



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

GEOGRAPHY

9696/01

Paper 1 Core Geography

October/November 2008

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 **all** 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 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 **all** the questions in this section. All questions carry 10 marks.

Atmosphere and weather

- 1 Fig. 1 is a temperature height diagram showing unstable atmospheric conditions.
- (a) Give the rate of temperature decrease in degrees centigrade per 1000 metres for:
- (i) DALR (dry adiabatic lapse rate); [1]
 - (ii) SALR (saturated adiabatic lapse rate). [1]
- (b) Why are the rates of temperature decrease different for the DALR and the SALR? [3]
- (c) Explain the development of the towering cumulus cloud shown on Fig. 1. [5]

Rocks and weathering

- 2 Fig. 2 shows the distribution and movement of major crustal plates.
- (a) With reference to **two** of the plates named in Fig. 2, identify the type of plate boundary between them. [2]
- (b) Describe the general distribution of the type of plate boundary you have named in (a). [2]
- (c) Using diagrams, describe and explain the formation of **two** landforms associated with one of the types of plate boundary found on Fig. 2. [6]

Population change

- 3 Fig. 3 shows, for the year 2000, total fertility rates by country and their long-term impacts.
- (a) Name the continent where the population was growing the most rapidly in 2000. [1]
- (b) Describe the distribution of countries for which a total fertility rate of 2.4–2.9 is shown in Fig. 3. [3]
- (c) Suggest reasons why many countries experienced a total fertility rate below the replacement level (less than 2.3). [6]

Population change/Settlement dynamics

- 4 Table 1 gives the results of a survey conducted in Jinan city, China, about the main problem experienced by workers who had migrated from rural areas.
- (a) Compare the **two** greatest percentage responses from male migrants and from female migrants. [3]
- (b) Give **two** reasons why reliable information about the problems migrants experience may be difficult to obtain in a survey. [2]
- (c) How may the discrimination which many rural migrants experience in cities be explained? [5]

Settlement dynamics

- 5 Figs 4A, 4B and 4C show the population age/sex pyramids for three districts of the city of San Diego, USA.
- (a) Giving evidence from the figures, name the district of San Diego which was likely to be:
- (i) the location of the state university;
- (ii) a residential suburb favoured by families. [4]
- (b) Explain briefly the **economic** factors which help to create residential districts of different characteristics within many large urban areas. [6]

Section B: The Physical Core

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

Hydrology and fluvial geomorphology

- 6 (a) (i) Define the terms *saltation* and *suspension* in a river, as they apply to the transportation of channel load. [4]
- (ii) Describe turbulent flow within a river channel. [3]
- (b) Using diagrams, describe the formation of:
- (i) a delta;
- (ii) floodplains and levees. [8]
- (c) To what extent is it possible to predict and prevent the flooding of rivers? [10]

Atmosphere and weather

- 7 (a) (i) What is meant by the term *urban heat island*? [4]
- (ii) Briefly describe **one** effect that atmospheric pollution may have upon urban climates. [3]
- (b) With the use of diagrams, explain how the earth's atmosphere is heated by solar radiation. [8]
- (c) Explain how winds can influence the distribution of global temperatures. [10]

Rocks and weathering

- 8 (a) (i) Define the terms *heave* and *slide* as they apply to mass movements. [4]
- (ii) Briefly describe an example of a mass movement resulting from the process of flow. [3]
- (b) With the use of diagrams, describe how rock type and structure can affect the form of slopes. [8]
- (c) Describe the physical properties of granite rock and explain how granite can be weathered. [10]

Section C: The Human Core

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

Population change

- 9 (a) (i) Give the meaning of the term *death rate*. [2]
- (ii) Explain **three** factors which help to account for the low death rates in MEDCs. [5]
- (b) With the help of a diagram, describe the changes in the death rate shown by the demographic transition model. [8]
- (c) Forecasts in the 1950s of what India's total population would be in 2001 varied from 790 to 1146 million. The 2001 census recorded 1027 million people.
- Why is it so difficult to make accurate population forecasts? [10]

Population change

- 10 (a) (i) Give the meaning of the term *international migration*. [3]
- (ii) With the help of examples, outline **two** types of voluntary international migration. [4]
- (b) Describe and explain the factors which may influence how likely a person is to migrate internationally. [8]
- (c) To what extent do you agree that international migration has a negative economic impact on source areas? [10]

Settlement dynamics

- 11 (a) (i) Explain the meaning of the term *urbanisation*. [2]
- (ii) Give **two** reasons why rates of urban growth are low in many MEDCs. [5]
- (b) With the help of one or more examples, describe the effects of rural-urban migration on **rural** areas of LEDCs. [8]
- (c) Assess the effectiveness of strategies for reducing urbanisation in LEDCs, giving reasons for their success or failure. [10]

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Copyright Acknowledgements:

- Question 2 Fig. 2 © Garrett Nagle; *Climate and Society*; Hodder Murray; 2002.
Question 3 Fig. 3 © Michael Witherick; *Population and Migration: Contemporary Case Studies*; Philip Allan Updates; 2000.
Question 5 Figs. 4A, 4B & 4C © US Census Bureau.

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