



NATIONAL SENIOR CERTIFICATE EXAMINATION  
SUPPLEMENTARY EXAMINATION 2015

**GEOGRAPHY: PAPER II**

**EXAMINATION NUMBER**

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Time: 1½ hours

100 marks

**PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY**

1. Write your examination number in the appropriate blocks provided above.
2. This question paper consists of 14 pages and a colour photograph Insert of one (i) page. Please check that your question paper is complete.
3. Read the questions carefully.
4. Answer ALL the questions in the spaces provided on the question paper.
5. Carefully study the 1:50 000 topographic map extract 3030CB PORT SHEPSTONE and the accompanying aerial photograph sheet (Photographs 1 and 2 on the colour photograph Insert) before answering the questions.
6. The topographic map has grid lines with markings A to H and 1 to 10 that may be used to identify locations according to blocks.
7. The topographic map, the aerial photograph sheet and your completed Answer Book must be handed to the invigilator at the end of the examination. The maps and photographs may be retained by the school for future use.
8. On page 2 there is a glossary of words. This will help you understand what the words in **bold** in the questions are asking you to do. There is also an English-Afrikaans translation of some words appearing on the map.
9. A magnifying glass and a calculator may be used.
10. It is in your own interest to write legibly and to present your work neatly.
11. Please hand in this question paper.

**FOR MARKER'S USE ONLY**

Question	1	2	3	4	Total
Marks					

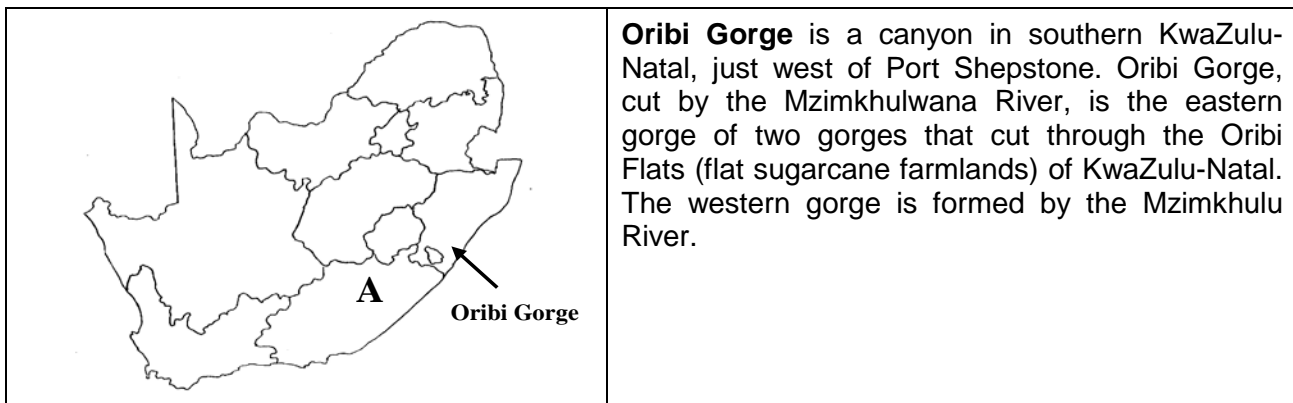
**Glossary of terms**

<b>WORD</b>	<b>MEANING</b>
<b>Calculate</b>	To work out the value of something using a mathematical method.
<b>Circle</b>	To draw a circle around something.
<b>Compare</b>	To point out or show both similarities and differences.
<b>Design</b>	To explain step-by-step a process or plan of action; to make a detailed drawing of something.
<b>Differentiate</b>	To see or to understand the difference between one feature and another.
<b>Draw</b>	To show by means of a sketch or drawing.
<b>Explain</b>	To describe something so that it can be understood.
<b>Identify</b>	To give the details or characteristics of something.
<b>Outline</b>	To give the main features or general principles of a subject.
<b>Provide</b>	(Give) To state or present the information.
<b>Recommend</b>	To offer an opinion about or solution to an issue.
<b>Select</b>	To choose; to pick out the correct answer from several alternatives.
<b>State</b>	To say something; to write something down.
<b>Suggest</b>	To put forward ideas, a plan or reasons.

**Translation of words**

English to Afrikaans

Canyon	Ravyn
Conveyor belt	Vervoerband
Diggings	Delwerye
Farm	Plaas
Furrow	Kanaal/ voor
Lime works	Kalkwerke
Marsh, swamp or wetland	Vlei/ moeras
Mountain	Berg
Nature Reserve	Natuurreservaat
Old Rail Route	Ou spoorwegroete
River	Rivier
Road	Pad

**Location map: Location of Oribi Gorge in South Africa**

[Adapted from: &lt; en.wikipedia.org &gt;]

**QUESTION 1      ATLAS USE, MAP ORIENTATION AND TECHNIQUES**

1.1 Refer to the location map above, as well as the topographic map extract 3030CB PORT SHEPSTONE to answer the following questions. Tick the correct box.

1.1.1 The province labelled A on the location map above is ...

Eastern Cape	
Free State	
Lesotho	
Kwazulu-Natal	

(1)

1.1.2 The digits in the topographic map number 3030 refer to ...

Contours and isobars	
Trigonometrical stations	
Latitude and longitude	
Spot heights	

(1)

1.1.3 The latitude reference of the Murchison Mission Hospital (G6) is ...

30° 43' 37"E	
30° 21' 32"S	
30° 21' 32"E	
30° 43' 37"S	

(1)

1.1.4 The road distance (km) on the 1:50 000 topographic map extract from the intersection of the N2 and the secondary road (H2) to Harding is ...

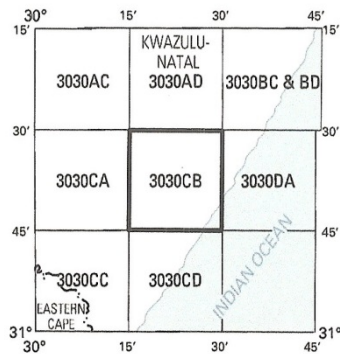
3 km	
53 km	
56 km	
59 km	

(2)

1.1.5 Study the Index to Sheets on the topographic map (also shown below).

**Suggest ONE** reason why some map sheets are combined, such as the map sheet 3030BC & BD.

INDEX TO SHEETS INDEKS VAN VELLE



(2)

1.1.6 **Identify** the features represented by the symbols labelled A – D on the topographic map extract 3030CB PORT SHEPSTONE.

A (E6)	
B (E7)	
C (A3)	
D (C3)	

(8)

## 1.2 Geographical techniques

Refer to the topographic map extract 3030CB PORT SHEPSTONE.

1.2.1 The bearing of trigonometric beacon 337 (E4) (Parrot Mountain) from spot height 434 (D5) (Four Men's Hill) is ... (Tick the correct answer)

27°	
153°	
207°	
270°	

(2)

## 1.2.2 Tick the correct answer.

Will the magnetic declination for the topographic map sheet in 2015 be greater than or less than  $25^{\circ} 21'$  west of true north? (Tick the correct answer)

Greater than $25^{\circ} 21'$	
Less than $25^{\circ} 21'$	

**Provide ONE** reason for your answer.

(1)

Reason: \_\_\_\_\_

(2)

1.2.3 **Gradient**

Refer to the topographic map extract 3030CB PORT SHEPSTONE.

**Calculate** the average gradient from Leopard Rock (C2) (X – 485 m) to the Mzimkhulu River (B2) (Y – 80 m). The altitudes of points X and Y have been provided.

(a) Difference in height: \_\_\_\_\_ m (1)

(b) Distance between the two points: \_\_\_\_\_ m (1)

(c) Gradient: **1:** \_\_\_\_\_ (2)

Calculations:

[24]

**Q1 subtotal**

**QUESTION 2 DRAINAGE OF THE AREA AND MICRO CLIMATE**

2.1 Complete the following sentences by inserting the correct fluvial term.

2.1.1 The point at which two rivers meet, in F9 is the \_\_\_\_\_.

2.1.2 The river displays a \_\_\_\_\_ stream pattern in C8.

2.1.3 The drainage density in B2 is \_\_\_\_\_.



2.1.4 The railway line crosses the Mzimkhulwana River \_\_\_\_\_ times.

2.1.5 The drainage pattern in A10 is a \_\_\_\_\_ pattern. (10)

2.2 Study the photographs in Table 1 below.

Refer to the topographic map extract 3030CB PORT SHEPSTONE. The block reference (for example, E10) is given for each photograph. Once you have located the feature, read the statement and respond by **stating** TRUE or FALSE. **Provide** a reason for each answer, using map evidence.

**Table 1**

2.2.1		Leopard Rock in C2 overlooks the Mzimkhulwana River	True/ False: _____ Reason: _____ _____ _____ _____
2.2.2		A low-level bridge crosses the Mzimkhulwana River in F2	True/ False: _____ Reason: _____ _____ _____ _____

(6)

2.3 **Calculate** the distance of the hiking trail from the weir in F2 to the Samango Falls (F2) in metres.

\_\_\_\_\_ m (2)

Calculation:

2.4 Study the course of the Mzimkhulwana River in blocks D4, E4, E3, E2 and F2.

There is evidence that rejuvenation has taken place. **Identify** TWO river features that form as a result of rejuvenation. Give the block reference of each feature.

- Feature: \_\_\_\_\_ Block ref: \_\_\_\_\_
- Feature: \_\_\_\_\_ Block ref: \_\_\_\_\_ (4)

2.5 **Valley climate**

Refer to the topographic map extract 3030CB PORT SHEPSTONE and Photograph 1 below. Photograph 1 is reproduced in the colour Insert.

Photograph 1 was taken at Baboon's Castle (D4), looking down Oribi Gorge.

**Photograph 1**

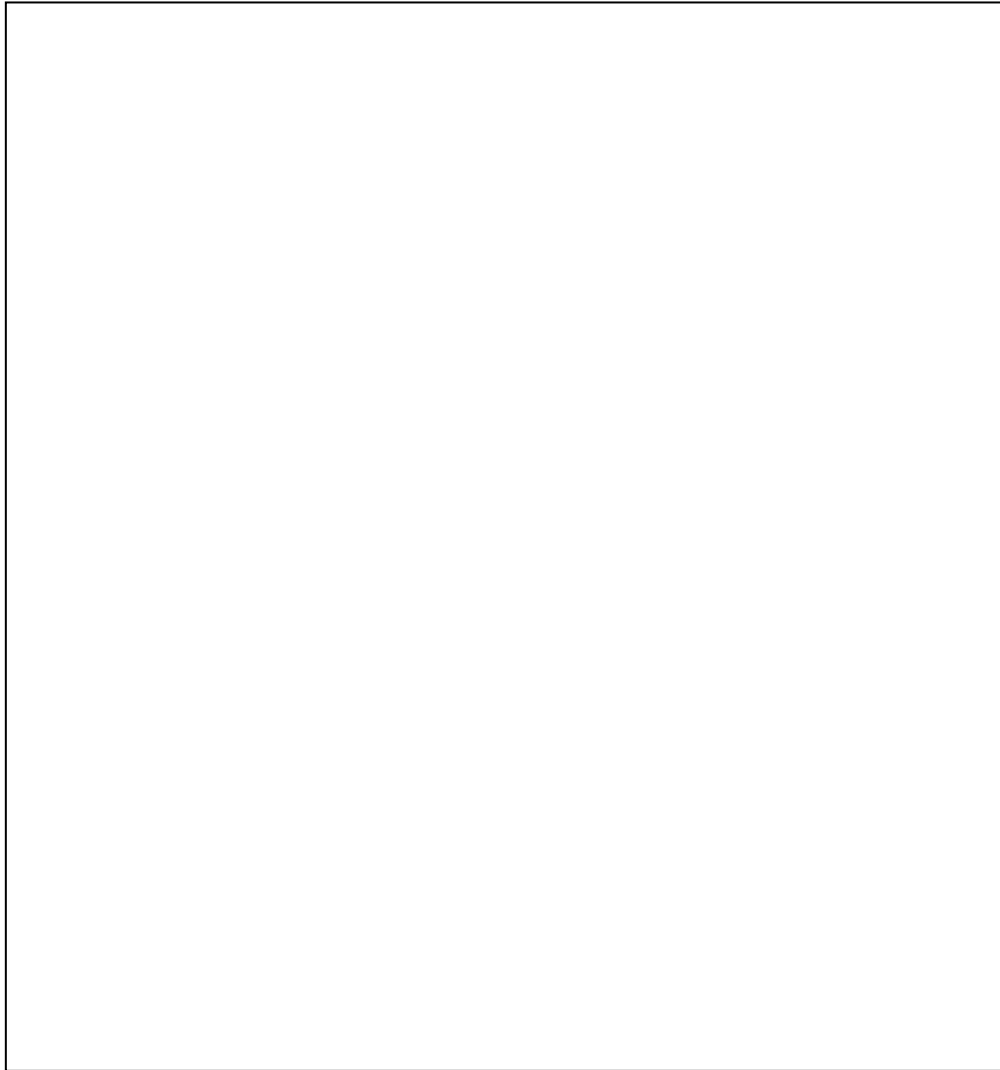


[Source: Examiner's photograph]

2.5.1 **Select** the correct underlined options in each of the following sentences. **Circle** the correct option(s).

- (a) Photograph 1 was taken in the early morning/ late afternoon/ early evening.
- (b) In Photograph 1 there is evidence of a microclimatic feature known as berg winds/ temperature inversion/ sea breezes. (2)

- 2.5.2 **Draw** a simple diagram in the box below to explain why the microclimatic feature mentioned in Question 2.5.1 (b) occurs in this valley in winter. (6)

**[30]****Q2 subtotal**



**QUESTION 3      SETTLEMENT PATTERNS**

Refer to the topographic map extract 3030CB PORT SHEPSTONE and the key of conventional signs.

3.1      **Compare** the building density of Elushabeni (A7 – 8) and Esikhaleni (A8 – 9).

- \_\_\_\_\_  
\_\_\_\_\_
  - \_\_\_\_\_  
\_\_\_\_\_
- (4)

3.2      Locate the area called Murchison (G7).

3.2.1      **Identify** TWO services provided in this settlement area.

- \_\_\_\_\_
  - \_\_\_\_\_
- (4)

3.2.2      **Explain** why these services are located next to roads.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(2)  
**[10]**



<b>Q3 subtotal</b>
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## QUESTION 4 ECONOMIC DEVELOPMENT IN THE AREA – SECONDARY AND TERTIARY ACTIVITIES

4.1 Study the photographs in Table 2 below.

Refer to the topographic map extract 3030CB PORT SHEPSTONE. The block reference (for example, E10) is given for each photograph. Once you have located the feature, read the statement and respond by **stating** TRUE or FALSE. **Provide** a reason for each answer, using map evidence.

**Table 2**

4.1.1		Open cast mining is taking place in C6 and C7	True/ False: _____ Reason: _____ _____ _____ _____
4.1.2		The cement factory in D6 is an example of a primary activity	True/ False: _____ Reason: _____ _____ _____ _____

(6)

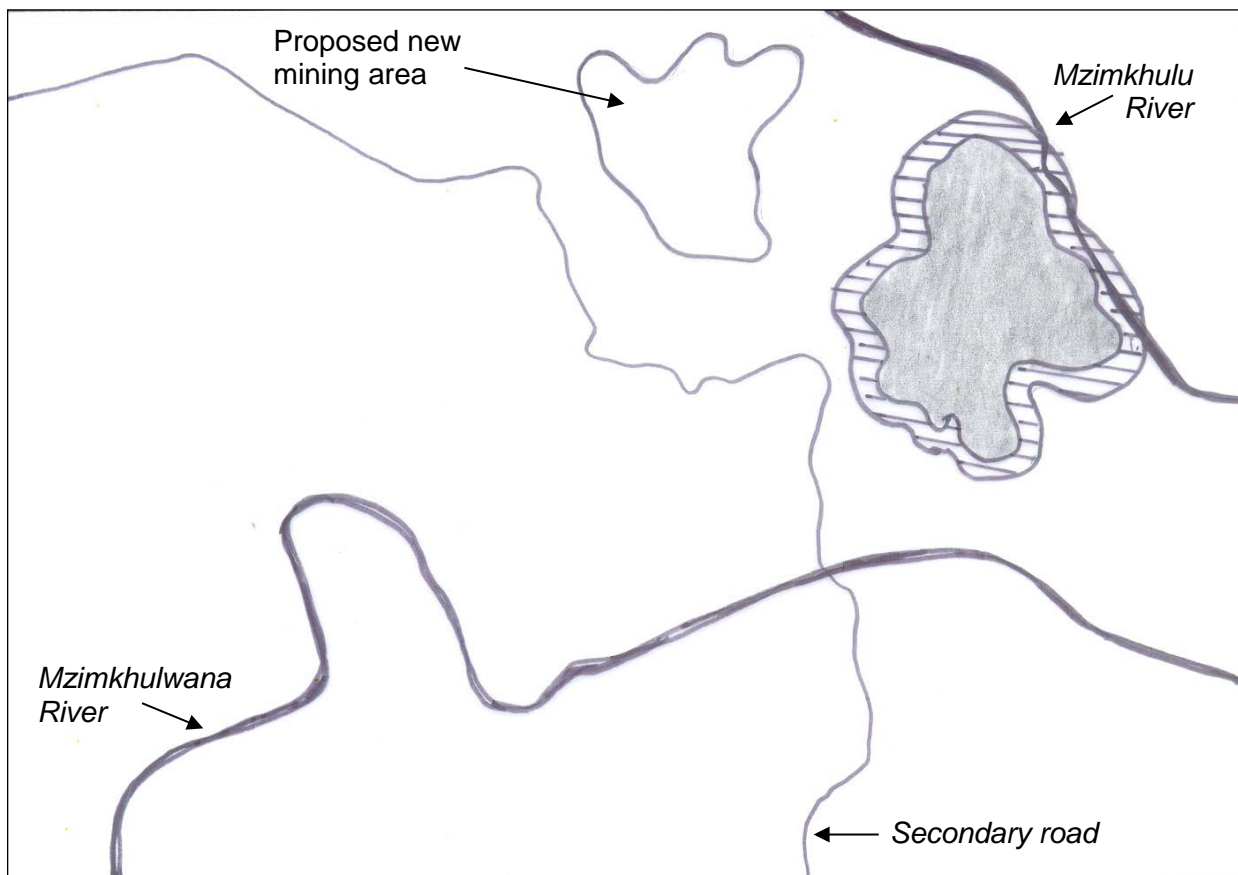
4.2 Using map evidence, **outline** TWO factors which favour the location of the cement factory in D6.



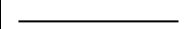

- \_\_\_\_\_
- \_\_\_\_\_

(4)

### 4.3 GIS and photograph analysis

Refer to the topographic map extract 3030CB PORT SHEPSTONE and Photograph 2, a satellite image on the colour Insert. The area shown in Photograph 2 is marked by a red box on the topographic map. Figure 1 on page 11 is a GIS map of the Simuma Lime Works.

**FIGURE 1      A GIS MAP OF SIMUMA LIME WORKS**

<b>Key:</b>	
	Mined area
	Buffer zone (1)
	Secondary road
	Buffer zone (2) around proposed new mining area (Question 4.3.2 (c))

4.3.1 (a) **Differentiate** between attribute and spatial data.

Attribute data \_\_\_\_\_

\_\_\_\_\_

Spatial data \_\_\_\_\_

\_\_\_\_\_

(4)

(b) What type of data is provided on a GIS map, for example, Figure 1?

\_\_\_\_\_

(2)

4.3.2 A buffer zone (1) of 50 m has been created around the existing mining area.

- (a) **Suggest** how this buffer zone (1) can be used by environmental planners.

\_\_\_\_\_  
\_\_\_\_\_  
(2)

- (b) The Mzimkhulu River falls within the buffer zone. **Explain** the significance of this fact.

\_\_\_\_\_  
\_\_\_\_\_  
(2)

- (c) **Draw** a 0,5 cm buffer zone (2) around the proposed new mining area on Figure 1 on page 11. Use the symbol as indicated on the key. (2)

- (d) **Recommend** a water management strategy the mining company could implement to ensure the quality of water in the area is maintained.

• \_\_\_\_\_  
\_\_\_\_\_

• \_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
(4)

#### 4.4 **Tourism in the area**

Refer to the topographic map extract 3030CB PORT SHEPSTONE and study Photograph 3 on page 13 showing a sign board at the T-junction in D1. The management of the Oribi Gorge Nature Reserve wishes to put up a large, new information sign board for tourists in the area.

**Photograph 3 – Sign board at the T-junction in D1**

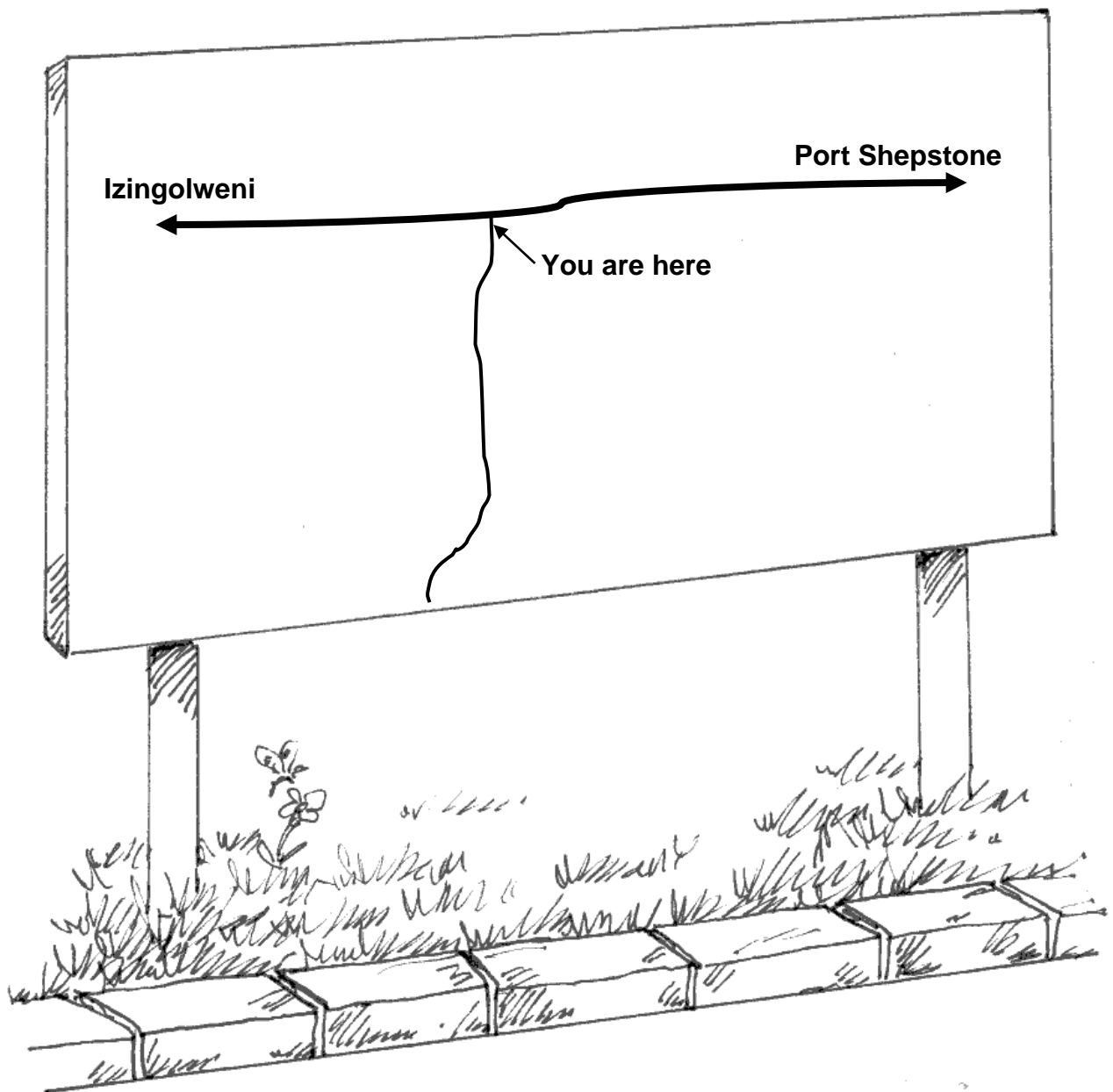
**Design** a sign board that will show tourists how to get to the following places:

- Leopard Rock C2
- Baboon's Castle D4
- Oribi Heads E2
- Samango Falls F2
- Oribi Gorge Hotel C4

Use the template provided on page 14 for your sign board. Make sure that you locate the features in the correct direction from where you are on the sign board. The new sign board will replace the existing board at D1.

(10)

## SIGN BOARD DESIGN



[36]

Q4 subtotal

**Total: 100 marks**