

Surname						Other Names					
Centre Number						Candidate Number					
Candidate Signature											

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General Certificate of Education  
 June 2006  
 Advanced Level Examination



**GEOGRAPHY (SPECIFICATION A)  
 Unit 4**

**GGA4**

Tuesday 13 June 2006 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 space 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 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.
- You are reminded of the need for good English and clear presentation in your answers. All questions should be answered in continuous prose. Quality of Written Communication will be assessed in all answers.

**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.

For Examiner's Use			
Number	Mark	Number	Mark
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Examiner's Initials			

**SECTION A**

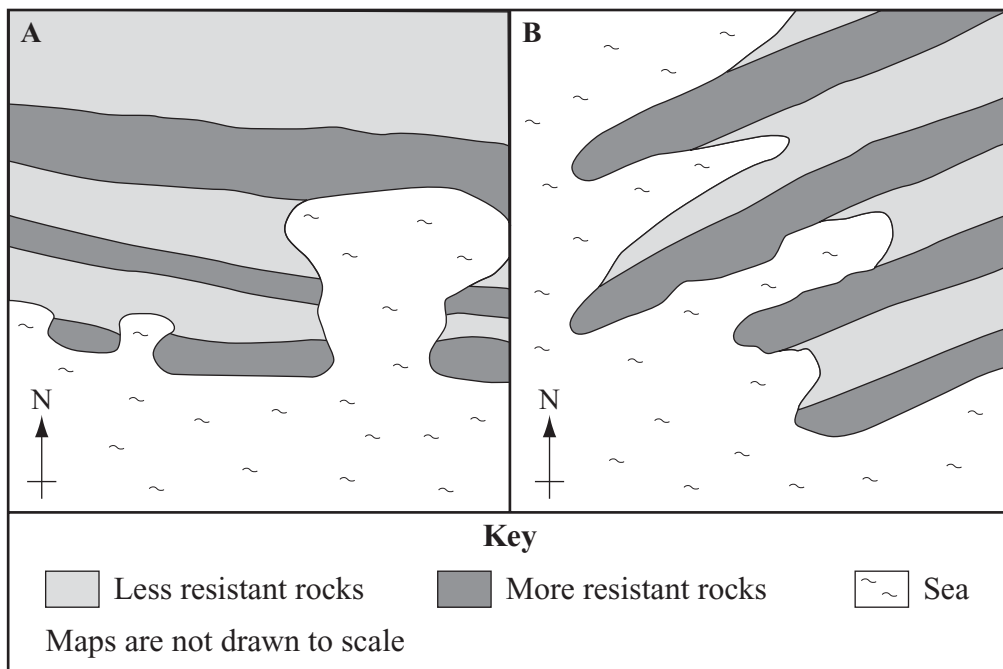
Answer **two** questions from this Section.

**1 COAST PROCESSES AND PROBLEMS**

**Total for this question: 15 marks**

(a) Study **Figure 1** which shows maps of two contrasting coastlines in the British Isles.

**Figure 1**



Why have bays become such prominent features of these coastlines?

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(4 marks)

(b) Outline marine factors that influence the rate of erosion along a coastline.

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*(4 marks)*

(c) To what extent do coastlines that experience erosion require less management than coastlines that experience deposition?

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*(7 marks)*

**2 GEOMORPHOLOGICAL PROCESSES AND HAZARDS**

**Total for this question: 15 marks**

- (a) Study **Figure 2** which includes an eye-witness account of a tsunami at Hilo on Big Island, Hawaii on 1 April 1946.

**Figure 2**

“We looked and this mammoth wave, right across the harbour here, was just going out, out, out . . . You could see the fish jumping on the ocean bottom with no water. We looked out here and coming inside was another wave, bigger than the one going out and ... they collided ... The one coming into Hilo we estimated a mountain of water, 20 or 30 feet. Because the outgoing force was not as strong as the incoming force, when they collided, it just took the outgoing force and rolled it back with a terrific roar.”

The tsunami killed 96 people in Hilo and caused \$26 million damage.

Describe the physical characteristics of tsunamis.

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*(4 marks)*

(b) Outline causes of tsunamis.

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*(4 marks)*

(c) To what extent do tsunamis have less impact than earthquakes?

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*(7 marks)*

**3 COLD ENVIRONMENTS AND HUMAN ACTIVITIES**

**Total for this question: 15 marks**

(a) Distinguish between warm and cold glaciers.

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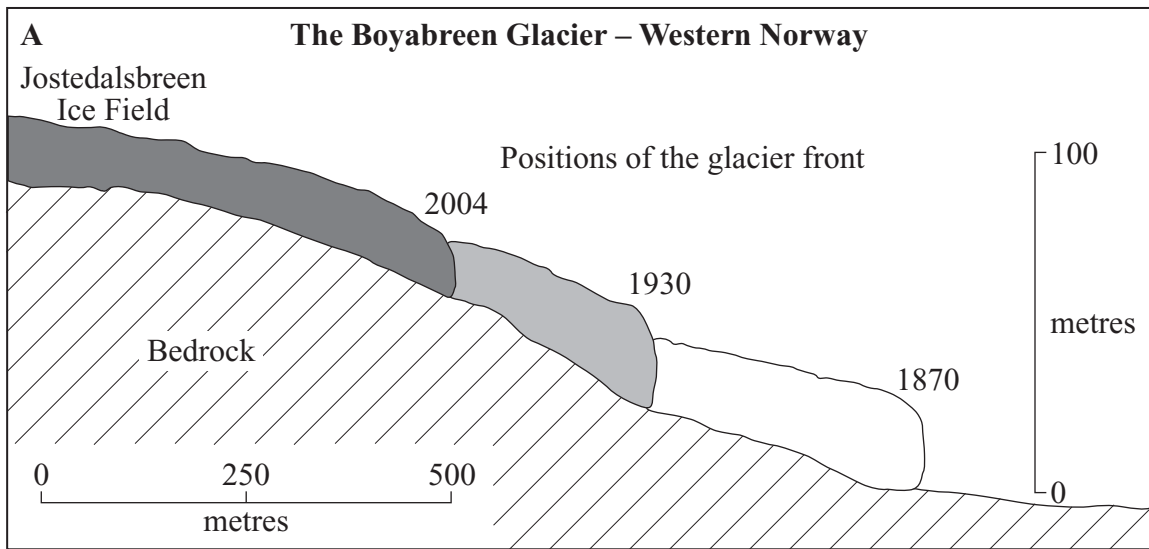
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(4 marks)

(b) Study **Figure 3** which gives information about changes in three glaciers in different parts of the world.

**Figure 3**



**B Unteeraar Glacier – Switzerland**

Since the mid-1800s the Unteeraar Glacier front in the Swiss Alps has receded by more than 1.4 km.

Sept 2004

**C Sperry Glacier – USA**

Since 1901 the Sperry Glacier has shrunk from more than 3.25 km<sup>2</sup> to 1.2 km<sup>2</sup>.

Trail side sign in Glacier National Park Montana

Sept 2004

Suggest reasons for the changes shown in **Figure 3**.

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*(4 marks)*

(c) Account for the different types of landform that might result from the retreat of a glacier.

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*(7 marks)*

**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** Discuss the view that however and wherever people interfere with coasts it is merely a temporary occurrence.  
*(30 marks)*
- 5** Discuss the view that attempts at management of geomorphological hazards are a waste of time and effort.  
*(30 marks)*
- 6** To what extent does the development of cold environments involve conflicts between environmental sustainability and economic pressures?  
*(30 marks)*

**END OF QUESTIONS**



QUESTION  
NUMBER

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Question 2 Figure 2: B JONES and L McLEOD, *Savage Earth*, HarperCollins Publishers Ltd, 1997

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