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Centre Number					Candida	ate Number		
Candidate Signature								

For Examiner's Use

General Certificate of Education June 2007 Advanced Subsidiary Examination

GEOGRAPHY (SPECIFICATION B) Unit 2 The Physical Options

GGB2



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

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.

For Examiner's Use					
Question	Mark	Question	Mark		
Р	\times	R	\times		
1		3			
Q	\times				
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Total (Column 2)					
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Answer the question on Option P or Q or R.

OPTION P: GLACIAL ENVIRONMENTS

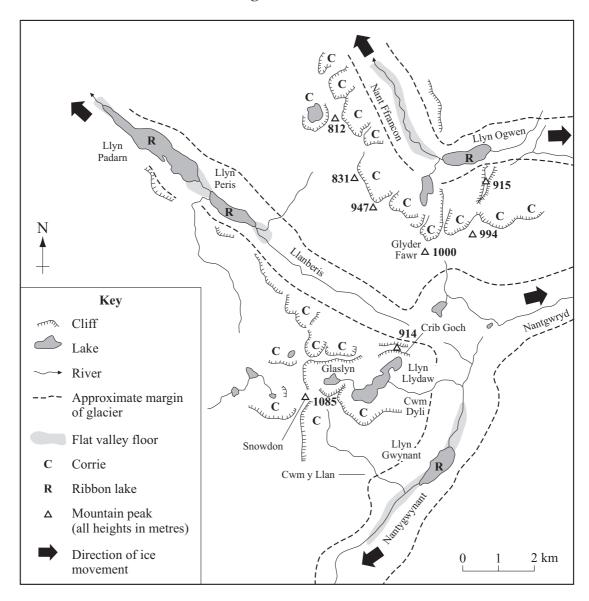
1	(a)	(i)	In the context of glaciation, what is meant by the following terms?
			Accumulation
			Ablation
			(6 marks)
		(ii)	Describe various ways in which glaciers move.

(7 marks)

Question 1 continues on the next page

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

Figure 1



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Question 1 continues on the next page

Choose one fluvioglacial landfoit was formed.	orm. Describe your chosen landform and explain how
Chosen landform	
	(8 marks)
Explain how nivation hollows a	are formed.

	•••••
	•••••
(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.

Using the photograph only , describe the landscape shown.	
	•••••
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	 marks)

50

(ii)	Suggest how landform X was formed.
	(6 marks)

END OF OPTION P

Turn over for Option Q

Turn over ▶

Answer the question on Option ${\bf P}$ or ${\bf Q}$ or ${\bf R}$.

OPTION Q: COASTAL ENVIRONMENTS

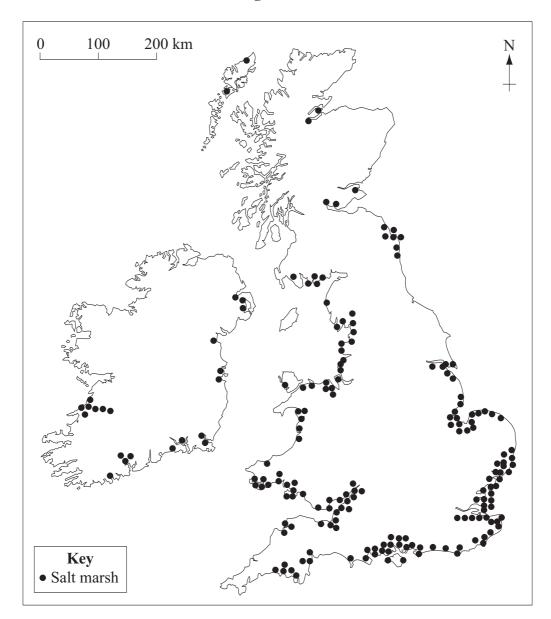
2	(a)	(i)	Describe differences in form and frequency between constructive and destructive waves.
			(6 marks)
		(ii)	How does the effect of destructive waves on a beach differ from that of constructive waves?

	(7 marks)
(b)	In the context of marine erosion, what is meant by the following terms?
	Abrasion
	Attrition
	(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.

	(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
	(8 marks)

Question 2 continues on the next page

(d) Study **Figure 4**.





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

(e)	(i)	Explain how global sea level change has been influenced by glacial advance and retreat.
		(6 marks)
	(ii)	Describe one landform typically found on a coast of submergence.

Question 2 continues on the next page

(6 marks)

50

END OF OPTION Q

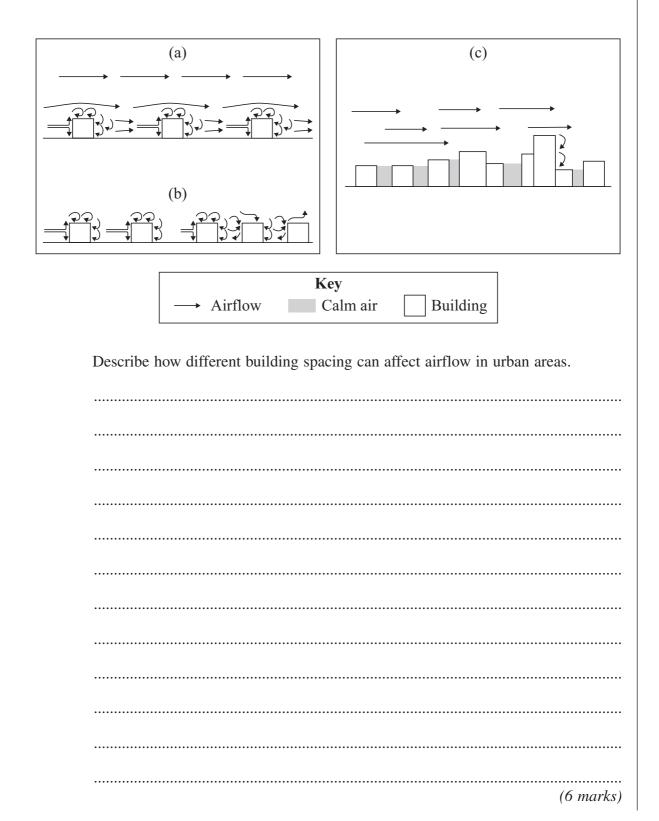
Turn over for Option R

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



	(ii)	Describe and explain how winds within urban areas vary in speed.
		(7 marks)
(b)	(i)	In the context of urban climates, define the following terms:
		Surface albedo

Question 3 continues on the next page

	Net heat loss.	
		(6 marks)
(ii)	Using example(s), describe the diurnal (daily) and seasonal variatio urban heat island effect.	ns in the
		(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.
	(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.
	(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.
	(7 marks)

Question 3 continues on the next page

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

50

END OF QUESTIONS

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.

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