

Assessment Objectives Grid for GCE Geography - G1

January 2013

| | Knowledge and Understanding | Application | Skills | Total | Key Question |
|-------------------|-----------------------------|-------------|--------|-------|--------------|
| Question 1 | | | | | |
| (a) | 0 | 2 | 3 | 5 | 1.4 |
| (b) | 8 | 2 | | 10 | 1.3 |
| (c) | 7 | 3 | | 10 | 1.4 |
| | 15 | 7 | 3 | 25 | |
| Question 2 | | | | | |
| (a) | 0 | 2 | 3 | 5 | 2.2 |
| (b) | 8 | 2 | | 10 | 2.1 |
| (c) | 7 | 3 | | 10 | 2.2 |
| | 15 | 7 | 3 | 25 | |
| Question 3 | | | | | |
| (a) | 1 | 1 | 5 | 7 | 1.4 |
| (b) | 2 | 1 | 5 | 8 | |
| (c) | 3 | 2 | 5 | 10 | |
| | 6 | 4 | 15 | 25 | |

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
MARK SCHEME - JANUARY 2013

Q.1 (a) Use Figure 1 to describe the impacts of climate change in Tajikistan. [5]

Candidates may refer to a variety of potential impacts that link the two elements of the resource.

First part of Figure 1 states that temperature increase has led to increased sickness in crops and thus a loss of up to 30% due to disease. It also points out that drought has been hard on the wheat crop. Allow maximum 2 marks for comments from this element.

Second part of Figure 1 invites the candidate to make links between a decline in agriculture and a variety of economic and social characteristics. For example:

- [as the country relies on agriculture] [this would reduce employment] 2 marks
- [the decline in agriculture] [would also decrease the wealth of the country] 2 marks – [GDP / tax revenue] 1 mark
- [the decline in agriculture] [may also decrease trade as it is a high proportion of exports] 2 marks
- [there is also an unequal gender impact] [as most women are engaged in agriculture] 2 marks.

No double marking.

Allow one mark for a comment with an extra mark for information/data from resource to back up comment. All 5 marks may come from linkage.

(b) Describe and explain how *one or more* changes to the physical environment provide evidence for climate change. [10]

The question has a focus on the changes to the physical environment and requires **both** a description and explanation. The candidates may refer to changes that have taken place to atmosphere, hydrosphere or biosphere. Possible changes could refer to:

- changing temperatures of the atmosphere
- increase in extreme weather events
- changing distribution of climatic belts
- changing sea levels
- changing salinity of the sea
- changing acidity of the sea
- changing ecosystems
- glacial retreat/advances
- permafrost changes
- changing gas composition of the atmosphere.

Allow reference to both long and short term climate change e.g. El Nino.

The ideal answer should give a description of the changes that are selected and why they occur with reference to evidence for climate change. Candidates may select from a variety of temporal scales – long or short term climatic changes.

No credit for human evidence of climate change.

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| Level 3 8-10 marks | Detailed and developed knowledge and understanding of changes to physical environment. Developed explanation of the changes to physical environment. Good development of examples. |
| Level 2 4-7 marks | Either , some knowledge and understanding of changes to physical environment or one change in more detail. Some explanation of changes to physical environment. Or , only addresses one part of the question. Examples are evident. |
| Level 1 0-3 marks | Basic knowledge of changes to physical environment. Description or basic explanation of changes to physical environment. Little use of examples. |

(c) Outline the impacts of extreme weather on human activities. [10]

Candidates may examine one or more extreme weather conditions in response to this question. They may include a variety of extreme weather events that have been attributed to climate change such as hurricanes, exceptional rainfall events that lead to flooding, heat waves and short-term drought. One expected element of the answers will be a description of the extreme weather event(s) with some exemplar material as an illustration. The depth of detail will vary according to the number of types of extreme weather selected. The main focus is however on the impact on human activities and this can include a number of characteristics:

- impacts on economic activity – manufacturing, tourism, agriculture etc.
- impacts on finance – insurance, repair, aid, compensation etc.
- impacts on demographics – migration, population distribution
- impacts on society – health, trauma, break up of community etc.
- impacts on management – increased activity focused on preparation etc.

The actual content of the answer will depend upon the extreme weather event(s), the activity and the location selected.

There may be a number of approaches:

- focus on one or more events
- focus on location e.g. Gulf of Mexico
- focus on activities with reference to a variety of weather events.

All approaches are valid.

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| Level 3 8-10 marks | Developed knowledge and/or understanding of extreme weather. Developed explanation of how extreme weather impacts on human activity. Good development of example(s). |
| Level 2 4-7 marks | Some knowledge and/or understanding of extreme weather. Some explanation of how extreme weather impacts on human activity. Example(s) are evident. |
| Level 1 0-3 marks | Basic knowledge of extreme weather. Description or basic explanation of how extreme weather impacts on human activity. Little use of example(s). |

Q.2 (a) Use *Figure 2* to compare sources of household income before and after the earthquake. [5]

There are a number of general comparisons that can be made that show the pattern of income sources before and after the earthquake:

- unemployment is the only one to increase / all decrease except unemployment
- street vendors has the biggest decline
- remittances show the least decline
- salaried jobs now the third highest
- street vendors now the second highest.

These are the most obvious but accept other valid generalisations. Accept comparisons of trends/patterns at 1 mark plus development/use of data.

Allow comparison of individual sources of income before and after the earthquake. 1 mark for comparative comment e.g. decrease/increase and 1 mark for use of data, comparison of percentage figures or percentage change.

(b) Outline the processes operating at destructive plate margins. [10]

Candidates should focus on the processes that operate at destructive margins. However, some may drift into the resulting land forms to illustrate the response which is acceptable. Answers **may** refer to:

- internal processes that result in plate movement
- directions of plate movement – towards each other
- subduction of one of the plates
- two types of destructive margin ocean to continental and ocean to ocean – allow collision margins
- the processes that lead to the formation of volcanoes
- the production of earthquake activity.

Allow reference to the external processes at such margins that are the result of tectonic activity – liquefaction, volcanic processes, tsunamis.

Candidates may approach this from a generic view i.e. types of destructive margin or with reference to a specific boundary/location. Either approach is acceptable.

Accept answers that are solely annotated diagrams.

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| Level 3 8-10 marks | Detailed and developed knowledge and understanding of processes. Good use of examples. |
| Level 2 4-7 marks | Some knowledge and understanding of processes. Examples are evident. |
| Level 1 0-3 marks | Basic knowledge of processes. Little use of examples. |

(c) **Outline the demographic and social impacts of *one or more* tectonic events.** [10]

The content of answers will vary considerably with the selection of volcanic and/or earthquake event(s) and the examples used to illustrate the response. Expect a variety of generic ideas to form the basis of responses – some may look at long- and short-term impacts, some may examine impacts as they refer to one event, some may see impacts as local, regional or global.

Reference may be made to a number of impacts:

- level of mortality
- migration/displacement
- disease/injury
- disruption to normal life
- loss of housing
- damage to infrastructure – water, gas, electricity
- disruption of transport and communication
- breakdown of social order
- impacts on emergency services
- stress and trauma to population affected by tectonic event
- impacts on cultural heritage.

Be prepared to credit other valid social/demographic impacts and trade depth versus breadth.

Allow an event by event approach.

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| Level 3 8-10 marks | Detailed and developed knowledge. Developed understanding of how tectonic activity has demographic and social impacts. Good development of examples. |
| Level 2 4-7 marks | Either , some knowledge and understanding of how tectonic activity has demographic and social impacts. Or , developed understanding of how tectonic activity has either demographic or social impacts – is unbalanced. Examples are evident and enhance the explanation. |
| Level 1 0-3 marks | Basic knowledge of how tectonic activity has demographic and social impacts. Little use of examples. |

Q.3 (a) Use *Figure 3* to outline the consequences of flooding on St Jean-sur-Richelieu. [7]

There are a number of consequences that can be seen on the photographs:

- fields have been flooded which will impact on agricultural production
- houses have been flooded which will result in homelessness, damage to property, insurance claims, possible trauma
- transport networks have been blocked
- possible need for rescue with boats seen next to houses.

Candidates need to identify consequences from the photographs and develop how they impact on St Jean-sur-Richelieu.

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| Level 3 6-7 marks | Shows clear and detailed identification and description of consequences . Extensive use of information from resource. |
| Level 2 3-5 marks | Shows some ability to identify and describe consequences. Good description of the flooding. |
| Level 1 0-2 marks | Basic description of flooding. |

(b) Describe *one or more* methods that could be used to gain information on the causes of a flood. [8]

Candidates may approach this from a variety of directions. Some will look at one method in great detail whilst others may review a number of methods. Whichever route is taken there should be two elements to the method(s) selected – a description of the method itself and how it can be used to gain information on the causes of the flood.

Methods selected will vary but may include:

- land-use analysis – map evidence or primary data collection
- collection of information concerning the water content of the soil
- geological data
- comparison of ordnance survey maps – spatial and temporal
- analysis of meteorological information
- slope analysis
- flood hydrographs, which show the link between rainfall and discharge.

Other valid methods should be given full credit.

Allow approaches that focus on methods of data collection but these methods of data collection must refer to causes of flooding.

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| Level 3 6-8 marks | Good and realistic knowledge and understanding of method(s). Developed ability to outline link to causes of a flood/flooding. |
| Level 2 3-5 marks | Some realistic knowledge and understanding of method(s) or one method in more detail. Some ability to outline link to causes of a flood/flooding. |
| Level 1 0-2 marks | Basic knowledge of method(s). Basic ability to outline link to causes of flood. |

- (c) **Discuss two limitations of your own investigation into a changing physical environment.** [10]

You should clearly state the question that you have investigated

The content of the responses will depend on the topic selected for investigation and the focus on the location of limitations within the enquiry approach. The discussion element of the question invites the candidates to address why the selected content is limiting to the study. Answers may review limitations in:

- the planning of the study and could look at elements such as the construction of the data-collection sheet, the type of data to be collected, the equipment to be used or the lack of a pilot survey;
- the data-collection element may look to the sampling method, the number of samples and the actual collection of data;
- the data presentation may look at the appropriateness of the graphs, maps etc or the ability to construct them with the data collected;
- data analysis may examine the use of statistics and refer to the number of samples;
- conclusions may refer to the how the whole data collection/analysis sequence failed to give any pattern etc.

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| Level 3 8-10 marks | Developed knowledge and understanding of two limitations and how the limitations reduce the effectiveness of the investigation. Good development in the context of the study. |
| Level 2 4-7 marks | Either , some knowledge of two limitations; some understanding of how the limitations reduce the effectiveness of the investigation; some development in the context of the study. Or , developed detailed knowledge and understanding of one limitation; some development in the context of the study. |
| Level 1 0-3 marks | Basic knowledge of two limitations. Basic development in the context of the study. |