

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 13 pages, a topographic map and an aerial photograph. Please check that your 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 3222BC BEAUFORT WEST and the accompanying 1:10 000 aerial photograph before answering the questions. Where appropriate, you must refer to actual evidence from these sources.
6. The topographic map has grid lines with markings A to J and 1 to 8 that may be used to identify locations according to blocks.
7. The topographic map extract, aerial photograph and your completed answer book must be handed to the invigilator at the end of the examination. The maps and aerial 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. You may use the back page for rough work. No marks will be allocated to rough work.

FOR MARKER'S USE ONLY

Question	1	2	3	4	Total
Marks	24	20	26	30	100
Obtained					

Glossary of terms

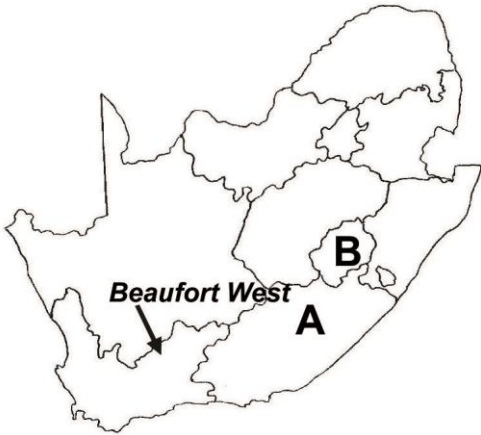
WORD	MEANING
Calculate	To work out the value of something using a mathematical method.
Classify	To arrange in categories or groups according to shared qualities.
Compare	To point out or show both similarities and differences.
Complete	To fill in.
Describe	To briefly give an account of something; to explain something and give reasons. (Note a map or diagram may be part of a description).
Design	To make drawings, sketches or plans of something.
Explain	To describe something so that it can be understood.
Identify	To give the details or characteristics of something.
Name	To state something; to give; to mention; to identify.
Provide	To give.
Substantiate	To support an answer with proof or evidence.
Support	To show something is correct or true.
Verify	To prove that something is true.

Translation of words

English to Afrikaans

Bridge	Brug	Orange	Lemoen
Camping site	Kampeerterrein	Pass	Bergpas
Caravan Park	Karavaanpark	Purification plant	Watersuiweringsaanleg
Cattle pen	Kraal	Rifle range	Skietbaan
Dam	Dam	River	Rivier
Diggings	Delwerye	Road	Pad
Farm	Plaas	Road under construction	Pad onder konstruksie
Furrow	Kanaal; voor	Route	Roete
Golf course	Gholfbaan	Sewerage works	Rioolwerke
Hill	Kop/koppie	Shoe	Skoen
Lamb	Lammertjie	Stream	Stroom
Landing strip	Landingstrook	Waterfall	Waterval
Marsh, swamp or wetland	Vlei	Watrigap	Poort
Memorial	Gedenkteken		
National Park	Nasionale Park		

Location map: Location of Beaufort West, Western Cape

	<p>Beaufort West is the largest town in the arid Great Karoo region, Western Cape. It is the centre of an agricultural district based mainly on sheep farming, and is strategically located alongside the N1 national road.</p> <p>The Karoo National Park is close to Beaufort West and important fossils have been found in the area, as early as 1827.</p> <p>Population: 34 085 (2011) <statssa. 2011></p>
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QUESTION 1 ATLAS USE, MAP AND PHOTOGRAPH ORIENTATION AND TECHNIQUES

1.1 Refer to the location map above, as well as the 1:50 000 topographic map extract 3222BC BEAUFORT WEST to answer the following questions. Tick the correct box.

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

Free State	
Gauteng	
Eastern Cape	
Northern Cape	

(1)

1.1.2 The neighbouring country labelled B on the location map above is ...

Lesotho	
Namibia	
Swaziland	
Zimbabwe	

(1)

1.1.3 The Karoo National Park lies to the ... of Beaufort West.

south east	
south west	
north east	
north west	

(1)

- 1.1.4 (a) The magnetic declination for the topographic map sheet 3222BC BEAUFORT WEST will be ... in 2018. Tick the correct answer.

25° 20' W of True North	
24° 10' W of True North	
23° 00' W of True North	
24° 18' W of True North	

Calculations

(2)

- (b) The approximate true bearing of spot height 1145 (B4) from spot height 1238 (E2) is ...

36°	
168°	
192°	
224°	

(2)

- (c) The present day magnetic bearing of spot height 1145 (B4) from spot height 1238 (E2) will be ...

(1)

- 1.1.5 The distance to Laingsburg from the intersection of the N1 and N12 (H2) is ...

193 km	
199 km	
196 km	
6 km	

(2)

- 1.1.6 The map reference code of the topographic map sheet to the south east of 3222BC BEAUFORT WEST is ...

3222 AD	
3222 DB	
3222 CB	
3222 DA	

(2)

1.1.7 (a) Spot height 1848 (A1) is the highest point on the map.

True	
False	

(1)

(b) **Substantiate** your answer in Question 1.1.7 (a) above.

(2)

(c) **Identify** the map symbol located at spot height 1848 (A1).

(1)

1.1.8 **Name** the TWO main road routes that converge at Beaufort West.

 and

(2)

1.2 Refer to the 1:10 000 aerial photograph as well as the 1:50 000 topographic map extract 3222BC BEAUFORT WEST.

A number of features (A to C) have been labelled on the 1:10 000 aerial photograph of Beaufort West. **Identify** each labelled feature by circling the correct underlined word.

A excavation / mine dump / waste dump

B silos / reservoirs / ground sign

C trees and bush / erosion / golf course

(6)
[24]

<p>Q1 subtotal</p>

QUESTION 2 RELIEF AND DRAINAGE ANALYSIS

Refer to the 1:50 000 topographic map extract 3222BC BEAUFORT WEST.

- 2.1 2.1.1 The predominant drainage pattern around Die Skoen (E2) is ...
Tick the correct answer.

Centripetal	
Parallel	
Radial	
Rectangular	

(2)

- 2.1.2 **Support** your answer in Question 2.1.1 above, by providing map evidence.

(2)

- 2.2 **Calculate** the average gradient from trigonometrical station 152 (E2) to the wind pump on the boundary of blocks E1/F1.

2.2.1 Difference in height: _____ m (1)

2.2.2 Distance between the two points: _____ m (1)

2.2.3 Gradient **1:** _____ (2)

Calculations

- 2.3 Refer to the 1:50 000 topographic map extract 3222BC BEAUFORT WEST as well as the 1:10 000 aerial photograph.

- 2.3.1 **Describe** the location of the Beaufort West Dam.

(2)

2.3.2 **Explain** why the location of the Beaufort West Dam may pose a threat to the inhabitants of the town. **Provide** TWO reasons for your answer.

- _____

- _____

(4)

2.4 With reference to the 1:50 000 topographic map extract 3222BC BEAUFORT WEST, **provide** THREE pieces of evidence that support the statement: *'this area is an arid region and therefore water is a critical resource'*.

- _____

- _____

- _____

(6)
[20]

Q2 subtotal

QUESTION 3 SETTLEMENT

Refer to the 1:50 000 topographic map extract 3222BC BEAUFORT WEST.

3.1 **Classify** the settlement at Lemoenfontein (C7).

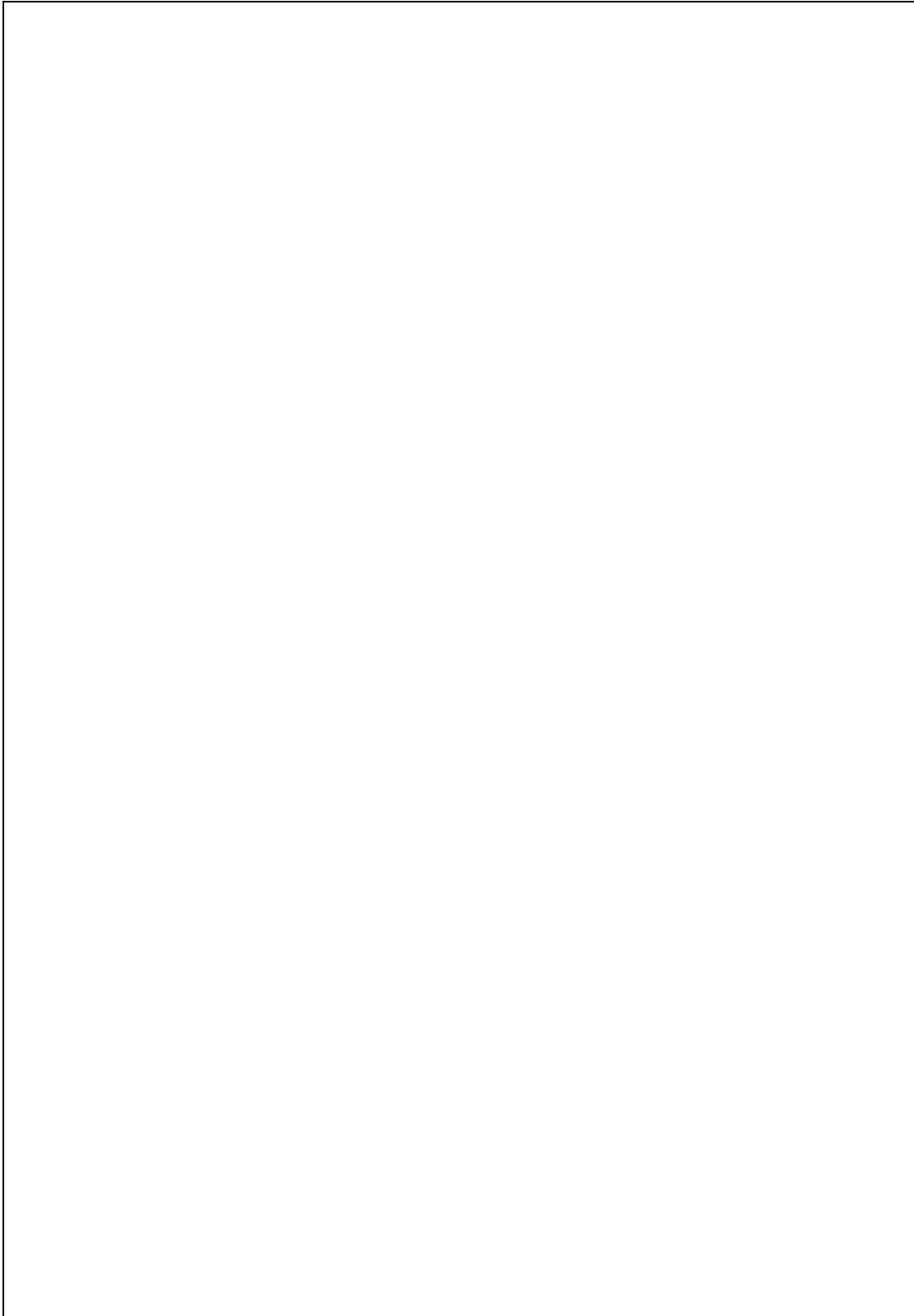
(2)

3.2 **Complete** the table below to **compare** the settlements at Lemoenfontein (C7) and Hansrivier (I8). Use map evidence to support your answers.

	Lemoenfontein (C7)	Hansrivier (I8)
Site		
Situation		
Access to water resources		
Main economic activities		

(16)

- 3.3 **Design** an advertisement for a local magazine to promote Lemoenfontein (C7) as a 'Bed and Breakfast' and overnight stop. A location map is an important aspect of this advertisement. Consider other locational factors that will attract people to Lemoenfontein.



(8)
[26]

Q3 subtotal

QUESTION 4 ECONOMIC ACTIVITIES IN THE AREA

Refer to the 1:50 000 topographic map extract 3222BC BEAUFORT WEST.

- 4.1 Locate the railway station in G5. What evidence is there that this station is of importance to the area?

(2)

- 4.2 Locate feature labelled P in J2 on the 1:50 000 map extract 3222BC BEAUFORT WEST. **Verify** that this is an important electrical substation for the area.

(2)

- 4.3 Circle the correct underlined answer.

(a) Tourist activities that take place in the Karoo National Park (D1, 2, 3, 4) are classified as primary / secondary / tertiary activities.

(2)

(b) The activity at feature labelled P (J2) is classified as a primary / tertiary / quaternary activity.

(2)

- 4.4 **Identify** TWO services located to the north and TWO services that are located to the south of the built-up area of Beaufort West. **Provide** the block reference for each service identified.

Services <u>north</u> of Beaufort West	Block reference	Services <u>south</u> of Beaufort West	Block reference
1.		1.	
2.		2.	

(8)

4.5 Proposed mining in the area

Read the Fact File on the proposed uranium mining and hydraulic fracturing (fracking) in the area.

FACT FILE**Uranium mining threatens the Karoo**

Just as the threat of fracking seemed to quieten in the Karoo, the danger of uranium mining has arisen. The Karoo has long been known to contain large uranium deposits. Now an Australian company with Russian funding is planning to extract the radioactive mineral out of the ground on a major scale.

The company has quietly accumulated over 750 000 hectares of Karoo properties and concessions around Beaufort West and plans to set up a large Central Processing Plant just outside of the town. Huge concern is about the contamination of the scarce water supply. In the Karoo, uranium exploration and some mining have occurred on and off since 1969.

Dr Stefan Cramer

[Source: <<http://karoospace.co.za>>]

4.5.1 **Identify** THREE infrastructural services that are well developed in the Beaufort West area that would support mining.

- (a) _____
- (b) _____
- (c) _____

(6)

4.5.2 **Complete** the table below to weigh up the PROS and CONS (arguments for and against) of the proposed uranium mining in the Beaufort West area.

Provide TWO factors for and TWO against the proposed mining.

Factors <u>FAVOURING</u> the proposed mining	Factors <u>AGAINST</u> the proposed mining
1	1
2	2

(8)
[30]

Q4 subtotal

Total: 100 marks

Rough work (Not for marks)