

**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

Tuesday 19 May 2009**Afternoon****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	
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TOTAL	

Hydrological Systems

- 1 Study Fig. 1, which shows monthly rainfall and river discharge for a drainage basin during one year.

(a) (i) Describe the pattern of river discharge through the year shown in Fig. 1.

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..... [4]

(ii) Suggest how monthly rainfall may have influenced this pattern of river discharge.

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..... [6]

(iii) Explain the effect of **one** other physical factor on this pattern of river discharge.

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(b) Describe and explain how human activities can influence the shape of storm hydrographs.

..... [10]

[Total: 24]

Ecosystems

2 Study Fig. 2, which shows the nutrient cycle for an ecosystem.

(a) (i) How are nutrients transferred from biomass to litter and litter to soil?

1 biomass to litter

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2 litter to soil

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..... [4]

(ii) Using Fig. 2, explain the possible influences of **two** physical factors that affect the size of the soil store.

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(b) (i) What is meant by the term 'net primary productivity (N.P.P.)'?

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..... [2]

(ii) Explain why the N.P.P. of an ecosystem can vary over time.

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..... [4]

- (c)** With reference to a located example, describe and explain the impact of human activity on the natural processes within a broadleaved deciduous forest ecosystem.

..... [10]

[Total: 26]

Atmospheric Systems

3 Study Fig. 3, which shows a temperature inversion.

(a) (i) Describe the pattern of changing temperature with altitude as shown in Fig. 3.

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(ii) Explain **one** reason why temperature inversions occur.

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(iii) Describe and explain the impact of temperature inversions on weather conditions.

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[Total: 24]

Lithosphere

4 Study Fig. 4, which shows the global distribution of earthquakes.

(a) (i) Describe the global distribution of earthquakes shown in Fig. 4.

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(ii) Explain how tectonic processes cause earthquakes at location **X** on Fig. 4.

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(b) How are mid-ocean ridges formed?

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..... [6]

(c) (i) What is meant by the term 'weathering'?

..... [2]

(ii) Using examples, describe and explain the impacts of weathering on limestone landforms.

[10]

[Total: 26]

10
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