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General Certificate of Education January 2006 Advanced Subsidiary Examination

GEOGRAPHY (SPECIFICATION B) Unit 2 The Physical Options

GGB2



Friday 13 January 2006 9.00 am to 10.00 am

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 8.

Option **R**: Urban Physical Environments (Temperate Urban

Areas) – Page 14.

- Do all rough work in this book. Cross through any work you do not want marked.
- Give sketch maps, diagrams and specific examples, where appropriate.
- If there is not enough space for your anwer(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 are reminded of the need for good English and clear presentation in your answers. All questions should be answered in continuous prose. Quality of Written Communication will be assessed in all answers.

For Examiner's Use								
Number	umber Mark Number Mark							
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Answer the question on Option P or Q or R.

All questions carry equal marks.

OPTION P: GLACIAL ENVIRONMENTS

Figure 1, Photograph: a glacial landscape, Source: www.gov.ns.ca - not reproduced here due to third-party copyright constraints.

(a) Study **Figure 1**, a photograph of a glacial landscape.

(i)	Identify the features of the glacial landscape labelled A, B, C and D	
	A	
	В	
	C	
	D	(4 marks)

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Describe one landform that has been created by glacial erosion.
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(6 marks)					
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(b) (i) Draw a labelled diagram to show the main characteristics of a typical drumlin.

(6 marks)

(ii)	Choose two of the foll	owing landforms:		
	Terminal moraine;	Medial moraine;	Ground moraine;	Lateral moraine.
	For each landform, des	scribe it and explain	n how it was formed	1.
	Landform 1			
	Landform 2			
				(8 marks)

Question 1 continues on the next page

(111)	Outline the differences between the nature of glacial and fluvioglacial deposits.
	(5 mark
name	e one landform that has been created by fluvioglacial processes. Describe the d landform and explain the role played by glacial meltwater in its formation.
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	(8 marks)
(d)	Name and describe one landform that has been formed under periglacial conditions.
	Name of landform
	(5 marks)

Turn over for the next question

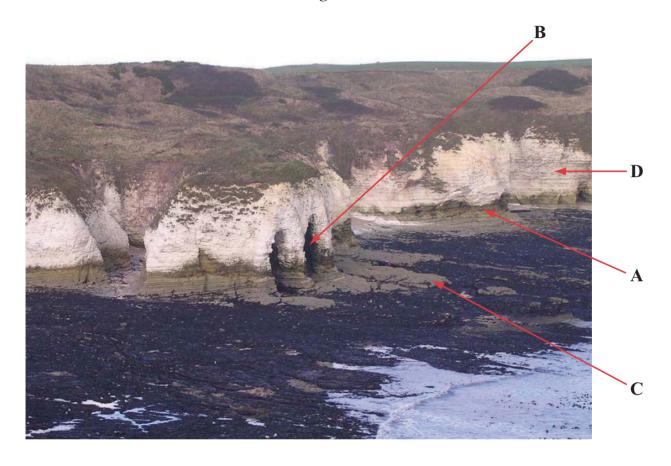
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Answer the question on Option P or Q or R.

OPTION Q: COASTAL ENVIRONMENTS

2 (a) Study Figure 2, a photograph of a coastal landscape.

Figure 2



6	i)	Identify	the	features	αf	the	coastal	landscape	labelled	1 🛕	\mathbf{R}	C	and	D
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A	
В	
C	
D	(4 marks)

•	n the context of coastal erosion , what is meant by the following terms?
P	Abrasion
•	(4 marks)
ŀ	Hydraulic Action
•	(4 marks)
	Using an example(s), show how the geology (rock type and structure) of a coastline has affected the landforms found there.
•	
•	
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Question 2 continues on the next page

	(8 marks)
(b)	Choose one sub-aerial process and explain how it has affected one stretch of coastline.

Chos	en landform
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•••••	(8 mar.
(i)	Choose either a sand dune environment or a salt marsh environment. Describ
	the main characteristics of your chosen environment.
	Chosen environment

Question 2 continues on the next page

	(5 marks)
(ii)	Explain the role played by vegetation in the formation of your chosen environment.
	(6 marks)

(e) Draw **two** labelled diagrams to show the characteristics of a fringing reef and an atoll.

(6 marks)

Turn over for the next question

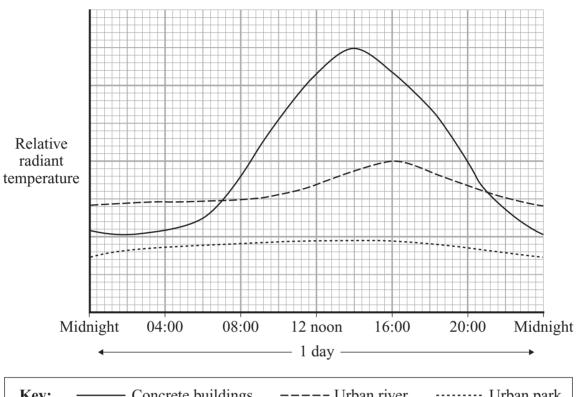
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Answer the question on Option P or Q or R.

OPTION R: URBAN PHYSICAL ENVIRONMENTS (TEMPERATE URBAN AREAS)

3 (a) Study **Figure 3**, a graph which shows surface air temperature.

Figure 3



Key:	——— Concrete buildings	Urban river	····· Urban park

(1)	period of one day.
	(3 marks

(ii)	Describe and explain the urban heat island effect.
	(8 marks)

Question 3 continues on the next page

(b) Study Figures 4 and 5, photographs of the same location in different years.Figure 4 (1952) Figure 5 (Present day)





What do the photographs suggest about the differences in the air quality between 1952 and the present day?

(5 mark
Explain why there is a greater incidence of fog in urban areas than in their surrounding rural areas.

Question 3 continues on the next page

(iii)	Outline ways in which planners and policy makers have attempted to improve the quality of the air in temperate urban areas.			
	(7 marks)			
(c) (i)	Using examples, explain how the planned introduction of new species has changed the vegetation composition of urban areas.			

	(8 marks)
(ii)	Describe the various attitudes to conservation within urban areas.
	(5 marks)

Question 3 continues on the next page

(iii)	Choose two of th	e follow	ing:	
	Routeways;	Parks;	Gardens;	Ecological conservation areas.
	Describe the disti	nctive ec	cology of ea	ach of your two choices.
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				(7 marks)

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END OF QUESTIONS

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Question 1 Figure 1: Photo by RALPH STEA. Courtesy of Nova Scotia Department of Natural Resources.

Question 3 Figure 3: John R Jensen, 2000, Remote Sensing of the Environment: An Earth Resource Perspective, New Jersey: Prentice Hall, 556 pages

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