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National Senior Certificate
Grade 12
Geography
Paper 1

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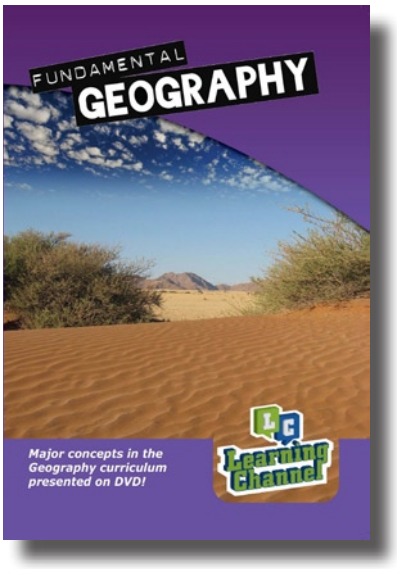


Marks: 300 **Time: 3 hours**

This question paper consists of 8 pages and an annexure of 7 pages.

INSTRUCTIONS AND INFORMATION

1. This **question paper** consists of TWO sections, namely SECTION A and SECTION B.
2. Answer THREE questions only and **choose** your questions as follows:
   - ONE question from SECTION A
   - ONE question from SECTION B
   - A THIRD question from either SECTION A **or** SECTION B that has NOT been answered already.
3. All diagrams are in the **annexure**.
4. Number all your answers in the CENTRE of the line.
5. Leave a line between subsections answered.
6. Start EACH question on a NEW page.
7. Number the answers correctly according to the numbering system used in this question paper.
8. Do NOT write in the margins of the ANSWER BOOK.
9. On the cover page of the ANSWER BOOK encircle the numbers of the questions that you have answered.
10. Where possible, illustrate your answers with labelled diagrams.
11. Write neatly and legibly.

SECTION A: PHYSICAL GEOGRAPHY

Answer at least ONE question from this section.

QUESTION 1

1.1 Choose a description from COLUMN B that matches an item in COLUMN A. Write only the letter (A–L next to the question number (1.1.1–1.1.10) in your answer book, for example 1.1.11 M.

COLUMN A	COLUMN B
1.1.1 Coriolis Effect	A sinking motion of cold, dense air
1.1.2 Katabatic Wind	B air that moves down a slope at night
1.1.3 Subsidence	C occurs when the river is younger than the structures over which it flows
1.1.4 Radiation	D ridges of higher-lying ground that separate drainage basins
1.1.5 Aquifers	E energy travelling in the form of electromagnetic waves
1.1.6 Superimposed drainage	F low-pressure systems in the atmosphere
1.1.7 Headward erosion	G weathered rock material is deposited on this slope
1.1.8 Watershed	H rocks that allow water to flow through them along cracks or joints
1.1.9 Plateau	I is a force caused by the rotation of the Earth, which causes moving air to be deflected
1.1.10 Talus	J the leading edge of the cold sector of an air mass
	K extensive flat region bounded by an escarpment, at a high altitude
	L the lengthening of a river course by a river cutting backwards towards its source

10 × 2 (20)

1.2 Refer to Figure 1.2A, a synoptic extract of a weather system in the southern hemisphere and Figure 1.2.B, a simplified representation of the same system also in the southern hemisphere. Answer the questions that follow.

1.2.1 Identify the fronts AB; BC; and BD. (3)

1.2.2 Draw a cross-section along line RS to show the following:

(a) A profile (side-view/cross-section) of the **cold front** and **warm front**. (2)

(b) Indicate which air masses can be considered **cold**, **cool** or **warm**. (3)

(c) The cloud formations associated with these fronts. Name the various **cloud types**. 6 × 2 (12)

1.2.3 What is the air temperature in Port Elizabeth? 1 × 2 (2)

1.2.4 By what other names are mid-latitude cyclones known? 1 × 2 (2)

1.3 Refer to Figure 1.3A and Figure 1.3B, and answer the following questions.

1.3.1 The weather system shown in Fig 1.3A is a tropical cyclone. List TWO identifying features seen as evidence from the synoptic weather extract to substantiate your answer. 2 × 2 (4)

1.3.2 With reference to the weather system identified in 1.3.1, how many of the same weather phenomena (including the one already mentioned) have already occurred in the year concerned? Explain your answer. 2 × 2 (4)

1.3.3 Refer to Fig. 1.3B. Name the FOUR characteristics of the weather system shown in this cross-section. They are numbered 1 to 4. (4)

1.3.4 Account for the fact that the two ships (refer to the station models over the ocean) at sea experienced winds coming from different directions due to the effects of *Alda*. 2 × 2 (4)

1.3.5 What do American scientists call this weather phenomenon when it occurs in the northern hemisphere? 1 × 2 (2)

1.4 Refer to Figure 1.4A, showing the **longitudinal profile of a river** from its source in the upper course, to its mouth in the lower course. Various landforms typical of the different courses are shown. A number of large settlements with a typical urban climate occur along the banks. Studies also show that soil profiles taken along the river's course differ greatly from the source to the mouth. Answer the questions that follow:

1.4.1 Identify the THREE courses/stages of a river labelled P, Q and R. (3)

1.4.2 (a) Draw and label a simple, freehand cross-section of each of the three courses to show the shape of the respective river valleys. (3)

(b) Explain the shape of each cross-section as shown in your answer to question 1.4.2 (a). 3 × 2 (6)

1.4.3 A stream strives to obtain a **graded profile**. Explain the meaning of the term ***ungraded profile*** as seen in Fig. 1.4B. (2)

1.4.4 Many landforms are shown along the river's course. Indicate which of the landforms W, X and Y are landforms of river erosion and which are landforms of river deposition. Tabulate your answer. 3 × 2 (6)

1.4.5 Identify the stream channel pattern assumed by the river in course **R**. 1 × 2 (2)

1.4.6 Briefly explain why the stream assumes this stream pattern as identified in course **R**. 2 × 2 (4)

1.4.7 What sort of recreational water activity would you associate with the river in course **R**? 1 × 2 (2)

1.4.8 Refer to FigureS 1.4C and 1.4D.

(a) Explain the term **soil profile**. 1 × 2 (2)

(b) Match soil profiles 1.4C and 1.4D with the correct section of the river's course P, Q and R. 2 × 2 (4)

(c) Name and describe any TWO soil-forming processes. 2 × 2 (4)

100 marks

QUESTION 2

2.1 Refer to Figure 2.1 and answer the questions that follow.

2.1.1 What are the latitudinal positions of the temperate/mid-latitude cyclones during January and July? (4)

2.1.2 Explain the latitudinal positions of the temperate/mid-latitude cyclones during January and July. 4 × 2 (8)

2.1.3 With reference to South Africa, explain how the changing latitudinal positions of temperature/mid-latitude cyclones affect weather conditions. 5 × 2 (10)

2.1.4 During which season is a tropical cyclone experienced in the southern hemisphere? 1 × 2 (2)

2.1.5 Why don't tropical cyclones occur in the southern hemisphere at all times of the year? 1 × 2 (2)

2.1.6 Give an account of the growth of a tropical cyclone from the time a low pressure centre develops until it reaches its mature stage. 4 × 2 (8)

2.1.7 How are scientists able to track tropical cyclones? 2 × 2 (4)

2.1.8 Do you think that it is necessary scientists of the South African Weather Bureau study and track tropical cyclones? Justify your answer. 2 × 2 (4)

2.2 Refer to Figure 2.2, which shows air movement over the plateau of South Africa.

2.2.1 Which high-pressure system is illustrated as A on the diagram? 1 × 2 (2)

2.2.2 High-pressure system A is more intense during winter. Give an explanation for this. 3 × 2 (6)

2.2.3 Warm, moisture-laden air is prevented from reaching the interior of South Africa during winter. What effect does this have on the weather over the plateau during winter? 3 × 2 (6)

2.2.4 Apart from the south-western and western coastal regions, South Africa experiences little or no rain during winter. Explain why the south-western and western coastal regions receive winter rainfall. 3 × 2 (6)

2.3 Refer to Figure 2.3, which illustrates an area in which two rivers are situated on different levels. Stream capture (river piracy) has taken place.

2.3.1 Identify the different stream features indicated on the sketch by letters A, B, C, D and E. 5 × 2 (10)

2.3.2 What type of landform could possibly develop at E? 1 × 2 (2)

2.3.3 What will happen to the position of landform E as time goes by? 1 × 2 (2)

2.3.4 Briefly explain how the streams A, B and C have changed in terms of **stream volume and force of erosion** since stream capture occurred. 3 × 2 (6)

2.4 Figure 2.4 is a hydrograph and rainfall graph of the War River. Study it carefully before answering the following questions.

2.4.1 During which month does the War River receive its highest rainfall? 1 × 2 (2)

2.4.2 Calculate the total precipitation that occurred in the first two months of the calendar year. 2 × 2 (4)

2.4.3 The Highveld receives about 850 mm of rain per annum. Would you describe the War River area as being wetter or drier than the Highveld? Explain your answer. 2 × 2 (4)

2.4.4 Define the concept "discharge of a river". 2 × 2 (4)

2.4.5 Classify the War River on the basis of stream flow, and give a reason for your answer. 2 × 2 (4)

100 marks

SECTION B: PEOPLE AND PLACES: RURAL AND URBAN SETTLEMENTS, PEOPLE AND THEIR NEEDS

Answer at least ONE question from this section.

QUESTION 3

Study Figure 3, which shows a hypothetical landscape in the southern hemisphere, and then answer the questions that follow.

3.1 Refer to the area marked **A**.

3.1.1 Identify the rural **settlement pattern** evident in this area. 1 × 2 (2)

3.1.2 (a) Identify the **type of rural settlement** shown here. 1 × 2 (2)

(b) Provide ONE advantage and ONE disadvantage of this particular settlement pattern. 2 × 4 (8)

3.1.3 The farmer in area A seems to be well aware of the problem of soil erosion.

(a) Define **soil erosion**. 1 × 2 (2)

(b) Identify and explain how the farmer is dealing with this problem. 2 × 2 (4)

3.1.4 Comment on the **sustainability** of both the site and situation of this settlement with specific reference to the following factors:

(a) availability of water

(b) availability of building material

(c) microclimatic factors in the valley. 3 × 2 (6)

3.2 Refer to the area marked **B**.

3.2.1 Identify the **land-use zone**. 1 × 2 (2)

3.2.2 Provide ONE advantage and ONE disadvantage for the location of this land use zone. 2 × 2 (4)

3.2.3 Comment on the probable **land values** of this zone. 2 × 2 (4)

3.2.4 Name the **street pattern** depicted here. 1 × 2 (2)

3.3 Refer to area marked **C**.

3.3.1 Identify the **land use** found here. 1 × 2 (2)

3.3.2 (a) Would you describe the nature of this land use to be heavy or light? 1 × 2 (2)

(b) Provide TWO possible reasons for your answer. 2 × 2 (4)

3.3.3. Discuss TWO factors that determined the **site** for this land use. 2 × 2 (4)

3.3.4 Provide TWO negative effects that the location of this land-use zone is likely to have on the surrounding area. 2 × 2 (4)

3.4. Refer to area marked **D**.

3.4.1 Identify the **land-use zone** found here. 1 × 2 (2)

3.4.2 List TWO recreational activities that usually occur here. (2)

3.4.3 In what way is the river being utlised in this area? (2)

3.4.4 Explain why this land use is still considered to be urban. 2 × 2 (4)

3.5 In Figure 3, there are very few people engaged in primary activities, suggesting that there has been movement of people towards the cities.

3.5.1 What is the name given to the movement of people from rural to urban settlements? 1 × 2 (2)

3.5.2 Discuss TWO consequences each of this movement for:

(a) rural settlements 2 × 2 (4)

(b) urban settlements. 2 × 2 (4)

3.5.3 What methods could be introduced to slow down the movement of people from rural to urban settlements? 3 × 2 (6)

3.6 Refer to areas marked **E**.

3.6.1 This area is the 'rural urban fringe'. Explain the meaning of this term. 1 × 2 (2)

3.6.2 Give two examples of activities typical of this land-use zone. (2)

3.7 Figure 3.7 is a rural settlement called RODE. Figure 3.7A shows the farming area around RODE before land consolidation was introduced. Figure 3.7B shows the same area after the implementation of land consolidation.

3.7.1 Name the settlement distribution pattern associated with this settlement. 1 × 2 (2)

3.7.2 What type of rural settlement is this? 1 × 2 (2)

3.7.3 Identify the shape of the rural settlement. 1 × 2 (2)

3.7.4 (a) Discuss the criteria that influenced the origin and shape of the settlement of RODE. 2 × 2 (4)

(b) Suggest TWO reasons why land ownership, as shown in Figure 3.7A, made it difficult to practise commercial farming successfully. 2 × 2 (4)

3.7.5 (a) Explain the meaning of **land consolidation**. 1 × 2 (2)

(b) Provide TWO possible economic advantages of land consolidation. 2 × 2 (4)

(c) Discuss ONE likely disadvantage of land consolidation. 1 × 2 (2)

100 marks

QUESTION 4

4.1 Choose the correct word in each of the phrases below. Write only the correct word next to the question number, e.g. 4.1.17 Economic Geography.

4.1.1 (*Primary activities/secondary activities*) involve the processing or manufacturing of goods extracted from primary activities.

4.1.2 A (*Wet-point / Dry-point*) settlement arises when homes are built near a water source in a water-scarce area.

4.1.3 (*Intensive farming / Extensive farming*) takes place when there are fewer workers, productivity per area is lower and farms are large and generally mechanised.

4.1.4 (*Commercial farming / Subsistence farming*) is practised by farmers who aim to produce enough to feed their dependants in order to survive.

4.1.5. (*Depopulation / Urbanisation*) is a decrease in population size.

4.1.6 (*Land restitution / Land redistribution*) aims to provide the disadvantaged and the poor with access to land for residential and farming purposes.

4.1.7 (*Refugees / Migrant labourers*) are people who leave their country for political or religious reasons.

4.1.8 (*Sphere of influence / Range*) is the maximum distance that people are prepared to travel for goods or services.

4.1.9 (*GDP / GNP*) is the total value of all goods and services produced in a country in one year.

4.1.10 (*Agglomeration / Globalisation*) refers to economic, political, social and cultural relations across international boundaries.

4.1.11 (*Trade bloc / Free trade*) involves trading between countries without having to pay duties.

4.1.12 (*Balance of Trade / Balance of payments*) is the cost of imports subtracted from the income earned from all goods exported.

4.1.13 (*Food access / Food security*) is the situation in which all people, at all times, have access to enough food for an active, healthy life.

4.1.14 (*Riparian rights / Custodianship*) is the right to use water based on ownership of the land. 14 × 2 (28)

4.2 South Africa hosts the FIFA Soccer World Cup in June/July 2010. Refer to Figure 4.1 which depicts the various host cities for the World Cup.

4.2.1 Match the cities listed below to the numbers given on the map. Write the numbers 1–9 underneath each other and the name of the city next to the number.

Pretoria; Nelspruit; Cape Town; Polokwane; Johannesburg; Port Elizabeth; Bloemfontein; Durban; Rustenburg

(9)

4.2.2 Match each of the cities above to the provinces given below. List the provinces and write the name of the corresponding city next to it.

Limpopo; Gauteng; Eastern Cape; KwaZulu-Natal; North West; Free State; Mpumalanga; Western Cape

(9)

4.2.3 Name the province which is not hosting any of the World Cup games. (1)

4.3 Read the extracts in the annexure downloaded from the Internet entitled '*Polokwane awaits World Cup stage'* and '*2010 FIFA World Cup™*' and answer the questions that follow.

4.3.1 Is this the first time that Africa will be hosting the FIFA World Cup? (1)

4.3.2 List, and briefly explain, THREE economic advantages for Polokwane in hosting certain games of the World Cup soccer event. 3 × 2 (6)

4.3.3 List and describe THREE geographic problems you foresee for Polokwane in June/July 2010. 3 × 2 (6)

4.4 Write a short paragraph (no more than 12 lines) outlining the positive benefits of the FIFA World Cup for South Africa. 5 × 2 (10)

4.5 Figure 4.2 is a bar graph showing the number of tourist arrivals in South Africa from 1997 to 2007. Answer the following questions, after studying the data carefully.

4.5.1 How many international tourists visited South Africa in 1997? 1 × 2 (2)

4.5.2 How many visitors were recorded in 2007? 1 × 2 (2)

4.5.3 By how many has the number of international tourists increased since 1997? 1 × 2 (2)

4.5.4 Suggest and explain TWO reasons for this increase. 2 × 2 (4)

4.5.5 In which year did tourist numbers decline slightly? 1 × 2 (2)

4.5.6 Briefly explain what you understand by the following terms, giving an **example from the South African context** in **each** case:

(A) Business tourism

(B) Cultural tourism

(C) Ecotourism

(D) Paleo-tourism

(E) Adventure tourism

(F) Sports tourism. 6 × 3 (18)

100 marks

ANNEXURE

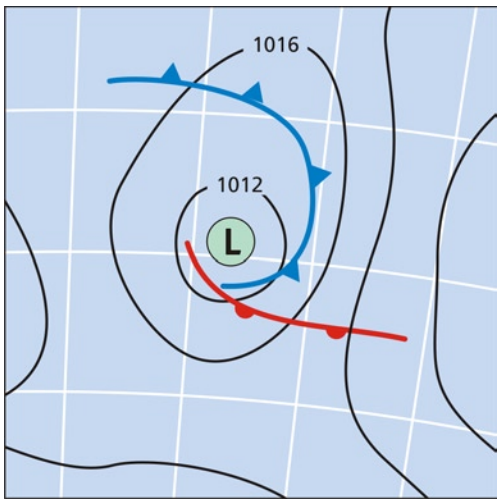


Figure 1.2A

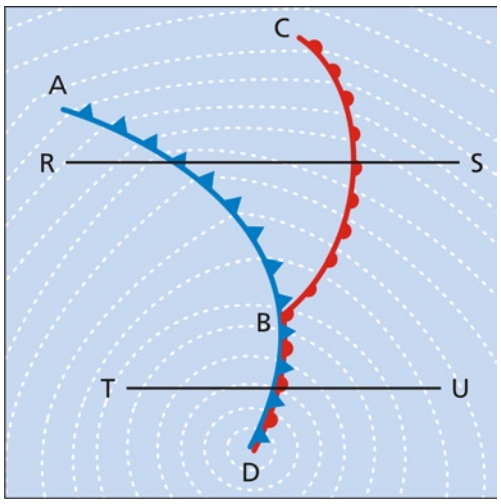


Figure 1.2B

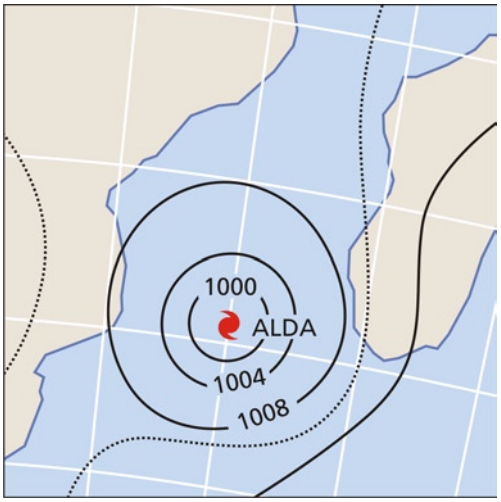


Figure 1.3A

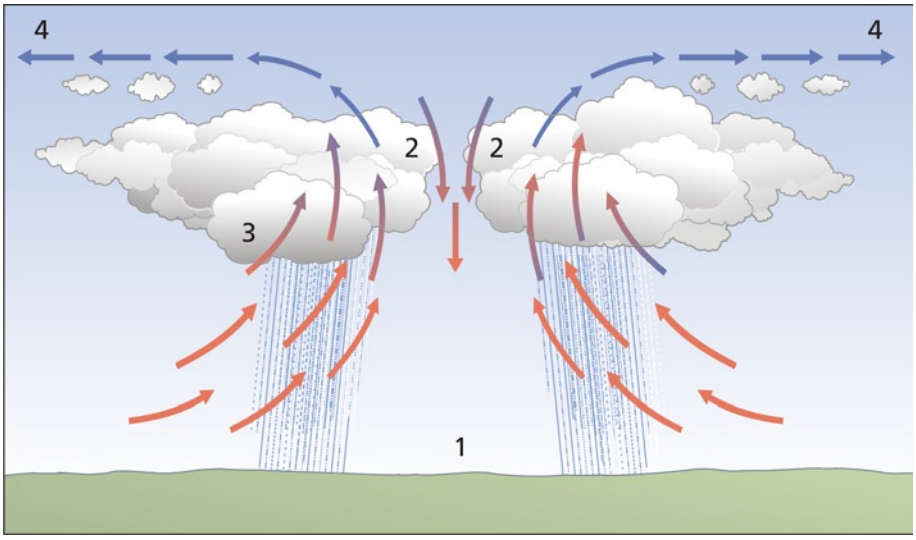


Figure 1.3B

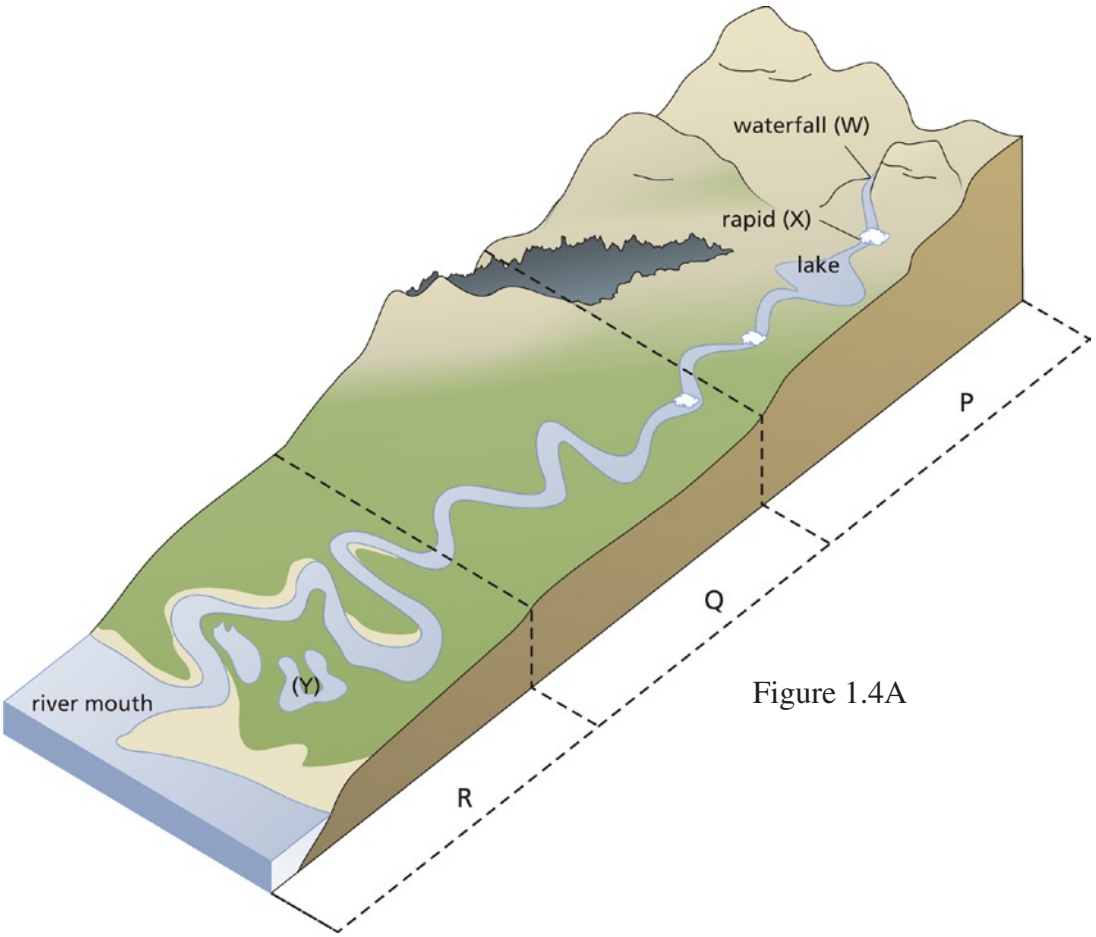


Figure 1.4A

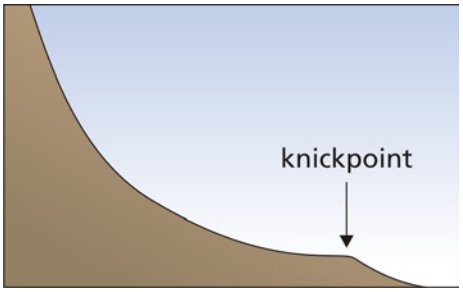


Figure 1.4B

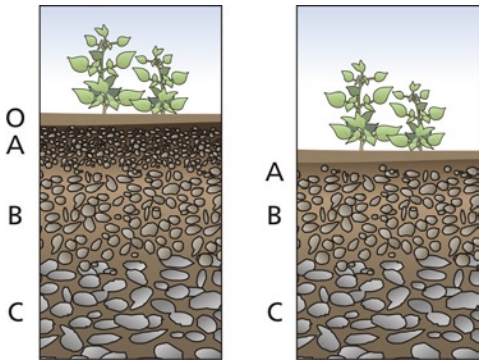


Figure 1.4C and D

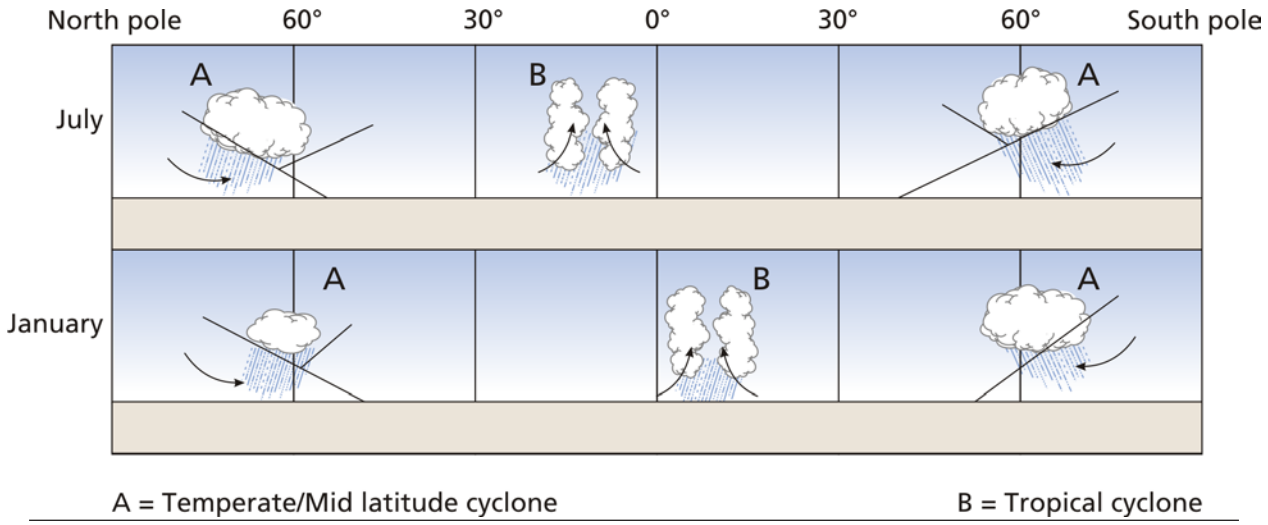


Figure 2.1

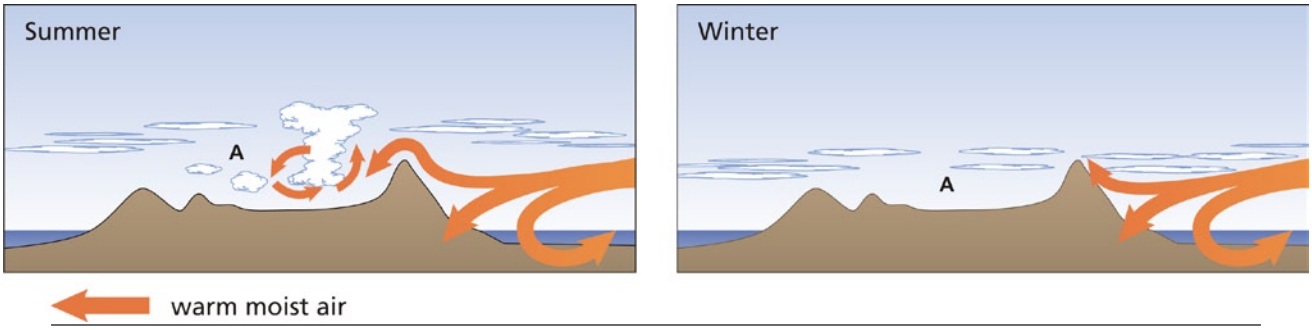


Figure 2.2.

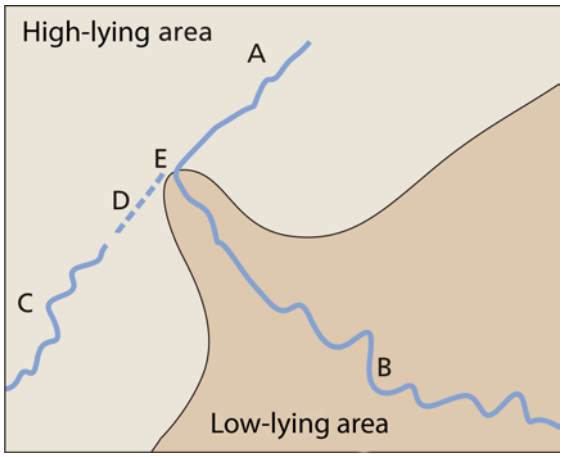


Figure 2.3

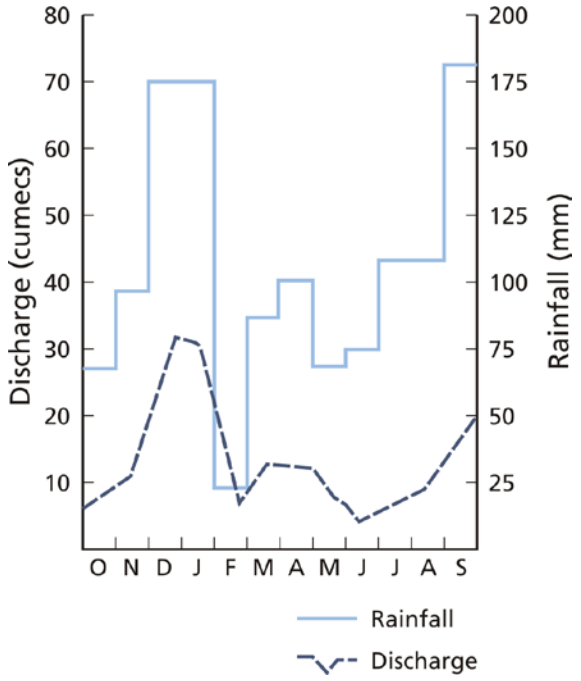


Figure 2.4

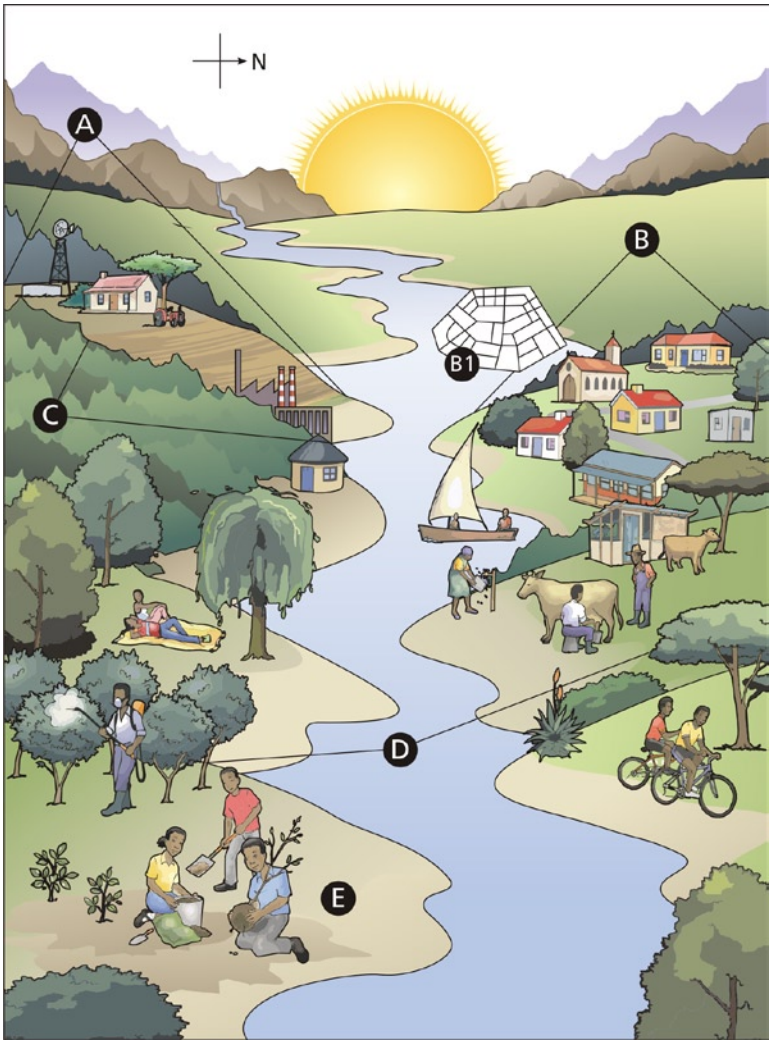
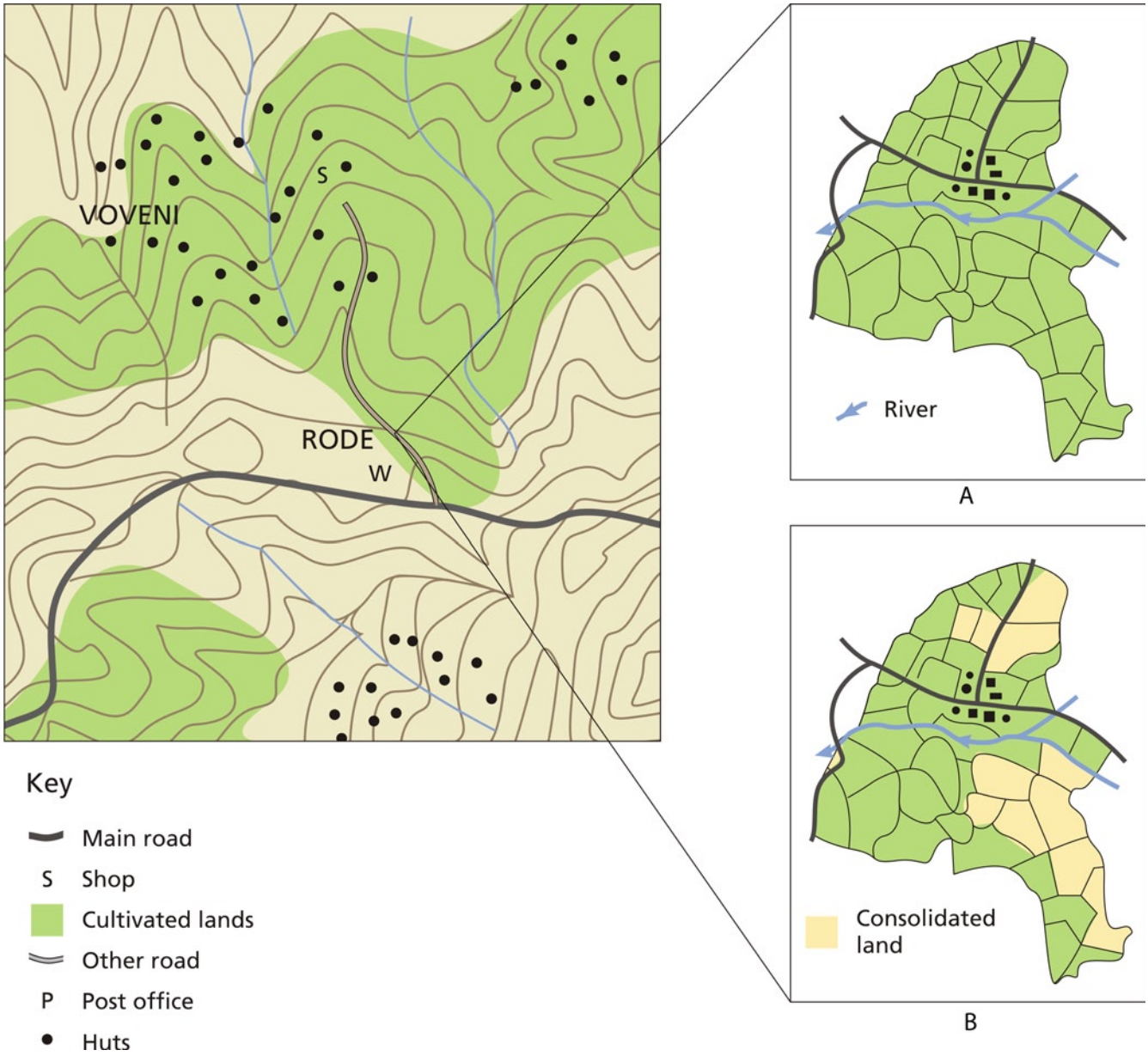


Figure 3


VOVENI
S
RODE
W
Key
Main road
S Shop
Cultivated lands
Other road
P Post office
Huts
River
A
Consolidated land
B

Figures 3.7

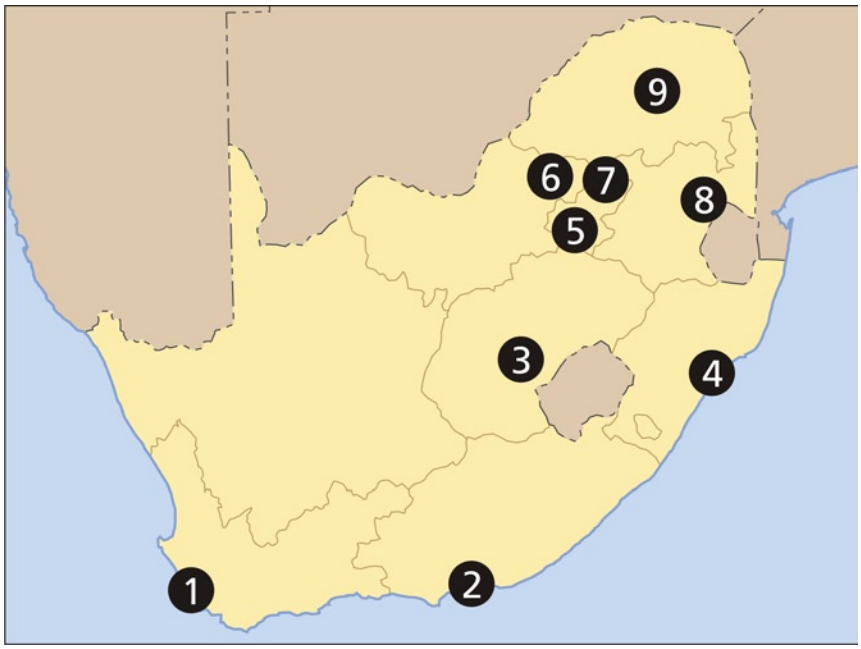


Figure 4.1

Polokwane awaits World Cup stage

24 February 2010

The Peter Mokaba Stadium is complete and the people of Polokwane, in South Africa's Limpopo province, are excited to be part of history in the making as residents of one of the nine host cities of Africa's first Fifa World Cup™.

Known as Africa's City of Stars, Polokwane is the smallest of the host cities for this year's World Cup, and a visit allows one to experience the excitement about the event and the pride of the locals.

Jacob Ntuli, a 46-year-old bricklayer, is quick to comment when he overhears others talking about the World Cup. "We will welcome the people to watch our games at the stadium," says Ntuli.

Place of Safety

"Polokwane means 'Place of Safety' in Sotho, which is one of our 11 official languages. Yes, eleven, we are many different people, but we are all South African and we will welcome anyone from anywhere in the world to our city. It is a friendly city, and I wish there were even more matches here." "Have you seen the stadium?" asks Precious Mbulani, a lady selling fruit on a street corner. "It is something very special because you can see it from far away, and on nights when the lights are on it is very beautiful. I wish I could watch a game at the Peter Mokaba Stadium, but it gives me pride to know that the best players will be so close to my home."

Ronald Le Grange, an importer waiting for a shipment at Polokwane International Airport, agrees with Precious. "To think that Polokwane will be part of this once in a lifetime World Cup is astonishing. It's a great time to be South African, and a great time to be in Polokwane. "I have bought tickets for Argentina's match against Greece for my family, and I can't wait to enjoy the atmosphere at the Peter Mokaba Stadium," says Le Grange.

(Source: http://www.southafrica.info/2010/polokwane-240210.htm; Accessed on 27th February 2010).

2010 FIFA World Cup™

Ecstatic celebrations erupted countrywide when South Africa was announced as the host country for the 2010 FIFA World Cup™. Never before has an African country been afforded the opportunity to host such a prestigious sporting event, and show the world what South Africa – and Africa – has to offer.

From the 11 June–11 July, South Africa will host the 2010 FIFA World Cup™ – the world's largest, most-watched football extravaganza. Staged across eight provinces, and nine host cities, almost half-a-million visitors are expected to experience the spectacle firsthand, while a worldwide television audience of between 35 and 40 billion "cumulative" viewers will witness the action and drama on screen.

The 2010 FIFA World Cup™ is an unprecedented opportunity to make South Africa a more widely known and better understood destination that offers exceptional value for money and a quality travel experience, combined with a depth and breadth of activities and attractions that's hard to beat.

The ultimate goal of the 2010 FIFA World Cup™ is to harness the power of football to create positive social change. An improved public transport system and better-skilled and equipped safety and security, health, emergency services, accommodation and tourism providers are just some of the lasting legacies of 2010. For the first time, small, medium and micro enterprises will be graded as FIFA approved accommodation providers, and opportunities for business, especially among emerging entrepreneurs in South Africa's tourism industry will increase.

New urban recreational areas and multi-disciplinary sports facilities will benefit all, whilst many previously disadvantaged communities are currently benefitting from job opportunities in the construction of infrastructure and telecoms networks across the country. Four revamped and six new world-class, multi-purpose stadiums will continue to stimulate regional economies and provide jobs long after the football fanfare is over.

The 2010 FIFA World Cup South Africa's™ official slogan: *Ke Nako* – Celebrate Africa's Humanity, means 'it is time'. Time for South Africa to change the world's perceptions as we host a football spectacular that is African and first-class in every respect. We are ready. South Africa's time has come.

(Source: http://www.southafrica.net/sat/content/en/za/full-article?oid=8025&sn=Detail&pid=1&2010-FIFA-World-Cup™; Accessed on 27th February 2010).

International Tourist Arrivals (in Millions)

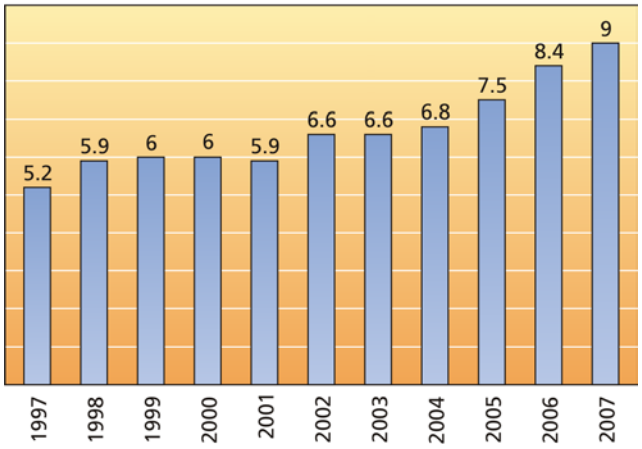


Figure 4.2

(Source: Department of Tourism) as cited on: http://www.southafrica.info/cm_pics/doing_business/692-1827-2678-0_1465012.jpg; Accessed 27th February 2010.02.27