



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
EDUCATION

VHEMBE EAST DISTRICT

**NATIONAL
SENIOR CERTIFICATE**

GRADE 11

**GEOGRAPHY
PRE-MIDYEAR EXAM
MAY 2026**

MARKS: 150

DURATION: 3hrs

This question paper consists of 16 pages

INSTRUCTIONS AND INFORMATION

1. This question paper consists of two sections.

SECTION A

QUESTION 1: CLIMATE AND WEATHER (60)

QUESTION 2: GEOMORPHOLOGY (60)

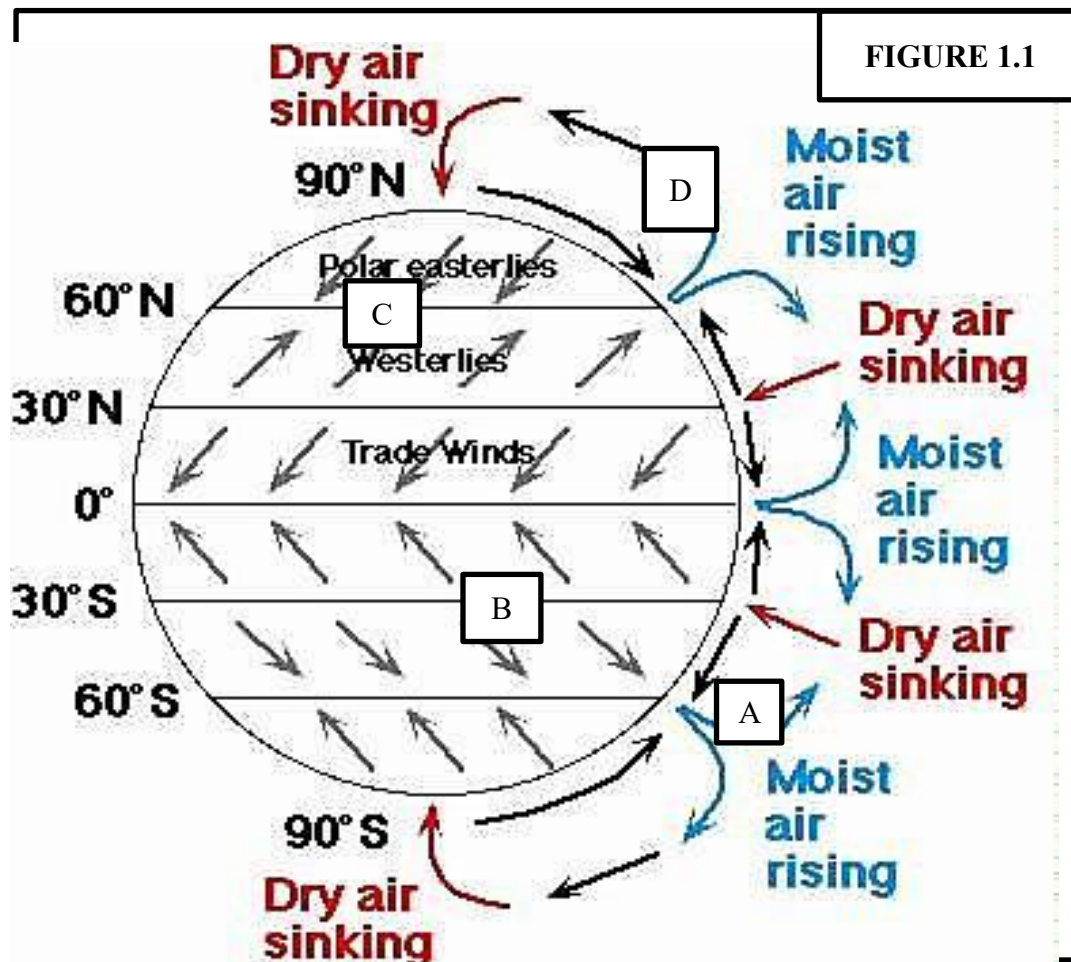
SECTION B

QUESTION 3: GEOGRAPHICAL SKILL AND TECHNIQUES (30)

2. Answer ALL the questions
3. All diagrams are included in the QUESTION PAPER.
4. Leave a line between the subsections of question answered.
5. Start EACH question on the top of the NEW page .
6. Number the answer correctly according to the numbering system used in this question paper
7. Draw fully labeled diagrams when instructed to do so.
8. Answer in FULL SENTENCES except when you have to state, name, identify.
9. Units of measurement must be indicated in your final answer,
eg.1020hpa,45m
- 10.You must use a non-programmable calculator.
- 11.You may use a magnifying glass.
12. Write neatly and legibly.
- 13.A 1: 50 000 topographical map 2629DB ERMELO and 1:10 000 orthophoto map 2629DB 5 ERMELO are provided.
14. The area demarcated in RED/BLACK on the topographical map represents area covered by the orthophoto map.
15. Show your ALL calculations. Marks will be allocated for steps in calculations.

SECTION A: CLIMATE AND WEATHER AND GEOMOPHOLOGY**QUESTION 1: CLMATE AND WEATHER**

1.1 Refer to **FIGURE 1.1** to answer the following questions. Choose the correct answer and write only the letter (A – D) next to the question number (1.1.1 – 1.1.7) on the answer script, for example 1.1.8 D



1.1.1 The front is usually found at **A**

- A equatorial
- B mid latitude
- C Sub-tropical
- D polar

1.1.2 The air pressure belt at **B** is the ...

- A sub-polar LP belt
- B sub-tropical HP belt
- C equatorial LP belt
- D polar HP belt

1.1.3 The air pressure belt at **C** is the ...

- A sub-polar LP belt
- B sub-tropical HP belt
- C equatorial LP belt
- D polar HP belt

1.1.4 The cell at **D** is the

- A Ferrell cell
- B Hadley cell
- C polar cell
- D divergence cell

1.1.5 are usually found at 30 degrees north and south

- A Tropical cyclones
- B Mid latitude cyclones
- C Anticyclones
- D Hurricanes

1.1.6 The ITCZ is ...

- A Inter Tropical Convection Zone
- B Inner-wind Transport Convergence Zone
- C Inter Tropical Connection Zone
- D Inter Tropical Convergence Zone

1.1.7 A force that influences the speed of winds is called the ...

- A Pressure gradient force
- B Coriolis force
- C Geostrophic force
- D Primary force

(7x1) (7)

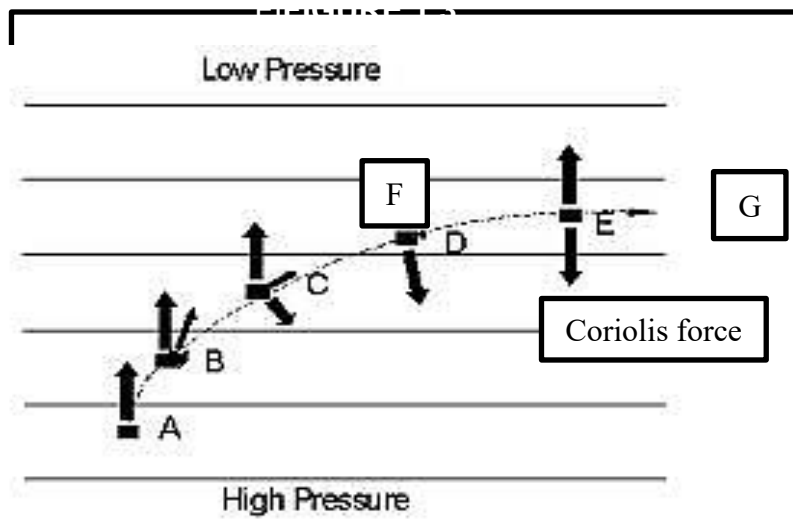
- 1.2** Match the following statements in **COLUMN B** with the terms in **COLUMN A**.
Write down only the question number and correct letter e.g. 1.2.9 I

COLUMN A		COLUMN B	
1.2.1	Tropic of Cancer	A	Shape of the earth
1.2.2	Rotation	B	23.5° South
1.2.3	Fohn winds	C	Seasonal reversal of winds
1.2.4	Spherical	D	Path of earth around the sun
1.2.5	Monsoon winds	E	Earth turns on imaginary axis
1.2.6	Elliptical	F	Air masses from both hemispheres converge here
1.2.7	I.T.C.Z	G	Hot dry wind in Alps
1.2.8	Tropic of Capricorn	H	23.5° North

(8X1) (8)

1.3 PRESSURE GRADIENT, CORIOLIS FORCE AND GEOSTROPHIC WIND

Refer to **FIGURE 1.3** illustrating **Coriolis Effect**.



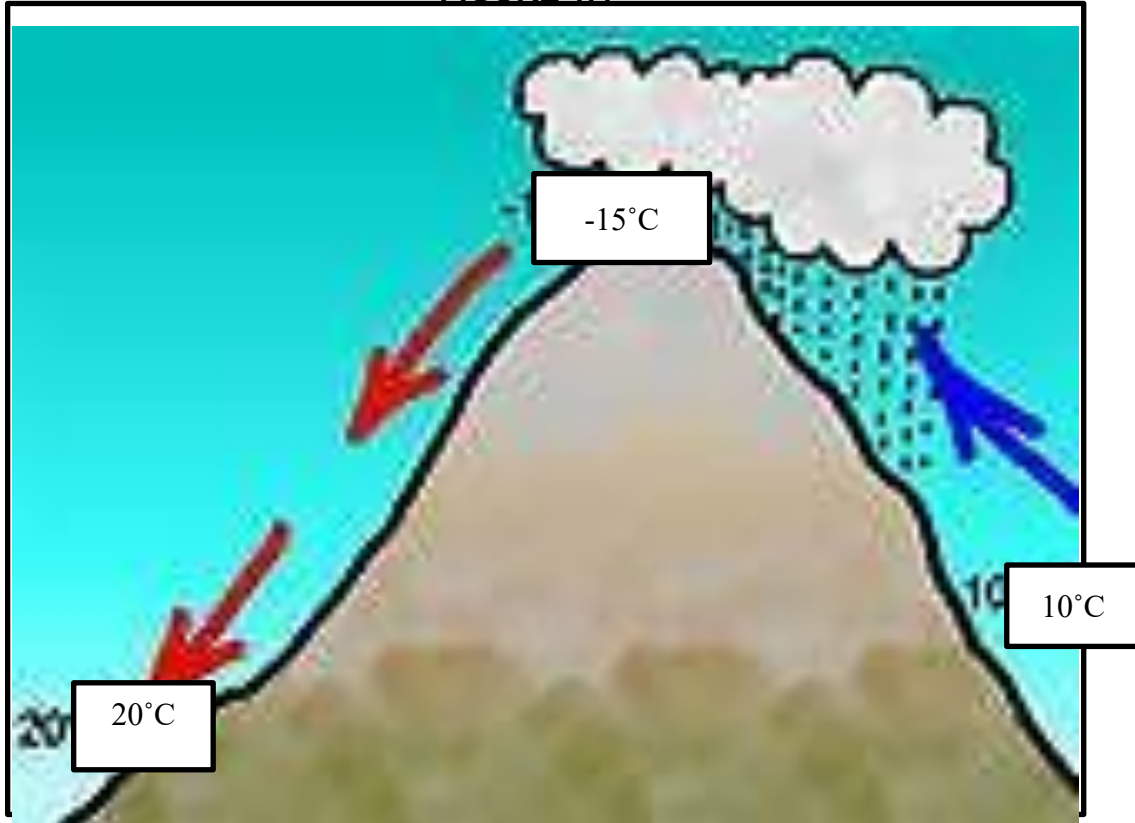
- 1.3.1 Define Coriolis force. (1)
- 1.3.2 What is responsible for the formation of Coriolis force? (1)
- 1.3.3 Distinguish between the Coriolis effect in the northern hemisphere and the Coriolis effect in the southern hemisphere. (2x2) (4)
- 1.3.4 How does the strength of the Coriolis force change from the equator to the poles? (1x2) (2)
- 1.3.5 Name the force at **F** where the wind blows from High Pressure to Low pressure. (1x1) (1)
- 1.3.6 Name the wind at **G**. (1x1) (1)

[10}

1.4 FÖHN WINDS

Refer to **FIGURE 1.4** illustrating a **Föhn wind** and then answer the following questions.

FIGURE 1.4



- 1.4.1 Define the term Föhn wind. (1)
- 1.4.2 On which side of the mountain (windward or leeward) does the Föhn wind occur? (1)
- 1.4.3 Explain why the Föhn winds are hot and dry. (2)
- 1.4.4 Describe briefly how the Föhn winds occur. (6)

[10]

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1.5 DROUGHT

Refer to **FIGURE 1.5** below illustrating **drought** and answer the following questions:

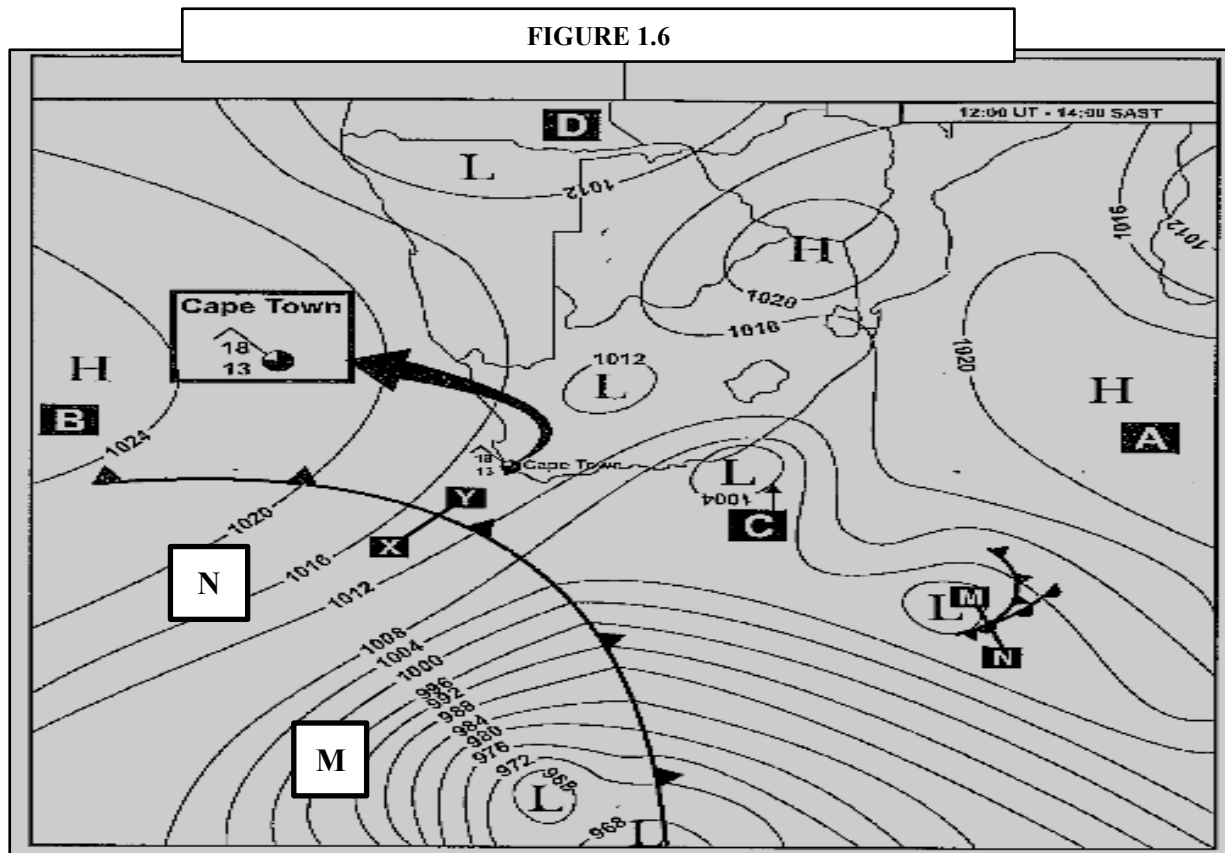
FIGURE 1.5



- 1.5.1 Define the term drought. (1x2) (2)
- 1.5.2 Define desertification. (1x2) (2)
- 1.5.3 Mention any **TWO** causes of droughts in South Africa. (1x2) (2)
- 1.5.4 Write a paragraph in which you suggest management strategies that can be implemented to reduce the risk of drought in South Africa. (3x2)(6)
- (12)**

1.6 SYNOPTIC WEATHER CHARTS

Refer to the **synoptic chart** in **FIGURE 1.6** and answer the following questions.



- 1.6.1 What name is given to the lines on the map joining places of equal pressure? (2)
- 1.6.2 What is the isobaric interval on this map? (1)
- 1.6.3 Name the high-pressure cell, labeled A. (1)
- 1.6.4 At what time was this map drawn according to the South African Standard Time (SAST)? (2)
- 1.6.5 Refer to the station model at Cape Town (enlarged). Interpret the weather conditions of the station model at Cape Town according to the following:
 - Cloud cover
 - Wind direction
 - Wind speed
 - Air temperature
 - Dew point temperature (5x1) (5)
- 1.6.6 Compare the **pressure gradients** at M and N according to **wind speeds** respectively. (2x1) (2)

[13]

TOTAL [60]

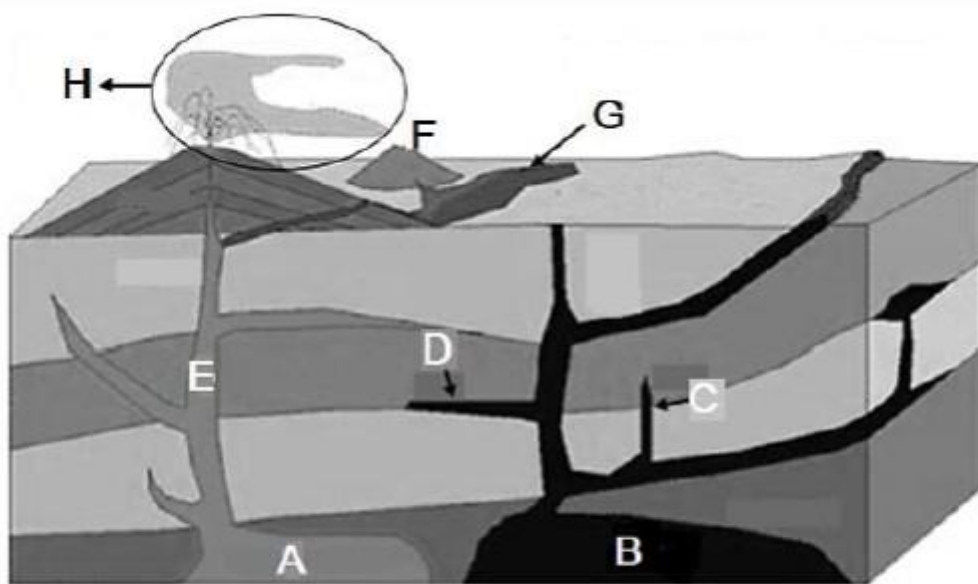
QUESTION 2: GEOMORPHOLOGY

2.1 Choose a term from COLUMN B that matches the geomorphologic description in COLUMN A. Write ONLY the letter (A-I) next to the question number (2.1.1-2.1.8) in the ANSWER BOOK, for example 2.1.9 J

COLUMN A	COLUMN B
2.1.1 Large area with deep steep sided valleys with narrow valley floors	A. Butte
2.1.2 The plateau is reduced in width due to the process of back wasting, thereby creating this feature.	B. Cuesta
2.1.3 Flat-topped hills with a greater height than width.	C. Canyon
2.1.4 Landform where the resistant cap rock has been removed.	D. Plateau
2.1.5 A large flat area elevated above sea level.	E. Parallel retreat
2.1.6 Hard resistant rock found on the top of horizontal features like mesa and butte.	F. Cap rock
2.1.7 Landscape that consists of flat-topped mountains of different widths.	G. Mesa
	H. Karoo Landscape
	I. Conical hill

(7X1) (7)

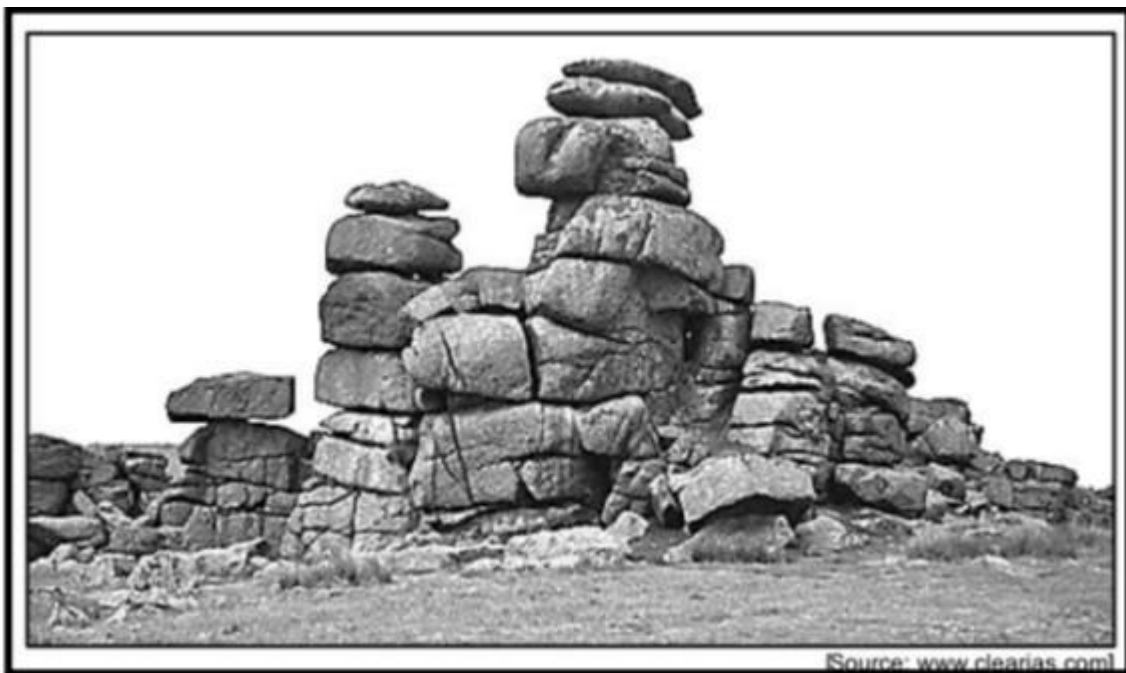
2.2 Refer to the diagram showing igneous intrusions. Match the letters A to H to each description below. Write down the LETTERS next to the question numbers (2.2.1- 2.2.8) in your ANSWER BOOK. e.g. 2.2.9. L



https://www.wikiwand.com/en/Intrusive_rock

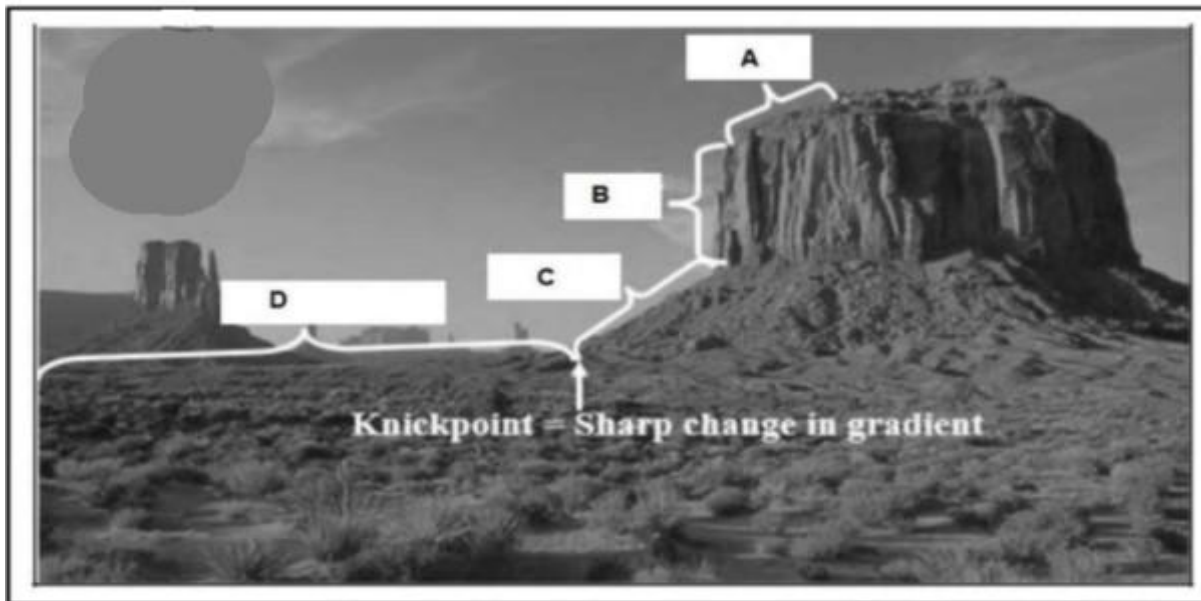
- 2.2.1 Forms when an enormous mass of magma pushes upwards and solidifies under the earth's surface.
 - 2.2.2 Circular or oval features made up of small fragments of lava from a single vent.
 - 2.2.3 Consists of fragments of rocks, minerals, and volcanic glass ranging in size.
 - 2.2.4 A horizontal rock layer formed as magma spreads between existing layers of rocks.
 - 2.2.5 A large underground pool of molten rock beneath the Earth's surface.
 - 2.2.6 A pipe-like structure through which magma can move, often to the surface.
 - 2.2.7 Molten rock that flows out through fissures or volcanic vents.
 - 2.2.8 A wall-like intrusion that cuts almost vertically across existing rock layers.
- (8X1) (8)

2.3 Refer to the sketch below which shows Tors and answer the following questions:



- 2.3.1 What are tors? (1X1) (1)
 - 2.3.2 Name the rock type from which tors develop. (1X1) (1)
 - 2.3.3 State the igneous intrusion from which tors would originate. (1X1) (1)
 - 2.3.4 Why is it possible for the core stones to remain in place although they seem very loose? (2X2) (4)
 - 2.3.5 In a paragraph of approximately Eight lines, explain the formation of Tors. (4X2) (8)
- (15)**

2.4 Refer to the sketch showing the slope elements and answer the following questions:



[Source: http://www.holycrosshigh.co.za/Alida/GRADE%2011_WEEK%2011.px]

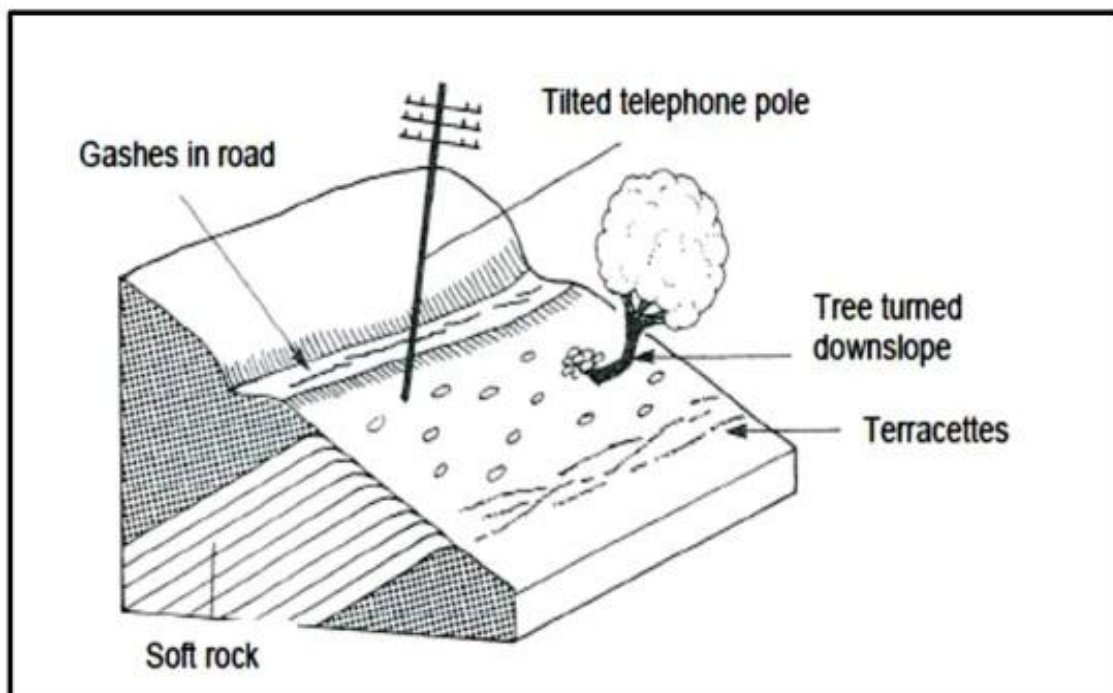
2.4.1 Name the slope elements A, B, C and D (4X1) (4)

2.4.2 Explain the formation of slope element C (1X2) (2)

2.4.3 What caused the different slope elements to develop? (1X1) (1)

2.4.4 In a paragraph of approximately Eight lines, discuss why slope element D is suitable for farming. (4X2) (8)
(15)

2.5 Refer to the diagram showing mass movement down a slope.



- 2.5.1 Provide evidence from the diagram that mass movement is taking place. (1X1) (1)
- 2.5.2 On which slope, the dip slope or scarp slope, is mass movement More likely to take place? (1X2) (2)
- 2.5.3 Explain your answer in question 2.5.2 above. (1X2) (2)
- 2.5.4 Why do you think people should be made aware of the consequences of mass movement before building on slopes? (1X2) (2)
- 2.5.5 In a paragraph of approximately Eight lines, discuss the factors which cause mass movement and suggest ways of preventing or minimizing its effects. (4X2) (8)
- (15)**

TOTAL MARKS: [60]

SECTION B: GEOGRAPHICAL SKILLS AND TECHNIQUES (MAPWORK)

All questions refer to the extract of 1: 50 000 of the 2629 DB ERMELO topographical map and an extract of the 2629DB 5 ERMELO orthophoto map of a part of the mapped area.

QUESTION 3

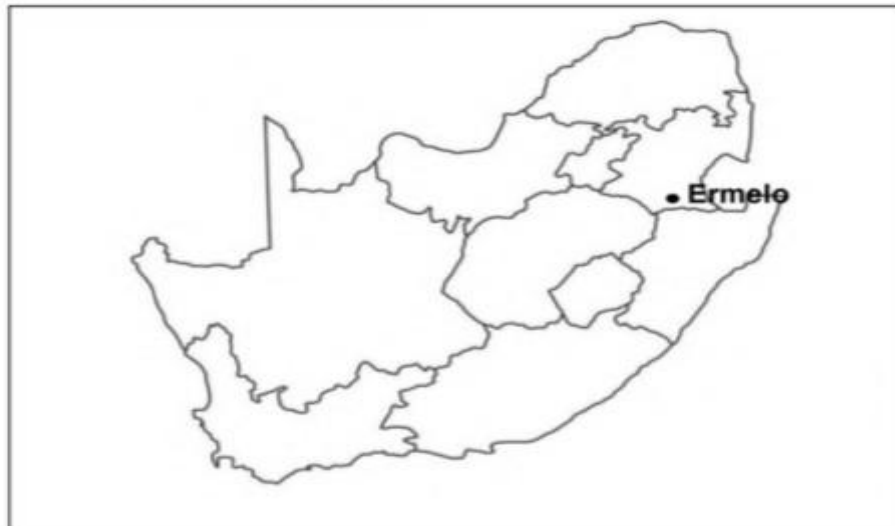
The following English terms and their Afrikaans translations are shown on the topographical map:

ENGLISH

River
Purification plant
Opencast Mine
Furrow

AFRIKAANS

Rivier
Watersuiweringswerke
Oopgroefmyn
Kanaal

GENERAL INFORMATION ON ERMELO

Ermelo is the educational, industrial and commercial town of the Gert Sibande District Municipality in Mpumalanga province, South Africa. It is both a mixed agriculture and mining region. It is located 210 km east of Johannesburg.

Mining is important to the district with anthracite, coal and torbanite mined.

The climate is warm and temperate. The summers have a good deal of rainfall, while the winters have very little. The average annual temperature is 14.7 °C. In a year, the rainfall is on average 883 mm.

The geology in the vicinity of Ermelo is comprised of rocks of the Karoo Supergroup, and mainly consists of sandstones, gritstones, shales and coal beds of the Eccia Subgroup, made up of the Volksrust and Vryheid Formations.

[Source: Adapted from: https://en.wikipedia.org/wiki/Ermelo,_Mpumalanga
<https://csegrecorder.com/articles/view/assessing-risk-to-the-ermelo-ring-road-from-historical-coal-undermining>.

3.1 MAP SKILLS AND CALCULATIONS

Various options are provided as possible answers to the following questions. Choose the correct answer and write only the letter (A-D) next to the question number.

3.1.1 The contour interval on the Orthophoto map is meters.

- A. 5
- B. 10
- C. 20
- D. 25

(1X1) (1)

3.1.2 In the map reference/index 2629 DB, 26 is referring to.....

- A. Longitude
- B. Latitude
- C. Easterly
- D. Westerly

(1X1) (1)

3.1.3 Calculate the present magnetic declination for the map.

(5X1) (5)

3.2 MAP INTERPRETATION

Various options are provided as possible answers to the following questions. Choose the answer and write only the letter (A-D) next to the question number.

3.2.1 Wesselton, the area covered by the orthophoto map is from Ermelo.

- A. East
- B. West
- C. North
- D. South

(1X1) (1)

3.2.2 The scale of the orthophoto map is than that of the topographic map

- A. 5 times smaller
- B. 10 times smaller
- C. 5 times bigger
- D. 10 times bigger

(1X) (1)

3.2.3 The land use at 6 on the orthophoto map is (a).....

- A. Cemetery
- B. Factories
- C. Hospital
- D. Houses

(1X1) (1)

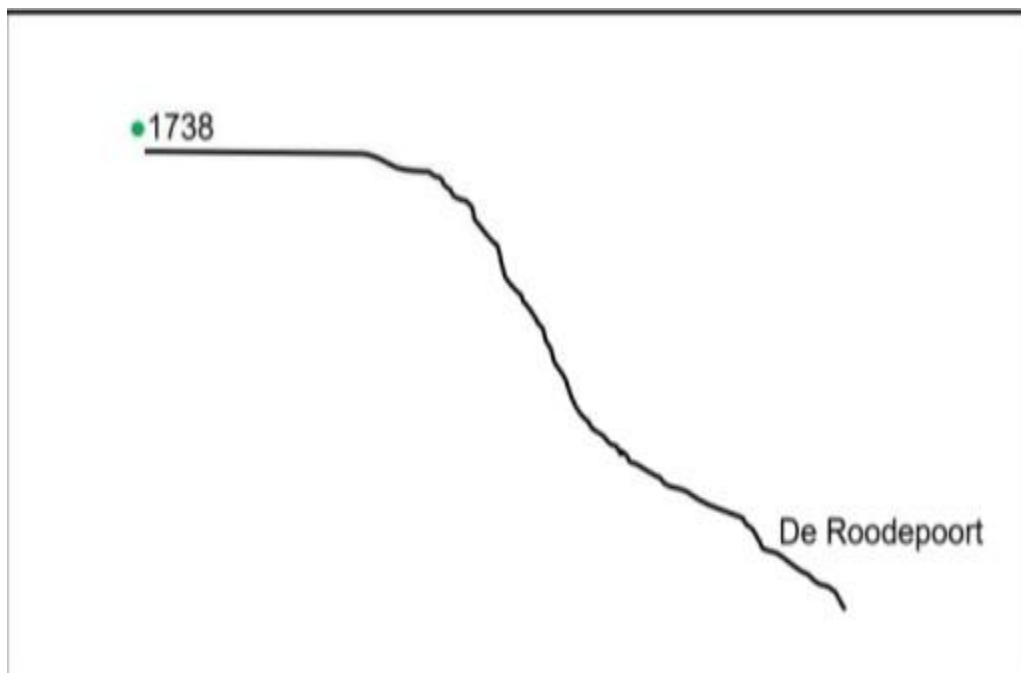
Refer to the Topographic map.

3.2.4 Ermelo receives seasonal rainfall, True or False? (1X1) (1)

3.2.5 Give evidence from the topographic map to support your answer in question 3.2.4 (2X1) (2)

3.2.6 How do the farmers in the area prepare themselves for the possibility of dry seasons? (1X2) (2)

3.2.7 The following diagram is a cross section from spot height 1738 in (block **B1**) to the De Roodepoort farm in (block **C1**) on the topographic map.

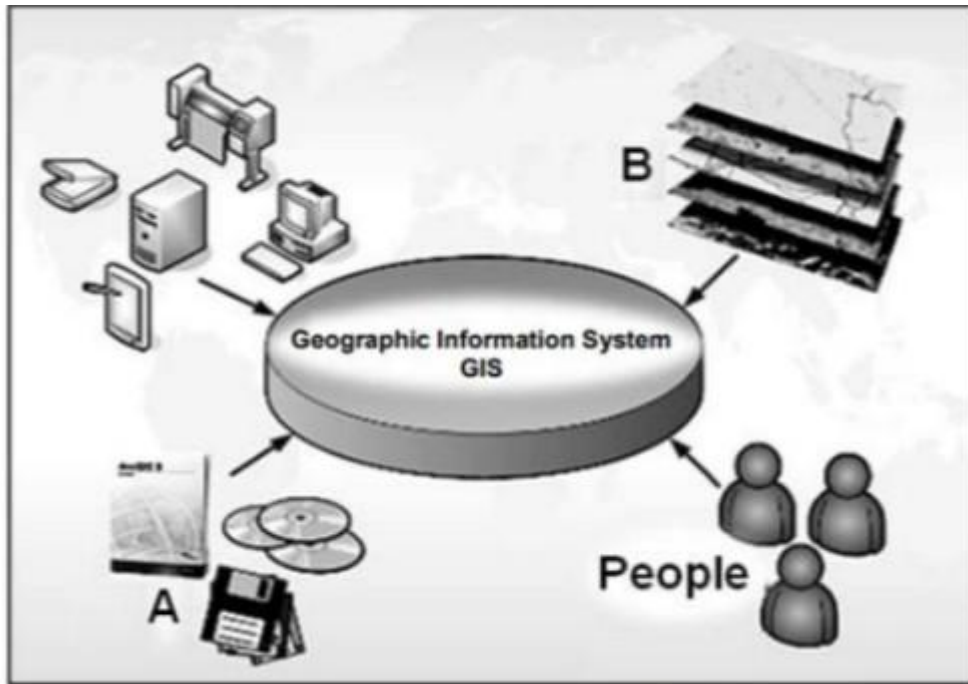


(a) Explain how slope decline might affect the appearance of the slope. (1X2) (2)

(b) Is there a cultivated land South-west of De Roodepoort farm?

Explain why this is the ideal location for farming. (1X3) (3)

3.3 GEOGRAPHICAL INFORMATION SYSTEMS (GIS)



[Adapted from Google Images]

3.3.1 Refer to the above diagram that shows the different components of a GIS

(a) Define GIS (2X1) (2)

(b) Identify components A and B (2X1) (2)

3.3.2 Differentiate between vector data and raster data (2X2) (4)

3.3.3 How can GIS assist farmers about the climate of ERMELO (2X1) (2)

{30}

TOTAL MARKS: [150]