



Province of the  
**EASTERN CAPE**  
EDUCATION

## NATIONAL SENIOR CERTIFICATE

**GRADE 12**

**SEPTEMBER 2013**

**GEOGRAPHY P2**

**MARKS: 100**

**TIME: 1½ hours**

**NAME:** \_\_\_\_\_



		MARKS	MOD
Q1	20		
Q2	20		
Q3	40		
Q4	20		

TOTAL MARKS	MOD
100	100

\_\_\_\_\_  
This question paper consists of 12 pages.  
\_\_\_\_\_

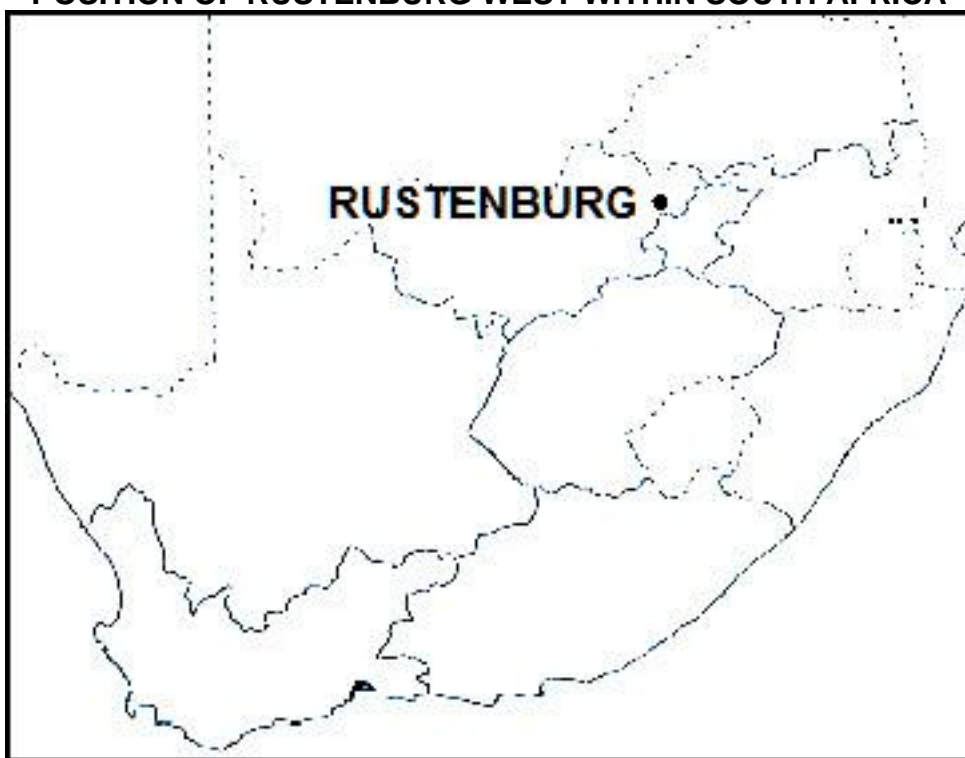
**INSTRUCTIONS AND INFORMATION**

1. Write your NAME in the space provided on the cover page.
2. Answer ALL the questions in the spaces provided ON THIS QUESTION PAPER.
3. You are supplied with a 1:50 000 topographical map (2527CA RUSTENBURG WEST) and an orthophoto map (2527CA 20 RUSTENBURG) of a part of the mapped area.
4. The topographical map and the orthophoto map must be handed over to the invigilator at the end of the examination session.
5. NOTE: The resource material (topographical map and orthophoto map) must be collected by the schools for their own future use.
6. A non-programmable calculator may be used.
7. A glossary of some of the English and Afrikaans words and their translations appears on the following page.

**GLOSSARY**  
**(SOME OF THESE TERMS MAY APPEAR ON THE MAPS)**

ENGLISH	AFRIKAANS
Shaft	Skag
Slimes Dam	Slykdam
Diggings	Uitgrawings
Nature Reserve	Natuurreservaat
Woodland/Plantation	Beboste Gebied/Plantasie
Cemetery	Begraafplaas
Caravan Park	Karavaanpark
Golf Course	Gholfbaan
Furrow	Voor
Hospital	Hospitaal
Shooting Range	Skietbaan
Model Aircraft Club	Modelvliegveld-klub
Hiking Trail	Voetslaanpad
Sewage Disposal Works	Rioolverwerkingsaanleg

**POSITION OF RUSTENBURG WEST WITHIN SOUTH AFRICA**



**SECTION A****QUESTION 1: MULTIPLE-CHOICE QUESTIONS**

The following statements are based on the 1:50 000 topographical map 2527CA RUSTENBURG WEST, as well as the orthophoto map of a part of the mapped area. Various options are provided as possible answers to the following statements. Choose the correct answer and write only the letter (A–D) in the block next to the statement.

1.1 The major raw mineral mined around the Rustenburg area is ...

- A platinum.
- B coal.
- C diamonds.
- D iron ore.

1.2 The contour interval on the orthophoto map is ...

- A 5 m.
- B 10 m.
- C 20 m.
- D 2 m.

1.3 At **5** on the orthophoto map the land use is a/an ....

- A park.
- B hospital.
- C golf course.
- D industry.

1.4 The physical feature marked **E** in block F4 on the topographical map is a ...

- A mesa.
- B ridge.
- C valley.
- D plateau.

1.5 The road connecting Rustenburg West with Verntersdorp is a/an ...

- A national road.
- B main road.
- C arterial road.
- D other road.

1.6 The slope element marked **A** in block G5 on the topographical map is the ... slope.

- A scarp/cliff
- B crest
- C pediment
- D talus/debris/scree

☐

1.7 The scale of the orthophoto is ...

- A the same as the map.
- B smaller than that of the map.
- C larger than that of the map.
- D impossible to tell from the information available.

☐

1.8 The feature marked **1** on the orthophoto map is a/an ...

- A dam.
- B sports field.
- C reservoir.
- D excavation.

☐

1.9 The model aircraft club in block F7 is found in the ...

- A CBD.
- B rural-urban fringe.
- C residential area.
- D slum.

☐

1.10 The drainage pattern of the area marked **M** in block D2 on the topographical map is ...

- A centripetal.
- B trellis.
- C radial.
- D rectangular.

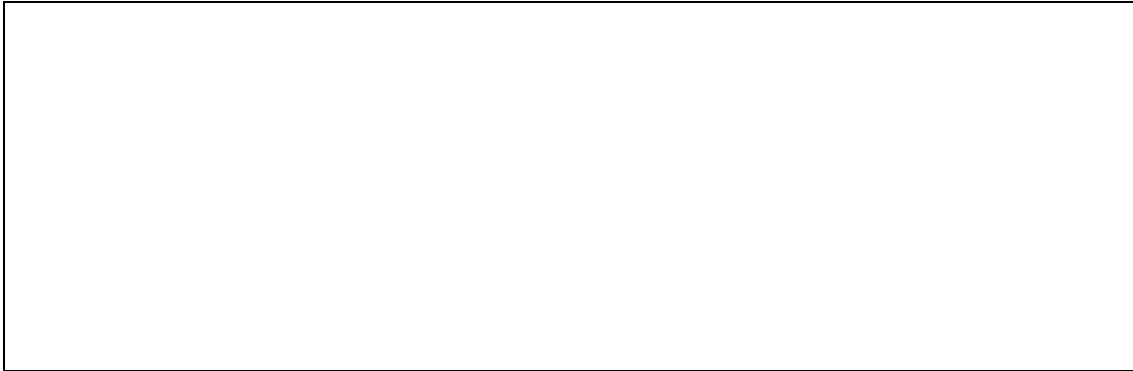
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(10 x 2) (20)

**TOTAL SECTION A: 20**

**SECTION B****QUESTION 2: MAPWORK TECHNIQUES AND CALCULATIONS**

- 2.1 Draw a rough cross profile, from spot height •241 (K3) to spot height •666 (J5) to illustrate that with labels Magaliesberg Mountain is a good example of a cuesta.



(4)

- 2.2 Calculate the magnetic declination for the year 2013.  
Show ALL calculations.

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(5)

- 2.3 Calculate the average gradient from spot height •1153 **(4)** to spot height •1162 **(5)** on the orthophoto map.  
Show ALL your calculations.

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(6)

- 2.4 Is the gradient that you have calculated in QUESTION 2.3, steep or gentle?

**Answer:**

(1)

- 2.5 Explain your answer to QUESTION 2.4.

**Reason:**

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(1)

- 2.6 Give the direction of the railway station (block F9) from **E** on the topographical map.

**Answer:**

(1)

- 2.7 Give ONE reason why it would not be economical to build a link road between block H7 and block K5.

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(1)

- 2.8 Refer to trigonometrical station 228 (block J6) and trigonometrical station 217 (block K8):

State the difference in height between these two points.

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(1)

**TOTAL SECTION B: 20**

**SECTION C****QUESTION 3: MAP INTERPRETATION AND ANALYSIS**

- 3.1 "Rainfall over the map area is seasonal and at times unreliable."  
Provide map evidence of any TWO measures farmers have used to overcome the problem of water shortage during times of low rainfall.

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(2 x 2) (4)

- 3.2 Predict TWO ways in which water supply for the future can be assured in this area.

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(2 x 2) (4)

- 3.3 Commercial farming is practised at the group of farms (block E5) on the topographical map. Give TWO reasons to substantiate this statement.

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(2 x 2) (4)

- 3.4 Give ONE piece of evidence from the topographical map to show that nature conservation is a priority in the mapped area.

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(1 x 2) (2)



3.5 Locate the area marked **3** on the orthophoto map.

3.5.1 This area is a low cost-housing scheme. Give ONE piece of evidence from the orthophoto map to support this statement.

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(1 x 2) (2)

3.5.2 The local government in charge of the area marked **3** is posed with many challenges regarding service delivery. Give TWO possible challenges that the authorities will be confronted with.

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(2 x 2) (4)

3.6 Expansion of the town of Rustenburg towards the **west** is limited. Provide map evidence of ONE physical factor hindering expansion of the town in this direction.

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(1 x 2) (2)

3.7 The human activities (block B9) on the topographical map are causing environmental despoliation (damage). State TWO measures that can be adopted to overcome this problem.

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(2 x 2) (4)

3.8 Find Rustenburg North in block G9 on the topographical map and answer the questions that follow.

3.8.1 Identify the street pattern at Rustenburg North.

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(1 x 2) (2)

3.8.2 Give ONE advantage of the street pattern at Rustenburg North.

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(1 x 2) (2)

3.8.3 Give TWO disadvantages of the street pattern at Rustenburg North.

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(2 x 2) (4)

3.9 Refer to the topographical map.

3.9.1 What is the dominant (main) economic activity that is practised in the rural areas of Rustenburg? Give a reason for your answer.

Activity:

Reason:

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(2 x 2) (4)

3.9.2 What is the product that is produced by the economic activity mentioned in QUESTION 3.9.1 above?

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(1 x 2) (2)

**TOTAL SECTION C: 40**

**SECTION D****QUESTION 4: GEOGRAPHICAL INFORMATION SYSTEMS (GIS)**

4.1 Geographical information is obtained in a number of ways.

4.1.1 What is a database?

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\_\_\_\_\_  
(1 x 2) (2)

4.1.2 Why is it sometimes necessary to manipulate data in a database?

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\_\_\_\_\_  
(2 x 2) (4)

4.2 Classify the following data as either spatial data or attribute data.

4.2.1 A map showing housing density.

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(1 x 2) (2)

4.2.2 The shape of a dam.

\_\_\_\_\_  
(1 x 2) (2)

4.3 Define the term *remote sensing*.

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\_\_\_\_\_  
(1 x 2) (2)

4.4 Name any TWO natural features on the topographical map that can be studied using remote sensing data.

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(2 x 2) (4)

- 4.5 Name any TWO layers that one could overlay to obtain a realistic dataset of the Rustenburg Nature Reserve.

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(2 x 2) (4)

**TOTAL SECTION D: 20**  
**GRAND TOTAL: 100**

