

Surname						Other Names					
Centre Number						Candidate Number					
Candidate Signature											

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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 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 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	Mark	Number	Mark
P	X	R	X
1		3	
Q	X		
2			
Total (Column 1) →			
Total (Column 2) →			
TOTAL			
Examiner's Initials			

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

All questions carry equal marks.

OPTION P: GLACIAL ENVIRONMENTS

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

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

- (i) Identify the features of the glacial landscape labelled **A**, **B**, **C** and **D**.

A

B

C

D

(4 marks)

- (ii) In the context of glacial erosion, what is meant by the following terms?

Plucking

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(4 marks)

Abrasion

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(4 marks)

- (iii) Describe **one** landform that has been created by glacial erosion.

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Question 1 continues on the next page

(6 marks)

- (b) (i) Draw a labelled diagram to show the main characteristics of a typical drumlin.

(6 marks)

(ii) Choose **two** of the following landforms:

Terminal moraine; Medial moraine; Ground moraine; Lateral moraine.

For each landform, describe it and explain how it was formed.

Landform 1

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Landform 2

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(8 marks)

Question 1 continues on the next page

(iii) Outline the differences between the nature of glacial and fluvioglacial deposits.

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(5 marks)

(c) Name **one** landform that has been created by fluvioglacial processes. Describe the named landform and explain the role played by glacial meltwater in its formation.

Name of landform

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(8 marks)

- (d) Name and describe **one** landform that has been formed under periglacial conditions.

Name of landform

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(5 marks)

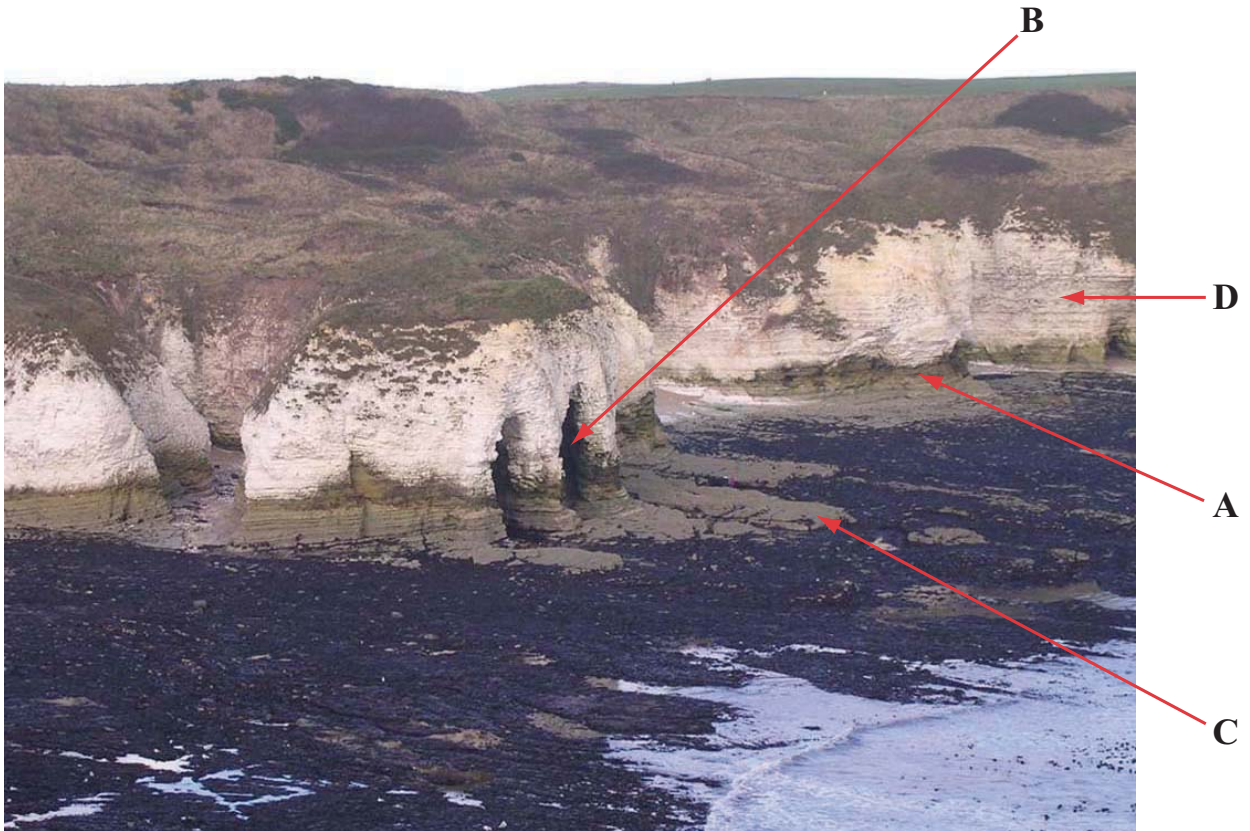
Turn over for the next question

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



- (i) Identify the features of the coastal landscape labelled **A**, **B**, **C** and **D**.

A

B

C

D

(4 marks)

- (ii) In the context of coastal **erosion**, what is meant by the following terms?

Abrasion

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(4 marks)

Hydraulic Action

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(4 marks)

- (iii) 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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(8 marks)

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

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(5 marks)

- Chosen landform

Chosen environment

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(5 marks)

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

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(6 marks)

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

(6 marks)

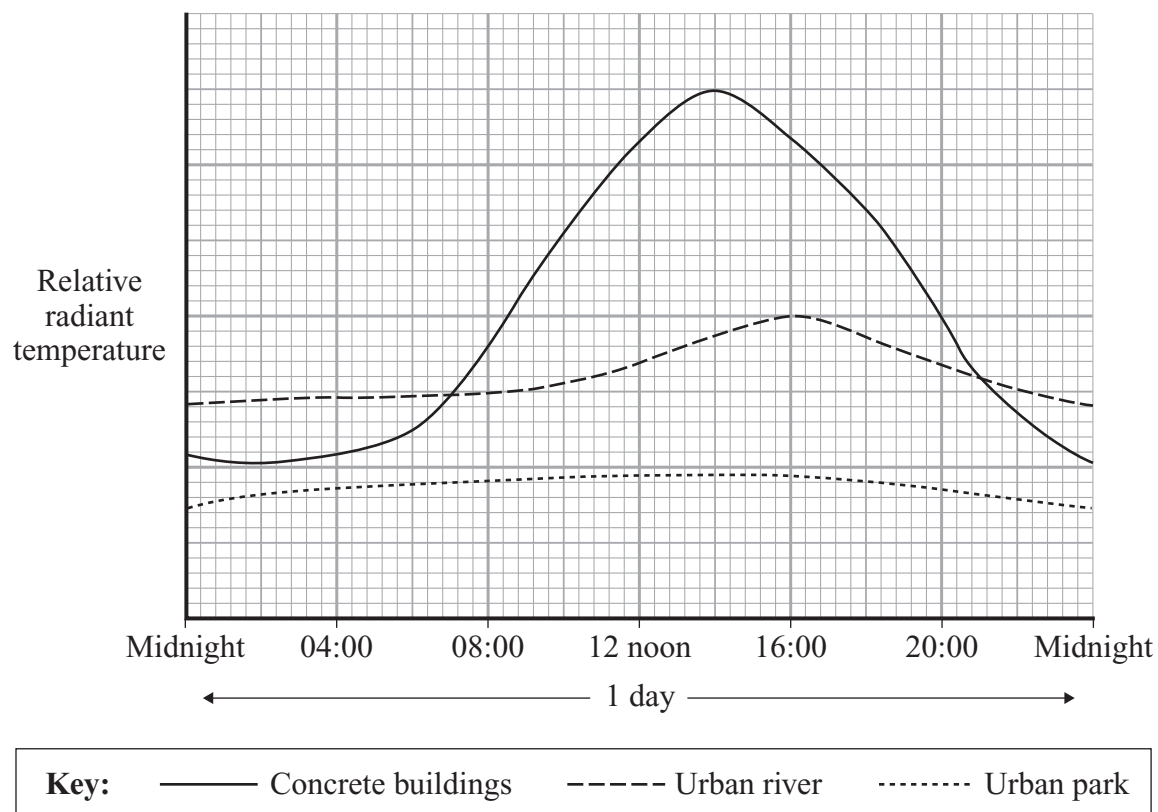
Turn over for the next question

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



- (i) Describe the changes in the radiant temperatures of various surfaces through a period of one day.

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(3 marks)

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

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(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)



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

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(5 marks)

- (7 marks)

(7 marks)

www.theallpapers.com

- (iii) Outline ways in which planners and policy makers have attempted to improve the quality of the air in temperate urban areas.

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(7 marks)

- (c) (i) Using examples, explain how the planned introduction of new species has changed the vegetation composition of urban areas.

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(8 marks)

- (ii) Describe the various attitudes to conservation within urban areas.

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(5 marks)

Question 3 continues on the next page

(iii) Choose **two** of the following:

Routeways; Parks; Gardens; Ecological conservation areas.

Describe the distinctive ecology of each of your two choices.

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(7 marks)

50

END OF QUESTIONS

Write the question number in the left hand margin.

Write the question number in the left hand margin.

Write the question number in the left hand margin.

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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