



Province of the
EASTERN CAPE
EDUCATION

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

SEPTEMBER 2012

GEOGRAPHY P2

NAME: _____

MARKS: 100

TIME: 1½ hours



| | | MARKS | MOD |
|----|----|-------|-----|
| Q1 | 20 | | |
| Q2 | 20 | | |
| Q3 | 40 | | |
| Q4 | 20 | | |

| TOTAL MARK | MOD |
|------------|-----|
| | |
| 100 | 100 |

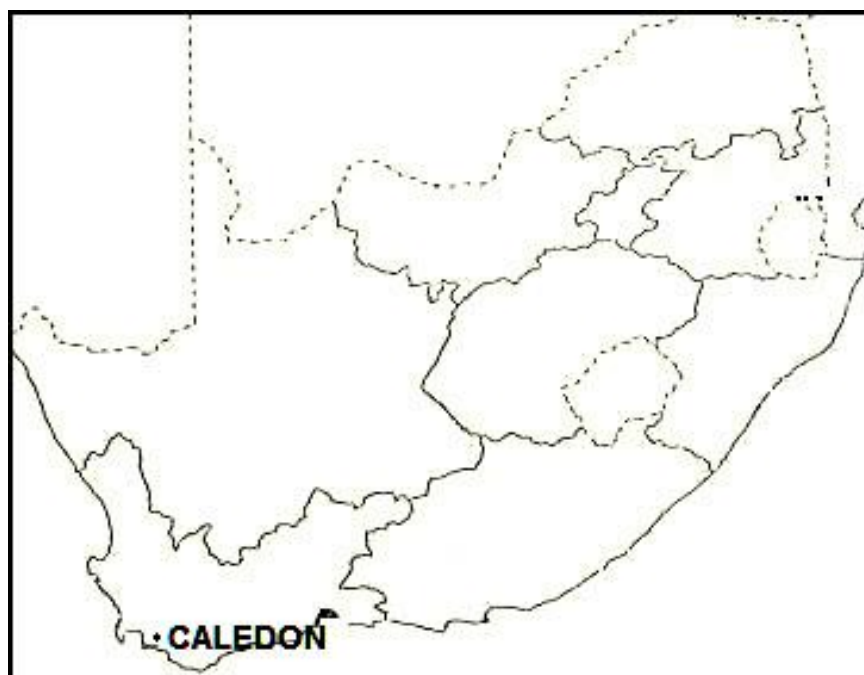
This question paper consists of 9 pages.

INSTRUCTIONS AND INFORMATION

1. Write your NAME and in the space provided on the cover page.
2. Answer ALL the questions in the spaces provided ON THIS QUESTION PAPER.
3. You are supplied with a 1:50 000 topographical map (3419 AB CALEDON) and an orthophoto map (3419 AB 24 CALEDON) of a part of the mapped area.
4. The topographical map and the orthophoto map must be handed over to the invigilator at the end of the examination session.
5. NOTE: The resource material (topographical map and orthophoto map) must be collected by the schools for their own future use.
6. A non-programmable calculator may be used.
7. The following English terms or their Afrikaans translations are shown on the 1:50 000 topographical map:

| ENGLISH | AFRIKAANS |
|-----------------------------|---------------------------|
| Caledon Casino & Spa Resort | Caledon Casino & Spa Oord |
| Landing Strip | Landingstrook |
| Diggings | Uitgrawings |
| Nature Reserve | Natuurreservaat |
| Show Grounds | Skougronde |
| Hot Spring | Warmwaterbronne |
| Sewage Disposal Works | Rioolverwerkingsaanleg |
| Silo | Graansuier |
| Marshes and vlei | Moeras en vlei |

POSITION OF CALEDON WITHIN SOUTH AFRICA



SECTION A

QUESTION 1: MULTIPLE-CHOICE QUESTIONS

The following statements are based on the 1:50 000 topographical map 3419 AB CALEDON and the orthophoto map 3419 AB 24 of the same area. Various options are provided as possible answers to the following statements/questions. Choose the correct answer and write only the letter (A – D) in the block next to the question/statement.

1.1 The province in which Caledon is situated is ...

- A Kwa Zulu Natal.
- B Eastern Cape.
- C North West.
- D Western Cape.

1.2 The topographical map number 3419 refers to the ...

- A longitude and latitude.
- B latitude and longitude.
- C contour line and isobar.
- D longitude and contour lines.

1.3 When travelling by rail in an easterly direction from Caledon station (O11) the next station will be ...

- A Botrivier
- B Greyton.
- C Riviersonderend.
- D Klipdale.

1.4 The type of rural settlement pattern found at Môreson (F12) is ...

- A circular.
- B nucleated.
- C irregular.
- D linear.

1.5 Caledon is classified as a ... town.

- A mining
- B break-of-bulk
- C central place
- D fording/bridging

1.6 What natural feature is found at 34°10'00"S and 19°22'56"E on the topographical map?

- A River
- B Spur
- C Dam
- D Marsh and vlei

1.7 The street patterns evident in the suburb Vleiview on the orthophoto map are ...

- A gridiron and irregular.
- B irregular and circular.
- C circular and gridiron.
- D radial and irregular.

1.8 The letter E on the orthophoto map indicates a/an ...

- A new housing development.
- B farm dam.
- C excavation.
- D vineyard.

1.9 The letter D on the orthophoto map indicates a ...

- A sewerage treatment plant
- B reservoir
- C silo
- D power station

1.10 What tertiary activity is found in block E7?

- A Sewerage works
- B Police Station
- C Prison
- D Cultivated lands

(10x2) (20)

TOTAL SECTION A: 20

SECTION B

QUESTION 2: MAPWORK TECHNIQUES AND CALCULATIONS

2.1 Calculate the area in square kilometres (km²) of the region covered by the orthophoto map on the topographical map. Show ALL calculations.

(5)

2.2 Calculate the average gradient from spot height 825 (block D6) along the Donkerhoekberge watershed to spot height 579 (block E5). Show ALL calculations.

(5)

2.3 Calculate the magnetic declination for the year 2012. Show ALL calculations.

(5)

2.4 Calculate the vertical exaggeration of a cross section if the vertical scale is 1 cm = 30 m and the horizontal scale is 1:50 000. Show ALL calculations.

(5)

TOTAL SECTION B: 20

SECTION C**QUESTION 3: MAP INTERPRETATION AND ANALYSIS**

3.1 Refer to the Riviersonderend and Theewaterskloof Dam, which is an interbasin water transfer scheme, on the topographical map and answer the following questions:

3.1.1 What is the general direction of flow of the Riviersonderend river?

_____ (1x2) (2)

3.1.2 The Riviersonderend river on the topographical map has several characteristics of a river in its lower course. Which of the following characteristics are visible on the map?

| |
|--|
| <p>Meanders/Levees (dykes)/Braided stream channel/ Gentle gradient/Fertile flood plain/V-shaped cross profile</p> |
|--|

_____ (3x2) (6)

3.1.3 State and explain TWO physical factors that favoured the location of the Theewaterskloof Dam.

_____ (2x2) (4)

3.1.4 Identify the stream pattern in block K15.

_____ (1x2) (2)

3.2 Rainfall in the mapped area is seasonal. Give ONE piece of evidence from the map to support this statement.

_____ (1x1) (1)

3.3 Choose the correct answer:

Caledon is situated at the foot of the
(Swartberge/Riviersonderenberge/Drakensberge).

_____ (1x1) (1)

3.4 Commercial farming occurs in the vicinity of the Theewaterskloof Dam on the topographical map.

3.4.1 Apart from cultivated farming, name TWO other primary activities practised in the mapped area.

_____ (2x2) (4)

3.4.2 Explain any THREE factors (besides those related to water supply), that favoured this type of farming.

_____ (3x2) (6)

3.5 The letter F on the topographical map indicates the CBD of Caledon. Name TWO characteristic features visible on the map and orthophoto, which indicate that this is the CBD.

_____ (2x2) (4)

3.6 Why will land prices be relatively high in Tuinsig area? Give TWO reasons from the orthophoto map to support this statement.

_____ (2x2) (4)

- 3.7 3.7.1 Identify the urban functional zone, on the topographical map, where the sewage works (block E8) is situated.

_____ (1x2) (2)

- 3.7.2 The sewage works in block E8 has a good location. State TWO advantages of its location.

_____ (2x2) (4)

TOTAL SECTION C: 40

SECTION D

QUESTION 4: GEOGRAPHICAL INFORMATION SYSTEMS (GIS)

- 4.1 Match the statement in COLUMN A with a term chosen from COLUMN B. Write only the letter of the CORRECT term in the space below.

Example 4.1.1 M.

4.1.1

| COLUMN A | | COLUMN B | |
|----------|---|----------|--------------------|
| 4.1.1 | Location and shape of a feature | A | Raster method |
| 4.1.2 | Geographical Positioning System. | B | Spatial data |
| 4.1.3 | The observation of the earth from a distance using satellites to gather information | C | Spatial resolution |
| 4.1.4 | A method of storing GIS data as rectangular grid cells/pixels | D | Database |
| 4.1.5 | The detail with which a map depicts the location and shape of the feature | E | Remote sensing |
| 4.1.6 | A collection of data organized to use in computers | F | GPS |

(6x1) (6)

ANSWERS FOR 4.1.1 – 4.1.6:

4.1.1

4.1.4

4.1.2

4.1.5

4.1.3

4.1.6

4.2 Name any TWO components of GIS.

(2x1) (2)

4.3 Your friend lives in Caledon and he/she would like to open a business in the area. How could you make use of GIS in order to ensure the success of his business?

(2x2) (4)

4.4 Give TWO examples of possible spatial data found in or around the Caledon Casino Spa Casino (block N12) on the topographical map.

(2x2) (4)

4.5 Does the orthophoto map or the topographical map have a higher spatial resolution?

(1x2) (2)

4.6 What is 'a layer of data'?

(1x2) (2)

TOTAL SECTION D: 20

GRAND TOTAL: 100