



Province of the
EASTERN CAPE
EDUCATION

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

SEPTEMBER 2012

GEOGRAPHY P1

MARKS: 300

TIME: 3 hours

This question paper consists of 14 pages.

INSTRUCTIONS AND INFORMATION

1. This question paper consists of TWO sections, namely SECTION A and SECTION B.
2. Answer THREE questions to be chosen as follows:

ONE question from SECTION A

ONE question from SECTION B

A THIRD question from SECTION A or SECTION B. (Which has NOT been answered already.)
3. All diagrams are included in the ANNEXURE.
4. Leave a line between subsections answered.
5. Start EACH question on a NEW page.
6. Number the answers correctly according to the numbering system used in this question paper.
7. Do NOT write in the margins of the ANSWER BOOK.
8. Encircle the numbers of the questions that you have answered on the cover page of the ANSWER BOOK.
9. Where possible, illustrate your answer with labelled diagrams.

Write neatly and legible.
10. Mark allocation:
If marks are given as follows – $3 \times 2 = 6$, it means that THREE facts should be given for TWO marks each.
If marks are given as follows – $3 \times 1 = 3$, it means that THREE facts should be given for ONE mark each. Essay type questions must be answered in FULL SENTENCES. LISTING will result in marks being deducted.

SECTION A: PHYSICAL GEOGRAPHY: CLIMATE AND WEATHER, FLUVIAL PROCESSES AND STRUCTURAL LANDFORMS**QUESTION 1**

- 1.1 Study the diagram depicting tri-cellular air circulation, FIGURE 1.1 and match the descriptions 1.1.1 to 1.1.5 with the numbers 1 to 5 on the diagram. Write down the number 1 to 5 next to the question number (1.1.1 – 1.1.5) for example, 1.1.6. – 8.
- 1.1.1 The cool air sinks at 30° N and 30° S.
- 1.1.2 Some of the cold air flows back towards the equator and some flows towards the poles.
- 1.1.3 The hot air rises and moves away from the equator.
- 1.1.4 As the air moves away from the equator, it cools.
- 1.1.5 The cool air moving towards the poles meets cold air moving away from the poles. (5 x 2) (10)
- 1.2 For each of the statements below, select the correct term from those between the brackets. Write the correct answer next to the question number (1.2.1 – 1.2.5) for example, 1.2.6 soil erosion.
- 1.2.1 The bubbling flow of water in a river is called (laminar flow/turbulent flow).
- 1.2.2 A stream in which there is more deposition than erosion is (overgraded/undergraded).
- 1.2.3 The pointed dolerite capped hills of the Karoo is called (mesas/buttes).
- 1.2.4 A form of river transport is (saltation/transportation).
- 1.2.5 The course of a river that is older than the structures of the landscape it flows through is called (antecedent drainage/superimposed drainage) (5 x 2) (10)
- 1.3 Study the synoptic weather map dated 2000/07/16, FIGURE 1.3 and answer the following questions.
- 1.3.1 Describe the weather being experienced at station **C** (Durban).(2 x 2) (4)
- 1.3.2 Identify the weather system labelled **D** on the map. (1 x 2) (2)
- 1.3.3 In what stage of development is weather system **D**? (1 x 2) (2)
- 1.3.4 Give a reason to support your answer in QUESTION 1.3.3. (1 x 2) (2)

- 1.3.5 Explain how the pressure cell **B** has influenced the weather of South Africa during this period. (2 x 2) (4)
- 1.3.6 Write an essay (not more than 12 lines) and discuss the effects the front **E** would have had on the human activities in the South Western Cape. (6 x 2) (12)
- 1.4 Refer to the diagram, FIGURE 1.4 that shows a settlement located halfway up a slope to answer the following questions.
- 1.4.1 Explain why the settlement is located halfway up the slope. (1 x 2) (2)
- 1.4.2 How would the wind represented by **Z**, affect crops grown at the bottom of the valley? (1 x 2) (2)
- 1.4.3 Account for the difference in the position of the cultivated land and the trees in this valley. (2 x 2) (4)
- 1.4.4 With reference to the diagram, explain when and how a temperature inversion develops in this valley. (3 x 2) (6)
- 1.5 Refer to the hydrographs, FIGURE 1.5 and complete the following questions.
- 1.5.1 Define the term *discharge*. (1 x 2) (2)
- 1.5.2 Refer to the processes infiltration and runoff and tabulate the difference between hydrographs a and b in FIGURE 1.5. (2 x 2) (4)
- 1.5.3 Which hydrograph a or b shows:
- (a) a long lagtime
- (b) a high discharge peak? (2 x 2) (4)
- 1.5.4 Explain why runoff might be higher in an urban area than in a rural area. (2 x 2) (4)
- 1.6 Refer to the extract below to answer the following questions.

“Catchment areas and drainage basins include rivers as well as lakes and underground water.

South Africa is a mostly arid country and is vulnerable to drought (in the dry season) and floods (in the rainy season).

Human activities can affect river catchment areas and drainage basins in many ways.

There are some ways that river catchment areas and drainage basins can be managed more effectively so that we are not vulnerable to droughts and floods and have access to clean water ...”

- 1.6.1 Refer to the extract and write an essay (not more than 12 lines) on the impact of human activities on river catchment areas and drainage basins and suggests ways to manage it more effectively to ensure a constant and safe water supply for humans, plants and animals. (6 x 2) (12)
- 1.7 Refer to the diagram, FIGURE 1.7 depicting a structural landscape and answer the following questions.
- 1.7.1 Identify the landform that is depicted in the diagram. (1 x 2) (2)
- 1.7.2 Name the characteristics of the structural landscape mentioned in QUESTION 1.7.1. (2 x 2) (4)
- 1.7.3 Identify the slope elements labelled **A**, **B** and **C** and give a feature of each. (3 x 2) (6)
- 1.7.4 Can the dip slope be used for farming? Give a reason for your answer. (1 + 1) (2)
- [100]**

QUESTION 2

- 2.1 Choose the concept from COLUMN B that matches the descriptions in Column A. Write only the letter from COLUMN B next to the question number (2.1.1 – 2.1.5) for example 2.1.6 X.

COLUMN A		COLUMN B	
2.1.1	Hot dry off-shore winds that blow over South Africa in winter	A.	Föhnwind
		B.	Subtropical High
2.1.2	The region at the ITCZ where air convergence takes place	C.	Insolation
		D.	Bergwind
2.1.3	The process where the earth is warmed by the sun	E.	Radiation
		F.	Equatorial low
2.1.4	The difference in pressure between two points that results in wind velocity	G.	Coriolus force
		H.	Monsoon wind
2.1.5	A seasonal wind caused by the difference in land and sea temperatures in India	I.	Pressure gradient
		J.	Catabatic wind

(5 x 2) (10)

- 2.2 Study the diagrams FIGURE 2.2 and match the drainage patterns with the landscapes a to e. Write the letter of the landscape (a to e) next to the number of the drainage pattern (2.2.1 to 2.2.5) for example 2.2.6 X.

- 2.2.1 Dendritic pattern
 2.2.2 Radial pattern
 2.2.3 Centripetal pattern
 2.2.4 Trellis pattern
 2.2.5 Rectangular pattern

(5 x 2) (10)

- 2.3 Refer to FIGURE 2.3 depicting tropical cyclone Eline to answer the following questions.

- 2.3.1 How many tropical cyclones had occurred prior to Eline in this season? (1 x 1) (1)
- 2.3.2 Refer to the diagram and list ONE factor that is needed for the formation of this tropical cyclone. (1 x 2) (2)
- 2.3.3 Explain TWO of the economic effects of cyclone Eline. (2 x 2) (4)
- 2.3.4 Describe the path of cyclone Eline. (1 x 2) (2)
- 2.3.5 Why did cyclone Eline began to dissipate on day 22? (1 x 2) (2)

- 2.4 Study FIGURE 2.4 showing a weather phenomenon that occur from November until January in South Africa and answer the following questions.
- 2.4.1 Identify the weather phenomenon depicted in the diagram. (1 x 2) (2)
- 2.4.2 Explain how the moisture front is formed. (1 x 2) (2)
- 2.4.3 Write an essay (not more than 12 lines) on the environmental and social impact of the phenomenon in QUESTION 2.4.1. (6 x 2) (12)
- 2.5 Refer to the table, FIGURE 2.5 which shows differences in the minimum temperatures in Nairobi and an outlying area (the airport) and answer the following questions.
- 2.5.1 Name the phenomenon that is depicted in the table. (1 x 2) (2)
- 2.5.2 At what time of the day is this temperature difference the greatest? (1 x 1) (1)
- 2.5.3 Give TWO causes of the phenomenon in QUESTION 2.5.1. (2 x 2) (4)
- 2.5.4 Would the temperature difference be greater during weekdays or weekends? Explain your answer. (2 x 2) (4)
- 2.5.5 Suggest ONE way in which a city can be designed to reduce the effect mentioned in QUESTION 2.5.1. (1 x 2) (2)
- 2.6 Study the diagram, FIGURE 2.6 depicting the longitudinal profile of a river and answer the questions that follow.
- 2.6.1 In this longitudinal river profile, which letters mark:
- (a) the graded part of the river
(b) the base level
(c) the temporary base level (3 x 1) (3)
- 2.6.2 Name a feature or a landform that acts as a temporary base level. (1 x 1) (1)
- 2.6.3 Describe the rivers gradient and cross profile between points **C** and **D**. (2 x 2) (4)
- 2.6.4 Draw a simple cross profile of the river between points **D** and **E**. (1 x 2) (2)

- 2.7 Study FIGURE 2.7 that shows a simple map of the Doring River, which is a tributary of the Olifants River. The Nieuwhoudt Falls were formed by the capture of a river that used to flow towards the interior. Answer the following questions.
- 2.7.1 Give evidence from the map that river capture had occurred. (1 x 2) (2)
- 2.7.2 Identify the features of river capture labelled **A** to **D** on the map. (4 x 1) (4)
- 2.7.3 Describe the grade of the captured river. (1 x 2) (2)
- 2.7.4 Explain why rejuvenation is associated with river capture? (2 x 2) (4)
- 2.8 Refer to the diagram of a slope, FIGURE 2.8 to answer the following questions.
- 2.8.1 Which slope element is formed by deposition? (1 x 2) (2)
- 2.8.2 What does the dotted line on the diagram represents? (1 x 2) (2)
- 2.8.3 What types of mass movement are most likely to take place at:
- (a) **A** and
(b) **B**? (2 x 1) (2)
- 2.8.4 Write an essay (not more than 12 lines) to describe the natural factors and human activities that increase the likelihood of mass movements. (6 x 2) (12)
- [100]**

**SECTION B: PEOPLE AND PLACES, PEOPLE AND THEIR NEEDS,
WATER AND FOOD SECURITY****QUESTION 3**

3.1 Give ONE word/term for each of the following statements by choosing a word/term from the list below. Write only the letter (A to E) next to the question number (3.1.1 – 3.1.5) for example, 3.1.6 X.

- A Urban profile
- B Urban expansion
- C Land value
- D Centripetal force
- E Centrifugal force
- F Site
- G Situation
- H Conurbation
- I Metropolis
- J Morphological structure

3.1.1 The view of a city as seen from the side.

3.1.2 Describes where a place is in relation to its surroundings such as rivers, lakes and neighbouring settlements.

3.1.3 Forces that attract people and their activities to the city.

3.1.4 A large city surrounded by several towns which are dependent on it.

3.1.5 The physical growth of a town or city. (5 x 2) (10)

3.2 Choose the correct term from the word(s) in brackets to complete the following descriptions. Write only the word(s) next to the question number (3.2.1 to 3.2.5) for example, 3.2.6 population.

3.2.1 New sites for industrial development which are located in the country side or the surrounding fringe of the city are called (greenfield sites/ brownfield sites).

3.2.2 (Gross domestic product/Gross national product) is the total value of goods and services produced in a country in one year.

3.2.3 The planned policy to move activities away from over concentrated areas is referred to as (decentralisation/deconcentration).

3.2.4 (Balance of trade/balance of payment) is the difference in monetary value between the imports and exports of a country.

3.2.5 When restrictions are placed on trade between countries by using tariffs and quotas, it is called (trading blocs/protectionism). (5 x 2) (10)

- 3.3 Study FIGURE 3.3 showing rural land-use and answer the following questions.
- 3.3.1 Identify the type of rural settlement at each of **P** and **Q**. (2 x 1) (2)
- 3.3.2 Name TWO disadvantages of living in settlement **Q**. (2 x 2) (4)
- 3.3.3 Name the shape of settlement **R**. (1 x 1) (1)
- 3.3.4 Intensive farming methods are being practised on the farm labelled **S**. Explain the term *intensive farming*. (1 x 2) (2)
- 3.3.5 Give TWO factors evident in the diagram that favour the above-mentioned type of farming. (2 x 2) (4)
- 3.3.6 The removal of woodlands in the area will result in an increase in soil erosion. Assess the impact this will have on agriculture. (1 x 2) (2)
- 3.4 Study the land-use map, FIGURE 3.4 showing the general urban structure of a modern city to answer the following questions.
- 3.4.1 State the general shape of this city. (1 x 1) (1)
- 3.4.2 With reference to the main industrial area in the city, explain TWO locational advantages enjoyed by this industrial area. (2 x 2) (4)
- 3.4.3 Explain why slum clearance occurs around the CBD. (1 x 2) (2)
- 3.4.4 Give evidence to show that urban expansion has taken place in this city. (1 x 2) (2)
- 3.4.5 A green belt has been planned to be located on the north of the city. Explain the meaning of the term *green belt*. (1 x 2) (2)
- 3.4.6 The CBD is highly accessible. Give ONE reason from the map to support this statement. (1 x 2) (2)
- 3.4.7 Write an essay (not more than 12 lines) to explain the problems experienced in this CBD as a result of its high degree of accessibility and state possible solutions to overcome each of the problems mentioned. (6 x 2) (12)

- 3.5 Study the map of South Africa, FIGURE 3.5 and answer the following questions.
- 3.5.1 Identify the industrial area that produces the most (43%) and the least (5%) of South Africa's manufactured products. (2 x 1) (2)
- 3.5.2 Provide ONE factor that promotes industrial development at **A** and **C** respectively. (2 x 2) (4)
- 3.5.3 State new industrial projects to promote industrial development and economic growth in areas **B** and **D** respectively. (2 x 2) (4)
- 3.5.4 Explain the impact the location of the new industrial projects at **B** and **D** will have on the people living in this area. (2 x 2) (4)
- 3.6 Read the extract below and answer the following questions.

"The informal sector can be described as informal trading businesses that have no fixed business premises and do not pay tax to the receiver of revenue.

It is a second economy because it is a sector, mostly in urban areas, that functions on its own and provides a tertiary function to the community ..."

- 3.6.1 Write an essay (not more than 12 lines) to explain the reasons for the development of informal trading sector and discuss the challenges that face the informal trading sector in urban areas. (6 x 2) (12)
- 3.7 Study FIGURE 3.7 that captures the trade relationship that exists between countries in the Northern Hemisphere and the Southern Hemisphere and answer the following questions.
- 3.7.1 Identify the trading process that captures the trade relationship that exists between the countries of the Northern and Southern hemispheres. (1 x 2) (2)
- 3.7.2 Describe the imbalance evident on the sketch in terms of trade between the two hemispheres. (1 x 2) (2)
- 3.7.3 Give ONE possible reason for this trade imbalance between the two hemispheres. (1 x 2) (2)
- 3.7.4 Comment on the high percentage of primary products that are being exported to the Northern Hemisphere. (2 x 2) (4)
- 3.7.5 Describe the impact of the export of manufactured goods on the trade balance of the Northern Hemisphere countries. (2 x 2) (4)

[100]

QUESTION 4

- 4.1 State whether the following statements are TRUE or FALSE. Write only TRUE or FALSE next to the question number (4.1.1 – 4.1.5) for example, 4.1.6. FALSE.
- 4.1.1 The land restitution policy return land to people that were forced out during the apartheid era.
- 4.1.2 Low income residential areas have the highest land values of all residential areas.
- 4.1.3 Planned neighbourhood shopping centres are close to major roads, have massive parking space and a large variety of shops.
- 4.1.4 Gentrification occurs when low cost houses are bought by the wealthy, cheaply and modernised.
- 4.1.5 A refugee is someone who enters a foreign country without the government's permission. (5 x 2) (10)
- 4.2 Refer to the map of South Africa, FIGURE 4.2, depicting the water transfer schemes to answer the following questions. Write down the answer next to the question number (4.2.1. to 4.2.5.) for example, 4.2.6. Nile River.
- Name:
- 4.2.1 The water transfer scheme marked **O** that supplies the Eastern Cape with irrigation water.
- 4.2.2 The dam at number 5 that receives water from the water scheme marked **T**.
- 4.2.3 The country that shares its water supply across the border with South Africa.
- 4.2.4 The province that benefits from the water transfer scheme and the dams marked 8 and 13.
- 4.2.5 The dam at number 3 that has a lower evaporation rate than the dam at number 5. (5 x 2) (10)
- 4.3 Study the table, FIGURE 4.3 depicting information about urban and rural areas in South Africa and answer the following questions.
- 4.3.1 Give the meaning of the terms *depopulation* and *rural-urban migration*. (2 x 2) (4)

- 4.3.2 State the percentage level of the following in rural areas:
- (a) Illiteracy
 - (b) No access to water
 - (c) Unemployment (3 x 1) (3)
- 4.3.3 Indicate by what percentage are the unemployment levels higher in rural areas. (1 x 2) (2)
- 4.3.4 Which areas are better serviced with medical facilities; rural or urban areas? (1 x 2) (2)
- 4.3.5 Write an essay (not more than 12 lines) to explain the impact of rural-urban migration on the rural areas of South Africa and explain measures that can be adopted to counteract rural-urban migration. (6 x 2) (12)
- 4.2 Refer to the maps, FIGURE 4.4 to answer the following questions.
- 4.4.1 Which TWO places will have a bigger sphere of influence, **A**, **B**, **C**, **D** or **E**? (2 x 1) (2)
- 4.4.2 What is meant by the sphere of influence of a place? (1 x 2) (2)
- 4.4.3 Explain why the two places mentioned in QUESTION 4.4.1 will have a greater sphere of influence. (2 x 2) (4)
- 4.4.4 State the order of the type of functions that will be found in the places mentioned in QUESTION 4.4.1. (1 x 2) (2)
- 4.4.5 Provide any TWO examples of the type of functions mentioned in QUESTION 4.4.4. (2 x 1) (2)
- 4.4.6 Classify the urban settlements marked **B**, **D** and **E** according to their original function. (3 x 1) (3)
- 4.4.7 Why would the goods and services at settlement **B**, require a low threshold population and a low range? (1 x 2) (2)
- 4.5 Study the extract, FIGURE 4.5 and answer the following questions.
- 4.5.1 In your own words, state ONE way in which poor people create a livelihood. (1 x 2) (2)
- 4.5.2 Give TWO examples of resources that poor people lack in rural areas. (2 x 1) (2)
- 4.5.3 Explain the term *food insecurity*. (1 x 2) (2)
- 4.5.4 Only 26% of poor households have access to land. What implications does this have for the rural poor? (2 x 2) (4)

- 4.5.5 In your opinion, does South Africa have food insecurity? Justify your answer. (2 x 2) (4)
- 4.5.6 Write an essay (not more than 12 lines) to explain the factors that contribute to food insecurity and suggest what government can do at national and local level to address the threat of food insecurity. (6 x 2) (12)
- 4.6 Refer to the table, FIGURE 4.6 about South Africa's water requirements and answer the following questions.
- 4.6.1 Compare the total use in 1993 with the total use in 2010. What do these figures say about the demand for water? Justify your answer. (2 x 2) (4)
- 4.6.2 Which sector is the greatest user of water? (1 x 1) (1)
- 4.6.3 In which sector is water use predicted to increase the most and by how much? (2 x 1) (2)
- 4.6.4 In which TWO sectors is the increase in demand for water predicted to be the least? (2 x 1) (2)
- 4.6.5 Which economic sector, primary, secondary or tertiary, has the greatest demand for water? (1 x 1) (1)
- 4.6.6 Suggest some sustainable ways the sector mentioned in QUESTION 4.6.2 can use to reduce its use of water. (2 x 2) (4)
- [100]**
- TOTAL: 300**