



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

---

**GEOGRAPHY**

**9696/13**

Paper 1 Core Geography

**October/November 2011**

**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. 1 shows the Hjulstrom Curve.
- (a) Which size of particle (mm) is eroded at 10 cm/sec velocity? [1]
  - (b) Which size of particle (mm) is deposited at 100 cm/sec velocity? [1]
  - (c) Briefly explain the erosion of different types of material. [4]
  - (d) Describe how deposition can vary along a river channel. [4]

**Atmosphere and weather**

- 2 Fig. 2 shows major pressure and wind systems at the earth's surface in January and July.
- (a) (i) Describe **one similarity** in the location of high pressure areas in January and July. [2]
  - (ii) Describe **one difference** in the location of high pressure areas in January and July. [2]
  - (b) Briefly explain the development of the high and low pressure areas and how they influence the pattern of winds. [6]

**Rocks and weathering**

- 3 Fig. 3 shows a classification of types of mass movement according to water content and velocity.
- (a) Give the range of velocities and the water content that are associated with:
    - (i) solifluction, [2]
    - (ii) rock slides. [2]
  - (b) Explain how the nature and conditions under which mud flow occurs is different from those of soil creep. [6]

### Population

4 Table 1 shows the population structure of two countries.

(a) Compare the population structures of the two countries in Table 1. [4]

(b) Explain why the dependency ratio may be misleading in its implications for a LEDC. [6]

### Migration

5 Fig. 4 shows the origin of European migrants living in Switzerland in 2000.

(a) Name the country which was the origin of most migrants to Switzerland between 1970 and 2000. [1]

(b) Describe the pattern of migration to Switzerland from within Europe. [4]

(c) More than 20% of the people living in Switzerland are migrants. What benefits and problems might a large migrant population have for countries such as Switzerland? [5]

### Settlement dynamics

6 Fig. 5 shows the urban and rural populations of LEDCs and MEDCs between 1970 and 2030.

(a) State the **urban** population in LEDCs in 2010. [1]

(b) Compare the predicted trends in the **rural** populations in LEDCs and MEDCs after 2005. Support your response with data from Fig. 5. [3]

(c) Explain the rapid growth in **urban** population in **LEDCs**. [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 *abrasion* and *hydraulic action*. [4]
- (ii) Briefly describe how attrition can affect the load carried by a river. [3]
- (b) Using diagrams, describe and explain the formation of the landforms found in a meandering river channel. [8]
- (c) To what extent can human activities influence the causes and effects of floods and low flows in river channels? [10]

**Atmosphere and weather**

- 8 (a) (i) Describe **two** factors that influence the rate of evaporation from a water surface. [4]
- (ii) How does dew form? [3]
- (b) With the aid of a diagram, explain the day-time energy budget. [8]
- (c) Describe and explain possible climatic changes as a result of global warming. [10]

**Rocks and weathering**

- 9 (a) (i) Define the terms *spheroidal weathering* and *humic acid*. [4]
- (ii) Describe how crystal growth (salt) weathering occurs. [3]
- (b) Explain the operation of hydrolysis and carbonation and describe how climate affects these processes. [8]
- (c) Explain the tectonic processes that operate at divergent and convergent plate boundaries. Describe **two** landforms that develop at either of these plate boundaries. [10]

### Section C: The Human Core

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

#### Population

- 10 (a) (i) Give the meaning of the term *life expectancy*. [3]
- (ii) Describe **two** factors that can affect life expectancy. [4]
- (b) Describe and explain the relationship between population growth and development in the demographic transition. [8]
- (c) Assess the extent to which a country's attempt to control its population can create problems as well as solve them. [10]

#### Migration

- 11 (a) (i) Explain the terms *voluntary* and *forced (involuntary)* migration. [3]
- (ii) Describe briefly **one** example of forced migration. [4]
- (b) Explain the role of push factors and pull factors in migration decision-making. [8]
- (c) 'Most migrants are young, male and jobless.' How far do you agree? [10]

#### Settlement dynamics

- 12 (a) With reference to one or more urban areas, describe changes in the Central Business District (CBD). [7]
- (b) The UN estimates that one in three of the world's urban population lives in a slum, shanty town or squatter settlement.
- Suggest reasons why so many people in towns and cities do not live in permanent housing. [8]
- (c) 'The location of manufacturing within urban areas changes as accessibility changes.' How far do you agree? [10]





**BLANK PAGE**

---

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

University of Cambridge International Examinations is part of the Cambridge Assessment Group. Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.