

**ADVANCED SUBSIDIARY GCE
 GEOGRAPHY A**

The Physical Environment

TUESDAY 20 MAY 2008

2680

Afternoon
 Time: 1 hour 15 minutes

Candidates answer on the question paper
Additional materials (enclosed): An Insert

Additional materials (required):
 None



Candidate Forename

Candidate Surname

Centre Number

Candidate Number

INSTRUCTIONS TO CANDIDATES

- Write your name in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use blue or 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.

INFORMATION FOR CANDIDATES

- The number of marks for each question 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, provided they illustrate your answer.

FOR EXAMINER'S USE	
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TOTAL	

This document consists of **10** printed pages, **2** blank pages and an Insert.

Hydrological Systems

1 (a) Study Fig. 1, which shows the relationship between size of drainage basin and mean discharge of selected British rivers.

(i) What is meant by the term 'drainage basin'?

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.....[2]

(ii) Describe and explain the relationship shown in Fig. 1.

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(iii) The river labelled X has a low discharge for the size of its drainage basin. State and explain **two** possible reasons for its relatively low discharge.

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Ecosystems

2 (a) Study Fig. 2, which shows vegetation and soil changes along a dune transect.

(i) Describe the changes in vegetation with distance from the sea.

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(ii) Describe and explain the differences in soil pH at site 1 and site 8.

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(iii) State and explain **one** reason for the low number of species found at Site 8.

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Atmospheric Systems

3 (a) Study Fig. 3, which shows the global energy budget by latitude.

(i) Describe the variation in outgoing long-wave radiation.

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(ii) Explain why the incoming short-wave radiation is much lower nearer the poles.

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(iii) Describe **two** ways by which surplus energy near the equator is transferred to areas of deficit nearer the poles.

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(b) Name **two** ways by which heat is transferred from the earth’s surface into the atmosphere.

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Lithosphere

4 (a) Study Fig. 4, which shows a valley slope in Shropshire.

(i) State **two** pieces of evidence, which suggest that mass movement has taken place on the slope.

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(ii) State and explain **two** possible factors that may have contributed to mass movement on the slope shown.

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(iii) State and explain **two** ways in which the slope could be managed to reduce the occurrence of further mass movement.

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(b) Study Fig. 5, which shows the main features of a tectonic plate boundary in the Pacific Ocean.

(i) Describe the direction of plate movement at this boundary and outline the causes of this movement.

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.....[3]

(ii) Name the zone labelled X, and the features labelled Y and Z.

Zone X
Feature Y
Feature Z [3]

(iii) Explain the formation of Feature Y.

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[Total: 26]

10
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