

HILLCREST HIGH SCHOOL**GEOGRAPHY PAPER 2 MAPWORK****GRADE 11****TIME: 1 HOURS****November 2020****MARKS: 60**

NAME AND SURNAME: _____

RESOURCES AND INFORMATION

1. An extract from topographical map 2627CD PARYS. Orthophoto map 2627 CD 19 PARYS

INSTRUCTIONS AND INFORMATION

1. Write your name in the space provided above.
 2. A non-programmable calculator may be used.
 3. Answer all questions in the spaces provided on the question paper.
 4. The Topographical map and Orthophoto must be handed in – please erase pencil working after you have finished writing.
 5. Show all calculations
- 6 The following English terms and their Afrikaans translations are shown on the topographical map:**

ENGLISH

Aerodrome
 Caravan Park
 Diggings
 Golf Course
 Gap
 Holiday Resort
 Island
 Purification Plant
 River
 Sewage Works

AFRIKAANS

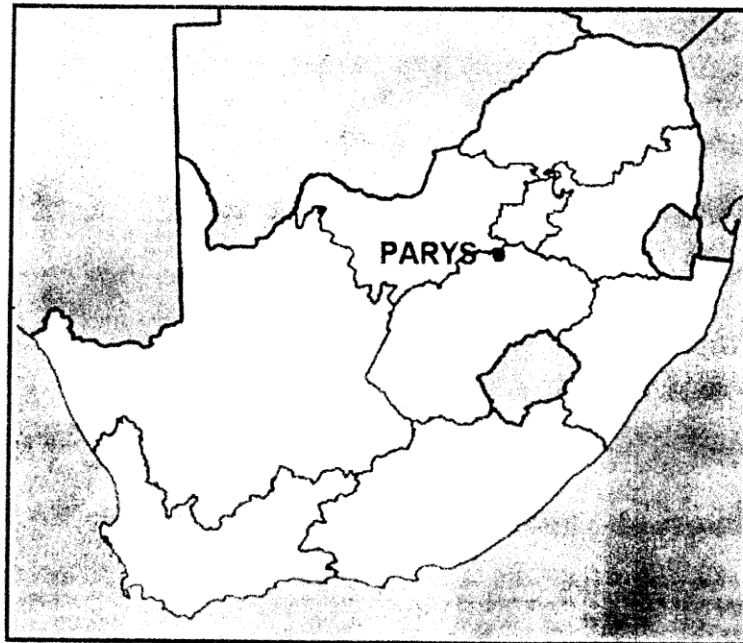
Vliegveld
 Karavaanpark
 Uitgrawings
 Gholfbaan
 Poort
 Vakansieoord
 Eiland
 Watersuiweringsaanleg
 Rivier
 Rioolwerke

Woodlands

Beboste Gebied

GENERAL INFORMATION ON PARYS

Parys is a town in the Free State in South Africa. It is located on the banks of the Vaal River approximately 115 km south of Johannesburg. The completion of the railway line to Parys in 1905 suddenly made Parys more accessible to the public and this, in turn, led to the growth of the town as a holiday resort and industrial centre. Many artists have settled in the town and the variety of new, interesting shops and attractions make it the ideal breakaway from Gauteng and other big centres. Parys lies within the Vredefort Dome World Heritage Site. The Vredefort Crater is the largest verified impact crater on Earth. The Vredefort Dome was added to the list of UNESCO World Heritage Sites for its geological interest.



Coordinates: 26°54'S 27°27'E

[Adapted from http://en.wikipedia.org/wiki/Parys,_South_Africa,_Freestate]

QUESTION 1: MULTIPLE-CHOICE QUESTIONS

The questions below are based on the 1: 50 000 topographical map (2627CD PARYS), as well as the orthophoto map of a part of the mapped area. Various options are provided as possible answers to the following questions. **You are required to circle the correct answer.**

1.1 The topographical map index south-east of Parys is ...

- A 2727AB
- B 2727AD
- C 2627DC
- D 2727BA

1.2 The orthophoto map scale of 1:10 000 means that 1cm on the map represents.....km

- A 0.01
- B 0.1
- C 0.5
- D 0.05

1.3 The altitude of the northern runway of Parys Aerodrome in block G10 on the topographical map isMeters

- A 1400
- B 1450
- C 1420
- D 1480

1.4 The landform represented by number 4 on the orthophoto map is a

- ...
- A spur
- B valley
- C ridge
- D gap

1.5 The natural water purification feature in blocks J3 is a ...

- A windpump.
- B cultivated land.
- C marsh and vlei.
- D excavation.

1.6 The slope found between 11 and 12 on the Orthophoto map is a

- A gentle
- B convex
- C terraced
- D concave

1.7 The farming activity being practised on the farm Pistorius Rust in the south east of the Orthophoto map isFarming.

- A cattle
- B fruit
- C poultry
- D crop

1.8 The man-made feature at K on the Topographical map is a/an ...

- A water tower
- B reservoir
- C windpump
- D water point

1.9 The Diggings found at 10 on the orthophoto map is classified as a.....economic activity.

- A primary
- B secondary
- C tertiary
- D quaternary

1.10 Land-use at T in block I 9 on the topographical map is

- A residential

- B industrial
- C commercial
- D recreational

1.11 The true bearing of the windpump in block F4 from spot height 1474 in block E6 is ...

- A 120°
- B 240°
- C 60°
- D 200°

1.12 The grid reference/co-ordinates of trig. Beacon 334 in Block B2 is/are

- | | | | | | |
|---|--------------|---------------|---|--------------|--------------|
| A | 26° 48' 20"E | 27° 21' 03"S | B | 26° 48' 20"S | 27° 21' 03"E |
| C | 27° 48' 03"S | 26° 48' 20" E | D | 26° 48' 20"N | 27° 21' 03"W |

1.13 The contour interval on the orthophoto map is _____ metres.

- A 5
- B 10
- C 15
- D 20

1.14 The road at 3 on the orthophoto map is ...

- A other road.
- B an arterial route.
- C a secondary road.
- D a main road.

1.15 The direction of 3 From 9 on the Orthophoto map is

- A north – east
- B north – north – east
- C east – north – east
- D East

15 x 1 = [15]

QUESTION 2: MAP CALCULATIONS AND TECHNIQUES

2.1 Locate the largest dam at Rietpoort in Block F6 and calculate the length of the dam wall in meters. Show all calculations

3

2.2 Refer to spot height 1493 in block D5 and spot height 1573 in block E6 on the topographical map

2.2.1 Calculate the average gradient between spot height 1493 and spot height 1573, showing all your calculations. 5

vertical interval (VI)

Formula: Gradient _____

horizontal equivalent (HE)

2.2.2 Interpret this gradient. 2

2.3 A cross-section is drawn between point 11 and 12 on the orthophoto map. Assume the vertical scale is 1cm represents 40mm.

2.3.1 Calculate the vertical exaggeration of cross-section, showing all your Calculations. 4

Formula: Vertical exaggeration =
$$\frac{\text{Vertical scale (VS)}}{\text{Horizontal scale (HS)}}$$

2.4 Refer to the information about the magnetic declination of Parys found on the topographical map.

2.4.1 Calculate the magnetic declination of Parys for 2020. Show ALL Calculations. Marks will be awarded for calculations. 5

Difference in years: _____

Mean annual change: _____

Total change: _____

Magnetic declination for 2020: _____

QUESTION 3: APPLICATION AND INTERPRETATION

3.1.1 The main economic activity in the mapped area is
(mining/industry/farming/recreation) 1

3.1.2 Quoting map evidence, outline **TWO factors** that favour the
activity that you mentioned in 3.11 4

**3.2 Refer to the Vaal River on the Map. The Vaal River forms
the boundary between two South African Provinces?**

3.2.1 What evidence is there on the map to suggest that it is a
boundary between two Provinces? 1

3.2.2 State the general direction of flow, of the Vaal River on the
map. 2

3.2.3 Give **One** reason from the topographical map to justify your answer in 3.2.2. 2

3.3 **Tourism makes a large contribution to the economy of Parys**

3.3.1 List **TWO** potential tourist attractions that would attract people to Parys. 2

3.3.2 Give **TWO** positive economic impacts that the tourism industry could bring to the local community of Parys. 2

3.3.3 The mapped area receives seasonal rainfall. Give **TWO** pieces of evidence from the topographical map to support this statement. 2

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

4.1.1 Define the term **Data Layering** 1

4.1.2 Name **THREE** layers that the farmer in this area (F1) used when deciding to place his farm there. 3

4.2 Parys is located in the geologically important Vredefort Dome and Geologists have made use of remote sensing to investigate this structure.

4.2.1 What is meant by **Remote Sensing**? 1

4.2.2 How could remote sensing assist the geologists with their investigation? 2

4.3 Refer to the orthophoto map.

4.3.1 The orthophoto map has a medium resolution. Does this mean that the orthophoto map has a high level of clarity? **Yes or No** 1

4.3.2 Explain your answer to QUESTION 4.3.1 2

[10]