



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

GEOGRAPHY

9696/21

Paper 2 Advanced Physical Options

May/June 2010

1 hour 30 minutes

Additional Materials: Answer Booklet/Paper

* 5 4 5 9 3 7 7 8 3 *

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.

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) State and explain the similarities and differences between monsoon and seasonally humid tropical climates. [10]
- (b) Describe and explain the development of landforms that are found in areas of tropical karst (limestone). [15]
- 2 (a) Describe the types and structures of the vegetation found in tropical savanna areas. [10]
- (b) Fig. 1 shows the location of some human activities in areas of tropical rainforest in South-east Asia.
Explain the likely impact of these activities upon the tropical rainforest ecosystem. [15]

Coastal environments

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

- 3 (a) Using diagrams, describe different types of coral reef and atoll. Explain the conditions required for their existence. [10]
- (b) What are the main physical factors that influence the erosion of coasts? How far can these physical factors be controlled? [15]
- 4 (a) Fig. 2 shows some features of a sand and shingle beach.
Explain the formation of the beach features shown on Fig. 2. [10]
- (b) Explain the extent to which human activities might affect the deposition of sediment along coasts. [15]

Hazardous environments

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

- 5 (a) Describe the methods used to predict volcanic eruptions. [10]
- (b) Outline the methods used to predict earthquakes. Discuss whether these methods of earthquake prediction are more or less successful in limiting the loss of life than those used for predicting volcanic eruptions. [15]
- 6 (a) Fig. 3 shows the development of a tornado within a thunderstorm.
Describe the nature of tornadoes and explain how they develop. [10]
- (b) Explain the extent to which the hazardous effects of tornadoes are different from those of a tropical cyclone (hurricane). [15]

Arid and semi-arid environments

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

- 7 (a) Using one or more examples, describe the causes and environmental consequences of desertification. [10]
- (b) Describe and evaluate measures that might be employed to restore areas that have suffered desertification. [15]
- 8 Fig. 4 shows some landforms of part of the southern Sahara.
- (a) Briefly describe and explain the landforms in Fig. 4 that have been produced by wind action. [10]
- (b) Describe and explain those landforms in Fig. 4 that have been produced by water action. Explain what evidence on Fig. 4 suggests that these landforms may have been produced in a wetter past. [15]

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Question 4 Figure 2 © Michael Raw; *AS/A-Level Geography Exam Revision Notes*; Hodder & Stoughton; 2000.
Question 6 Figure 3 © C Donald Ahrens; *Meteorology Today*; Cengage Publishing; 1994.

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