

**ADVANCED SUBSIDIARY GCE****GEOGRAPHY A**

The Physical Environment

2680

Candidates answer on the question paper

OCR Supplied Materials:

- An Insert (inserted)

Other Materials Required:

None

Monday 12 January 2009
Morning

Duration: 1 hour 15 minutes

Candidate Forename		Candidate Surname	
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Centre Number						Candidate Number				
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INSTRUCTIONS TO CANDIDATES

- Write your name clearly in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure that you know what you have to do before starting your answer.
- Answer **all** the questions.
- Do **not** write in the bar codes.
- Write your answer to each question in the space provided, however additional paper may be used if necessary.

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.
- 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, provided they illustrate your answer.
- The total number of marks for this paper is **100**.
- This document consists of **12** pages. Any blank pages are indicated.

FOR EXAMINER'S USE	
1	
2	
3	
4	
TOTAL	

Hydrological Systems

1 Study Fig. 1, which shows the mean monthly discharge for the River Dee, north-west England.

(a) (i) What is meant by the term 'river discharge'?

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..... [2]

(ii) With reference to Fig. 1, describe the seasonal pattern of discharge of the River Dee.

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..... [4]

(iii) Suggest how temperature is likely to have influenced this pattern.

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..... [4]

(b) Explain how the discharge from a drainage basin can be influenced by basin size and basin shape.

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..... [6]

(c) Using examples, describe and explain the influence of human activities on river discharge.

..... [10]

[Total: 26]

Ecosystems

2 Study Fig. 2, which shows energy flows and trophic levels in an ecosystem.

(a) (i) What is meant by the term 'trophic level'?

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 [2]

(ii) How is energy transferred between trophic level 5 and soil?

.....
 [2]

(iii) Suggest why the amount of energy stored in trophic levels decreases from each level to the next.

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 [4]

(iv) State and explain **two** reasons why the number of herbivores (trophic level 2) might change over time.

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 [6]

- (b)** Using a named example you have studied, describe and explain the factors influencing a xerosere (sand dune succession).

..... [10]

[Total: 24]

Atmospheric Systems

- 3** Study Fig. 3, which shows a depression centred to the north-west of the British Isles in December.

(a) (i) What is meant by the term 'a depression'?

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..... [2]

(ii) What is meant by the term 'air mass'?

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..... [2]

(b) (i) Describe the temperature variations shown on Fig. 3.

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..... [4]

(ii) Explain the difference in temperature between **X** and **Y** on Fig. 3.

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..... [6]

..... [10]

[Total: 24]

Lithosphere

- 4 Study Fig. 4, which shows the relationships between rates of chemical weathering and climatic conditions.

- (a) Using Fig. 4, describe the relationships between rates of chemical weathering and climatic conditions.

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..... [4]

- (b) Explain how rocks are weathered by carbonation and hydration.

1 Carbonation

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2 Hydration

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..... [6]

- (c) State and explain **two** ways in which human activities influence weathering processes.

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..... [6]

(d) With reference to examples, explain why rapid mass movement can occur on slopes.

..... [10]

[Total: 26]

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