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

GEOGRAPHY	**9696/12**
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.

UNIVERSITY *of* CAMBRIDGE
International Examinations

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Section A

Answer **five** questions from this section. All questions carry 10 marks.

Hydrology and fluvial geomorphology

1   Fig. 1 shows a storm hydrograph along with the characteristics of that drainage basin.

 (a) Calculate the lag time. [1]

 (b) Identify the following features of the hydrograph.

 (i) A

 (ii) B

 (iii) C [3]

 (c) Explain how two of the catchment conditions given in Fig. 1 affect the shape of the hydrograph.
 [6]

Atmosphere and weather

2   Fig. 2 shows an idealised global pattern of pressure and winds.

 (a) (i) Identify the pressure area marked as **A**.

 (ii) Identify the pressure areas marked as **B**. [2]

 (b) (i) Name the winds marked as **C**.

 (ii) Name the winds marked as **D**. [2]

 (c) Explain how the pressure systems develop and how they influence the pattern of global winds.
 [6]

Rocks and weathering

3   Fig. 3 is a diagram which relates climate to types of weathering.

 (a) (i) What type of weathering would be dominant in an area with an annual temperature of 24 °C and mean annual rainfall of 1800 mm?

 (ii) Which weathering process would be most dominant in an area with an annual temperature of −12 °C and mean annual rainfall of 600 mm? [2]

 (b) In what type of climate would 'very slight weathering' occur? Explain why weathering would be limited in such a climate. [4]

 (c) With reference to a specific process, explain why strong chemical weathering occurs in that area shown in the graph. [4]

Population

4   Table 1 shows the actual and predicted percentage of world population by region between 1950 and 2100.

   (a) Using data from Table 1:

      (i) which region had experienced the largest decline in its share of population between 1950 and 2008?

      (ii) name the region with the largest predicted increase in its share of population between 2008 and 2100.   [2]

   (b) Describe how the share of world population shown in Table 1 changes for Asia and Northern America between 1950 and 2100.   [3]

   (c) Outline the possible demographic consequences of the predicted population change in Africa.
                                                                                                      [5]

Migration

5   **(a)** Fig. 4 shows the main countries of origin of international migrants seeking asylum in 2008. Asylum-seekers who are granted the protection of the country to which they migrated are called refugees.

      Describe the distribution shown in Fig. 4.   [5]

   (b) Outline the impacts of the flow of refugees on the countries to which they migrate (the receiving countries).   [5]

Settlement dynamics

6   Fig. 5 shows population change in two villages in a rural area of an LEDC.

   (a) **(i)** State the 5 year period in which village **X** had the greatest increase in population.   [1]

      (ii) Compare the population changes in the two villages since 1970.   [3]

   (b) Suggest reasons for the population changes in the two villages between 1970 and 2010.   [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 terms *hydraulic action* and *solution* as they apply to processes in a river channel. [4]

   (ii) Describe how variations in discharge could lead to braiding in a river channel. [3]

(b) With the use of diagrams, explain how a pool and riffle sequence may lead to the development of meanders. [8]

(c) With reference to the Hjulstrom Curve, explain the relationship between velocity and sediment size in terms of erosion, transportation and deposition in a river. [10]

Atmosphere and weather

8 (a) (i) Define the terms *fog* and *dew*. [4]

   (ii) Briefly describe **one** set of conditions under which fog may be formed. [3]

(b) Using diagrams explain the differences between the local energy budget (the heating and cooling of the atmosphere), during daytime and night-time. [8]

(c) Explain the extent to which the climate in rural areas differs from that of nearby urban areas. [10]

Rocks and weathering

9 (a) (i) Define the terms *flow* and *slide* as they apply to mass movements. [4]

   (ii) Briefly describe how a rock slide can affect the shape of a slope. [3]

(b) With the use of a diagram or diagrams, show how ocean trenches and island arcs may develop at a convergent plate margin. [8]

(c) Explain how human activities can both increase and decrease mass movements on 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 examples, briefly explain how food shortages can occur. [7]

(b) Describe and explain the possible impacts of food shortages. [8]

(c) To what extent is the level of education the most important factor in determining fertility rate? [10]

Migration

11 (a) (i) Explain the term *internal migration*. [3]

(ii) Explain why urban-rural migration occurs in LEDCs. [4]

(b) With the help of examples, describe how constraints, obstacles and barriers affect internal migrations. [8]

(c) To what extent are pull factors more important than push factors in voluntary migration? [10]

Settlement dynamics

12 (a) (i) Give the meaning of the term *urbanisation*. [3]

(ii) Outline **two** possible causes of the rapid urban growth experienced by some cities in LEDCs. [4]

(b) Explain the slow rate of urban growth in MEDCs. [8]

(c) With reference to examples from **either** LEDCs **or** MEDCs, assess the attempts made to solve the problems associated with rapid urban growth. [10]

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