



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

GEOGRAPHY

9696/12

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 Tables 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 some features of a meandering river channel.
- (a) Identify the features on Fig. 1 marked as:
- (i) A, [1]
 - (ii) B, [1]
 - (iii) C. [1]
- (b) Draw a simple cross section of the channel shape along the line marked X–Y. [2]
- (c) Explain how rivers can produce a meandering channel. [5]

Atmosphere and weather

- 2 Fig. 2 shows Hadley cells located either side of the equator.
- (a) (i) State whether the pressure is high or low at A on Fig. 2. [1]
- (ii) State whether the pressure is high or low at B on Fig. 2. [1]
- (b) Explain how the Hadley cells operate and describe the contribution they make to the circulation of heat and winds on the earth's surface. [6]
- (c) Briefly describe **one** other method by which heat is transferred around the earth's surface. [2]

Rocks and weathering

- 3 Fig. 3 shows some landforms at a plate boundary.
- (a) (i) Identify the type of plate boundary shown on Fig. 3. [1]
- (ii) Identify the type of tectonic 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 its associated landforms. [4]

Population

- 4 Tables 1A and 1B show the highest and lowest mortality rates, for ages 15–60 years, in the world in 2010.
- (a) Using Table 1A, calculate the difference between the mortality rates for males and females in Lesotho. [1]
- (b) Using Table 1B, compare the information about the lowest mortality rates for males with that for females. [4]
- (c) Explain why the mortality rate for males is higher than for females. [5]

Population / Migration

- 5 Fig. 4 shows population increase in an MEDC in Europe, 1997–2007.
- (a) Using Fig. 4, state the year in which:
- (i) the gain from migration was greatest, [1]
- (ii) gains from migration overtook gains from natural increase. [1]
- (b) Describe the trend in natural increase shown on Fig. 4. [3]
- (c) Explain the possible effects of immigration on birth rates in **MEDCs**. [5]

Settlement dynamics

- 6 Fig. 5 shows a model of urban development based on some cities in Asia.
- (a) Describe the location and extent of the areas of urban sprawl on Fig. 5. [4]
- (b) Explain some of the pressures on the rural and frontier areas on Fig. 5 resulting from the growth of the urban settlements. [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 hydrological terms *interception* and *stemflow*. [4]
(ii) Briefly explain how throughflow occurs. [3]
- (b) With the aid of a labelled diagram, explain the operation of the hydrological cycle within a drainage basin. [8]
- (c) Explain the extent to which changes in land-use can affect both flows and stores within a drainage basin. [10]

Atmosphere and weather

- 8 (a) (i) Define the terms *latent heat transfer* and *sensible heat transfer*. [4]
(ii) Briefly explain how radiation cooling occurs. [3]
- (b) With the aid of a labelled diagram, explain how the earth's surface and atmosphere are heated during the daytime. [8]
- (c) Explain how the uplift of air can result in rainfall. [10]

Rocks and weathering

- 9 (a) (i) Define the mass movement terms *earth flow* and *rock fall*. [4]
(ii) Briefly describe the process of heave. [3]
- (b) With the aid of labelled diagrams, explain the physical and chemical weathering of limestone rocks. [8]
- (c) Explain the extent to which human activities can affect the weathering of rocks and the shape of slopes. [10]

Section C: The Human Core

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

Population

- 10 (a) With the help of a labelled diagram, compare Stages 2 and 3 of the demographic transition model. [7]
- (b) How may decreasing death rates be explained? [8]
- (c) Assess how education helps to lower birth rates. [10]

Migration / Settlement dynamics

- 11 (a) (i) Define the term *stepped migration*. [3]
- (ii) Give **two** reasons why stepped migration occurs. [4]
- (b) With the help of one or more examples, describe and explain where migrants are likely to live in cities in **LEDCs**. [8]
- (c) 'Urbanisation is a past process, not a current one.' How far do you agree? [10]

Settlement dynamics

- 12 (a) (i) Give the meaning of the term *functional zonation* as applied to urban settlements. [3]
- (ii) Explain **one** advantage and **one** disadvantage of functional zonation. [4]
- (b) Explain how planning has affected the location of activities within one or more named urban areas. [8]
- (c) Why are problems in urban areas difficult to overcome? [10]

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Copyright Acknowledgements:

- Question 3 Fig. 3 © <http://pubs.usgs.gov/gip/dynamic/graphics/fig24tibet.gif>
Question 4 Table 1A & 1B © *Adult Mortality Rate Worldwide 'Has Worsened'*; The Straits Times; 01 May 2010.
Question 5 Fig. 4 © *Baby Boom Has Taken Population Above 61 Million For The First Time*; The Times; 28 August 2009.
Question 6 Fig. 5 © Clive Hart: *Geography For A2*; Cambridge University Press; 0521893496.

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