

Surname						Other Names					
Centre Number						Candidate Number					
Candidate Signature											

For Examiner's Use
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General Certificate of Education  
June 2008  
Advanced Level Examination



**GEOGRAPHY (SPECIFICATION A)**  
**Unit 4 Challenge and Change in the Natural Environment**

**GGA4**

Friday 6 June 2008 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.
- Fill in the boxes at the top of this page.
- Answer **three** questions in the spaces provided: **two** from **Section A** and **one** from **Section B**.
- You must answer the questions in the spaces provided. Answers written in margins or on blank pages will not be marked.
- Do all rough work in this book. Cross through any work you do not want to be marked.

**Information**

- The maximum mark for this paper is 90.
- Each question in Section A is worth 15 marks.
- Each question in Section B will be marked out of 30 and multiplied by 2 to give a mark out of 60.
- The marks for questions are shown in brackets.
- Section B of this unit assesses your understanding of the relationship between the different aspects of Geography.
- You are expected to use a calculator where appropriate.
- All questions should be answered in continuous prose where appropriate. You will be marked on your ability to use an appropriate form and style of writing, to organise relevant information clearly and coherently, and to use specialist vocabulary where appropriate. The legibility of your handwriting and the accuracy of your spelling, punctuation and grammar will also be considered.

**Advice**

- Where appropriate, sketch maps and diagrams should be used to illustrate answers and reference made to regional examples and case studies.
- You are advised to spend about 30 minutes on Section A and about 60 minutes on Section B.

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Question	Mark	Question	Mark
1		4	
2		5	
3		6	
		×2	
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Total (Column 1) →			
Total (Column 2) →			
TOTAL			
Examiner's Initials			

**SECTION A**

Answer **two** questions from this section.

**1 COAST PROCESSES AND PROBLEMS****Total for this question: 15 marks**

- 1** (a) Outline **two** processes of marine erosion.

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(4 marks)

- 1** (b) Study **Figure 1** which shows a stack in the Orkney Islands.

**Figure 1**



Suggest the sequence of events leading to the formation of the stack shown in **Figure 1**.

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(4 marks)

**1** (c) To what extent are coastal problems the result of erosional processes?

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(7 marks)

Turn over ►



## 2 GEOMORPHOLOGICAL PROCESSES AND HAZARDS

Total for this question: 15 marks

Study **Figure 2** which shows active and dormant volcanoes.

**Figure 2**



- 2 (a) Describe the distribution of volcanic activity shown in **Figure 2**.

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(4 marks)



2 (b) Explain the distribution of volcanic activity shown in **Figure 2**.

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(4 marks)

2 (c) Living near any volcano is unwise. To what extent do you agree with this view?

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(7 marks)

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**3 COLD ENVIRONMENTS AND HUMAN ACTIVITY****Total for this question: 15 marks**

Study **Figure 3** which shows pingos on the Mackenzie Delta in the Northwest Territories of Canada.

**Figure 3**

Photograph of a Pingo not reproduced here  
due to third-party copyright constraints.

- 3** (a) Describe the characteristics of pingos.

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(4 marks)



3 (b) Explain how pingos are formed.

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(4 marks)

3 (c) Assess the role of temperature fluctuations in periglacial processes.

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(7 marks)

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**SECTION B**

Answer **one** question from this section.

**Total for this question: 30 marks**

**Note to Candidate**

You should bear in mind that essay Questions 4, 5 and 6 are synoptic in nature. In your response to these questions you are required to show your knowledge and understanding of different aspects of geography, the connections between these different aspects and, where relevant, of human perspectives upon geographical themes and issues.

- 4** Assess the likely impact of global warming on coastal environments. (30 marks)
- 5** Managing the secondary impacts of geomorphological hazards is difficult, managing the primary ones is impossible. To what extent do you agree with this statement? (30 marks)
- 6** Glaciated areas have little practical use. To what extent do you agree with this statement? (30 marks)

**END OF QUESTIONS**





QUESTION  
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Question 1 Figure 1: Blom Aerofilms Limited

Question 2 Figure 2: <http://www.volcano.si.edu> Smithsonian Institution, Global Volcanism Program

