Surname		Other Names	
Centre Number			Candidate Number									
Candidate Signature												

For Examiner's Use

General Certificate of Education
June 2007
Advanced Subsidiary Examination

ASSESSMENT and QUALIFICATIONS ALLIANCE

GEOGRAPHY (SPECIFICATION B) **GGB2**
Unit 2 The Physical Options

Friday 25 May 2007 1.30 pm to 2.30 pm

You will need no other materials.
You may use a calculator.

Time allowed: 1 hour

For Examiner's Use			
Question	Mark	Question	Mark
P		R	
1		3	
Q			
2			
Total (Column 1) →			
Total (Column 2) →			
TOTAL			
Examiner's Initials			

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 10.
  Option **R**: Urban Physical Environments (Temperate Urban Areas) – Page 18.
- 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) (i) In the context of glaciation, what is meant by the following terms?

Accumulation .....

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Ablation .....

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(6 marks)

(ii) Describe various ways in which glaciers move.

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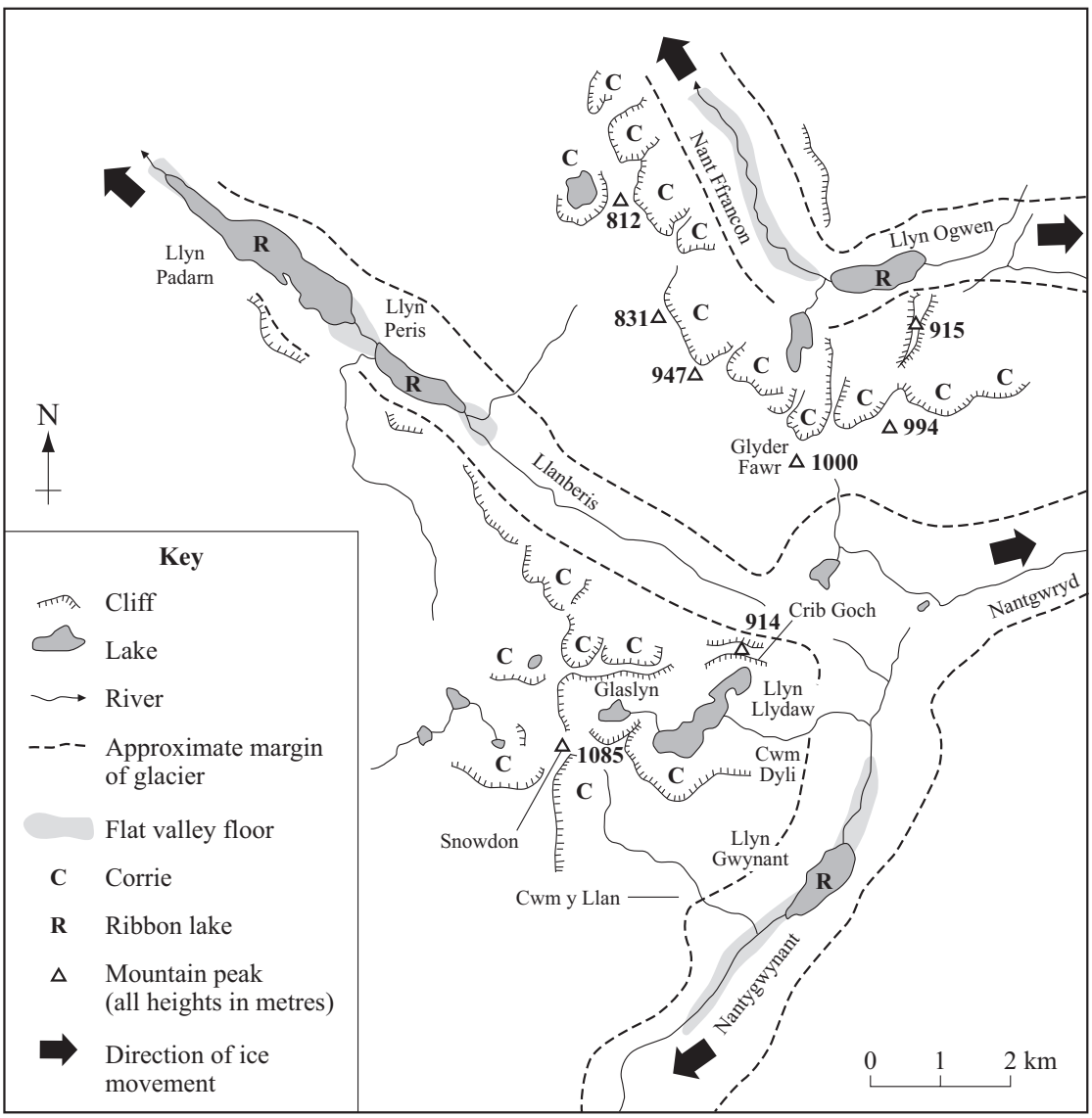
(7 marks)

Question 1 continues on the next page

(b) Study **Figure 1** which shows the major landforms of part of Snowdonia.

Figure 1



(i) Describe the distribution of corries and of ribbon lakes.

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(6 marks)

(ii) Give reasons for the orientation of the corries shown.

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(5 marks)

Question 1 continues on the next page

(c) Choose **one** fluvioglacial landform. Describe your chosen landform and explain how it was formed.

Chosen landform .....

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(8 marks)

(d) Explain how nivation hollows are formed.

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(7 marks)

Question 1 continues on the next page

(e) Study **Figure 2**.

Figure 2

Colour photograph showing a glacial landform (pingo) from Essential Landform Skills (page 61), Nelson Thornes, 2002 - not reproduced here due to third-party copyright constraints.

(i) Using the **photograph only**, describe the landscape shown.

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(5 marks)

(ii) Suggest how landform **X** was formed.

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(6 marks)

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END OF OPTION P

Turn over for Option Q

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

OPTION Q: COASTAL ENVIRONMENTS

2 (a) (i) Describe differences in form and frequency between constructive and destructive waves.

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(6 marks)

(ii) How does the effect of destructive waves on a beach differ from that of constructive waves?

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(7 marks)

(b) In the context of marine erosion, what is meant by the following terms?

Abrasion .....

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Attrition .....

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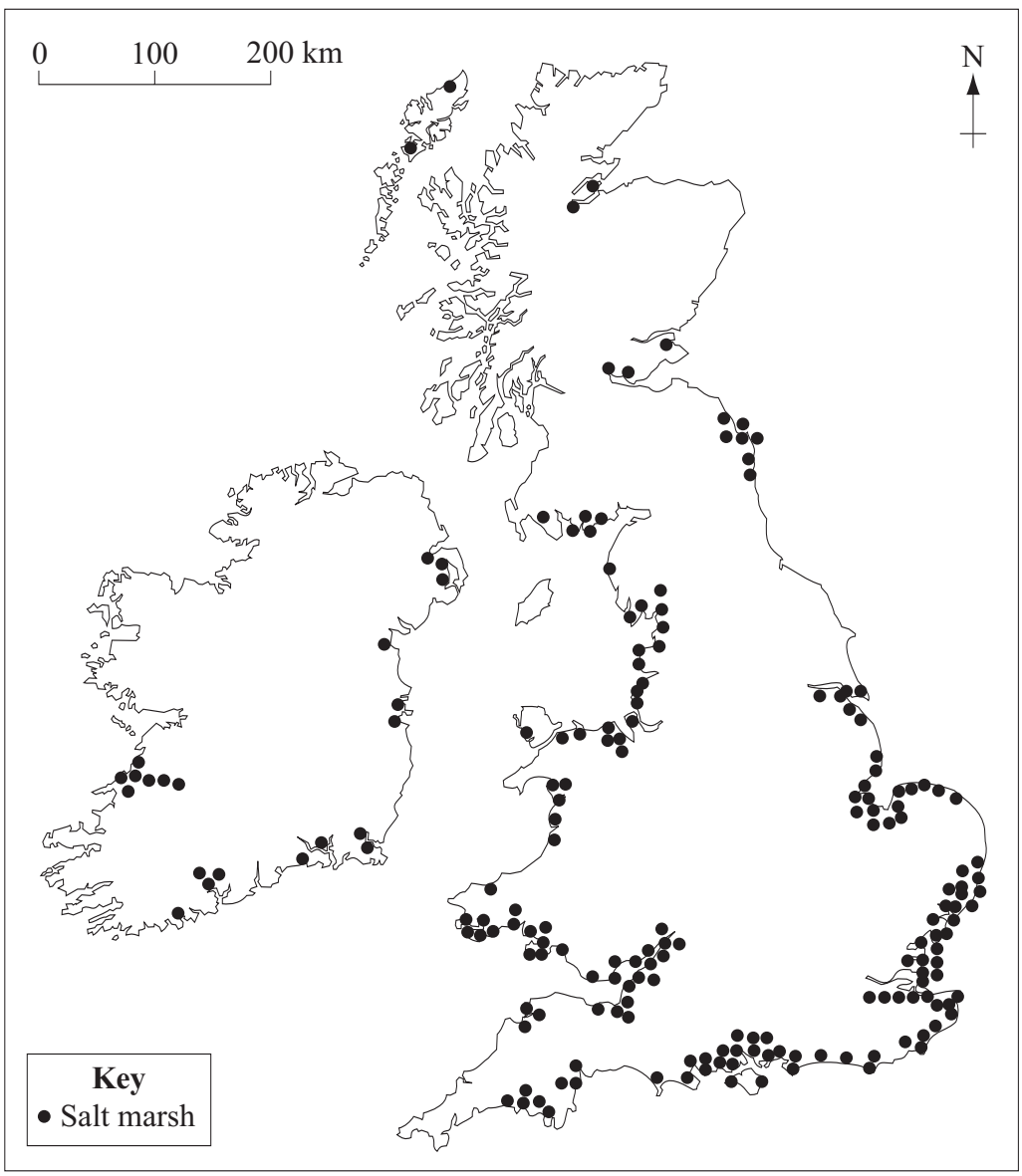
(6 marks)

Question 2 continues on the next page

(c) Study **Figure 3** which shows locations where *Spartina anglica*, a common salt marsh grass, is found.

Figure 3



(i) Describe the distribution of this salt marsh grass.

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(6 marks)

(ii) Choose **either** a salt marsh environment **or** coastal sand dunes.
Describe the main features of your chosen environment and explain how they were formed.

Chosen environment .....

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(8 marks)

Question 2 continues on the next page

(d) Study **Figure 4**.

Figure 4

Using evidence from the **photograph only**, describe the sub-aerial processes taking place on this stretch of coastline.

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(5 marks)

(e) (i) Explain how global sea level change has been influenced by glacial advance and retreat.

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(6 marks)

(ii) Describe **one** landform typically found on a coast of submergence.

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Question 2 continues on the next page

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(6 marks)

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END OF OPTION Q

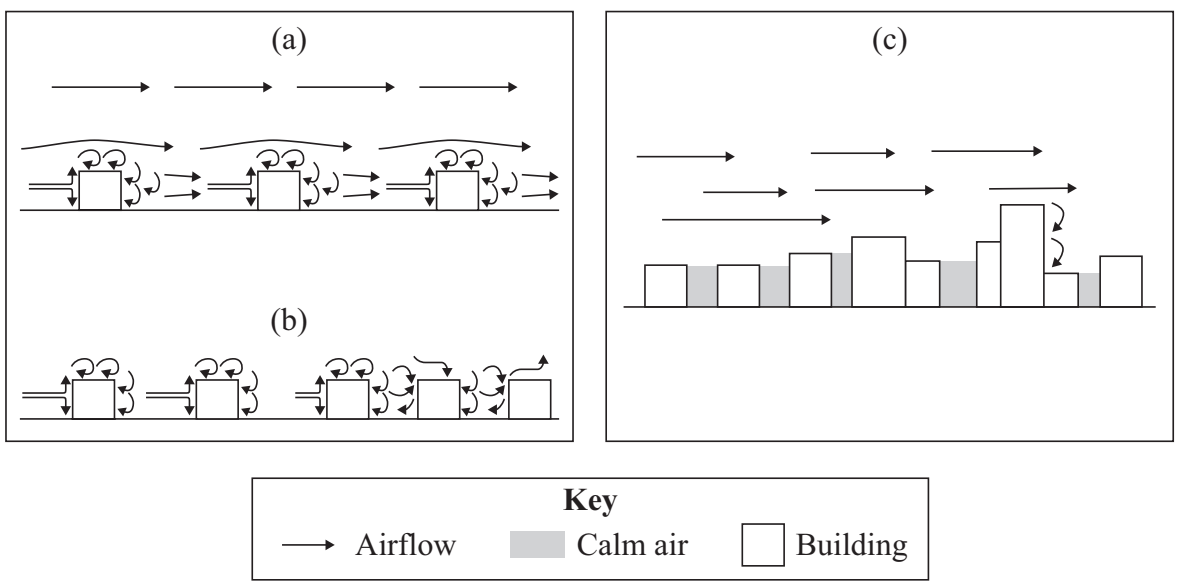
Turn over for Option R

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

OPTION R: URBAN PHYSICAL ENVIRONMENTS (TEMPERATE URBAN AREAS)

3 (a) (i) Study **Figure 5** which shows airflow patterns related to building spacing.

Figure 5



Describe how different building spacing can affect airflow in urban areas.

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(6 marks)

(ii) Describe and explain how winds within urban areas vary in speed.

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(7 marks)

(b) (i) In the context of urban climates, define the following terms:

Surface albedo .....

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Question 3 continues on the next page

Net heat loss. .....

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(6 marks)

(ii) Using example(s), describe the diurnal (daily) and seasonal variations in the urban heat island effect.

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(7 marks)

(c) Atmospheric particulates can pollute the air above urban areas.
Describe the sources of this atmospheric pollution. Using example(s), outline ways in which this pollution can be reduced.

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(8 marks)

Question 3 continues on the next page

(d) Study **Figure 6**.

Figure 6

(i) Using evidence from the **photograph only**, describe the various ecological niches that would attract flora and fauna to this area.

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(5 marks)

(ii) If the site in **Figure 6** were to be made an ecological conservation area, outline the plant succession that would be likely to take place.

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(7 marks)

Question 3 continues on the next page

(iii) Explain why **one** named plant species has been deliberately introduced into urban areas.

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(4 marks)

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END OF QUESTIONS

QUESTION NUMBER

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LEAVE MARGIN BLANK

QUESTION NUMBER

Write the question number in the left-hand margin.

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QUESTION NUMBER

Write the question number in the left-hand margin.

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Question 1 Figure 2: Landform Slides.
Question 2 Figure 3: Biological Records Centre, Centre for Ecology and Hydrology.
Question 3 Figure 5: *Urban Microclimates – Geofile*, Geoffrey Parsons, Nelson Thornes, 2003.