education

Department:
Education
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 12

GEOG.2

GEOGRAPHY P2

NOVEMBER 2009

CENTRE NUMBER:												
EXAMINATION NUMBER:												

MARK SCORED	
MARKER	
SENIOR MARKER	
CHIEF MARKER	
MODERATOR	
TOTAL	
	100

MARKS: 100

TIME: 1½ hours

This question paper consists of 11 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 after the examination.

INSTRUCTIONS AND INFORMATION

1. Write your examination number and your centre number in the spaces provided in the QUESTION PAPER.
2. Answer ALL the questions in the spaces provided in this question paper.
3. You should receive 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: MUTIPLE-CHOICE QUESTIONS

The following questions are based on the 1:50 000 topographical map 2230AA&AC MUSINA as well as the orthophoto map of part of the mapped area. Various options are provided as possible answers for the following statements. Choose the answer and write only the letter (A – D) in the block next to each statement.

1.1 The earth's curved surface is represented on the topographical map by the … projection.

A Mercator
B Gauss conform
C Lambert
D transverse

1.2 The landform found between spot height 512 (H6) and spot height 526 (H6) is a …

A poort.
B saddle.
C spur.
D valley.

1.3 Musina is an example of a … town.

A central place
B junction
C gap
D bridge

1.4 The feature marked **1** (G5) on the topographical map is a/an …

A mine dump.
B cutting.
C embankment.
D excavation.

1.5 An orthophoto map is a … photograph which has contour lines, spot heights, trigonometrical stations and other labelled features drawn onto it.

A high oblique
B low oblique
C horizontal
D vertical

1.6 The true bearing of spot height 553 (**B**) from spot height 578 (**A**) on the orthophoto map is …

A 167°.
B 193°.
C 213°.
D 257°.

1.7 The index of the orthophoto map sheet southeast of Musina is …

A 2230AC17.
B 2230AC7.
C 2229BD20.
D 2229BD10.

1.8 The orthophoto map scale is … than that of the topographical map.

A 5 times smaller
B 5 times larger
C 40 times larger
D 40 times smaller

1.9 The road marked **H** on the orthophoto map is a/an … road.

A arterial
B main
C secondary
D other

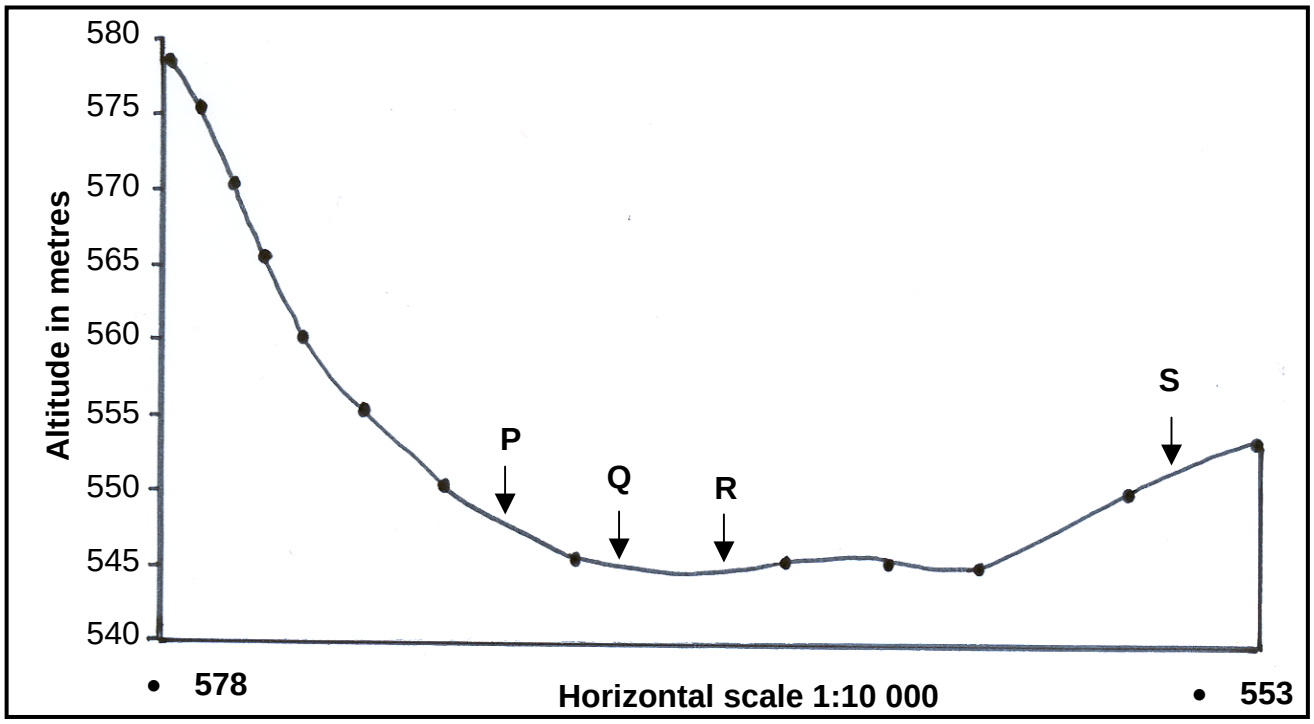
1.10 The Sand River (Sandrivier) that flows in the mapped area is a/an … river.

A periodic
B episodic
C permanent/perennial
D exotic

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

QUESTION 2: GEOGRAPHICAL TECHNIQUES AND CALCULATIONS

2.1 The diagram below is a cross-section from spot height 578 (**A**) to spot height 553 (**B**) on the orthophoto map.



2.1.1 Identify the features marked **P**, **Q**, **R** and **S** on the cross-section.

P _____

Q _____

R _____

S _____ (4)

2.1.2 Are features **P** and **R** intervisible?

_____ (1)

2.1.3 Give ONE reason for your answer to QUESTION 2.1.2.

_____

_____ (1)

2.1.4 Calculate the vertical exaggeration for the given cross-section. Show ALL your calculations.

_____

_____

_____

_____

_____

_____

_____

_____

_____ (4)

2.2 Calculate the average gradient between spot height 532 **(F3)** and spot height 553 **(E2)** on the topographical map. Show ALL your calculations.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____ (6)

2.3 Would you consider the gradient that you have calculated in QUESTION 2.2 to be steep or gentle?

_____ (1)

2.4 Explain your answer to QUESTION 2.3.

_____

_____ (2)

2.5 Give evidence from the topographical map to support your answer to QUESTION 2.3.

_____ (1)
[20]

QUESTION 3: APPLICATION OF THEORY/MAP AND PHOTO INTERPRETATION

3.1 The Limpopo River indicated on the topographical map forms an international boundary.

3.1.1 Which country lies directly to the north of the Limpopo River?

_____ (1 x 2) (2)

3.1.2 What is the general direction of flow of the Limpopo River in the mapped area?

_____ (1 x 2) (2)

3.1.3 Give evidence from the map to support your answer to QUESTION 3.1.2.

_____

_____ (1 x 2) (2)

3.1.4 Identify the stream channel pattern of the Limpopo River in blocks A1 and A2.

_____ (1 x 2) (2)

3.2 Refer to the land-use zone marked **C** on the orthophoto map.

3.2.1 Identify the economic activity taking place at land-use zone **C**.

_____ (1 x 2) (2)

3.2.2 Give TWO possible reasons why the site for the economic activity taking place at land-use zone **C** was selected.

- _____
- _____ (2 x 2) (4)

3.3 Many activities are located in the rural-urban fringe where large tracts of land are available at fairly low prices.

3.3.1 Name any TWO activities in the rural-urban fringe of Musina.

- _____
- _____ (2 x 2) (4)

3.3.2 Give ONE reason specific to each of the activities named in QUESTION 3.3.1, other than the availability of land and low land values, why the activities were established in the rural-urban fringe of Musina.

- _____

  _____
- _____

  _____ (2 x 2) (4)

3.4 The N1 National Route passes through Musina on its way to the border post between South Africa and the country mentioned in QUESTION 3.1.1.

3.4.1 Name ONE advantage for the town of Musina as a result of the N1 passing through it.

_____ (1 x 2) (2)

3.4.2 Name ONE disadvantage for the town of Musina as a result of the N1 passing through it.

_____ (1 x 2) (2)

3.4.3 Name the border post through which the N1 passes into the neighbouring country in QUESTION 3.1.1.

_____ (1 x 2) (2)

3.5 Find the slimes dam in blocks G3/4 on the topographical map.

3.5.1 Which primary economic activity made it necessary to build the slimes dam?

_____ (1 x 2) (2)

3.5.2 Name a measure that was implemented to make the slimes dam less unsightly.

_____ (1 x 2) (2)

3.6 Refer to the residential areas marked **F** and **G** on the orthophoto map.

3.6.1 Which ONE of the residential areas marked **F** and **G** is more likely the older one of the two?

_____ (1 x 2) (2)

3.6.2 Give ONE reason for your answer to QUESTION 3.6.1.

_____

_____ (1 x 2) (2)

3.7 Identify the man-made features marked **D** and **E** on the orthophoto map.

D _____

E _____ (2 x 2) (4)
[40]

QUESTION 4: GEOGRAPHIC INFORMATION SYSTEMS (GIS)

4.1 Differentiate between *spatial data* and *attribute data*.

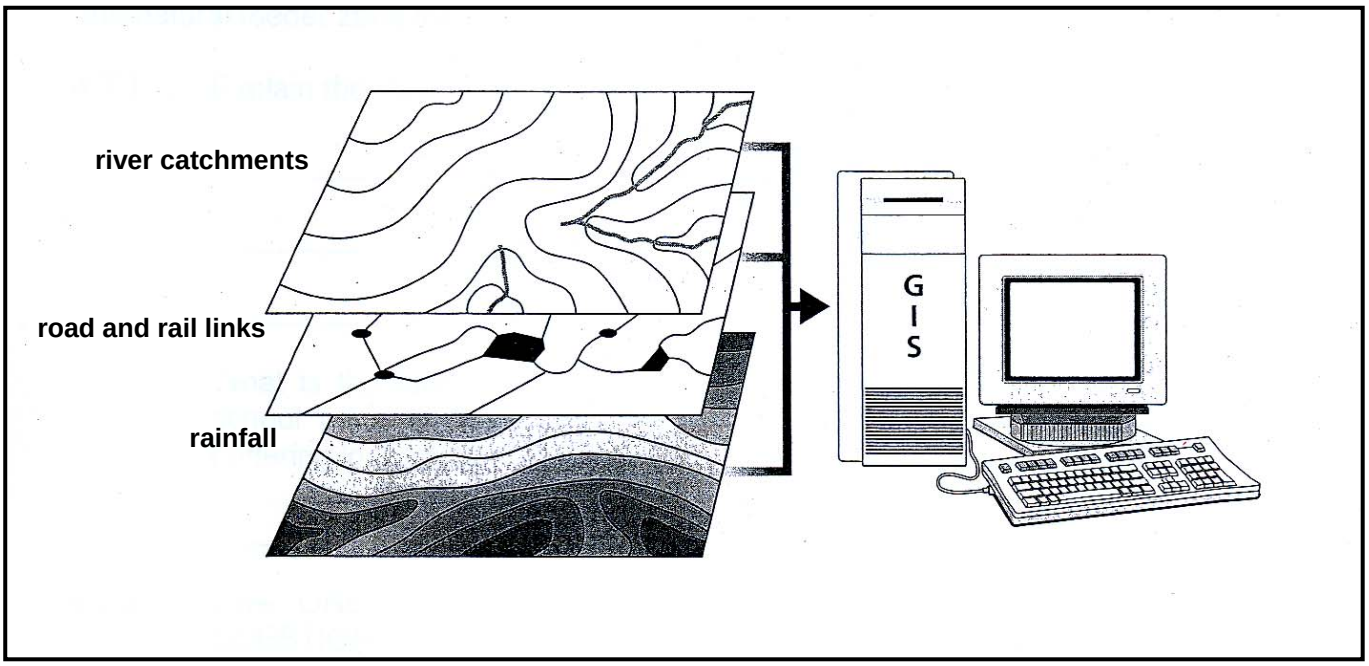
Spatial data: _____

_____

Attribute data: _____

_____ (2 x 2) (4)

4.2 The diagram below illustrates the concept of data layering.



4.2.1 Explain the meaning of the term *data layering*.

_____

_____

_____ (1 x 2) (2)

4.2.2 Name any TWO layers of information that one can identify in block G3 on the topographical map.

- _____
- _____ (2 x 2) (4)

4.2.3 Explain TWO uses of data layering in a GIS.

_____

_____

_____

_____

_____ (2 x 2) (4)

4.3 Buffering can be used in many different ways in a GIS, for example when determining the natural feeder zone for a school.

4.3.1 Explain the meaning of the term *buffering*.

_____

_____

_____ (1 x 2) (2)

4.3.2 A learner lives in the feeder zone that has been created through buffering in block I3 on the topographical map. What is the furthest distance this learner will have to travel to school?

_____ (1 x 2) (2)

4.3.3 Name ONE advantage of buffering for the school identified in QUESTION 4.3.2.

_____

_____

_____ (1 x 2) (2)
[20]

TOTAL: 100

ROUGH WORK AND CALCULATIONS