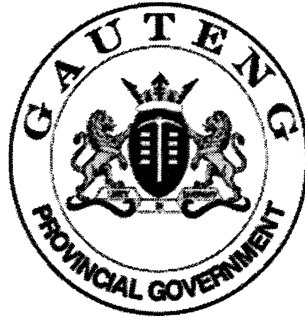


**SENIOR CERTIFICATE EXAMINATION
SENIORSERTIFIKAAT-EKSAMEN**



**OCTOBER / NOVEMBER
OKTOBER / NOVEMBER**

2004

GEOGRAPHY

AARDRYKSKUNDE

**(Second Paper: Map and
Aerial Photograph
Interpretation)
(Tweede Vraestel: Kaart-
en Lugfotovertolking)**

SG

502-2/2

**5 pages
5 bladsye**

GEOGRAPHY SG: Paper 2
Question Paper & Maps



502 2 2

SG

**COPYRIGHT RESERVED / KOPIEREG VOORBEHOU
APPROVED BY UMALUSI / GOEDGEKEUR DEUR UMALUSI**



**GAUTENGSE DEPARTEMENT VAN ONDERWYS
SENIORSERTIFIKAAT-EKSAMEN**

**AARDRYKSKUNDE SG
(Tweede Vraestel: Kaart- en
Lugfotovertolking)**

TYD: 1½ uur

PUNTE: 60

HULPBRONMATERIAAL:

- 'n Uittreksel uit die **topografiese kaart** van 2826 BB Virginia.
- 'n Uittreksel uit die **ortofotokaart** van 2826 BB 8 HARMONY.

BENODIGHEDE:

- Kandidate moet hulle eie toerusting verskaf en mag van 'n standaard sakrekenaar en 'n vergrootglas gebruik maak.

INSTRUKSIES:

- Beantwoord AL die vrae.
- Beantwoord **Vraag 1.1 en Vraag 6** op die **antwoordblad** op **bladsy 5**. Maak hierdie bladsy los en sit die voor in jou **antwoordboek**. Moenie vergeet om jou **eksamennommer** op hierdie bladsy te skryf nie.
- Die hulpbronmateriaal (d.w.s. die **topografiese kaart** en **ortofotokaart**) moet deur die skole ingeneem word vir hulle eie verdere gebruik.
- Kandidate moet van hulle teoretiese kennis van aardrykskunde gebruik maak om die vrae te beantwoord.
- Die ligging van verskynsels word soos volg aangetoon:
 - **Hoofletters** op die topografiese kaart
 - **Syfers** op die ortofotokaart

Die volgende Engelse terme met hul Afrikaanse vertalings verskyn op die topografiese kaart:

| | | |
|---------------------------|---|-------------------------|
| Aerodrome | – | Vliegveld |
| Camping site | – | Kampeergebied |
| Canal | – | Kanaal |
| Conveyor belt | – | Vervoerband |
| Diggings | – | Mynwerke |
| Furrow | – | Voor |
| Limestone | – | Kalkklip |
| Sewerage works | – | Rioolwerke |
| Shaft | – | Skag |
| Silos | – | Silo's / Graansuiers |
| Slimes Dam | – | Slykdam |
| Siphon | – | Afvoerpyp |
| Waterpoint = Fountain (F) | – | Waterpunt = Fontein (F) |
| Weir | – | Stuwal / Uitkeerwal |

GAUTENG DEPARTMENT OF EDUCATION
SENIOR CERTIFICATE EXAMINATIONGEOGRAPHY SG
(Second paper: Map and Aerial
Photograph Interpretation)

TIME: 1½ hours

MARKS: 60

RESOURCE MATERIAL:

- An extract from the **topographic map** of 2826 BB Virginia.
- An extract from the **orthophoto map** of 2826 BB 8 HARMONY.

REQUIREMENTS:

- Candidates must supply their own equipment and may make use of a standard calculator and a magnifying glass.

INSTRUCTIONS:

- Answer ALL questions.
- Answer **Question 1.1** and **Question 6** on the **answer sheet** provided on **page 5**. Detach this page and place it **in the front** of your **answer book**. Do not forget to fill in your **examination number** on this page.
- The resource material (i.e. the **topographic map** and the **orthophoto map**) must be collected by the schools for their own further use.
- Candidates must draw on their theoretical knowledge of geography to answer the questions.
- The positions of features are indicated as follows:
 - **Capital letters** on the topographic map
 - **Numbers** on the orthophoto map

The following English terms with their Afrikaans equivalents appear on the topographic map:

| | | |
|---------------------------|---|-------------------------|
| Aerodrome | – | Vliegveld |
| Camping site | – | Kampeergebied |
| Canal | – | Kanaal |
| Conveyor belt | – | Vervoerband |
| Diggings | – | Mynwerke |
| Furrow | – | Voor |
| Limestone | – | Kalkklip |
| Sewerage works | – | Rioolwerke |
| Shaft | – | Skag |
| Silos | – | Silo's / Graansuiers |
| Slimes Dam | – | Slykdam |
| Siphon | – | Afvoerpyp |
| Waterpoint = Fountain (F) | – | Waterpunt = Fontein (F) |
| Weir | – | Stuwal / Uitkeerwal |

VRAAG 1

- 1.1 Gebruik die kaart van Suid-Afrika op die **antwoordblad** en toon die posisie van Virginia daarop aan deur die toepaslike snypunt van breedte- en lengtelyne te omkring. (2)
- 1.2 Verskaf die volledige kaartindeksverwysing van die topografiese kaart suidwes van die Virginiakaart. Kies uit 2826BA OF 2826BC. (1)
- 1.3 Wat is die koördinate van peilbaken 293 in ruit A6?
Kies uit: 28° 03,7' Suid; 26° 53,1' Oos OF 28° 03,9' Suid; 26° 53,0' Oos. (2)
- 1.4 Identifiseer die algemene vloeirigting van die Sandrivier. (2)
- 1.5 Wat is die ware peiling vanaf peilbaken 293 in ruit A6 na punthoogte 1354 in ruit A5? (2)
- 1.6 Bereken die afstand in kilometer vanaf peilbaken 293 in ruit A6 na punthoogte 1354 in ruit A5. Afstand = Kaartafstand x woorde skaal (3)
- 1.7 Vergelyk die gradiënt van die hellings gemerk **F** en **H** op die topografiese kaart. Gebruik beskrywings soos steil en geleidelik. 2+2=(4)
[16]

VRAAG 2

- 2.1 Bestudeer die plaas Nellie in ruit H7.
- 2.1.1 Noem die TWEE nedersettingspatrone gemerk **A** en **B**. 1x2=(2)
- 2.1.2 Verduidelik waarom die geboue by **B** hierdie vorm het. 1x2=(2)
- 2.1.3 Waarom maak die pad naby **B** so 'n skielike draai na die ooste? (1)
- 2.1.4 Watter gewas word mees waarskynlik op Nellie en ander plase in die gebied verbou? (1)
- 2.1.5 Hoe vul die boer op Nellie die reënval aan? (1)
- 2.1.6 Hoe vul die boer in ruit F9 die reën aan? (1)
- 2.2 Identifiseer 'n ernstige probleem, ten spyte van die geleidelike helling van die landskap, waarmee die boere in ruit F11 rekening moet hou. 1x2=(2)
[10]

VRAAG 3

- 3.1 Verwys na ruit B4 en C4.
- 3.1.1 Spesifiseer die hoof-primêre aktiwiteit in hierdie ruite. 1x2=(2)
- 3.1.2 Noem TWEE bewyse dat grondwater in die Virginiagebied as 'n geheel beskikbaar is. (2)
- 3.1.3 Noem TWEE omgewingsprobleme wat veroorsaak word deur die teenwoordigheid van die primêre aktiwiteit waarna in Vraag 3.1.1 verwys is. (2)
[6]

QUESTION 1

- 1.1 Use the map of South Africa on the **answer sheet**, and plot the position of Virginia by circling the appropriate intersection of lines of latitude and longitude. (2)
- 1.2 Give the complete map index reference of the topographic map, to the south-west of the Virginia map. Choose from: 2826BA OR 2826BC. (1)
- 1.3 What are the co-ordinates of trigonometrical station 293 in block A6? Choose from: 28° 03,7' South; 26° 53,1' East OR 28° 03,9' South; 26° 53,0' East. (2)
- 1.4 Identify the general direction of flow of the Sand River. (2)
- 1.5 What is the true bearing from trigonometrical station 293 in block A6 to spot height 1354 in block A5? (2)
- 1.6 Calculate the distance in kilometres from trigonometrical station 293 in block A6 to spot height 1354 in block A5. Distance = Map distance x word scale (3)
- 1.7 Compare the gradient of the slopes marked **F** and **H** on the topographic map. Use descriptions like steep and gentle. 2+2=(4)
[16]

QUESTION 2

- 2.1 Study the farm Nellie in block H7.
- 2.1.1 Name the TWO settlement patterns, marked **A** and **B**. 1x2=(2)
- 2.1.2 Explain why the group of buildings at **B** have the shape they do. 1x2=(2)
- 2.1.3 Why does the path near the settlement marked **B** turn so abruptly towards the east? (1)
- 2.1.4 What crop is most likely farmed at Nellie and other farms in the region? (1)
- 2.1.5 How does the farmer on Nellie supplement the rainfall? (1)
- 2.1.6 How does the farmer on block F9 supplement the rainfall? (1)
- 2.2 Identify a serious problem that farmers in block F11 have to deal with, in spite of the gentle slopes of the landscape. 1x2=(2)
[10]

QUESTION 3

- 3.1 Refer to blocks B4 and C4.
- 3.1.1 Specify the main primary activity in these blocks. 1x2=(2)
- 3.1.2 List TWO pieces of evidence that groundwater is available in the Virginia region as a whole. (2)
- 3.1.3 Name TWO environmental problems that have been created by the presence of the primary activity referred to in Question 3.1.1. (2)
[6]

VRAAG 4

- 4.1 Sommige riviere in die Virginiagebied vloei nie regdeur die jaar nie.
- 4.1.1 Identifiseer die stroompatroon wat deur die riviersisteem, wat noordwaarts na die Sandrivier vloei in ruit F9 en F10, gevorm word. (1)
- 4.1.2 Wat is die orde van hierdie riviersisteem (Vraag 4.1.1) waar dit Sandrivier binnevloei? (1)
- 4.2 Teken 'n kantaansigskets oor die rivier tussen 4 en 5 in ruit L8 op die ortofotokaart. Merk die punte 4 en 5 duidelik op die skets en benoem die glyoewer en die stootoewer. (4)
- 4.3 Verwys na die gebied in ruit M8, M9 en L6 op die ortofotokaart.
- 4.3.1 Watter bewys toon aan dat die rivier by 2 nie altyd sy huidige kanaal gevolg het nie? (1)
- 4.3.2 Verduidelik waarom die eilande gemerk 1 waarskynlik nie hulle posisies sal behou nie. (2)
- 4.3.3 Beskryf die vorm van die helling gemerk 3 op die ortofotokaart. (1)
- [10]**

VRAAG 5

- 5.1 Bestudeer die morfologie van die dorp op beide die ortofotokaart en die topografiese kaart.
- 5.1.1 Identifiseer die staatpatroon
- (a) in ruit O5 en ruit P5. (1)
- (b) van die voorstad Glen Harmony aan die noordelike kant van die Sandrivier. (1)
- 5.1.2 Noem EEN voordeel van 'n staatpatroon soos dit in Glen Harmony voorkom. (1)
- 5.1.3 Verduidelik waarom die suidelike deel van die dorp nie maklik toeganklik is vir die voorstede aan die noordekant van die Sandrivier nie. $1 \times 2 = (2)$
- 5.2 Identifiseer die verskynsels gemerk 6 tot 10 op die ortofotokaart. Die topografiese kaart **moet** geraadpleeg word. (5)
- [10]**

VRAAG 6

- 6.1 Gebruik die grafiek op die **antwoordblad** en voltooi 'n akkurate dwarsaansig vanaf peilbaken 20 in ruit D11 na peilbaken 353 in ruit H11. (4)
- 6.2 Toon aan en benoem die volgende verskynsels op die dwarsaansig:
- Die Sandrivier met 'n letter **R**
 - EEN donga met 'n letter **D**
- $2 \times 2 = (4)$
- [8]**

TOTAAL: 60

QUESTION 4

- 4.1 Some of the rivers in the Virginia area do not flow all year round.
- 4.1.1 Identify the stream pattern formed by the river system flowing northward to the Sand River in block F9 and F10.
- 4.1.2 What is the order of this river system (Question 4.1.1) where it enters the Sand River? (1)
- 4.2 Draw a cross profile sketch across the river from **4** to **5** in block L8 on the orthophoto map. Mark the points **4** and **5** clearly on the sketch and label the slip-off slope and the undercut slope. (4)
- 4.3 Refer to the area in blocks M8, M9 and L6 on the orthophoto map.
- 4.3.1 What evidence suggests that the river at **2** did not always follow its present channel? (1)
- 4.3.2 Explain why the islands marked **1** are not likely to retain their positions. (2)
- 4.3.3 Describe the shape of the slope marked **3** on the orthophoto map. (1)
- [10]**

QUESTION 5

- 5.1 Study the morphology of the town on both the orthophoto map and the topographic map.
- 5.1.1 Identify the street pattern
- (a) in block O5 and block P5. (1)
- (b) of the suburb of Glen Harmony on the northern side of the Sand River. (1)
- 5.1.2 Name ONE advantage of a street pattern like that in Glen Harmony. (1)
- 5.1.3 Explain why the southern part of the town is not easily accessible to the suburbs on the northern side of the river. 1x2=(2)
- 5.2 Identify the features marked **6** to **10** on the orthophoto map. The topographic map **must** be consulted. (5)
- [10]**

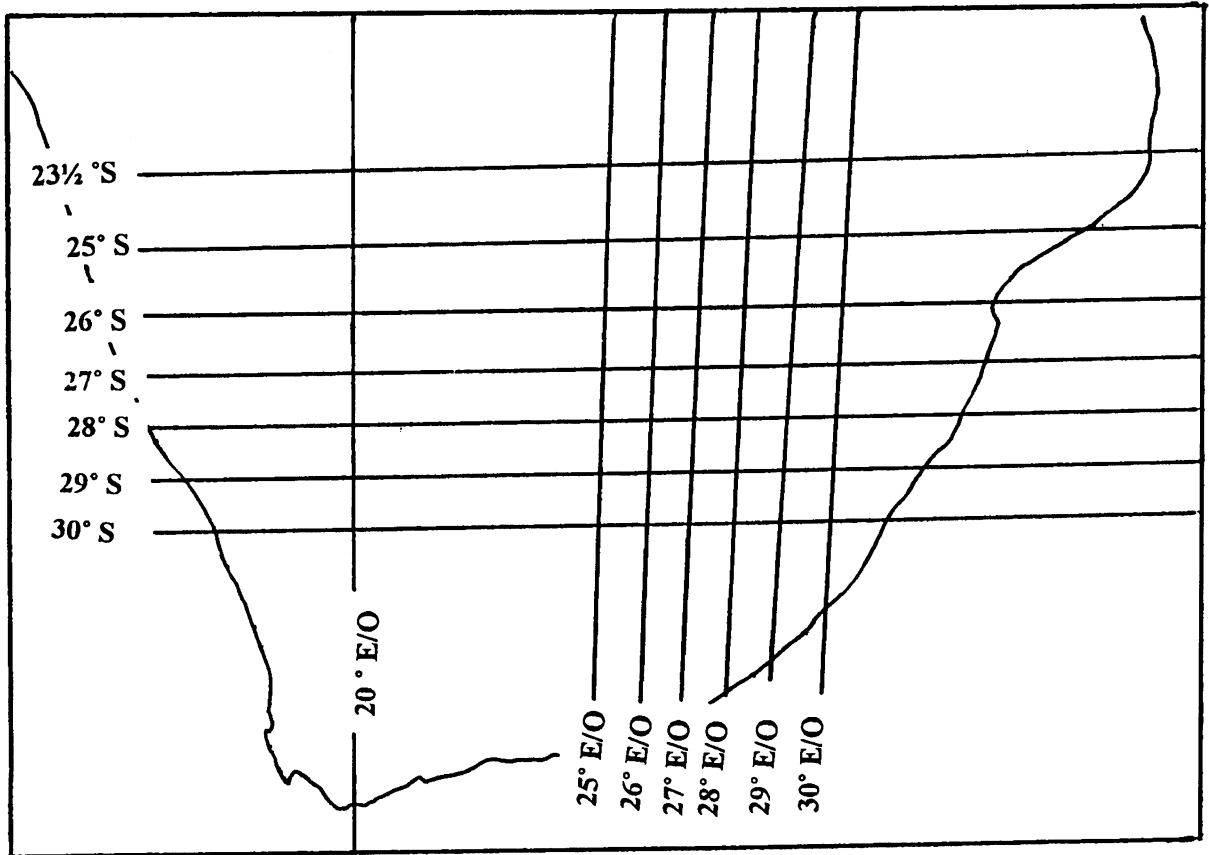
QUESTION 6

- 6.1 Use the graph on the **answer sheet** and complete an accurate cross-section from trigonometrical station 20 in block D11 to trigonometrical beacon 353 in block H11. (4)
- 6.2 Label the position of the following features on the cross-section:
- The Sand River with a letter **R**
 - ONE donga with a letter **D**
- 2x2=(4)
- [8]**

TOTAL: 60

CANDIDATE'S NUMBER /
KANDIDAAT SE NOMMER

QUESTION 1.1 / VRAAG 1.1



QUESTION 6 / VRAAG 6

