



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

SENIOR CERTIFICATE EXAMINATION

GEOGRAPHY P1

2015

MARKS: 225

TIME: 3 hours

This question paper consists of 14 pages and an annexure of 10 pages.

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. Number the answers in the CENTRE of the line.
7. Do NOT write in the margins of the ANSWER BOOK.
8. Illustrate your answers with labelled diagrams, where possible.
9. 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 a stage in the development of a mid-latitude cyclone. Choose the correct word(s) from those given in brackets. Write only the word(s) next to the question number (1.1.1–1.1.7) in the ANSWER BOOK.
- 1.1.1 A mid-latitude cyclone is also known as a (coastal low pressure/extratropical cyclone).
- 1.1.2 The mid-latitude cyclone in FIGURE 1.1 develops in the (Southern/Northern) Hemisphere.
- 1.1.3 A mid-latitude cyclone is a (high/low)-pressure system.
- 1.1.4 The stage of development shown in FIGURE 1.1 is the (wave/mature) stage.
- 1.1.5 A mid-latitude cyclone moves in a/an (easterly/westerly) direction.
- 1.1.6 A mid-latitude cyclone has a greater influence in South Africa in (summer/winter).
- 1.1.7 Line **A** is the (40°/60°) latitude. (7 x 1) (7)

1.2 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 (1.2.1–1.2.8) in the ANSWER BOOK, for example 1.2.9 J.

COLUMN A		COLUMN B	
1.2.1	The lengthening of the stream at its source due to the erosion of the watershed	A	water table
		B	dendritic
1.2.2	River in a humid climate where the rainfall exceeds the evaporation rate	C	drainage pattern
		D	headward erosion
1.2.3	A section of a river drawn across the valley at right angles to the river	E	cross-profile
1.2.4	The drainage pattern that is formed by folded mountains	F	trellis
		G	episodic river
1.2.5	Occurs when the position of a watershed changes due to a more energetic stream that flows parallel to a less energetic stream	H	abstraction
		I	permanent river
1.2.6	A drainage pattern associated with a uniform underlying rock structure		
1.2.7	The upper surface of the zone of saturation in the underlying rock structure		
1.2.8	The arrangement of streams and rivers in a drainage basin		

(8 x 1) (8)

1.3 Study the synoptic weather map in FIGURE 1.3 to answer the questions below.

- 1.3.1 Identify high-pressure cell **A**. (1 x 1) (1)
- 1.3.2 Identify front **B**. (1 x 1) (1)
- 1.3.3 Give the air pressure at **A**. (1 x 1) (1)
- 1.3.4 What evidence in area **C** shows that strong winds are experienced? (1 x 2) (2)
- 1.3.5 Give a reason for the cloud cover to the east of the heat low pressure. (1 x 2) (2)
- 1.3.6 Besides the date, what evidence suggests that this is a summer synoptic weather map? (1 x 2) (2)
- 1.3.7 With reference to the South Indian (Mauritius) High Pressure situated east of Durban, explain the weather conditions experienced at Durban. (3 x 2) (6)

- 1.4 FIGURE 1.4 shows the formation of a travelling disturbance known as a line thunderstorm.
- 1.4.1 Name the season during which line thunderstorms occur. (1 x 1) (1)
- 1.4.2 Name the TWO high-pressure systems responsible for the formation of line thunderstorms. (2 x 1) (2)
- 1.4.3 Name TWO weather conditions associated with line thunderstorms. (2 x 1) (2)
- 1.4.4 Give a reason for the shifting of the Kalahari High-Pressure Cell during a line thunderstorm. (1 x 2) (2)
- 1.4.5 In a paragraph of approximately EIGHT lines, evaluate the impact of line thunderstorms on farmers in the interior of South Africa. (4 x 2) (8)
- 1.5 Study FIGURE 1.5 which shows superimposed drainage (**A**) and antecedent drainage (**B**).
- 1.5.1 Distinguish between *superimposed drainage* and *antecedent drainage*. (2 x 1) (2)
- 1.5.2 Give ONE reason why superimposed drainage does not change its course. (1 x 2) (2)
- 1.5.3 Name ONE unique feature associated with the flow patterns of superimposed and antecedent drainage. (1 x 2) (2)
- 1.5.4 Identify the tectonic force associated with the uplift of the surface evident in diagram **B**. (1 x 2) (2)
- 1.5.5 Give the relationship between the rate of downcutting and tectonic uplift in antecedent drainage. (1 x 2) (2)
- 1.5.6 Explain why the illustrated landscapes are not suitable for human habitation. (2 x 2) (4)
- 1.6 Refer to FIGURE 1.6 showing a simplified sketch of river capture near the Pungwe Gorge in Mpumalanga.
- 1.6.1 Match the following features of river capture to letters **A**, **B**, **C** or **D**:
- (a) Misfit/Beheaded stream (1 x 1) (1)
- (b) Wind gap (1 x 1) (1)
- (c) Elbow of capture (1 x 1) (1)
- 1.6.2 State ONE characteristic of the misfit/beheaded stream. (1 x 1) (1)
- 1.6.3 Explain how river capture has led to the rejuvenation of the Pungwe River. (2 x 2) (4)
- 1.6.4 In a paragraph of approximately EIGHT lines, describe the negative impacts of river capture on people living along the banks of the Nyakupinga River. (4 x 2) (8)

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QUESTION 2

- 2.1 Indicate whether each of the statements below refers to a HIGH-PRESSURE CELL or a LOW-PRESSURE CELL.
- 2.1.1 The air pressure is increasing outwards.
- 2.1.2 Winds are converging inside the pressure cell.
- 2.1.3 The air circulation is clockwise in the Northern Hemisphere.
- 2.1.4 This pressure cell is also known as an anticyclone.
- 2.1.5 This pressure cell is associated with subsiding air.
- 2.1.6 This pressure cell is associated with a layer of air in which temperature increases with height.
- 2.1.7 Winds diverge out of this pressure cell.
- 2.1.8 This pressure cell is associated with stable weather conditions. (8 x 1) (8)
- 2.2 Refer to FIGURE 2.2 illustrating a river profile of a South African river from source to mouth. Various base levels of erosion are indicated along the river profile.
- 2.2.1 Identify the type of river profile in the diagram.
- 2.2.2 Does the river profile show A GRADED profile or an UNGRADED profile?
- 2.2.3 In which course of the river did the waterfall develop?
- 2.2.4 Will rejuvenation take place UPSTREAM or DOWNSTREAM of the knickpoint?
- 2.2.5 Name the permanent base level of erosion visible in FIGURE 2.2.
- 2.2.6 Name a temporary base level of erosion visible in FIGURE 2.2.
- 2.2.7 Will the waterfall move UPSTREAM or DOWNSTREAM? (7 x 1) (7)
- 2.3 Study FIGURE 2.3 which shows the path of a tropical cyclone in the Mozambique Channel.
- 2.3.1 In which general direction do tropical cyclones move? (1 x 1) (1)
- 2.3.2 The Coriolis Force is almost zero between 0° and 5° south and north of the equator. How will this impact on the point of origin of a tropical cyclone? (1 x 2) (2)

- 2.3.3 Give the duration in days of the tropical cyclone in FIGURE 2.3. (1 x 2) (2)
- 2.3.4 Use the scale provided to determine the approximate distance of the path taken by this cyclone between 20 January and 31 January. (1 x 2) (2)
- 2.3.5 Why do tropical cyclones follow an erratic path? (2 x 2) (4)
- 2.3.6 A ship at **A** was caught in the dangerous semicircle of the tropical cyclone. Predict the consequences for this ship that was caught in the cyclone in terms of the safe delivery its cargo to the Durban harbour. (2 x 2) (4)
- 2.4 FIGURE 2.4 illustrates valley climates.
- 2.4.1 Identify wind **A**. (1 x 1) (1)
- 2.4.2 Explain why this wind occurs at night. (2 x 2) (4)
- 2.4.3 Give ONE reason why the layer of warm air at **B** is situated halfway up the slope. (1 x 2) (2)
- 2.4.4 In a paragraph of approximately EIGHT lines, explain the impact of the layer of warm air at **B** on human activities in the valley. (4 x 2) (8)
- 2.5 Refer to FIGURE 2.5 which shows features of river rejuvenation.
- 2.5.1 Define the term *river rejuvenation*. (1 x 1) (1)
- 2.5.2 Identify the features of rejuvenation in diagrams **A** and **B**. (2 x 1) (2)
- 2.5.3 What does a knickpoint indicate along the course of a rejuvenated river? (1 x 2) (2)
- 2.5.4 State the impact of river rejuvenation on the cross-profile of a river. (1 x 2) (2)
- 2.5.5 Explain why a gorge develops where a river is rejuvenated. (2 x 2) (4)
- 2.5.6 Explain why rejuvenated rivers attract tourists. (2 x 2) (4)
- 2.6 FIGURE 2.6 is a photograph showing pollution along a section of the Umgeni River.
- 2.6.1 What evidence suggests that pollution is occurring along this section of the river? (3 x 1) (3)
- 2.6.2 Discuss the impact of polluted water on the livelihood of people living along the banks of the Umgeni River. (2 x 2) (4)
- 2.6.3 Suggest strategies (in approximately EIGHT lines) that can be put in place to reduce pollution along the Umgeni River. (4 x 2) (8)

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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 Refer to FIGURE 3.1. Indicate whether each of the statements below refers to a SETTLEMENT TYPE **A** or SETTLEMENT TYPE **B**.
- 3.1.1 This settlement is a dry-point settlement.
 - 3.1.2 Possible flooding is a hazard to this settlement.
 - 3.1.3 This settlement is situated on high-lying ground.
 - 3.1.4 This settlement has a dispersed pattern.
 - 3.1.5 This settlement is situated on the flood plain.
 - 3.1.6 This settlement has a roughly linear pattern.
 - 3.1.7 This settlement lends itself to large-scale farming.
 - 3.1.8 This settlement is a clustered settlement. (8 x 1) (8)
- 3.2 Read the following statements and choose the appropriate word(s) in brackets which will make the sentence TRUE. Write down only the question number (3.2.1–3.2.7) and the answer.
- 3.2.1 The value of all goods, products or services produced within the boundaries of a country during the period of a year is referred to as the (gross domestic product/gross national product).
 - 3.2.2 Agriculture is a very important supplier of raw materials to the (secondary/tertiary) economic sector.
 - 3.2.3 A planned strategy to move industries away from over-concentrated areas is referred to as (deconcentration/decentralisation).
 - 3.2.4 The careful use of resources to maintain social and economic development for future generations is known as (sustainable development/reconstruction and development).
 - 3.2.5 A spatial location that has been identified to attract industrial development and related economic activity just outside the core centre is referred to as a (break-of-bulk/growth) point.

- 3.2.6 The financial assistance provided by government to lower production costs in the secondary sector is known as (subsidies/tariffs).
- 3.2.7 (Imports/Exports) are goods that are brought into a country. (7 x 1) (7)
- 3.3 Refer to FIGURE 3.3 showing a rural settlement pattern.
- 3.3.1 Identify the rural settlement pattern in FIGURE 3.3. (1 x 1) (1)
- 3.3.2 Give ONE reason for your answer to QUESTION 3.3.1. (1 x 1) (1)
- 3.3.3 Identify the primary economic activity that most people living in this settlement would be involved in. (1 x 1) (1)
- 3.3.4 State TWO possible site factors that influenced people to live in this settlement. (2 x 2) (4)
- 3.3.5 Poor farming practices resulted in lower yields in the illustrated landscape.
- Write a paragraph of approximately EIGHT lines in which you analyse the impact of poor farming practices on the economy and rural depopulation. (4 x 2) (8)
- 3.4 Study FIGURE 3.4 which shows land use in a South African city and then answer the questions.
- 3.4.1 Name land-use zone **A**. (1 x 1) (1)
- 3.4.2 Give TWO reasons for your answer to QUESTION 3.4.1. (2 x 1) (2)
- 3.4.3 Give a suitable term to describe area **B**. (1 x 2) (2)
- 3.4.4 Give TWO characteristics of the land-use zone named in QUESTION 3.4.3. (2 x 2) (4)
- 3.4.5 Why does the land-use zone in area **B** tend to attract illegal immigrants to the city? (2 x 2) (4)
- 3.4.6 Explain the possible high land values in area **B**. (1 x 2) (2)

- 3.5 Read the extract from an article based on food insecurity in FIGURE 3.5.
- 3.5.1 Define the term *food insecurity*. (1 x 1) (1)
- 3.5.2 Name TWO groups of people, who, according to the article, are most vulnerable to food insecurity in rural areas. (2 x 1) (2)
- 3.5.3 Name ONE physical factor that contributes to food insecurity. (1 x 2) (2)
- 3.5.4 Name ONE socio-economic factor that contributes to food insecurity. (1 x 2) (2)
- 3.5.5 Write a paragraph of approximately EIGHT lines in which you suggest measures that could be put in place to ensure that South Africa is food secure. (4 x 2) (8)
- 3.6 Study the map in FIGURE 3.6 showing a core industrial region in South Africa. Answer the questions that follow.
- 3.6.1 Name the industrial area shown in FIGURE 3.6. (1 x 1) (1)
- 3.6.2 State TWO important industrial activities that dominate in this region. (2 x 1) (2)
- 3.6.3 Comment on the type of raw materials available to support the industrial activities in QUESTION 3.6.2. (2 x 2) (4)
- 3.6.4 How does this region address its water shortage problem? (2 x 2) (4)
- 3.6.5 Analyse this region's accessibility to international markets compared to other industrial regions in South Africa. (2 x 2) (4)
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QUESTION 4

4.1 Choose a term from COLUMN B that matches the description in COLUMN A. Write only the letter (A–H) next to the question number (4.1.1–4.1.7) in the ANSWER BOOK, for example 4.1.8 J.

COLUMN A		COLUMN B	
4.1.1	A system of ranking urban areas according to size and functions	A	urban morphology
4.1.2	Movement of people from urban to rural areas	B	urban sprawl
4.1.3	The view of a city from the side	C	rural-urban fringe
4.1.4	Formless expansion of urban areas into the surrounding rural areas	D	urban hierarchy
4.1.5	The ageing, decay and deterioration of buildings in the inner city	E	urban profile
4.1.6	The external shape of an urban area	F	counter-urbanisation
4.1.7	The zone on the outskirts of the city where urban and rural functions are mixed	G	urban blight
		H	rural-urban migration

(7 x 1)

(7)

4.2 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 (4.2.1–4.2.8) in the ANSWER BOOK, for example 4.2.9 A.

4.2.1 High-order functions and service industries are an example of the ... economic sector.

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

4.2.2 The contribution by the agricultural sector to the GDP (gross domestic product) has decreased due to ...

- A the low production costs of field crops.
- B an increased output by secondary and tertiary activities.
- C mechanisation reducing the number of farm labourers.
- D the improvement of climatic conditions.

- 4.2.3 The domestic market where products are manufactured and sold within South Africa:
- A Home market
 - B Import market
 - C International market
 - D Export market
- 4.2.4 An example of a value-added product:
- A Maize
 - B Soya beans
 - C Dried fruit
 - D Sunflower seeds
- 4.2.5 Fluctuating prices of minerals in South Africa is caused by ...
- A foreign exchange rates.
 - B improved infrastructure.
 - C limited mineral reserves available.
 - D poor working conditions.
- 4.2.6 The major manufacturing industry in the South-Western Cape:
- A Iron and steel production
 - B Canning of fish
 - C Motor vehicle assembly
 - D Sugar refining
- 4.2.7 An industry that can be established anywhere is referred to as a/an ... industry.
- A break-of-bulk point
 - B raw material-orientated
 - C bridge
 - D ubiquitous
- 4.2.8 The only industrial region in South Africa that is located inland:
- A South-Western Cape
 - B PWV/Gauteng
 - C Port Elizabeth-Uitenhage
 - D Durban-Pinetown
- (8 x 1) (8)
- 4.3 The threshold population required for a service is determined by the order of the service.
- 4.3.1 Define the term *threshold population*. (1 x 1) (1)
- 4.3.2 State the difference between *range* and *sphere of influence*. (2 x 1) (2)

- 4.3.3 The shopping patterns of people will be determined by the order of the service they require.
- (a) Give an example of a high-order service. (1 x 1) (1)
- (b) Why do you think people would be willing to travel longer distances for the high-order service in QUESTION 4.3.3(a)? (1 x 2) (2)
- (c) Why would a high-order service require a large threshold population? (1 x 2) (2)
- 4.3.4 The development of a regional shopping centre on the outskirts of the city will change the sphere of influence of the city.
- In a paragraph of approximately EIGHT lines, describe this change and explain the possible economic benefits for the city. (4 x 2) (8)
- 4.4 Study FIGURE 4.4 showing global urbanisation trends.
- 4.4.1 Define the term *urbanisation*. (1 x 1) (1)
- 4.4.2 In which year did global urban population numbers overtake global rural population numbers? (1 x 1) (1)
- 4.4.3 Give TWO pull factors for the projected increase in the urban population. (2 x 1) (2)
- 4.4.4 The graph shows that the rural population is decreasing.
- Explain this trend by referring to natural population growth factors. (2 x 2) (4)
- 4.4.5 Discuss the impact of rural-urban migration on the growth of informal settlements in cities. (3 x 2) (6)
- 4.5 Study the table showing seasonal sales of minerals in South Africa in FIGURE 4.5.
- 4.5.1 Which mineral shows the lowest seasonal sale from July to September 2014? (1 x 1) (1)
- 4.5.2 Which mineral shows the lowest seasonal sale from October to December 2014? (1 x 1) (1)
- 4.5.3 More coal was sold from October to December 2014 than from July to September 2014. Give TWO possible reasons for this trend. (2 x 2) (4)

4.5.4	Discuss TWO factors that favour the mining sector in South Africa.	(2 x 2)	(4)
4.5.5	Discuss the importance of the mining sector to economic development of South Africa.	(2 x 2)	(4)
4.6	Study FIGURE 4.6 which shows employment in the formal and informal sectors.		
4.6.1	Describe the trends noticed between 2004 and 2012 in the formal and informal sectors of employment respectively.	(2 x 1)	(2)
4.6.2	Why is the economic contribution of the informal sector not included in the GDP?	(1 x 2)	(2)
4.6.3	Explain how local municipalities can assist informal traders in improving working conditions.	(2 x 2)	(4)
4.6.4	In a paragraph of approximately EIGHT lines, discuss how informal trading influences the formal sector of the South African economy.	(4 x 2)	(8)
			[75]
		GRAND TOTAL:	225