

**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

Centre Number 

--	--	--	--	--

Candidate Number 

--	--	--	--

**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.

<b>FOR EXAMINER'S USE</b>	
<b>1</b>	
<b>2</b>	
<b>3</b>	
<b>4</b>	
<b>TOTAL</b>	

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



(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.

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....[10]

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

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....[6]

**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.

.....  
.....  
.....  
.....  
.....[4]

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

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....[6]

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

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....[6]



**Atmospheric Systems**

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

.....  
.....[2]

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



[2]

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

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....[6]

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

.....  
.....[2]

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

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....[6]

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

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....[6]

[Total: 24 marks]

**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.

.....  
.....  
.....  
.....  
.....[4]

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

.....  
.....  
.....  
.....  
.....[4]

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

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....[6]



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

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

[10]

[Total: 24 marks]

**10**  
**BLANK PAGE**

**PLEASE DO NOT WRITE ON THIS PAGE**

11  
BLANK PAGE

PLEASE DO NOT WRITE ON THIS PAGE

PLEASE DO NOT WRITE ON THIS PAGE