

**GEOGRAPHY
HIGHER LEVEL
PAPER 3**

Thursday 23 May 2002 (morning)

2 hours

INSTRUCTIONS TO CANDIDATES

- Do not open this examination paper until instructed to do so.
- Answer Section A.
- Answer **either** two questions from Section B **or** one question from Section B and one question from Section C.

SECTION A

TOPOGRAPHICAL MAPPING










Answer all parts of the question in this section.

1. Refer to the topographic map extract and the photograph that show an area on the east coast of the South Island of New Zealand. The main town, Christchurch, has a population of about 300 000 people, and is surrounded to the north, west and south-west by a fertile farming area known as the Canterbury Plains. To the west of the area shown are the Southern Alps, a high mountain range formed by the collision of two tectonic (crustal) plates. To the south-east of Christchurch, and shown on the map, is the Banks Peninsula, an extinct volcanic cone that has collapsed, forming a caldera known as Akaroa Harbour.







The scale of the map is 1:250 000. Heights are in metres above mean sea level.

- (a) Draw a large sketch map of the area shown in the map extract to show the major landform features. [7 marks]
- (b) Describe and explain the pattern of roads in the area shown. [5 marks]
- (c) For the photograph:
 - (i) name and briefly describe the places shown in the photograph;
 - (ii) estimate the compass direction in which the camera is pointing. [3 marks]
- (d) Referring to the map extract, discuss the advantages and disadvantages of Christchurch's location. [5 marks]

















ROADS

National State Highway	
Provincial State Highway	
Other roads	
Vehicle track	
Foot track	
Road Surface {	
	
	
Tunnel	










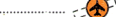

RAILWAYS

Railway	
Railway station	
Level crossing	
Road over railway	
Railway over road	
Tramway	



NATURAL FEATURES

Stream or watercourse	
Sand & mud	
Sand & shingle	
Swamp	
Mangroves	
Coastal rocks	
Sandhills	
Waterfall	
Glacier	
Cliff	
Rock outcrop	
Cave	
Saddle	
Native forest	
Exotic forest	
National Park or State Forest Park boundary	

OTHER CULTURAL FEATURES

Built-up area	
Building or group of buildings	
Isolated homestead	
Radio mast; TV Mast	
Main electric power line	
International Airport	
Airport	
Aerodrome	
Lighthouse	
Mine or quarry	
Race course	

HEIGHT INFORMATION

Elevation in metres	
Trig station	





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Answer *either* two questions from Section B *or* one question from Section B and one question from Section C.

SECTION B

THE NATURAL ENVIRONMENT

2.

Name **one** atmospheric hazard, explain the causes of this hazard, and describe ways in which damage from this hazard can be minimized.

[20 marks]
3.

Refer to the map extract on page 3 and select examples of **either two** coastal landforms shown on the map **or two** river landforms shown on the map. Identify the two landforms selected and describe the processes that have led to their formation.

[20 marks]
4.

Draw a full-page, well-labelled diagram that shows the operation of the water cycle. On the same diagram, add at least five ways that humans can affect the natural operation of the water cycle. Select **one** of these human impacts, and discuss its significance in specific areas that you have studied.

[20 marks]
5.

Discuss the ways in which humans have caused stress on some specific ecosystems, and evaluate the effectiveness of management strategies in controlling those stresses.

[20 marks]

SECTION C

RESOURCES

6.

Discuss the consequences of the uneven distribution of natural resources. In your answer, refer to at least **two** different natural resources as examples.

[20 marks]
7.

With reference to **two** environmental issues, explain why an understanding of natural processes is necessary for effective management and sustainable outcomes.

[20 marks]