

Surname						Other Names					
Centre Number						Candidate Number					
Candidate Signature											

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General Certificate of Education
 June 2003
 Advanced Level Examination



GEOGRAPHY
Unit 4

GGA4

Monday 9 June 2003 Afternoon Session

In addition to this paper you will require:

- photograph to be used when answering Question 1 (enclosed).
 You may use a calculator.

For Examiner's Use			
Number	Mark	Number	Mark
1		4	
2		5	
3		6	
		×2	
		=	
Total (Column 1)		→	
Total (Column 2)		→	
TOTAL			
Examiner's Initials			

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 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.
- Mark allocations 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 will be assessed 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 degree of legibility of your handwriting and the level of accuracy of your spelling, punctuation and grammar will also be taken into account.

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.

SECTION A

Answer **two** questions from this Section.

1 COAST PROCESSES AND PROBLEMS

Total for this question: 15 marks

(a) Outline sources of energy likely to affect a coastline.

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(4 marks)

(b) Outline the factors which influence the size of energy inputs into a coastline.

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(4 marks)

- (c) Study **Figure 1** on the insert, a photograph of the coast of Kent in the vicinity of Folkestone.

Describe and suggest reasons for the variations in the cross profile of this coast from sea level to cliff top as between A–B and C–D.

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(7 marks)

Figure 1 is not reproduced here due to third-party copyright constraints. □
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15

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2 GEOMORPHOLOGICAL PROCESSES AND HAZARDS

Total for this question: 15 marks

Study **Figure 2** which shows the structure of the Earth and the passage of waves generated by earthquakes.

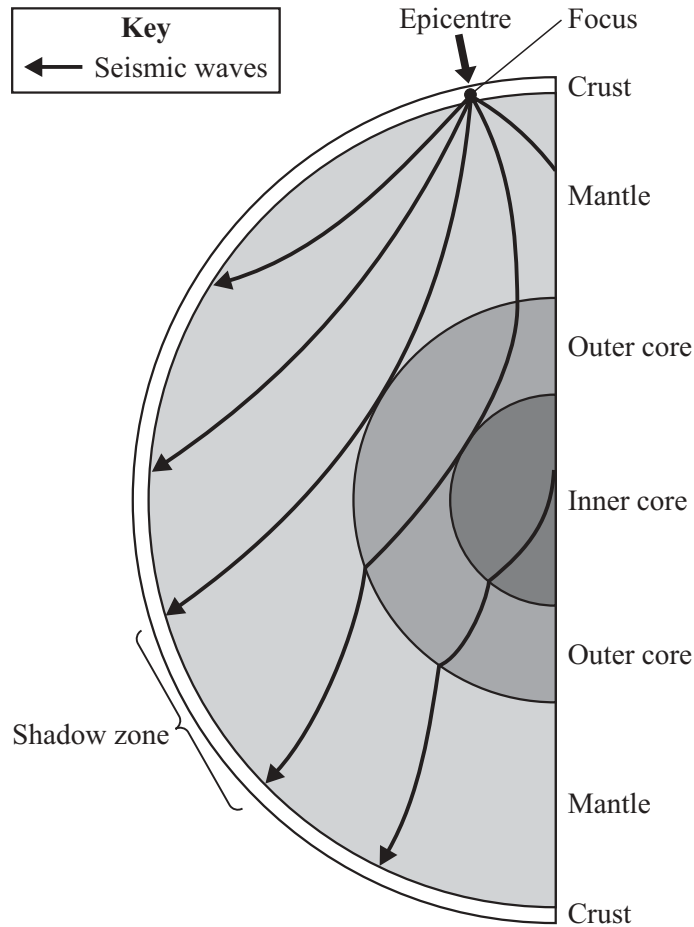


Figure 2

(a) Distinguish between primary (P) and secondary (S) waves generated by earthquakes.

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(4 marks)

(b) How does the structure of the Earth affect the passage of earthquake waves as indicated on **Figure 2**?

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(4 marks)

(c) To what extent are earthquakes predictable in location?

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(7 marks)

3 COLD ENVIRONMENTS AND HUMAN ACTIVITY

Total for this question: 15 marks

Study **Figure 3** which shows variations in the depth of permafrost in Russian Siberia, an extensive periglacial area, along longitude 130 degrees east.

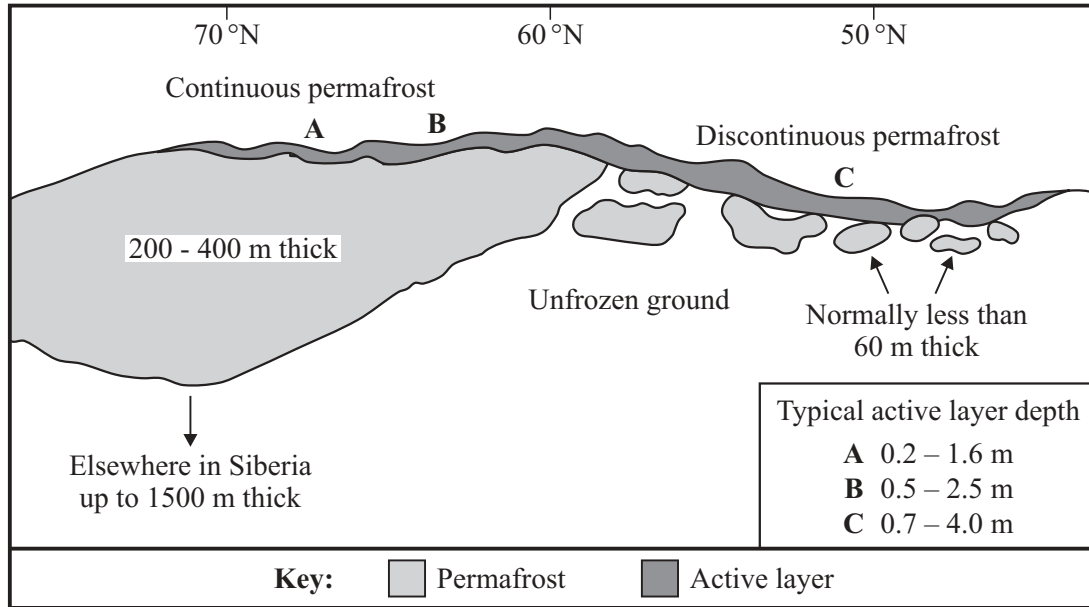


Figure 3

(a) Why is the term *active layer* applied to the upper ground level in such periglacial areas?

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(4 marks)

(b) Outline one or more processes associated with the active layer.

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(4 marks)

(c) Discuss the extent to which landforms in periglacial areas are caused by the presence of permafrost.

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(7 marks)

TURN OVER FOR THE NEXT SECTION

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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** To what extent do you agree with the view that coastal systems are too complex to ever be completely manageable? *(30 marks)*
- 5** Discuss the view that geomorphological processes such as weathering, mass movement and those resulting from volcanic and earthquake activity cannot be managed but merely adapted to. *(30 marks)*
- 6** Cold environments may be developed in a sustainable manner. To what extent do you agree with this statement? *(30 marks)*

END OF QUESTIONS

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