Mark Scheme (Results)

January 2012

GCE Geography (6GE02) Paper 01
Geographical Investigations

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General Guidance on Marking

All candidates must receive the same treatment.

Examiners should look for qualities to reward rather than faults to penalise. This does NOT mean giving credit for incorrect or inadequate answers, but it does mean allowing candidates to be rewarded for answers showing correct application of principles and knowledge.

Examiners should therefore read carefully and consider every response: even if it is not what is expected it may be worthy of credit.

Candidates must make their meaning clear to the examiner to gain the mark. Make sure that the answer makes sense. Do not give credit for correct words/phrases which are put together in a meaningless manner. Answers must be in the correct context.

Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the Team Leader must be consulted.

Using the mark scheme

The mark scheme gives:
• an idea of the types of response expected
• how individual marks are to be awarded
• the total mark for each question
• examples of responses that should NOT receive credit.

1   / means that the responses are alternatives and either answer should receive full credit.
2   ( ) means that a phrase/word is not essential for the award of the mark, but helps the examiner to get the sense of the expected answer.
3   [ ] words inside square brackets are instructions or guidance for examiners.
4   Phrases/words in **bold** indicate that the meaning of the phrase or the actual word is **essential** to the answer.
5   ecf/TE/cq (error carried forward) means that a wrong answer given in an earlier part of a question is used correctly in answer to a later part of the same question.

Quality of Written Communication

Questions which involve the writing of continuous prose and candidates will be expected to:

•   show clarity of expression
•   construct and present coherent arguments
•   demonstrate an effective use of grammar, punctuation and spelling.

Full marks will be awarded if the candidate has demonstrated the above abilities.

Questions where QWC is likely to be particularly important are indicated "QWC" in the mark scheme BUT this does not preclude others.

Additional Comments specific to 6GE02

- Always credit bullet points and similar lists, but remember if the list is the **only response**, then this is unlikely to be able to get into the top-band (L3 or L4) based on QWC shortcomings. However, bullets and lists as **part of a response** should permit access to the top band.
- Credit reference to the full investigative fieldwork and research process when referred to in any sections of the paper.
- Credit reference to virtual fieldwork, where appropriate
- Credit reference to GIS as a fieldwork and research tool in all questions.
- Credit reference to candidates own fieldwork and research across ALL questions
- Credit use of case studies and exemplar material where relevant.

Question Number	Question
1(a) **QWC (i, ii, iii)**	

Series	Indicative content
	There are a number of differences relating to the economic impacts that might be commented on i.e. using data to make suggestions about its significance.

Tornado	Flooding
• Property damage ranges from $420m 2005 – $1760m in 2008 • Seems to be lots of variability in property damage. • High variation in crop damage from $7m to $82m in 2005 but numbers generally low compared to flood. • Weakish correlation / linkage between property damage and crop damage	• Property damage ranges from $650 (2002) to $3770m in 2006. • Much higher than tornado • Less variability in property damage – generally > $1000m • Crop damage generally high, but with high variability from year to year – ranges from $82m to $2177m. • Limited linkage between flooding and crop damage.

Important is idea of differences and comparisons. Credit reference to own knowledge and understanding of topics. May talk about path, speed and intensity of tornadoes etc (i.e. whether they tracked over settlements); also number + frequency in year.
For flooding may consider relative scale and impact in comparison with tornado, i.e. widespread versus more localised etc. Credit use of own data, examples, wider knowledge and understanding not on Figure 1.

Level	Mark	Descriptor
Level 1	1-4	Basic and generalised with one or two ideas only relating to data provided or making little use of Figure 1. Likely to do tornadoes OR Flooding, not both. Lacks structure and very limited use of geographical terminology. Considerable errors in language.
Level 2	5-7	Some data commented on, but likely to be restricted either in range and or depth. Mentions both tornadoes and flooding, likely to be unbalanced. Expect some comparison. Some structure and some written language errors.
Level 3	8-10	A response where some range of data and differences are commented on providing depth, including reference to Figure 1. Some reasons may also be given. Reasonably balanced in terms of tornadoes and flooding (uses both tables). Well structured; written language errors are rare.

Question Number	Question
1(b) **QWC (i, ii, iii)**	
Series	Indicative content
	Note this question is focused on results and conclusions, but may also include elements of data presentation and analysis (should be linked to outcomes).
	<table><tr><td>Results and conclusions</td><td> - Results are outcomes / data gathered during fieldwork or from research. - May provide a summary of the fieldwork and research data collected (e.g. patterns of flood risk etc), with reference to particular places. - May include evaluation and comments on reliability. - Moves towards providing conclusions based on data and evidence. </td></tr></table>
	Expect a wide variety of ideas discussed, but also credit approaches / methodology to provide a context / setting for the results and conclusions.
	Credit responses may make links to previous flood events and therefore able to comment on degree of risk, especially how flood risk changes over time.
	NB: do not credit coastal flooding / risk. Rubric.

Level	Mark	Descriptor
Level 1	**1-4**	A limited description of fieldwork / research undertaken. May not be well linked to flooding. Lacks structure. Considerable errors in language.
Level 2	**5-8**	May be a description of fieldwork/research with some link to flooding / risk. Likely to be unbalanced and lacking detail. Expect limited use of geographical terminology. There are some written language errors. *Max 8 if case study with no indication of own fieldwork or research.*
Level 3	**9-12**	Some range of results and/or conclusions from the candidate's own fieldwork / research linked to flood risk. Some use of geographical terminology. Response shows some structure, limited written language errors. *Max 10 if only fieldwork or research.*
Level 4	**13-15**	Structured account which summarises a range of results and conclusions of the candidate's own fieldwork and research and comments on *increasing* flood risks. Good use of terminology. Written language errors are rare.

Question Number	Question
1(c) **QWC (i, ii, iii)**	
Series	Indicative content
	Candidates may choose **one** from a range of extreme weather events – hurricanes, floods, tornado, heatwave, or drought. Approaches to reduce impacts include: **Preparation** e.g. building design, landuse planning, community preparedness and education; evacuation plans etc. **Prediction:** range of ideas, technology likely to be especially important: • Better computer modelling to forecast / predict locations, durations and likely impacts, e.g. GIFS Global Interactive Forecasting System which uses advanced grid computation technology. • Weather radar – rainfall density over a large area. Doppler radar allows accurate measurement of wind systems in severe storms. • Satellites can be used to estimate rain rate etc – help in the forecasting of floods. • GIS can be used to prepare mathematical models for extreme weather forecasting – it can process complex spatial information and therefore contribute to the early warning. In addition **response** could be mentioned e.g. role of emergency services, evacuation, aid and longer term responses. May have developed versus developing countries comparative solutions or top down versus bottom up approaches to reduce impacts. 'Approaches' can be interpreted to mean strategies and examples of schemes. If two or more extreme weather event types are done, credit the best.

Level	Mark	Descriptor
Level 1	1-4	Basic with one or two general ideas on approaches, limited link to reducing impacts. No exemplification. Lacks structure and very limited use of geographical terminology. Considerable errors in language.
Level 2	5-7	Some approaches examined. Likely to be restricted either in range and or depth but has some links to reducing impacts. Some limited exemplification present. Some structure and some written language errors.
Level 3	8-10	A clear response which refers to 2 or more different approaches, well linked to reducing the impacts of the chosen extreme weather event. Well structured and balanced response which uses the examples effectively. Shows range and or detail through response. Written language errors are rare.

Question Number	Question
2(a) **QWC (i, ii, iii)**	
Series	Indicative content
	The information in the resource provides lots of material, there is a range of possible ideas to draw on, e.g.: • Bird watching conflicts with camping / caravanning; agriculture conflicts with camping • Most activities are compatible, e.g. sunbathing and fishing (rarely conflicting). Note some activities are marine whereas others are land based and these are likely to rarely conflict. • Many activities are incompatible but chance of conflict is low. • Military use is a little unusual in that it is incompatible but conflict is rare with all activities. Expect candidates to use own knowledge and understanding to comment on reasons for individual conflicts. Credit any other ideas which may be related to reliability of data used in matrix and rationale / decisions it is based on. Credit reference to examples from own fieldwork and research where relevant.

Level	Mark	Descriptor
Level 1	**1-4**	Basic and generalised with one or two descriptive ideas only relating to data provided. Picks on a very limited range of activities. Lacks structure and very limited use of geographical terminology. Considerable errors in language.
Level 2	**5-7**	Some data commented on, but likely to be restricted either in range and or depth / reasons. Expect some comment relating to the degree of conflict. Some structure and some written language errors.
Level 3	**8-10**	A response where some range of conflicts are discussed with some details. Some reasons may also be given. Reasonable range in terms of number of activities selected and discusses how degree of conflict varies. Well structured; written language errors are rare.

Question Number	Question
2(b) **QWC (i, ii, iii)**	
Series	Indicative content
	Note this is focused on results and conclusions, but may also include elements of data presentation and analysis (should be linked to outcomes).
	<table><tr><td>Results and conclusions</td><td>• Results are outcomes / data gathered during fieldwork or from research. • May provide a summary of the fieldwork and research data collected (e.g. landuse etc), with reference to particular places. • May include evaluation and comments on reliability. • Moves towards providing conclusions based on data and evidence.</td></tr></table>
	Expect a wide variety of ideas discussed, but also credit approaches / methodology to provide a context / setting for the results and conclusions. Credit responses may make links to historical development and therefore able to comment on change over time. Coastal development may refer to urbanisation, coastalisation, industry, tourism, conservation developments, energy developments, building / developing coastal defences (the latter could be linked to land use maps, sketches, photos, old maps etc.) NB: 'hold the line' type answers or ones focussed on rates of coastal erosion are unlikely to answer the question successfully.

Level	Mark	Descriptor
Level 1	1-4	A limited description of fieldwork / research undertaken. May not be well linked to coastal development. Lacks structure. Considerable errors in language.
Level 2	5-8	May be a description of fieldwork/research with some link to coastal development. Likely to be unbalanced and lacking detail. Expect limited use of geographical terminology. There are some written language errors. *Max 8 if case study with no indication of own fieldwork or research.*
Level 3	9-12	Some range of results and/or conclusions from the candidate's own fieldwork / research linked to coastal development. Some use of geographical terminology. Response shows some structure, limited written language errors. *Max 10 if only fieldwork or research.*
Level 4	13-15	Structured account which summarises a range of results and conclusions of the candidate's own fieldwork and research and comments on coastal development. Good use of terminology. Written language errors are rare.

Question Number	Question
2(c) **QWC (i, ii, iii)**	
Series	Indicative content
	Credit discussion/ definitions of integrated coastal management / ICZM. Large coastal cells are broken down into smaller units and then action is taken via SMP (Shoreline Management Plans). Sustainable coastal defence / management attempts to accommodate, copy or work alongside natural systems and processes, with ecosystems often playing a key role. Typically such approaches are small scale, localised and bottom-up or community driven. - They have the advantages of being environmentally friendly, sometimes cheaper and longer-lasting. - Consideration needs to be taken so that schemes are compatible with adjacent coastal areas. Managed retreat is where the sea is allowed to flood parts of the intertidal zone – thus creating mudflats and valuable salt marsh habitat. - Coastal realignment may be more controversial since it involves 'retreating the line', e.g. Kent, N. Norfolk and Essex. Is often viewed by local residents as the do-nothing and easy opt out. Politically can be difficult to execute. Credit discussion of why some / all hard defences are not sustainable / as sustainable e.g. breakwaters, gabions, geotextiles, groyne fields, revetments, rock armour and rip-rap, sea walls etc. Costly to install but can be effective at particular locations. Often used in combination with other strategies in high value coastal environments, e.g. resort beaches etc. Examples can mean examples of places or approaches. **NB** Answers which explain a management strategy for a coastline with very limited link to '*why sustainable approaches..*' are used are likely to score low L2 marks (5).

Level	Mark	Descriptor
Level 1	1-4	Basic and generalised with a few ideas on coastal management. No / little appreciation of sustainable coastal management. Descriptive. Lacks structure and very limited use of geographical terminology. Considerable errors in language.
Level 2	5-7	Some ideas on sustainable and / or integrated approaches with partial explanations of why these strategies are used. Likely to be restricted either in range and or depth. Some structure and some written language errors. Some use of geographical terminology.
Level 3	8-10	A clear response with examples of sustainable coastal management. Well structured and balanced response which explains why they are used. Shows range and or detail through response. Appropriate use of geographical terminology. Written language errors are rare.

Question Number	Question
3(a) **QWC (i, ii, iii)**	
Series	Indicative content
	The degree of inequality between Clearing and Englewood is huge – therefore there are very obvious differences between the two areas e.g. • Englewood is mainly African American, whereas there is a very low % (0.6) in Clearing. • Far more poverty in Englewood with nearly half the population below the poverty line, whereas Clearing 6.9%. • Another significant difference is crime (robberies and murders) e.g. Clearing 1 and 33 versus Englewood 20 and 565. • Candidates may explore weaknesses in the data e.g. some data not present Much more data can be extracted from the table – income, median household income Overall the data does show significant inequalities in terms of social and economic differences. Especially reward those who recognise just how big the differences are (i.e. the degree)and begin to offer possible suggestions, linking idea of inner city suburb vs outer suburb. Some candidates may use the data in an implied way whilst others may quote it.

Level	Mark	Descriptor
Level 1	**1-4**	One or two basic items of data described from the resource but limited to simple lift-offs (with probably no data support). May discuss one district only. Lacks structure and considerable errors in language.
Level 2	**5-7**	A range of descriptive comments linked to resource including one or two ideas relating to degree of differences. Likely to use data from the resource. Comments on both districts. Some structure; there are some written language errors.
Level 3	**8-10**	A clear response with good use of resource (both districts) commenting on the degree of difference. Uses data well. Some reasons may also be given. Well structured and appropriate use of geographical terminology. Written language errors are rare.

Question Number	Question
3(b) **QWC (i, ii, iii)**	
Series	Indicative content
	Lack of access to services which can lead to inequality may take many forms: • Technology, e.g. mobile phone reception, wi-fi, high speed broadband etc • Bus / train / rail / port infrastructure proximity and frequency • Places for entertainment and leisure (affordability and availability) • Basic services such as electricity, sanitation etc • Healthcare – quality, range of services, distance and affordability • Education/training – choice, distance to travel Inequality will be worse where it is difficult to access services, but it may affect different groups (e.g. the elderly, the young, unemployed, single parents, disabled, ethnic minorities etc) to different degrees. In MEDCs inequality more likely to be driven by physical barriers (e.g. mountains / hills), remoteness or the economics of delivery of a particular service. Population density (potential market) will also be a factor which links to marginalisation. Expect candidates to refer to lack of high speed broadband or poor mobile phone reception. LEDCs other factors at play. Candidates may just do MEDC or LEDC. Note – can be examples from rural or urban locations (not both). These could refer to types of service within a place or different places.

Level	Mark	Descriptor
Level 1	**1-4**	Identifies one or two basic ideas only. Very limited understanding of lack of access to services. Likely to be not located. Little structure and very limited use of geographical terminology. Considerable errors in language.
Level 2	**5-7**	Uses a place/service to support response. Some structure. Likely to be lacking in either range or depth, but shows some understanding of how inequality may be linked to access to services. There are some written language errors.
Level 3	**8-10**	A clear response which shows understanding of how a lack of access to services can be linked to inequality. Well exemplified through places and/or services. Well structured and balanced response in which written language errors are rare.

Question Number	Question
3(c) **QWC (i, ii, iii)**	

Series	Indicative content
	There are a range of fieldwork and research opportunities – expect these to include some of the following:

Fieldwork (primary):	Visit location(s), collect qualitative and quantitative evidence, e.g. oral histories of change, perception of reputation, looking for evidence of change in functional hierarchy etc. Looking for evidence of improvements to 'place image', 'product' image etc. Opportunity at busy rural or urban locations to determine sphere of influence etc (use of questionnaire?). Lots of photographic and video evidence expected, e.g. architectural icons / design features. Especially important as part of urban schemes (linked to rebranding).
Research (secondary):	Photos / postcards illustrating change, changes in employment, visitor profile and published catchment survey data etc. Urban areas, e.g. crime statistics, visitor numbers / footfall patterns. Data from town / city centre management. Also use of geo-demographic data, e.g. postcode checkers on the internet etc. Particular data relating to actual schemes.

Provide credit for possible reference to sampling strategies, e.g. systematic and stratified, no of people interviewed etc; also some candidates may have used a pilot survey, e.g. to format questionnaires.

In reality it is quite difficult to get evidence – credit any acknowledgment that results may be partial and tentative; based on more subjective observations.
Note can be either urban or rural.

Level	Mark	Descriptor
Level 1	**1-4**	Very limited range of fieldwork / research described. Fieldwork may not be appropriate / linked to inequality. Lacks structure. Considerable errors in language.
Level 2	**5-8**	Descriptive style but with some statements about either fieldwork or research approaches linked to inequality or schemes. May be a description that lacks focus on the question / less relevant techniques. Likely to be unbalanced and lacking detail. Expect limited use of geographical terminology. There are some written language errors.
Level 3	**9-12**	Describes a range of fieldwork and/or research approaches linked to schemes to reduce inequality. Expect some mention of success and / or schemes. Some use of geographical terminology. Response shows some structure, limited written language errors. Max 10 if only fieldwork **or** research.
Level 4	**13-15**	Structured account which describes a good range of fieldwork and research linked to schemes to reduce inequality. 'Success' also forms part of the answer. Shows good use of own / group fieldwork, with good use of terminology. Written language errors are rare.

Question Number	Question
4(a) **QWC (i, ii, iii)**	
Series	Indicative content
	Rebranding often involves the removal of old land-uses to make way for the new (image). Often these changes may create conflict (which could range from a mild disagreement up to direct action against development) as there is no doubt disruption and disturbance, noise etc; changes may not be to the benefit of all people within an area or region. Conflict could occur at different stages in the rebranding process and responses may refer to this. Table indicates possible groups associated with each image. | Image 1a Traditional industries / light manufacturing	Image 1b Traditional industries / light manufacturing
Image 2a Developers and residents in buildings	Image 2b Games visitors + tourists
Image 3a Residents	Image 3b Games visitors | Candidates may also discuss the role of players (links to groups of people). Also credit candidates who bring in own knowledge and understanding of the issues relating to London Olympics or any other places which seem reasonable. Many other conflicts could be discussed that are not directly linked to the images, such as between local residents and developers, or builders and shop keepers etc. Credit mentioning of these. Credit ideas that the rebranding process does not necessarily create conflicts. Expect reference to Figure 4, but candidates may also discuss other examples of conflict as a result of rebranding.

Level	Mark	Descriptor
Level 1	1-4	One or two basic items of data described from the resource, but no real ideas about conflicts; limited to simple lift-offs of what pictures show, likely from one or two images only. Lacks structure and considerable errors in language.
Level 2	5-7	A range of descriptive comments linked to resource including one or two ideas regarding possible conflicts linked to rebranding, may mention groups. May move beyond images provided. Some structure; there are some written language errors.
Level 3	8-10	A clear response which makes valid comments linking together rebranding, conflicts and groups using images and possibly own ideas /examples. Well structured; written language errors are rare.

Question Number	Question
4(b) **QWC (i, ii, iii)**	
Series	Indicative content
	Rebranding can be used as a tool or catalyst to improve quality of places. Sustainability might link to economic, social and environmental aspects of rebranding. There are a range of linked ideas here. Inward investment attracting other businesses etc and positive spirals. Perhaps important is the idea of longer-term success. Credit definition of sustainability in the context of rebranding. | **Urban**	**Rural** | |---|---| | • Employment opportunities close to communities, reducing transport footprint • Preservation of heritage and culture • Innovative energy efficient design | • Economically viable providing a range of employment opportunities • Limited use of artificial chemicals in any production methods (ideally organic); local food etc. | One of the issues with rebranding is to what extent schemes actually benefit *all* communities / groups / players, especially those that are the most deprived or have least say. Places can be urban or rural, and at a range of scales, e.g. regional to local. Credit discussion of top-down, bottom-up and partnership approaches.

Level	Mark	Descriptor
Level 1	1-4	Basic and generalised with few ideas on rebranding. Lacks structure and very limited use of geographical terminology. Limited or no reference to a real place. Sustainability concept largely absent. Considerable errors in language.
Level 2	5-7	Some structure. Likely to be lacking in either range or depth, but may show some understanding of sustainability and its use as a part of rebranding. Reference to at least one place. There are some written language errors.
Level 3	8-10	A clear response which shows how 2 or more named places have used rebranding to become more sustainable. Well structured and balanced response. Written language errors are rare.

Question Number	Question
4(c) **QWC (i, ii, iii)**	

Series	Indicative content
	There are a range of fieldwork and research opportunities – expect these to include some of the following:

Fieldwork (primary):	Visit location(s), collect qualitative and quantitative evidence, e.g. oral histories of change, perception of reputation, looking for evidence of change in functional hierarchy etc. Looking for evidence of improvements to 'place image', 'product' image etc. Opportunity at busy rural or urban locations to determine sphere of influence etc (use of questionnaire?). Lots of photographic and video evidence expected, e.g. architectural icons / design features. Especially important as part of urban schemes (linked to rebranding).
Research (secondary):	Photos / postcards illustrating change, changes in employment, visitor profile and published catchment survey data etc. Urban areas, e.g. crime statistics, visitor numbers / footfall patterns. Data from town / city centre management. Also use of geo-demographic data, e.g. postcode checkers on the internet etc. Particular data relating to actual schemes.

Provide credit for possible reference to sampling strategies, e.g. systematic and stratified, no of people interviewed etc; also some candidates may have used a pilot survey, e.g. to format questionnaires.

In reality it is quite difficult to get evidence – credit any acknowledgment that results may be partial and tentative; based on more subjective observations.
Note can be either urban or rural.

Level	Mark	Descriptor
Level 1	**1-4**	Very limited range of fieldwork / research described. Fieldwork may not be appropriate / linked to rebranding. Lacks structure. Considerable errors in language.
Level 2	**5-8**	Descriptive style but with some statements about either fieldwork or research approaches linked to rebranding or schemes. May be a description that lacks focus on the question / less relevant techniques. Likely to be unbalanced and lacking detail. Expect limited use of geographical terminology. There are some written language errors.
Level 3	**9-12**	Describes a range of fieldwork and/or research approaches linked to rebranding. May be some indication of success and / or schemes. Some use of geographical terminology. Response shows some structure, limited written language errors. Max 10 if only fieldwork **or** research.
Level 4	**13-15**	Structured account which describes a good range of fieldwork and research linked to rebranding. 'Success' forms part of the answer as does a mention of scheme(s). Shows good use of own / group fieldwork, with good use of terminology. Written language errors are rare.

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