



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

GEOGRAPHY

9696/22

Paper 2 Advanced Physical Options

October/November 2009

1 hour 30 minutes

Additional Materials: Answer Booklet/Paper

* 1 7 8 3 2 8 9 8 3 5 *

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 Table referred to in the questions are contained in Insert 1.
Photograph A referred to in Question 8 is contained in Insert 2.

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 **2** Inserts.



Tropical environments

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

- 1 (a) Describe the main characteristics of climax and plagioclimax vegetation in tropical areas. [10]
- (b) Using examples, describe the different ways in which humans have sought to exploit **either** tropical rainforests **or** savannas. How sustainable are these types of exploitation? [15]
- 2 (a) Fig. 1A and Fig. 1B show data for two types of tropical climate.
Identify and describe the climates shown in Fig. 1A and in Fig. 1B. Explain how vegetation might be affected by each type of climate. [10]
- (b) How far has climate influenced the development of landforms in areas of granite rocks within the tropics? [15]

Coastal environments

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

- 3 (a) Using diagrams, explain the development of wave cut platforms, caves, arches and stacks. [10]
- (b) Using one or more examples demonstrate the extent to which coasts can be sustainably managed. [15]
- 4 (a) Fig. 2 shows the movement of water in sea waves. Explain how such movement occurs and describe the differences between constructive and destructive waves. [10]
- (b) How do waves affect coastal deposition? What other factors can affect the landforms of coastal deposition? [15]

Hazardous environments

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

- 5 (a) Explain the nature and causes of avalanches and describe their hazardous effects. [10]
- (b) Describe and evaluate the methods used to limit the hazardous effects of avalanches and other forms of mass movement. [15]
- 6 (a) Table 1 gives some information on major earthquakes occurring between 2001 and 2008. With the help of Table 1, explain why some earthquakes are more hazardous to human life than others. [10]
- (b) Explain the origins and general location of earthquakes and evaluate the methods used to limit their effects. [15]

Arid and semi-arid environments

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

- 7 (a) Describe the characteristics of soils found in hot arid areas. [10]
- (b) How have plants and animals adapted to extreme temperatures and aridity? To what extent can such environments be sustainably managed without harming plants and animals? [15]
- 8 Photograph A shows some landforms in a hot arid area.
- (a) Using a sketch diagram, identify and describe the landforms shown in Photograph A. [10]
- (b) Explain how landforms such as those shown in Photograph A have developed. To what extent have they been formed by past and present physical processes? [15]

BLANK PAGE

Copyright Acknowledgements:

Question 2 © C Donald Ahrens; *Meteorology Today*, West Publishing Co; 1994.

Question 4 © Michael Raw; *Exam Revision Notes: AS/A Level Geography*, Phillip Allan Updates; 2000.

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

University of Cambridge International Examinations is part of the Cambridge Assessment Group. Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.