Centre Number			Candidate Number		
Surname					
Other Names					
Candidate Signature					



General Certificate of Education Advanced Level Examination January 2010

Geography

GEO4A

Geography Fieldwork Investigation Unit 4A

Tuesday 26 January 2010 9.00 am to 10.30 am

You will need no other materials.	
You may use a calculator.	

Time allowed

• 1 hour 30 minutes

Instructions

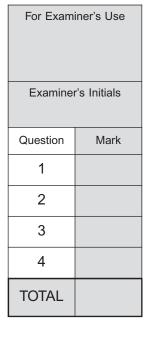
- Use black ink or black ball-point pen. Use pencil only for drawing.
- Fill in the boxes at the top of this page.
- Answer all questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 60.
- You will be marked on your ability to:
 - use good English
 - organise information clearly
 - use specialist vocabulary where appropriate.

Advice

• You are advised to spend about 60 minutes on Section A and about 30 minutes on Section B.



SECTION A

Answer all questions in the spaces provided.

	All your answers should relate to the geographical fieldwork investigation that you undertook in preparation for this examination.					
St	State the aim(s) of your investigation.					
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1	Describe the location of your fieldwork investigation and explain its relevance to the aim(s).					



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2	(a)	Explain how one method of data collection that you used was suitable for the investigation.
		(6 marks)
		(Extra space)



2	(b)	As a result of your experience in the field, justify one or more improvements that you would make to a method of data collection that you used.
		Question 2 continues on the next page



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SECTION B

Answer all questions in the spaces provided.

4 The data in **Figure 1** come from a fieldwork investigation on river velocity and channel width, carried out by an A Level student.

Figure 1

Study site number from source	Channel width (m)	Velocity (m/s)
1	10.3	0.44
2	11.2	0.48
3	13.2	0.58
4	8.7	0.70
5	6.7	0.52
6	17.0	0.95
7	10.1	0.64
8	9.6	0.42
9	15.7	0.98
10	16.8	0.76

The A Level student proposed the following hypothesis:

velocity will increase with increasing channel width.

To test this hypothesis, a Spearman's rank correlation coefficient was calculated; the result was $r_s = +0.576$.

The critical values of r_s at two chosen significance levels are as follows:

Sample	Significance level			
size	0.05	0.01		
10	0.564	0.745		

4	(a)	Interpret the value of r_s that has been calculated.



		(4 marks)
		(Extra space)
4	(b)	With reference to Figure 1 , suggest an alternative way to present and analyse these
		data.
		(4 marks)
		(Extra space)
		Question 4 continues on the next page





4	(c)	Explain how the use of techniques, such as those referred to in 4(a) and 4(b), may help the analysis of data collected in the field and increase geographical understanding.



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