



Province of the  
**EASTERN CAPE**  
EDUCATION

**NATIONAL  
SENIOR CERTIFICATE**

**GRADE 12**

**SEPTEMBER 2014**

**GEOGRAPHY P1**

**MARKS: 225**

**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 four questions.
2. Answer any THREE questions of 75 marks each.
3. All diagrams are included in the ANNEXURE.
4. Number the questions correctly according to the numbering system used in this question paper. Number all your questions in the CENTRE of the line.
5. Leave a line between subsections of questions answered.
6. Start EACH question on a NEW page.
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: PHYSICAL GEOGRAPHY: CLIMATE AND WEATHER AND GEOMORPHOLOGY**

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

**QUESTION 1**

1.1 Various options are given as possible answers to the multiple-choice questions below. Choose the correct answer and write only the letter (A–D) next to the question number (1.1.1–1.1.8) in your ANSWER BOOK.

1.1.1 Air ... in a high pressure cell.

- A rises anticlockwise
- B subsides with a rotating action
- C moves towards the centre
- D rises clockwise

1.1.2 The warm Mozambique current affects the east coast of South Africa's weather by ...

- A causing high temperatures and reducing precipitation.
- B raising temperatures on the plateau.
- C increasing temperature and rainfall.
- D decrease in temperature and increase in rainfall.

1.1.3 The westerly wind belt with frontal depressions moves north in winter because of ...

- A winter temperatures.
- B cold ocean currents.
- C movement of the overhead sun from the tropic of capricorn to the tropic of cancer.
- D movement of the overhead sun from the equator to the tropics.

1.1.4 Cyclogenesis occurs as a result of ...

- A an imbalance in energy between the polar and tropical regions.
- B an organised system of heavy thunderstorms.
- C a decrease in temperature and pressure.
- D a system of tropical cyclones.

1.1.5 A cold front occlusion happens when ...

- A air ahead of the cold front is colder than the air behind the cold front.
- B air ahead of the cold front is slightly warmer than the air behind the cold front.
- C the cold air is left on the ground.
- D the cold air is ahead of the warm front.

- 1.1.6 Tropical cyclones in the northern hemisphere rotate ...
- A towards the equator.
  - B clockwise.
  - C anticlockwise.
  - D towards the tropic of cancer.
- 1.1.7 The ... is the moving air that surrounds the eye of the tropical cyclone.
- A jet stream
  - B vortex
  - C geostrophic wind
  - D occlusion
- 1.1.8 ... is the name given to tropical cyclones in Japan.
- A Cyclones
  - B Hurricanes
  - C Tornadoes
  - D Typhoons

(8 x 1) (8)

1.2 Refer to FIGURE 1.2 which illustrates common drainage patterns in South Africa. Select a label from the sketch that best suits the descriptions below:

- 1.2.1 There is no distinctive pattern that flows to the rivers and lakes
- 1.2.2 Streams flow into a lowland lake or pan
- 1.2.3 Rivers that flow parallel or next to each other with few tributaries
- 1.2.4 Branching tree like pattern where tributaries join at acute angles
- 1.2.5 Streams radiate from a central highland
- 1.2.6 The mainstream flows in the syncline and tributaries join from the anticline
- 1.2.7 Streams have right angle bends along their course

(7 x 1) (7)

- 1.3 Study the synoptic weather map in FIGURE 1.3(a) and answer the following questions.
- 1.3.1 Name the season represented on the synoptic weather map. (1 x 1) (1)
- 1.3.2 What evidence suggests that **A** is a high pressure cell? (1 x 1) (1)
- 1.3.3 With reference to mid-latitude cyclones **D** and **B**:
- (a) Is mid-latitude cyclone **D** or **B** older? (1 x 1) (1)
- (b) Give a reason for your answer to QUESTION 1.3.3(a). (1 x 2) (2)
- 1.3.4 State why cold-frontal systems occur more frequently over South Africa during the colder months of the year. (1 x 2) (2)
- 1.3.5 FIGURE 1.3(b) illustrates the weather changes that have taken place at Cape Town as the cold front moved over. Describe and account for the changes in:
- (a) Temperatures being experienced
- (b) Winds (2 x 2) (4)
- 1.3.6 Evaluate the importance of using synoptic weather maps and satellite imagery as warning weather systems. (2 x 2) (4)
- 1.4 Study the sketches (FIGURE 1.4) which shows the differences between the urban heat island during the day and night, and answer the following questions.
- 1.4.1 Define the term *heat island*. (1 x 1) (1)
- 1.4.2 List TWO possible effects that heat islands have on people. (2 x 1) (2)
- 1.4.3 Give TWO reasons for the difference in the vertical dimensions of the heat island during the day and night. (2 x 1) (2)
- 1.4.4 There are a number of ways to reduce the heat island effect in urban areas. As the heat island effect is reduced, so too will the pollution dome effect. In a paragraph of approximately 8 lines, write down the strategies to be implemented to reduce the heat island effect. (4 x 2) (8)

- 1.5 Refer to FIGURE 1.5, depicting fluvial landforms and answer the following questions.
- 1.5.1 Identify the fluvial landform at **B**. (1 x 1) (1)
- 1.5.2 How is water maintained in the fluvial landform mentioned in QUESTION 1.5.1? (2 x 1) (2)
- 1.5.3 The letter **A** represents the floodplain. Explain the importance of this landform for agricultural activities. (2 x 2) (4)
- 1.5.4 Explain the importance of landform **D** during periods of extensive rainfall. (1 x 2) (2)
- 1.5.5 Draw a cross-section of the river along the line **F–G**. In your cross-section, indicate the slip-off and undercut slope. (3 x 1) (3)
- 1.6 Study the diagram in FIGURE 1.6, depicting the longitudinal profile of a river and answer the questions that follow.
- 1.6.1 Provide a label for the origin of the river labelled **A**. (1 x 1) (1)
- 1.6.2 Does this river have a **CONCAVE** or **MULTI-CONCAVE** profile? (1 x 1) (1)
- 1.6.3 What is the difference between a *longitudinal* and *cross-profile* of a river? (2 x 2) (4)
- 1.6.4 Discuss **ONE** characteristic of a *graded river*. (1 x 2) (2)
- 1.6.5 Account for a graded river having a steep gradient in the upper course and a more gradual gradient in the lower course. (2 x 2) (4)
- 1.6.6 Explain in a paragraph of approximately 8 lines how river rejuvenation could change the fluvial features along the course of a river. (4 x 2) (8)
- [75]**

**QUESTION 2**

2.1 FIGURE 2.1 is a simplistic diagram showing air moving between a high pressure area and a low pressure area. Complete the following sentences by filling in HIGH or LOW. Write down the word next to the question number (2.1.1–2.1.6), for example 2.1.7 high.

2.1.1 Air descends at the centre of a ... pressure.

2.1.2 Clear, cloudless and dry conditions are associated with a ... pressure.

2.1.3 Air circulates in an anti-clockwise direction in a ... pressure.

2.1.4 Isobars decrease towards the centre of the ... pressure cell.

2.1.5 Air converges at the centre of a ... pressure cell.

2.1.6 Winds blow from a (a) ... pressure cell to a (b) ... pressure cell.

(7 x 1) (7)

2.2 Choose the concept from COLUMN B that matches the description in COLUMN A. Write only the letter from COLUMN B (A–K) next to the question number (2.2.1–2.2.7) for example 2.2.9 L.

COLUMN A	COLUMN B
2.2.1 a stream joining a large river	A shale
2.2.2 process where one river captures the waters of another river through headward erosion	B episodic
2.2.3 type of drainage pattern that occurs when the river is older than the landscape	C tributary
2.2.4 a river that flows every year in the rainy season only	D abstraction
2.2.5 the process by which very small particles are carried by the river	E river capture
2.2.6 when the watershed moves in the direction of the less energetic river	F superimposed
2.2.7 river develops a pattern on a surface that has eroded over time	G periodic
2.2.8 the upper level of underground saturated rock	H suspension
	I water table
	J antecedent river
	K abrasion

(8 x 1) (8)

- 2.3 Study the map in FIGURE 2.3 showing the path of HURRICANE KATRINA and answer the following questions.
- 2.3.1 State how many HURRICANES occurred over the Atlantic Ocean by the 25<sup>th</sup> of August. (1 x 1) (1)
- 2.3.2 List TWO important conditions necessary for HURRICANE KATRINA to develop. (2 x 2) (4)
- 2.3.3 Explain the source of energy that drives hurricanes. (1 x 2) (2)
- 2.3.4 Explain why HURRICANE KATRINA will dissipate rapidly when it reaches New Orleans. (2 x 2) (4)
- 2.3.5 Write a report (not more than 8 lines) detailing the social effects that HURRICANE KATRINA would have on the inhabitants of New Orleans. (4 x 2) (8)
- 2.4 Study the diagram depicting temperature inversion in a valley at night in FIGURE 2.4, and answer the following questions.
- 2.4.1 Define the term *temperature inversion*. (1 x 1) (1)
- 2.4.2 Give a reason for temperature inversion occurring in the valley. (1 x 2) (2)
- 2.4.3 Name ONE effect that temperature inversion can have on the weather in a valley. (1 x 2) (2)
- 2.4.4 Describe TWO conditions necessary for the formation of frost on the valley floor in winter. (2 x 1) (2)
- 2.4.5 Suggest why farmers will be selective about the crops they plant on slopes at **A** and **B** respectively. (2 x 2) (4)
- 2.5 Study the sketches in FIGURE 2.5 showing you the nature of river discharge and answer the following questions.
- 2.5.1 Define the term *river discharge*. (1 x 1) (1)
- 2.5.2 Name the stream flow at **A** and **B** respectively. (2 x 1) (2)
- 2.5.3 Give a reason for the type of stream flow occurring in river **B**. (1 x 2) (2)
- 2.5.4 Why will higher flow speeds likely occur at **A**? (1 x 2) (2)
- 2.5.5 Explain the relationship between the velocity of stream **B** and the transport of sediments. (2 x 2) (4)



2.6 FIGURE 2.6 illustrates the main features of a drainage basin. Study the diagram to answer the following questions.

- 2.6.1 Define the term *drainage basin*. (1 x 1) (1)
- 2.6.2 Explain the difference between a watershed and an interfluve. (2 x 1) (2)
- 2.6.3 What major factor influences the type of river that exists? (1 x 2) (2)
- 2.6.4 How will the urban environment affect the rate at which run off occurs? (1 x 2) (2)
- 2.6.5 Give TWO reasons for your answer in QUESTION 2.6.3. (2 x 2) (4)
- 2.6.6 “Due to human activities, the natural balance that exists within a river system has been disturbed and the natural catchment areas have been degraded.”
- Write a detailed report of approximately 8 lines on the negative impact that human activities have on drainage basins. (4 x 2) (8)
- [75]**

**SECTION B: RURAL AND URBAN SETTLEMENTS AND ECONOMIC  
GEOGRAPHY OF SOUTH AFRICA**

**QUESTION 3**

3.1 Give ONE term for each of the descriptions (3.1.1–3.1.7) below.

- 3.1.1 Area that has a mixture of land uses or functions, such as airports, sewerage works and golf courses
- 3.1.2 Wealthy communities that live in fenced housing estates
- 3.1.3 The type of urban settlement that occurs when goods are moved from one form of transportation to another
- 3.1.4 The street pattern where roads intersect at right angles
- 3.1.5 An area within the inner city in which people of a particular cultural or ethnic group live in unattractive conditions
- 3.1.6 This is a reverse trend to urbanisation where people move back to rural areas
- 3.1.7 The uncontrolled process whereby urban areas expand into the surrounding rural areas

(7 x 1) (7)

3.2 Four options are given as possible answers to the following questions. Choose the correct answer and write only the letter (A–D) next to the question number (3.2.1–3.2.8) in your ANSWER BOOK, for example 3.2.9 B.

3.2.1 The provision of transport is a ... economic activity.

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

3.2.2 Market orientated industries ...

- A are located close to raw materials.
- B have a free choice of location.
- C transfer cargo into smaller units of transport.
- D produce goods that need to be manufactured close to the consumer.

- 3.2.3 The most important manufacturing industry in the South Western Cape is ...
- A iron and steel.
  - B oil refinery.
  - C clothing and textile.
  - D assembly of motor vehicles.
- 3.2.4 The Maputo corridor is an example of ...
- A spatial development initiatives.
  - B border industry.
  - C black economic empowerment.
  - D industrial development industry.
- 3.2.5 South Africa's most important crop in terms of production is ...
- A sugar cane.
  - B maize.
  - C wheat.
  - D grapes.
- 3.2.6 Industries which are considered "footloose" ...
- A are fly-by-night operations.
  - B make shoes.
  - C are not affected by transport costs.
  - D require multiple sources of raw materials.
- 3.2.7 Koeberg, South Africa's nuclear power station is ...
- A in Gauteng.
  - B near Johannesburg.
  - C in Mpumalanga.
  - D outside Cape Town.
- 3.2.8 A problem associated with manufacturing in Gauteng is ...
- A the growing strain on water resources.
  - B the lack of infrastructure.
  - C agglomeration.
  - D the large distance from electricity producers.

(8 x 1) (8)

- 3.3 Carefully study the picture in FIGURE 3.3 showing land-use zones in an urban settlement and answer the following questions.
- 3.3.1 Name the urban land-use zones labelled by **A** and **B**. (2 x 1) (2)
- 3.3.2 List TWO functions occurring in land use zone **A**. (2 x 1) (2)
- 3.3.3 Explain why most buildings are tall in land-use zone **A**. (1 x 2) (2)
- 3.3.4 Suggest a reason for the fairly high land prices in land use zone **B**. (1 x 2) (2)
- 3.3.5 Dynamic change in land-use in zone **A** is constant through replacement and regeneration. Discuss any TWO programmes transforming this land-use zone. (2 x 2) (4)
- 3.3.6 Choose TWO strategies that the city council can implement to address the moral and social degeneration that occurs in land-use zone **B**. (2 x 2) (4)
- 3.4 Refer to FIGURE 3.4 which highlights the movement of people from farms to cities to answer the following questions.
- 3.4.1 What is the term that describes the movement of people from farms to cities? (1 x 1) (1)
- 3.4.2 List TWO reasons why people leave farms (push factors). (2 x 1) (2)
- 3.4.3 Explain why young people are mostly affected by the push factors in the rural areas. (2 x 2) (4)
- 3.4.4 Evaluate the economic consequences (approximately 8 lines) for rural areas that result from rural depopulation. (4 x 2) (8)
- 3.5 TABLE 3.5 provides details of South Africa's contribution to the GDP for 2012. Study this table and answer the following questions.
- 3.5.1 Name the economic sector that is the largest contributor to the economy. (1 x 1) (1)
- 3.5.2 What does the term *gross domestic product (GDP)* mean? (1 x 1) (1)
- 3.5.3 Suggest TWO ways in which the GDP can be increased in South Africa. (2 x 1) (2)
- 3.5.4 Account for finance and real estate being so well established in South Africa. (1 x 2) (2)

- 3.5.5 “Agriculture only contributes 2,4% to the primary sector, yet it is still important to the South African economy.”  
Explain why this is the case. (2 x 2) (4)
- 3.5.6 In a paragraph of approximately 8 lines, explain why trade and land ownership favoured agricultural development in South Africa.  
(4 x 2) (8)
- 3.6 Read through the case study ‘Neliswa beats unemployment and widowhood’ in FIGURE 3.6 and answer the following questions.
- 3.6.1 Explain what you understand by the *informal sector*. (1 x 1) (1)
- 3.6.2 Name ONE problem (mentioned in the case study) that people like Neliswa are exposed to when trading. (1 x 2) (2)
- 3.6.3 Discuss any TWO reasons why people like Neliswa are forced into informal sector employment. (2 x 2) (4)
- 3.6.4 Explain TWO ways in which changes can be made to the informal sector to strengthen the South African economy. (2 x 2) (4)
- [75]**

**QUESTION 4**

- 4.1 Choose a term from COLUMN B that matches the description in COLUMN B. Write only word the letter (A–H) next to the question number (4.1.1–4.1.8), for example 4.1.9 I.

COLUMN A		COLUMN B
4.1.1	changing the existing structure of land tenure	A Wet point site
4.1.2	farming to make a profit	B Dry point site
4.1.3	growth of settlements where routes cross a river	C Range
4.1.4	land is owned by the community	D Land reform
4.1.5	a small rural settlement	E Communal tenure
4.1.6	settlements built near a water source	F Bridging point
4.1.7	settlements built away from a water source	G Hamlet
4.1.8	maximum distance that people have to travel to buy goods	H Commercial farming

(8 x 1)

(8)

- 4.2 Select a term from the list below to match the following statements. Write only the correct term next to the question number (4.2.1–4.2.7) in the ANSWER BOOK.

Quaternary activities; Beneficiate; Tertiary sector; GEAR ; Multiplier effect; Agglomeration; Core; Periphery; BEE; Industrial inertia

- 4.2.1 The reluctance of established industries to move
- 4.2.2 A government plan for economic development and the creation of jobs
- 4.2.3 A process in which low grade ores are enriched at a mine.
- 4.2.4 Those parts of the economy concerned with research, gathering information, etc.
- 4.2.5 New economic activity in an area which attracts further economic development and more employment

- 4.2.6 An area of low economic development
- 4.2.7 An area where economic activity is concentrated (7 x 1) (7)
- 4.3 Refer to FIGURE 4.3 which depicts a map showing an area in the southern hemisphere and answer the questions that follow.
- 4.3.1 Differentiate between the terms *site* and *situation* of a settlement. (2 x 1) (2)
- 4.3.2 Describe the settlement pattern at **A** and **B** respectively. (2 x 2) (4)
- 4.3.3 State TWO factors that could have influenced the pattern at **A**. (2 x 2) (4)
- 4.3.4 Explain the climatic factor that could have been responsible for the location of settlement **C**. (1 x 2) (2)
- 4.3.5 Justify why there is no need today for a settlement like **D** to be near a water source. (1 x 2) (2)
- 4.4 Read through the newspaper article titled, 'SHACK DWELLERS DEMAND HOUSES' in FIGURE 4.4, which highlights a land use conflict in South Africa and answer the following questions.
- 4.4.1 Define the term *informal settlement*. (1 x 2) (2)
- 4.4.2 State the main grievance of the shack dwellers towards the municipality. (1 x 1) (1)
- 4.4.3 Describe any TWO problems that shack dwellers generally experience. (2 x 2) (4)
- 4.4.4 Write a paragraph of approximately 8 lines to identify TWO other reasons for land use conflicts, besides a lack of housing and suggest TWO solutions to the housing land use conflict. (4 x 2) (8)

- 4.5 Read through the case study of the Richards Bay Industrial Development Zone in FIGURE 4.5 and answer the following questions.
- 4.5.1 What is an *industrial development zone*? (1 x 1) (1)
- 4.5.2 Why is Richards Bay an ideal location for industries that export goods? (2 x 1) (2)
- 4.5.3 Name ONE other industrial development zone operational in South Africa. (1 x 1) (1)
- 4.5.4 Explain how Spatial Development Initiatives aimed to achieve the principle of decentralisation of economic activities from core areas. (3 x 2) (6)
- 4.5.5 Write a paragraph of approximately 8 lines to evaluate the impact that the development of an IDZ will have on an area. Consider the positive impact of the development. (4 x 2) (8)
- 4.6 Refer to FIGURE 4.6 which highlights the type of industry found in one of the four economic regions that you have studied. Refer to the sketches to answer the questions.
- 4.6.1 Name the core region that is mainly involved in the production of goods shown in FIGURE 4.6. (1 x 1) (1)
- 4.6.2 Account for the location of the petro-chemical and sugar industry in this region. (2 x 2) (4)
- 4.6.3 Discuss TWO advantages that this industrial area enjoys over the PWV industrial region. (2 x 2) (4)
- 4.6.4 Write down any TWO problems hampering economic development in this region. (2 x 2) (4)
- [75]**

**GRAND TOTAL: 225**