

NORMAN HENSHILWOOD HIGH SCHOOL
EXAMINATIONS



DATE	7 JUNE 2011
GRADE	10
SUBJECT AND PAPER	GEOGRAPHY PAPER 2
TIME	1 HOUR 30 MINUTES
MARKS	75
EXAMINER	J HOLLAND
MODERATOR	D MILLAR

Name of learner: _____

D. ...
1 ...

MAPWORK AND PHOTO INTERPRETATION

Instructions to candidates :

- Complete all answers on this question paper.
- You will need a ruler, pencil, eraser, protractor and a calculator as resources for this examination.
- The examination is based on the following resource sheets:
 1 : 50 000 Topographical map 2230 AA&AC Musina
 1 : 10 000 Orthophoto map 2230 AC 11 Musina South
- All resource sheets must be returned at the end of the examination.
- A glossary of some of the English and Afrikaans words and their translations appear on the topographical map as shown below.
- Check the mark allocation of each question and respond accordingly.

ENGLISH	AFRIKAANS
Caravan park	Karavaanpark
Cemetery	Begraafplaas
Copper mine	Kopermyyn
Diggings	Uitgrawings
Disused mine	Ongebruikte myn
Drive-in theatre	Inryteater
Fish farm	Visplaas
Landing strip	Landingstrook
Refuse dump	Afvalstortingsterrein
Rifle range	Skietbaan
River	Rivier
Sewage disposal works	Rioolafvalwerke
Shaft	Skag
Slimes dam	Slykdam

GOOD LUCK !!

Question 1 – Multiple choice questions

Various options are provided as possible answers to the following questions. Choose the answer and write only the letter (a-d) in the space provided.

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

- a) 5m.
- b) 10m.
- c) 15m.
- d) 20m.

Answer _____ (1)

1.2 The height of the N1 National Route at 2 in block F1 is ...

- a) 500m.
- b) 520m.
- c) 540m.
- d) 560m.

Answer _____ (1)

1.3 The settlement of Arton Villa (F6) originally developed as a ... settlement.

- a.) Mining.
- b) Farming.
- c) Resort.
- d) Junction.

Answer _____ (1)

1.4 The feature numbered 3 in block H2 is a ...

- a) Windpump.
- b) communication tower.
- c) grave.
- d) water tower.

Answer _____ (1)

1.5 The word scale of the orthophoto map is:

- a) 1 cm represents 10 000m.
- b) 1cm represents 1 000m.
- c) 1cm represents 100m.
- d) 1cm represents 10m.

Answer _____

(1)

1.6 The landform marked L-M on the orthophoto map is a ...

- a) Conical Hill.
- b) Valley.
- c) Spur.
- d) Mesa.

Answer _____

(1)

1.7 The slope between L and M on the orthophoto map is ...

- a) Convex.
- b) Concave.
- c) Gentle.
- d) Terraced.

Answer _____

(1)

1.8 The direction of land-use J from land-use K on the orthophoto map is ...

- a) West- northwest.
- b) North-northwest.
- c) Northwest.
- d) Southwest.

Answer _____

(1)

1.9 The refuse dump at N on the orthophoto is mainly for ... waste.

- a) Industrial.
- b) Domestic.
- c) Agricultural.
- d) Mining.

Answer _____

(1)

1.10 The residential area marked G on the orthophoto map shows a rough ...street pattern.

- a) Grid-iron.
- b) Radial.
- c) Star.
- d) Irregular

Answer _____

(1)

(10x1) **[10]**

Question 2 – Geographical Techniques and Calculations

2.1 Calculate the area of the rifle range (E) on the orthophoto map in km². Show all calculations. (6)

2.2 Determine the present magnetic bearing from trigonometrical station 17 (G1) to Spens Shaft (F5). Use the following steps as a guide: (8)

Date of map: _____

Magnetic Declination: _____

Mean annual change: _____

Difference in years: _____

Total annual change: _____

Magnetic declination in 2011: _____

True Bearing: _____

Present magnetic bearing: _____

2.3 Give the co-ordinates (fix the position) of the reservoir in block G4. (4)

2.4 Calculate the gradient between the Benchmark (K1) and Spotheight 518 (J4). Show all the calculations. (5)

Use the following formula: $G=VI/HD$

2.5 Which one, the topographical map or the orthophoto map map, has a larger scale? (1)

2.6 Give a reason for your answer to QUESTION 2.5. (1)

Question 3 – Application of Theory/Map and Photo Interpretation

3.1 Refer to the houses found in blocks J/K8 on the topographical map.

3.1.1 Identify the settlement pattern of these buildings. Is it dispersed or nucleated? (1)

3.1.2 Give one reason for your answer to QUESTION 3.1.1 (1)

3.1.3 With reference to the topographical map, state any TWO problems (disadvantages) that the inhabitants of these houses might experience. (2x1) (2)

3.2 The N1 National Route passes through Musina on its way to the border post between South Africa and Zimbabwe.

3.2.1 State ONE advantage of the N1 passing through Musina, for motorists. (1)

3.2.2 State ONE disadvantage of the N1 passing through Musina, for motorists. (1)

3.3 What evidence on the topographical map and orthophoto map suggests that Musina is a central place town? (2x2) (4)

3.4 Identify the manmade features labelled J and K on the orthophoto map. (2x1) (2)

J - _____ K - _____

3.5 Give a possible reason for the location of man-made feature K. (1x2) (2)

3.6 Identify any TWO primary economic activities practised in close proximity to Musina. You must also provide a block reference number for each of the activities mentioned. (2x2) (4)

3.7 Give evidence from the topographical map that there are groundwater sources close to earth's surface in the mapped area (1x2) (2)

3.8 Using evidence from the topographical map, explain the occurrence of housing clusters in block J2. (2×2) (4)

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Question 4 - Map Projections and Geographic Information Systems

4.1 Explain the following concepts :

a. Geographic Information Systems

b. Remote Sensing

c. Spatial Resolution

d. Projections

4x1=(4)

4.2 Name TWO types of data used in GIS.

2x1=(2)

4.3 Name the following GIS objects:

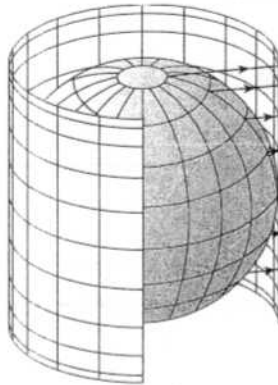
4.3.1 Point object (G3) - _____ (1)

4.3.2 Line object (H5) - _____ (1)

4.4 What do you need to run a GIS system ?

3x1=(3)

4.5 Study the map projection and answer the questions :



4.5.1 Name the type of Lambert Projection.

(1) ,

4.5.2 Give two advantages and two disadvantages of this type of projection.

2x2=(4)

[16]



TOTAL : 75
