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

GEOGRAPHY **9696/13**

Paper 1 Core Geography **May/June 2010**

3 hours

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.

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 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 **5** printed pages, **3** blank pages and **1** Insert.

Section A

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

Hydrology and fluvial geomorphology

1 Fig.1 shows the flows and stores of water in a drainage basin.

(a) (i) Name the water movement shown as A. [1]

(ii) Name the water movement shown as B. [1]

(b) Give the differences between the processes of infiltration and percolation. [2]

(c) Using Fig.1, explain how precipitation may reach the river channel. [6]

Atmosphere and weather

2 Figs 2A and 2B show two ways in which air is uplifted.

(a) (i) Name the type of uplift shown in Fig. 2A. [1]

(ii) Name the type of uplift shown in Fig. 2B. [1]

(b) Describe how air is uplifted in Fig. 2B. [3]

(c) Explain how clouds and rain may be produced by the uplift of air shown in both Fig. 2A and Fig. 2B. [5]

Rocks and weathering

3 Figs 3A and 3B show two types of the physical weathering of rocks.

(a) (i) Name the weathering process shown in Fig. 3A. [1]

(ii) Name the weathering process shown in Fig. 3B. [1]

(b) Describe the differences in the climatic conditions under which the processes in Figs 3A and 3B are most effective. [4]

(c) Explain the effects these weathering processes have upon rocks. [4]

Population

4 Fig. 4 shows the age/sex structure of deaths in an MEDC.

(a) Identify the 5-year age group which recorded:

(i) the lowest percentage of total deaths;

(ii) the highest percentage of total deaths. [2]

(b) With the help of information from Fig. 4, describe the differences between the ages at which males and females died. [4]

(c) Give **two** reasons which help to explain why MEDCs record only a small percentage of total deaths under 50 years of age. [4]

Migration

5 Fig. 5A shows net migration in North America and South America in 2002. Fig. 5B names the countries shown. Net migration is the balance between the number of in-migrants and the number of out-migrants.

(a) Name the country in Fig. 5A for which net in-migration of 10 000 to 49 999 people was recorded in 2002. [1]

(b) Describe the pattern of net migration shown in Fig. 5A, supporting your response with information from both figures. [4]

(c) Explain the factors that may influence the chosen destination of a young adult migrating from Brazil, an LEDC. [5]

Settlement dynamics

6 Fig. 6 shows the growth in world population, 1970–2000, and its predicted growth to 2030.

(a) Use Fig. 6 to identify in which category of settlement:

(i) most of the world's population lived in 1970; [1]

(ii) it is predicted that most of the world's population will live in 2030. [1]

(b) Describe the growth in the urban population of MEDCs, 1970–2030, supporting your response with information from Fig. 6. [3]

(c) How may the growth of population in urban areas in LEDCs, shown in Fig. 6, be explained? [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 *helicoidal flow* and *laminar flow*. [4]

(ii) Describe turbulent flow and the conditions under which it occurs. [3]

(b) Using diagrams, explain the formation of:

(i) a river cliff;

(ii) an oxbow lake. [8]

(c) Explain how urban growth could affect flows within a river channel. [10]

Atmosphere and weather

8 **(a)** **(i)** Define the terms *solar radiation* and *earth (terrestrial) radiation*. [4]

(ii) How does radiation cooling occur at the earth's surface? [3]

(b) Using a diagram or diagrams, explain why the earth's surface receives less solar radiation in polar areas than in equatorial areas. [8]

(c) Explain how human activities have contributed to global warming. [10]

Rocks and weathering

9 **(a)** **(i)** Define the terms *continental plate* and *oceanic plate*. [4]

(ii) Briefly describe how sea floor spreading occurs. [3]

(b) Using diagrams, describe how landforms are produced at convergent (destructive) plate margins. [8]

(c) Explain how mass movements can affect the shape of slopes. [10]

Section C: The Human Core

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

Population

10 (a) (i) Give the meaning of the term *carrying capacity* in connection with population. [3]

(ii) Describe how **two** constraints may limit the capability of resources to feed a population. [4]

(b) Explain how, when two countries have the same population density, one may be overpopulated and one underpopulated. [8]

(c) Assess the success of one or more attempts by governments to change the population-resource relationship. [10]

Migration / Settlement dynamics

11 (a) Give the meaning of the term *stepped migration* and explain why it occurs within the settlement hierarchy. [7]

(b) With the help of examples, describe and explain the **push** factors which may influence people to migrate **from** large urban areas. [8]

(c) Examine the connections between a person's age and migration. [10]

Settlement dynamics

12 (a) Explain why the majority of people in many cities in LEDCs live in slums, shanty towns or squatter settlements. [7]

(b) Between 2001 and 2003 approximately half a million people were evicted from shanty towns in Jakarta, the capital of Indonesia, an LEDC in Asia.

With the help of examples, suggest reasons why city authorities may seek to remove shanty towns and squatter settlements. [8]

(c) Assess the success of attempts to improve the quality of life in one or more shanty towns or squatter settlements you have studied. [10]

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