

Surname						Other Names					
Centre Number						Candidate Number					
Candidate Signature											

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General Certificate of Education
 June 2004
 Advanced Subsidiary Examination



GEOGRAPHY (SPECIFICATION B)
Unit 2 The Physical Options

GGB2

Monday 7 June 2004 Afternoon Session

No additional materials are required.
 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 Environments) – 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.
- Mark allocations are shown in brackets.
- You are expected to use a calculator where appropriate.
- You will be assessed 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 degree of legibility of your handwriting and the level of accuracy of your spelling, punctuation and grammar will also be taken into account.

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

Answer the question on Option P or Q or R.

OPTION P GLACIAL ENVIRONMENTS

- 1 (a) (i) Study **Figure 1**. Describe the **differences** between the limit of the last glacial advance and the limit of maximum glacial advance in Northern Europe.

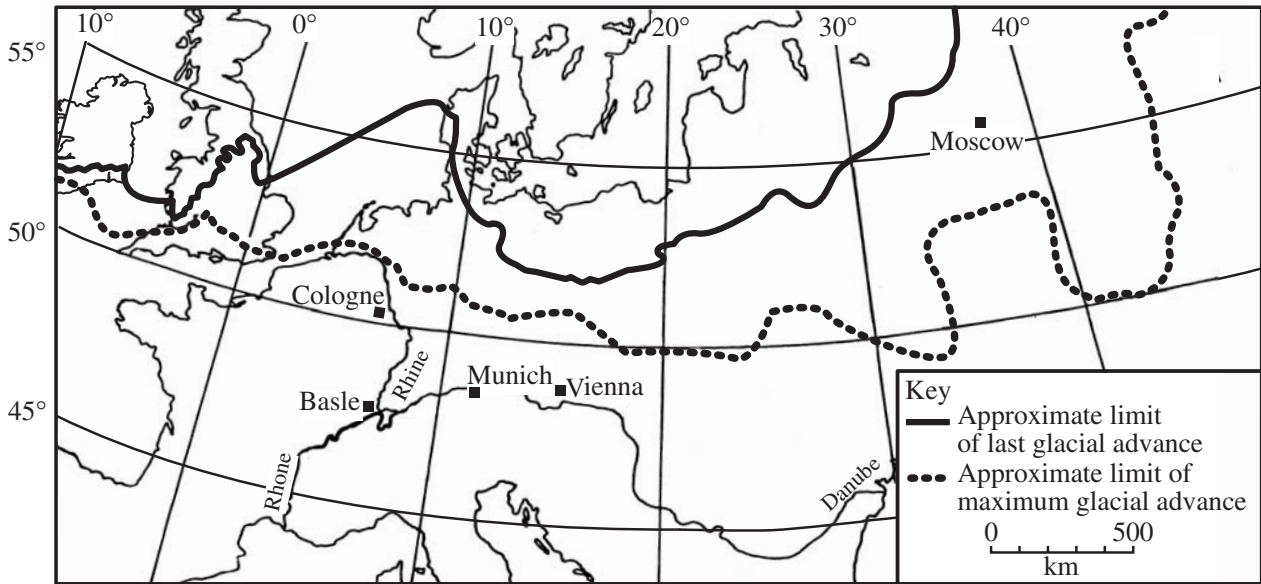


Figure 1

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(4 marks)

(ii) Suggest **two** pieces of evidence that could have been used to identify these limits.

Evidence 1:

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Evidence 2:

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(2 marks)

(b) Explain how each of the following glacial processes erodes rock in contact with glacial ice.

(i) Plucking

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(4 marks)

(ii) Abrasion

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Using **Figures 2a** and **2b** describe the velocity profile:

(i) across the surface of a glacier

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(4 marks)

(ii) vertically through a glacier

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(4 marks)

QUESTION 1 CONTINUES ON THE NEXT PAGE

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(ii) Nivation

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(4 marks)

(iii) Choose **one** landform that has been created by nivation and describe that landform.

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(6 marks)



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Answer the question on Option P or Q or R.

OPTION Q COASTAL ENVIRONMENTS

2 (a) Study **Figure 3**, which shows coral reefs and protected areas in Jamaica.

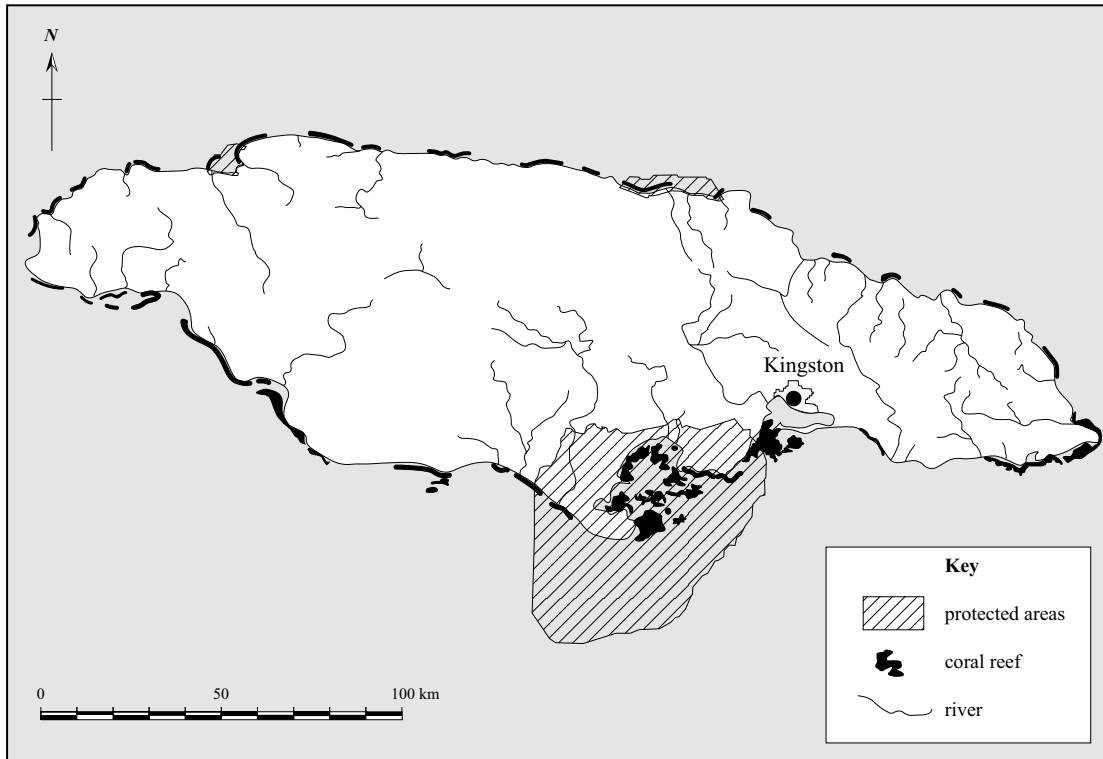


Figure 3

(i) Describe the distribution of coral reefs and protected areas in **Figure 3**.

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(6 marks)

(ii) Study **Figure 4**, which shows differing effects of geology on cliff profiles.

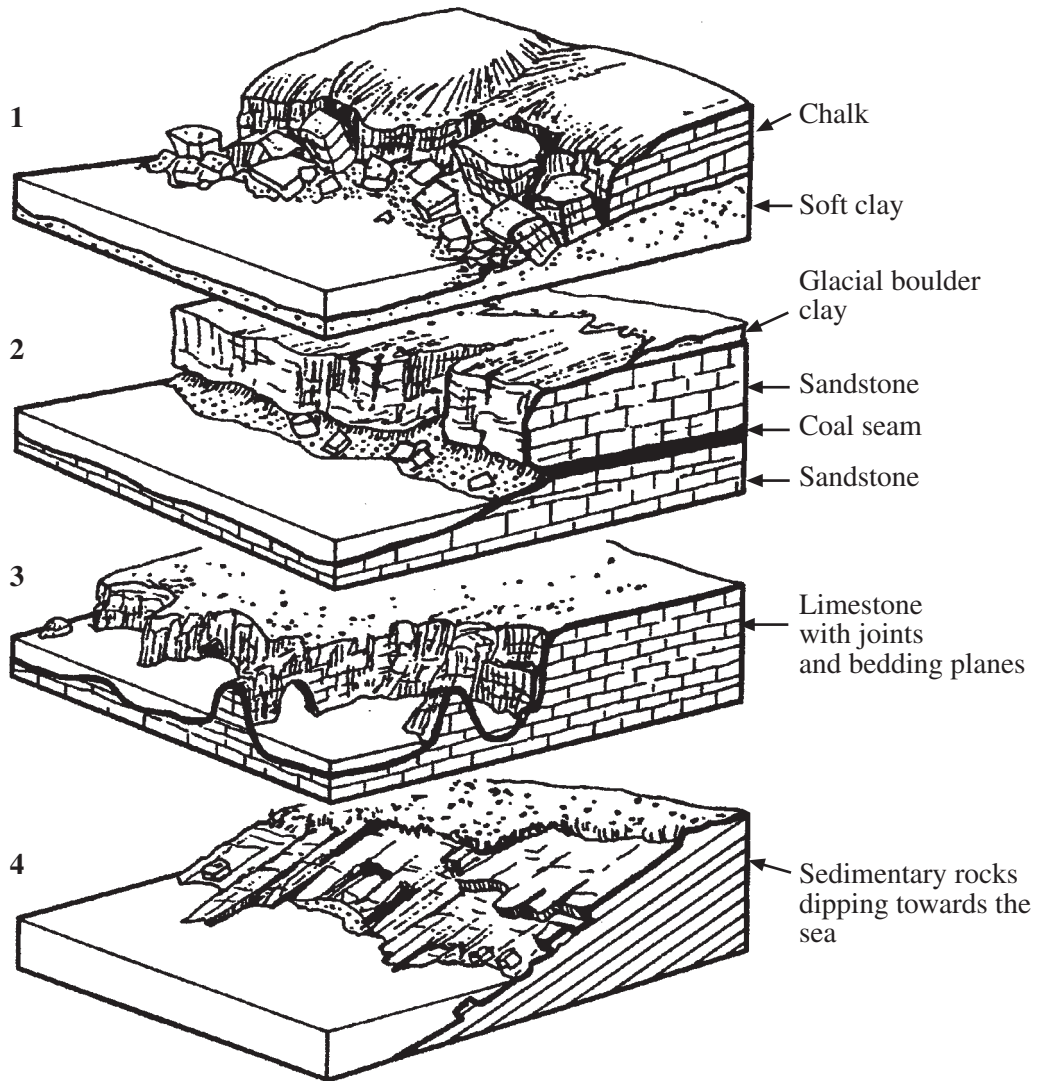


Figure 4

Describe how the cliff profiles shown in **Figure 4** are affected by the geology.

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(8 marks)

- (c) Name **two** sub-aerial processes that act upon coastlines. For each process explain how it works and describe its effect upon the coastline.

Sub-aerial process 1

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Sub-aerial process 2

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(4 marks)

(d) Choose **one** landform that has been created partly by the process of marine deposition.

(i) Describe your chosen landform.

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(4 marks)

(ii) Explain its formation.

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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 5**, which relates to temperatures in cities and their surroundings.

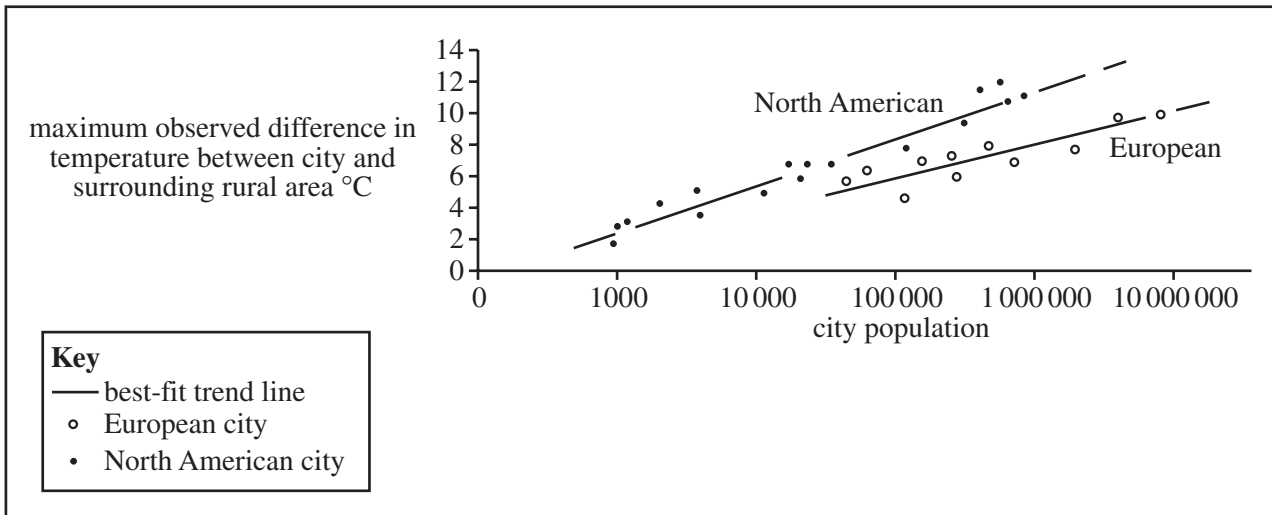


Figure 5

(i) Describe and compare the relationships shown in **Figure 5**.

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(6 marks)

(b) Study **Figure 6**, which shows thunderstorm frequency in a large North American urban area.

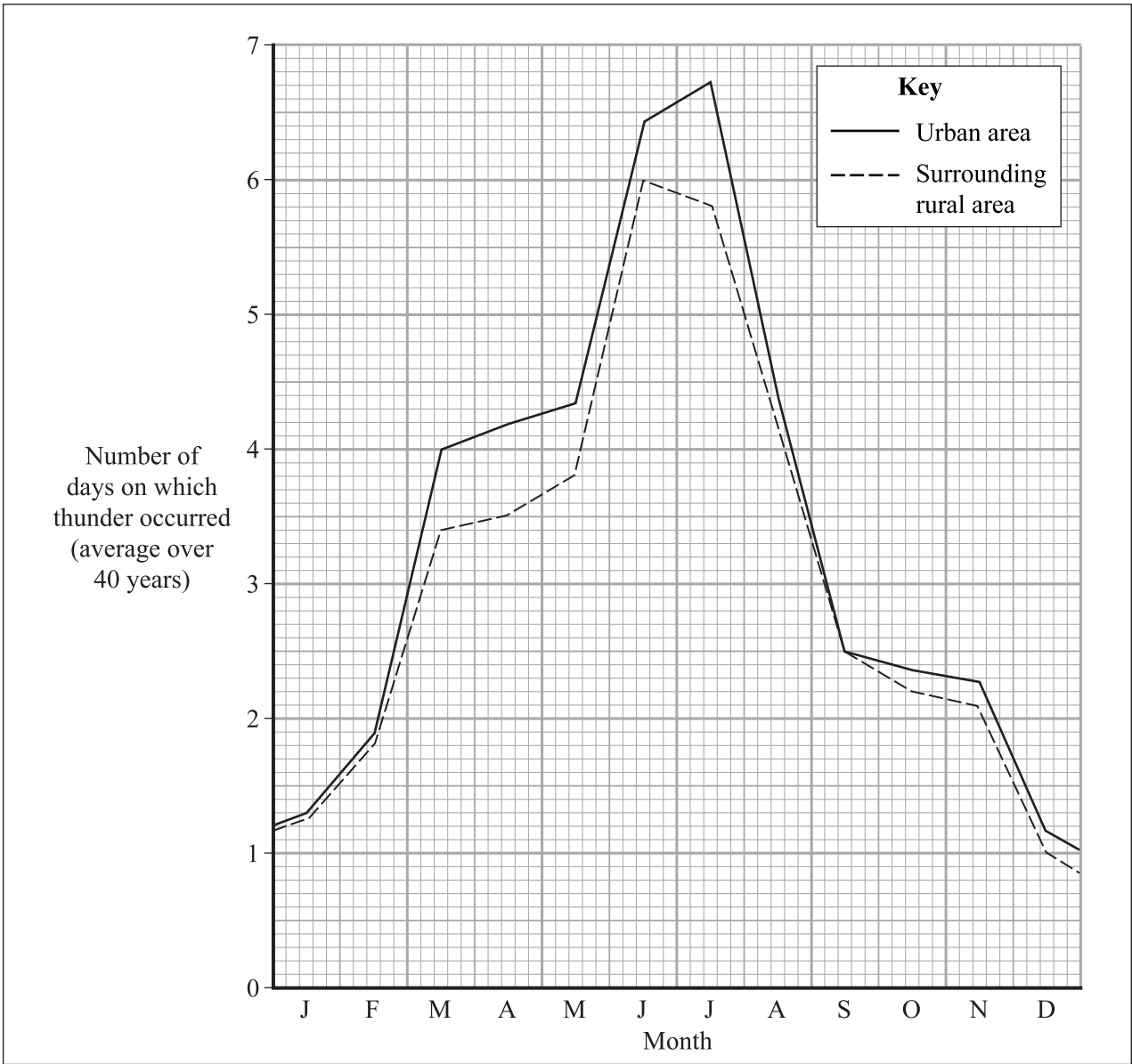


Figure 6

(ii) Explain why there are more thunderstorms in urban areas than in surrounding rural areas.

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(c) (i) In the context of urban climate, what is meant by the term ‘particulate pollution’?

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(ii) Identify **two** policies that are aimed at reducing particulate pollution in urban areas. How do these policies lead to lower levels of particulate pollution?

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(6 marks)

(d) (i) In the context of the ecology of urban areas, what is meant by the following terms?

Plant succession

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Turn over ►

Distinctive ecology

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(4 marks)

(ii) Using examples, describe how new species can be introduced into urban areas.

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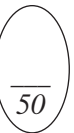
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(6 marks)

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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THERE ARE NO QUESTIONS PRINTED ON THIS PAGE

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Question 1: Figure 1: *Environmental Systems – an introductory text* by White, Mottershead and Harrison (Chapman & Hall, publisher)

Question 1: Figures 2a and 2b: *Environmental Systems – an introductory text* by White, Mottershead and Harrison (Chapman & Hall, publisher)

Question 2: Figure 3: Source: ReefBase (www.ReefBase.org)

Question 2: Figure 4: Edexcel

Question 3: Figure 5: Copyright © Oxford University Press, from *Geography: Success at A Level* by Kris Spencer, used by permission of Oxford University Press

Question 3: Figure 6: Copyright © Oxford University Press, from *Geography: Success at A Level* by Kris Spencer, used by permission of Oxford University Press

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