

## GCE GEOGRAPHY G1

### MARK SCHEME – SUMMER 2015

**Q.1 (a) Describe the pattern of temperature deviations shown in *Figure 1a*. [5]**

Award 1 mark for a valid descriptive comment concerning the pattern shown and

1 mark for use of data from the resource (credit reference to figures that indicate deviation from the mean). There are a number of patterns that are identifiable:

- highest increases in the northern section of the Mid West
- decreases to the east/south/west
- high levels of positive deviations in an arc running from Central through Mid South, Mid Atlantic and North East
- closer to normal/mean temperatures in West/southern USA/Gulf coast/South East
- below mean temperature in Pacific West
- highest decreases in north west

Accept other valid comments that address general pattern.

**Q.1 (b) Outline the effects on human activities of *one or more* extreme weather events. [10]**

Candidates may examine one or more extreme weather events 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 events selected. The main focus is however on the effects on human activities and this can include a number of characteristics:

- effects on economic activity – manufacturing, tourism, agriculture etc.
- effects on finance – insurance, repair, aid, compensation etc.
- effects on demographics – migration, population distribution, death
- effects on society – health, trauma, break up of community etc.
- effects 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.

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

**Q.1 (c) Discuss the success of strategies used by pressure groups and/or individuals to address climate change. [10]**

The question has two elements – a knowledge of the strategies used and a discussion of their success.

Strategies carried out by individuals will probably be centred on lifestyle choices such as switching to renewable energy, transport options, reduced energy use, energy efficient white goods, recycling, composting and buying food from local producers to save food miles. There will be other lifestyle strategies so be prepared to credit if they are valid.

There may also be candidates who make comment on the individual acting as part of a pressure group and these should be given credit as long as it has an individual focus. Where pressure groups, such as Greenpeace and Campaign against Climate Change, are addressed there may be comment on how they raise public awareness by their advertising, campaigns, social networking, media work and demonstrations. There may also be comment on the lobbying powers of the groups in the political arena. Some pressure groups also act directly to plant trees or organise land-use strategies to combat climate change.

Comment on the level of success may refer to the impact on green house gas emissions. Some answers may discuss the limited impact of individual action when compared with the growth of industrial powers such as China and India. Others may look at the variation in impact between countries with some societies, such as the USA, not giving full backing to strategies.

<b>Level 3 8-10 marks</b>	Good knowledge of the strategies used by pressure groups and/or individuals and how they can be applied to address climate change. Good discussion of the success of the strategies identified. Good development of examples.
<b>Level 2 4-7 marks</b>	<b>Either</b> , some knowledge of the strategies used by pressure groups and/or individuals and how they can be applied to address climate change. Some discussion of the success of the strategies identified. Some development of examples. <b>Or</b> , lacks balance – good knowledge or good discussion of strategies.
<b>Level 1 0-3 marks</b>	Basic knowledge of the strategies used by pressure groups and/or individuals and how they can be applied to address climate change. Basic discussion of the success of the strategies identified. Limited development of examples.

**Q.2 (a) Compare the loss scores from earthquakes shown in *Figure 2*. [5]**

Allow a maximum of 3 marks for comment on magnitude and a maximum of 3 marks for comment on composition of loss score.

The command word is compare, from WJEC list of term, requires: Give a point by point identification of **similarities and differences** or contrasts. There are usually marks reserved for the explicit use of comparative adjectives. There are a number of comments that can be seen from the resource.

Award 1 mark for a comparative comment with 1 mark for back-up (development) using data.

Magnitude comments	Composition comments
<ul style="list-style-type: none"> <li>• Largest loss – Van</li> <li>• Smallest loss – Bingol</li> <li>• Accept comments on magnitude of difference; e.g. Van about 4.5 times more than Bingol</li> </ul>	<ul style="list-style-type: none"> <li>• Lice – largest proportion of deaths</li> <li>• Bingol – largest proportion of homeless</li> <li>• Van – largest proportion buildings uninhabitable</li> <li>• Allow comment on least</li> <li>• Allow comparisons of region for 1 mark</li> </ul>

**Q.2 (b) Outline the tectonic processes operating at constructive plate margins and conservative plate margins. [10]**

The question is looking for knowledge of the processes that are operating at constructive and conservative plate margins and an explanation of the processes on the context of tectonic theory.

For constructive margins, candidates may refer to the plates being pulled apart by the rising limb of convection currents or the drag produced by subduction of the plate at destructive boundaries. This will lead onto a variety of related processes that may lead to landforms (NB it is the process that receives the credit and not the landform) – magma production at the boundary leading to the formation of volcanoes and lava plains, faulting and the production of rift valleys, the production of ridges by crust bulging and accumulation of volcanic rocks.

A conservative margin occurs when two plates move parallel to one another. Candidates may refer to one plate moving in the opposite direction to the other plate and comment on the resultant friction that results. When the build-up of friction is overcome the energy is released into the plate causing an earthquake. The point at which the earthquake occurs within the plate is called the focus and directly above the focus, on the earth surface, is the epicentre. Volcanic activity is not associated with conservative plate margins and plates are neither created nor destroyed.

Accept other valid processes that relate to tectonic activity.

<p><b>Level 3</b> <b>8-10 marks</b></p>	<p>Good knowledge of the processes at both margins. Developed understanding of how processes are linked to tectonics at both margins. Good development of examples.</p>
<p><b>Level 2</b> <b>4-7 marks</b></p>	<p><b>Either</b>, some knowledge of processes at both margins. Some understanding of how processes are linked to tectonics. <b>Or</b>, Lacks balance – good and developed knowledge of the processes at <b>one</b> margin. Developed understanding of how processes are linked to tectonics at one margin. Examples are evident and enhance the explanation.</p>
<p><b>Level 1</b> <b>0-3 marks</b></p>	<p>Superficial knowledge of processes. Superficial understanding of how processes are linked to tectonics. Little use of examples.</p>

**Q2. (c) Outline the social and economic 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. Responses may be structured in a number of formats – some may look at long- and short-term impacts, some may examine impacts as they refer to one event and some may see impacts as local, regional or global. If there is reference to more than one event then responses may outline how the social and demographic impacts differ.

Reference may be made to a number of impacts:

- impact of death e.g. affect workforce, impact on family life
- migration/displacement and impact on society/economy
- 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
- cost of rebuilding
- insurance costs
- unemployment
- loss of production.

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

Allow an event by event approach.

<b>Level 3 8-10 marks</b>	Detailed knowledge and developed understanding of social and economic impacts. Good development of examples.
<b>Level 2 4-7 marks</b>	<b>Either</b> , some knowledge and understanding of social and economic impacts. <b>Or</b> , developed understanding of either social <b>or</b> economic impacts – i.e. is unbalanced. Examples are evident and enhance the explanation.
<b>Level 1 0-3 marks</b>	Basic knowledge of social and economic impacts. Little use of examples.

**Q.3 (a) Describe the variations in flood risk shown in *Figure 3*. [7]**

Answers may refer to the increase in rate of discharge and/or rainfall intensity using data from the resource. Comment may also be made on the changes in the area flooded. This can take the form of extent and/or location of flooded areas. In the first photo there is a small area flooded next to the river in the west. In the second photo there is an increase in the area flooded in the west and there is flooding in the central reaches of the river. Flooding is still close to the river. There is a small area of flooding in the east. In the last photo flooding is more extensive and has spread from the the river in the central reaches.

Answers may also comment on the land use flooded – in the first photo it is mainly grass/trees. In the second photo there is flooding of housing in the west. In the third photo there is more housing flooded in the centre and some larger buildings (industry/shops/municipal buildings).

<b>Level 3 6-7 marks</b>	Good description of the changes with reference to discharge, rainfall intensity and flooding with good use of information from the resource. Comments need to recognise the increase in discharge, rainfall intensity and extent of flooding.
<b>Level 2 3-5 marks</b>	<b>Either</b> , some description of the changes shown to discharge, rainfall intensity and flooding. Some use of information from the resource. <b>Or</b> , good description of two variations – i.e. lacks balance.
<b>Level 1 0-2 marks</b>	Basic description of changes. Limited use of information from the resource.

**Q.3 (b) Describe how you would collect information on people's views of the economic impacts of flooding. [8]**

The majority of candidates will refer to the collection of information via the use of a questionnaire. In these circumstances there may be reference to the structure of the questionnaire in the form of content and type of question. Candidates may also refer to the type of sample with the idea of a structured sample as the ideal. The number of people surveyed may be commented on as will the time, location and format of delivery (street based, house based, personal or postal etc). There may be some candidates who examine extended interviews of key selected members of the population to gain views and comment on what questions should be asked to whom. Some candidates may look for other sources of information such as local government or opinion on firms' websites, blogs, newspapers etc. Candidates may also include reference to elements of the planning stage e.g. sampling, pilot surveys etc.

Be prepared to accept valid method(s) as long as they contain a description of the method and an explanation of how it can be used to gain people's views.

Economic impacts may refer to costs of damage to housing and property, insurance premiums, loss of earnings, views on aid to other countries. Accept other valid economic impacts.

<b>Level 3 6-8 marks</b>	Good knowledge of data collection method(s) with direct reference to economic impacts. Developed description.
<b>Level 2 3-5 marks</b>	Some knowledge of data collection method(s) with reference to economic impacts. Some detail in description.
<b>Level 1 0-2 marks</b>	Basic knowledge of data collection method(s).

- Q.3 (c) Discuss the strengths and weaknesses of *two* methods used to present information for an investigation into changing a physical environment that you have completed.**

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

The question consists of two elements – knowledge of the methods used to present information and an evaluation of the methods.

Expect a great variety of responses according to the investigation that has taken place. Many will describe tabulation, different graphs that have been produced such as pie, bar, line scatter etc. Other answers may refer to maps that have been drawn to show information such as located symbols, flow line, choropleth, isoline etc. Some candidates may look at the data in the form of visual representation as annotated photographs, sketches or video materials. The actual valid method is less important than the description and discussion of the method, which again will take a variety of formats according to the investigation completed.

Discussion may take the form of a review of the suitability of the methods used where candidates may reflect on the positives and negatives of the technique. Others may examine the precision of the data and look at the precision of data collection methods or sampling structure.

<b>Level 3 8-10 marks</b>	Good description of <b>two</b> methods used in the investigation. Good discussion of strengths and weaknesses of the methods of presentation.
<b>Level 2 4-7 marks</b>	<b>Either:</b> Some description of <b>two</b> methods used in the investigation. Some discussion of the strengths and weaknesses of methods of presentation. <b>Or:</b> Good description of <b>one</b> method (lower L2) or <b>two</b> methods (upper L2) used in the investigation – i.e. answer lacks balance.
<b>Level 1 0-3 marks</b>	Basic description of one or more methods used in the investigation.