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

GEOGRAPHY **9696/01**

Paper 1 Core Geography

October/November 2003

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 on both sides of the paper.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid.

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.

Sketch maps and diagrams should be drawn whenever they serve to illustrate an answer.
All the Figures referred to in the questions are contained in the insert.

Answer **all** questions in Section A.
Answer **one** question from Section B.
Answer **one** question from Section C.

This document consists of **5** printed pages **3** blank pages and an Insert.

MML 3337 5/02 S40503/3
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Section A

Answer **all** the questions in this section. All questions carry 10 marks.

Hydrology and fluvial geomorphology

1 Fig.1 shows the flow of water through a drainage basin system.

   (a) **(i)** Name the water movement shown as A. [1]

   (ii) Name the water movement shown as B. [1]

   (b) **(i)** Describe **two** different conditions under which surface (overland) flow might take place. [4]

   (ii) Briefly explain the differences between surface storage and soil moisture storage. [4]

Atmosphere and weather

2 Fig. 2 shows two methods by which air is uplifted.

   (a) Name the two methods shown as A and B. [2]

   (b) **(i)** Briefly describe the processes that have brought about the uplift of air shown in each of the diagrams. [5]

   (ii) Describe the type of weather that might result from the uplift of air shown in diagram B. [3]

Rocks and weathering

3 Fig. 3 shows two types of activity found along plate margins.

   (a) **(i)** Give **two** differences between the plate margins X and Y. [2]

   (ii) Give **two** similarities between the plate margins X and Y [2]

   (b) Give a brief explanation of the processes that have created the fold mountains and ocean trenches. [6]

Population change

4 The world map in Fig. 4 shows infant mortality rates in 2000.

   (a) **(i)** Give the meaning of the term *infant mortality rate*. [2]

   (ii) Using Fig. 4, compare the levels of infant mortality in Africa with the levels of infant mortality in South America. [3]

   (b) Explain briefly the very low rates of infant mortality in many more economically developed countries (MEDCs). [5]

Settlement dynamics

5   Fig. 5 is a model of the movements of the poor to and within a city, Alexandria, Egypt.

    (a) **(i)** Identify the destinations of first movements **to** the city shown on Fig. 5.   [2]

        (ii) Describe the third movements **inside** the city shown on Fig. 5.   [3]

    (b) Suggest reasons why areas of semi-informal housing (shanties and squatter settlements) develop in many cities in less economically developed countries (LEDCs).   [5]

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Section B: The Physical Core

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

Hydrology and fluvial geomorphology

6 **(a)** **(i)** Name **three** methods by which rivers transport their load. [3]

      (ii) Briefly describe turbulent flow and helicoidal flow. [4]

  (b) Draw labelled diagrams to illustrate the formation of:

     (i) a delta,

     (ii) a waterfall. [8]

  (c) Explain how urbanisation can affect river channel flows. [10]

Atmosphere and weather

7 **(a)** **(i)** Briefly explain how radiation cooling can occur at the earth's surface. [4]

      (ii) Name **three** weather phenomena that can result from radiation cooling at the earth's surface. [3]

  (b) **(i)** Draw a labelled diagram to show why polar areas receive less solar radiation than equatorial areas. [3]

      (ii) Why are temperature ranges greater over land than over sea? [5]

  (c) Explain how urban heat islands develop. To what extent can urban heat islands influence the weather experienced in cities? [10]

Rocks and weathering

8 **(a)** **(i)** Define the weathering processes *wetting and drying* and *heating and cooling (insolation weathering)*. [4]

      (ii) Describe the possible effects on rocks of one of the processes defined in (i). [3]

  (b) **(i)** Draw a diagram of a slope that has convex, rectilinear and concave elements. Label each slope element on the diagram. [3]

      (ii) How might such a slope develop? [5]

  (c) To what extent can both physical and chemical weathering be said to be controlled by climate alone? [10]

Section C: The Human Core

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

Population change

9 **(a)** Explain the meaning of the terms *underpopulation*, *optimum population* and *overpopulation*. [7]

(b) Describe the evidence of overpopulation in one or more overpopulated areas you have studied. [8]

(c) To what extent may attempts to reduce the birth rate help to solve the problem of overpopulation? [10]

Population change/Settlement dynamics

10 **(a)** Suggest reasons why **urban-rural** migration may occur in less economically developed countries (LEDCs). [7]

(b) Using examples, describe the push factors in rural areas in LEDCs that may result in migration **to** urban centres. [8]

(c) Evaluate the impacts of rural-urban migration in LEDCs on the rural area(s) left by the migrants. [10]

Settlement dynamics

11 Choose **one** example of an inner city area in a more economically developed country (MEDC).

(a) Describe the nature of the area you have chosen. [7]

(b) Suggest reasons for the inner city's problems. [8]

(c) Assess the extent to which attempts to improve the inner city have been successful. [10]

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