



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

SENIOR CERTIFICATE EXAMINATIONS

GEOGRAPHY P1

2018

MARKS: 225

TIME: 3 hours

This question paper consists of 14 pages and an 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 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 where you have to state, name, identify or list.
11. Units of measurement MUST be indicated in your final answers, e.g. 1 020 hPa, 14 °C and 45 m.
12. Write neatly and legibly.

SECTION A: CLIMATE, WEATHER AND GEOMORPHOLOGY

Answer at least ONE question in this section. If you answer ONE question in SECTION A, you must answer TWO questions in SECTION B.

QUESTION 1

- 1.1 Refer to FIGURE 1.1 showing stages in the development of a mid-latitude cyclone.
- 1.1.1 Name the front at 60° S, in diagram **X**, where mid-latitude cyclones develop.
- 1.1.2 Name the stage of development of the mid-latitude cyclone at **X**.
- 1.1.3 Give the lowest air pressure recorded in stage **Y**.
- 1.1.4 Which mid-latitude cyclone, **Y** or **Z**, is older?
- 1.1.5 Name the stage of development of the mid-latitude cyclone at **Z**.
- 1.1.6 What evidence suggests that the illustrated mid-latitude cyclone is in the Southern Hemisphere?
- 1.1.7 What is the term used to describe mid-latitude cyclones that are linked to one another? (7 x 1) (7)
- 1.2 Choose the correct word from those given in brackets which will make the sentence TRUE. Write down only the word next to the question numbers (1.2.1 to 1.2.8).
- 1.2.1 Rivers that flow all year round are (permanent/periodic) rivers.
- 1.2.2 (Exotic/Periodic) rivers flow during the rainy season only.
- 1.2.3 Rivers that only flow after heavy rainfall are known as (episodic/exotic) rivers.
- 1.2.4 The majority of rivers in South Africa are (periodic/permanent).
- 1.2.5 In (permanent/episodic) rivers the river bed is always below the water table.
- 1.2.6 The water table is always below the river bed in (exotic/episodic) rivers.
- 1.2.7 (Periodic/Exotic) rivers flow all year round because they are fed by tributaries in high rainfall areas.
- 1.2.8 (Permanent/Periodic) rivers are characteristic of interchanging seasons of high and low rainfall. (8 x 1) (8)

- 1.3 FIGURE 1.3 is a diagram showing the influence of the plateau on South Africa's climate.
- 1.3.1 Does sketch **A** or sketch **B** indicate a winter condition? (1 x 1) (1)
- 1.3.2 Give evidence from the sketch to support your answer to QUESTION 1.3.1. (1 x 1) (1)
- 1.3.3 How does the inversion layer form in sketch **A**? (1 x 2) (2)
- 1.3.4 Account for the change in the position of the height of the inversion layer in sketch **B**. (2 x 2) (4)
- 1.3.5 Write a paragraph of approximately EIGHT lines explaining how the changing position of the height of the inversion layer over the plateau influences the climate in the interior of South Africa during summer and winter. (4 x 2) (8)
- 1.4 Study FIGURE 1.4 which is based on valley climates.
- 1.4.1 Why was the site of Pietermaritzburg a poor choice for the development of a city? (1 x 1) (1)
- 1.4.2 Give evidence from the article why pollution levels are much higher in winter. (2 x 1) (2)
- 1.4.3 Refer to the 'brown haze' (mixture of fog and pollutants) and answer the questions that follow.
- (a) Name the local wind that causes the 'brown haze' to disappear after 11:00. (1 x 1) (1)
- (b) Give ONE characteristic of the local wind, named in QUESTION 1.4.3(a), which assists with the dispersal (removal) of the 'brown haze'. (1 x 2) (2)
- (c) Draw a labelled sketch to illustrate the development of the local wind that causes the 'brown haze' to disappear. The sketch must show the wind direction and ONE descriptive label. (2 x 2) (4)
- 1.4.4 Why is the 'brown haze' a safety hazard for motor vehicle users? (2 x 2) (4)

- 1.5 Study FIGURE 1.5 which shows two types of drainage patterns (**A** and **B**).
- 1.5.1 Name the drainage patterns labelled **A** and **B**. (2 x 1) (2)
- 1.5.2 Name the underlying rock structure that gives rise to drainage patterns **A** and **B**. (2 x 1) (2)
- 1.5.3 State ONE of the following:
- (a) Similarity between drainage patterns **A** and **B** (1 x 2) (2)
- (b) Difference between drainage patterns **A** and **B** (1 x 2) (2)
- 1.5.4 Why are the tributaries in drainage pattern **A** short in comparison to the length of the main river? (1 x 2) (2)
- 1.5.5 Account for the main streams in drainage pattern **B** having 90° bends. (2 x 2) (4)
- 1.6 Study FIGURE 1.6 which is an aerial photograph of a delta.
- 1.6.1 What is a *delta*? (1 x 1) (1)
- 1.6.2 Give TWO pieces of evidence from the photograph to support the statement that a delta is shown. (2 x 1) (2)
- 1.6.3 Name the feature labelled **A**. (1 x 1) (1)
- 1.6.4 Briefly describe the formation of feature **A**. (1 x 2) (2)
- 1.6.5 Why are some coastlines not suitable for the development of deltas? (1 x 2) (2)
- 1.6.6 Write a paragraph of approximately EIGHT lines and explain why deltas are ideal for farming. (4 x 2) (8)
- [75]**

QUESTION 2

- 2.1 Refer to FIGURE 2.1 which indicate pressure cells and match EACH of the descriptions below with one of the pressure cells, **A** or **B**.
- 2.1.1 Pressure cell that gives rise to unstable weather conditions
 - 2.1.2 Air movement is anticlockwise in the Southern Hemisphere
 - 2.1.3 Associated with cold, subsiding air
 - 2.1.4 Surface air converges into this pressure cell
 - 2.1.5 The lowest pressure is found in the centre of the pressure cell
 - 2.1.6 Upper air converges into this pressure cell
 - 2.1.7 Contributes to the dry conditions over the western half of South Africa
 - 2.1.8 Draws moisture over South Africa in summer (8 x 1) (8)
- 2.2 Choose a term from COLUMN B that matches the geomorphologic description in COLUMN A. Write only the letter (A–H) next to the question numbers (2.2.1 to 2.2.8) in the ANSWER BOOK, e.g. 2.2.9 J.

COLUMN A		COLUMN B	
2.2.1	Water flowing downslope over the land	A	longitudinal profile
2.2.2	Water found below the earth's surface	B	first-order streams
2.2.3	The point along the course of a river where two tributaries join	C	cross profile
2.2.4	Total length of streams in a drainage basin, divided by the total area (km ²) of the same drainage basin	D	laminar flow
		E	groundwater
2.2.5	Tributaries that do not have any streams flowing into them	F	surface run-off
		G	drainage density
2.2.6	River flow is very smooth so that very little vertical mixing of water occurs	H	confluence
2.2.7	A view of the river that shows the length of the river from source to mouth		

(7 x 1) (7)

- 2.3 Study FIGURE 2.3, a media report, with the title 'Is South Africa due for a tropical cyclone?'
- 2.3.1 Which coastline of South Africa is affected by tropical cyclones? (1 x 1) (1)
- 2.3.2 What are the 'current conditions' referred to in the extract that will result in a low pressure forming in the central Mozambique Channel? (2 x 1) (2)
- 2.3.3 Describe TWO reasons why people in certain parts of South Africa have been warned to be careful. (2 x 2) (4)
- 2.3.4 Write a paragraph of approximately EIGHT lines explaining why South Africa does not usually experience the expected full impact of tropical cyclones? (4 x 2) (8)
- 2.4 FIGURE 2.4 shows a coastal low pressure.
- 2.4.1 What is a *coastal low pressure*? (1 x 1) (1)
- 2.4.2 Describe the path that the coastal low pressure follows. (2 x 1) (2)
- 2.4.3 Why is the air ahead of the coastal low (**B**) drier than the air behind the coastal low (**A**)? (2 x 2) (4)
- 2.4.4 Explain why different types of precipitation are expected along the west and east coast as the coastal low passes by. (2 x 2) (4)
- 2.4.5 Why are these low pressure systems usually associated with high temperatures along the coast in winter? (2 x 2) (4)
- 2.5 Study FIGURE 2.5, photograph that shows the course of a river.
- 2.5.1 Which course of the river is represented in FIGURE 2.5? (1 x 1) (1)
- 2.5.2 Draw a labelled cross-section showing the difference in the shapes of the slopes associated with river banks **A** and **B**. (3 x 1) (3)
- 2.5.3 Answer the following questions with reference to river bank **A**.
- (a) Name the slope associated with river bank **A**. (1 x 1) (1)
- (b) Explain the steepness of the slope along river bank **A**. (1 x 2) (2)
- 2.5.4 Give reasons for the sand deposits along river bank **B**. (2 x 2) (4)
- 2.5.5 Explain why a canoeist (someone who rows a small boat) would prefer to row along river bank **A** than river bank **B**. (2 x 2) (4)

- 2.6 FIGURE 2.6 is a case study from the *Mail & Guardian*, about the human impact on the Vaal Dam.
- 2.6.1 How much water does the Vaal Dam hold? (1 x 1) (1)
- 2.6.2 Excluding Gauteng, name TWO other provinces dependent on water from the Vaal Dam, as shown on the map. (2 x 1) (2)
- 2.6.3 From which neighbouring country does South Africa import fresh water? (1 x 1) (1)
- 2.6.4 Why has it become necessary to treat the above-mentioned water? (1 x 1) (1)
- 2.6.5 Briefly explain the consequences of unsafe levels of bacteria, like *E. coli*, for people that drink the river water. (1 x 2) (2)
- 2.6.6 Write a paragraph of approximately EIGHT lines suggesting sustainable strategies that the government should implement (put in place) to solve the problem of water pollution in the Vaal Dam. (4 x 2) (8)
- [75]**

SECTION B: RURAL AND URBAN SETTLEMENTS AND SOUTH AFRICAN ECONOMIC GEOGRAPHY

Answer at least ONE question in this section. If you answer ONE question in SECTION B, you must answer TWO questions in SECTION A.

QUESTION 3

3.1 Choose a term in COLUMN B that matches the description in COLUMN A. Write only the letter (A–I) next to the question numbers (3.1.1 to 3.1.8) in the ANSWER BOOK, e.g. 3.1.9 J.

COLUMN A		COLUMN B	
3.1.1	Place where goods are transferred from one form of transport to another	A	mining towns
		B	central places
3.1.2	Settlements that develop where a number of routes converge	C	break-of-bulk point
		D	junction towns
3.1.3	Settlements that are located in mountain passes	E	specialised towns
3.1.4	The main function of these settlements is to protect South Africa during times of war	F	resort towns
		G	gap towns
3.1.5	Urban settlements that have one dominant function	H	satellite towns
		I	military towns
3.1.6	Settlements that provide urban goods and services to the surrounding rural population		
3.1.7	The main function of these settlements is to attract holiday-makers		
3.1.8	The extraction of minerals resulted in the formation of these type of settlements		

(8 x 1)

(8)

- 3.2 FIGURE 3.2 is a table of data relating to the economic activities of South Africa.
- 3.2.1 Name the economic sector into which agriculture, forestry and fishing is categorised.
- 3.2.2 Which primary economic activity has shown the lowest growth rate during the period 2010 to 2015?
- 3.2.3 Which economic activity is projected to show the lowest growth rate in 2018?
- 3.2.4 Name the tertiary activity that has the highest growth rate projected for 2018.
- 3.2.5 Into which economic sector would 'general government' be classified?
- 3.2.6 Which year shows the highest total GDP growth of all economic activities?
- 3.2.7 Calculate the GDP growth rate of finance, insurance and business services from 2016 to 2018. (7 x 1) (7)
- 3.3 The increasing rate of rural-urban migration causes many problems for rural and urban settlements.
- 3.3.1 Define the term *rural-urban migration*. (1 x 1) (1)
- 3.3.2 Name TWO environmental push factors responsible for rural-urban migration. (2 x 1) (2)
- 3.3.3 How will rural-urban migration cause the economy of rural areas to stagnate (stop growing)? (2 x 2) (4)
- 3.3.4 Write a paragraph of approximately EIGHT lines and explain why pull factors are a burden on urban municipalities (local governments). (4 x 2) (8)
- 3.4 FIGURE 3.4 shows a simple sketch of urban land-use zones.
- 3.4.1 Identify land-use zone **A**. (1 x 1) (1)
- 3.4.2 What evidence suggests that land-use zone **A** has a high degree of accessibility? (1 x 1) (1)
- 3.4.3 Indicate how the accessibility of land-use zone **A** impacts on the morphology of the buildings. (1 x 1) (1)
- 3.4.4 Draw a labelled urban profile from **B** to **C**. (4 x 1) (4)

- 3.4.5 Answer the following questions with reference to the transition zone.
- (a) Why are the buildings in the transition zone poorly maintained?
(1 x 2) (2)
- (b) Give a reason for the high land values in the transition zone.
(1 x 2) (2)
- 3.4.6 Give TWO reasons for the location of the heavy industrial zone.
(2 x 2) (4)
- 3.5 FIGURE 3.5 gives details about agricultural trade in South Africa.
- 3.5.1 Name an agricultural product that is exported in an unprocessed form from South Africa.
(1 x 1) (1)
- 3.5.2 State the difference between an *unprocessed* and a *processed* agricultural product.
(2 x 1) (2)
- 3.5.3 What is the disadvantage of exporting unprocessed agricultural goods?
(1 x 2) (2)
- 3.5.4 Give a physical factor that does not favour agriculture as a future development path for South Africa.
(1 x 2) (2)
- 3.5.5 Write a paragraph of approximately EIGHT lines and give reasons for the huge decline in the number of people employed in the agricultural sector and the likely impact thereof on these people.
(4 x 2) (8)
- 3.6 FIGURE 3.6 shows the West Coast Spatial Development Initiative.
- 3.6.1 In which province is the West Coast SDI located?
(1 x 1) (1)
- 3.6.2 Name any ONE economic activity in the extract that contributes to the growth of the West Coast economy.
(1 x 1) (1)
- 3.6.3 Give a reason for the growth of the economic activity named in QUESTION 3.6.2.
(1 x 1) (1)
- 3.6.4 Explain why energy (power/electricity) and water security are threats to industrial growth in the West Coast SDI.
(2 x 2) (4)
- 3.6.5 Why are well-developed transport links important to support the growth of the West Coast SDI?
(2 x 2) (4)
- 3.6.6 How will the West Coast SDI contribute to the economic growth of in this area?
(2 x 2) (4)
- [75]

QUESTION 4

- 4.1 Refer to FIGURE 4.1 on rural settlements. Match EACH of the descriptions below with ONE of diagrams **A**, **B** or **C**. You may choose the same settlement more than once. Write only the letter (A–C) next to the question numbers (4.1.1 to 4.1.7) in the ANSWER BOOK, e.g. 4.1.8 A.
- 4.1.1 Farm houses are found in a linear shape.
- 4.1.2 Farm houses are far apart or scattered.
- 4.1.3 Less safe and secure in this type of settlement.
- 4.1.4 This shape is influenced by a single road.
- 4.1.5 Settlement pattern associated with large commercial farms.
- 4.1.6 The shape of the settlement is stellar.
- 4.1.7 Individual farmlands tend to be elongated (long and narrow). (7 x 1) (7)
- 4.2 Choose the correct word from those given in brackets which will make the sentence TRUE. Write down only the word next to the question numbers (4.2.1 to 4.2.8).
- 4.2.1 Industries that produce perishable goods are mainly (market/raw material) orientated.
- 4.2.2 Food processing industries, like bakeries, are generally (heavy/light) industries.
- 4.2.3 Industries that are located between the source of the raw materials and the customer are called (bridge/footloose) industries.
- 4.2.4 (Ubiquitous/Bridge) industries can locate in any geographic area.
- 4.2.5 (Heavy/Light) industry works with large quantities of raw materials and large-scale machinery.
- 4.2.6 An industry that is located close to where its customers live is known as a (raw material/market) industry.
- 4.2.7 A (footloose/ubiquitous) industry can be located near either the market or the source of the raw material.
- 4.2.8 (Heavy/Light) industries are usually located close to the rural-urban fringe. (8 x 1) (8)

- 4.3 FIGURE 4.3 is an extract on informal settlements.
- 4.3.1 What percentage of residents in South African cities live in shacks?
(1 x 1) (1)
- 4.3.2 Give a reason for the dense clustering of shacks in informal settlements.
(1 x 2) (2)
- 4.3.3 Outline TWO ways in which shack dwellers often show their growing discontent (unhappiness) in South Africa.
(2 x 2) (4)
- 4.3.4 Write a paragraph of approximately EIGHT lines and suggest why people that live in informal settlements find it difficult to improve their standard of living.
(4 x 2) (8)
- 4.4 Refer to FIGURE 4.4, an extract on environmental injustice.
- 4.4.1 What is an *environmental injustice*?
(1 x 1) (1)
- 4.4.2 Name the environmental injustice caused by the coal-powered power station.
(1 x 1) (1)
- 4.4.3 Why are the poor mainly affected by the environmental injustice named in QUESTION 4.4.2?
(1 x 1) (1)
- 4.4.4 Discuss TWO negative effects of the environmental injustice mentioned in QUESTION 4.4.2 on the community.
(2 x 2) (4)
- 4.4.5 Suggest TWO measures that can be put in place to protect this community from the environmental injustice named in QUESTION 4.4.2.
(2 x 2) (4)
- 4.4.6 Discuss the negative impact of the location of the Medupi Power Station on the surrounding farming community.
(2 x 2) (4)

- 4.5 Study FIGURE 4.5 which shows manufacturing activities in South Africa.
- 4.5.1 Does the bar graph show a positive or a negative trend for manufacturing in 2017? (1 x 1) (1)
- 4.5.2 Which sector of the manufacturing industry improved in 2017? (1 x 1) (1)
- 4.5.3 Identify the manufacturing activity that had the least growth in 2017. (1 x 1) (1)
- 4.5.4 Give ONE possible reason for the lack of growth of the manufacturing activity identified in QUESTION 4.5.3. (1 x 2) (2)
- 4.5.5 State ONE way in which labour contributes to the negative growth of manufacturing activities in South Africa. (1 x 2) (2)
- 4.5.6 Why is it important to strengthen the position of manufacturing activities in South Africa? (2 x 2) (4)
- 4.5.7 State TWO measures that can be put in place to improve manufacturing activities in the future. (2 x 2) (4)
- 4.6 FIGURE 4.6 is based on informal trading.
- 4.6.1 Define the term *informal trading*. (1 x 1) (1)
- 4.6.2 What is the total worth of the South African food market? (1 x 1) (1)
- 4.6.3 What percentage of the figure stated in QUESTION 4.6.2 is accounted for by the formal trade market? (1 x 1) (1)
- 4.6.4 Give TWO reasons for the high turnover (amount of goods sold) that spaza outlets in townships experience. (2 x 2) (4)
- 4.6.5 Write a paragraph of approximately EIGHT lines and explain why 85% of informal traders are foreigners. (4 x 2) (8)
- GRAND TOTAL: 225**
- [75]**