

Surname		Other Names	
Centre Number		Candidate Number	
Candidate Signature			

For Examiner's Use

General Certificate of Education
January 2008
Advanced Subsidiary Examination



GEOGRAPHY (SPECIFICATION B)
Unit 2 The Physical Options

GGB2

Monday 14 January 2008 9.00 am to 10.00 am

<p>You will need no other materials. You may use a calculator.</p>

For Examiner's Use			
Question	Mark	Question	Mark
P	X	R	X
1		3	
Q	X		
2			
TOTAL			
Examiner's Initials			

Time allowed: 1 hour

Instructions

- Use blue or black ink or ball-point pen. You may use pencil for maps, diagrams and graphs.
- Fill in the boxes at the top of this page.
- Answer **one** question in the spaces provided.
Choose option **P** or **Q** or **R**.
- Option **P**: Glacial Environments – Page 2.
- Option **Q**: Coastal Environments – Page 8.
- Option **R**: Urban Physical Environments (Temperate Urban Areas) – Page 15.
- Do all rough work in this book. Cross through any work you do not want to be marked.
Give sketch maps, diagrams and specific examples, where appropriate.
- If there is not enough space for your answer(s), use the extra page(s) at the end of the book. If you do this, make sure that you show the number of the question you are answering.

Information

- The maximum mark for this paper is 50.
- The marks for questions are shown in brackets.
- You are expected to use a calculator where appropriate.
- You will be marked on your ability to use an appropriate form and style of writing, to organise relevant information clearly and coherently, and to use specialist vocabulary where appropriate.
The legibility of your handwriting and the accuracy of your spelling, punctuation and grammar will also be considered.

Answer the question on Option **P** or **Q** or **R**.

OPTION P: GLACIAL ENVIRONMENTS

1 (a) In the context of glacial budgets, define the following terms:

(i) Accumulation

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(3 marks)

(ii) Ablation

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(3 marks)

(b) Describe and explain the ways in which a glacier moves.

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(8 marks)

(c) Choose **one** landform created by glacial deposition.

(i) Describe your chosen landform.

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(6 marks)

(ii) Explain how it was formed.

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(6 marks)

Question 1 continues on the next page

Turn over ►

(d) Draw an annotated diagram to show how the course of a **named** river was diverted by ice.

(7 marks)

(e) In the context of periglaciation:

(i) Define the term 'permafrost' and explain how permafrost is formed.

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(4 marks)

(ii) Explain the process of solifluction.

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(6 marks)

50

END OF OPTION P

Turn over for Option Q

Turn over ►

Answer the question on Option **P** or **Q** or **R**.

OPTION Q: COASTAL ENVIRONMENTS

2 (a) In the context of marine processes, define the following terms:

(i) Abrasion

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(3 marks)

(ii) Hydraulic action

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(3 marks)

(b) Draw an annotated diagram to explain how waves can be refracted around a headland.

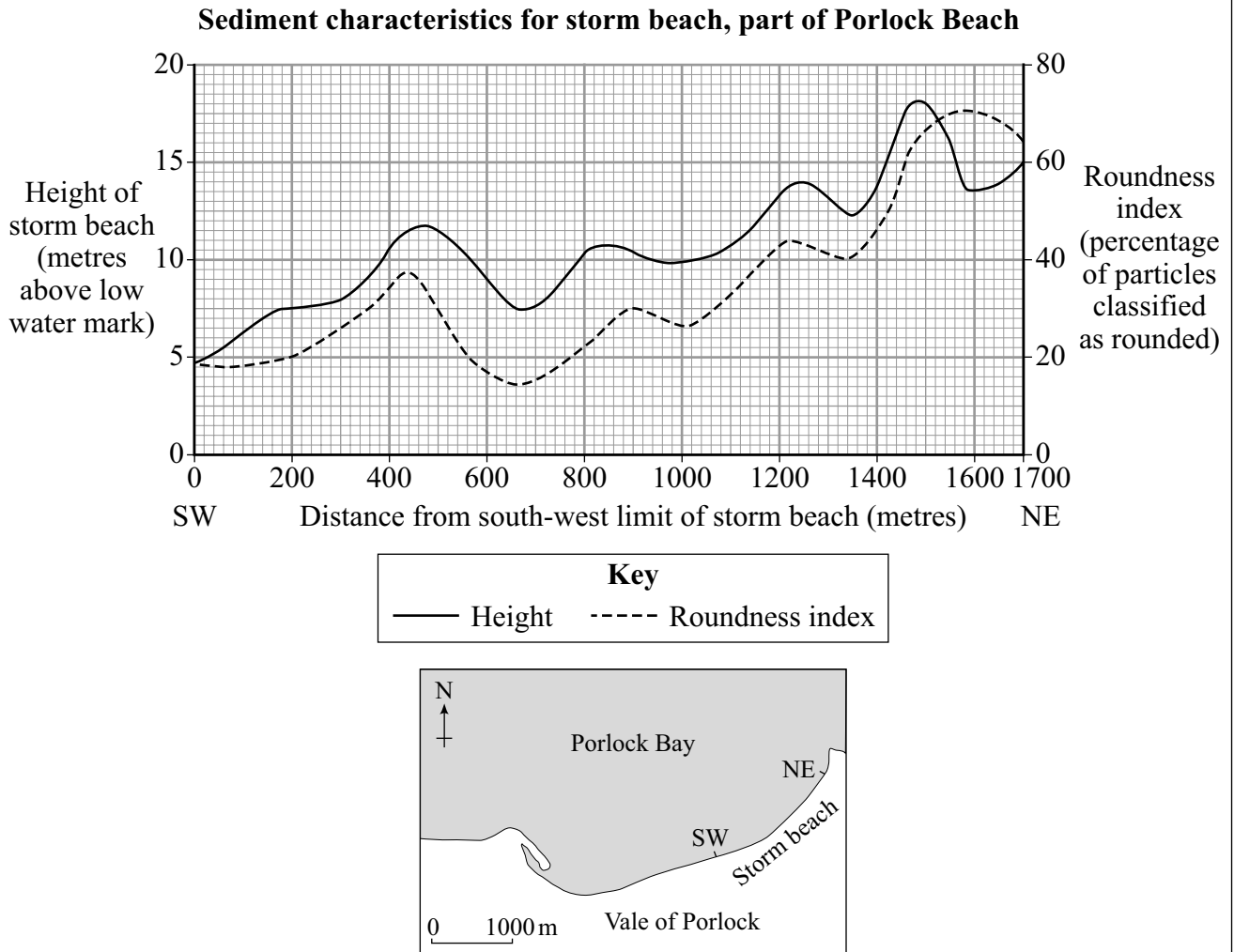
(7 marks)

Question 2 continues on the next page

Turn over ►

(c) Study **Figure 2**.

Figure 2



(f) (i) Describe the marine conditions under which coral reefs grow.

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(4 marks)

(ii) Outline the threats that coral reefs face.

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(6 marks)

END OF OPTION Q

Answer the question on Option **P** or **Q** or **R**.

OPTION R: URBAN PHYSICAL ENVIRONMENTS (TEMPERATE URBAN AREAS)

3 (a) In the context of urban environments, define the following terms:

(i) Surface albedo

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(3 marks)

(ii) Net heat loss

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(3 marks)

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(6 marks)

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(ii) Explain how pollution reduction policies attempt to lessen the effect of these particulates.

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(7 marks)

- (c) Draw an annotated diagram(s) to show how urban structures affect winds within urban areas.

(6 marks)

Question 3 continues on the next page

Turn over ►

(d) Study **Figure 3**.

Figure 3

Extract adapted from a brochure for the Greenwich Peninsula Ecology Park created by The Trust for Urban Ecology

The Greenwich Peninsula was originally made up of fields, marshes and a large millpond. It was historically known as Greenwich Marsh. The area became heavily industrialised from the late 1880s onwards. By 1968, the British Gas playing fields were the only green space left on the Peninsula: these fields are now occupied by superstores.

From the 1970s, former industrial land became increasingly derelict and marsh began to reappear on the Peninsula.

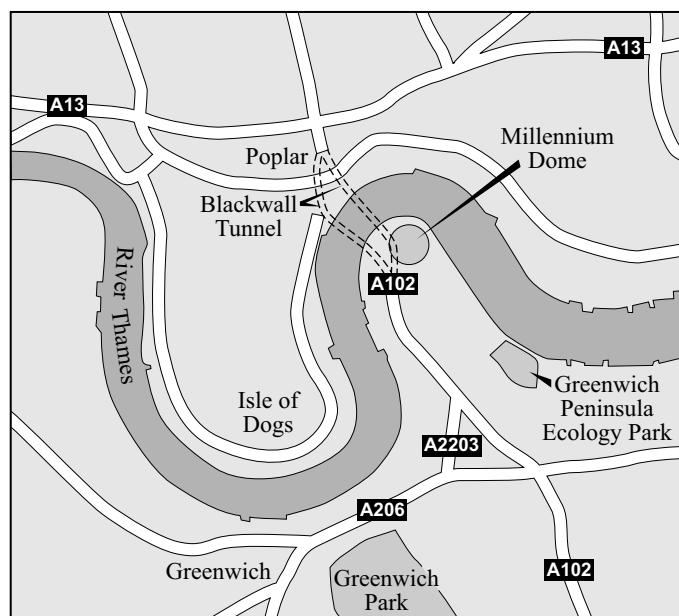
English Partnerships bought the land in 1997 and set in place a massive regeneration project, which included restoration of parts of the riverbank and the creation of the Greenwich Peninsula Ecology Park as a freshwater habitat.

The Park is made up of an inner and an outer lake. The outer lake area has open access at all times. The inner lake area is accessible only through the Gatehouse during opening hours.

A fascinating variety of wildlife thrives in the Park, including frogs, toads, newts and a huge array of insects. In spring and summer, the Park comes alive with brightly coloured dragonflies, damselflies and butterflies over the wildflower meadows.

Specially designed bird hides allow you to watch the many different species, both local and visiting, without disturbing them. As the seasons change, so do the types of bird you are likely to see.

There is a host of organised activities you can join in with – from evening bat walks to summer fun days for the family! During term time, the Park is open for school visits where children can experience nature first hand. Ask the wardens for more details.



(i) Define the term 'ecology'.

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(2 marks)

(ii) How does **Figure 3** reflect changing attitudes to conservation in urban areas?

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Question 3 continues on the next page

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QUESTION
NUMBER

Write the question number in the left-hand margin.

A series of horizontal dotted lines for writing answers, spanning the width of the page.

Turn over ►

QUESTION
NUMBER

Write the question number in the left-hand margin.

A series of horizontal dotted lines for writing answers, with a vertical solid line on the left side for writing question numbers.

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- Question 1 Figure 1: Geography Review, March 2002, Philip Allan Updates.
- Question 2 Figure 2: Reprinted by permission of HarperCollins Publishers Ltd © V Bishop & R Prosser, 1997
- Question 3 Figure 3: Text extract: Trust for Urban Ecology.

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