education

Department:
Education
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 12

GEOG.2

GEOGRAPHY P2

FEBRUARY/MARCH 2010

CENTRE NUMBER:												
EXAMINATION NUMBER:												

MARK SCORED	**100**
MARKER	
SENIOR MARKER	
CHIEF MARKER	
MODERATOR	
TOTAL	
	100

MARKS: 100

TIME: 1½ hours

This question paper consists of 10 pages and 1 rough work page.

AFTERNOON SESSION

RESOURCE MATERIAL

An extract from topographical map 2230AA&AC MUSINA.

Orthophoto map 2230 AC 11 MUSINA SOUTH.

NOTE: The resource material must be collected by the schools for their own use.

INSTRUCTIONS AND INFORMATION

1. Write your centre number and examination number in the spaces on the ANSWER BOOK.

2. Answer ALL the questions in the spaces provided in this question paper.

3. You are supplied with a 1:50 000 topographical map 2230AA&AC MUSINA and an orthophoto map of a part of the mapped area.

4. The topographical map and the orthophoto map must be handed to the invigilator at the end of this examination session.

5. You may use the blank page at the back of this question paper for all rough work and calculations.

6. A non-programmable calculator may be used.

7. The following English terms and/or their Afrikaans translations are shown on the topographical map.

ENGLISH	AFRIKAANS
Caravan park	Karavaanpark
Cemetery	Begraafplaas
Copper mine	Kopermyn
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

QUESTION 1: MULTIPLE-CHOICE QUESTIONS

The following questions are based on the 1:50 000 topographical map 2230AA&AC MUSINA as well as the orthophoto map of a part of the mapped area.

Various options are provided as possible answers to the following questions. Choose the answer and write only the letter (A – D) in the block next to each statement.

1.1 The contour interval of the topographical map is …

A 5 m.
B 10 m.
C 15 m.
D 20 m.

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

A 500 m.
B 520 m.
C 540 m.
D 560 m.

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

A mining
B farming
C resort
D junction

1.4 The feature numbered **3** in block H2 is a …

A windpump.
B communication tower.
C grave.
D water tower.

1.5 The word scale of the orthophoto map is:

A 1 cm represents 10 000 m.
B 1 cm represents 1 000 m.
C 1 cm represents 100 m.
D 1 cm represents 10 m.

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

A cuesta.
B valley.
C spur.
D mesa.

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

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

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.

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

A industrial
B domestic
C agricultural
D mining

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

A grid-iron
B radial
C unplanned, irregular
D planned, irregular

(10 x 2) **[20]**

QUESTION 2: GEOGRAPHICAL TECHNIQUES AND CALCULATIONS

2.1 Calculate the area of the rifle range (**E**) on the orthophoto map in km^2. Show ALL your 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:

Date of map: _____

Magnetic declination: _____

Mean annual change: _____

Difference in years: _____

Total annual change: _____

Magnetic declination in 2010: _____

True bearing: _____

Present magnetic bearing: _____ (8)

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

_____ (4)

2.4 Which one, the topographical map or the orthophoto map, has a larger scale?

_____ (1)

2.5 Give a reason for your answer to QUESTION 2.4.

_____

_____

_____ (1)
[20]

QUESTION 3: APPLICATION OF THEORY/MAP AND PHOTO INTERPRETATION

3.1 Refer to the drainage pattern in blocks B/C10 on the topographical map.

3.1.1 Identify the drainage pattern assumed by the river system in these two blocks.

_____
(1 x 2) (2)

3.1.2 With reference to the topographical map, explain why the river system assumed this drainage pattern in blocks B/C10.

_____

_____

_____

_____
(3 x 2) (6)

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

3.2.1 Identify the settlement pattern of these buildings.

_____
(1 x 2) (2)

3.2.2 Give ONE reason for your answer to QUESTION 3.2.1.

_____
(1 x 2) (2)

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

- _____
- _____

(2 x 2) (4)

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

3.3.1 State ONE advantage of the N1 passing through Musina, for motorists.

_____

(1 x 2) (2)

3.3.2 State ONE disadvantage of the N1 passing through Musina, for motorists.

_____

(1 x 2) (2)

3.4 What evidence on the topographical map and orthophoto map suggests that Musina is a central place town?

- _____
- _____

(2 x 2) (4)

3.5 Identify the man-made features labelled **J** and **K** on the orthophoto map.

J _____

K _____

(2 x 2) (4)

3.6 Give a possible reason for the location of man-made feature **K**.

_____

(1 x 2) (2)

3.7 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.

- _____ block _____
- _____ block _____

(2 x 2) (4)

3.8 Give evidence from the topographical map that there are groundwater sources close to the earth's surface in the mapped area.

_____

(1 x 2) (2)

3.9 Using evidence from the topographical map, explain the occurrence of housing clusters in block J2.

_____

_____

_____

(2 x 2) (4)

[40]

QUESTION 4: GEOGRAPHICAL INFORMATION SYSTEMS (GIS)

4.1 Name any TWO components of a GIS.

- _____
- _____

(2 x 2) (4)

4.2 Identify a polygon feature, a line feature and a point feature respectively in block G3.

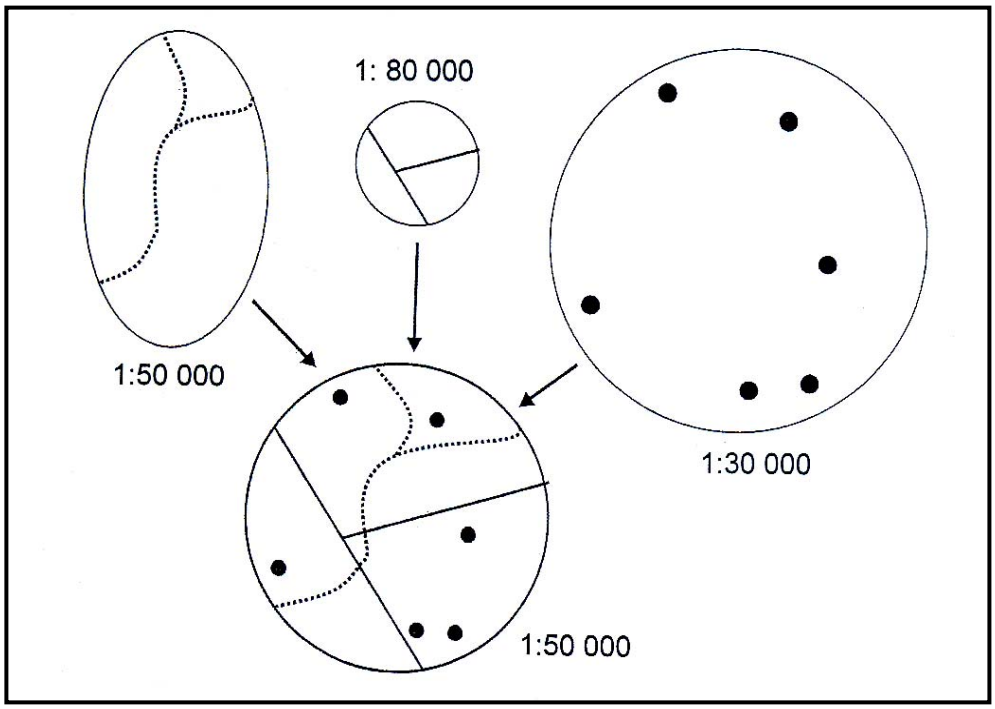
Polygon feature: _____

Line feature: _____

Point feature: _____

(3 x 2) (6)

4.3 The diagram below illustrates the concept of data integration. Study the diagram carefully and answer the questions that follow.



4.3.1 Explain what is meant by *data integration*.

_____

_____

_____

(1 x 2) (2)

4.3.2 Name ONE problem that was experienced with data integration prior to the introduction of GIS.

_____

_____

(1 x 2) (2)

4.3.3 Of what importance is data integration to a geographer?

_____

_____

_____

(1 x 2) (2)

4.4 What is a *database*?

_____

_____

(1 x 2) (2)

4.5 Why is it sometimes necessary to manipulate data in a database?

_____

_____

(1 x 2) (2)

[20]

TOTAL: 100

ROUGH WORK AND CALCULATIONS

NB: PLEASE HAND IN TOGETHER WITH ANSWER BOOK.