

OXFORD CAMBRIDGE AND RSA EXAMINATIONS
Advanced Subsidiary GCE
GEOGRAPHY A

The Physical Environment


2680

Friday

13 JANUARY 2006

Morning

1 hour 15 minutes

Candidates answer on the question paper.
 An insert is enclosed with this question paper.
 No additional materials are required.

 Candidate
Name

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 Centre
Number

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 Candidate
Number

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TIME 1 hour 15 minutes

INSTRUCTIONS TO CANDIDATES

- Write your name in the space above.
- Write your Centre number and candidate number in the boxes above.
- Answer **all** the questions.
- Write your answers, in blue or black ink, in the spaces on the question paper.
- Read each question carefully and make sure you know what you have to do before starting your answer.
- Do not write in the bar code. Do not write in the grey area between the pages.
- **DO NOT WRITE IN THE AREA OUTSIDE THE BOX BORDERING EACH PAGE. ANY WRITING IN THIS AREA WILL NOT BE MARKED.**

INFORMATION FOR CANDIDATES

- The number of marks is given in brackets [] at the end of each question or part question.
- The Insert contains maps and diagrams for use with questions.
- The total number of marks for this paper is 100.
- You will be awarded marks for the quality of written communication where an answer requires a piece of extended writing.
- Even where not specifically asked for, credit will be given for sketch maps and diagrams.

FOR EXAMINER'S USE	
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TOTAL	

This question paper consists of 9 printed pages, 3 blank pages and an Insert.

Hydrological Systems

- 1 (a) (i)** What is meant by the term 'drainage basin'?

[2]

- (ii) Name **two** outputs of the drainage basin hydrological cycle.

[2]

- (iii) Explain the effects of soil and rock type on the flows of water in drainage basins.

[6]

.[6]

- (b) Study Fig. 1 (Insert), which shows two areas, a housing development and an adjacent deciduous woodland area, in West Yorkshire.
- (i) Describe and explain the different flows and stores of water in these two areas in response to a storm event.

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- (ii) Suggest the likely flows and stores of water in the area of the housing development when it has been completed.

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[6]

[Total: 26 marks]
[Turn over]

Ecosystems

2 (a) Study Fig. 2 (Insert), which shows the nutrient cycle of a deciduous woodland ecosystem.

- (i) Describe the flows within the nutrient cycle shown.

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- (ii) Explain the relationship between the flows and stores within the nutrient cycle shown.

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- (iii) Describe and explain the ways in which the nutrient cycle would be affected if mature trees were cut down.

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- (b) With reference to a sand dune ecosystem you have studied, describe and explain the process of plant succession over time.

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[Total: 26 marks]

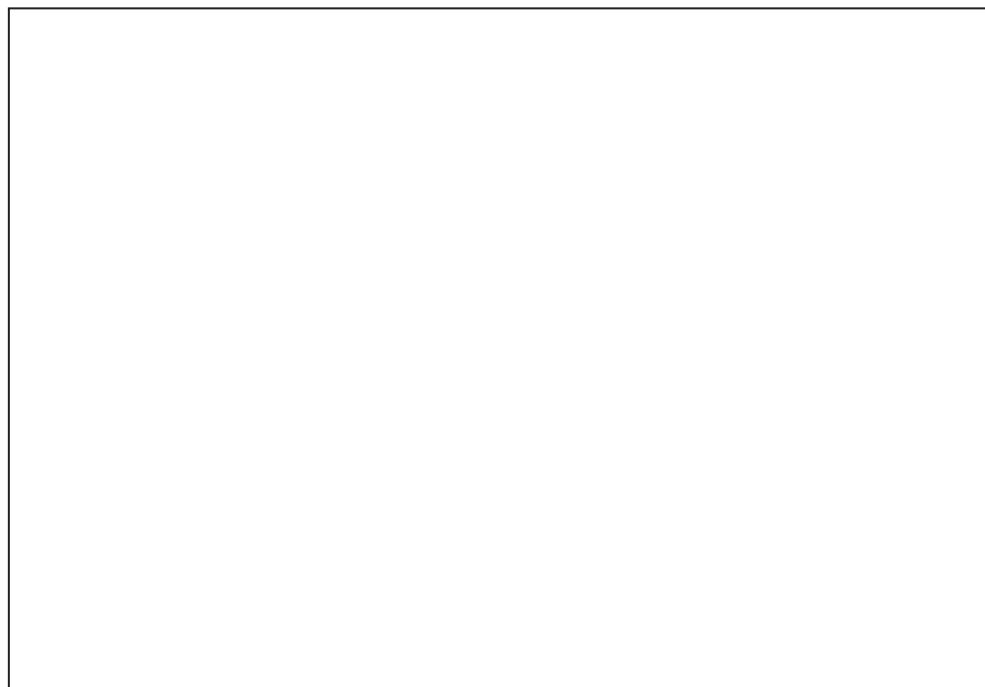
[Turn over

Atmospheric Systems

- 3 (a) (i) What is meant by the term 'temperature inversion'?

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- (ii) Draw a graph or diagram in the box below to show a temperature inversion.



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- (iii) Explain **two** ways in which a temperature inversion might occur.

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- (b) (i) What is meant by the term 'reflected solar radiation'?

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- (ii) Describe and explain **two** ways in which **local** energy budgets differ between day and night.

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- (c) State and explain **two** ways in which human activity might influence **local** energy budgets.

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[Total: 24 marks]

[Turn over

Lithosphere

- 4 Study Fig. 3 (Insert), which shows an outcrop of granite in the Namib desert, southern Africa and the climate data for the same area.

- (a) (i) Using evidence from Fig. 3, identify and describe a mechanical weathering process that is likely to be occurring on the granite outcrop.

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- (ii) Name and describe a chemical weathering process that might occur on the granite.

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- (b) Describe and explain the effect of vegetation on weathering rates.

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- (c) Describe and explain the influence of human activity on weathering and mass movement processes.

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[Total: 24 marks]

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