

Surname						Other Names					
Centre Number						Candidate Number					
Candidate Signature											

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General Certificate of Education  
January 2008  
Advanced Level Examination



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

**GGA4**

Wednesday 23 January 2008 1.30 pm to 3.00 pm

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

Time allowed: 1 hour 30 minutes

**Instructions**

- Use blue or black ink or 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**.
- 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	
		=	
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**

Study **Figure 1** which shows raised beaches on the coast near Dunure, western Scotland.

**Figure 1**

Aerial photograph of raised beaches not reproduced  
here due to third-party copyright constraints.

(a) How are raised beaches formed?

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(4 marks)

(b) Compare and contrast rias with fiords.

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(4 marks)

(c) Isostatic changes will have less impact on humans than eustatic changes. To what extent do you agree with this statement?

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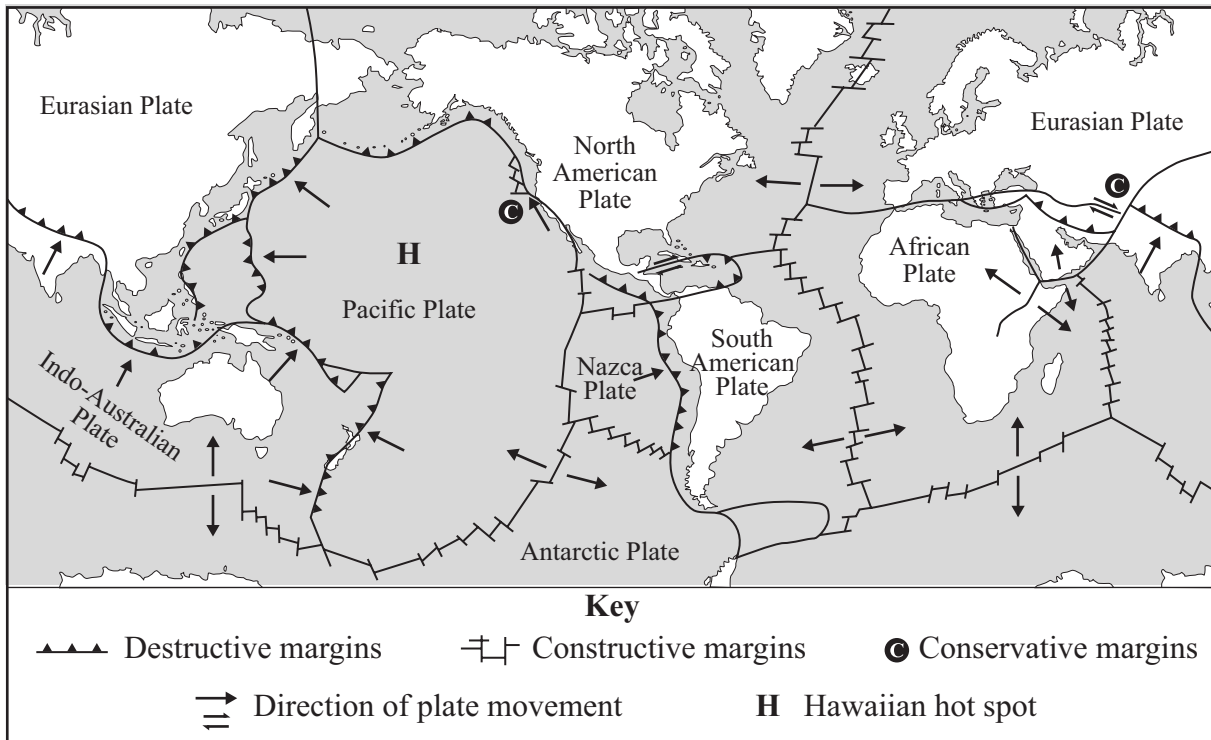
(7 marks)

## 2 GEOMORPHOLOGICAL PROCESSES AND HAZARDS

Total for this question: 15 marks

Study **Figure 2** which shows major tectonic plates and margins.

**Figure 2**



(a) Why do tectonic plates move as shown in **Figure 2**?

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(4 marks)

(b) Outline the causes of hot spots.

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(4 marks)

(c) Why is it more hazardous to live near destructive margins than constructive ones?

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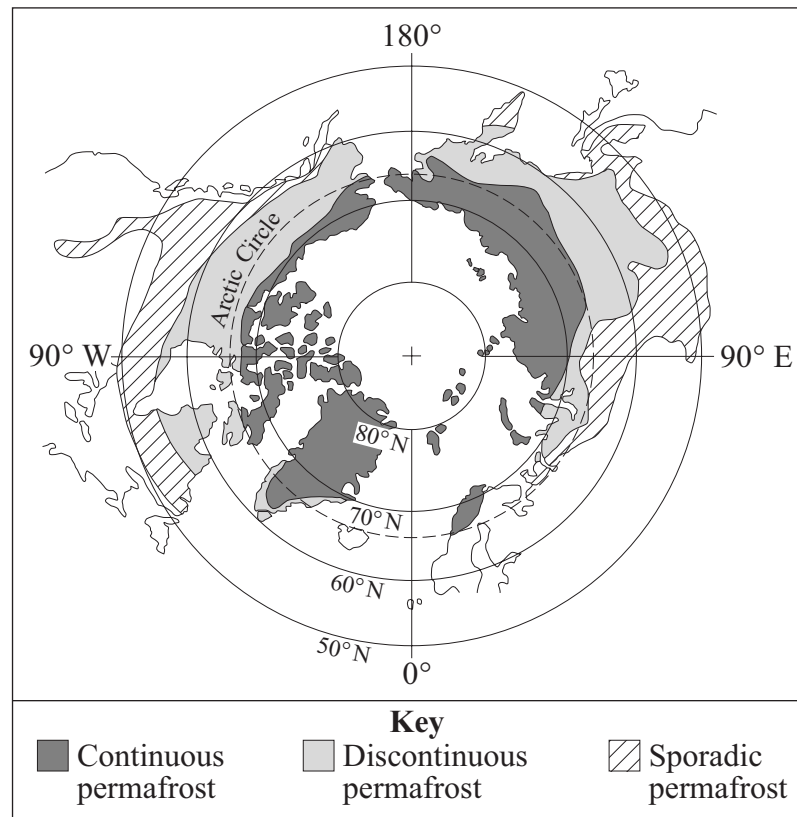
(7 marks)

### 3 COLD ENVIRONMENTS AND HUMAN ACTIVITY

Total for this question: 15 marks

Study **Figure 3** which shows the distribution of permafrost in the northern hemisphere.

**Figure 3**



(a) Describe the distribution of permafrost in the northern hemisphere.

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(4 marks)

(b) Explain the distribution of permafrost shown in **Figure 3**.

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(4 marks)

(c) Assess the effectiveness of strategies that can be adopted in order to live in cold environments.

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(7 marks)

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**SECTION B**

Answer **one** question from this section.

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**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** To what extent should coastal management put economic necessity before environmental concerns?  
(30 marks)
- 5** Earthquakes have less impact than mass movement on human activity and physical landscapes. To what extent do you agree with this view?  
(30 marks)
- 6** Discuss the view that human activity had more impact on cold environments in the past than it will have in the future.  
(30 marks)

**END OF QUESTIONS**



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Question 1      Figure 1: Blom Aerofilms Ltd

Question 2      Figure 2: *AQA (B) Advanced Geography*, Philip Allan Updates, 2003

Question 3      Figure 3: *Process and Landform*, ALAN CLOWES AND PETER COMFORT, Pearson Education Ltd