



Province of the
EASTERN CAPE
EDUCATION

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

SEPTEMBER 2016

GEOGRAPHY P1

MARKS: 225

TIME: 3 hours



This question paper consists of 15 pages and a 9 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. 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. 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 a graph of the atmospheric changes that takes place as a tropical cyclone moves over an area. 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 Air pressure is measured in ...

- A millimetres.
- B millibars.
- C degrees celsius.
- D kilometre per hour.





1.1.2 In how many hours would a person standing at point Y experience the eye of the tropical cyclone?

- A 12
- B 18
- C 24
- D 30

1.1.3 The winds that are responsible for the movement of tropical cyclones are ...winds.

- A trade
- B westerly
- C berg
- D polar

1.1.4 Which synoptic weather map symbol illustrates the area at X?

- A 
- B 
- C 
- D 

- 1.1.5 The type of clouds that will dominate the area at approximately 25 hours as it moves in a westerly direction will be ... clouds.
- A cumulonimbus
 - B cumulus
 - C stratus
 - D nimbostratus
- 1.1.6 The development of tropical cyclones is possible between the following latitudes.
- A 0° — 5° north and south of the equator
 - B 60° — 90° north and south of the equator
 - C 15° — 20° north and south of the equator
 - D 35° — 55° north and south of the equator
- 1.1.7 The difference in temperature between 21 hours and 24 hours is approximately ...
- A 25 °C.
 - B 10 °C.
 - C 5 °C.
 - D 15 °C.
- 1.1.8 Which statement is a characteristic of the degeneration stage of the weather system?
- A Temperature increases
 - B Wind speed increases
 - C Rainfall increases
 - D Pressure increases
- (8 x 1) (8)
- 1.2 Refer to FIGURE 1.2, which shows TWO river profiles; **A-B** and **C-D**. Choose the correct answer from the options given between brackets to make each statement TRUE.
- 1.2.1 (**A-B/C-D**) represents a river profile where erosion is generally more than deposition.
- 1.2.2 The (waterfall/sea) represents the ultimate/permanent base level of erosion.
- 1.2.3 Laminar flow will dominate in course (**F/H**) of the river.
- 1.2.4 In course (**G/H**) one will find a U-shaped river valley.
- 1.2.5 Generally, rapids are found in the (**F/H**) course of the river.
- 1.2.6 The longitudinal profile (**A-B/C-D**) shows a river in equilibrium.
- 1.2.7 Under favourable conditions (alluvial fans/deltas) will develop at **E**.
- (7 x 1) (7)

1.3 Study FIGURE 1.3 which depicts a satellite image and a newspaper article and answer the questions that follow.

- 1.3.1 What is meant by the term *heat wave*? (1 x 1) (1)
- 1.3.2 Name the high pressure system mentioned in the article. (1 x 1) (1)
- 1.3.3 Explain how the satellite image illustrates the impact of the high pressure system. (1 x 2) (2)
- 1.3.4 Discuss how the persisting atmospheric conditions may contribute to the occurrence of veld fires. (2 x 2) (4)
- 1.3.5 In a paragraph of approximately EIGHT lines, explain the impact that veld fires will have on the people in the interior of South Africa. (4 x 2) (8)

1.4 Refer to FIGURE 1.4, which is a photo of fog in a valley, and answer the questions that follow.

- 1.4.1 Name the type of fog that has formed in this valley. (1 x 1) (1)
- 1.4.2 What time of day was the photograph most likely taken? (1 x 1) (1)
- 1.4.3 Give ONE reason for your answer to QUESTION 1.4.2. (1 x 2) (2)
- 1.4.4 Provide TWO atmospheric conditions that will be conducive to the formation of the type of fog mentioned in QUESTION 1.4.1. (2 x 2) (4)
- 1.4.5 Explain the role of katabatic winds in the formation of the type of fog mentioned in QUESTION 1.4.1. (2 x 2) (4)
- 1.4.6 Provide ONE positive impact that the fog, visible in the photograph, will have on people living in this valley. (1 x 2) (2)

1.5 Refer to FIGURE 1.5 showing two drainage basins with different stream orders.

- 1.5.1 Give the geographical term used to describe the following high lying areas:
- (a) **P** between two different drainage basins (1 x 1) (1)
- (b) **Q** between two tributaries in the same drainage basin (1 x 1) (1)

- 1.5.2 What evidence in FIGURE 1.5 suggests that both river systems flow on rocks that are uniformly resistant to erosion? (1 x 2) (2)
- 1.5.3 Why can one say that drainage basin **T** has a higher drainage density than drainage basin **S**? (1 x 2) (2)
- 1.5.4 With reference to FIGURE 1.5, describe the relationship between drainage density and the highest stream order in a drainage basin. (1 x 2) (2)
- 1.5.5 In a paragraph of approximately EIGHT lines, explain any TWO factors that could have resulted in drainage basin **T** having a higher stream order than drainage basin **S**. (4 x 2) (8)
- 1.6 Study the diagrams in FIGURE 1.6, which illustrates the process of rejuvenation, and answer the questions that follow.
- 1.6.1 Define the term *rejuvenation*. (1 x 1) (1)
- 1.6.2 Identify the features associated with rejuvenation at **A** and **B** respectively. (2 x 1) (2)
- 1.6.3 What will happen to the position of landform **B** in the course of the river as time passes by? (1 x 1) (1)
- 1.6.4 Explain the positional change of landform **B** as mentioned in QUESTION 1.6.3. (2 x 2) (4)
- 1.6.5 Mention ONE negative impact of rejuvenation on farming activities downstream of feature **B**. (1 x 2) (2)
- 1.6.6 Evaluate the economic importance of feature **B** after rejuvenation. (2 x 2) (4)
- [75]**

QUESTION 2

2.1 FIGURE 2.1 illustrates a mid-latitude cyclone in the occlusion stage. Choose the correct answer from the options given between brackets to make each statement TRUE.

- 2.1.1 The temperature at **B** is influenced by (westerly/polar) winds.
- 2.1.2 The area at **C** is called the (cold/warm) sector.
- 2.1.3 This weather system moves in a (east to west/west to east) direction.
- 2.1.4 The weather stations **1** to **3** at (**D/E**) illustrate the direction in which the wind will change as **G** moves over the area.
- 2.1.5 This change in wind direction mentioned in QUESTION 2.1.4 is known as (veering/backing).
- 2.1.6 (Cumulonimbus/Nimbostratus) clouds will develop at **F**.
- 2.1.7 The illustrated occlusion is a (cold/warm) front occlusion. (7 x 1) (7)

2.2 FIGURE 2.2 shows the features after stream piracy has occurred. To which letter from the sketch does the following description refer? Write ONLY the letter (A–E) next to the question number (2.2.1–2.2.8), e.g. 2.2.9 F.

NOTE: One letter may refer to more than ONE description.

- 2.2.1 The feature that divides the drainage basins
- 2.2.2 The stream that will be rejuvenated
- 2.2.3 The place where a waterfall might develop
- 2.2.4 The area where the valley will be too big for the river flowing in it
- 2.2.5 The place where stream piracy occurred
- 2.2.6 The stream that will be robbed of its water
- 2.2.7 The stream that flows down a steep area
- 2.2.8 The area where river gravel can be seen (8 x 1) (8)

- 2.3 Refer to FIGURE 2.3 showing the weather conditions during a particular season over South Africa and answer the questions that follow.
- 2.3.1 Which season does FIGURE 2.3 represent? (1 x 1) (1)
- 2.3.2 Give ONE reason for your answer to QUESTION 2.3.1. (1 x 1) (1)
- 2.3.3 Identify the high pressure cell at **P**. (1 x 1) (1)
- 2.3.4 Differentiate between the two air masses **X** and **Y** respectively in terms of moisture content and temperatures. (2 x 2) (4)
- 2.3.5 Explain why line thunderstorms will develop at **Q** on the plateau. (2 x 2) (4)
- 2.3.6 Evaluate the negative impact that line thunderstorms may have on farming activities on the plateau. (2 x 2) (4)
- 2.4 A photo of pollution over an urban area is shown in FIGURE 2.4. Refer to the photo when answering the questions that follow.
- 2.4.1 Define the term *pollution dome*. (1 x 1) (1)
- 2.4.2 The pollution dome will result in acid rain over the city. Explain how the acid rain will affect the vegetation at **A**, and the building structures at **B**. (2 x 2) (4)
- 2.4.3 Suggest how motorcar manufacturers can help in decreasing the pollution dome over urban areas. (1 x 2) (2)
- 2.4.4 In a paragraph of approximately EIGHT lines, explain, with reasons, how pollution concentrations will vary from 06h00 to 18h00 near the earth's surface. (4 x 2) (8)
- 2.5 Study the sketches in FIGURE 2.5 showing drainage patterns and answer the questions that follow.
- 2.5.1 Identify the drainage patterns illustrated in sketches **A** and **B**. (2 x 1) (2)
- 2.5.2 Identify the landform that developed at **C** where the river cuts through the ridge. (1 x 1) (1)
- 2.5.3 Discuss how the landform identified in QUESTION 2.5.2 can be of use to humans. (2 x 2) (4)
- 2.5.4 Explain why the drainage pattern at **B** is older than the folded mountains illustrated on the sketch. (1 x 2) (2)
- 2.5.5 Why is it possible for both rivers in these drainage patterns to maintain their course? (2 x 2) (4)

2.6 Read the newspaper article with the heading, '*Human impact on water quality along the Orange-Senqu River Basin*' in FIGURE 2.6 and answer the questions that follow.

- 2.6.1 What is a *water scarce country*? (1 x 1) (1)
- 2.6.2 Quote TWO reasons from the newspaper article, why water has to be reused more often in the Orange Senqu River Basin. (2 x 1) (2)
- 2.6.3 Give TWO reasons why the Senqu River system provides high quality fresh water to the Orange-Senqu River Basin. (2 x 1) (2)
- 2.6.4 Discuss the negative impact of commercial farming on the quality of water in the Orange River drainage basin. (2 x 2) (4)
- 2.6.5 In a paragraph of approximately EIGHT lines, outline sustainable strategies that the South African government can implement to ensure the provision of high quality water in the Orange-Senqu River Basin. (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 FIGURE 3.1 represents different urban settlements. Provide a letter from the sketch that best matches the descriptions below. Write **ONLY** the letter of your choice next to the question number (3.1.1 – 3.1.7).

NOTE: One letter may refer to more than ONE description.

- 3.1.1 A settlement which is an example of a typical gateway town
- 3.1.2 The settlement that provides services to a predominant farming community
- 3.1.3 The settlement where one type of transport is replaced by another
- 3.1.4 The settlement which represents a specialised town
- 3.1.5 The settlement where a junction town can be found
- 3.1.6 The settlement that will never develop into a circular shape
- 3.1.7 East London and Port Elizabeth are typical examples of this settlement (7 x 1)

(7)

- 3.2 FIGURE 3.2 is a map of South Africa's core industrial regions which is indicated by the letters **A** to **D**. Match the letters to the statements below.

NOTE: One letter may refer to more than ONE description.

- 3.2.1 There is a good source of natural water supply because of rainfall throughout the year in this region
- 3.2.2 This region boasts with Coega, the deepest port in South Africa
- 3.2.3 This region has a Mediterranean climate which encourages pleasant working conditions
- 3.2.4 Gold was the stimulus for the original growth of this industrial region
- 3.2.5 The salt and motor industry forms part of the main industrial activities in this region
- 3.2.6 Oil refineries are based in this region because the harbour is the nearest to the Middle East

- 3.2.7 Thermal electricity is very expensive in this region, but nuclear power reduces electricity prices
- 3.2.8 This industrial region is landlocked (8 x 1) (8)
- 3.3 Refer to FIGURE 3.3, a cartoon showing a discussion between inhabitants of a rural area and a developer.
- 3.3.1 The people of the area are reluctant to help the developer increase the productivity of the land. Provide a reason for this reluctance. (1 x 1) (1)
- 3.3.2 Suggest TWO possible socio-economic conditions of the inhabitants in this rural area. (2 x 1) (2)
- 3.3.3 Land reform was introduced by the government to help rural people with land claims and to redress the injustices of the past.
- (a) Name the land reform policy which allows the government to buy unoccupied land and share it equally amongst rural people. (1 x 1) (1)
- (b) Explain why the developer says that land is a key to fight poverty. (2 x 2) (4)
- (c) In a paragraph of approximately EIGHT lines, outline measures that the government could implement to make land reform policies more effective. (4 x 2) (8)
- 3.4 Study FIGURE 3.4, depicting traffic congestion and answer the questions that follow.
- 3.4.1 Identify the dominant street pattern evident in the sketch. (1 x 1) (1)
- 3.4.2 Give ONE advantage of the street pattern identified in QUESTION 3.4.1. (1 x 1) (1)
- 3.4.3 Explain how the street pattern mentioned in QUESTION 3.4.1, contributed to the traffic congestion problem that exists in the illustrated city. (1 x 2) (2)
- 3.4.4 Discuss TWO possible solutions for the traffic congestion problems in this particular city. (2 x 2) (4)
- 3.4.5 Mention ONE impact of traffic congestion on the infrastructure of the illustrated city. (1 x 2) (2)
- 3.4.6 Support the statement that urban expansion creates environmental problems in the illustrated city. (2 x 2) (4)

- 3.5 Refer to FIGURE 3.5 showing trade data for South Africa to answer the questions that follow.
- 3.5.1 Calculate the percentage that raw materials contribute to South Africa's exports. (1 x 2) (2)
- 3.5.2 By referring to the data, explain why gold is so important to the economy of South Africa. (1 x 2) (2)
- 3.5.3 Analyse the general trend in South Africa's exports and imports of manufacturing goods. (1 x 2) (2)
- 3.5.4 Suggest reasons why South African manufactured goods are in danger of becoming an economic burden in the future. (2 x 2) (4)
- 3.5.5 Discuss how a skills driven programme will help in creating a more sustainable manufacturing sector. (2 x 2) (4)
- 3.6 Study FIGURE 3.6, a sketch and the extract regarding food security, and answer the questions that follow.
- 3.6.1 Define the term *food security*. (1 x 1) (1)
- 3.6.2 According to the sketch, name ONE natural resource that influences food security. (1 x 1) (1)
- 3.6.3 Explain how the natural resource mentioned in QUESTION 3.6.2 influences food security. (1 x 2) (2)
- 3.6.4 Suggest TWO economic strategies to address food security. (2 x 2) (4)
- 3.6.5 In a paragraph of approximately EIGHT lines, evaluate how food insecurity impacts on the economic growth rate in South Africa. (4 x 2) (8)
- [75]**

QUESTION 4

4.1 FIGURE 4.1 show some push and pull factors responsible for rural-urban migration. Provide the specific factor which the description below refers to. Write ONLY the letter (A–J) of the factor next to the question number (4.1.1–4.1.8), for example 4.1.9 K.

- 4.1.1 People will earn a steady and permanent income
- 4.1.2 Farms are made into one big farming unit
- 4.1.3 Tertiary institutions are causing people to migrate
- 4.1.4 An environmental problem leads to a decrease in production
- 4.1.5 Employment is influenced by modern technology
- 4.1.6 Maintenance of the farms becomes less sustainable
- 4.1.7 Farm workers cannot sustain their families with their income
- 4.1.8 'Bright lights' of the area contribute to the migration process

(8 x 1) (8)

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

COLUMN A		COLUMN B	
4.2.1	A macro-economic framework which would stimulate growth, employment and reconstruction	A	Growth points
4.2.2	Aimed at promoting investment in regions of South Africa which are under developed, but shows potential for growth	B	Deconcentration points
4.2.3	Industrial development was aimed at areas around the homelands	C	Industrial development points
4.2.4	Its main objective is to halve poverty and unemployment and to accelerate employment equity by 2014	D	RDP
4.2.5	Industrial development was located outside the main metropolitan areas.	E	GEAR
4.2.6	An initial socio-economic programme to address the poverty and the shortfalls of social services	F	SDI
4.2.7	Industrial development was set up in remote areas where infrastructure was in place	G	Good Hope Plan
		H	Asgisa

(7 x 1) (7)

- 4.3 Refer to FIGURE 4.3, showing a number of rural settlement patterns, before answering the following questions.
- 4.3.1 Identify the settlement pattern at **A**. (1 x 1) (1)
- 4.3.2 Give ONE reason for your answer to QUESTION 4.3.1. (1 x 2) (2)
- 4.3.3 Explain TWO factors that played a role in selecting the site for settlement **A**. (2 x 2) (4)
- 4.3.4 The long distance between settlements **B** and **C** have both advantages and disadvantages for the farmers living there. Substantiate this statement by giving ONE advantage and ONE disadvantage. (2 x 2) (4)
- 4.3.5 Evaluate the positive impact of modern farming techniques on farming in this entire rural area. (2 x 2) (4)
- 4.4 The photo in FIGURE 4.4 illustrates a major problem which exists in the inner city of big urban areas. Use the photo to answer the following questions.
- 4.4.1 Identify the urban problem illustrated by the photo. (1 x 1) (1)
- 4.4.2 In which land-use zone is this problem commonly found in big urban areas? (1 x 1) (1)
- 4.4.3 Mention ONE socio-economic problem that could have worsened the situation illustrated in the photo. (1 x 1) (1)
- 4.4.4 Despite the poor conditions visible in the photograph, the land-use zone where this photo was taken has high land values. Explain why this is the case. (2 x 2) (4)
- 4.4.5 The visible poor conditions and the infrastructure is a problem for urban planners, as it discourages investment in cities. In a paragraph of approximately EIGHT lines, outline suggestions you would forward as part of an urban renewable strategy. (4 x 2) (8)
- 4.5 Refer to FIGURE 4.5 and read the extract on '*Exports Deplete SA Maize Stocks*' and answer the questions that follow.
- 4.5.1 Quote ONE reason from the extract why South Africa might have to import grain. (1 x 1) (1)
- 4.5.2 Why has white and yellow maize reached a break-even point? (1 x 1) (1)
- 4.5.3 Name ONE of South Africa's main international maize trading partners. (1 x 1) (1)

- 4.5.4 Discuss TWO factors that have a negative impact on maize production in South Africa. (2 x 2) (4)
- 4.5.5 Explain why it is important for South African farmers to keep exporting maize, although the maize crop production is low. (2 x 2) (4)
- 4.5.6 Discuss how a trade deficit of maize will have a negative impact on the poorest people in South Africa. (2 x 2) (4)
- 4.6 Read the extract on the informal economy in FIGURE 4.6 and answer the questions that follow.
- 4.6.1 Name any ONE type of informal activity. (1 x 1) (1)
- 4.6.2 Explain why scholars, as well as practitioners in the developing world, acknowledge the significant role of the informal economy. (1 x 2) (2)
- 4.6.3 Explain why it was possible for the informal economy to 'expand with modern industrial growth'. (2 x 2) (4)
- 4.6.4 In a paragraph of approximately EIGHT lines, outline possible negative effects on the formal economy, if the informal economy is not being regulated. (4 x 2) (8)
- [75]**
- GRAND TOTAL: 225**

