



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS  
General Certificate of Education Advanced Subsidiary Level and Advanced Level

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**GEOGRAPHY**

**9696/02**

Paper 2 Advanced Physical Options

**May/June 2007**

**1 hour 30 minutes**

Additional Materials: Answer Booklet/Paper

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**READ THESE INSTRUCTIONS FIRST**

If you have been given an Answer Booklet, follow the instructions on the front cover of the Booklet.

Write your Centre number, candidate number and name on all the work you hand in.

Write in dark blue or black pen.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer **two** questions only. Each question answered **must** be from a different topic.

Sketch maps and diagrams should be drawn whenever they serve to illustrate an answer.

You should make reference to appropriate examples studied in the field or the classroom, even where such examples are not specifically requested by the question.

All the figures referred to in the questions are contained in the Insert.

At the end of the examination, fasten all your work securely together.

The number of marks is given in brackets [ ] at the end of each question or part question.

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This document consists of **3** printed pages, **1** blank page and **1** insert.



### Tropical environments

Only **one** question may be answered from this topic.

- 1 (a) Describe the ITCZ (Inter-Tropical Convergence Zone). Why is it important in understanding tropical climates? [10]
- (b) Describe the vegetation structure and soils that are found in the savanna ecosystem. To what extent have human activities contributed to the development of this ecosystem? [15]
- 2 (a) Fig.1 shows the soil nutrient levels in a shifting cultivation (slash and burn) system within the tropical rainforest.  
Describe and explain how nutrient levels within the soil change over time. [10]
- (b) Describe the main forms of chemical weathering that occur in tropical environments. Explain how they contribute to the formation of landforms in **either** granite **or** limestone areas. [15]

### Coastal environments

Only **one** question may be answered from this topic.

- 3 (a) Describe the nature of a coastal sediment cell. How do these cells contribute to the formation of coastal landforms? [10]
- (b) To what extent do rock type and structure influence the development of landforms along cliffed coasts? [15]
- 4 (a) Fig. 2 shows a coastal zone with its tide and wave environments.  
Describe the wave activities occurring in the breaker, surf and swash zones. What impact do these activities have upon the shape of backshore and nearshore zones? [10]
- (b) What are the principal threats to the continued existence of coral coasts? To what extent can these threats be overcome? [15]

### Hazardous environments

Only **one** question may be answered from this topic.

- 5 (a) Explain how and why avalanches occur. Under what conditions do they become hazardous? [10]
- (b) For **one** natural hazard, describe the methods used to predict the occurrence of the hazard and assess the success of these prediction methods. [15]
- 6 (a) Fig. 3 shows the impact of Cyclone Eline on Mozambique in February 2000.  
Describe the nature of tropical cyclones and, using Fig. 3, explain how their effects may become hazardous. [10]
- (b) Explain why the occurrence of many natural hazards is associated with tectonic plate margins. [15]

### Arid and semi-arid environments

Only **one** question may be answered from this topic.

- 7 (a) Describe and explain the effects of wind erosion upon desert landforms. [10]
- (b) To what extent is irrigation the best way to bring about sustainable management in arid and semi-arid areas? [15]
- 8 (a) Describe and explain the characteristics of soils in arid and semi-arid environments. [10]
- (b) Fig. 4 shows the process of desertification as a system.  
To what extent does this system represent the development of desertification in an area or areas you have studied? [15]

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*Copyright Acknowledgements:*

Question 6                      Fig. 3 © Garrett Nagle; *Climate and Society*; Hodder Murray; 2002.

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