

CAMBRIDGE INTERNATIONAL EXAMINATIONS
General Certificate of Education Advanced Subsidiary Level

GEOGRAPHY

8696/1

PAPER 1 Core Geography

OCTOBER/NOVEMBER SESSION 2001

3 hours

Additional materials:
Answer paper

TIME 3 hours

INSTRUCTIONS TO CANDIDATES

Write your name, Centre number and candidate number in the spaces provided on the answer paper/ answer booklet.

Answer **all** questions in Section A.

Answer **one** question from Section B.

Answer **one** question from Section C.

Write your answers on the separate answer paper provided.

If you use more than one sheet of paper, fasten the sheets together.

INFORMATION FOR CANDIDATES

The number of marks is given in brackets [] at the end of each question or part question.

All the Figures referred to in the questions are contained in the insert.

Sketch maps and diagrams should be drawn whenever they serve to illustrate an answer.

This question paper consists of 4 printed pages and an insert.



Section A

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

Hydrology and fluvial geomorphology

- 1 Fig. 1 shows flows of water in a cross section of soil and bedrock
- (a) Name the flows shown as A, B, C. [3]
- (b) Describe what is meant by percolation. [2]
- (c) Describe and explain the occurrence of **one** of the flows you identified in (a). [5]

Atmosphere and weather

- 2 Fig. 2 shows temperature and height diagrams for 0600 hours and 1800 hours for a place on one day.
- (a) What do the abbreviations ELR and SALR represent? [2]
- (b) Describe **two** differences between diagram A and diagram B. [2]
- (c) State and explain what weather changes are likely to occur between 0600 hours (A) and 1800 hours (B). [6]

Population change

- 3 Fig. 3 shows the age-sex pyramids for two districts in a less economically developed country (LEDC). Each is experiencing the impact of HIV/AIDS on its population structure.
- (a) Identify the **main** features of each pyramid. [6]
- (b) Giving evidence from Fig. 3, explain in which district you consider HIV/AIDS to have had the greater impact on the population structure. [4]

Population change

- 4 Study Fig. 4 which provides an outline map of selected states in India and shows their fertility rates in 1992 and spending on health and education per person.
- (a) What relationships does the information suggest
- (i) between fertility rate and spending on health,
- (ii) between fertility rate and spending on education? [6]
- (b) To what extent is it true to say that a North-South pattern exists in the distribution of fertility rates within India? [4]

Settlement dynamics

- 5 Fig. 5 shows the annual average rate of growth of **urban** population from 1995 to 2000.
- (a) Describe the main features of the spatial distribution shown. [6]
- (b) Suggest reasons why some parts of the world experienced an annual average rate of growth of urban population of less than 2% for this period. [4]

Section B: The Physical Core

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

Hydrology and fluvial geomorphology

- 6 (a) (i) Describe **two** processes by which rivers erode their channels. [4]
- (ii) Describe the general effects of erosion on the **shape** of the river channel. [3]
- (b) (i) Draw a labelled diagram to show a braided river channel. [3]
- (ii) Briefly explain how braided channels develop. [5]
- (c) Suggest how human activities might affect flows within a river channel. [10]

Atmosphere and weather

- 7 (a) (i) Describe the differences between rain, sleet, hail and snow. [4]
- (ii) Choose **one** of the above (rain, sleet, hail, snow) and briefly outline the conditions under which it might occur. [3]
- (b) (i) Draw a fully labelled diagram to show the 'day model' of radiation balance in the Earth's energy budget. [5]
- (ii) Briefly outline the general effects of ocean currents on the global distribution of temperatures. [3]
- (c) To what extent should the possible effects of global warming be of concern? [10]

Rocks and weathering

- 8 (a) (i) Define the terms insolation weathering (thermal fracture) and pressure release (dilatation). [4]
- (ii) Briefly describe how vegetation and relief can influence weathering. [3]
- (b) (i) Draw a labelled diagram to demonstrate sea floor spreading. [3]
- (ii) Give a brief explanation of sea floor spreading. [5]
- (c) Using examples explain how the properties of **either** granite **or** limestone can affect the weathering and erosion of the rock. [10]

Section C: The Human Core

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

Population dynamics

- 9 (a) Give the meaning of the term *natural increase rate* of population and explain how it is calculated. [7]
- (b) In what circumstances is natural increase of population likely to be very low? Support your answer with examples. [8]
- (c) 'Raising a girl child is as worthless as watering a neighbour's plant' (a traditional saying from South India). Assess the influence of cultural factors on the birth rate in **one** less economically developed country (LEDC) you have studied. [10]

Settlement dynamics

- 10 (a) With the aid of diagrams, give the meaning of the terms,
- (i) *primate city*,
- (ii) *sphere of influence*. [7]
- (b) Explain why many countries are dominated by one or two large cities. [8]
- (c) With reference to **one** country which is dominated by its largest city, assess the consequences of this dominance for the rest of the country. [10]

Settlement dynamics

- 11 (a) Why may there be strong competition for space (spatial competition) within urban areas? [7]
- (b) Choose **one** city experiencing problems with the provision of its infrastructure. Describe the evidence of **and** give reasons for, these problems. [8]
- (c) Evaluate the success of recent attempts to improve the provision of infrastructure within your chosen city. [10]

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- Question 3. Fig. 3 © Marguerite L. Daniel, *Age Sex pyramids for two districts in a LEDC*, reproduced by permission of The Geographical Association.
 Question 4. Fig. 4 © World Resources 1994–95, *Outline Map of India*, Oxford University Press.
 Question 5. Fig. 5 © David Clark, *World Map of average annual rate of growth of urban population*, reproduced by permission of The Geographical Association.

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