



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

GEOGRAPHY

9696/13

Paper 1 Core Geography

October/November 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, the Photograph 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. 1 shows the annual hydrograph of the Columbia River in Canada.
- (a) (i) State the mean monthly discharge of the Columbia River in October. [1]
 - (ii) State the highest mean monthly discharge and the month in which it occurs. [2]
 - (b) Briefly describe the pattern of the annual discharge of the Columbia River. [2]
 - (c) Explain **two** factors that might cause variations in river discharge throughout a year. [5]

Atmosphere and weather

- 2 Fig. 2 shows the night time temperatures across a large urban area.
- (a) Give the term that is used to describe the pattern of temperatures shown in Fig. 2. [1]
 - (b) Describe the pattern of temperatures along a transect from A to B. [4]
 - (c) Explain how buildings and roads can affect the climate in urban areas. [5]

Rocks and weathering

- 3 Photograph A shows a rock cliff (free face) marked X and a debris slope (scree) marked Y.
- (a) Briefly describe the nature of:
 - (i) the rock cliff, [2]
 - and
 - (ii) the debris slope. [2]
 - (b) Explain how rock type and structure may influence mass movement. [6]

Population

- 4 Fig. 3 shows births and deaths for Sweden, an MEDC, from 1970 to 2010, and predicted for 2011 to 2060.
- (a) (i) Using Fig. 3, describe the pattern of births between 1970 and 2010. [3]
- (ii) Suggest reasons for the pattern you described in (i). [3]
- (b) Explain why population predictions, such as those in Fig. 3, are useful to a country. [4]

Migration

- 5 Table 1 shows some information about emigrants from El Salvador, an LEDC in Central America, living in the Americas in 2000.
- (a) Describe and suggest reasons for the age and sex of the emigrants to the USA in Table 1. [5]
- (b) Outline the benefits to LEDCs of high rates of emigration. [5]

Settlement dynamics

- 6 Fig. 4 shows population change in selected cities in the USA, an MEDC, between 2000 and 2010.
- (a) Using Fig. 4, compare the data for Chicago and Detroit. [4]
- (b) Suggest reasons why MEDC cities, such as those in Fig. 4, have seen a decline in their population. [6]

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 fluvial terms *traction* and *saltation*. [4]
(ii) Briefly describe how abrasion occurs in a river channel. [3]
- (b) Explain the formation of alluvial fans and deltas. [8]
- (c) Using a diagram or diagrams, explain how erosion, transport and deposition of sediment are related to variations in river flow. [10]

Atmosphere and weather

- 8 (a) (i) Define the terms *convection* and *orographic uplift*. [4]
(ii) Briefly describe the conditions which may lead to the formation of fog. [3]
- (b) Explain how ocean currents influence the global distribution of temperature. [8]
- (c) Describe how human activities have affected the nature and concentration of greenhouse gases in the atmosphere. Examine the likely effects on global climate. [10]

Rocks and weathering

- 9 (a) (i) Define the terms *flows* and *slides* as they apply to mass movement. [4]
(ii) Briefly describe how slides can affect the shape of slopes. [3]
- (b) Explain how the development of slopes is affected by climate and vegetation. [8]
- (c) Using a diagram or diagrams, show how ocean trenches and mountains may develop at a convergent plate boundary. [10]

Section C: The Human Core

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

Population

- 10 (a) Describe and explain the relationship between the infant mortality rate and the level of economic development. [7]
- (b) With the help of examples, suggest reasons why countries may find it difficult to reduce their infant mortality rate. [8]
- (c) 'The role of women is the most important influence on population change.'
How far do you agree? [10]

Population/Migration

- 11 (a) (i) Give the meaning of the term *refugee*. [3]
- (ii) Describe the impacts a refugee flow may have on a receiving area. [4]
- (b) Outline the factors that influence the **pattern** of voluntary international migration. [8]
- (c) To what extent is immigration a solution to the problem of declining population in MEDCs? [10]

Settlement dynamics

- 12 (a) With reference to **one** named rural settlement or rural area:
- (i) describe the character of the rural settlement or rural area; [7]
- (ii) outline the main issues in the development and growth (or decline) of the rural settlement or rural area described in (i). [8]
- (b) Assess the extent to which attempts to manage rural settlements or rural areas have been successful. [10]

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Copyright Acknowledgements:

- Question 1 Fig. 1 © *Columbia River Hydrograph by Tributary (1973 – 2002)*; [http://www.docstoc.com/docs/38931364/Figure-3-1-COLUMBIA-RIVER-HYDROGRAPH-by-tributary-\(1973-2002\)](http://www.docstoc.com/docs/38931364/Figure-3-1-COLUMBIA-RIVER-HYDROGRAPH-by-tributary-(1973-2002)). 28 March 2012.
- Question 2 Fig. 2 © <http://cimss.ssec.wisc.edu/climatechange/globalCC/lesson7/UH12.html>.
- Question 3 Photograph A © *Weathering 417.jpg*; <http://www.edupic.net/Images/Biomes/weathering417.JPG>; 28 March 2012.
- Question 4 Fig. 3 © *Swedish Census Bureau*; Sveriges officiella statistik.
- Question 5 Table 1 © adapted: *MPI central am*; <http://www.migrationinformation.org/datahub/usimmigration.cfm>.
- Question 6 Fig. 4 © Wall Street Journal; <http://online.wsj.com>; March 2011.

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