

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

GEOGRAPHY

0460/01

Paper 1

May/June 2006

Additional Materials: Answer Booklet/Paper
Ruler

1 hour 45 minutes

READ THESE INSTRUCTIONS FIRST

If you have been given an Answer Booklet, follow the instructions on the front cover of the Booklet.
Write your Centre number, candidate number and name on all the work you hand in.
Write in dark blue or black pen.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer **three** questions.

Sketch maps and diagrams should be drawn whenever they serve to illustrate an answer.

The insert contains Photograph A for Question 2 and Photographs B, C and D for Question 3.

At the end of the examination, fasten all your work securely together.

The number of marks is given in brackets [] at the end of each question or part question.

- 1 (a) Study Fig. 1, population pyramids of Ethiopia (an LEDC) and The Netherlands (a MEDC).

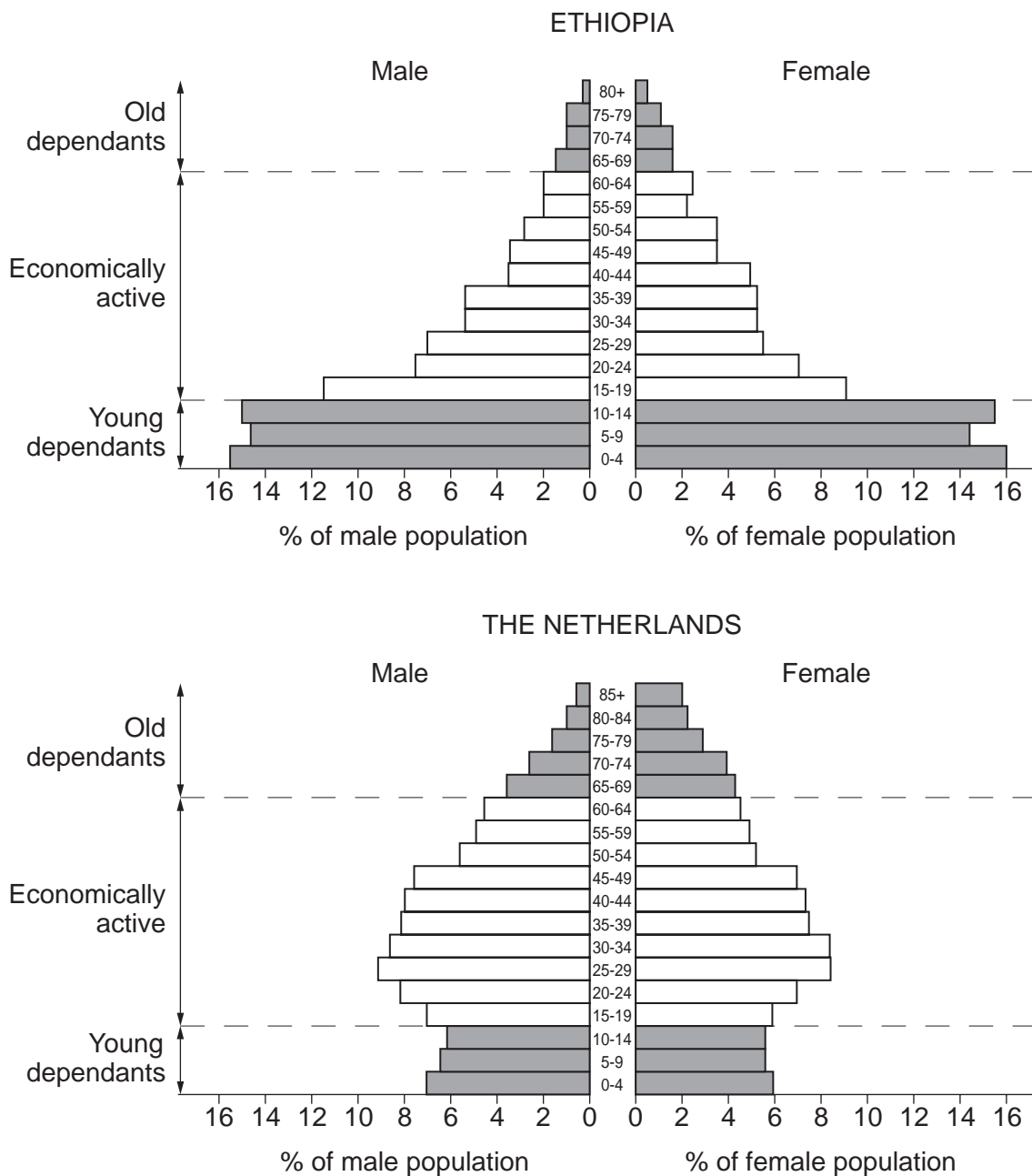


Fig. 1

- (i) Which age group in Ethiopia has the largest percentage of both males and females? [1]
- (ii) What evidence in the population pyramids suggests that:
- A. people in The Netherlands have a longer life expectancy than people in Ethiopia?
- B. Ethiopia has a higher birth rate than The Netherlands? [2]
- (iii) How does the dependent population of Ethiopia differ from that of The Netherlands? Support your answer with figures. [3]
- (iv) Describe the ways in which the dependent population is supported in LEDCs and MEDCs. [4]

- (b) Study Fig. 2, an extract about population growth in Japan.

Population crisis in Japan

Japan's population growth has slowed to the lowest rate since the 1940s. In 1999, Japan's population grew by 0.16% to reach 126.7 million. Of that number, children under 14 made up about 14.8% of the population, a record low. By comparison, the same group in 1949 represented 35.5% of the population. A United Nations population report indicates that Japan's population is expected to fall to 105 million by 2050, with the average age expected to rise from 41 to 49. The proportion of the population 65 and older is expected to grow from 17% to 32% over the same period.

Fig. 2

- (i) Suggest reasons why Japan has an ageing population. [3]
- (ii) Suggest the likely effects of this population trend on the Japanese economy by 2050. [5]
- (c) Explain why the governments of some countries may be concerned by a rapid growth of population. You may refer to examples which you have studied. [7]

- 2 (a) Study Fig. 3 which shows data about the quality of life in nine large urban areas. Photograph A (Insert), taken in New York, USA.

Quality of life indicators for nine large urban areas.

Urban Area	Socio-economic indicators			Environmental indicators		
	Persons per room	% homes with water & electricity	Murder per 100 000	Levels of measured noise (1–10)	Mean traffic speed (km/h in rush hour)	Levels of measured air pollution (1–10)
Tokyo	0.9	100	1.4	4	44.8	4
Mexico City	1.9	94	27.6	6	12.8	9
Sao Paulo	0.8	93	26.0	6	24.0	4
New York	0.5	99	12.8	8	13.9	5
Shanghai	2.0	95	2.5	5	24.5	4
Los Angeles	0.4	100	12.4	6	30.4	7
Kolkata	3.0	60	1.1	4	21.3	10
Mumbai	4.2	83	1.1	5	16.6	7
Beijing	1.6	89	2.5	4	41.1	10

Note: where 1–10 scale is used 1 is low and 10 is high.

Fig. 3

- (i) What is meant by *urban area*? [1]
- (ii) Use Fig. 3 to name an urban area where:
- A. housing is overcrowded,
- B. air quality is poor. [2]
- (iii) Using **only information from Fig. 3**, identify three differences between the quality of life of people living in Shanghai and New York. [3]
- (iv) Using evidence from Photograph A, describe the problems which are likely to be faced by people who live in New York. [4]
- (b) Study Fig. 4, based on a newspaper article about traffic in Auckland, New Zealand.

No contest as bikes hit heavy traffic

TRANSPORT: Cars, buses and bikes raced to the city in rush hour challenge. Pedal power ruled.

Cyclists left car drivers behind yesterday as they pedalled their bikes through Auckland's slow traffic in the morning rush hour.

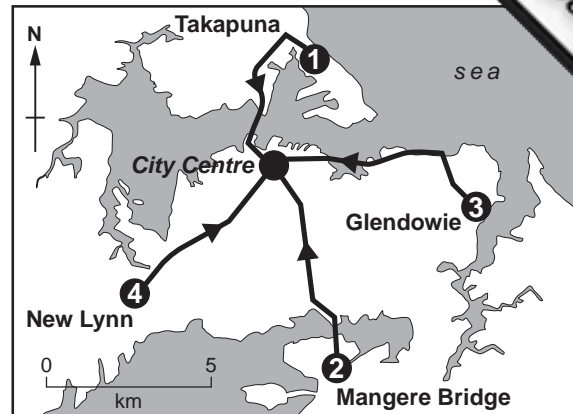
In the Auckland Commuter Challenge four sets of cyclists, car drivers and buses raced into the centre of Auckland.

The cyclists were quickest with an average time of 26 minutes 51 seconds. This is the latest demonstration of Auckland's traffic crisis, says Cycle Action Auckland, which organised the event.

About 6 per cent of commuters travel by bike or foot, 7 per cent by public transport and the rest in their cars.

Traffic congestion is getting worse as 3 per cent more cars each year are using roads that have not been significantly improved.

Tuesday's announcement of a \$1.6 billion funding package to improve the road network is hoped to get Auckland moving.



1 North

30:50



35:38



54:44



2 South

28:04



27:37



45:35



3 East

24:40



30:19



68:59



4 West

23:49



32:35



43:25



Key: 43:25 = 43 minutes 25 seconds

Fig. 4

- (i) How do the results of the 'rush hour challenge' reported in Fig. 4 show that there is traffic congestion in Auckland? [3]
- (ii) Explain why traffic congestion is a problem in many large urban areas. [5]
- (c) In all large urban areas attempts have been made to solve the problems faced by the people who live there. These include problems such as:

traffic congestion,
squatter settlements,
housing shortages,
urban sprawl.

Choose **either** one of these problems **or** any other problem faced by people who live in urban areas. For a named urban area, describe the attempts which have been made to solve the problem which you have chosen.

- 3 (a) Study Fig. 5, which shows the global distribution of areas with coral reefs.

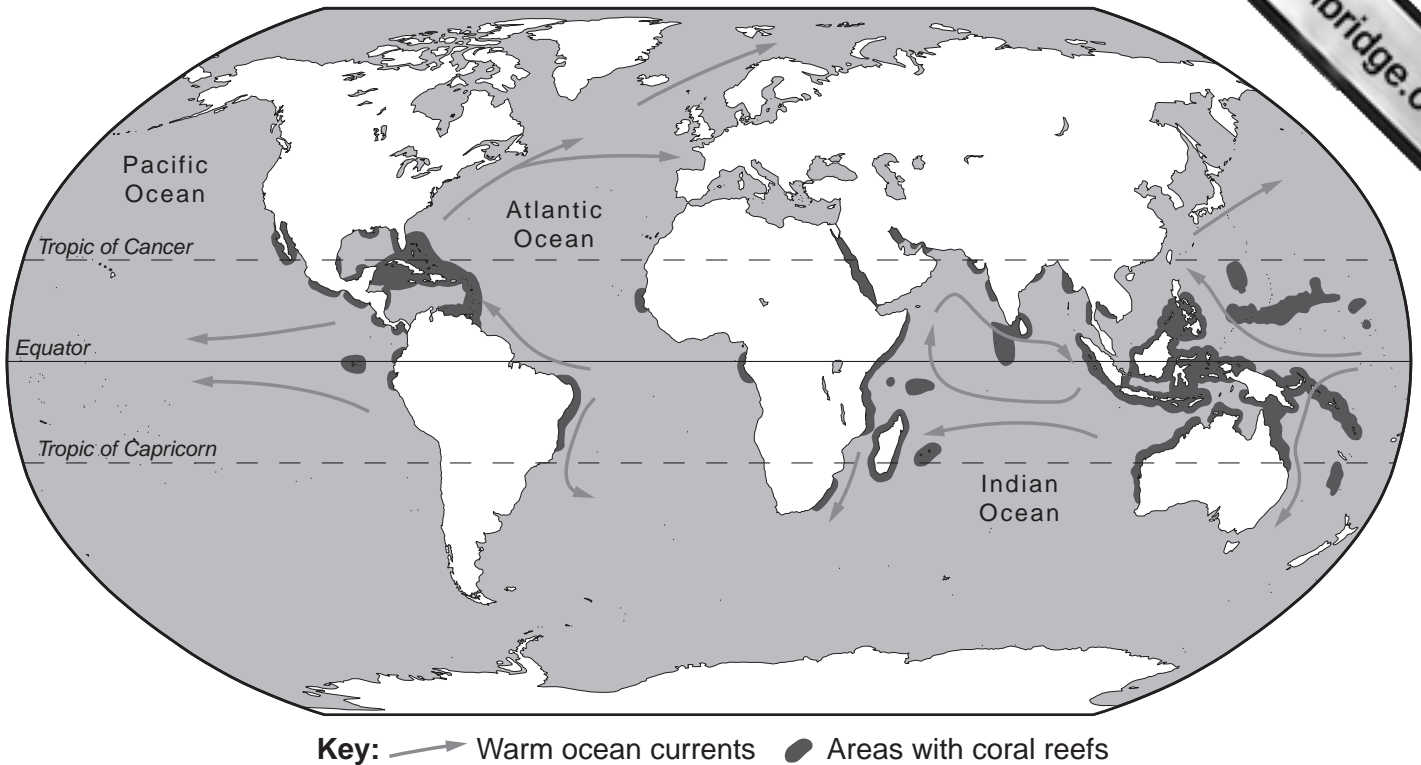


Fig. 5

- (i) What is a *coral reef*? [1]
- (ii) Australia is a country with coral reefs. Name **two** other countries with coral reefs along their coastlines. [2]
- (iii) Describe the global distribution of coral reefs. [3]
- (iv) Describe the conditions required for the development of coral reefs. [4]
- (b) Study Photographs B, C and D (Insert), which show human activities in three different coastal areas.
- (i) Using **only evidence from the photographs**, identify three ways in which coastal areas can provide opportunities for people. [3]
- (ii) Explain how human activities can damage the natural environment in coastal areas. You can refer to the areas shown in the photographs or to any examples which you have studied. [5]
- (c) Explain how the natural features of headlands are formed as a result of wave processes. You may use labelled diagrams in your answer. [7]

- 4 (a) Study Fig. 6 which shows three instruments which are used to measure characteristics of weather.

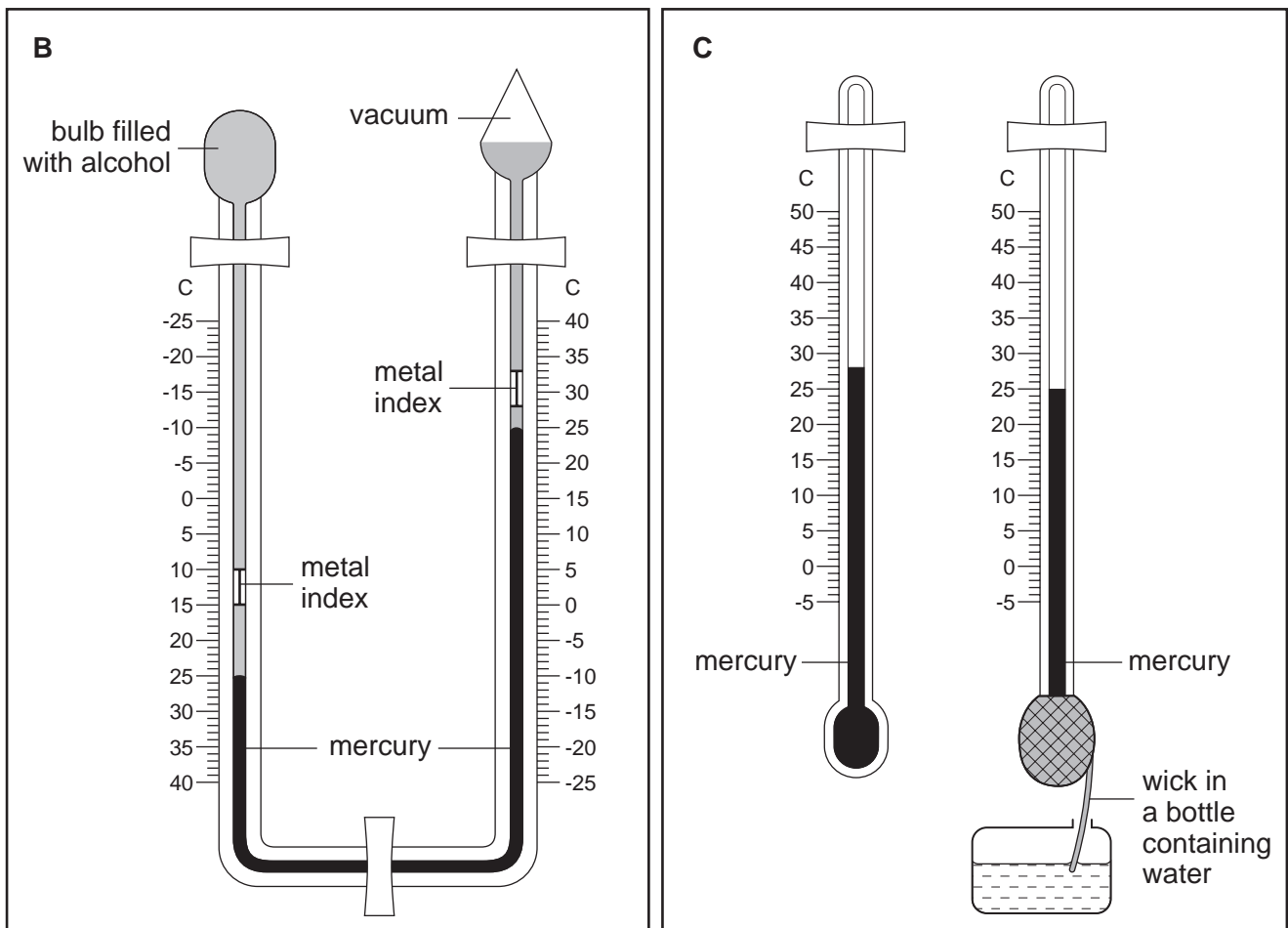
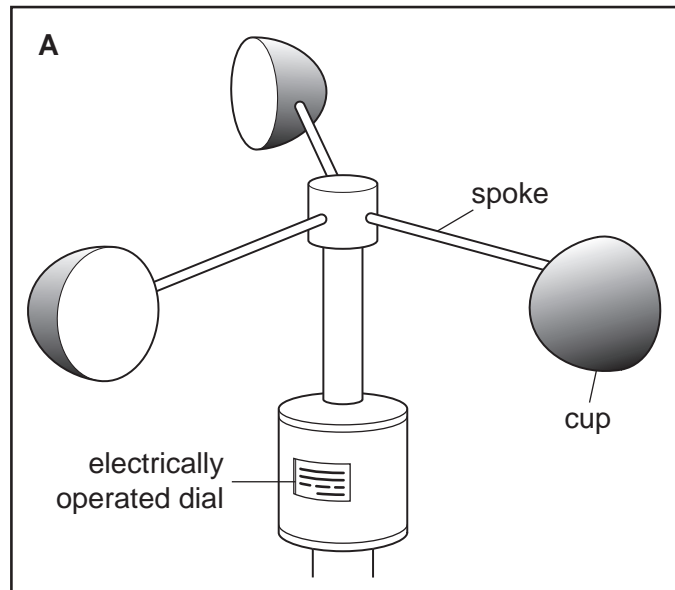


Fig. 6

- (i) Which weather characteristic is measured by instrument **A**? [1]
- (ii) Identify the weather instruments labelled **B** and **C**. [2]

- (iii) Use the correct instrument shown in Fig. 6, along with Table 1, to work out the relative humidity. You must show how you got your answer.

Table 1

		Wet-bulb depression (°C)					
		0	1	2	3	4	5
Dry bulb		%	%	%	%	%	%
22°C		100	90	82	73	65	60
24°C		100	91	82	74	66	62
26°C		100	91	83	75	67	64
28°C		100	91	83	76	68	65
30°C		100	92	84	77	68	66
32°C		100	92	85	78	70	68

Question 4 continues on page 10.

- (b) Study Fig. 7 which shows a weather station and the siting of some of the instruments.

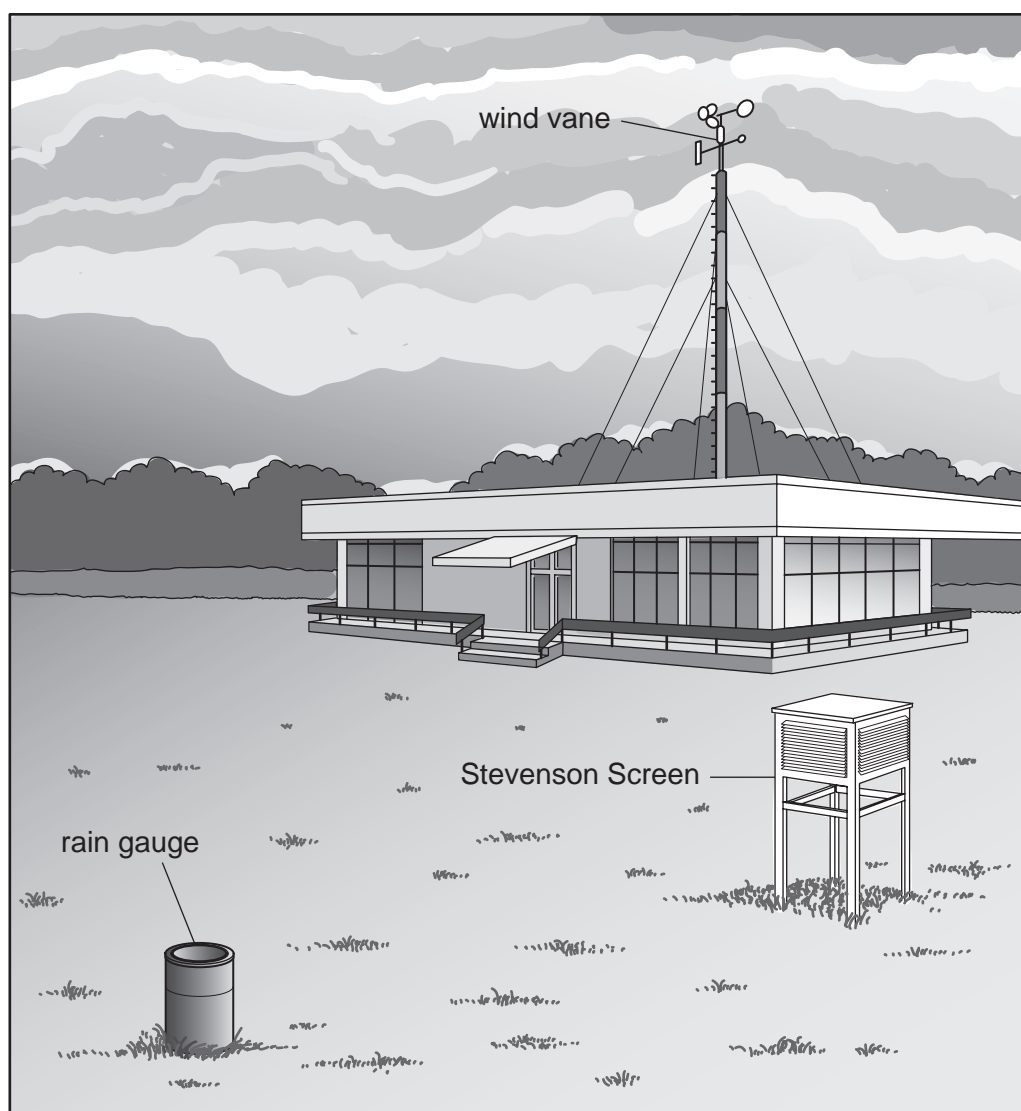


Fig. 7

- (i) Explain how you would take measurements using the rain gauge. [3]
- (ii) Explain why the instruments labelled **B** and **C** on Fig. 6 will give more accurate readings if they are kept in a Stevenson Screen rather than on the roof of the building. [4]
- (iii) Describe and explain the location of the wind vane and the rain gauge. [5]
- (c) The weather often causes problems for people. These include problems caused by:
- flooding,
drought,
tropical storms.

Choose **either** one of these hazards **or** any other hazard faced by people as a result of the weather or climate. Describe the problems experienced by people living in areas at risk from your chosen hazard.

You may refer to examples which you have studied.

[7]

- 5 (a) Study Fig. 8 which shows information about the jobs created by the growth of tourism in an LEDC in Africa.

Jobs	Local people	People from abroad
Hotels - high paid jobs	1%	4%
Hotels - low paid jobs	52%	1%
Tour operators - high paid jobs	2%	3%
Tour operators - low paid jobs	15%	1%
Other jobs	20%	1%

Fig. 8

- (i) State the percentage of jobs in hotels created by the growth of tourism. [1]
- (ii) What does Fig. 8 suggest about the difference in jobs created by tourism for local people and people from abroad? [2]
- (iii) State **three** other benefits, as well as the creation of jobs for local people, which tourism brings to an LEDC. [3]
- (b) Study Fig. 9 (opposite) which shows the changes which have taken place over a 50 year period in an area where tourism is important, along the Mediterranean coast in southern Europe.
- (i) Using **only evidence from Fig. 9**, describe three changes which have taken place in the area as a result of economic development. [3]
- (ii) Suggest reasons why some people are worried about the continued growth of the tourist industry in areas such as the one shown in Fig. 9. [4]
- (iii) Tourism is important in many countries. How can it be developed so that it is sustainable? [5]
- (c) For a named area which you have studied, explain why the tourist industry is important. You should refer to the area's physical and human attractions. [7]

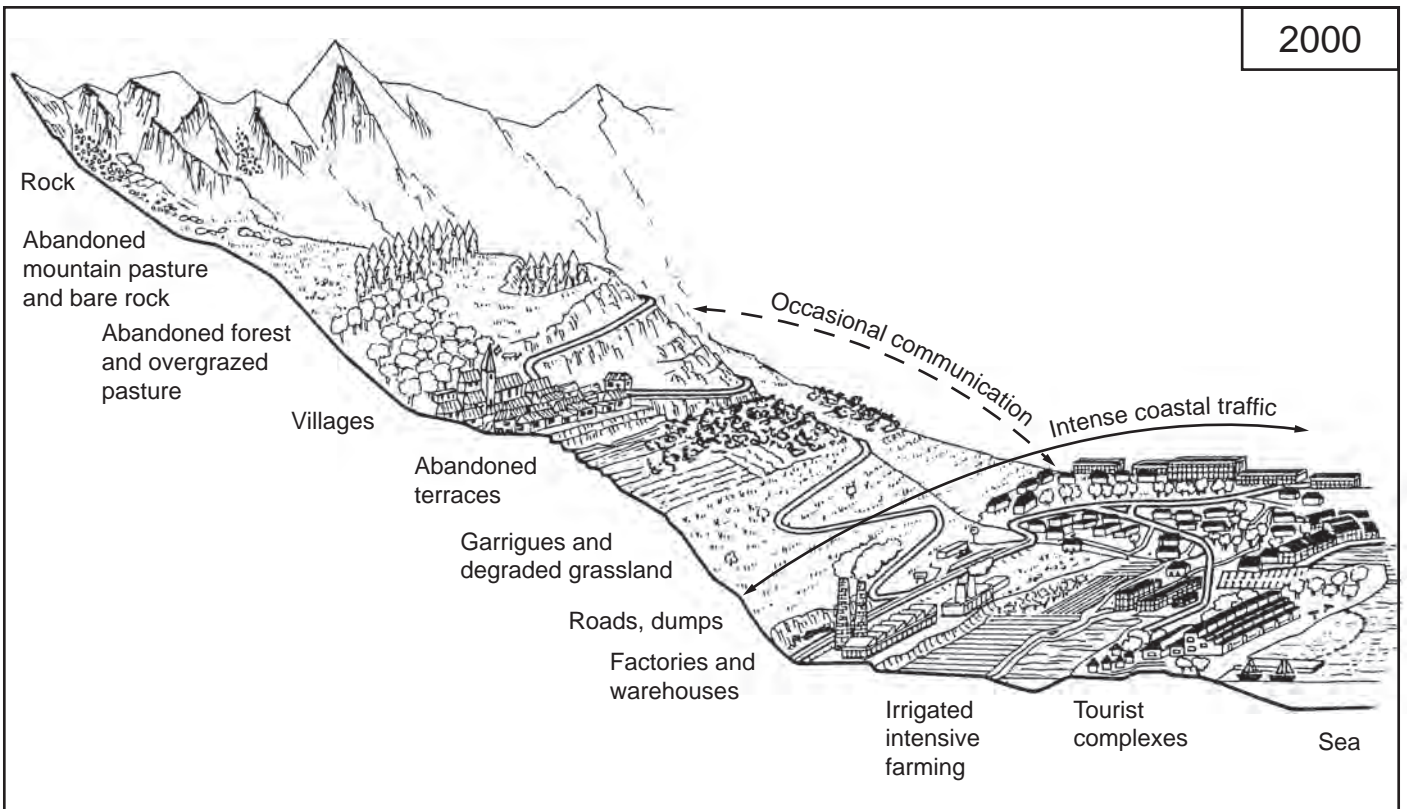
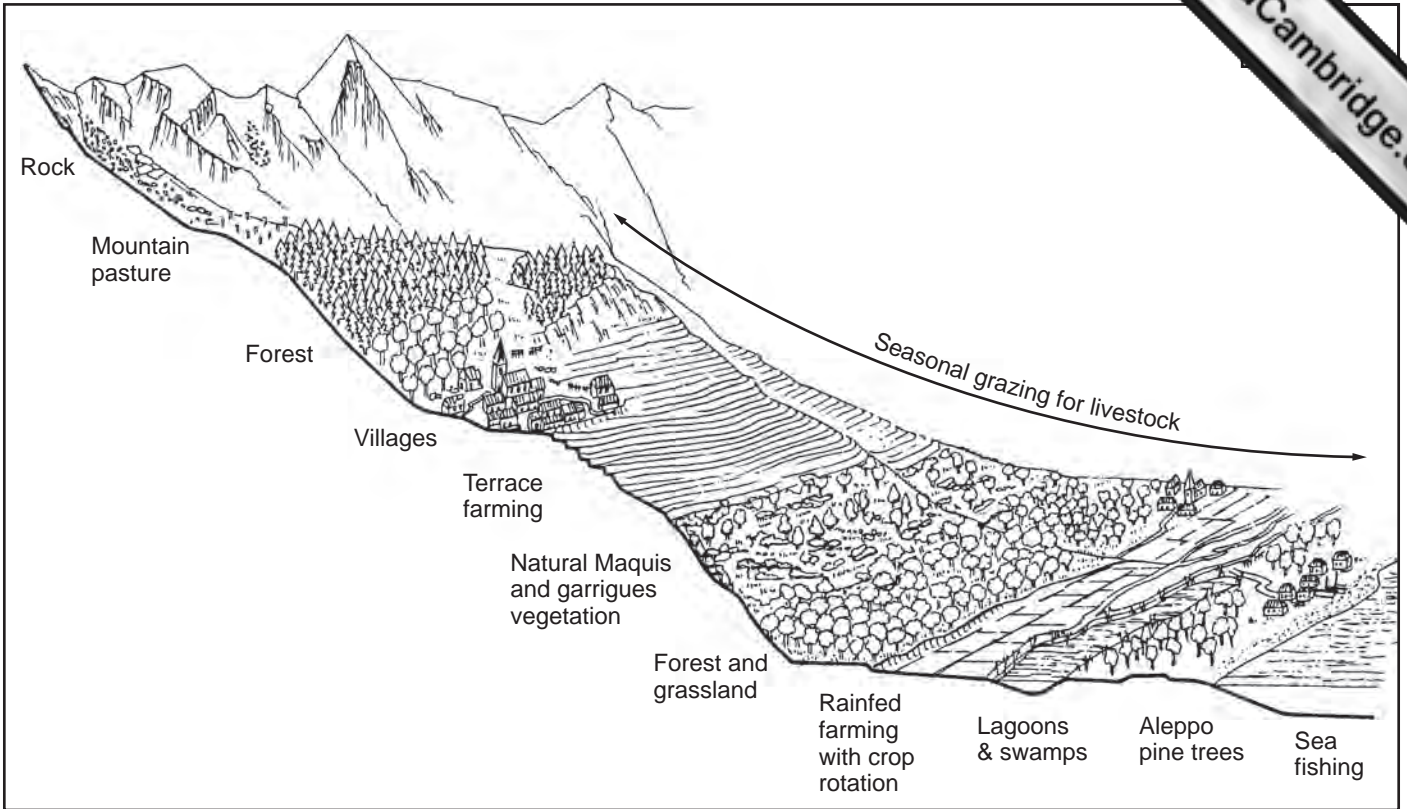


Fig. 9

- 6 (a) Study Fig. 10 which shows the percentage of different forms of energy used to generate electricity in six countries in Asia and Australasia.

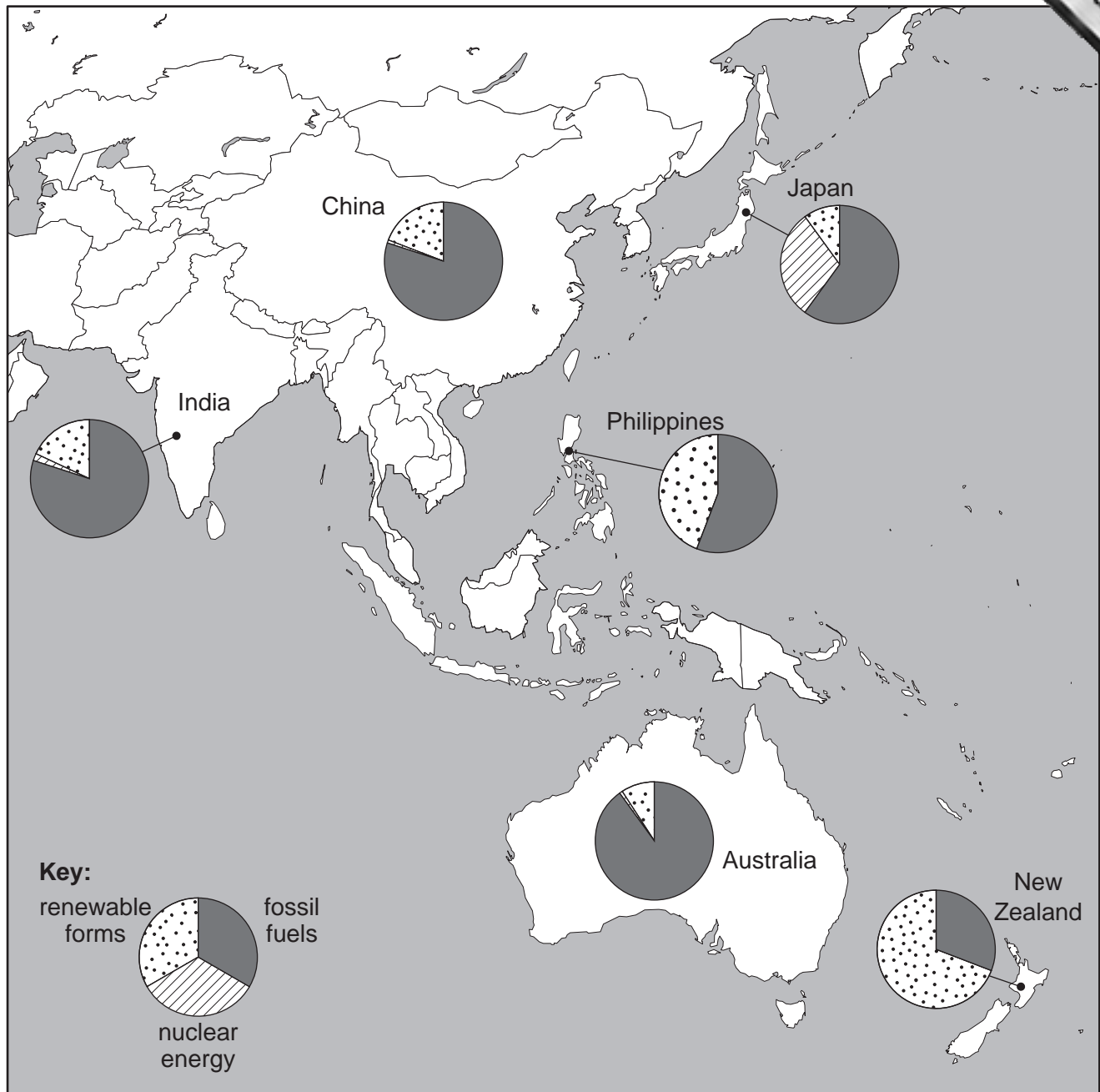


Fig. 10

- (i) Which country relies on fossil fuels for 90% of its electricity? [1]
- (ii) Give an example of:
 A. a fossil fuel,
 B. a renewable form of energy. [2]
- (iii) Compare the importance of the different methods of generating electricity in New Zealand and Japan. [3]
- (iv) Suggest reasons why the importance of different methods of generating electricity varies from country to country. [4]

- (b) Study Fig. 11 which shows the changes in the importance of different types of power station used to generate electricity in Japan between 1960 and 2000.

Briefly describe the changes in the importance of different types of power station in Japan between 1960 and 2000.

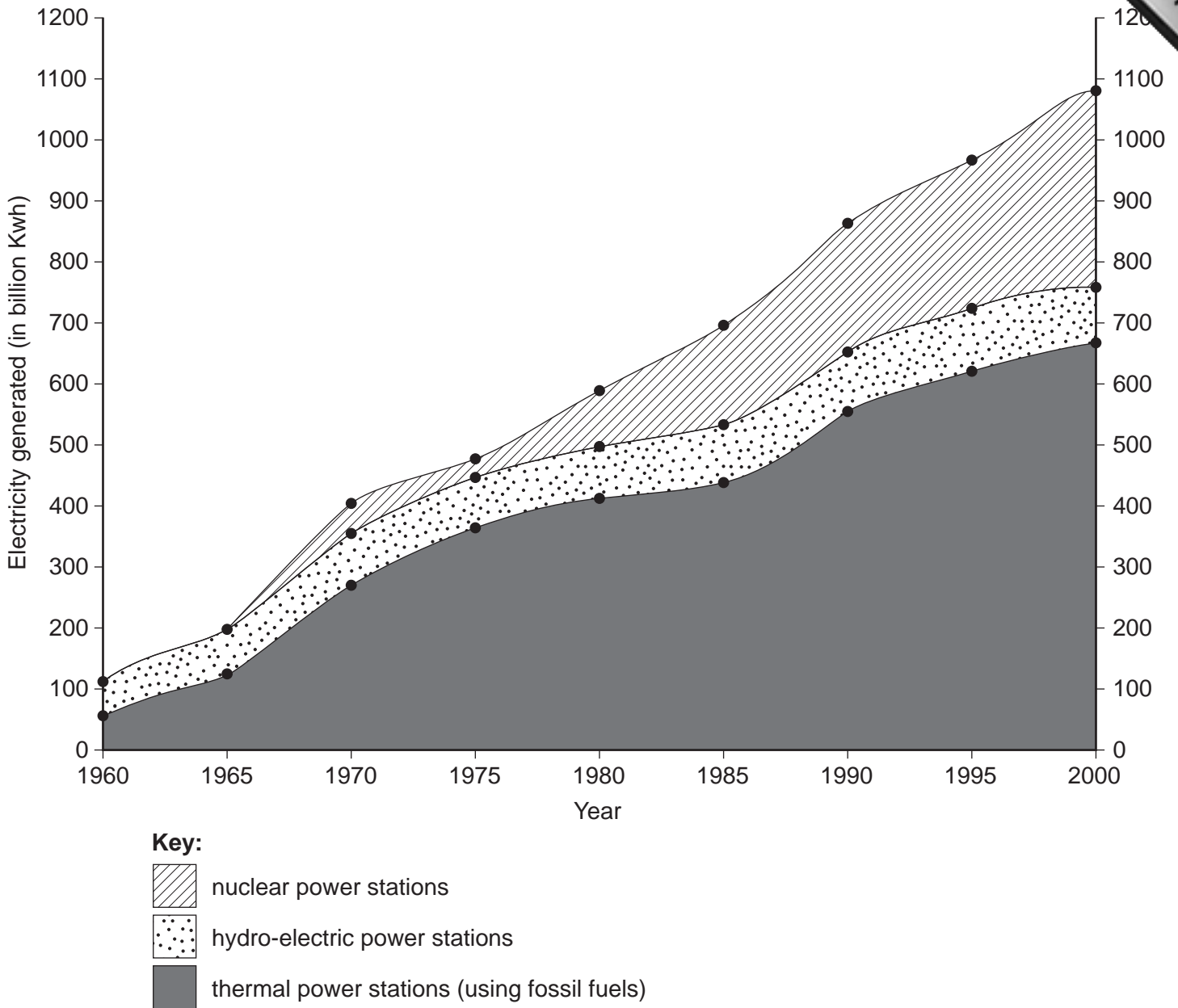


Fig. 11

- (c) For any **one** type of power station, describe and explain the factors which influence its siting. [5]
- (d) Identify a form of energy and describe how its use threatens the natural environment. You may refer to named areas which you have studied. [7]

Copyright Acknowledgements:

Question 1	Fig. 2 © <i>Geo-News Review</i> , June 2000.
Question 2	Fig. 4 © <i>The New Zealand Herald</i> , February 2004.
Question 3	Fig. 5 © T. Y. Chun (1997) <i>Understanding Geography</i> , Addison-Wesley Longman Singapore.
Question 4	Fig. 6 © T. Y. Chun (1997) <i>Understanding Geography</i> , Addison-Wesley Longman Singapore.
Question 4	Fig. 7 © T. Y. Chun (1997) <i>Understanding Geography</i> , Addison-Wesley Longman Singapore.
Question 5	Fig. 9 © <i>Geographical Magazine</i> , April 1993.
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