HILLCREST HIGH SCHOOL

GRADE 11
GEOGRAPHY PAPER II
JUNE 2018

TIME : 90 MINUTES **MARKS :** 75
EXAMINER : CM Girvin Esq.

NAME : _____
TEACHER : _____

RESOURCES AND INFORMATION

1. An extract from the topographical map 2829AC HARRISMITH

2. Orthophoto map 2829AC 3 HARRISMITH

INSTRUCTIONS

1. Answer all the questions in the spaces provided, unless instructed otherwise

2. Show all calculations

3. You may use a non - programmable calculator

4. The following English terms and their Afrikaans translations are shown on the topographical map

1. MULTIPLE CHOICE QUESTIONS

In the questions below, you are required to **CIRCLE** the most correct answer

1.1 The map index/ reference of the topographical map to the south - east of Harrismith is

A	2829AA	B	2829CB
C	2829AD	D	2828DB

1.2 The direction of F (D6) from B (B9) is

A	north - east	B	north - north east
C	south west	D	south – south west

1.3 Which town is approximately 60km from Harrismith?

A	Van Reenen	B	Warden
C	Witsieshoek	D	Kestell

1.4 The recreational feature marked 1 on the orthophoto map is a

A	park	B	nature reserve
C	golf course	D	plantation

1.5 The contour interval on the orthophoto map is _____ meters

A	5	B	10
C	15	D	20

1.6 The orthophoto map is an example of a _____ photograph

A	high oblique	B	low oblique
C	horizontal	D	vertical

1.7 The dam wall of the dam in block I 12 is _____ meters above sea level

A	1720	B	1740
C	1680	D	1660

1.8 The feature labelled E on the topographical map is (a) .....

A	perennial water	B	non – perennial water
C	marsh and veli	D	non – perennial river

1.9 The slope at 5 on the orthophoto map is a

A	gentle	B	terraced
C	concave	D	convex

1.10 The row of trees in Blocks E2, E3 and D3 is used as a

A	firebreak	B	farm boundary
C	plantation	D	windbreak

1.11 The true bearing of trig beacon 278 (I 10) from the reservoir in block G 11 is

A	248°	B	220°
C	40°	D	94°

1.12 The main agricultural activity around Harrismith is

A	crop farming	B	fruit farming
C	cattle farming	D	chicken farming

1.13 The length of the dam wall of the large dam in block I 13 is

A	200m	B	4mm
C	2km	D	500m

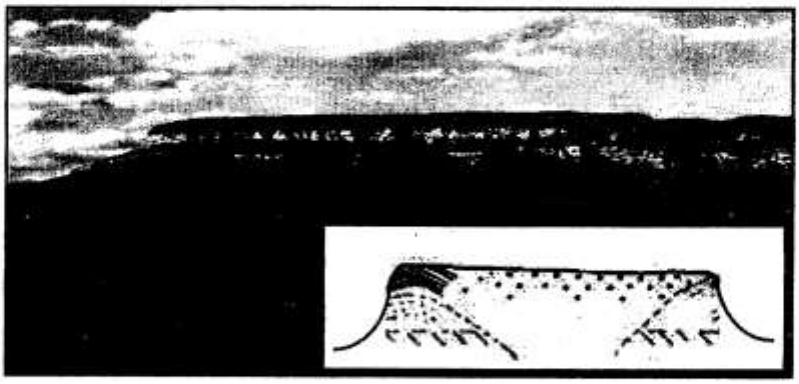
1.14 The grid reference/ co - ordinates of the Harrismith police station are

A	28° 07' 40"S 29° 16' 15"E	B	28° 42' 30"S 29° 10' 48"E
C	28° 07' 40"E 29° 16' 15"S	D	28° 16' 15"S 29° 07' 45"E

14 X 1 = [14]

2. GEOGRAPHICAL TECHNIQUES AND CALCULATIONS

2.1 Harrismith holds an annual marathon that involves contestants running up Platberg. Study both the photograph of Platberg below and the area covered by blocks A/B 10, 11, 12 and 13 on the topographical map and then answer the questions



2.1.1 Identify the landform named Platberg

_____(2)

2.1.2 Identify the shape of the slope the contestants will be running up between points C and D (bock A/B 10) on the topographical map. Explain your answer with reference to the contour lines on the map

SLOPE

_____ (1)

EXPLANATION

_____

_____ (2)

2.1.3 Calculate the average gradient of the slope between spot height 1797 and spot height 2263 in block A10 on the topographical map using the formula

G = VD/ HD

_____

_____

_____

_____

_____

_____

_____ (5)

2.1.4.1 How would you describe this slope in words?

_____ (1)

2.1.4.2 Hence comment on the level of difficulty of this slope for the runners

_____ (1)

2.1.5 Explain why a zig – zag footpath (block A11) has been cut over Platberg

_____ (1)

2.2.1 Using the information on the topographical map, determine the magnetic declination for this year showing all your calculations

_____

_____

_____

_____

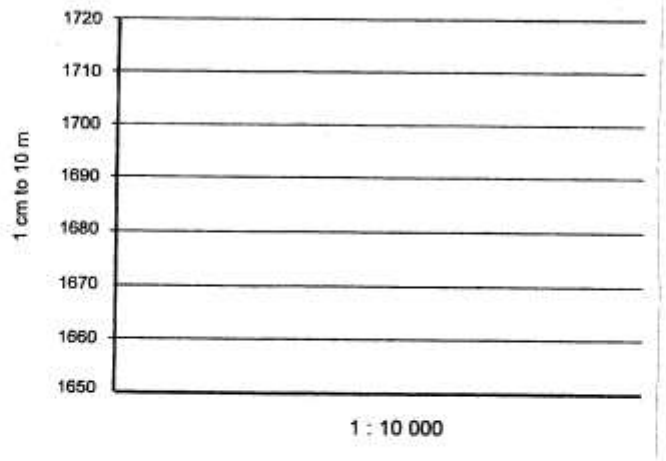
_____ (4)

2.2.2 Hence determine the magnetic bearing of trig beacon 278 (I 10) from the reservoir in block G 11 using the formula

MB = TB + MD

(2)

2.3.1 Refer to the feature labelled Blokhuis (4) on the orthophoto map. Draw a cross section from 2 to 3 on the axes below



(6)

2.3.2 Calculate the vertical exaggeration of the cross section, showing **ALL** calculations and using the formula

VE = vertical difference in height/ horizontal distance

(4)

[29]

3. APPLICATION OF THEORY

3.1 Harrismith is located in a low rainfall area. Give TWO pieces of evidence from the map to support this statement

_____

_____

_____

_____ 2 X 2 = (4)

3.2 Harrismith is a very old town that developed in the 19th century. Quote ONE piece of evidence from the map to support this statement

_____

_____ (2)

3.3 Refer to the dominant primary activity practiced in blocks H1 and H2

3.3.1 Identify this activity

_____ (1)

3.3.2 Explain how the environment is likely to be affected by this activity (3.3.1) in a negative way

_____

_____ (2)

3.4 The N3 does not go through the town of Harrismith

3.4.1 Why do you think this is so?

_____ (1)

3.4.2 What is the disadvantage for businesses of the N3 not passing through Harrismith?

_____

_____ (2)

[12]

4. GEOGRAPHICAL INFORMATION SYSTEMS (GIS)

4.1 Name **TWO COMPONENTS** that make up a GIS

_____

_____ (2)

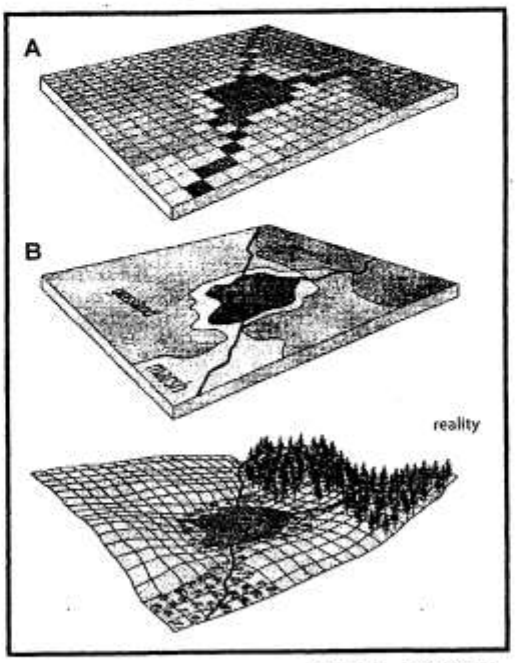
4.2 Briefly describe the role of **ANY ONE** of these components (4.1) in a GIS

_____

_____

_____ (2)

4.3 Study the illustrations below



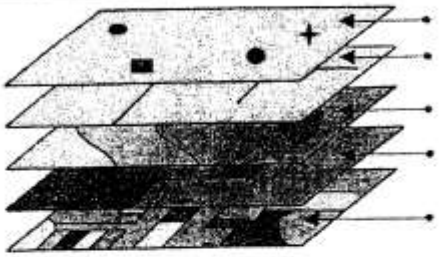
Source: Platinum

4.3.1 Identify the **DATA STORAGE** formats labelled A and B

A _____

B _____ (2)

4.4 Study the illustration below and then answer the questions



Source: Solutions for all

4.4.1 Explain the term **DATA LAYERING**

_____

_____

_____ (2)

4.4.2 Name **TWO** layers of information that were used to develop the topographic map of Harrismith

_____

_____ (2)

4.5 Several tourist attractions have been identified in Harrismith. These will have a positive impact on the economy of the town

4.5.1 Mrs Zondo, a business woman, wants to open a B and B (Bed and Breakfast) establishment in Harrismith. Explain how she would make use of a GIS in order to ensure the success of her tourism venture in Harrismith

_____

_____

_____

_____

_____ (4)

4.5.2 State **ONE** disadvantage of obtaining data from a source such as a GIS, as opposed to a source such as a face – to – face interview

_____

_____

_____ (2)

4.6 Refer to the **ORTHOPHOTOGRAPH**. Explain the terms **SPATIAL RESOLUTION** and **SPECTRAL RESOLUTION** in relation to this orthophotograph.

SPATIAL RESOLUTION _____

_____

_____

_____

SPECTRAL RESOLUTION _____

_____

_____

_____ (4)
[20]

TOTAL : 75