

**GAUTENG DEPARTMENT OF EDUCATION
SENIOR CERTIFICATE EXAMINATION**

FEB / MAR 2006

GEOGRAPHY SG
(Second Paper: Map and Aerial
Photograph Interpretation)

TIME: 1½ hours

MARKS: 60

RESOURCE MATERIAL:

- An extract from the topographical map of Estcourt
- An extract from the orthophoto map of Estcourt

REQUIREMENTS:

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

INSTRUCTIONS:

- Answer ALL the questions.
- All diagrams appear on the **Information Sheet on page 6** of this question paper.
- In the case of calculations, **all steps** must be shown.
- The resource material (i.e. the topographical map and the orthophoto map) must be collected by the schools for their own further use.
- Candidates must draw on their knowledge of physical and human geography to answer questions.
- The positions of features are indicated as follows:
 - Capital letters on the topographical map
 - Numbers on the orthophoto map

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

Boat club	- <i>Bootklub</i>	Nature Reserve	- <i>Natuurreservaat</i>
Boesmans River	- <i>Boesmansrivier</i>	Power Line	- <i>Kraglyn</i>
Caravan Park	- <i>Karavaanpark</i>	Rail Route	- <i>Spoorroete</i>
Furrow / Canal	- <i>Voor / Kanaal</i>	Rifle Range	- <i>Skietbaan</i>
Game Reserve	- <i>Wildreservaat</i>	Sewage Works	- <i>Rioolwerke</i>
Landing Strip	- <i>Landingstrook</i>	Tunnel	- <i>Tonnel</i>
Monument	- <i>Monument</i>	Weir	- <i>Stuwal / uitkeerwal</i>

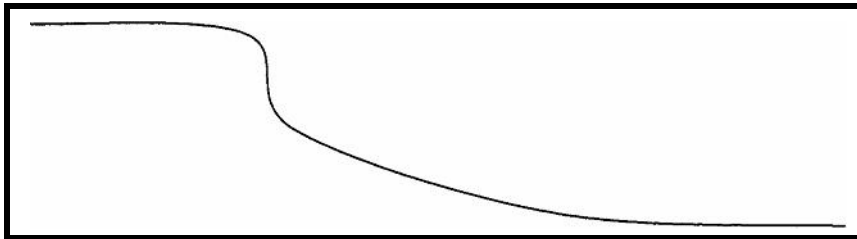
QUESTION 1

Refer to **Figure 1** on **page 6**. Estcourt is located in an area known as KwaZulu-Natal Midlands.

- 1.1 Name the provinces marked **B**, **D** and **E**. (3)
- 1.2 Which TWO economic regions are linked by the National Route, the N3, which is indicated on the topographical map? (2)
- 1.3 Name the water transfer scheme in **Figure 1** that takes water from the catchment area of the Tugela River to the Vaal Dam. (2)
- [7]**

QUESTION 2

- 2.1 Mountains in the area all exhibit the same shape and have approximately the same height. Refer to the diagram below.



- 2.1.1 The sketch (profile) view of the mountain along the line marked **A** in blocks B1 and B2 illustrates the typical shape and slopes. Redraw the diagram above in your answer book and label the typical slope forms. (4)
- 2.1.2 Indicate on the sketch where the layer of resistant rock is located. (2)
- 2.1.3 Give a name for the landform partially represented by the diagram. (2)
- 2.2 Erosion occurs at different rates in the area around the town of Estcourt.
- 2.2.1 Name the physical feature or landform marked **B** in blocks E10 and F10. Choose from: Ridge or Saddle. (1)
- 2.2.2 Describe the gradients of the slopes marked **C** and **D** on either side of the feature marked **B**. Use the terms steep and gentle. (2)
- 2.2.3 On which slope (**C** or **D**) will the rivers flow more turbulently? Why is this so? (4)

2x2=(4)
[15]

QUESTION 3

The Estcourt area is ideal for leisure activities and the views are quite good.

- 3.1 List TWO conservation areas which can be found on the topographical map. (2)
- 3.2 What is the name of the large dam found on the topographical map? (1)
- 3.3 Calculate the length in metres of the dam wall (Question 3.2). (3)
- 3.4 Is the dam wall visible from the N3 national route? (1)
- 3.5 What is the direction of the runway marked **G** at the airport in block C10? (2)
- 3.6 Calculate the gradient of the runway marked **H**, using the contour heights as points for measurement.

$$\text{Gradient} = \frac{\text{Height Difference (m)}}{\text{Horizontal Distance (m)}}$$

(5)
[14]

QUESTION 4

Refer to the orthophoto map but the topographical map should also be consulted.

- 4.1 Identify the features marked **1** in block J6 and **2** in block K7. (2)
- 4.2 What economic activity is taking place in block J1? (1)
- 4.3 Identify the forms of transport services marked **5** in block J2 and K1. (2)
- 4.4 Which land-use zone is found in blocks K3 and L3?
Choose from: Central Business District or Rural Urban fringe. (1)
- 4.5 What is the name of the main road passing through this land-use zone (Question 4.4)? (1)
- 4.6 Why is the land-use zone in block N2 for the wealthy people? 1x2=(2)
- 4.7 Which arrow, marked **6**, **7**, **8**, or **9** in the top right-hand corner of the orthophoto map represents the direction True North? (2)

[11]

QUESTION 5

Urban expansion and poverty are realities in all modern South African towns.

- 5.1 How will the expansion of the settlements in blocks E3 and F2 affect the woodlands in the south-western area of the topographical map? (2)
- 5.2 Name ONE negative environmental impact that would result from your answer given in Question 5.1. (2)
- 5.3 The dotted line marked **E** (blocks C3 and D2/3) indicates the extent of the built-up area of Wembezi in 1975. In which directions has the built-up area grown since then? 2x2=(4)
[8]

QUESTION 6

Refer to **Figure 2** on page 6, a cross-section drawn from Beacon Hill in block E10 to the power lines at 29°02' South and 29°56,8' East in block C12 on the topographical map.

- 6.1 Match the following features with ONE of the points marked 1 to 15 on the cross-section.
- 6.1.1 National road
- 6.1.2 Concave slope
- 6.1.3 An erosion gully (donga)
- 6.1.4 Spur
- 6.1.5 Single power line (5)
[5]

TOTAL: 60

INFORMATION SHEET

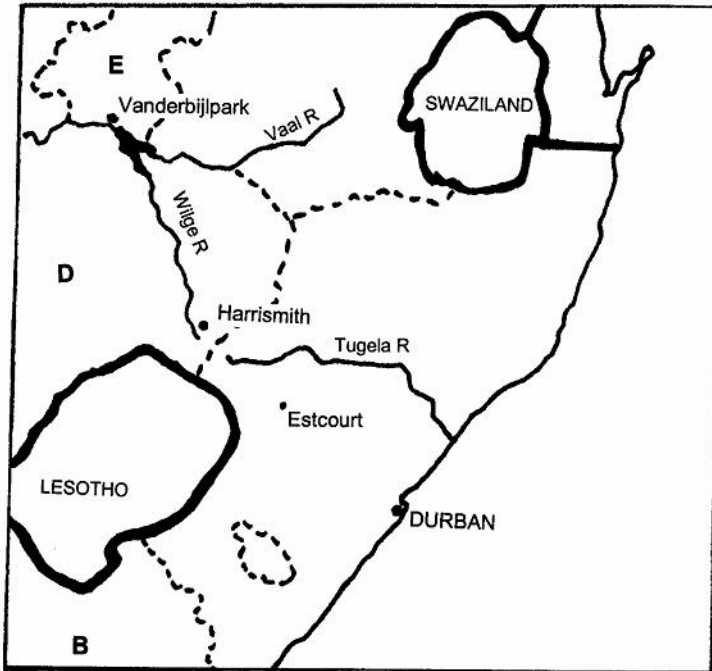


FIGURE 1

- International boundary
- - - Provincial boundary
- ~ Rivers

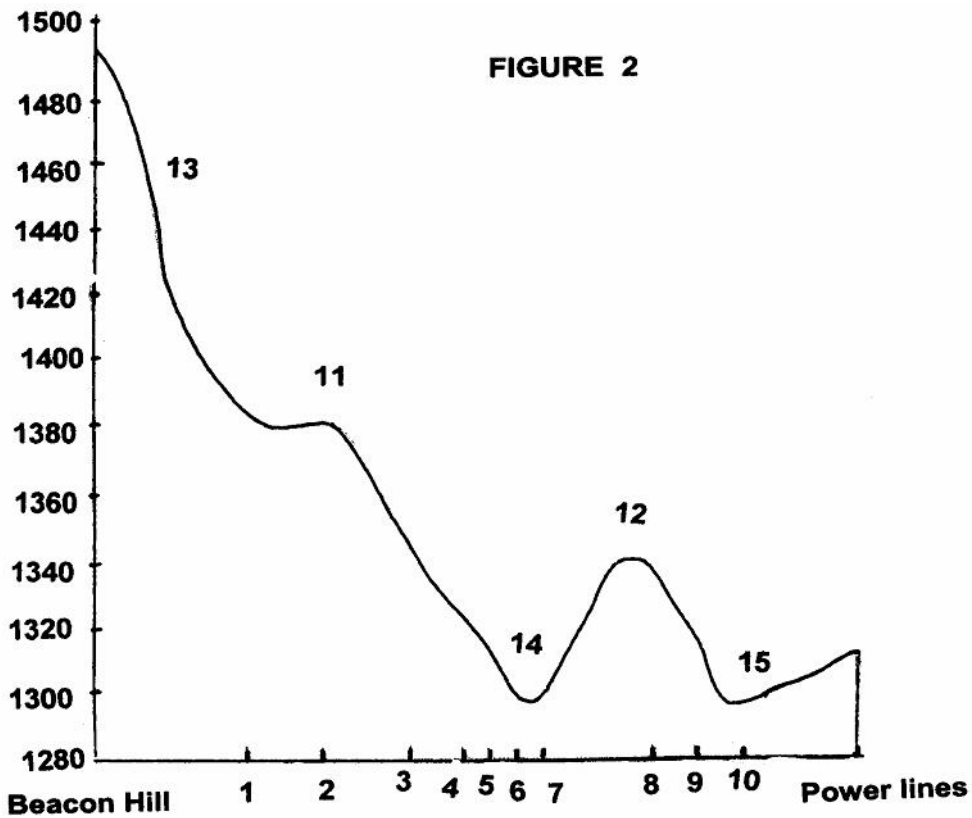


FIGURE 2

END

GEOGRAPHY – PAPER 2 – HG

502-2/2 K

Please refer to the colours of the topographic map.

The colours of the map, especially the **brown**, are not quite true. Learners are advised to consult the key or reference at the bottom of the map.

AARDRYKSKUNDE – VRAESTEL 2 – HG

502-2/2 K

Verwys asseblief na die kleure op die topografiese kaart.

Die kleure op die kaart, veral die **bruin**, is nie heeltemal korrek nie. Leerders word aangeraai om die sleutel of verklaring onderaan die kaart te raadpleeg.