



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

GEOGRAPHY

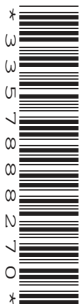
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Paper 1 Core Geography

May/June 2013

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 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 from this section. All questions carry 10 marks.

Hydrology and fluvial geomorphology

- 1 Fig. 1A shows two river catchments that have the same size and shape but different land-uses. Fig. 1B shows a rainfall event that occurred in both catchments.
- (a) Draw a labelled hydrograph for river X and a labelled hydrograph for river Y that show the likely responses to the rainfall event shown in Fig. 1B. [6]
- (b) Briefly explain the differences between the two hydrographs you have drawn in (a). [4]

Atmosphere and weather

- 2 Fig. 2 shows the mean (average) temperatures in July.
- (a) Describe the location of the area showing the highest mean (average) temperatures. [2]
- (b) Explain why the highest mean (average) temperatures are found in the location you have described in (a) rather than at the equator. [4]
- (c) Explain why temperatures recorded over land often differ from those recorded over sea at the same latitudes. [4]

Rocks and weathering

- 3 Fig. 3 shows a map of a plate boundary.
- (a) (i) Identify the type of plate boundary shown on Fig. 3. [1]
- (ii) Identify the type of plates shown on Fig. 3. [1]
- (b) (i) Draw a labelled cross section diagram showing this type of plate boundary and its associated landforms. [4]
- (ii) Briefly explain the formation of this type of plate boundary and landforms. [4]

Population

- 4 Fig. 4 shows age-specific death rates for three countries in 2004.
- (a) In which age group is the death rate lowest for the two LEDCs shown in Fig. 4? [1]
- (b) Describe the age-specific death rate for Japan, using data from Fig. 4. [4]
- (c) Explain why death rates in most countries are highest amongst the very young and the very old. [5]

Migration

- 5 Fig. 5A shows net international migration, by country, in North and South America, 2000–5. Fig. 5B names the countries.
- (a) Describe the pattern shown on Fig. 5A, supporting your answer with information from both figures. [5]
- (b) Suggest reasons for the pattern you described in (a). [5]

Settlement dynamics

- 6 Table 1 gives the City development index (CDI) and its components for different groups of cities in 2008.
- (a) State the range of values of the CDI in Table 1. [2]
- (b) Using data from Table 1, show how the different components contribute to the CDI of cities in Latin America and the Caribbean. [3]
- (c) Suggest **three** reasons why it is difficult for many city authorities to provide cities with services such as waste management, health and education. [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 *riffle* and *pool*. [4]
(ii) Briefly describe helicoidal flow. [3]
- (b) Draw a labelled diagram to show a braided river channel and its landforms and explain their formation. [8]
- (c) Describe how rivers erode their channels and explain to what extent river erosion has contributed to the formation of waterfalls and rapids. [10]

Atmosphere and weather

- 8 (a) (i) Define the terms *evaporation* and *condensation*. [4]
(ii) Briefly describe the factors that influence the rate of evaporation. [3]
- (b) With the aid of diagrams, explain how convectional rainfall and orographic rainfall are produced. [8]
- (c) Explain how greenhouse gases influence the temperature of the earth's atmosphere. To what extent could an increase in greenhouse gases lead to climate change? [10]

Rocks and weathering

- 9 (a) (i) Define the terms *humic acid* and *chelation*. [4]
(ii) Briefly explain how hydration weathers rock. [3]
- (b) With the aid of diagrams show how
(i) rock slides and
(ii) mud flows
occur and can affect the shape of slopes. [8]
- (c) Explain to what extent climate, vegetation and relief influence the weathering of limestone. [10]

Section C: The Human Core

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

Population/Migration

- 10 (a) (i) Describe how natural increase rate is calculated. [3]
 (ii) Briefly explain **two** ways that migration may contribute to population increase. [4]
 (b) Describe and explain variations in the rate of population growth between the different stages of the demographic transition model. [8]
 (c) To what extent do you agree that population growth leads to an increase in food supply? [10]

Migration

- 11 (a) (i) Give the meaning of the term *forced (involuntary) migration*. [3]
 (ii) Outline **two** different circumstances in which forced migration may occur. [4]
 (b) With the help of one or more examples, explain how push factors and pull factors work together to cause **economic migration**. [8]
 (c) "Emigration is a door to the modern world and once it's open, it is very difficult to close."
 How far do you agree with this view? [10]

Settlement dynamics

- 12 (a) Describe the different locations in which retailing (e.g. shops and supermarkets) is found in urban areas. [7]
 (b) With the help of examples, suggest reasons why the Central Business District (CBD) in urban settlements is changing. [8]
 (c) Assess whether, in urban settlements, it is preferable to live in the CBD or in a residential suburb. [10]

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Copyright Acknowledgements:

- Question 4 Fig. 4 © John R Weeks; *Population: An Introduction to Concepts and Issues*; Thomson Wadsworth; 2008.
Question 5 Fig. 5A © Farhana Hossain; *Snapshot: Global Migration*; The New York Times; <http://www.nytimes.com>
Question 6 Table 1 © Global Urban Observatory; *Global Urban Indicators Database Version 2*;
www.unhabitat.org/pmss/getElectronicVersion.aspx?nr=1535&alt=1; 19 August 2011.

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