



Province of the
EASTERN CAPE
EDUCATION

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

SEPTEMBER 2017

GEOGRAPHY P1

MARKS: 225

TIME: 3 hours



This question paper consists of 16 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. Number the questions correctly according to the numbering system used in this question paper.
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. The mark allocation is as follows: (2 x 1) (2) means that TWO facts are required for ONE mark each.
(2 x 2) (4) means that TWO facts are required for TWO marks each.
10. If words/action verbs like **name, identify, provide, classify**, are used in a question, ONE word answers are acceptable.
If words/action verbs like **discuss, define, explain, comment, evaluate, justify, suggest** and **substantiate** are used in a question, FULL sentences or phrases are required.
All paragraph questions must be answered in FULL sentences.
11. 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 from SECTION B.

QUESTION 1

1.1 FIGURE 1.1 shows synoptic weather features associated with a coastal low. 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, E.g. 1.1.9 C





1.1.1 The localised air flow that influences the temperature of Cape Town is known as ...

- A a bergwind.
- B onshore winds.
- C off shore winds.
- D valley winds.

1.1.2 The air pressure indicated by the isobar at **B** is ... hPa.

- A 1004
- B 1006
- C 1010
- D 1012

1.1.3 Which synoptic weather map symbol would represent the precipitation at Langebaan?

- A 
- B 
- C 
- D 

1.1.4 The season that the synoptic weather map would most likely represent is ...

- A winter.
- B spring.
- C summer.
- D autumn.

1.1.5 Give the wind direction at **C**.

- A North east
- B North west
- C South east
- D South west

1.1.6 The winds in the region of **C** will be ... to/than the winds in the region of **E**.

- A stronger
- B weaker
- C similar
- D equal

1.1.7 The coastal low pressure system at **D**, will migrate in a ... direction along the coast.

- A south west
- B north west
- C south east
- D north east

(7 x 1) (7)

1.2 Refer to FIGURE 1.2 showing drainage basin features. Use the letters in FIGURE 1.2 to assist you to select the correct term/concept to answer the questions below.

1.2.1 The point at **A**, where two rivers/streams meet

1.2.2 The area at **B** that separates tributaries of the same drainage basin

1.2.3 The upper surface of the zone of saturation of groundwater at **C**

1.2.4 The collective name for the mainstream and its tributaries at **D**

1.2.5 The high-lying area at **E**, which divides the two drainage basins

1.2.6 The process which will cause the high-lying area at **E** to move in an easterly direction

1.2.7 A way of determining drainage density indicated by the number at **F**

1.2.8 The process (indicated by the arrows) at **G**, which replenishes groundwater

(8 x 1) (8)

1.3 FIGURE 1.3, depicts a tropical cyclone in its mature stage.

- 1.3.1 Identify TWO factors from the diagram that were responsible for the original development of this tropical cyclone. (2 x 1) (2)
- 1.3.2 Refer to areas **A** and **B** on the diagram.
- (a) Identify areas **A** and **B** respectively. (2 x 1) (2)
- (b) Differentiate between the air movements at areas **A** and **B** respectively. (1 x 2) (2)
- (c) Mention the reasons for the differences in air movements as stated in QUESTION 1.3.2(b). (2 x 1) (2)
- 1.3.3 Draw a labelled synoptic map representation of the stage of the tropical cyclone being depicted by the diagram. (3 x 1) (3)
- 1.3.4 Explain how the situation described at **C** on the diagram will have a negative influence on the economy of the affected coastal regions. (2 x 2) (4)

1.4 FIGURE 1.4 shows a valley in the Northern hemisphere.

- 1.4.1 Name the weather phenomenon indicated by **X** on the graph. (1 x 1) (1)
- 1.4.2 Explain how the weather phenomenon **X**, mentioned in QUESTION 1.4.1 developed. (2 x 2) (4)
- 1.4.3 Comment on the existence of thick vegetation on slope **A**. (1 x 2) (2)
- 1.4.4 In a paragraph of approximately EIGHT lines, suggest reasons for the low temperature at site **B**, and evaluate how this temperature influenced the oranges being cultivated at site **B**. (4 x 2) (8)

1.5 Refer to FIGURE 1.5, showing different drainage patterns.

- 1.5.1 What is a *drainage pattern*? (1 x 1) (1)
- 1.5.2 Name the drainage patterns **A** and **B** in FIGURE 1.5. (2 x 1) (2)
- 1.5.3 Explain the difference between drainage patterns **A** and **B** by referring to their main streams and tributaries. (2 x 2) (4)
- 1.5.4 Comment on how the underlying rock structure influenced the formation of drainage pattern **A**. (2 x 2) (4)
- 1.5.5 Explain how the varying resistance of the underlying rocks influencing drainage patterns **A** and **B** will determine the drainage densities of the respective drainage basins. (2 x 2) (4)

1.6 Refer to FIGURE 1.6, a photograph of a river in a high-lying area.

- 1.6.1 Which stage of the fluvial cycle is depicted in the photograph? (1 x 1) (1)
- 1.6.2 Describe the channel of the river in the photograph. (1 x 1) (1)
- 1.6.3 Feature **A** is a rapid which causes the stream velocity (speed) to increase.
- (a) Give the type of river flow associated with rapids. (1 x 1) (1)
- (b) Explain how rapids form. (2 x 2) (4)
- 1.6.4 In a paragraph of approximately EIGHT lines discuss the processes that will alter (change) the landscape of the river from the upper course, to the lower course. (4 x 2) (8)

[75]

QUESTION 2

2.1 FIGURE 2.1 represents TWO air pressure systems in South Africa. Answer the following questions by choosing either **A** or **B** (except 2.1.1) to make the statement TRUE. Write ONLY the letter/answer of your choice next to the question number (2.1.1–2.1.8), for example 2.1.9 B.

- 2.1.1 Air always moves from (**A to B/B to A**) on the earth surface.
- 2.1.2 (**A/B**) forms part of the sub-tropical high pressure zone at 30° north and south of the equator.
- 2.1.3 The interior of South Africa is dominated by (**A/B**) during summer.
- 2.1.4 The air movement of (**A/B**) is anticlockwise in the northern hemisphere.
- 2.1.5 (**A/B**) brings relatively dry, cool and stable air from the southwest to the interior of South Africa.
- 2.1.6 (**A/B**) is responsible for line thunderstorms experienced in the northeast and eastern interior of South Africa.
- 2.1.7 Ridging of air will occur at (**A/B**).
- 2.1.8 (**A/B**) is causing onshore and offshore air flow along the coast of South Africa during winter. (8 x 1) (8)
- 2.2 Refer to FIGURE 2.2, showing the flow patterns of a river. Choose between LAMINAR FLOW and TURBULENT FLOW to match the statement below. Only write down the question number and either turbulent or laminar.
- 2.2.1 The flow pattern where water flows in thin layers.
- 2.2.2 The flow pattern that dominates the upper course of a river.
- 2.2.3 The flow pattern that occurs at the undercut slope of a meander.
- 2.2.4 The flow pattern that occurs over an even and gently sloping riverbed.
- 2.2.5 The flow pattern where there is a high rate of erosion.
- 2.2.6 The flow pattern that will mostly occur on an ungraded river profile.
- 2.2.7 The flow pattern which will occur where deltas form. (7 x 1) (7)

2.3 FIGURE 2.3 shows a synoptic weather map and the weather forecast for Cape Town.

2.3.1 What season is represented on the synoptic weather map? (1 x 1) (1)

2.3.2 Why are mid-latitude cyclones seen as part of *cyclogenesis* development? (1 x 1) (1)

2.3.3 Refer to the day by day weather forecast for Cape Town. How does the forecast indicate that a number of mid-latitude cyclones will influence the weather of Cape Town in the upcoming week? (2 x 2) (4)

2.3.4 Copy the incomplete weather station model to your ANSWER BOOK and complete it by adding the precipitation and cloud cover for Sunday to the station information. (2 x 1) (2)

2.3.5 Refer to the wind direction changes from Friday to Tuesday.

(a) What term is used to describe the change in wind direction from Friday to Tuesday? (1 x 1) (1)

(b) Explain the term you mentioned in QUESTION 2.3 5(a). (1 x 2) (2)

(c) Why does the wind direction change from Friday to Tuesday? (2 x 2) (4)

2.4 Refer to FIGURE 2.4, which shows climatic contrasts (differences) between urban and rural areas.

2.4.1 Define the term *insolation*. (1 x 1) (1)

2.4.2 Differentiate between the amount of insolation being received in the urban areas in comparison to the rural areas. (1 x 2) (2)

2.4.3 Account for the differentiation you mentioned in QUESTION 2.4.2, and explain why the urban areas have a higher mean annual temperature than the rural areas. (2 x 2) (4)

2.4.4 In a paragraph of approximately EIGHT lines, comment on the fact that the precipitation is higher over urban areas, despite urban areas experiencing a lower relative humidity. (4 x 2) (8)

2.5 Study the sketches in FIGURE 2.5 showing a river meander.

2.5.1 What is feature **A** called? (1 x 1) (1)

2.5.2 Refer to the cross section.

(a) Name the geomorphological processes that dominate at slopes **X** and **Y** respectively. (2 x 1) (2)

(b) Describe how the geomorphological process at **X** takes place. (2 x 2) (4)

2.5.3 Explain why the river in **Stage 2** will overflow its banks more often than the river in **Stage 4**. (2 x 2) (4)

2.5.4 Comment on how feature **B** has become separated from the mainstream as indicated in the sketches in FIGURE 2.5. (2 x 2) (4)

2.6 Study FIGURE 2.6, which illustrates the process of river capture.

2.6.1 Name the features of river capture at **A** and **B** respectively. (2 x 1) (2)

2.6.2 Refer to feature **C**.

(a) Name feature **C**. (1 x 1) (1)

(b) Explain how feature **C** was altered (changed) by stream **D** over time. (1 x 2) (2)

2.6.3 Explain how resultant river capture may be seen as providing an advantage for future transport purposes. (1 x 2) (2)

2.6.4 In a paragraph of approximately EIGHT lines, evaluate how the environment around the beheaded (misfit) stream at **E** will be affected. (4 x 2) (8)

[75]

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

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

QUESTION 3

3.1 Use the information in FIGURE 3.1 to match the type of business district with the statements below. A particular business district may be referred to more than once.

- 3.1.1 Shops like garages that are found along important routes in the city.
- 3.1.2 The commercial heart of the city.
- 3.1.3 This business centre occurs along highways and has a very large sphere of influence.
- 3.1.4 This small business district can be found in almost every suburban area.
- 3.1.5 The unplanned commercial business centre which is usually the most accessible.
- 3.1.6 An unplanned business district that occurs at important road crossings or where there is a high population density.
- 3.1.7 This planned business centre occurs mostly in suburban areas.

(7 x 1) (7)

3.2 Match the term/concepts below to the statements that follow. Write ONLY the term/concept next to the question number, e.g. 3.1.9 South Africa.

Beneficiation / Decentralisation / Food security / Footloose / Foreign Exchange / Gross Domestic Product / Import replacement / Informal sector / Food insecurity

- 3.2.1 The sum total of income earned in one year in a country.
- 3.2.2 Where workers have no legal rights.
- 3.2.3 The process where the economic value of ore is improved, so that it results in higher export value.
- 3.2.4 These industries do not have to be near raw materials or markets to exist.
- 3.2.5 When entrepreneurs produce products which was originally brought in from other countries.

- 3.2.6 When all people at all times have access to sufficient and nutritious food.
- 3.2.7 The process of redistributing functions, powers, people, etc. away from a focal location.
- 3.2.8 When one currency is changed for another. (8 x 1) (8)
- 3.3 Study the photo in FIGURE 3.3 showing a settlement pattern.
- 3.3.1 Why is this settlement regarded as a rural settlement? (1 x 1) (1)
- 3.3.2 Identify the settlement pattern in FIGURE 3.3. (1 x 1) (1)
- 3.3.3 Explain how relief and water availability influenced the pattern of the settlement in FIGURE 3.3. (2 x 2) (4)
- 3.3.4 Provide evidence from FIGURE 3.3 to substantiate the fact that extensive commercialised farming is practiced. (2 x 2) (4)
- 3.3.5 Discuss TWO economic advantages for the farmer living in this settlement. (2 x 2) (4)
- 3.4 Refer to FIGURE 3.4, **A** and **B**, which highlights the problem of traffic congestion in modern cities.
- 3.4.1 What is a *traffic congestion*? (1 x 1) (1)
- 3.4.2 Provide TWO reasons for the traffic congestion in urban areas. (2 x 1) (2)
- 3.4.3 Comment on the irony (opposite) thoughts of the drivers in FIGURE 3.4 A. (1 x 2) (2)
- 3.4.4 Refer to FIGURE 3.4 B showing a consequence/effect of traffic congestion.
- (a) Name the type of consequence/effect that is illustrated. (1 x 1) (1)
- (b) Evaluate the social impact that this type of consequence/effect in FIGURE 3.4 B might have on drivers. (1 x 2) (2)
- 3.4.5 In a paragraph of approximately EIGHT lines, suggest measures that the local authorities can implement to reduce traffic congestion in urban areas. (4 x 2) (8)

3.5 Study FIGURE 3.5 that illustrates key sectors of South Africa's economy.

3.5.1 List the following from the data that is provided:

- (a) The year in which the first quarter shows a negative growth rate
(1 x 1) (1)
- (b) The economic activity that shows a positive growth rate in the secondary sector
(1 x 1) (1)

3.5.2 Refer to the second quarter economic growth rates from 2012 to 2015.

- (a) Mention the general trend in the economic growth rate from 2012 to 2015.
(1 x 1) (1)
- (b) Calculate the difference in the economic growth rate between the second quarter of 2014 and 2015.
(1 x 1) (1)
- (c) Using the data provided by the different economic sectors, discuss the economic growth rate in the second quarter of 2015.
(2 x 2) (4)

3.5.3 Suggest a reason why trade in the tertiary sector, may have recorded a negative economic growth rate.
(1 x 2) (2)

3.5.4 Analyse the impact that the negative growth rate of agriculture might have on the broader population of South Africa, if this trend continues.
(2 x 2) (4)

3.6 Refer to FIGURE 3.6, a map of the South Western Cape industrial region.

3.6.1 Name the agricultural product being cultivated at Clanwilliam.
(1 x 1) (1)

3.6.2 Refer to the nuclear power plant at **A**.

- (a) Name the nuclear power plant at **A**.
(1 x 1) (1)
- (b) Discuss how the nuclear power plant at **A** benefits industrial development in the South Western Cape region.
(1 x 2) (2)

3.6.3 Comment on the influence of the cold Benguela current on commercial fishing along the west coast in this region.
(2 x 2) (4)

3.6.4 In a paragraph of approximately EIGHT lines, discuss the main factors that hinder industrial development in the South Western Cape industrial region.
(4 x 2) (8)

[75]

QUESTION 4

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

COLUMN A		
4.1.1	When farmers concentrate on those products which produce the highest yield and income	A Fragmentation
4.1.2	Process in which the population density of rural areas decrease over time	B Urbanisation
4.1.3	The movement of people away from rural areas	C Consolidation
4.1.4	Use of machinery instead of manual labour to increase production	D Pull factors
4.1.5	When farming products are harvested to be sold directly to the consumers	E Mechanisation
4.1.6	Those factors in rural areas that force people to move to cities	F Specialisation
4.1.7	When a single farm consists of numerous spatially separated farm units	G Market orientated
4.1.8	The process in commercialisation when small farm plots are joined together to form one large farm	H Push factors
		I Rural-urban migration
		J Rural depopulation

(8 x 1) (8)

4.2 FIGURE 4.2 refers to TWO different sectors of employment in South Africa. The questions below provide a description of the TWO sectors. Write your choice of ONLY **A** or **B** next to the question number that matches the statement (4.2.1–4.2.7).

4.2.1 This sector fills the gap in the market by providing a wide variety of low-cost goods

4.2.2 This sector has employees that are regulated by government

4.2.3 This sector usually provide job opportunities to people with very little skills

4.2.4 This sector has a lack of formal legal registration

4.2.5 This sector contributes massively to the GDP of the country

4.2.6 This sector can be found in the more developed settlements of the country

4.2.7 The government has limited control in this sector (7 x 1) (7)

4.3 FIGURE 4.3 is a case study on land restitution in Macleantown.

4.3.1 Define the term *land restitution*. (1 x 1) (1)

4.3.2 State TWO purposes of land reform in South Africa. (2 x 1) (2)

4.3.3 Provide THREE reasons why the people in the case study in FIGURE 4.3 are unable to generate a 'livelihood from agriculture'. (3 x 1) (3)

4.3.4 Explain what the author means by the statement, 'The benefits of land restitution appear to be more symbolic than material'. (1 x 2) (2)

4.3.5 In a paragraph of approximately EIGHT lines, discuss how the government could empower the beneficiaries of land restitution to help alleviate poverty in South Africa. (4 x 2) (8)

4.4 Study FIGURE 4.4, a photograph of a land use zone in an urban area.

- 4.4.1 Identify the land use zone illustrated in the photograph. (1 x 1) (1)
- 4.4.2 Provide a reason for your answer in QUESTION 4.4.1. (1 x 1) (1)
- 4.4.3 Suggest TWO reasons why the factory owners chose this land use zone (answer to QUESTION 4.4.1) in which to build a factory. (2 x 1) (2)
- 4.4.4 Discuss TWO advantages that the farmer will have by locating in this land use zone (answer to QUESTION 4.4.1). (2 x 2) (4)
- 4.4.5 Why is it important for urban municipalities to restrict further urban expansion in this land use zone (answer to QUESTION 4.4.1)? (3 x 2) (6)

4.5 Refer to the extract in FIGURE 4.5 on manufacturing in South Africa.

- 4.5.1 Define the term *manufacturing*. (1 x 1) (1)
- 4.5.2 Name the economic sector that manufacturing falls under. (1 x 1) (1)
- 4.5.3 Give ONE specific outcome that the manufacturing sector can achieve according to the extract. (1 x 1) (1)
- 4.5.4 Explain the economic importance to South Africa if the manufacturing sector can 'compete in the global economy'. (2 x 2) (4)
- 4.5.5 '... manufacturing presents an opportunity to significantly accelerate the country's growth and development.' In a paragraph of EIGHT lines, comment on how labour supply and international competition may hinder any proposed acceleration in the manufacturing sector. (4 x 2) (8)

4.6 Refer to FIGURE 4.6, which provides information about the Maputo Development Corridor.

- | | | | |
|-------|--|---------|-----|
| 4.6.1 | What is a <i>development corridor</i> ? | (1 x 1) | (1) |
| 4.6.2 | Name ONE other neighbouring country (NOT Mozambique) that benefits from the Maputo Development Corridor. | (1 x 1) | (1) |
| 4.6.3 | Provide a reason for the link between Johannesburg and Maputo. | (1 x 1) | (1) |
| 4.6.4 | Explain how the Maputo Development Corridor benefits the tourism industry in the area. | (1 x 2) | (2) |
| 4.6.5 | Discuss THREE key objectives of the Maputo Development Corridor as a Spatial Development Initiative. | (3 x 2) | (6) |
| 4.6.6 | Explain how the Mpumalanga Province has contributed to the success of the Maputo Development Corridor. | (2 x 2) | (4) |

[75]

GRAND TOTAL: 225