

### Assessment Objectives Grid for Geography - G1

	Knowledge and Understanding	Application	Skills	Total	Key Question
<b>Question 1</b>					
(a)	0	2	3	5	1.3
(b)	8	2		10	1.4
(c)	7	3		10	1.6
	15	7	3	25	
<b>Question 2</b>					
(a)	0	2	3	5	2.5
(b)	8	2		10	2.4
(c)	7	3		10	2.6
	15	7	3	25	
<b>Question 3</b>					
(a)	1	1	5	7	2.3
(b)	2	1	5	8	
(c)	3	2	5	10	
	6	4	15	25	
	36	18	21		
	(48%)	(24%)	(28%)		

#### Using the mark bands

The aim is to find the descriptor that conveys most accurately the level attained by the candidate, using the best-fit model. A best-fit approach means that marks should be awarded for a response that most fairly matches different aspects of the descriptor.

## GCE GEOGRAPHY G1

### CHANGING PHYSICAL ENVIRONMENTS

**Q.1 (a) Use *Figure 1* to describe changes in the extent of Arctic sea ice.**

**[5]**

The general pattern shown on the graph is one of decline over time (negative correlation). The values decline from 7.2 in 1979 to 3.6 in 2012. Allow a tolerance of +/- 0.1. The year to year changes show a fluctuating pattern. The rate of decrease speeds up after 2000. Step by step description of annual change equals fluctuation (1 mark) plus (1 mark) for data. Allow (1 mark) for halved from 1979 – 2012. Allow (1 mark) for a comment that accurately describes change with an extra (1 mark) for corroborating information from the resource.

**(b) Describe and explain the effect(s) of climate change on *one or more* biomes.**

**[10]**

This question has two elements – knowledge of climate change and an understanding of how this can lead to impacts on biomes.

Answers should display an understanding of the link between climate change and impacts on biomes. Candidates may outline changes in temperature and precipitation in a description of climatic modifications. There may also be comment about the length and intensity of seasons. Climate change may also be examined as increases in extreme weather.

There should also be reference to how changes in climate can cause changes in biomes. This may take the form of changes in the distribution of species such as the introduction of warm water species into the North Sea or comment on the disappearance of species in an area. Candidates may also examine the changing boundaries of biomes e.g. the northward movement of the boundary between the taiga and tundra. Some answers may refer to increased aridity as part of climate change and explain how this can put stress on biomes and result in desertification. There is also the opportunity to comment on the impact of specific extreme weather events on biomes – fire or short-term destruction by cyclones. Other answers may concentrate on the operation of the biome and linkages within it. These may look at how climate change disturbs the food chain. Accept one biome covered in depth or two or more treated with more breadth.

<b>Level 3 8-10 marks</b>	Good knowledge of climate change and the altered biomes. Good understanding of how climate change has influenced biomes. Good development of examples.
<b>Level 2 4-7 marks</b>	Some knowledge of climate change and the altered biomes. Some understanding of how climate change has influenced biomes. Examples are evident and enhance the explanation.
<b>Level 1 0-3 marks</b>	Basic knowledge of climate change and the altered biomes. Basic understanding of how climate change has influenced biomes. Little use of examples.

**(c) Outline the strategies that governments can use to address climate change. [10]**

The question offers an opportunity to candidates to show their knowledge of the strategies used by governments to overcome the impacts of climate change. The question asks for strategies and requires candidates to look at more than one. This can be achieved in a number of ways – an examination of governments at the same level e.g. an examination of two countries or an examination of governments at different levels – national and local. The strategies examined will vary with selected examples:

Regulation – laws to cut down on the production of greenhouse gases such as the congestion charge.

Relief – provision of aid to those people impacted by the effects of climate change.

Awareness – advertising and publication of reports.

Conservation – heat saving in domestic housing.

Infrastructure – provision of cycle paths, walking routes to reduce use of cars.

Alternatives – encouragement of alternative sources of power – wind, tidal etc.

Adaptation – e.g. adapting coastal defences to sea level rise.

There may be other valid strategies that deserve full credit.

Answers should show detail of the strategies and how they can address climate change.

<b>Level 3 8-10 marks</b>	Good knowledge of strategies. Good understanding of how strategies can address climate change. Good development of examples.
<b>Level 2 4-7 marks</b>	Some knowledge of strategies. Some understanding of how strategies can address climate change. Examples are evident and enhance the explanation.
<b>Level 1 0-3 marks</b>	Basic knowledge of strategies. Basic understanding of how strategies can address climate change. Little use of examples.

- Q.2 (a) Use *Figure 2* to describe both the location and number of people affected by flooding.**

**[5]**

There are a number of points that can be made. Most affected areas are close to the Cagayan River (1 mark). Smaller numbers are affected by the Iponan River (1 mark). The highest numbers affected are close to the rivers (1 mark). The numbers affected decrease with distance from the river. There is a cluster of small numbers affected in areas on the northern section of the Cagayan. The population affected is mainly in the north / close to the coast. Answers may comment on anomalies to patterns described. Allow (1 mark) for comment on distribution with an extra (1 mark) for use of information from resource.

- (b) Describe and explain the characteristics of *one or more* river regimes.**

**[10]**

There are two elements to this question – a description of the characteristics of selected river regime(s) and an explanation of the regime(s) selected.

In a description of the characteristics of a river regime answers may refer to seasonal variations in discharge picking out summer/autumn/spring/winter as divisions or may refer to changes on a month to month basis. Descriptions may also refer to amounts of discharge – especially if they compare different locations such as Glacial/Mediterranean/UK. Accept well-annotated diagrams as description.

Candidates may also look at short- or long-term characteristics as well as medium. As such they may comment upon variations within a season – the impacts of thunderstorms or periods of unusual drought. They may also look at changes that take place to regimes over time and comment on a decrease or increase in discharge as a result of climate change.

When explaining the characteristics of the regime(s) candidates may refer to physical and/or human factors. When explaining physical reasons for variations, candidates may examine variability in relation to precipitation, temperature, evapotranspiration, soil conditions, water balance, glacial meltwater, snowmelt and vegetation. There may be other valid physical factors that are pertinent to specific examples and these should be given credit. Other factors that influence the variability of discharge are man-made. Candidates may comment on reservoirs, dams, and abstraction for industrial and domestic uses. Accept one developed river regime or two or more river regimes treated with more breadth.

<b>Level 3 8-10 marks</b>	Good knowledge of characteristics of river regime(s). Good explanation of the factors that influence the characteristics of selected regime(s). Good development of examples located or generic.
<b>Level 2 4-7 marks</b>	Some knowledge of characteristics of river regime(s). Some explanation of the factors that influence the characteristics of selected regime(s). Some development of examples located or generic.
<b>Level 1 0-3 marks</b>	Basic knowledge of characteristics of river regime(s). Basic explanation of the factors that influence the characteristics of selected regime(s). Little use of examples.

- (c) **Outline the effectiveness of management strategies used to overcome the impacts of *either* river flooding *or* one tectonic hazard.**

[10]

The focus of the question is 'outline' so expect to see answers that describe the identified strategy. The second part of the question looks at the effectiveness of the strategies and how well they manage the hazard. Answers should display both knowledge of the strategies and an explanation of how they can manage flooding or one tectonic hazard. The strategies used in answers will vary. Accept either generic or detailed strategies for full marks.

Generic approaches may address preparation, planning, land-use planning, adaptation, protection, prevention, aid, etc. The management may refer to how the strategy allows people to avoid the hazard, to absorb the impacts the impacts of the hazard or to alleviate the impacts of the hazard after it has occurred. Popular strategies that may be used are:

**Flooding:** Specific strategies may include the use of dykes, washlands, arrangements of rooms in housing next to rivers, evacuation, afforestation and specific aid projects etc. There should be reference to examples in both approaches. The responses will normally take the form of a development of the workings of the selected strategies in the management of river floods.

**Earthquakes:** Building engineering, earthquake preparedness, household seismic safety, seismic retrofit, education for citizens, emergency service training, evacuation for tsunamis, land-use plans, aid and earthquake prediction.

**Volcanoes:** Early warning systems, evacuation, emergency plans, education for citizens, emergency service training, building engineering, land-use plans and aid. There will be a great variety of strategies used depending on the hazard selected and the examples that have been studied. Accept approaches that have a case study structure.

When looking the effectiveness answers may refer to short term/long term, economic/social/environmental comparison of before and after the implementation, comparison with locations that have not implemented strategies, comparison with locations that have implemented different strategies, variations in the magnitude of the hazard. Do not expect extensive comments in the time allowed.

<b>Level 3 8-10 marks</b>	<p>Good knowledge of the strategies.            Good explanation of the operation of the strategies and how they overcome impacts.            Good evaluative comment.            Good development of examples, located or generic.</p>
<b>Level 2 4-7 marks</b>	<p>Some knowledge of the strategies.            Some explanation of the operation of the strategies and how they overcome impacts.            Some evaluative comment.            Some development of examples, located or generic.            Lacks balance.</p>
<b>Level 1 0-3 marks</b>	<p>Basic knowledge of the strategies.            Basic explanation of the operation of the strategies and how they overcome impacts.            Little use of examples.</p>

- Q.3 (a) Use *Figure 3* to describe how different groups perceive tectonic hazards.**

[7]

The resource shows two aspects of tectonic activity on Montserrat. Candidates may refer to the negative elements that are presented such as deaths, migration, abandonment of Plymouth, coverage of the southern half of the island by ash and restricted access. There are positive elements brought about by potential use of geothermal power – cheaper energy, less reliance on imported fuel, potential jobs both in geothermal energy and domestic industry, exports of energy and the potential use of the southern part of the island. There should be comment on both elements present in the resource. The question asks for groups and so to get into Level 3 there must be some recognition of the groups involved. These need not be specific but can be implied from the resource – local industrialists, forced migrants etc.

<b>Level 3 6-7 marks</b>	Good grasp of the reasons for different perceptions. Balance of both positive and negative reasons for perceptions. Identification of groups of people.
<b>Level 2 3-5 marks</b>	Some grasp of the reasons for different perceptions. Well-developed but lacks balance and/or identification of groups.
<b>Level 1 0-2 marks</b>	Basic grasp of reasons for different perceptions.

- (b) Describe some strengths and weaknesses of using secondary sources of information in physical geography.**

[8]

Candidates may refer to variety of sources of secondary information – GIS, maps, satellite images, newspaper reports, academic articles, official data, internet sites and possibly census information.

As strengths responses may look at ease of access of data, up to date and constantly updated information, the large amounts of data that can be accessed, and accuracy of data that has been collected by professional bodies and which is cheaper than collecting primary data.

As weaknesses responses may refer to reliability of data, availability of data for specific question set, access to official data, data validity problems and data source bias. Data may also be in a different format or units than is required by the researcher. Much secondary data can be several years old.

<b>Level 3 6-8 marks</b>	Good knowledge of one or more strengths/weaknesses. Good understanding of feature related to secondary data.
<b>Level 2 3-5 marks</b>	Some knowledge of one or more strengths/weaknesses. Some understanding of feature related to secondary data. Lacks balance – not related to secondary data or only positive or negative addressed.
<b>Level 1 0-2 marks</b>	Basic knowledge of one strength/weakness.

- (c) **Outline the importance of planning in your investigation into a changing physical environment.**

***You should clearly state the question that you have investigated.*** [10]

The question requires two elements to be addressed – the elements of planning and a comment on the value of planning. This can be done by looking at the planning process with an overview of evaluation or an examination of the elements and a comment on the value of planning to the investigation process.

Candidates could address:

- a discussion of the need to devise a question, a hypothesis (positive or negative) or investigate an issue – this will give clarity and direction to the study;
- a discussion of a pilot survey – this will allow any issues in the completion of the study to be identified and ironed out;
- a discussion of where, when and how, which might include the construction of recording sheets and a discussion on sampling (the discussion should be about planning, not describing what actually happened). This will allow a structured collection of data and ensure that the correct type and amount of data is collected from the right places;
- a risk assessment, which may involve identifying specific risks, judging the outcome if the risk factor actually materialised and assessing the probability of the risk factor occurring. This will allow the study to be conducted in safety.

Top quality answers should address more than one aspect of planning but do not expect all of the above. For any generic planning of a human investigation award maximum of Level 1.

<b>Level 3 8-10 marks</b>	Good outline of the elements of planning. Good review of the value of the elements of planning.
<b>Level 2 4-7 marks</b>	Either some outline of the elements of planning. Some review of the value of the elements of planning. Or lacks balance – only looks at elements or review of value of planning.
<b>Level 1 0-3 marks</b>	Basic outline of the elements of planning. Basic review of the value of the elements of planning.