



**NATIONAL  
SENIOR CERTIFICATE**


**GRADE 11**

**NOVEMBER 2024**

**GEOGRAPHY P1**

**MARKS: 150**

**TIME: 3 hours**



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This question paper consists of 16 pages.

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**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 Skills and Techniques (30)
2. Answer all THREE questions.
3. ALL diagrams are included in the QUESTION PAPER.
4. Leave a line between subsections of questions answered.
5. Start EACH question at the top of a NEW page.
6. Number the answers correctly according to the numbering system used in this question paper.
7. Do NOT write in the margins of the ANSWER BOOK.
8. Draw fully labelled diagrams when instructed to do so.
9. Answer in FULL SENTENCES, except when you have to state, name, identify or list.
10. Units of measurement MUST be indicated in your final answer, e.g. 1010 hPa, 9 °C and 25 m.
11. You may use a non-programmable calculator.
12. You may use a magnifying glass.
13. Write neatly and legibly.

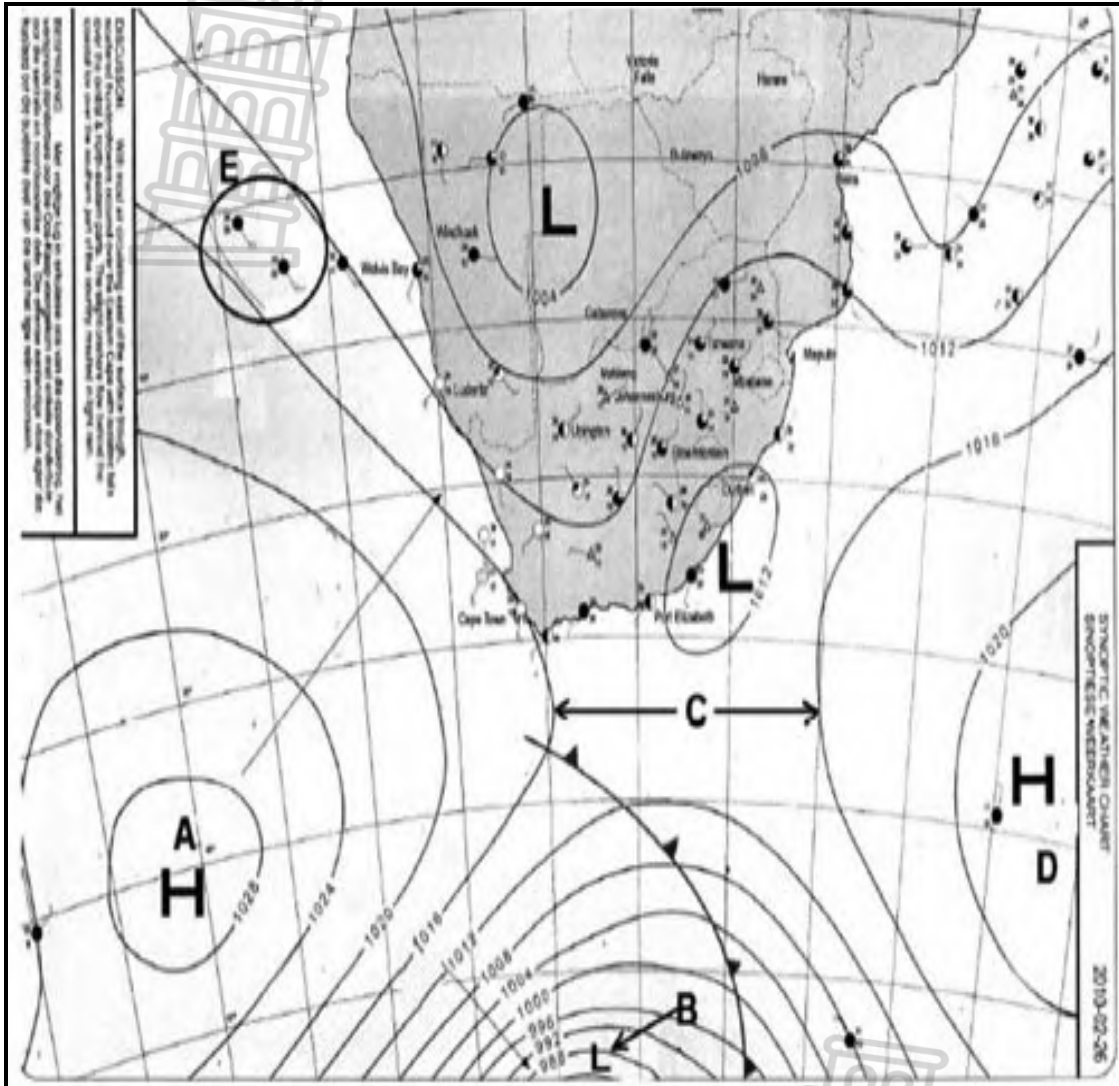
**SPECIFIC INSTRUCTIONS AND INFORMATION FOR SECTION B**

14. A 1 : 50 000 topographical map (EXTRACT from 2527 DB HARTBEESPOORT DAM) and a 2527DB 23 orthophoto map of a part of the mapped area are provided.
15. The area demarcated in RED/BLACK on the topographic map represents the area covered by the orthophoto map.
16. Show ALL calculations. Marks will be allocated for this.
17. You must hand in the topographic and the orthophoto map to the invigilator at the end of this examination session.

**SECTION A: CLIMATE AND WEATHER AND GEOMORPHOLOGY**

**QUESTION 1: THE ATMOSPHERE**

1.1 Refer to the synoptic weather map of Southern Africa. Choose the correct word/number from those given in brackets to complete the following sentences. Write only the word/number next to the question numbers (1.1.1 to 1.1.8) in the ANSWER BOOK, for example 1.1.9 trough.



[Adapted from Geography for All]

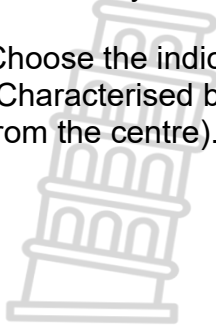
- 1.1.1 The synoptic weather map above indicates a (summer/winter) season.
- 1.1.2 The unit of measurement that indicates air pressure along the isobars is (hectopascal/millimetres).
- 1.1.3 The value of the calculated isobaric interval on the synoptic weather map is (2/4).
- 1.1.4 The area of constant pressure at **C** between the two high pressure systems is a (ridge/saddle).
- 1.1.5 The pressure gradient at **A** is (gentle/steep).

- 1.1.6 The atmospheric pressure reading at letter **D** is approximately (1016/1024) millibars.
- 1.1.7 The pressure system between Durban and Port Elizabeth is a (coastal low/low-pressure).
- 1.1.8 Weather system **B** is a low-pressure system.

Choose the indicator that does NOT fit.

(Characterised by unstable weather conditions/ Divergence occurs from the centre).

(8 x 1) (8)



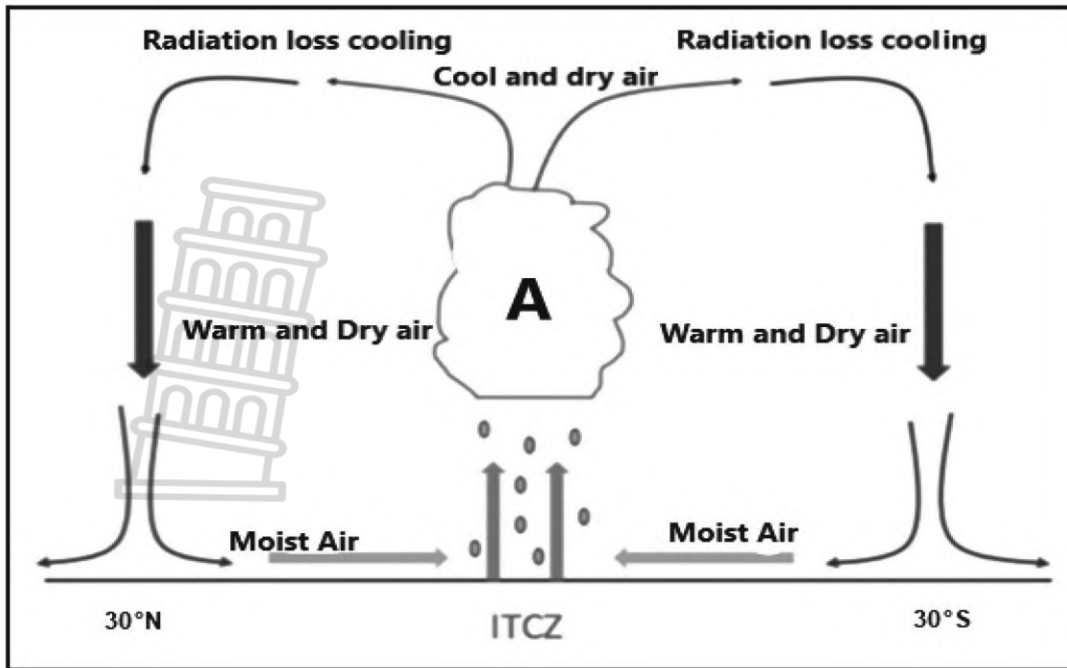
- 1.2 Complete the statements in COLUMN A with the options in COLUMN B. Write only **A** or **B** next to the question numbers (1.2.1 to 1.2.7) in the ANSWER BOOK, for example 1.2.8 B.

COLUMN A		COLUMN B	
1.2.1	Movement of the earth in an orbit around the sun	<b>A</b>	rotation
		<b>B</b>	revolution
1.2.2	Theoretical wind that would result from an exact balance between Coriolis force and pressure gradient force	<b>A</b>	geostrophic flow
		<b>B</b>	geostrophic balance
1.2.3	It is experienced in midsummer 21 December when days are longer and nights are shorter	<b>A</b>	spring equinox
		<b>B</b>	summer solstice
1.2.4	The direction in which the slope faces in relation to the sun	<b>A</b>	aspect
		<b>B</b>	orbit
1.2.5	The zone along 60° N/S where warm subtropical air and cold polar air meet	<b>A</b>	front
		<b>B</b>	polar front
1.2.6	Manner in which there is a balance between incoming solar radiation and outgoing radiation of the earth	<b>A</b>	terrestrial radiation
		<b>B</b>	energy balance
1.2.7	Strong winds blowing from west to east in the upper atmosphere 10 km above the earth surface	<b>A</b>	planetary winds
		<b>B</b>	jet streams

(7 x 1) (7)



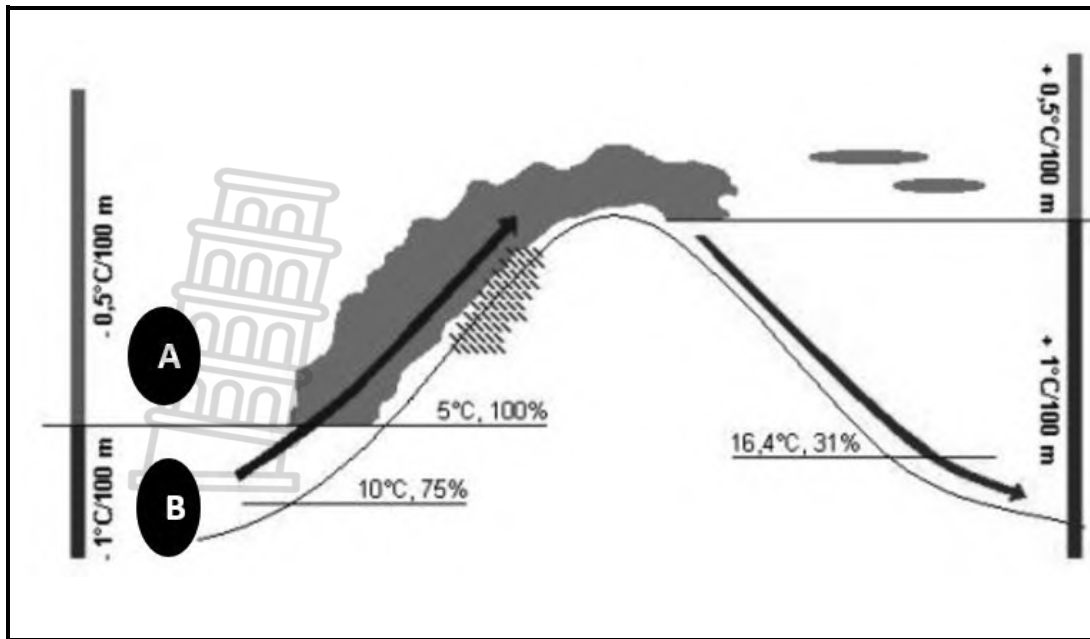
1.3 Study the sketch below and answer the questions that follow.



- 1.3.1 What is a *primary air circulation*? (1 x 2) (2)
- 1.3.2 Identify the cell represented by the sketch above. (1 x 1) (1)
- 1.3.3 Supply a suitable name for the surface winds blowing from 30° to 0° North and South of the equator. (1 x 1) (1)
- 1.3.4 Outline the resultant weather conditions associated with the winds named in QUESTION 1.3.3. (1 x 2) (2)
- 1.3.5 Name the type of cloud that is found at **A**. (1 x 1) (1)
- 1.3.6 Explain the formation of the cell identified in QUESTION 1.3.2. (4 x 2) (8)



1.4 Refer to the sketch below illustrating Föhn winds.



1.4.1 Define *Föhn winds*. (1 x 2) (2)

1.4.2 Provide a suitable name for Föhn winds in South Africa. (1 x 1) (1)

1.4.3 Lapse rate is the rate at which the temperature of dry air decreases with an increase in height.

Identify the letter on the sketch that represents dry adiabatic lapse rate and wet adiabatic lapse rate respectively. (2 x 1) (2)

1.4.4 Briefly explain why the temperature of the descending air on the leeward side is higher (16,4°) than temperature on the windward side. (1 x 2) (2)

1.4.5 In a paragraph of approximately EIGHT lines, explain the impact of Föhn winds on the environment on the leeward side of the mountain. (4 x 2) (8)



1.5 Read the extract on drought and desertification.

**DESERTIFICATION, DROUGHT AND CLIMATE CHANGE**

Dryland areas in Africa are under threat from deforestation, soil erosion, nutrient mining, recurrent drought and climate change, potentially resulting in land degradation, desertification, and aggravated poverty. Sustainable agricultural innovations are key to limiting adverse impacts on the environment and on the livelihoods of rural populations.

- 1.5.1 Differentiate between *drought* and *desertification*. (1 x 2) (2)
- 1.5.2 State TWO causes of drought. (2 x 2) (4)
- 1.5.3 Quote from the extract the consequences of drought. (3 x 1) (3)
- 1.5.4 Suggest THREE common management strategies to reduce the spread of drought and desertification. (3 x 2) (6)

**[60]**





**QUESTION 2: GEOMORPHOLOGY**

2.1 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 numbers (2.1.1 to 2.1.8) in the ANSWER BOOK, for example 2.1.9 A.

2.1.1 Canyon landscapes develop in:

- A Tilted sedimentary rock
- B Round igneous domes
- C Massive igneous rock
- D Horizontally layered rock

2.1.2 A small, narrow, long area of erosion on a slope is called a ...

- A gorge.
- B gullies.
- C badlands.
- D plateau.

2.1.3 Planes separating layers of rocks:

- A Bedding plain
- B Peneplains
- C Pediplains
- D Pediments

2.1.4 Erosion of a slope backwards causing no loss of height of landform is called ...

- A downward erosion.
- B vertical erosion.
- C scarp retreat.
- D down wasting.

2.1.5 A ... is a flat-topped hill with a greater height than width.

- A butte
- B mesa
- C conical hill
- D plateau

2.1.6 A long, narrow, elongated hill:

- A Ridge
- B Plateau
- C Mesa
- D Sill



2.1.7 A ridge with an angle of the dip slope greater than 45° is referred to as a ...

- A cuesta.
- B homoclinal ridge.
- C canyon.
- D hogsback.

2.1.8 In Ridges and Karoo landscapes, flat land that is ideal for farming is found in ... and ... strata.

- (i) horizontal
- (ii) inclined
- (iii) massive igneous intrusion
- (iv) domes

- A (i) and (ii)
- B (ii) and (iii)
- C (iii) and (iv)
- D (i) and (iv)

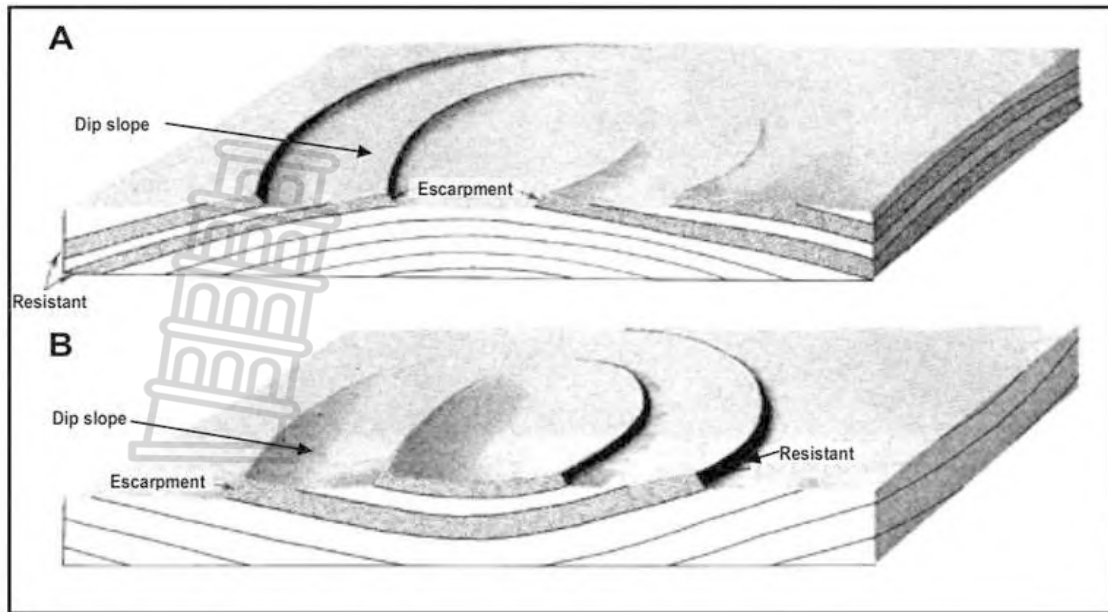
(8 x 1) (8)

2.2 Choose the word/term from COLUMN B that completes the statement in COLUMN A. Write only **Y** or **Z** next to the question numbers (2.2.1 to 2.2.7) in the ANSWER BOOK, for example 2.2.8 Y.

COLUMN A		COLUMN B	
2.2.1	The peeling of rock layers due to expansion and contraction	<b>Y</b>	mechanical weathering
		<b>Z</b>	exfoliation
2.2.2	Granite boulders left after surrounding rock has been weathered	<b>Y</b>	tors
		<b>Z</b>	core stones
2.2.3	Landform resulting from erosion of overlying strata to expose a batholith	<b>Y</b>	granite dome
		<b>Z</b>	poort
2.2.4	A saucer shaped intrusion, which is found deeper in the Earth crust	<b>Y</b>	laccolith
		<b>Z</b>	lopolith
2.2.5	Vertical intrusion along the sedimentary rocks that forms serrated ridges	<b>Y</b>	dyke
		<b>Z</b>	sill
2.2.6	Rocks only joined at the bottom	<b>Y</b>	dome
		<b>Z</b>	tors
2.2.7	Large dome shaped intrusion of magma deep within the earth surface	<b>Y</b>	bushveld igneous complex
		<b>Z</b>	batholith

(7 x 1) (7)

2.3 Refer to the sketch showing cuestas.

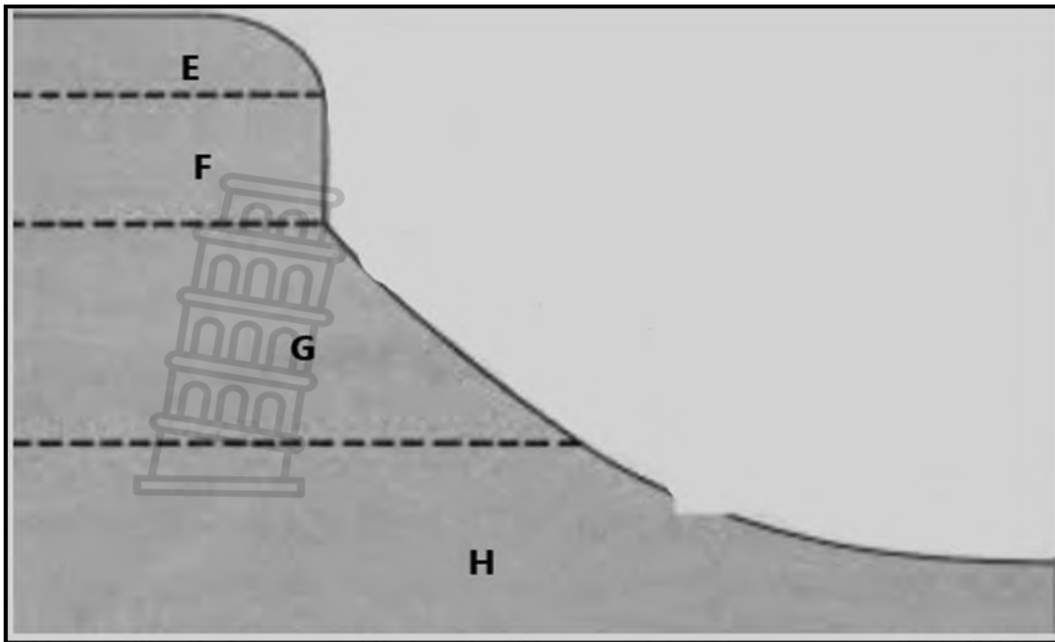


[Source: geo.msu.edu]

- 2.3.1 Define a *cuesta*. (1 x 2) (2)
- 2.3.2 Describe the difference between a *dip slope* and a *scarp slope*. (2 x 1) (2)
- 2.3.3 Provide the suitable name for the *cuesta* at **A**. (1 x 1) (1)
- 2.3.4 How will the *cuesta* at **B** form? (2 x 2) (4)
- 2.3.5 Suggest how humans can utilise *cuestas*. (3 x 2) (6)



2.4 Refer to the sketch on slope elements.



2.4.1 From the sketch above, which slope elements have the following shapes:

(a) Convex

(b) Concave

(2 x 1) (2)

2.4.2 Choose the answer between brackets.

A distinct change in the angle of the slope between the talus and the pediment is a (knickpoint/scarp retreat).

(1 x 1) (1)

2.4.3 Name the geomorphological process dominant at slope element **E**.

(1 x 2) (2)

2.4.4 Describe the characteristics of slope elements **F** and **G**.

(2 x 2) (4)

2.4.5 Evaluate the impact of slope element **H** on human activities.

(3 x 2) (6)



2.5 Refer to the photograph below on mass movement.

**STEADY RAINS CAUSING HAVOC ON THE ROADS**



The Department of Transport has urged drivers to be cautious when approaching mountain passes, after rock falls have partially obstructed roads in two parts of the province.

A rock fall has partially obstructed the R67 from Makhanda to Fort Beaufort, 40 km from Makhanda according to Department of Transport spokesperson, Unathi Binqose. Binqose urged road users to be extra cautious when approaching mountain passes as there are threats of mudslides. Steady rains in most parts of the province were causing havoc on the roads and mudslides had been reported on the R102 old Cape Town Road near Mondplaas in Humansdorp area as well as the R67 between Makhanda and Fort Beaufort.

[Source: [talk/the.town.co.za//2023/05/14](http://talk/the.town.co.za//2023/05/14)]

- |       |  |         |             |
|-------|--|---------|-------------|
| 2.5.1 | What is <i>mass movement</i> ?   | (1 x 2) | (2)         |
| 2.5.2 | Identify the type of mass movement depicted on the photograph above.   | (1 x 1) | (1)         |
| 2.5.3 | Besides rainfall mentioned in the above extract, explain other possible causes of mass movement.                 | (2 x 2) | (4)         |
| 2.5.4 | In a paragraph of approximately EIGHT lines, suggest strategies to minimise or prevent effects of mass movement. | (4 x 2) | (8)         |
|       |  |         | <b>[60]</b> |

**TOTAL SECTION A: 120**

## SECTION B

## QUESTION 3: GEOGRAPHICAL SKILLS AND TECHNIQUES

## GENERAL INFORMATION ON HARTBESPOORT DAM



Co-ordinates: 25°43'32" S 27°50'54" E

Hartbeespoort Dam (also known as *Harties*) is an arch type of dam situated in the North West Province of South Africa. It lies in a valley to the south of the Magaliesberg mountain range and north of the Witwatersberg Mountain Range, about 35 kilometres northwest of Johannesburg and 20 kilometres west of Pretoria. In 1923, the Hartbeespoort Dam was completed. It became a popular holiday and weekend destination for the inhabitants of Johannesburg and Pretoria.

[Source: [https://en.wikipedia.org/wiki/Hartbeespoort\\_Dam](https://en.wikipedia.org/wiki/Hartbeespoort_Dam)]

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

**ENGLISH**

Agricultural holdings  
Archaeological site  
Diggings  
Estate  
Golf course  
Sewerage works

**AFRIKAANS**

Landbouhoewes  
Argeologiese terrein  
Uitgrawings  
Landgoed  
Gholfbaan  
Rioolwerke



**3.1 MAPWORK SKILLS AND CALCULATIONS**

3.1.1 The co-ordinates of the non-perennial river at **H** in block **E4** on the topographical map are ...

- A 25°45'00" S 27°51'00" E.
- B 25°46'29" E 27°52'40" S.
- C 25°46'29" S 27°52'40" E.
- D 27°52'40" E 25°46'29" S. (1 x 1) (1)

3.1.2 The contour interval on the orthophoto map is ...

- A 20 m.
- B 5 m.
- C 5 km.
- D 20 km. (1 x 1) (1)

3.1.3 The approximate time the orthophoto was taken would be between ...

- A 08:00–10:00.
- B 11:00–13:00.
- C 14:00–17:00.
- D 17:00–19:00. (1 x 1) (1)

3.1.4 Calculate the distance from **1** to **2** on the orthophoto map. (2 x 1) (2)

3.1.5 Determine the true bearing from the reservoir in block **E2** to the archaeological site in block **E4** on the topographical map. (1 x 2) (2)

3.1.6 The horizontal equivalent between the benchmark 1170,7 m and spot height 1465 m in block **B3** on the topographical map is 500 m.

Calculate the average gradient using the information above. (3 x 1) (3)



### 3.2 MAP INTERPRETATION

- 3.2.1 (a) Is the landform at **J** in block **B3** on the topographical map a spur or a valley? (1 x 1) (1)
- (b) Provide map evidence for your answer in QUESTION 3.2.1(a). (1 x 2) (2)
- 3.2.2 Harties became a popular holiday and weekend destination. Identify any THREE features, found on the topographical map, that attract tourists. (3 x 1) (3)
- 3.2.3 Refer to block **E4** on the topographical map and provide a suitable name for the structural landform. (1 x 1) (1)
- 3.2.4 Describe the characteristics of the landform named in QUESTION 3.2.3. (1 x 2) (2)
- 3.2.5 (a) Is the area at **3** in block **C3** on the orthophoto map intervisible to area at **5** in block **C5**. (1 x 1) (1)
- (b) Give a reason for your answer in QUESTION 3.2.5 (a). (1 x 2) (2)

### 3.3 GEOGRAPHICAL INFORMATION SYSTEMS (GIS)

- 3.3.1 Define a *data layer*. (1 x 2) (2)
- 3.3.2 Identify the data layers used in constructing the tunnel in block **B2** on the topographical map. (1 x 2) (2)
- 3.3.3 Classify the following spatial objects from the topographical map as point, line or polygon:
- (a) **F** in block **A5**
- (b) **L** in block **A1**
- (c) **M** in block **E1** (3 x 1) (3)
- 3.3.4 Choose the answer from the given options between brackets.
- The detail in which a map describes the location and shape of the feature is (spatial data/spatial resolution). (1 x 1) (1)

**[30]****TOTAL SECTION B: 30**  
**GRAND TOTAL: 150**





**NATIONAL  
SENIOR CERTIFICATE**

**GRADE 11**

**NOVEMBER 2024**

**GEOGRAPHY P1  
MARKING GUIDELINE**

**MARKS: 150**



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This marking guideline consists of 8 pages.

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**SECTION A: CLIMATE AND WEATHER AND GEOMORPHOLOGY****QUESTION 1: THE ATMOSPHERE**

- 1.1 1.1.1 Summer (1)
- 1.1.2 Hectopascals (1)
- 1.1.3 4 (1)
- 1.1.4 Saddle (1)
- 1.1.5 Gentle (1)
- 1.1.6 1024 (1)
- 1.1.7 Coastal low (1)
- 1.1.8 Divergence occur from the centre (1) (8 x 1) (8)
- 1.2 1.2.1 B (1)
- 1.2.2 A (1)
- 1.2.3 B (1)
- 1.2.4 A (1)
- 1.2.5 B (1)
- 1.2.6 B (1)
- 1.2.7 B (1) (7 x 1) (7)
- 1.3 1.3.1 Primary circulation refers to circulatory pattern of air on a global scale (2)  
**[CONCEPT]** (1 x 2) (2)
- 1.3.2 Hadley cell (1) (1 x 1) (1)
- 1.3.3 Tropical easterlies (1) (1 x 1) (1)
- 1.3.4 Associated with warm steady winds (2)  
 Associated with heavy rainfall (2)  
**[ANY ONE]** (1 x 2) (2)
- 1.3.5 Cumulonimbus clouds (1) (1 x 1) (1)
- 1.3.6 Hadley cell forms out of the inter-tropical convergence zone (ITCZ) at the equator (2)  
 The high temperatures at the equator cause air to be heated and rise (2)  
 As the air rises it cools condenses and cause thunderstorms (2)  
 The air sinks back to the surface at 30°N/S (2)  
 At 30°N/S, some of the air flows back towards the equator (2)  
**[ANY FOUR]** (4 x 2) (8)

- 1.4 1.4.1 Föhn winds are warm, dry winds that descends on the leeward side of the mountain (2) (1 x 2) (2)
- 1.4.2 Berg winds (1) (1 x 1) (1)
- 1.4.3 A – Wet adiabatic lapse rate (1)  
B – Dry adiabatic lapse rate (1) (2 x 1) (2)
- 1.4.4 The temperature increases by 1 °C/100 m as the air descends. (2)  
Moisture evaporates as the air descends (2)  
**[ANY ONE]** (1 x 2) (2)
- 1.4.5 **NEGATIVE IMPACT:**  
Dry, gusty winds will dry out vegetation and ignite fires (2)  
Melting of snow resulting in avalanches (2)  
Melting of snow resulting in flooding (2)  
Flooding may destroy biodiversity (2)  
Flooding may cause soil erosion (2)  
Fires may cause destruction of the ecosystem (2)  
Strong winds will cause soil erosion (2)
- POSITIVE IMPACT:**  
Fires may cause germination of seeds (2)  
Flooding will fill up the dams (2) (4 x 2) (8)
- 1.5 1.5.1 **Drought** refers to a period of abnormal scarcity of rainfall for a period of more than two years (1)  
**Desertification** is a process where once fertile soil becomes arid (1)  
(2 x 1) (2)
- 1.5.2 Changing patterns of rainfall (2)  
Increased evaporation (2)  
Reduced cloud cover (2)  
High temperatures/ greater amount of sunshine (2)  
Shifting of weather systems (2)  
Low relative humidity (2)  
**[ANY TWO]** (2 x 2) (4)
- 1.5.3 Desertification (1)  
Land degradation (1)  
Aggravated poverty (1) (3 x 1) (3)
- 1.5.4 Water restriction should be imposed in urban areas (2)  
Reduce the size of cattle herds to work within the land carrying capacity (2)  
Educate the local community on implications and best practises (2)  
Plant drought resistant crops (2)  
Use of GIS/ satellite images to monitor maps (show the greenness of an area) to evaluate drought and desertification situations (2)  
Make plans in advance to store food and organise alternative food supplies (2)  
Explore other income generating activities that have less impact on the environment (tourism) (2)  
**[ANY THREE]** (3 x 2) (6)

**[60]**

**QUESTION 2: GEOMORPHOLOGY**

- 2.1 2.1.1 D Horizontally layered rock (1)
- 2.1.2 B gullies (1)
- 2.1.3 A Bedding plain (1)
- 2.1.4 C scarp retreat (1)
- 2.1.5 B butte (1)
- 2.1.6 A ridge (1)
- 2.1.7 D hogsback (1)
- 2.1.8 A (i) and (ii) (1) (8 x 1) (8)
- 2.2 2.2.1 Z (1)
- 2.2.2 Z (1)
- 2.2.3 Y (1)
- 2.2.4 Z (1)
- 2.2.5 Y (1)
- 2.2.6 Y (1)
- 2.2.7 Z (1) (7 x 1) (7)
- 2.3 2.3.1 Cuesta is a ridge with a dip slope and a scarp slope (2)  
**[CONCEPT]** (1 x 2) (2)
- 2.3.2 Dip slope is gentle (1)  
 Scarp slope is steep (1) (2 x 1) (2)
- 2.3.3 A is a cuesta dome (1) (1 x 1) (1)
- 2.3.4 Magma cools down, shrinks and sags (2)  
 This causes the rock strata to become tilted (2)  
 Erosion and weathering results in a circular cuesta landscape (2)  
 Dip slope will face inward towards the centre (2)  
 Scarp slope faces outwards (2)  
**[ANY TWO]** (2 x 2) (4)
- 2.3.5 Farming takes place in the cuesta valleys and plains (2)  
 Cuestas is used for outdoor activities (picnics, recreation, hand gliding, hot air ballooning) (2)  
 Dip slopes can be used for forestry (2)  
 Cuesta basin is a good source of water for irrigation (2)  
 Cuestas contains oil and natural gas (2)  
 Soft rock layers form fertile soil for farming (2)  
 Circular valleys between cuestas are used for the development of infrastructure (2)  
**[ANY THREE]** (3 x 2) (6)

- 2.4 2.4.1 (a) E (1)
- (b) H (1) (2 x 1) (2)
- 2.4.2 Knick point (1) (1 x 1) (1)
- 2.4.3 Soil creep (2) (1 x 2) (2)
- 2.4.4 F – The steepest slope element (2)  
Characterised by vertical bare rock (2)  
The angle of the cliff is more than 80° (2)  
**[ANY ONE]**
- G – Characterised by weathered material from the cliff (2)  
The slope remains constant (2)  
Slope angle is approximately 35° (2)  
**[ANY ONE]** (2 x 2) (4)
- 2.4.5 Pediment consist of weathered material ideal for farming (2)  
Gentle slope favours the establishment of settlements (2)  
Gentle gradient allows for construction of recreational grounds/activities (2)  
Gentle gradient promotes easy construction of infrastructure (2)  
**[ANY THREE]** (3 x 2) (6)
- 2.5 2.5.1 Mass movement is the movement of loose material down the slope due to the influence of gravity (2)  
**[CONCEPT]** (1 x 2) (2)
- 2.5.2 Rock falls (1) (1 x 1) (1)
- 2.5.3 Deforestation/ removal of vegetation result in fewer roots to bind the soil (2)  
Road construction/ quarrying/ blasting at the foot of the slopes can upset the balance of slopes (2)  
Building of holiday resorts or houses on steep slopes causes rocks to be unstable (2)  
Removal of minerals in mining activities and dumping of waste material cause unstable mine dumps or land fill sites (2)  
Recreational activities like mountain bike, cycling, scenic walk and skiing make roads unstable (2)  
Incorrect farming methods result in mass movement (2)  
Gradient – rapid movement of material is more on a steeper slope than gentle slope (2)  
**[ANY TWO]** (2 x 2) (4)

- 2.5.4 Drilling bolts into the sides of the hill slope (2)  
Build gabions or small stonewalls of rocks at the base of a slope (2)  
Use of wire mesh to hold rocks in place (2)  
Spraying concrete on the sides of slopes to stabilise rock slope (2)  
Reduce deforestation (2)  
Close roads to ensure the safety of people when the slope becomes unstable (2)  
Drainage and run off channelling structures to remove excess water (2)  
Plant natural vegetation on slopes (2)  
Complete environmental impact assessment (EIA) before any development to see if construction will have any impact on stability of the slope (2)  
Cutting and filling slopes to stabilise them (2)  
Restriction of activities along the slope (2)  
Use early warning systems to detect land movement or instability of the slope (2)

**[ANY FOUR]**

(4 x 2)

(8)

**[60]**

**TOTAL SECTION A: 120**



**SECTION B****QUESTION 3: GEOGRAPHICAL SKILLS AND TECHNIQUES****3.1 MAPWORK SKILLS AND CALCULATIONS**

- 3.1.1 C 25°46'29" S 27°52'40" E (1) (1 x 1) (1)
- 3.1.2 B 5 m (1) (1 x 1) (1)
- 3.1.3 C 14:00–17:00 (1) (1 x 1) (1)
- 3.1.4 6,5 cm (1) x 0,1 = 0,65 km (1)  
Range (0,64 – 0,66 km) (2 x 1) (2)
- 3.1.5 86° (2)  
Range (85°–87°) (1 x 2) (2)
- 3.1.6  $VI = 1\,465\text{ m} - 1\,170,7\text{ m} = 294,3\text{ m}$  (1)  
 $\frac{294,3\text{ m}}{500}$  (1)  
 $= 1 : 1,69$  (1) (3 x 1) (3)

**3.2 MAP INTERPRETATION**

- 3.2.1 (a) Valley (1) (1 x 1) (1)
- (b) Contour lines are forming a v shape pointing up the slope (2)  
There is a river passing through the valley (2)  
**[ANY ONE]** (1 x 2) (2)
- 3.2.2 Holiday resorts (1)  
Yatch club (1)  
Snake park (1)  
Water spout (swimming/ fishing/boat cruises) (1)  
Cable way (1)  
Archaeological sites (1)  
**[ANY THREE]** (3 x 1) (3)
- 3.2.3 Conical hill (1) (1 x 1) (1)
- 3.2.4 Conical hill consist of a distinct conical shape (2)  
The opposite sides are longer (2)  
Conical hill has a rounded top (2)  
**[ANY ONE]** (1 x 2) (2)
- 3.2.5 (a) No (1) (1 x 1) (1)
- (b) There are buildings in between that act as a barrier (1)  
There is vegetation in between the two points that obstruct the view (1)  
**[ANY ONE]** (1 x 2) (2)

**3.3 GEOGRAPHICAL INFORMATION SYSTEMS (GIS)**

- 3.3.1 Data layer is a layer of information based on a specific theme (2)  
(1 x 2) (2)
- 3.3.2 Topography/ Relief (2)  
Geology (2)  
**[ANY ONE]** (1 x 2) (2)
- 3.3.3 (a) Point (1)  
(b) Line (1)  
(c) Polygon (1) (3 x 1) (3)
- 3.3.4 Spatial data (1) (1 x 1) (1)  
**[30]**

**TOTAL SECTION B: 30**  
**GRAND TOTAL: 150**

