



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

2005

**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 9–15

25 marks

- Attempt Questions 16–19
- Allow about 45 minutes for this section

Section III Page 17

60 marks

- Attempt Questions 20–22
- 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
↙

Refer to Sources A and B to answer Question 1.

1 What is the name of the island located at *W*?

- (A) Cape Barren
- (B) Flinders
- (C) Hunter
- (D) King

Refer to Source B to answer Question 2.

2 What is the average gradient between the spot height at point *X* and the spot height at Frenchmans Cap ($42^{\circ}20'S$ $145^{\circ}45'E$)?

- (A) 1 : 129
- (B) 1 : 135
- (C) 1 : 1300
- (D) 1 : 1573

Refer to Source C to answer Question 3.

3 What is the vertical exaggeration of the cross-section from *X* to *Y*?

- (A) 40
- (B) 80
- (C) 200
- (D) 1000

4 Which of the following urban dynamics is a response to environmental decline in large cities in the developed world?

- (A) Counterurbanisation
- (B) Suburbanisation
- (C) Sustainability
- (D) Urban village

Refer to Source D to answer Questions 5–7.

- 5** What is the area in square kilometres of Thomsons Lake centred on AR 8942?
- (A) 1.8
 - (B) 2.3
 - (C) 2.8
 - (D) 3.3
- 6** What is the density of buildings in AR 8226?
- (A) 2 per km²
 - (B) 6 per km²
 - (C) 7 per km²
 - (D) 9 per km²
- 7** What is the bearing of the golf course in AR 8027 from the golf course in AR 8631?
- (A) 60°
 - (B) 240°
 - (C) NE
 - (D) SW

Refer to Sources B, D, E and F to answer Question 8.

- 8** Which source has the smallest scale?
- (A) Source B
 - (B) Source D
 - (C) Source E
 - (D) Source F

Refer to Sources D and E to answer Question 9.

9 Which direction was the photographer facing when the photograph was taken?

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

Refer to Sources D and F to answer Question 10.

10 What is the scale of the Landsat image?

- (A) 1 : 20 000
- (B) 1 : 30 000
- (C) 1 : 200 000
- (D) 1 : 300 000

11 Which of the following statements best describes the term *ecosystem*?

- (A) The variety of living organisms on Earth and their interactions
- (B) The realm of Earth that includes all plant and animal life-forms
- (C) The interaction of living organisms with each other and their environment
- (D) The total surroundings including the cultural, social, political and economic contexts of people

Refer to Source G to answer Questions 12 and 13.

- 12** In Germany in 1999, what was the difference between the percentage of males aged 35–39 and the percentage of females aged 35–39?
- (A) 0.6%
 - (B) 4.1%
 - (C) 4.7%
 - (D) 8.8%
- 13** Which of the following statements describes a projected change between 1999 and 2025?
- (A) The size of the population will increase.
 - (B) There will be fewer 50–59 year-old males.
 - (C) There will be more 40–49 year-old females.
 - (D) The proportion of people over the age of 60 will increase.

Refer to Source H to answer Question 14.

- 14** How many million German residents in 1999 were born in Turkey?
- (A) 0.5
 - (B) 1.6
 - (C) 2.1
 - (D) 3.8

Refer to Sources G and H to answer Question 15.

- 15** What percentage of the total German population in 1999 was from the former Yugoslavia?
- (A) 1.0
 - (B) 1.5
 - (C) 2.0
 - (D) 2.5

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Geography

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Centre Number

Section II

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Student Number

25 marks

Attempt Questions 16–19

Allow about 45 minutes for this section

Use the Stimulus Booklet and your knowledge of geography to answer Questions 16–19 in the spaces provided.

Marks

Question 16 (5 marks)

Refer to Source D on page 2 of the Stimulus Booklet to answer part (a).

- (a) Identify TWO economic activities evident on the map, and account for the location of ONE of these activities. **3**

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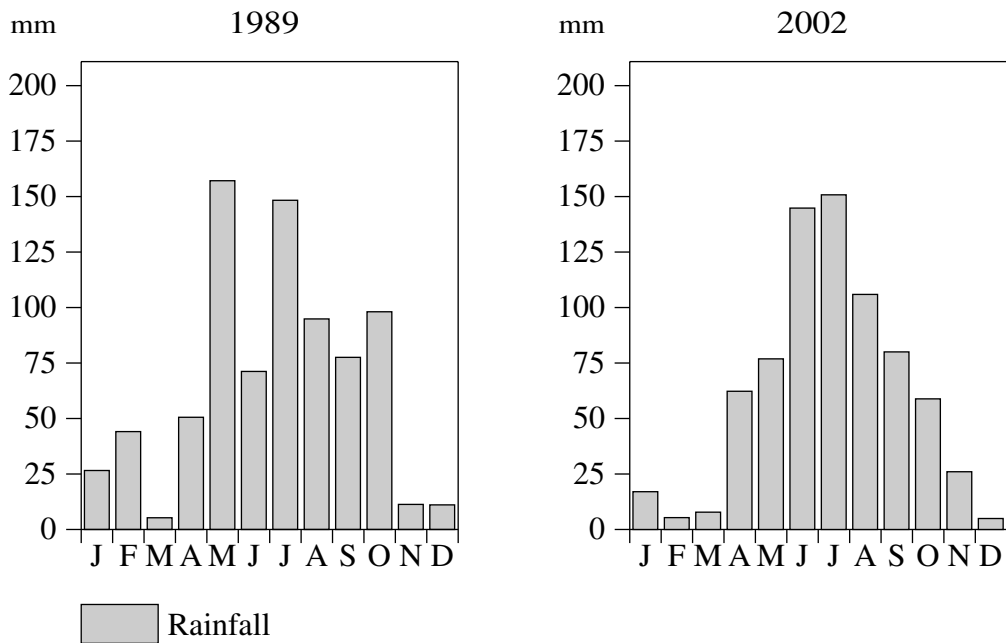
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Question 16 continues on page 10

Question 16 (continued)

Refer to the graphs below to answer part (b).

Rainfall graphs for Rockingham



Images were sourced from the Australian Greenhouse Officer, Copyright Commonwealth of Australia 2004

The greenkeeper at a Rockingham golf course will use the rainfall graphs to determine the amount of water that will be needed to maintain the golf course in 2006.

- (b) Evaluate the reliability of using data from these rainfall graphs for 2006. 2

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End of Question 16

Question 17 (5 marks)

(a) What is *genetic diversity*?

1

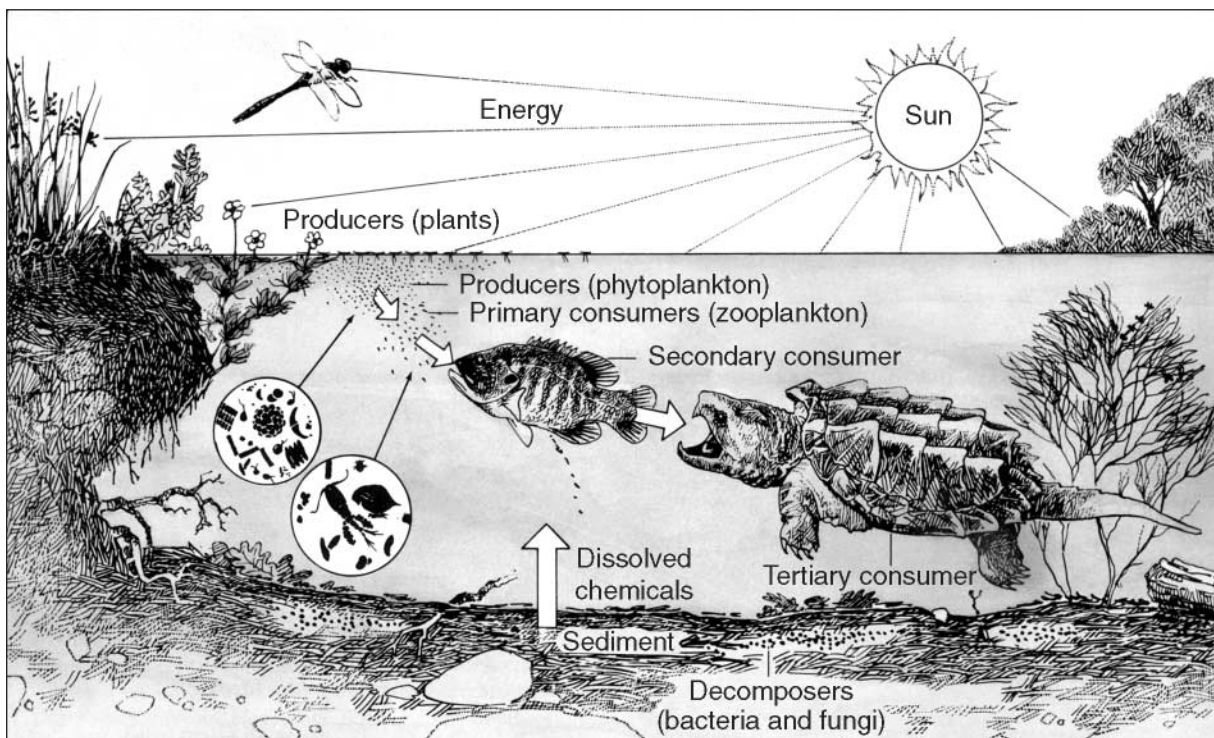
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Refer to the ecosystem diagram below to answer part (b).

Ecosystem diagram



(b) Explain how over-fishing of the secondary consumer in the ecosystem shown could affect the diversity and functioning of the ecosystem.

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Section II (continued)

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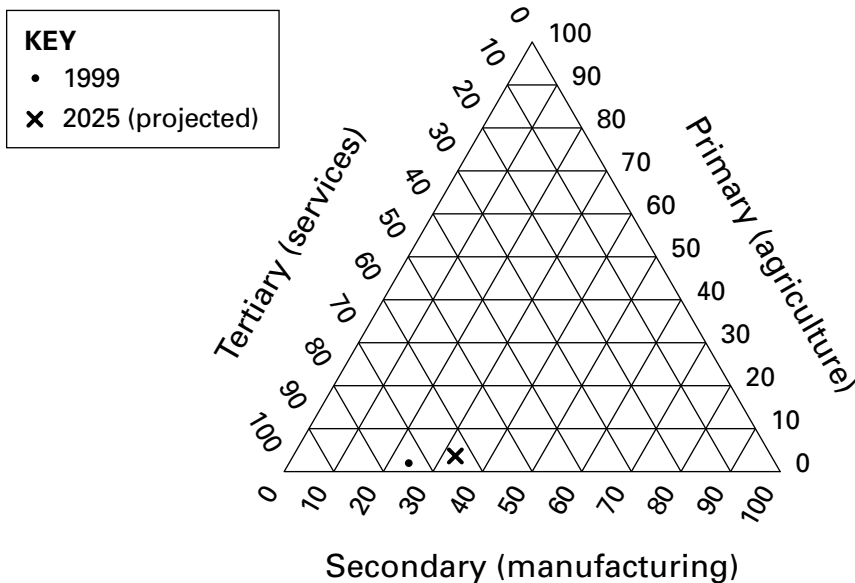
Student Number

Marks

Question 18 (7 marks)

Refer to the ternary graph to answer parts (a) and (b).

Structure of the German economy
(by sector, % for 1999 and 2025 projected)



- (a) What percentage of the German economy was made up of the Tertiary (services) sector in 1999? 1

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- (b) Identify TWO different changes that may occur in the structure of the German economy between 1999 and 2025. 2

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Question 18 continues on page 14

Question 18 (continued)

- (c) Identify and describe the spatial patterns of ONE economic activity in a global context. **4**

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End of Question 18

Geography

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Centre Number

Section II (continued)

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Student Number

Marks

Question 19 (8 marks)

- (a) Identify and outline ONE urban dynamic of change, with reference to a case study of a country town or suburb. **4**

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- (b) Describe, with reference to examples, the character of world cities. **4**

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Geography

Section III

60 marks

Attempt Questions 20–22

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 answers 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 20 (20 marks)

Account for the vulnerability and resilience of ecosystems.

Question 21 (20 marks)

Explain the relationships of dominance and dependence between world cities and other urban centres.

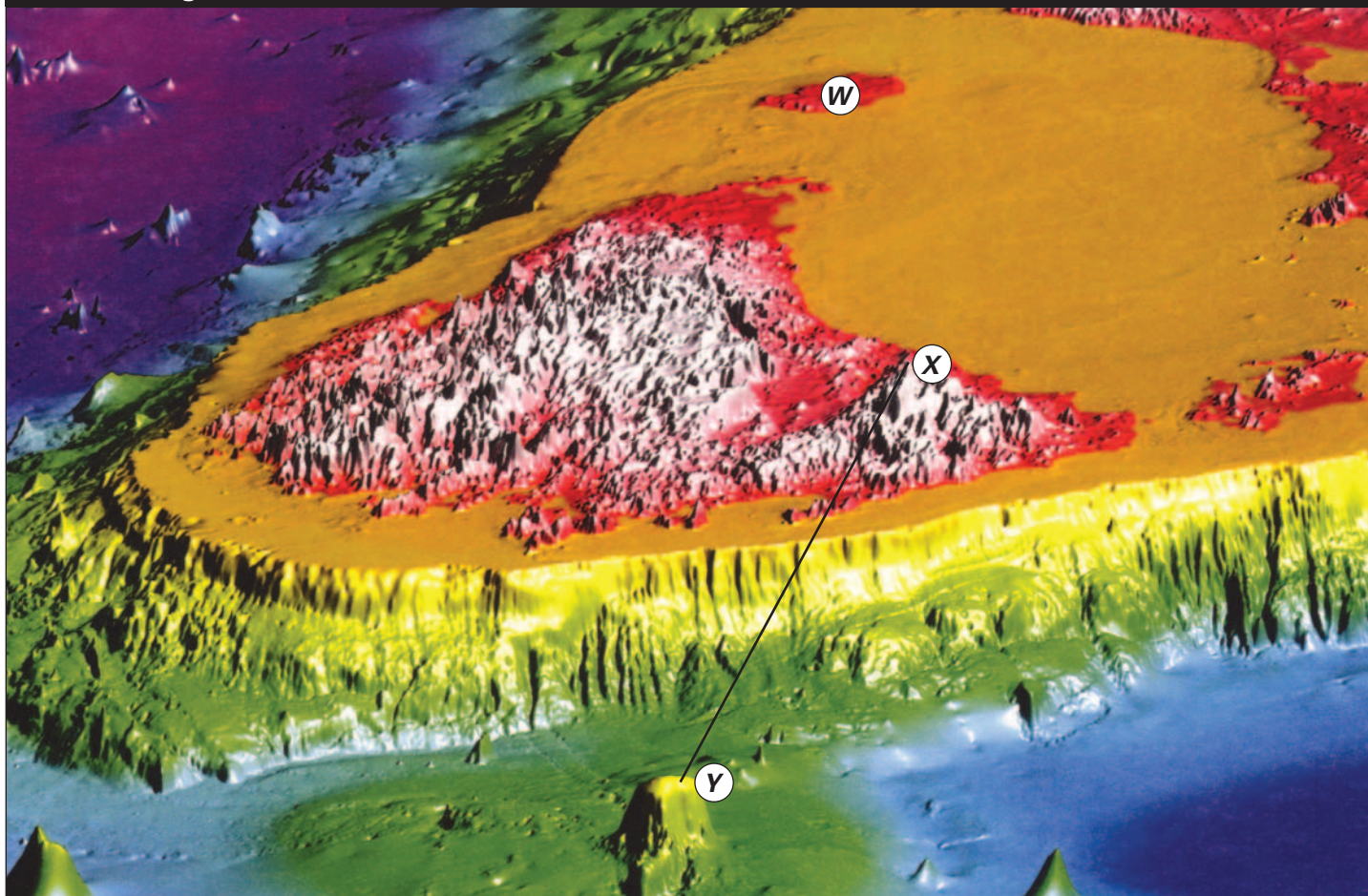
Question 22 (20 marks)

Describe how environmental constraints and human impacts influence the nature of an economic enterprise you have studied at a local scale.

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Source A – Geographical Information System (GIS) showing relief of Tasmania and surrounding continental shelf

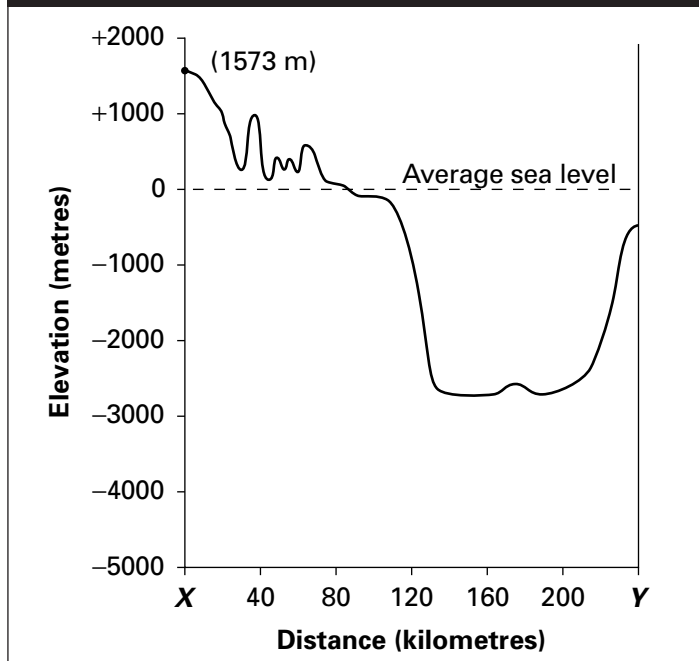


© Geoscience Australia

Source B – Relief map of Tasmania



Source C – Cross-section from X to Y



Source D – Rockingham, Western Australia topographic map 1976



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KEY for Source D

Built-up area; National route marker		Mine; Windmill; Yard; Quarry		Lake, perennial; Stream, perennial	
Principal road and highway; Cutting		Building/s; Church; Ruin; Drive-in theatre		Lake, intermittent; Stream, intermittent	
Secondary road; Embankment		Trig station; Bench mark with evaluation; Spot elevation		Lake, mainly dry; Stream, mainly dry	
Minor road; Road bridge		Cliff; Contour with value; Depression contour		Swamp, perennial; Intermittent	
Vehicular track		Sandridges		Land subject to inundation; Rice field	
Gate; Cattle grid		Forest, dense; medium; scattered		Bore or well; Spring; Tank or small dam	
Railway, multiple track; Station; Railway bridge		Scrub, dense; medium; scattered		Breakwater; Pier; Wharf	
Railway, single track; Railway tunnel		Tropical rainforest; Pine plantation		Wreck, exposed; Lighthouse	
Light railway or tramway		Orchard, plantation or vineyard; Mangrove		Rock, bare or awash; Foreshore flat; Sand	
Power transmission line		Windbreak		Reef; Rock ledge; Saline coastal flat	
Fence; Levee or bank					

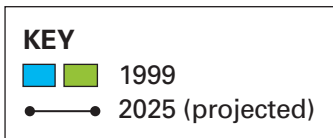
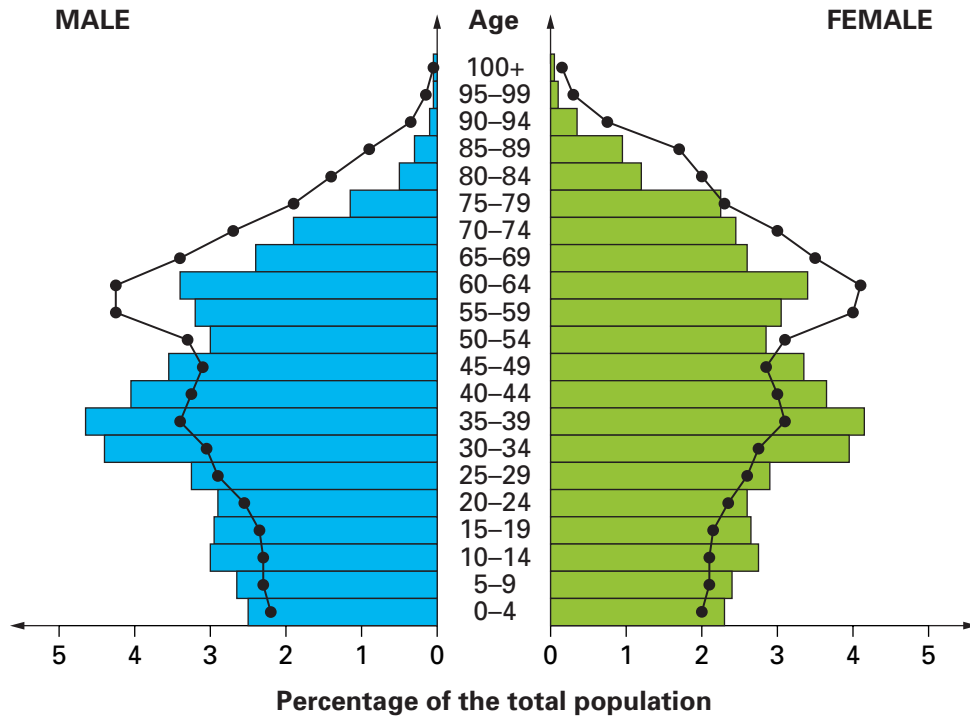
Source E – Oblique aerial photograph of Rockingham 1984



Source F – Landsat image of the Rockingham area 2002



Source G – Population pyramid for Germany 1999 and projection for 2025



Germany 1999 (total population: 82 187 909)
Germany 2025 (projected) (total population: 80 637 451)

Source H – German residents born outside Germany 1967–1999 (for selected countries)

