social and one economic factor that can increase the vulnerability of coastal communities to the impact of flooding.	AO1.1	AO1.2	AO2	AO3	Accuracy	Total
	4					4
Credit any valid economic and social factors which increase vulnerability with up to two marks for each awarded for elaboration (i.e. 2 + 2 or 3+1). Ensure development points take the answer forward as creditworthy geographical knowledge. Ensure answer refers to vulnerability and not consequences of flooding	<p>Social: high population density at coast (1) poorly constructed homes (1) lack of effective public health resources (1) lack of education (1) development max 2</p> <p>Economic: poverty (1) reduces resilience (1) reliance on primary activity (1) like fishing (1) poor infrastructure (1) poor defences (1) development max 2</p>					

4. (b) (iii) Explain why climate change is increasing the risk of flooding in coastal areas.	AO1.1	AO1.2	AO2	AO3	Accuracy	Total												
		4				4												
Use the descriptors below, working upwards from the lowest band.	Climate change is causing warming of oceans which leads to melting glaciers and ice caps which is in turn, causing sea levels to rise. This makes coastal areas more vulnerable to floods when storms happen. Storms are becoming more frequent and powerful as there is greater heat energy in the oceans which fuel them and a warmer atmosphere is able to hold more moisture which increases rainfall amounts. Coastal areas are also vulnerable from increased river flooding which results from higher rainfall inland. Credit the quality of explanation and the ability of the candidate to make linkages between increased temperature and the risk of flooding at the coast.																	
<table border="1"> <thead> <tr> <th>Band</th> <th>Marks</th> <th>Descriptor</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>3-4</td> <td>Elaborated statements which show good understanding of relationship between climate change and increased flooding.</td> </tr> <tr> <td>1</td> <td>1-2</td> <td>Simple statements showing some linkage between climate change and flooding.</td> </tr> <tr> <td></td> <td>0</td> <td>Award 0 marks if the answer is incorrect or wholly irrelevant.</td> </tr> </tbody> </table>							Band	Marks	Descriptor	2	3-4	Elaborated statements which show good understanding of relationship between climate change and increased flooding.	1	1-2	Simple statements showing some linkage between climate change and flooding.		0	Award 0 marks if the answer is incorrect or wholly irrelevant.
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4. (c) Local councils in the UK should protect all communities from coastal flooding to stop them from disappearing. To what extent do you agree with this statement? Use the Resource Box to support your answer. You may also refer to examples you have studied.				AO1.1	AO1.2	AO2	AO3	Accuracy	Total
						8			8
Use the descriptors below, working upwards from the lowest band.				Candidates should apply their knowledge and understanding of coastal flooding in the UK to form an opinion and a justified conclusion to the statement. There is no requirement for them to use additional material but this should be given credit where it enhances the argument and contributes to the viewpoint taken. On the one hand, candidates may argue that councils have a moral obligation to maintain and sustain communities by investing in engineering solutions to increased flood risk to protect them. They may quote the costs of displacing people and the economic arguments around tourism in coastal areas like Fairbourne as evidence for this viewpoint as well as the social arguments around splitting communities and families who have lived in these areas for a long time. On the other hand, they may argue that the cost of protection, in the face of climate change and increased storms and rising sea levels is unsustainable and that a managed retreat strategy is the only option. They may refer to cost-benefit analysis as a further justification for this. Credit the quality of the argument and the evidence presented towards reaching a valid conclusion.					
Band	Marks	Descriptor							
4	7-8	Balanced analysis and sophisticated judgement. A range of detailed and elaborated points are made both for and against the statement. Information in the resources and any implications are interpreted and analysed thoroughly and perceptively. Conclusion is justified using a sophisticated chain of reasoning. Meaning is unambiguous. The response has clear purpose, is fluent and logically structured.							
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1	1-2	Basic analysis and judgement. Valid but basic and simplistic points made with little or no elaboration. Basic conclusion is made but no justification. Meaning may lack clarity in parts. Statements are linked by a basic structure.							
	0	Award 0 marks if the answer is incorrect or wholly irrelevant.							

End of Question 4

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