



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

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**GEOGRAPHY**

**9696/22**

Paper 2 Advanced Physical Options

**May/June 2012**

**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 and the Photographs 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 and explain the differences between *humid* tropical and *seasonally humid* tropical climates. Support your answer with appropriate climatic data. [10]

- (b) For **one** tropical ecosystem, explain the development and nature of the climax vegetation. Evaluate the success of any attempt to sustainably manage areas within **one** tropical ecosystem. [15]

- 2 (a) With reference to **one** tropical soil type, describe and explain how climate, vegetation and soil forming processes lead to its typical profile characteristics. [10]

- (b) Photograph A is of a tropical karst (limestone) landscape.

With the help of Photograph A, describe the landforms of tropical karst landscapes. Explain the role of the climate, processes, rock type and structure in their development. [15]

## Coastal environments

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

- 3 (a) Explain how sea waves are generated. What factors determine the different types of wave breaking at a shoreline? [10]

- (b) Explain the importance of the rock type, geological structure and marine and sub-aerial processes in developing landforms along a cliffed coastline. [15]

- 4 (a) Study Photograph B which shows some landforms of coastal deposition.

Identify **three** features which have resulted from coastal deposition and give explanations for how those features have been formed. [10]

- (b) Describe the characteristics of different types of coral reefs and explain their distribution. Assess the impact of past and present sea level changes on coral reefs. [15]

### Hazardous environments

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

- 5 (a) Explain how different types of tectonic hazard may be generated at convergent (destructive) plate margins. [10]

- (b) To what extent and why are earthquakes generally more hazardous events than volcanic eruptions? How may the hazardous impact of earthquakes be reduced? [15]

- 6 (a) Fig. 1 shows some of the areas where tropical storms (cyclones and hurricanes) develop and the paths they take.

Explain how tropical storms develop in the areas shown in Fig. 1 and why they take the paths indicated. [10]

- (b) How and with what success can tropical storms be predicted and to what extent can their various impacts be reduced? [15]

### Arid and semi-arid environments

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

- 7 (a) Describe the characteristics of soils in arid and semi-arid environments and explain why they are difficult to manage. [10]

- (b) Discuss the role of running water, both present and past, in the development of desert landforms. [15]

- 8 (a) Fig. 2 gives information about part of the Sahara desert. The photograph shows a sand storm and rocky outcrops.

Explain the role of wind in creating **three** distinct types of desert landform. [10]

- (b) The information in Fig. 2 refers to human activities in the Sahara and the desert creeping south into the semi-arid Sahel.

Explain possible causes of desertification and, with reference to an example, or examples, explain the problems of sustainable management in such areas. [15]

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*Copyright Acknowledgements:*

- Question 2 Photograph A © [www.fotogeographic.de/thema\\_kaust/images/tk\\_moon1a.jpg](http://www.fotogeographic.de/thema_kaust/images/tk_moon1a.jpg); 6 April 2011.  
Question 4 Photograph B M.Bristow © UCLES.  
Question 6 Fig. 1 © Tropical Storms; <http://worldlywise.pbworks.com/w/page/25349490/Unit%20Section%20C%20-%20Causes%20and%20effects%20of%20tropical%20storms%20and%20responses%20to%20them>.  
Question 8 Fig. 2 © Kovach & McGuire; *Guide to Global Hazards*; Philip's; 2003.

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