



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

GEOGRAPHY

9696/11

Paper 1 Core Geography

May/June 2010

3 hours

Additional Materials: Answer Booklet/Paper

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.

Section A

Answer **five** questions.

Section B

Answer **one** question.

Section C

Answer **one** question.

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

All the Figures and the Table referred to in the questions are contained in Insert 1.

Photograph A for Question 3 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 **5** printed pages, **3** blank pages and **2** Inserts.



Section A

Answer **five** questions from this section. All questions carry 10 marks.

Hydrology and fluvial geomorphology

1 Fig. 1 shows changing levels of the water table in an area and the location of two valleys.

- (a) (i) Which valley will have flowing water only in the wet season? [1]
- (ii) What is the process marked X? [1]
- (iii) What is the zone marked Y? [1]
- (iv) What is the zone marked Z? [1]
- (b) Explain how water reaches, is stored in and removed from the zone below the water table. [6]

Atmosphere and weather

2 Figs 2A and 2B show two temperature/height diagrams of different atmospheric conditions.

- (a) (i) What is the name of the atmospheric condition shown in Fig. 2A? [1]
- (ii) What is the name of the atmospheric condition shown in Fig. 2B? [1]
- (iii) Give **two** differences between the ELR shown in Fig. 2A and Fig. 2B. [2]
- (b) Explain how the cloud shown in Fig. 2A is formed and why a cloud is not formed in Fig. 2B. [6]

Rocks and weathering

3 Photograph A shows a landslide.

- (a) Draw a fully labelled diagram identifying the main features of the landslide shown in the photograph. [4]
- (b) Explain how landslides occur and describe the effects that they may have upon slopes. [6]

Population change

- 4 Fig. 3 shows the age/sex pyramid of the world's population in 2000 and the predicted age/sex pyramid for 2100.
- (a) Identify **two** differences in shape between the age/sex pyramids for 2000 and 2100. Support your answer with information from Fig. 3. [4]
- (b) Explain how the demographic transition model may help in understanding the predicted decrease in the percentage of the world's population under 15 years of age by 2100. [6]

Migration

- 5 (a) Fig. 4 shows the main movements of Afghan refugees, 1979–1990, from the war with the Soviet Union, mapped by the United Nations Refugee Agency.
- Using Fig. 4, compare the scale and destination of the refugee flows into Iran with those into Pakistan. [4]
- (b) Outline the impacts of refugee flows on areas which receive refugees. [6]

Settlement dynamics/Population change/Migration

- 6 Table 1 gives information about the world's urban population, by region, in 1975 and 2000, and its predicted urban population in 2030.
- (a) Name the world region which experienced between 1975 and 2000:
- (i) the greatest absolute increase in urban population,
- (ii) the greatest percentage increase in urban population. [2]
- (b) Suggest **two** reasons why some of the data in Table 1 may be unreliable. [3]
- (c) Briefly explain why the percentage of urban population predicted for 2030 varies among the world regions. [5]

Section B: The Physical Core

Answer **one** question from this section. All questions carry 25 marks.

Hydrology and fluvial geomorphology

- 7 (a) (i) Define the terms *solution load* and *suspension load* as they apply to transportation in rivers. [4]
- (ii) Briefly explain the conditions under which rivers entrain (pick up) and transport sediment load. [3]
- (b) With the help of diagrams, describe and explain **two** landforms produced by deposition in rivers. [8]
- (c) Describe the processes of erosion in river channels. Illustrate your answer with reference to the landforms produced. [10]

Atmosphere and weather

- 8 (a) (i) Define the terms *long wave radiation* and *short wave radiation*. [4]
- (ii) Briefly explain what is meant by a temperature inversion. [3]
- (b) Explain how the global distribution of temperatures is influenced by areas of land and sea. [8]
- (c) What are greenhouse gases? Explain how build-ups of greenhouse gases are caused and the effects they may have upon global warming. [10]

Rocks and weathering

- 9 (a) (i) Define the weathering terms *exfoliation* and *crystal growth (salt)*. [4]
- (ii) Describe the process of freeze-thaw weathering. [3]
- (b) Explain the influences upon weathering of:
- (i) rock type and structure,
- (ii) vegetation. [8]
- (c) Explain how plate tectonics can be used to account for the development of ocean ridges and ocean trenches. [10]

Section C: The Human Core

Answer **one** question from this section. All questions carry 25 marks.

Population change

- 10 (a) (i) Give the meaning of the term *infant mortality rate*. [3]
- (ii) Outline **two** reasons why the first year of a child's life is a very vulnerable period. [4]
- (b) Explain why educating mothers is seen as fundamental to reducing child mortality. [8]
- (c) To what extent do you agree that in MEDCs, compared with LEDCs, most people die of old age? [10]

Migration

- 11 (a) With the help of examples, explain the terms *push factors* and *pull factors* in relation to **internal** migration. [7]
- (b) Describe some of the ways in which constraints, obstacles and barriers affect internal migration flows. [8]
- (c) Assess the extent to which **patterns** of internal migration may be identified. [10]

Settlement dynamics

- 12 (a) Describe the character and main functions of world cities. [7]
- (b) Explain the factors which have encouraged the emergence and development of world cities. [8]
- (c) To what extent is Fig. 5 helpful in understanding the hierarchy of world cities? [10]

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Question 3 © Photograph of landslide; www.uwsp.edu/geo/faculty; 07/08/2008.
Question 4 © Donald T Rowland; *Demographic Methods and Concepts*; Oxford University Press; 2003.
Question 5 © Map; www.unhcr.org.
Question 6 © John R Weeks; *Population: An Introduction to Concepts and Issues*; Wadsworth; 2002.
Question 12 © *The World according to GaWC*; www.lboro.ac.uk/gawc/citymap.html; 30 July 2008.

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