



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 12

GEOGRAPHY P2

NOVEMBER 2012

MARKS: 100

TIME: 1½ hours

EXAMINATION NUMBER														
CENTRE NUMBER														

MARK SCORED	Q1	Q2	Q3	Q4	TOTAL
MARKER					
SENIOR MARKER					
CHIEF MARKER					
MODERATOR					
TOTAL	20	20	40	20	100

This question paper consists of 11 pages and 1 page for rough work.

RESOURCE MATERIAL

1. An extract from topographical map 2829AC HARRISMITH.
2. Orthophoto map 2829AC 3 HARRISMITH.
3. **NOTE:** The resource material must be collected by the schools for their own use.

INSTRUCTIONS AND INFORMATION

1. Write your EXAMINATION NUMBER and CENTRE NUMBER in the spaces on the cover page.
2. Answer ALL the questions in the spaces provided in this question paper.
3. You are supplied with a 1:50 000 topographical map 2829AC of HARRISMITH and an orthophoto map of a part of the mapped area.
4. You must hand the topographical map and the orthophoto map to the invigilator at the end of this examination session.
5. You must use the blank page at the back of this paper for all rough work and calculations. Do NOT detach this page from the question paper.
6. Show ALL calculations and formulae, where applicable. Marks will be allocated for this.
7. You may use a non-programmable calculator.
8. The following English terms and their Afrikaans translations are shown on the topographical map.

ENGLISH

Diggings
Caravan Park
Sewage Works
River Mouth
Golf Course
Wetland

AFRIKAANS

Uitgrawings
Karavaanpark
Rioolwerke
Riviermond
Gholfbaan
Vlei

QUESTION 1: MULTIPLE-CHOICE QUESTIONS

The questions below are based on the 1:50 000 topographical map 2829AC HARRISMITH, as well as the orthophoto map of a part of the mapped area. Various options are provided as possible answers to the following questions. Choose the answer and write only the letter (A–D) in the block next to each question.

1.1 The main agricultural activity around Harrismith is ...

- A crop farming.
- B fruit farming.
- C cattle farming.
- D chicken farming.

1.2 The recreational feature marked 1 on the orthophoto map is a ...

- A park.
- B nature reserve.
- C golf course.
- D plantation.

1.3 On the topographical map, Phomolong (A) in block **A6/7** is an example of a/an ... residential area.

- A high-income
- B low-income
- C middle-income
- D informal

1.4 Which town is approximately 60 km from Harrismith?

- A Van Reenen
- B Warden
- C Witsieshoek
- D Kestell

1.5 The Sterkfontein Dam is to the ... of the town of Harrismith.

- A south-west
- B south-east
- C south
- D west

1.6 The map index to the south of 2829AC is ...

- A 2828DB.
- B 2829CA.
- C 2828BD.
- D 2829CB.

1.7 The river in block **C2** on the topographical map flows in a ... direction.

- A south-easterly
- B north-easterly
- C southerly
- D north-westerly

1.8 The land-use zone numbered **1** on the orthophoto map is a ...

- A recreational area.
- B rural-urban fringe.
- C residential area.
- D plantation.

1.9 The street pattern of the built-up area in blocks **C1**, **C2** and **D2** on the topographical map is ...

- A planned irregular.
- B a grid.
- C unplanned irregular.
- D radial.

1.10 The feature labelled **E** on the topographical map is (a) ...

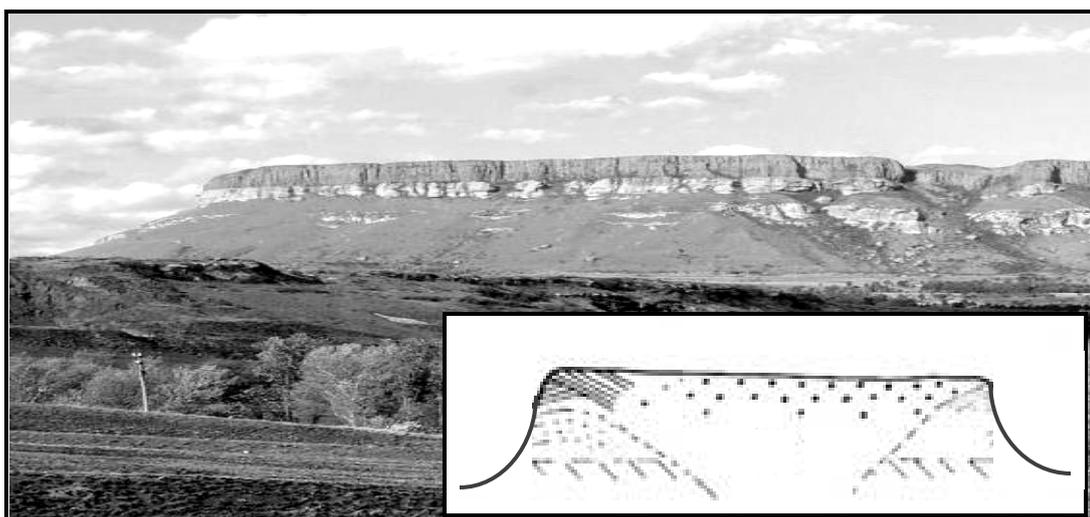
- A perennial water.
- B non-perennial water.
- C marsh and vlei.
- D non-perennial river.

(10 x 2)

[20]

QUESTION 2: CALCULATIONS AND APPLICATION

2.1 Harrismith holds an annual marathon that involves contestants running via Platberg. Study both the photograph of Platberg below and the area covered by blocks **A/B10**, **11**, **12** and **13** on the topographical map before answering the questions below.



2.1.1 Identify the landform named Platberg.

_____ (1 x 1) (1)

2.1.2 Identify the shape of the slope that the contestants will be running up between points **C–D** (block **A/B10**) on the topographical map. Explain your answer with reference to the contour lines on the map.

Slope

Explanation

_____ (2 x 1) (2)

2.1.3 Calculate the average gradient of the slope between spot height 1797 and spot height 2263 in block **A10** on the topographical map. Show ALL calculations.

_____ (5 x 1) (5)

2.1.4 Comment on the level of difficulty of this slope for a contestant.

_____ (1 x 1) (1)

2.1.5 Explain why a zig-zag footpath (block **A11**) has been cut over Platberg.

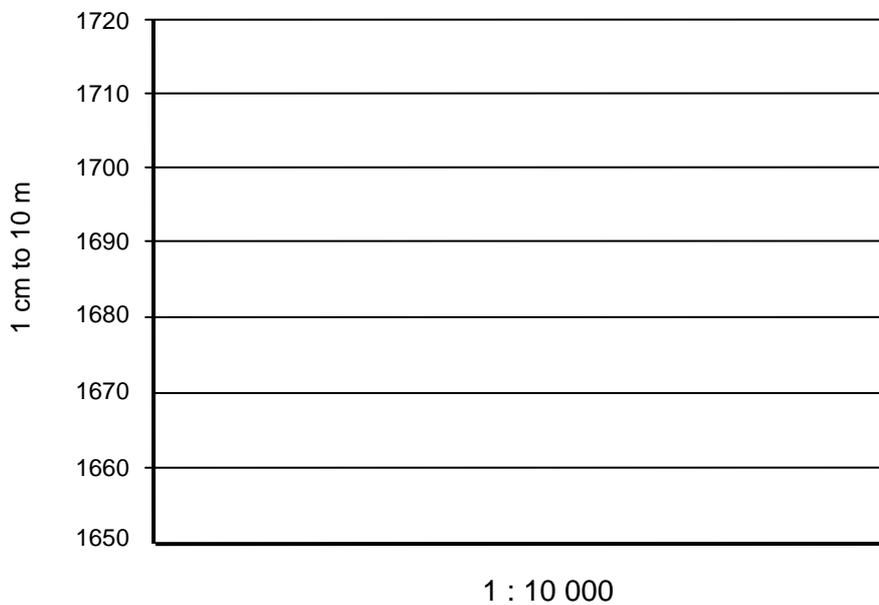
_____ (1 x 1) (1)

2.2 Using the information on the topographical map, determine the magnetic declination for this year. Show ALL calculations/steps followed.

(4 x 1) (4)

2.3 Refer to the feature labelled Blokhuis (4) on the orthophoto map.

Draw a cross section of the feature from 2 to 3 on the axes below.



(12 x ½) (6)
[20]

QUESTION 3: APPLICATION AND INTERPRETATION

3.1 The Sterkfontein Dam forms an important part of the Tugela-Vaal Scheme. Refer to the diagram below (**FIGURE 3.1**) as well as the dam on the topographical map to answer the questions that follow.

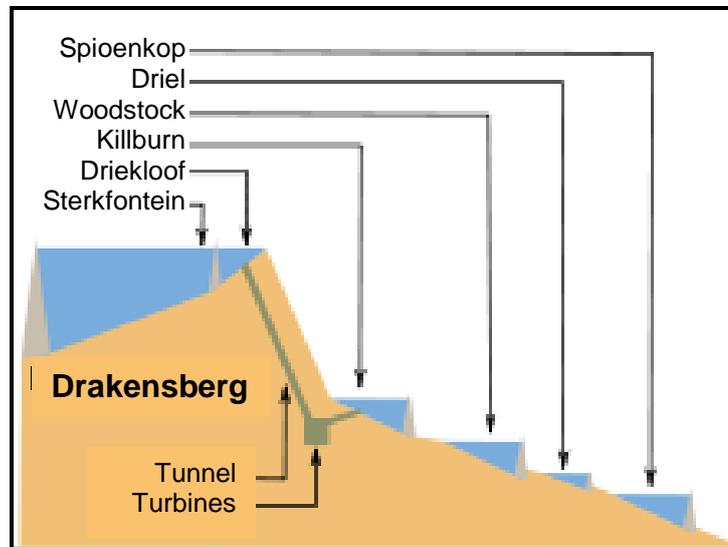


FIGURE 3.1

3.1.1 Describe the difference in position of the Sterkfontein Dam in relation to the Spioenkop, Driel, Woodstock and Killburn Dams.

(1 x 2) (2)

3.1.2 The Sterkfontein Dam has an ideal location for the storage of water. Give ONE reason to support this statement.

(1 x 2) (2)

3.1.3 Name TWO ways in which the residents of Harrismith and its surrounding area can benefit from the Sterkfontein Dam.

(2 x 2) (4)

3.2 Harrismith is located in a low-rainfall area. Give TWO pieces of evidence from the map to support this statement.

(2 x 2) (4)

3.3 Identify the drainage pattern in blocks **E/F3**, **4** and **5** and give evidence from the map to support your answer.

(2 x 2) (4)

3.4 Refer to Nuwejaarspruit in block **G2** on the topographical map.

3.4.1 Is this a perennial or non-perennial river?

(1 x 2) (2)

3.4.2 Nuwejaarspruit is in its middle course, changing to the lower course. Give TWO pieces of evidence from the map to support this statement.

(2 x 2) (4)

3.5 Harrismith is a very old town that developed in the colonial era. Support this statement with ONE piece of evidence from the map.

(1 x 2) (2)

3.6 Refer to the dominant primary activity practiced in blocks **H1** and **H2**.

3.6.1 Identify the dominant primary activity referred to above.

(1 x 2) (2)

3.6.2 Explain how the environment is likely to be affected by this activity identified in QUESTION 3.6.1 in a negative way.

(1 x 2) (2)

3.7 Refer to the N3.

3.7.1 Why does the N3 NOT pass through Harrismith?

(2 x 2) (4)

3.7.2 What is the disadvantage for businesses of the N3 not passing through Harrismith?

(1 x 2) (2)

3.8 Refer to Wilgerpark on the orthophoto map.

3.8.1 Wilgerpark developed much later than the original town of Harrismith. Give ONE reason from the orthophoto map to support this statement.

(1 x 2) (2)

3.8.2 Wilgerpark is a high-income residential area. Give ONE piece of evidence from the topographical map to support your answer.

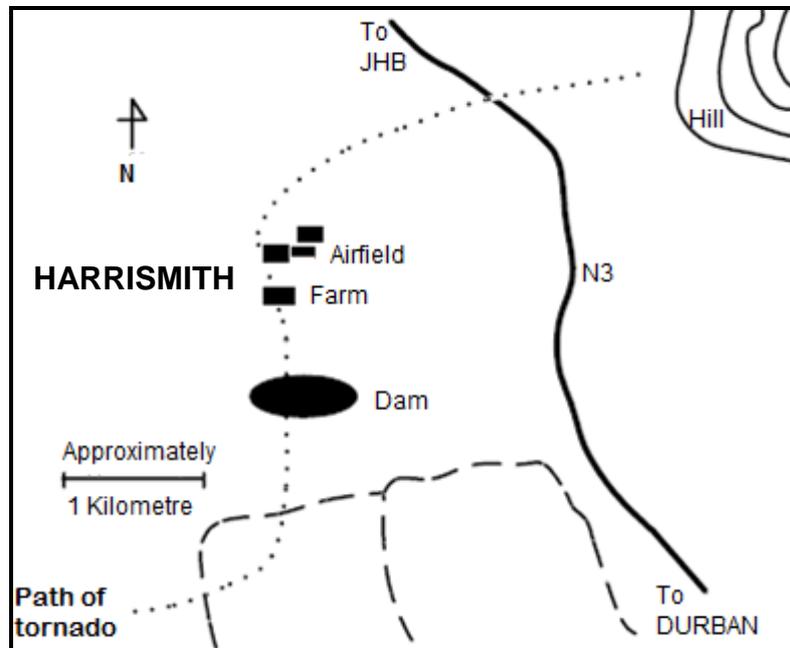
(1 x 2) (2)

3.8.3 Give ONE disadvantage of the location of Wilgerpark.

(1 x 2) (2)
[40]

QUESTION 4: GEOGRAPHICAL INFORMATION SYSTEMS (GIS)

4.1 Study the map below (**FIGURE 4.1**) which shows the path of the tornado that tore through Harrismith a few years ago. Many data layers were used to draw this map.



[Source: Goliger en Van Wyk]

FIGURE 4.1

4.1.1 Define the term *data layering (overlying)*.

(1 x 2) (2)

4.1.2 Name TWO data layers visible on the map (**FIGURE 4.1**).

(2 x 2) (4)

4.1.3 GIS is useful in disaster management. Explain how it would have assisted the local authorities with planning after the tornado struck.

(2 x 2) (4)

4.2 Study the photo (**FIGURE 4.2**) of the N3 that bypasses Harrismith and connects Durban and Johannesburg.



[Source: Google]

FIGURE 4.2

4.2.1 Differentiate between *spatial data* and *attribute data*.

(2 x 2) (4)

4.2.2 What type of spatial object (point, line or polygon) is the road?

(1 x 2) (2)

4.2.3 Give ONE attribute that can be captured for the N3.

(1 x 2) (2)

4.3 If a vehicle with a global positioning system (GPS) approaches Harrismith, how can the GPS assist the driver to find the hospital numbered **10** on the orthophoto map?

(1 x 2) (2)
[20]

TOTAL: 100

ROUGHWORK AND CALCULATIONS