



education

Department:
Education
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

GEOGRAPHY P2

EXEMPLAR 2008

MARKS: 100

TIME: 1½ hours

NAME:

SCHOOL:

This question paper consists of 10 pages, a topographical map and an orthophoto map.

RESOURCES

1. An extract from the topographical map, 2726DC, ODENDAALSRUS orthophoto map, 2726DC 14, ODENDAALSRUS
2. NOTE: The resource material must be collected by the schools for their own use.
3. A non-programmable calculator may be used.

INSTRUCTIONS AND INFORMATION

1. Write your NAME and that of your SCHOOL in the spaces provided.
2. Answer ALL the questions in the spaces provided on this question paper.
3. You are supplied with a 1:50 000 topographical map, 2726DC, ODENDAALSRUS and an orthophoto map of a part of the same area.
4. The topographical map and the orthophoto map must be handed over to the invigilator at the end of the examination session.
5. The following Afrikaans terms or their English translations are shown on the 1:50 000 topographical map.

AFRIKAANS

Kanaal/Voor
 Skag
 Uitgrawings
 Vervoerband
 Steengroewe
 Oopgroefmyn
 Diensspoorlyn
 Motorrenbaan
 Hospitaal
 Stadion
 Seiljagklub
 Slikdam
 Vliegveld
 Gholfbaan
 Rioolwerke

ENGLISH

Canal/Furrow
 Shaft
 Diggings
 Conveyer belt
 Quarries
 Opencast mine
 Service railway line
 Motor race-track
 Hospital
 Stadium
 Yacht club
 Slime dam
 Aerodrome
 Golf course
 Sewerage works

QUESTION 1

The following questions are based on the 1:50 000 topographical map, 2726DC, ODENDAALSRUS as well as the orthophoto map of the same area. Various possible options are provided as answers to the following questions. Choose the answer and write only the letter (A – D) in the block next to each question (1.1 – 1.10).

1.1 The number of the map to the west of map 2726DC ODENDAALSRUS is ...

- A 2726DA.
- B 2826BA.
- C 2726DD.
- D 2726CD.

1.2 The exact location (coordinates) of the windmill in block E5 is ...

- A $26^{\circ}43'09''S$ $27^{\circ}55'05''E$.
- B $27^{\circ}55'05''S$ $26^{\circ}43'09''E$.
- C $26^{\circ}40'05''S$ $27^{\circ}50'10''E$.
- D $27^{\circ}50'10''S$ $26^{\circ}40'05''E$.

1.3 The direction of spot height 1385 (block F6) from spot height 1364 (block E5) is ...

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

1.4 The man-made feature labelled **A** on the topographical map in block E6 is a/an ...

- A main road.
- B arterial route.
- C secondary road.
- D national road.

1.5 The contour interval of the topographical map is ...

- A 5 m.
- B 20 m.
- C 10 m.
- D 25 m.

1.6 The natural feature marked **B** on the topographical map in block G2 is a ...

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

1.7 The map projection used on the orthophoto map is ...

- A Mercator.
- B Lambert.
- C Gauss conform.
- D universal transverse.

1.8 The orthophoto map only depicts the ... part of the topographical map.

- A south-eastern
- B south-western
- C north-western
- D northern

1.9 The flight direction of the aeroplane when the photographs for the orthophoto map were taken, was ...

- A southwards.
- B westwards.
- C eastwards.
- D northwards.

1.10 The area marked **1** on the orthophoto map is (a) ...

- A mining area.
- B non-perennial water.
- C mine dump.
- D recreational area.

(10 x 2) [20]

QUESTION 2

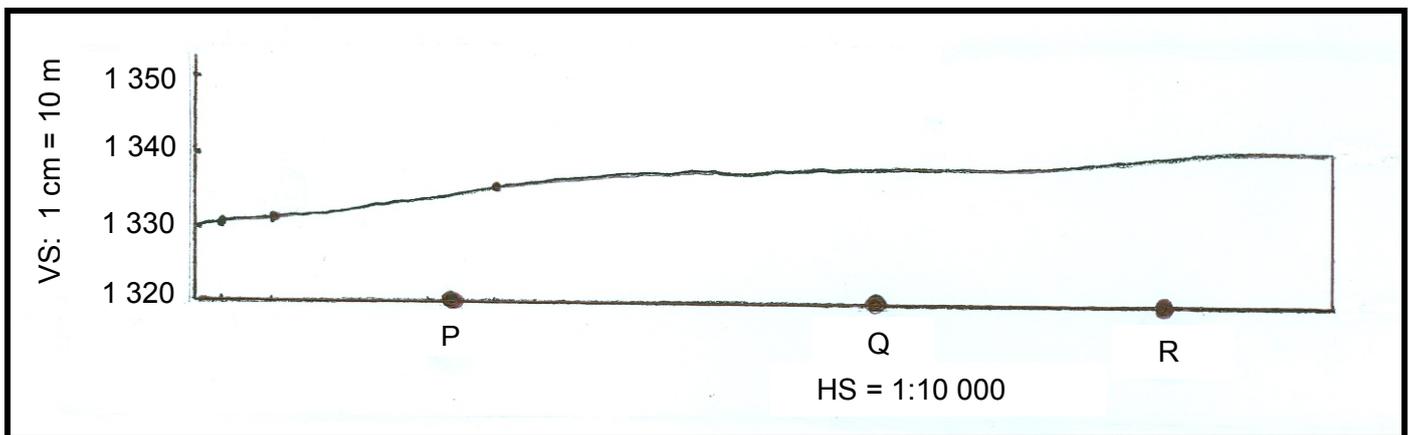
2.1 Calculate the actual (real) distance from point **5** to point **6** on the orthophoto map. Show ALL the calculations. Express your answer in kilometres.

(3)

2.2 How long would you take to travel from point **5** to point **6** if you travelled at 80 km/h? Show ALL the calculations.

(2)

2.3 The following cross section was drawn from point **7** to point **8** on the orthophoto map.



Use both the topographical map and the orthophoto map to identify **P**, **Q** and **R**.

P: _____

Q: _____

R: _____

(3 x 2) (6)

2.4 Calculate the vertical exaggeration of the cross section. Show ALL the calculations.

(3)

2.5.1 Calculate the average gradient from benchmark 1341 (C4) to benchmark 1357 (D6). Use the straight-line distance between the two benchmarks. Show ALL the calculations.

(6)

2.5.2 Is the gradient that you calculated in QUESTION 2.5.1 steep or gentle?

(2)

2.5.3 Explain your answer to QUESTION 2.5.2.

(2)
[24]

QUESTION 3

3.1 The mapped area experiences seasonal rainfall. Support the statement with evidence from the map.

(1 x 2) (2)

3.2 It is evident on the map that groundwater is used to supplement the scarce surface water during the dry season. Support this statement with evidence from the map.

(1 x 2) (2)

3.3 Find the golf course in block A3 on the topographical map.

3.3.1 Which physical feature played a role in selecting the site for the golf course?

(1 x 2) (2)

3.3.2 What is the advantage of selecting the site close to the feature mentioned in QUESTION 3.2.1?

(1 x 2) (2)

3.3.3 Why would the site selected for the golf course not be suitable for a residential area?

(2 x 2) (4)

3.4 Refer to both the orthophoto map and the topographical map and identify the features labelled **2**, **3** and **4** on the orthophoto map.

2: _____

3: _____

4: _____

(3 x 2) (6)

3.5 Find the Phakisa motor race-track in block D4.

3.5.1 In which urban land-use zone is the race-track situated?

_____ (1 x 2)

(2)

3.5.2 Why would one find the race-track in the land-use zone mentioned in QUESTION 3.5.1?

_____ (2 x 2)

(4)

3.6 The two urban settlements, Odendaalsrus and Welkom, can be seen on the topographical map.

3.6.1 In terms of the urban hierarchy, which of the two settlements will have a higher hierarchical order?

_____ (1 x 2)

(2)

3.6.2 Give a reason for your answer to QUESTION 3.6.1

_____ (1 x 2)

(2)

3.6.3 Which settlement will have a larger sphere of influence?

_____ (1 x 2)

(2)

3.6.4 Give a reason for your answer to QUESTION 3.6.3.

_____ (1 x 2)

(2)

3.6.5 What is the dominant (main) street pattern of Odendaalsrus in block B3?

_____ (1 x 2) (2)

3.6.6 State ONE advantage of the street pattern in QUESTION 3.6.5.

_____ (1 x 2) (2)
[36]

QUESTION 4

4.1 Geographical Information Systems (GIS) can store, manage, analyse and display data. To manage the data in GIS you must look at the different parts that make up the system. Name any TWO parts of GIS that make up the system.

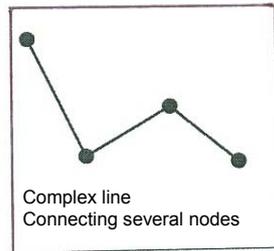
_____ (2 x 2) (4)

4.2 There are two main types of data, namely spatial data and attribute data. Differentiate between *spatial data* and *attribute data*.

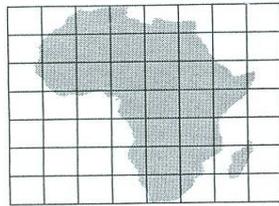
_____ (2 x 2) (4)

4.3 State whether the following types of spatial data are vector, raster or image data.

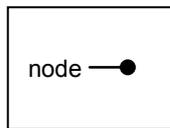
4.3.1



4.3.2



4.3.3



(3 x 2) (6)

4.4 Geographical information is obtained in a number of ways.

4.4.1 State any TWO ways in which geographical information can be obtained.

(2 x 2) (4)

4.4.2 What is a *geographical database*?

(1 x 2) (2)

[20]

TOTAL: 100