



Education and Sport Development

Department of Education and Sport Development
Departement van Onderwys en Sportontwikkeling
Lefapha la Thuto le Tlhabololo ya Metshameko

NORTH WEST PROVINCE

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

GEOGRAPHY P1

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MARKS: 225

TIME: 3 hours

This question paper consists of 15 pages and 11-page annexure

INSTRUCTIONS AND INFORMATION

1. This question paper consists of FOUR questions.
2. Answer ANY THREE questions of 75 marks each.
3. All diagrams are included in the ANNEXURE.
4. Leave a line between the 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. Number the answers in the centre of the line.
8. Do NOT write in the margins of the ANSWER BOOK.
9. Draw fully labelled diagrams when instructed to do so.
10. Answer in FULL SENTENCES, except when you must state, name, identify or list.
11. Write neatly and legibly.

SECTION A: CLIMATE, WEATHER AND GEOMORPHOLOGY**QUESTION 1**

1.1 Refer to FIGURE 1.1 showing berg winds. 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 (1.1.1. 1.1.7) in the ANSWER BOOK, e.g. 1.1.8 D

1.1.1 Berg wind conditions prevail in South Africa during ò

- A late autumn/winter.
- B spring.
- C autumn.
- D late spring.

1.1.2. The interaction between the Kalahari high and ò gives rise to berg winds.

- A Coastal low
- B warm fronts
- C occluded fronts
- D the cold Benguela current

1.1.3 The air movement associated with the Kalahari high-pressure cell is ò

- A subsiding, diverging and rotating in a clockwise direction.
- B rising, diverging and rotating in an anticlockwise direction.
- C rising, converging and rotating in a clockwise direction.
- D subsiding, diverging and rotating in an anticlockwise direction.

1.1.4 As the air subsides from the plateau and down the escarpment, it heats at the ò

- A Dry Adiabatic lapse rate.
- B Wet Adiabatic lapse rate.
- C Wet and Dry lapse rate.
- D 30°C for every 100m.

1.1.5 Berg winds in Western Cape are associated with ò conditions.

- A dry
- B warm
- C cold
- D hot and dry

1.1.6 The hazard that is associated with berg winds are ò

- A drought.
- B veld fires.
- C floods.
- D storm surges.

1.1.7 The weather system that usually follows a berg wind is a \bar{o}

- A tropical cyclone.
- B occluded front.
- C warm front.
- D cold front.

(7 x 1) (7)

1.2. Choose the correct word(s) from those given in brackets. Write only the word(s) next to the question number (1.2.1. 1.2.8) in the ANSWER BOOK.

1.2.1 The underlying rock type of the radial drainage pattern is (igneous/metamorphic) rock.

1.2.2 (Dendritic/trellis) drainage pattern form on uniform resistant rock.

1.2.3 Rectangular drainage pattern is found in the regions that have undergone (faulting/warping).

1.2.4 A (radial/deranged) drainage pattern resembles the spokes of a wheel.

1.2.5 A (trellis/dendritic) drainage pattern resembles the branches of a tree.

1.2.6 A (trellis/rectangle) drainage pattern has parallel streams with short tributaries meeting at right angles.

1.2.7 A (radial/deranged) drainage pattern is found in the regions that have been affected by glaciers.

1.2.8 In a (rectangular/trellis) drainage pattern tributaries have frequent 90° bends and join other streams at right angles. (8 x 1) (8)

1.3. Study FIGURE 1.3 a synoptic weather map.

1.3.1 The synoptic weather map represents summer conditions. Give ONE piece of evidence from the synoptic weather map to support the above statement. (1 x 1) (1)

1.3.2 With reference to weather phenomenon **B**:

a) State what weather phenomenon **B** (line) represents on the synoptic weather map. (1 x 2) (2)

b) Explain how the weather phenomenon **B** on the synoptic weather map is formed. (2 x 2) (4)

1.3.3 In a paragraph of approximately EIGHT lines, discuss the impact of weather phenomenon **B** on farmers in South Africa. (4 x 2) (8)

- 1.4. Study FIGURE 1.4 illustrating an urban heat island
- 1.4.1 Define the concept *urban heat island*. (1 x 1) (1)
- 1.4.2 Calculate the temperature range between the city centre and the farmland. (1 x 2) (2)
- 1.4.3 Explain TWO reasons from the illustration why this temperature difference occurs. (2 x 2) (4)
- 1.4.4 Propose TWO sustainable strategies that the future city developers should start including in their plans to reduce the increasing temperatures in the city. (2 x 2) (4)
- 1.4.5 Discuss the effects of the feature labelled **A** on human beings. (2 x 2) (4)
- 1.5. Study FIGURE 1.5, a diagram showing how the cross profile of a river channel changes downstream.
- 1.5.1 Define the term *cross profile*. (1 x 1) (1)
- 1.5.2 Name the dimensions shown by a cross profile of a river profile. (2 x 1) (2)
- 1.5.3 Explain TWO characteristics of an ungraded stream. (2 x 2) (4)
- 1.5.4 In a paragraph of approximately EIGHT lines, discuss why the channel characteristics of a cross profile changes downstream. (4 x 2) (8)
- 1.6. Study FIGURE 1.6 illustrating a meandering river.
- 1.6.1 Define the concept *meander*. (1 x 1) (1)
- 1.6.2 Explain the formation of the feature labelled **C**. (2 x 1) (2)
- 1.6.3 Discuss the importance of feature **C**. (2 x 2) (4)
- 1.6.4 Explain what happens to feature **C** when it is cut off from the main river. (2 x 2) (4)
- 1.6.5 Account for the difference in the speed of river flow at feature **A** and **B** on figure 1.6. (2 x 2) (4)

[75]

QUESTION 2

- 2.1. Refer to FIGURE 2.1 showing factors that influence the weather and climate of South Africa. Complete the following sentences by choosing the correct word from the options below. Write down the word next to the question number (2.1.1. 2.1.8) in the ANSWER BOOK.

subtropical low; warm Mozambique; cold Benguela; South Indian high; Subtropical high; inversion layer; coastal low; South Atlantic high; stable; cold; unstable

- 2.1.1 The \bar{o} current keeps the east coast of South Africa warmer than the west coast.
- 2.1.2 The \bar{o} pressure cell causes advection fog along the west coast of South Africa.
- 2.1.3 The presence of the Kalahari high pressure cell in the interior of South Africa during winter leads to \bar{o} conditions.
- 2.1.4 The \bar{o} prevent moisture from reaching the interior in winter.
- 2.1.5 The \bar{o} current contributes to the dry arid conditions on the west coast of South Africa.
- 2.1.6 The \bar{o} fronts are responsible for the winter rainfall at the Cape.
- 2.1.7 \bar{o} is the weakest high-pressure cell influencing South African weather.
- 2.1.8 South Africa's climate is dominated by the \bar{o} pressure belt.

(8 x 1) (8)

- 2.2. Choose the description from COLUMN A that matches the concepts in COLUMN B. Write ONLY the letter (A. H) next to the question numbers (2.2.1. 2.2.7) in the ANSWER BOOK, for example 2.2.8 I.

COLUMN A	COLUMN B
2.2.1 The area drained by a river system	A antecedent drainage
2.2.2 River in a desert originating in an area of high rainfall	B graded river
2.2.3 Rivers that only flow after a heavy downpour.	C drainage basin
2.2.4 A river that is younger than the underlying rock structure through which it flows	D drainage density
2.2.5 A smooth concave shape	E episodic river
2.2.6 The ratio between the total length of the streams in the drainage basin to the area of the drainage basin	F watershed
2.2.7 The high ground separating one drainage basin from another	G superimposed drainage
	H exotic

(7 x 1) (7)

- 2.3. Read the map and extract indicating a weather warning in FIGURE 2.3.

2.3.1 What is a cold front? (1 x 1) (1)

2.3.2. Why does the cold front affect the weather of South Africa in winter? (1 x 2) (2)

2.3.3 Explain the possible weather changes that Cape Town is going to experience, due to the cold front. (1 x 2) (2)

2.3.4 Discuss what initiated the South African Weather Service to issue this warning? (1 x 2) (2)

2.3.5 Write a paragraph of approximately EIGHT lines discussing the precautionary and management strategies people living along the coastal areas should take to reduce the impact of the cold front. (4 x 2) (8)

- 2.4. Refer to the FIGURE 2.4 showing a katabatic wind.
- 2.4.1 Define the concept *katabatic wind*. (1 x 1) (1)
- 2.4.2 What causes these winds to move in a downslope direction? (1 x 2) (2)
- 2.4.3 Explain the influence of katabatic winds on the location of a settlement. (1 x 2) (2)
- 2.4.4 Discuss how the katabatic wind is responsible for the freezing conditions in the valley. (1 x 2) (2)
- 2.4.5 Explain the formation of radiation fog at the bottom of the valley as indicated in FIGURE 2.4. (2 x 2) (4)
- 2.4.6 Outline TWO major problems the residents living in the valley may face because of the fog. (2 x 2) (4)
- 2.5. Study FIGURE 2.5 illustrating river rejuvenation.
- 2.5.1 What is river *rejuvenation*? (1 x 1) (1)
- 2.5.2 State ONE condition that leads to river rejuvenation. (1 x 1) (1)
- 2.5.3 What evidence indicates that river rejuvenation has taken place? (1 x 1) (1)
- 2.5.4 Describe the change that a river undergoes after rejuvenation. (1 x 2) (2)
- 2.5.5 With reference to river terraces:
- a) Explain how does rejuvenation form a river terrace? (2 x 2) (4)
- b) Explain the importance of terraces. (1 x 2) (2)
- 2.5.6 Discuss why the rejuvenated landscape is not suitable for economic activities? (2 x 2) (4)
- 2.6. Refer to FIGURE 2.6 showing river capture.
- 2.6.1 Define the term *river capture*? (1 x 1) (1)
- 2.6.2 Give ONE possible reason from FIGURE 2.6 why river capture has occurred in this area. (1 x 2) (2)
- 2.6.3 Explain how the captor stream will encourage more farming to take place on the river banks. (2 x 2) (4)
- 2.6.4 In a paragraph of approximately EIGHT lines discuss the impact of river capture on a settlement along the misfit river. (4 x 2) (8)

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**SECTION B: RURAL AND URBAN SETTLEMENTS AND SOUTH AFRICAN
ECONOMIC GEOGRAPHY****QUESTION 3**

3.1. 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 number (3.1.1. 3.1.8) in the ANSWER BOOK, for example 3.1.9 A.

3.1.1 The site of a settlement may be affected by ò

- A drainage.
- B function.
- C situation.
- D population size.

3.1.2 Settlements may be classified according to ò

- A building density.
- B size and complexity.
- C distance.
- D profile.

3.1.3 Rural areas are characterised by ò economic activities.

- A secondary
- B tertiary
- C quaternary
- D primary

3.1.4 A term that describes the movement of industries away from the centre is called ò

- A nationalisation.
- B agglomeration.
- D centralisation.
- D decentralisation.

3.1.5 A small rural nucleated settlement is called a/an ò

- A hamlet.
- B isolated farmstead.
- C town.
- D conurbation.

3.1.6 Settlements may be ranked according to ò

- A number of inhabitants.
- B number of functions.
- C building density.
- D pattern.

3.1.7 The Multiple Nuclei Model illustrates

- A the different land uses zones using concentric circles around the CBD.
- B the different land uses using zones wedges around the CBD.
- C the different land uses zones around a nucleus.
- D cities in South Africa is different from other countries due to apartheid.

3.1.8 Rural-Urban fringe is found

- A in the centre of the city.
- B on the outskirts of the city.
- C next to the CBD.
- D next to a residential area. (8 x 1) (8)

3.2. Choose the description from COLUMN A that matches the concepts in COLUMN B. Write ONLY the letter (A. G) next to the question numbers (3.2.1. 3.2.7) in the ANSWER BOOK for example 3.2.8 I.

COLUMN A	COLUMN B
3.2.1 They are located close to the market	A Footloose industry
3.2.2 Selling of goods to other countries	B Heavy industry
3.2.3 They operate through direct marketing e.g. email	C Export
3.2.4 They are located close to the source	D Bridge/Break of bulk Industries
3.2.5 Change from one mode of transport to another mode of transport	E Motor industries
3.2.6 Large quantities of raw materials are used, and pollution is generated	F Light industries
3.2.7 Handles small amount of materials and does not produce much pollution	G Market Orientated Industries
	H Raw material Orientated Industries

(7 x 1) (7)

3.3. Refer to the FIGURE 3.3 an article on rural development and land reform.

- 3.3.1 Define the concept of *land reform*. (1 x 1) (1)
- 3.3.2 Explain how land reform will resolve any one the three issues mentioned in the article. (1 x 2) (2)
- 3.3.3 Discuss why land reform is considered necessary in rural areas? (2 x 2) (4)
- 3.3.4 Explain TWO factors that benefitted land reform in the Cradock region. (2 x 2) (4)

- 3.3.5 Account for a slow land reform processes in South Africa. (1 x 2) (2)
- 3.4. Study FIGURE 3.4 showing the CBD and its characteristics.
- 3.4.1 Name the street pattern that dominates this CBD. (1 x 1) (1)
- 3.4.2 Explain TWO disadvantages of the street pattern mentioned in QUESTION 3.4.1. (2 x 2) (4)
- 3.4.3 Explain TWO characteristics of the buildings in FIGURE 3.4. (2 x 1) (2)
- 3.4.4 Congestion in cities is a major problem. Suggest ONE way in which cities can reduce traffic congestion? (1 x 2) (2)
- 3.4.5 Urban renewal is a focus of many cities around the world. In a paragraph of approximately EIGHT lines discuss how urban renewal is taking place in major cities like Johannesburg. (4 x 2) (8)
- 3.5. Study FIGURE 3.5 indicating the informal economic sector.
- 3.5.1 What is the *informal economic sector*? (1 x 1) (1)
- 3.5.3 What evidence indicates that informal trading is taking place in FIGURE 3.5? (1 x 2) (2)
- 3.5.3 Explain why informal sector employment is dominated by women rather than men. (2 x 2) (4)
- 3.5.4. Growth in the informal sector employment tends to be influenced by several negative factors. In a paragraph of approximately EIGHT lines discuss the factors that influence the informal sector employment negatively. (4 x 2) (8)
- 3.6. Study FIGURE 3.6 showing the Platinum Spatial Development Initiative.
- 3.6.1 Quote the name of the existing transport route which links Maputo with Walvis Bay. (1 x 1) (1)
- 3.6.2 Explain how the transport route quoted above in QUESTION 3.6.1 favour development in Rustenburg area? (1 x 2) (2)
- 3.6.3 Explain TWO physical factors that favoured the development of the Platinum SDI. (2 x 2) (4)
- 3.6.4 Outline the benefits of developing the Platinum SDI to the local community. (2 x 2) (4)
- 3.6.5 Examine the challenges related to the development of the Platinum SDI. (2 x 2) (4)
- [75]**

QUESTION 4

4.1. Choose an explanation from COLUMN **A** to match the term in COLUMN **B**. Write only the letter (A. H) next to the question number (4.1.1. 4.1.8) in the ANSWER BOOK, for example 4.1.9 J.

COLUMN A	COLUMN B
4.1.1 A town that has grown initially due to only one dominant function such as mining	A. Sphere of influence
4.1.2 When towns expand and merge to form a continuous built-up area	B. Range
4.1.3 Keeping the street front of an old building and modernising or rebuilding the interior	C Threshold population
4.1.4 Is the maximum distance that people will travel to buy goods or services	D Specialised town
4.1.5 A zone surrounding the CBD usually of mixed land-use and where invasion and succession takes place	E Conurbation
4.1.6 Minimum number of customers that each service in a settlement needs in order to make profit.	F Facadism
4.1.7 Area from which a business, service or settlement draws its customers	G Zone of transition
4.1.8 An urban settlement which supplies goods and services to the surrounding rural community.	H Urban blight
	I Central place

(8 x 1) (8)

4.2. Various options are given as possible answers to the following questions. Choose the answer and write only the letter (A. D) next to the question numbers (4.2.1. 4.2.7) in the ANSWER BOOK, e.g. 4.2.8 A.

4.2.1 The example of ð economic activity includes the collection and manipulation of information.

- A quaternary
- B tertiary
- C secondary
- D primary

- 4.2.2 ã is a total volume of goods and services produced in a country in one year?
- A Gross national product
 - B Gross district product
 - C Gross domestic product
 - D Gross provincial product
- 4.2.3 This IDZ is seen as a marine engineering hub.
- A Saldanha Bay
 - B Richards Bay
 - C Walvis Bay
 - D Cape Town
- 4.2.4 The largest aluminium producers and leading manufacturers of heavy machinery is found in ã
- A Cape Town.
 - B. Walvis Bay.
 - C Richards Bay.
 - D Saldahna Bay.
- 4.2.5 Term used to describe the exchange of goods and services between countries.
- A Exports
 - B. Imports
 - C Trade balance
 - D Trade
- 4.2.6 A term that describes goods that are mainly produced for selling to other countries is referred to as ã
- A home market.
 - B import market.
 - C export market.
 - D regional market.
- 4.2.7 The processing of raw materials to increase their value is known as ã
- A primary activity.
 - B secondary activities.
 - C tertiary activities.
 - D quaternary activities.
- (7 x 1) (7)

- 4.3 Refer to FIGURE 4.3 showing rural informal settlements.
- 4.3.1 With reference to settlement **B**:
- a) Identify settlement pattern at **B**. (1 x 1) (1)
 - b) Account for this pattern. (2 x 2) (4)
 - c) Provide ONE reason for your answer in QUESTION 4.3.1(b). (1 x 2) (2)
- 4.3.2 With reference to settlement **A**.
- (a) Discuss ONE disadvantage of staying at settlement **A**. (1 x 2) (2)
- 4.3.3 Explain a factor that has influenced the situation of settlement **B**. (1 x 2) (2)
- 4.3.4 Explain the factors that have influenced the choice of site **C**. (2 x 2) (4)
- 4.4. Refer to FIGURE 4.4 urbanisation in South Africa from 2007 to 2017.
- 4.4.1 Define the concept *urbanisation rate*. (1 x 1) (1)
- 4.4.2 In 2017 urbanisation rate was standing at 65.85% in South Africa. Provide possible reason for this. (1 x 2) (2)
- 4.4.3 Explain how urban planners must be creative to solve the issues created by urbanisation such as housing shortages in South African cities. (2 x 2) (4)
- 4.4.4 In a paragraph of approximately EIGHT lines discuss some sustainable ways to slow down urbanisation. (4 x 2) (8)
- 4.5. Refer to FIGURE 4.5 showing a map of the main industrial areas in South Africa.
- 4.5.1 Name the industrial area labelled **C**. (1 x 1) (1)
- 4.5.2 Briefly discuss any THREE factors that have limited industrial development in area **C**. (3 x 2) (6)
- 4.5.3 Explain any TWO natural factors that promoted industrial development in region **C**. (2 x 2) (4)
- 4.5.4 How does industrial growth support the development of South Africa's economy? (2 x 2) (4)

- 4.6 Study FIGURE 4.6 an article on South Africa's mining landscape.
- 4.6.1 Give evidence from the article that 2017 has been a tough year for the mining sector. (1 x 1) (1)
- 4.6.2 What turnaround strategy mentioned in the article has created a recovery in some mines? (1 x 2) (2)
- 4.6.3 Explain the negative impact that labour plays in the mining industry in South Africa. (2 x 2) (4)
- 4.6.4 In a paragraph of approximately EIGHT lines discuss how retrenchment in the mining industry will affect the economy of South Africa. (4 x 2) (8)

[75]

TOTAL: 225