



**General Certificate of Education (A-level)  
January 2012**

**Geography**

**GEO4A**

**(Specification 2030)**

**Unit 4A: Geography Fieldwork Investigation**

**Post-Standardisation**

***Mark Scheme***

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Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all examiners participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for standardisation each examiner analyses a number of students' scripts: alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, examiners encounter unusual answers which have not been raised they are required to refer these to the Principal Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

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### **General Guidance for GCE Geography Assistant Examiners**

The mark scheme for this unit includes an overall assessment of quality of written communication. There are no discrete marks for the assessment of written communication but where questions are "Levels" marked, written communication will be assessed as one of the criteria within each level.

- Level 1:** Language is basic, descriptions and explanations are over simplified and lack clarity.
- Level 2:** Generally accurate use of language; descriptions and explanations can be easily followed, but are not clearly expressed throughout.
- Level 3:** Accurate and appropriate use of language; descriptions and explanations are expressed with clarity throughout.

### **Marking – the philosophy**

Marking is positive and not negative.

### **Mark schemes – layout and style**

The mark scheme for each question will have the following format:

- a) Notes for answers (nfa) – exemplars of the material that might be offered by candidates
- b) Mark scheme containing advice on the awarding of credit and levels indicators.

### **Point marking and Levels marking**

- a) Questions with a mark range of 1-4 marks will be point marked.
- b) Levels will be used for all questions with a tariff of 5 marks and over.
- c) Two levels only for questions with a tariff of 5 to 8 marks.
- d) Three levels to be used for questions of 9 to 15 marks.

### **Levels Marking – General Criteria**

Everyone involved in the levels marking process (examiners, teachers, students) should understand the criteria for moving from one level to the next – the “triggers”. The following general criteria are designed to assist all involved in determining into which band the quality of response should be placed. It is anticipated that candidates’ performances under the various elements will be broadly inter-related. Further development of these principles will be discussed during the standardisation process. In broad terms the levels will operate as follows:

**Level 1: attempts the question to some extent (basic)**

An answer at this level is likely to:

- display a basic understanding of the topic
- make one or two points without support of appropriate exemplification or application of principle
- give a basic list of characteristics, reasons and attitudes
- provide a basic account of a case study, or provide no case study evidence
- give a response to one command of a question where two (or more) commands are stated e.g. “describe and suggest reasons”
- demonstrate a simplistic style of writing perhaps lacking close relation to the terms of the question and unlikely to communicate complexity of subject matter
- lack organisation, relevance and specialist vocabulary
- demonstrate deficiencies in legibility, spelling, grammar and punctuation which detract from the clarity of meaning.

**Level 2: answers the question (well/clearly)**

An answer at this level is likely to:

- display a clear understanding of the topic
- make one or two points with support of appropriate exemplification and/or application of principle
- give a number of characteristics, reasons, attitudes
- provide clear use of case studies
- give responses to more than one command e.g. “describe and explain..”
- demonstrate a style of writing which matches the requirements of the question and acknowledges the potential complexity of the subject matter
- demonstrate relevance and coherence with appropriate use of specialist vocabulary
- demonstrate legibility of text, and qualities of spelling, grammar and punctuation which do not detract from the clarity of meaning.

**Level 3: answers the question very well (detailed)**

An answer at this level is likely to:

- display a detailed understanding of the topic
- make several points with support of appropriate exemplification and/or application of principle
- give a wide range of characteristics, reasons, attitudes
- provide detailed accounts of a range of case studies
- respond well to more than one command
- demonstrate evidence of discussion, evaluation, assessment and synthesis depending on the requirements of the assessment
- demonstrate a sophisticated style of writing incorporating measured and qualified explanation and comment as required by the question and reflecting awareness of the complexity of subject matter and incompleteness/ tentativeness of explanation
- demonstrate a clear sense of purpose so that the responses are seen to closely relate to the requirements of the question with confident use of specialist vocabulary
- demonstrate legibility of text, and qualities of spelling, grammar and punctuation which contribute to complete clarity of meaning.

### **Mechanics of marking**

- Various codes may be used such as: 'rep' (repeated material), 'va' (vague), 'NAQ' (not answering question), 'seen', etc.
- Unless indicated otherwise, always mark text before marking maps and diagrams. Do not give double credit for the same point in text and diagrams.

### **Annotation of Scripts**

It is most important that examiners mark clearly, according to the procedures set out below.

- The right hand margin should be used for marks only.
- Where an answer is marked using a levels response scheme, the examiner should annotate the scripts with 'L1', 'L2', or 'L3' at the point where that level has been reached in the left hand margin. At each point where the answer reaches that level, the appropriate levels indicator should be given. In addition, examiners may want to indicate strong material by annotating the script as "Good Level... ". Further commentary may also be given at the end of the answer. Where an answer fails to achieve Level 1, zero marks should be given.
- Where answers do not require levels of response marking, the script should be annotated to show that one tick equals one mark. The tick should be positioned in the part of the answer which is thought to be creditworthy. For point marked question where no creditworthy points are made, zero marks should be given.

### **Other mechanics of marking**

- All errors and contradictions should be underlined.
- Various codes may be used such as: 'rep' (repeated material), 'va' (vague), 'NAQ' (not answering question), 'seen', etc.
- Use a wavy line to indicate weak dubious material (avoiding crossing out).

Unless indicated otherwise, always mark text before marking maps and diagrams. Do not give double credit for the same point in text and diagrams.

Underlining indicates key words for links and identification of levels.

The aim(s) of the investigation is/are expected to be set out clearly. No credit is allocated for this statement.

<b>1</b>	<p><b>Notes for answers</b></p> <p>There should be reference to the importance of the choice of location in the light of the aim(s); this is likely to include an explanation of the selection of the location, what made it important and why this was so. Reference to the underpinning theory may be present to explain why the aim was selected, but this must be linked to the importance of the location. There is likely to be a multi-layering of response, explaining why the aim was selected in relation to the location and emphasising its importance.</p> <p><b>Mark scheme</b></p> <p><b>Level 1 (1-5 marks) (mid point 3)</b> The candidate will be unclear about the aim(s) and why the location was selected. There will be reference to the aim(s), and/or location, though this will be <u>descriptive</u>, rather than explanatory. Reference to the candidate's own fieldwork will be absent at the lower end, though there may be some implicit reference at the upper end of the band.</p> <p><b>Level 2 (6-10 marks) (mid point 8)</b> There will be clear reference to an <u>explanation</u> of the <u>importance</u> of the location or vice versa, with varying reference to the <u>aim(s)</u>. This will be marked at the lower end and less so at the upper. There will be reference to the candidate's own <u>fieldwork</u>, with greater conviction towards the upper end of the band. Aims are likely to be implicit at the lower end.</p> <p><b>Level 3 (11-12 marks) (mid point 12)</b> There will be detailed and convincing reference to the <u>importance of the choice of location</u> and this will be referenced to the <u>aim(s)</u>. There will be <u>convincing</u> reference to the candidate's own <u>fieldwork</u>. The candidate will show evidence of thinking like a geographer.</p>	<b>12 marks</b>
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<p><b>2 (a)</b></p> <p><b>AO1-3</b> <b>AO2-2</b> <b>AO3-1</b></p>	<p><b>Notes for answers</b></p> <p>The method selected must relate to primary data collected for the investigation. Only one method is required. Any relevant primary method is acceptable. Explanation is not necessary for L2.</p> <p><b>Mark scheme</b></p> <p><b>Level 1 (1-4 marks) (mid point 3)</b> There will be a <u>basic outline</u> of the method selected. This will be generalised at the lower end, more structured at the upper end of the band. There will be no reference to the fieldwork undertaken at the lower end, with implicit reference at the upper end of the band.</p> <p><b>Level 2 (5-6 marks) (mid point 6)</b> There will be a <u>clear outline</u> of the method selected. <u>Rigour</u> will be demonstrated by detail. There will be clear and <u>convincing reference</u> to the <u>fieldwork</u> undertaken.</p>	<p><b>6 marks</b></p>
<p><b>2 (b)</b></p> <p><b>AO1-2</b> <b>AO2-2</b> <b>AO3-6</b></p>	<p><b>Notes for answers</b></p> <p>Any relevant method of primary data collection can be used, <u>but it must be that selected in (a)</u>. Reference to the suitability of this method will include an evaluation of its strengths, limitations and the candidate's experience in the field. eg risk assessment, alternatives.</p> <p><b>Mark scheme</b></p> <p><b>Level 1 (1-4 marks) (mid point 3)</b> There will be a <u>basic awareness</u>. There is likely to be a strong focus on the <u>strengths and/or weaknesses</u>, rather than an evaluation of the overall suitability. There may be a concentration on sampling itself, rather than the data collection. The candidate's own fieldwork experience will be absent / minimal.</p> <p><b>Level 2 (5-8 marks) (mid point 7)</b> There will be <u>clear reference</u> to evaluation of the suitability of the method but there is likely to be an <u>imbalance</u>, with strengths and weaknesses/limitations. Reference to suitability is likely to be straightforward at the lower end. At the upper end, there will be clear evaluation of the suitability of the method selected, linking to the fieldwork experience undertaken. Any reference to sampling used will be linked to the data collection.</p> <p><b>Level 3 (9-10 marks) (mid point 10)</b> There will be a <u>detailed evaluation</u> of the <u>suitability of the method</u>, linked to the experience in the <u>field</u>. This will be <u>convincing</u> in detail. Any reference to sampling will be balanced and integrated into the evaluation of the suitability of the method.</p>	<p><b>10 marks</b></p>

<p><b>3</b></p> <p><b>AO1-1</b> <b>AO2-4</b> <b>AO3-7</b></p>	<p><b>Notes for answers</b></p> <p>There is likely to be a summary of the conclusions of the investigation. Secondary data may be defined and will be linked to development of the investigation. This is likely to focus on the relevance of the conclusions and how they were and/or could be developed with secondary data, whether similar or more extended. Candidates may explain how secondary data were used in their investigation to reach their conclusions or how the investigation could be developed with appropriate secondary data. Secondary data can include weather maps, OS maps, river data, urban data, GIS, other students' data, etc.</p> <p><b>Mark scheme</b></p> <p><b>Level 1 (1-5 marks) (mid point 3)</b> There may be <u>basic reference</u> to some of the conclusions. Reference to secondary data and how they were or could have been used may be implicit and links to development will be basic at best. The approach will be <u>descriptive</u>.</p> <p><b>Level 2 (6-10 marks) (mid point 8)</b> There will be a <u>reference to the conclusions</u>, implicit at the lower end. Secondary data will be mentioned, but may show some imbalance by being implicit or inconsistent in application to the development of the study. 'Use' will <u>either explain</u> how it was used to reach the conclusions <u>and/or how</u> development would be enhanced by the use of secondary data. There may be imbalance between reference to the conclusions and the use of secondary data. Explanation of use is expected.</p> <p><b>Level 3 (11-12 marks) (mid point 12)</b> There will be <u>explicit reference to the conclusions</u>. Secondary data will be applied to <u>explain</u> how the <u>conclusions</u> were reached and/or how <u>development</u> would be enhanced by its use. There will be <u>detailed</u> and <u>consistent</u> reference to the candidate's own fieldwork.</p>	<p><b>12 marks</b></p>
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<p><b>4</b></p> <p><b>AO1-1</b> <b>AO2-4</b> <b>AO3-3</b></p>	<p><b>Notes for answers</b></p> <p><b>Dot map Figure 1</b> Basic strengths/weaknesses of maps. Reference to the examples will bring out many of these points to answer the question. The emphasis is on the maps, rather than the techniques.</p> <p>A dot map shows the distribution of a feature. It is a map using dots to show the presence of a feature or occurrence and display a spatial pattern. A dot map uses a dot to represent the number of a phenomenon found within the boundaries of a geographic area and can only be used for showing whole numbers. In addition, the cartographer usually attempts to show the pattern of distribution within the area by placing the dots where the phenomenon is most likely to, or does, occur. In the case of Figure 1, each dot represents 1000 people.</p> <p>Candidates will draw from the maps to exemplify these points.</p> <p><b>Strengths: (S)</b></p> <ul style="list-style-type: none"> <li>• The dots are located according to the distribution of the population, rather than being spread evenly within an administrative area.</li> <li>• Can be plotted evenly or randomly.</li> <li>• There is a clear visual impression of the dots.</li> <li>• The distribution is very clearly shown in this case so it is effective as a map.</li> <li>• Density can be implied by the clustering of dots, but it is not shown as such.</li> </ul> <p><b>Weaknesses: (W)</b></p> <ul style="list-style-type: none"> <li>• The dots do not show part figures of, in this case, 1000.</li> <li>• The dots merge together where there are clusters of population, so become indistinct.</li> <li>• The size of the dot has to be carefully selected to show the distribution at its most clear.</li> <li>• Difficult to plot in areas of very low population.</li> </ul>	<p><b>12 marks</b></p>
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	<p><b>Choropleth (shading) map Figure 2</b></p> <p>These are maps that are shaded or coloured to show varying spatial differences in administrative areas. They should only be used to show densities, percentages or other similar ratios; they should not normally be used to show whole numbers. They show groupings or classes of data, with a colour or shading (from light to dark as values increase) applied to each group/class. Black or white should be avoided.</p> <p>Candidates will draw from the maps to exemplify these points.</p> <p><b>Strengths: (S)</b></p> <ul style="list-style-type: none"> <li>• The intensity of shading or colour increases with higher values.</li> <li>• This gives a visual impression of the increasing values.</li> <li>• Groupings can be flexible to accommodate the spread of values.</li> </ul> <p><b>Weaknesses: (W)</b></p> <ul style="list-style-type: none"> <li>• There are abrupt changes of class at boundaries; the actual change may well be gradual.</li> <li>• The shading implies a consistent value across the whole area, which may well not reflect the actual density within the area.</li> <li>• Overall shadings are dependent on the size of the admin areas selected.</li> </ul> <p><b>Isoline map Figure 3</b></p> <p>These are maps showing lines drawn through points of equal value. Therefore all points between isolines lie between the values of the specific isolines. They are often used with colour between isolines to more clearly depict trends. In this way, they resemble choropleth maps, but show point data, not density. Density is implied by shading between isolines.</p> <p>Candidates will draw from the maps to exemplify these points.</p> <p><b>Strengths: (S)</b></p> <ul style="list-style-type: none"> <li>• Trends are shown clearly.</li> <li>• When used with shading/colour, a clearer indication of changes is given.</li> <li>• Whole numbers and % or ratios can be used as long as the data is point data.</li> </ul> <p><b>Weaknesses: (W)</b></p> <ul style="list-style-type: none"> <li>• There can be variations in the location of each isoline.</li> <li>• The shading implies equal values between the isolines.</li> <li>• Sharp changes at the isolines.</li> </ul>	
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	<p><b>Mark scheme</b></p> <p><b>Level 1 (1-5 marks) (mid point 3)</b> There is a <u>basic description</u> of the maps and what they are used to show. One map may be covered at the expense of others, so there may be <u>strong imbalance</u>. There will be emphasis on the <u>strengths</u> and <u>weaknesses</u> of the techniques to show the data about population, rather than the maps themselves.</p> <p><b>Level 2 (6-10 marks) (mid point 8)</b> There will be a clear summary of the <u>strengths and weaknesses</u> of the <u>maps</u> for presenting this data. <u>There will be reference to the Figures</u>. There may be greater knowledge shown on one map than the others, but this imbalance will decrease towards the upper end of the mark band, where it is expected that at least <u>two maps</u> will be covered. Reference to assessment is likely to be generalised.</p> <p><b>Level 3 (11-12 marks) (mid point 12)</b> There will be a <u>detailed summary</u> of the strengths and weaknesses of the maps, with reference to all three Figures possibly with some imbalance. <u>Reference to the maps</u> will show technical and geographical understanding and there will be evidence of <u>thinking like a geographer</u>. Critical assessment will be present.</p>	
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<p><b>5</b></p> <p><b>AO1-1</b> <b>AO2-4</b> <b>AO3-7</b></p>	<p><b>Notes for answers</b></p> <p><b>N.B. Dot, choropleth and isoline are excluded.</b></p> <p>Cartographic techniques are used to aid interpretation and analysis of data and this will aid improved understanding of the phenomena under investigation. Maps are the basic tool of the geographer.</p> <p>Techniques other than dot, choropleth and isoline include located proportional symbol maps, flow maps, desire lines, trip lines, town plans, weather maps, OS base maps, GIS base maps.</p> <p><b>Mark scheme</b></p> <p><b>Level 1 (1-4 marks) (mid point 3)</b> There will be a <u>basic awareness</u> of other cartographical techniques. The response will be limited, with a strong focus on <u>description</u> of the one or more techniques, rather than their assistance in developing understanding. There is likely to be imbalance in the coverage of the techniques covered.</p> <p><b>Level 2 (5-8 marks) (mid point 7)</b> There will be <u>clear reference</u> to the use of at least two of the other cartographical techniques. There will be use of detail on what the technique shows and an <u>explanation</u> of the use of these techniques in developing geographical understanding.</p>	<p><b>8 marks</b></p>
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