PHOENIX NORTH GEOGRAPHY CLUSTER

NOVEMBER EXAMINATION: 2019

PAPER 2

GRADE 10 **DURATION: 90 MINUTES**

MARKS: 75

1. This paper consists of **4** questions and **10** pages.
2. The questions in this paper are based on the **1:50 000 topographical map** and **1:10 000 orthophoto map** of **PARYS**.
3. Write down your answers in the spaces provided.
4. Write down your name and division below.

NAME: _____

GRADE: 10 ___

Question 1: Multiple Choice Questions

Choose the correct answer from various options – write only the letter (A-D) in the block provided.

1.1) The Earth's curved surface is represented on the topographical map through the _____ projection.

A. Azimuthal
B. Lambert
C. Cylindrical
D. Gauss Conform

1.2) Which statement about the orthophoto map is correct?

A. Has no contour lines
B. Has a smaller scale than topographical map
C. Is 10 times bigger than the topographical map
D. Contour interval is 5 metres

1.3) Point K on the topomap indicates a

A. Windpump
B. Monument
C. Water Tower
D. Cross

1.4) Parys is in the _____ province.

A. Free State
B. Gauteng
C. North West
D. Limpopo

1.5) The type of road at point 3 on the orthophoto map is

A. National Freeway
B. Main Road
C. Secondary Road
D. Arterial Road

1.6) The height of the land at point numbered 11 on the orthophoto map is _____ m

A. 1378.72
B. 1373.08
C. 1380
D. 1371.52

1.7) Height in block C4 on the topographical map is not shown by

A. Bench Mark
B. Spot Height
C. Trig Beacon
D. Contours

1.8) Points between 13 and 14 on the orthophoto map indicates a

A. River
B. Forest
C. Road
D. Racing Track

1.9) The "diggings" on the orthophoto map is represented by the number

A. 7
B. 10
C. 1
D. 15

1.10) The index of an atlas is located at the _____ of an atlas

A. Front
B. Middle
C. Back
D. Centre

1.11) The direction of point R from point S on the topographical map is

A. NE
B. SW
C. SSW
D. ESE

1.12) Very few buildings are evident in block J3 because of the presence of

A. Cultivated Land
B. Steep Slope
C. A Marsh
D. A Road

1.13) There is no crop farming taking place in block C, because

A. There is an absence of dams
B. The land is rugged
C. There is an absence of perennial streams
D. There is an absence of a road

1.14) The Vaal River is a/an _____ river

A. Non-perennial
B. Perennial
C. Episodic
D. Exotic

1.15) The towns of _____ is 29 km away from the mapped area

A. Potchefstroom
B. Sasolberg
C. Fochville
D. Dover

(15 x 1) [15]

Question 2: Map Calculation

2.1) Calculate the straight line distance between trig beacon 706 (H5) and spot height 1568 (H1). Give your answer in metres. (3)

2.2) Determine the difference in height between trig beacon 706 (H5) and spot height 1568 (H1). Give your answer in metres. (2)

2.3) Calculate the magnetic declination for 2019. Use the following headings. (5)

MD for current year: _____

Annual change: _____

Total change: _____

MD for 2019: _____

_____

_____

2.4) Determine the TRUE BEARING of trig beacon 706 (H5) from spot height 1568 (H1) (3)

_____

2.5) Calculate the straight line distance of Allenby Street on the orthophoto map. (3)

_____

_____

2.6) Construct a rough cross section of the slope labelled 8 on the orthophoto map. (4)

Question 3: Application and Interpretation

3.1) The Northern part of the receives seasonal (poor) rainfall. Quote three pieces of evidence from block A5 to substantiate this statement. (6)

3.2) Identify two types of recreational facilities found in G8. (2)

3.3) Refer to the Vaal River as it passes West End (H7). State one advantage and one disadvantage as this river passes West End. (2 x 2) (4)

Advantage:

Disadvantage:

3.4) Sipho leaves his farm in Edenvale (J1) and moves towards the industrial area U near the town.

3.4.1) What type of movement was Sipho involved in? (1)

_____

3.4.2) Describe the impact of the type of movement mentioned in Q3.4.1 above on :

a) Edenvale:

_____

_____

(2)

b) The Town:

_____

_____

(2)

3.4.3) Outline two steps that the government can take in order to reduce the number of people leaving areas like Edenvale. (2 x 2) (4)

_____

_____

3.5) What is the significance of the row of trees on the Rietpoort farm in block F6. (2)

_____

_____

3.6) State one advantage that windmills have over boreholes. (2)

_____

_____

[25]

Question 4: Geographical Information System - GIS

4.1) List two advantages that GIS has over paper maps. (2)

_____

_____

4.2) Differentiate between hardware and software. (2)

Hardware:

_____

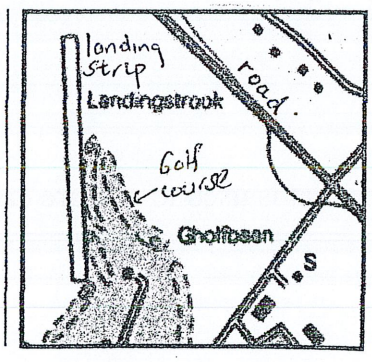
_____

Software:

_____

_____

4.3) Study the sketch showing spatial objects



4.3.1) Define the term spatial object. (2)

_____

_____

4.3.2) Identify the various types of spatial objects in the sketch. (3)

Line:

_____

Point:

_____

Polygon:

_____

4.3.3) Describe a line. (2)

_____

_____

4.4) How many types of lines are there in the sketch? (1)

_____

4.5) State two disadvantages of remote sensing. (2)

_____

_____

_____

4.6) Name one remote sensing device that is used to capture data. (1)

_____

[15]

GRAND TOTAL: [75]

Marking memo

PHOENIX NORTH GEOGRAPHY CLUSTER
NOVEMBER EXAMINATION: 2019

PAPER 2

GRADE 10 **DURATION: 90 MINUTES**
MARKS: 75

1. This paper consists of **4** questions and **10** pages.
2. The questions in this paper are based on the **1:50 000 topographical map** and **1:10 000 orthophoto map** of **PARYS**.
3. Write down your answers in the spaces provided.
4. Write down your name and division below.

NAME: Marking memo

GRADE: 10 ___

Question 1: Multiple Choice Questions

Choose the correct answer from various options – write only the letter (A-D) in the block provided.

1.1) The Earth's curved surface is represented on the topographical map through the _____ projection.

A. Azimuthal
B. Lambert
C. Cylindrical
D. Gauss Conform

D

1.2) Which statement about the orthophoto map is correct?

A. Has no contour lines
B. Has a smaller scale than topographical map
C. Is 10 times bigger than the topographical map
D. Contour interval is 5 metres

D

1.3) Point K on the topomap indicates a

A. Windpump
B. Monument
C. Water Tower
D. Cross

A

1.4) Parys is in the _____ province.

A. Free State
B. Gauteng
C. North West
D. Limpopo

A

Yr 10 P2

1.5) The type of road at point 3 on the orthophoto map is

A. National Freeway
B. Main Road
C. Secondary Road
D. Arterial Road

C

1.6) The height of the land at point numbered 11 on the orthophoto map is _____ m

A. 1378.72
B. 1373.08
C. 1380
D. 1371.52

C

1.7) Height in block C4 on the topographical map is not shown by

A. Bench Mark
B. Spot Height
C. Trig Beacon
D. Contours

C

1.8) Points between 13 and 14 on the orthophoto map indicates a

A. River
B. Forest
C. Road
D. Racing Track

A

1.9) The "diggings" on the orthophoto map is represented by the number

A. 7
B. 10
C. 1
D. 15

B

1.10) The index of an atlas is located at the _____ of an atlas

A. Front
B. Middle
C. Back
D. Centre

C

1.11) The direction of point R from point S on the topographical map is

A. NE
B. SW
C. SSW
D. ESE

A

1.12) Very few buildings are evident in block J3 because of the presence of

A. Cultivated Land
B. Steep Slope
C. A Marsh
D. A Road

C

1.13) There is no crop farming taking place in block C4 because

A. There is an absence of dams
B. The land is rugged
C. There is an absence of perennial streams
D. There is an absence of a road

B

1.14) The Vaal River is a/an _____ river

A. Non-perennial
B. Perennial
C. Episodic
D. Exotic

B

1.15) The towns of _____ is 29 km away from the mapped area
A. Potchefstroom
B. Sasolberg
C. Fochville
D. Dover

D

(15 x 1) [15]

Question 2: Map Calculation

2.1) Calculate the straight line distance between trig beacon 706 (H5) and spot height 1568 (H1). Give your answer in metres. (3)

15,8 x 0,5 ✓
7,9 km (x 1000) ✓
7900 M ✓

2.2) Determine the difference in height between trig beacon 706 (H5) and spot height 1568 (H1). (2)

1509 m - 1390.1 m ✓
199,9 M ✓

1568 - 1390,1
= 177,9 m

2.3) Calculate the magnetic declination for 2019. Use the following headings. (5)

MD for current year: 2019 − 2011 = 8 years ✓

Annual change: 2' W ✓

Total change: 8 × 2 = 16' ✓

MD for 2019: 18°52' + 16'

18° 68' ✓

= 19° 08' W of TN ✓

2.4) Determine the TRUE BEARING of trig beacon 706 (H5) from spot height 1568 (H1) (3)

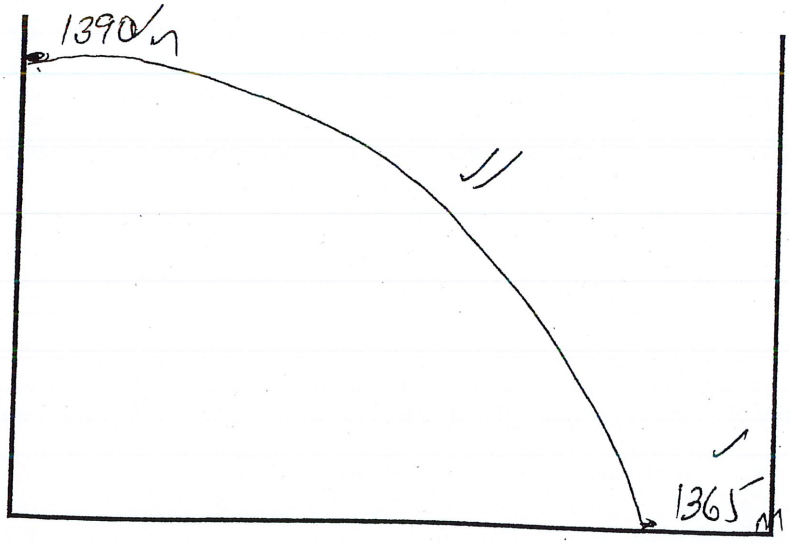
90° ✓ // (88° - 92°).

2.5) Calculate the straight line distance of Allenby Street on the orthophoto map. (3)

12 × 0,1 km ✓

1,2 km ✓ (accept 1,1 − 1,3 km) 1200m

2.6) Construct a rough cross section of the slope labelled 8 on the orthophoto map. (4)



Question 3: Application and Interpretation

3.1) The Northern part of the receives seasonal (poor) rainfall. Quote three pieces of evidence from block A5 to substantiate this statement. (6)

Reservoir of: a dam
a reservoir
a windmill
non-perennial streams

3.2) Identify two types of recreational facilities found in G8. (2)

Caravan Park ✓
Golf Course ✓

3.3) Refer to the Vaal River as it passes West End (H7). State one advantage and one disadvantage as this river passes West End. (2 x 2) (4)

Advantage: Cooling effect on temperature or used for recreational activities

Disadvantage: Waterborne disease could spread / Threat of flooding.

3.4) Sipho leaves his farm in Edenvale (J1) and moves towards the industrial area U near the town.

3.4.1) What type of movement was Sipho involved in? (1)

Rural - Urban Migration

3.4.2) Describe the impact of the type of movement mentioned in Q3.4.1 above on :

a) Edenvale:

Population decreases / Services such as schools + Hospitals will be underutilized / child headed households + farms

(2)

b) The Town:

Overcrowded / traffic Congestion / Increase in Pollution

(2)

3.4.3) Outline two steps that the government can take in order to reduce the number of people leaving areas like Edenvale. (2 x 2) (4)

Provide more jobs in Rural Areas / Improve Salaries / Improve work conditions / Improve infrastructure / roads Land Reforms must be accelerated

3.5) What is the significance of the row of trees on the Rietpoort farm in block F6. (2)

Trees act as windbreakers

3.6) State one advantage that windmills have over boreholes. (2)

Windmills are cheaper because they do not use electricity

[25]

Gr 10 - 12

Question 4: Geographical Information System - GIS

4.1) List two advantages that GIS has over paper maps. (2)

GIS can cope with large amounts of data / Can cover large areas / GIS is faste / More efficient / Requires less time & money.

4.2) Differentiate between hardware and software. (2)

Hardware: Refers to the physical equipment eg: compute

Software: Refers to a compute programme

4.3) Study the sketch showing spatial objects

4.3.1) Define the term spatial object. (2)

These are objects that have a location, shape and symbol.

4.3.2) Identify the various types of spatial objects in the sketch. (3)

Line:

landingstrip / road

Point:

School

Polygon:

golf course

4.3.3) Describe a line. (2)

It can connects a start and and point

4.4) How many types of lines are there in the sketch? (1)

2

4.5) State two disadvantages of remote sensing. (2)

Equipment is expensive / Resolution is poor.
data interpretation is difficult
measurements may not be accurate

4.6) Name one remote sensing device that is used to capture data. (1)

satellite / GPS

[15]

GRAND TOTAL: [75]

4.5.5) Name the instrument that the SAPS would use to locate places in Pietermaritzburg that they are not familiar with. (1)

GPS / satellite

4.5.6) How will the process of data security assist the police in ensuring that their information is protected? (1)

fire wall, passwords / codes.

[15]

GRAND TOTAL: [75]