



B O A R D O F S T U D I E S
NEW SOUTH WALES

2001

**HIGHER SCHOOL CERTIFICATE
EXAMINATION**

Geography

General Instructions

- Reading time – 5 minutes
- Working time – 3 hours
- Write using black or blue pen
- Board-approved calculators may be used
- A Stimulus Booklet is provided with this paper
- Write your Centre Number and Student Number at the top of pages 9, 13 and 15

Total marks – 100

Section I Pages 2–6

15 marks

- Attempt Questions 1–15
- Allow about 25 minutes for this section

Section II Pages 9–16

25 marks

- Attempt Questions 16–18
- Allow about 45 minutes for this section

Section III Page 17

60 marks

- Attempt Questions 19–21
- Allow about 1 hour and 50 minutes for this section

Section I

15 marks

Attempt Questions 1–15

Allow about 25 minutes for this section

Refer to the Stimulus Booklet

Use the multiple-choice answer sheet.

Select the alternative A, B, C or D that best answers the question. Fill in the response oval completely.

Sample: $2 + 4 =$ (A) 2 (B) 6 (C) 8 (D) 9
A B C D

If you think you have made a mistake, put a cross through the incorrect answer and fill in the new answer.

A B C D

If you change your mind and have crossed out what you consider to be the correct answer, then indicate the correct answer by writing the word **correct** and drawing an arrow as follows.

A B C D
correct
↙

Acknowledgments

Source A: The Top 200 companies 1987 and 1997

Kirkpatrick, Russell, 1999, *Bateman Contemporary Atlas of New Zealand*, David Bateman Ltd, Auckland.

Source B: Full-time employment by industry 1996

Kirkpatrick, Russell, 1999, *Bateman Contemporary Atlas of New Zealand*, David Bateman Ltd, Auckland.

Source C: Index of Deprivation Christchurch City 1996 Census

Kirkpatrick, Russell, 1999, *Bateman Contemporary Atlas of New Zealand*, David Bateman Ltd, Auckland.

Source E: Cartogram of Christchurch

Kirkpatrick, Russell, 1999, *Bateman Contemporary Atlas of New Zealand*, David Bateman Ltd, Auckland.

Source I: Avon-Heathcote Estuary

Kirkpatrick, Russell, 1999, *Bateman Contemporary Atlas of New Zealand*, David Bateman Ltd, Auckland.

1 Refer to Source A.

What was the change (1987–1997) in the percentage of the Top 200 companies in Auckland that were New Zealand-owned?

- (A) 18%
- (B) 22%
- (C) 32%
- (D) 42%

2 Refer to Source B.

What was the approximate number of people employed in Manufacturing in 1996?

- (A) 53 900
- (B) 180 200
- (C) 234 100
- (D) 274 800

3 Which statement best defines the geographical term *sustainability*?

- (A) The degree to which phenomena depend on each other for development and/or survival.
- (B) The ability to meet the needs of the present generation without compromising the ability of future generations to meet their needs.
- (C) The relationship between people and the environment and the effect that they have on each other.
- (D) The variety of living organisms on earth and the recognition of the need to maintain and protect this diversity.

4 Refer to Source E.

The cartogram shows the population of Christchurch in 1996.

What was the approximate population of Christchurch?

- (A) 200 000
- (B) 300 000
- (C) 400 000
- (D) 500 000

5 Refer to Source F.

What is the approximate gradient between the top of Mt Pleasant GR 890377 and GR 905402?

- (A) 1 in 2
- (B) 1 in 6
- (C) 1 in 10
- (D) 1 in 12

6 Refer to Source F.

Calculate the time taken to travel at an average speed of 40 km/h from Riccarton Racecourse (GR 750443) to Leadleys Road (GR 755356) using Provincial State Highways 73 and 75.

- (A) 12 minutes
- (B) 14 minutes
- (C) 18 minutes
- (D) 24 minutes

7 Refer to Sources F and H.

What direction was the photographer facing when the photograph in Source H was taken from the lookout at AR 8737?

- (A) NW
- (B) SW
- (C) SE
- (D) NE

8 Refer to Source G.

What is the feature located at X?

- (A) Low pressure system
- (B) Cold front
- (C) Warm front
- (D) High pressure system

9 Refer to Sources A and G.

Which statement best describes the weather conditions likely to have been experienced at Christchurch over the twelve-hour period from 10 am on 2 December 2000?

- (A) Decreasing temperature, increasing wind strength, possible rain
- (B) Increasing temperature, increasing wind strength, possible rain
- (C) Decreasing temperature, decreasing wind strength, possible rain
- (D) Increasing temperature, decreasing wind strength, possible rain

10 Refer to Sources A, C, F and I.

Which of the sources has the largest scale?

- (A) Source A
- (B) Source C
- (C) Source F
- (D) Source I

11 Refer to Source J.

Which urban area has the largest net internal in-migration?

- (A) Auckland
- (B) Christchurch
- (C) Dunedin
- (D) Wellington

12 Refer to Sources A and J.

Which of the following geographical concepts are relevant to both sources?

- (A) The nature, character and spatial distribution of world cities
- (B) The changing roles of regional centres and the demise of the small town
- (C) The impact of international migration
- (D) The environmental impacts of economic activities

13 Refer to Source I.

How many black swans were found in the nesting site located in the north-west of the Avon–Heathcote Estuary?

- (A) 40
- (B) 600
- (C) 1500
- (D) 5000

14 Refer to Sources I and K.

Which of the following had the greatest impact on the Avon–Heathcote Estuary’s ecosystem in 2000?

- (A) Estuary dredging
- (B) Untreated sewage
- (C) Recreational pressures
- (D) Seepage from the former landfill site

15 Which of the following includes only examples of secondary data used in geographical inquiry?

- (A) Graphical information, published reports and newspaper editorials
- (B) Statistics, graphical information and surveys
- (C) Photographs, field measurements and newspaper editorials
- (D) Texts, interviews and observations

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Geography

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Centre Number

Section II

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Student Number

25 marks

Attempt Questions 16–18

Allow about 45 minutes for this section

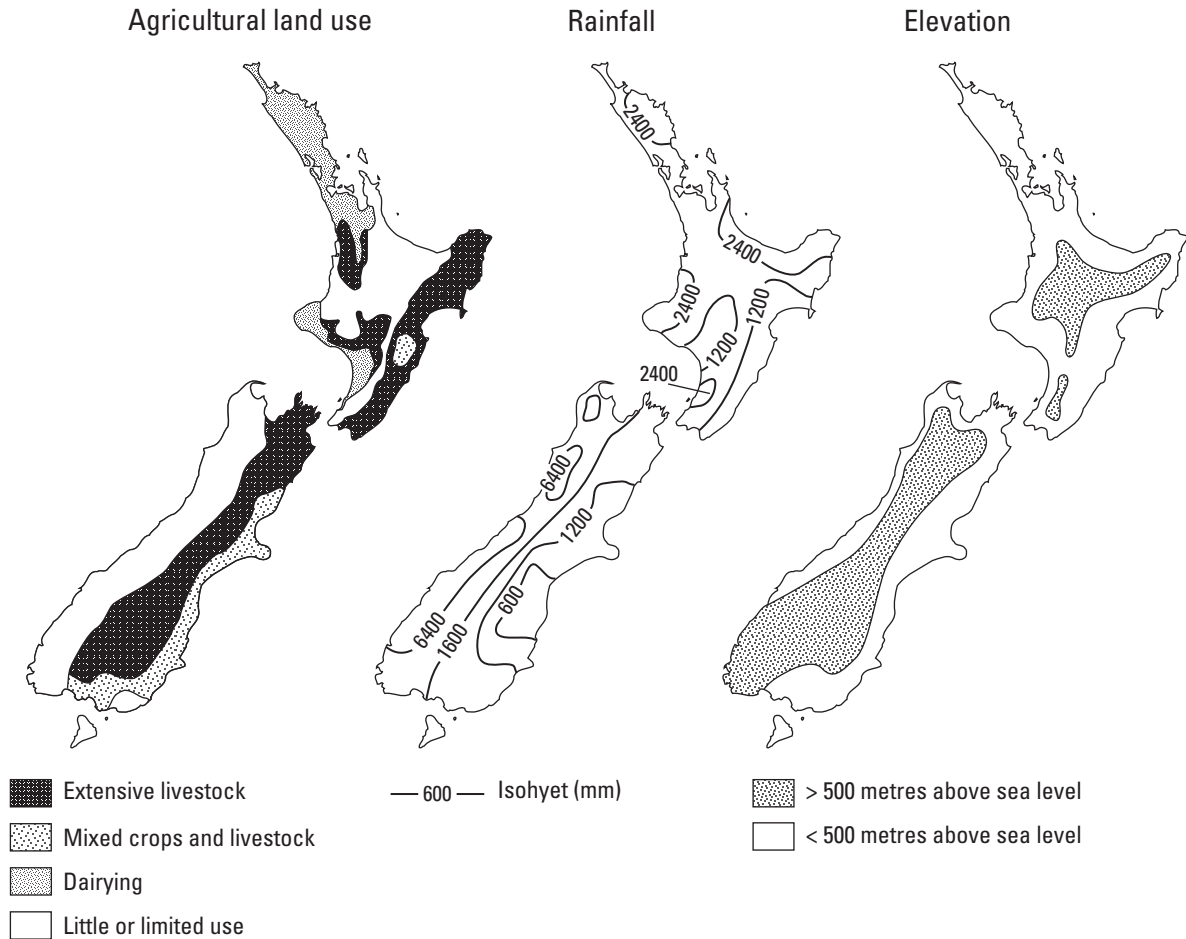
Use the Stimulus Booklet and your knowledge of geography to answer Questions 16–18 in the spaces provided.

Question 16 (6 marks)

Please turn over

Question 16 (6 marks)

Refer to Source A and the following maps of New Zealand.



(a) What are the land uses found along the transect from Auckland to Wellington? **2**

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Question 16 continues on page 11

Question 16 (continued)

- (b) Account for the distribution of agricultural land use in the South Island of New Zealand. **4**

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End of Question 16

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Centre Number

Section II (continued)

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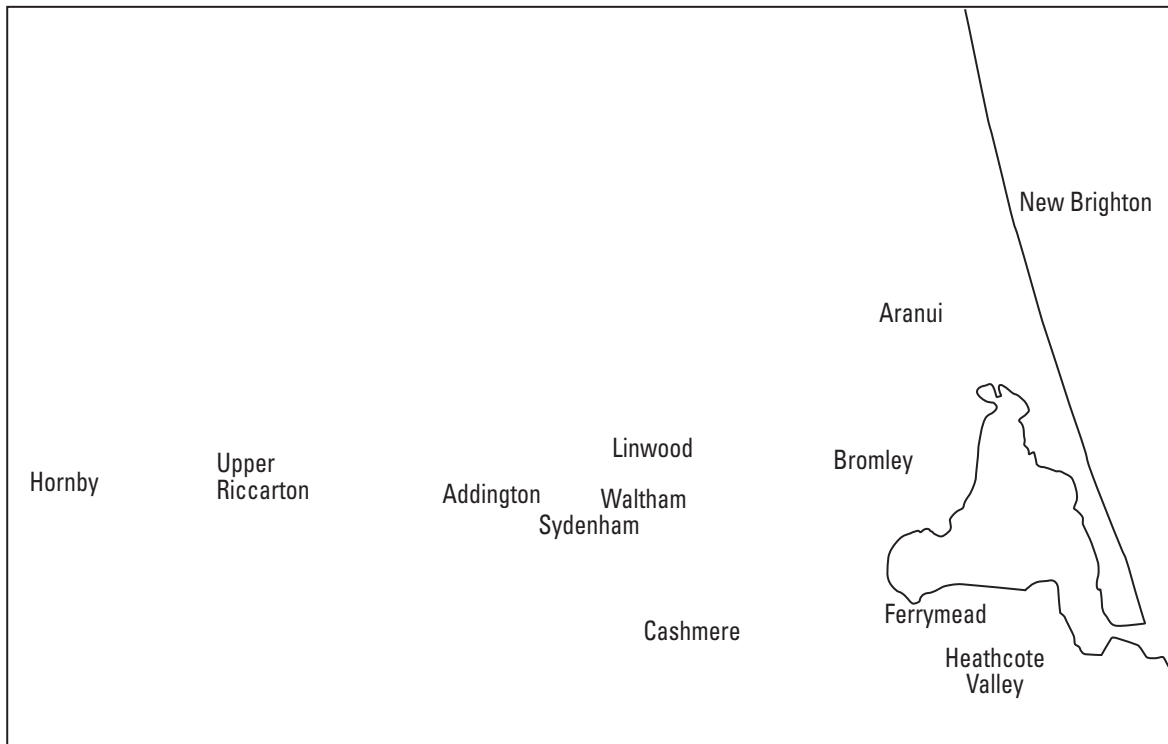
Student Number

Marks

Question 17 (9 marks)

(a) Refer to Source C.

Draw a simplified choropleth map to show the distribution of deprivation in Christchurch. 3



KEY

- Most deprived
- Mixed
- Least deprived

Question 17 continues on page 14

Question 17 (continued)

(b) Refer to Sources C, D, F, H and I.

From these sources, name TWO locations within Christchurch that demonstrate different urban dynamics, and account for these differences.

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End of Question 17

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Centre Number

Section II (continued)

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Student Number

Marks

Question 18 (10 marks)

Refer to Sources I and K.

- (a) Identify TWO human activities that may place the Avon–Heathcote Estuary at risk. **2**

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- (b) Identify a management strategy currently used in the Avon–Heathcote Estuary, and evaluate its likely success in terms of the ecological sustainability of this ecosystem. **4**

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Question 18 continues on page 16

Question 18 (continued)

- (c) What are TWO important questions that a geographer could ask to determine the validity and reliability of the 'Selected Bird Numbers' information? **4**

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End of Question 18

Geography

Section III

60 marks

Attempt Questions 19–21

Allow about 1 hour and 50 minutes for this section

Answer each question in a SEPARATE writing booklet. Extra writing booklets are available.

In your answer, you will be assessed on how well you:

- present a sustained, logical and well-structured answer to the question
 - communicate geographical information, ideas and issues
 - refer to appropriate case studies, illustrative examples and the Stimulus Booklet where appropriate
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Question 19 (20 marks)

Analyse the human impacts affecting the nature and rate of change of TWO ecosystems at risk.

Question 20 (20 marks)

Compare the results of the urban dynamics in a large city from the developed world with those in Christchurch evident in the Stimulus Booklet.

Question 21 (20 marks)

Explain how global changes in an economic activity have affected an enterprise you have studied at a local scale.

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