

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

GEOGRAPHY

9696/01

Paper 1 Core Geography

May/June 2006

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.

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 **all** questions in **Section A**.

Answer **one** question from **Section B**.

Answer **one** question from **Section C**.

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

Hydrology and fluvial geomorphology

- 1 Fig. 1 shows some features associated with the valley of a river channel.
- (a) (i) Name and briefly describe the feature marked as **A**. [2]
 - (ii) Name and briefly describe the feature marked as **B**. [2]
 - (b) Explain the development of this river channel and **one** of the landforms shown on Fig. 1. [6]

Rocks and weathering

- 2 Fig. 2 shows a classification of mass movements according to water content and velocity.
- (a) Give the water content and range of velocities that are associated with,
 - (i) debris flows,
 - (ii) rock falls. [2]
 - (b) Describe the nature of solifluction and explain under what conditions it occurs. [4]
 - (c) Describe soil creep and explain why it occurs at such low velocities. [4]

Population change

- 3 Fig. 3 shows age/sex pyramids for China, a LEDC in Asia, in 1990 and predicted for 2040.
- (a) Identify **two** main features of the age/sex pyramid in Fig. 3A. [2]
 - (b) Draw a simple labelled diagram to show the possible shape of China's age/sex pyramid in 2015. [3]
 - (c) Explain the predicted increase by the year 2040 in the percentage of China's population over 40 years of age. [5]

Population change / Settlement dynamics

- 4 Fig. 4 shows a model of how migration within a country may occur in stages.
- (a) Identify **one** similarity and **one** difference between movement **A** and movement **C** on Fig. 4. [2]
 - (b) Outline **two** reasons why migrants may move in stages. [3]
 - (c) Using examples, explain why many migrants who move to a capital city may later settle elsewhere (as seen in movements **D**, **E** and **F** on Fig. 4). [5]

Settlement dynamics

- 5 Figs 5A and 5B show low, middle and high income areas in the cities of São Paulo, Brazil (a LEDC) and Chicago, USA (a MEDC).
- (a) Outline the differences in the distribution of **low** income areas in the two cities. [4]
 - (b) Suggest reasons for the location of **high** income areas in cities such as São Paulo and Chicago. [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 *interception* and *stemflow*. [4]
- (ii) What is meant by the term *water balance* in a drainage basin? [3]
- (b) Using simple sketch hydrographs, explain how a change in land use in a drainage basin from woodland to urbanisation may affect river discharge. [8]
- (c) How can the abstraction (removal) and the storage of water by humans affect flows and stores within a drainage basin? [10]

Atmosphere and weather

- 7 (a) (i) Define the terms *condensation* and *sublimation*. [4]
- (ii) Describe the differences between snow and hail. [3]
- (b) Using diagrams, explain the formation of cumulo-nimbus (thunderstorm) clouds. [8]
- (c) Explain the causes of present global warming and describe its possible climatic effects. [10]

Rocks and weathering

- 8 (a) (i) Define the terms *biological weathering* and *solution weathering*. [4]
- (ii) Describe the effects that pressure release (dilatation) has upon rocks. [3]
- (b) With the use of diagrams, show how fold mountain building occurs at tectonic plate margins. [8]
- (c) Explain how human activities can affect the weathering of rocks and the form and development of slopes. [10]

Section C : The Human Core

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

Population change

- 9 Study Fig. 6 which shows the demographic transition model.
- (a) Describe and explain the population trends in Stage 1 of the model. [7]
 - (b) Some versions of the model include an additional stage of transition, Stage 5.
 - (i) Outline the characteristics of this possible Stage 5.
 - (ii) What evidence is there today of the existence of a Stage 5? [8]
 - (c) What factors may affect the timing of the demographic transition experienced by different countries? Use examples to support your answer. [10]

Population change

- 10 (a) (i) Give the meaning of the term *international migration*.
- (ii) Describe briefly the character of **one** example of international migration you have studied. [7]
- (b) What are the main **political** barriers to international migration? [8]
- (c) To what extent do you agree that **economic** migration is usually beneficial to both sending and receiving countries? [10]

Settlement dynamics

- 11 (a) Describe **two** problems that high rates of urbanisation have caused for cities in **LEDCs**. [7]
- (b) What may be done in rural areas of LEDCs to reduce the rate of urbanisation? [8]
- (c) To what extent is finance the key to solving **one** of the problems you identified in (a)? Use examples to support your answer. [10]

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Copyright Acknowledgements:

- Question 2 Fig. 2 © Ian Cook, et al; *Geography in Focus*; Pearson Education; 2000.
Question 3 Fig. 3 © Xizhe Peng; *The Changing Population of China (Family, Sexuality & Social Relations in Past Times)*; Blackwell Publishing; 2000.
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