



**General Certificate of Education (A-level)**  
**June 2011**

**Geography**

**GEOG2**

**(Specification 2030)**

**Unit 2: Geographical Skills**

**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 candidates' 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 candidates' 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 candidates' 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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## **GEOG2 General Guidance for GCE Geography Assistant Examiners**

### **Marking – the philosophy**

Marking should be positive rather than 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.

### **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. Once the Level has been determined, examiners should initially set the mark at the middle of the mark range for that level (or the upper value where no mid value exists). Then refine the mark up or down using the General Criteria, Notes For Answers and the additional question specific levels guidance. Further development of these principles will be discussed during Standardisation meetings. 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
- 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 (“more than one”) where the question requires it
- provide detailed 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.

**CMI+ annotations**

- The annotation tool will be available on all questions.
- Where an answer is marked using a levels response scheme the examiner should annotate the script with 'L1', 'L2' or 'L3' at the point where that level has been reached. 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 not be annotated. For point marked questions where no credit-worthy points are made, zero marks should be given.

**Other 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.

**Question 1**

Calculations should be to at least 2dp

**1 (a) (i)**

Year	Rainfall in mm ( $x$ )	$x - \bar{x}$	$(x - \bar{x})^2$
1	618.7	85.11	7 243.71
2	499.3	<b>-34.29</b>	<b>1 175.80 / 92</b> (1)
3	605.7	72.11	5 199.85
4	467.6	-65.99	4 354.68
5	697.6	164.01	26 899.28
6	667.4	133.81	17 905.12
7	603.3	69.71	4 859.48
8	360.4	-173.19	29 994.78
9	420.7	-112.89	12 744.15
10	554.1	20.51	420.66
11	409.9	<b>-123.69</b>	<b>15 299.22 / 63</b> (1)
12	498.4	-35.19	1 238.34
	$\sum x = 6\ 403.1$		$\sum (x - \bar{x})^2 = 127\ 335.07 / 60$
	$\bar{x} = 533.59$ (1)		

**(6 marks)**

**AO3 – 6**

Reserve 1 mark for evidence of working (basic substitution allowed).

$$\sigma = \sqrt{\frac{127335.07/60}{12}} \quad (1)$$

$$\sigma = 103.01 \quad (2) \quad \text{Final calculation must be to at least 2dp.}$$

**1 (a) (ii)**

There are a variety of ways candidates might approach this. One mark per valid point made. For example:

**(2 marks)**

Assuming the data is normally distributed 68.2% of the data should lie between 636.6 and 430.58. This large value of  $\sigma$  suggests considerable variation (measured against the mean) in rainfall based upon this sample of data. In this location, some years are much drier than others (or vice versa).

**AO2 – 2**

No double credit to be awarded here. Some may question the reliability of the mean. Allow credit for the development of the idea of range.

**1 (b) (i)**

A curved 5cm isoline must touch the 5s indicated on the sketch and extend to the margins. It must also be on the correct side of the 3s and 6s respectively. A second mark is available for accuracy throughout isoline. For deep pool allow anywhere inside the 25cm isoline.

**(3 marks)**

**AO3 – 3**

- 1 (b) (ii)** Reserve 1 mark for the fastest part of the river - allow anywhere over 0.4m/sec. ( 4 marks)  
For description allow one mark per valid point with additional credit for development. For example:

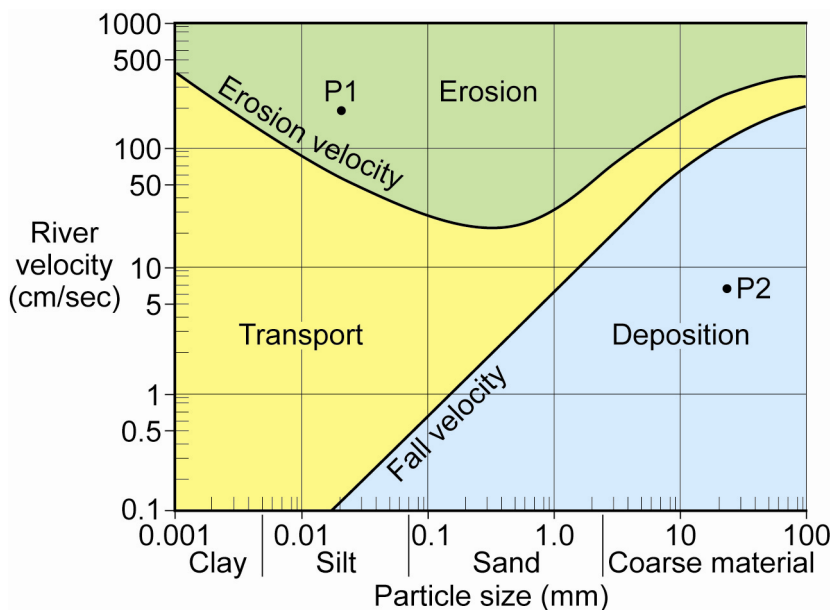
AO2 – 1  
AO3 – 3

The fastest part of the river also correlates with the deepest. Here speeds of 0.45m/sec appear to be the deepest sections (at up to 32cm depth) (d). This also appears to be the outside of the bend of the meander (d). As the water becomes shallow velocity decreases. Additional credit for development. No credit for straight reversals.

Credit is available for the development of the annotation.

Use of data must link Figures 2 and 3.

- 1 (c) (i)** 1 mark for each correct point plotted and labelled. (2 marks)



AO2 – 1  
AO3 – 1

Max 1 if not correctly labelled.

No marks available for one plot not labelled.

- 1 (c) (ii)** (2 marks)

	Process
Particle 1	Erosion
Particle 2	Deposition

AO2 – 1  
AO3 – 1

2×1

- 1 (c) (iii)** There are a variety of ways in which candidates might approach this question. **(6 marks)**  
The Hjulström curve tries to explain the dynamic relationship between velocity and particle size. The smallest particles held in suspended load may not be deposited even at the lowest speeds. Above this particle size, at the lowest river speeds, these particles will be deposited. This is because the particles change from clay based to silts and are therefore heavier. As particles become larger they generally become heavier (also changing from sand to larger materials). Therefore at lower velocities these particles are deposited. Some may refer to competence in relation to different river velocities. **AO1 – 6**  
Some may refer to the curving fall velocity as speed and velocity increase.

**Level 1 (Basic) 1-4 marks**

May make the basic link between velocity and particle size, but unlikely to note the dynamic relationship. Basic descriptive statements lifted from the graph such as 'deposition starts at 0.1cm/sec and .0.02mm with little attempt to explain relationship.

**Level 2 (Clear) 5-6 marks**

Clearly aware of the more complex aspects of the relationship. May refer to key technical terms such as suspended load. May consider the nature of the load as particle size increases. Explicit reference to Figure 4.

## Question 2

- 2 (a) (i)** Candidates are expected to outline the basis of the enquiry. There are a number of ways in which this might be approached. Some might focus on the aim and consider some associated hypotheses/objectives or research questions. On its own this would constitute a Level 1 answer. There should also be some attempt to contextualise the study, for instance, by linking to some underpinning theory such as the Bradshaw Model. Another approach might be to consider a local issue and show how this has led to the creation of an enquiry. In terms of purpose candidates show what they were trying to achieve or find out. **(5 marks)**
- AO3 – 5**

### **Level 1 (Basic) 1-3 marks**

Likely to extend little further than aim and hypothesis testing. Aim and therefore purpose may be unclear. Lacking a clear focus on context. May drift into description of local context or even methodology at the bottom end without linking to aim/purpose.

### **Level 2 (Clear) 4-5 marks**

Purpose clearly evident. Likely to relate to some aspect of local environment or urban setting. May consider local issue or clearly link to underpinning theory. Very clear what the candidate was hoping to achieve.

- 2 (a) (ii)** Essentially there are three elements to the risk assessment process. These include identifying the risks/hazards, minimising the risks and ongoing risk assessment during the visit. For a Level 2 answer more than one aspect of the process should be considered. Credit is awarded here for the identification of the risks, though it is the awareness of the broader process. **(6 marks)**
- AO2 – 2**  
**AO3 – 4**

### **Level 1 (Basic) 1-4 marks**

Likely to spend a long time on risks. May focus on only one risk. Describes risks without an awareness of how this links to the process, i.e. actions then taken to minimise the risks. Unlikely to show an awareness of the ongoing risk assessment process during the day.

### **Level 2 (Clear) 5-6 marks**

Much more clearly aware of the process. Must consider more than one risk or the management of such risks. Likely to describe risks and must link to actions taken to minimise the risks for Level 2. Can score full marks with just these two parts of the process. May also show an awareness of ongoing risks.

- 2 (b)** For an effective evaluation there should be some explicit evaluative comment. This may come at the end or the beginning. Comments such as “The method was broadly successful at allowing me to gather appropriate data ...” would suffice in this regard. Implicit evaluative comment can still access Level 2 but not full marks. **(5 marks)**
- AO2 – 5**

### **Level 1 (Basic) 1-3 marks**

May drift from evaluation into long description of method at the bottom end. Tentative evaluative comment can access top end. Basic description of limitations likely at top end.

### **Level 2 (Clear) 4-5 marks**

Clearly aware of strengths and/or limitations of the chosen methodology. Likely to draw upon different aspects of the methodology in supporting evaluative comment. For top Level 2 there must be explicit evaluative comment.



- 2 (c) (i)** Be aware that this is a summary of findings. For example, listing of findings at particular river sites or street intersections does not constitute a summary. Allow one mark per valid point made in relation to findings, e.g. "We found that the river velocity increased with distance downstream. For instance, at site 1 we calculated a figure of 0.3m/sec, but this increased to 0.7m/sec by the final site. There were some anomalies though, for instance, site 7 registered a decrease in velocity of 0.4m/sec." Max 1 for summary statements as a list. Maximum 2 for detailed list of data at different sites. Max 3 if no use of supporting data with units (reserve 1 mark). Beware of drift into explanation/reasons. **(4 marks)**  
**AO3 – 4**
- 2 (c) (ii)** The question allows candidates to explore their geographical understanding of the topic area. It also links different aspects of the study together. Candidates are expected to reflect on the original aim and briefly discuss their expected outcomes before considering how far the actual findings match this. A valid approach in some responses might be to consider why results have not met expectations. Others might point to further work in order to achieve their original aims. **(5 marks)**  
**AO3 – 5**

**Level 1 (Basic) 1-3 marks**

Likely to re-state underpinning theory or issue for investigation. Also likely to re-state findings without exploring extent to which the results match the expected outcomes.

**Level 2 (Clear) 4-5 marks**

Clear awareness of the extent to which findings concur with expected outcomes. Engagement need not be critical for full marks, but expected outcomes must be clearly elaborated.