



Province of the
EASTERN CAPE
EDUCATION

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

JUNE 2019

GEOGRAPHY P1

MARKS: 225

TIME: 3 hours



This question paper consists of 12 pages.

INSTRUCTIONS AND INFORMATION

1. This question paper consists of THREE questions.
2. Answer ALL THREE questions of 75 marks each.
3. All diagrams/sources 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, when asked to do so.
9. Mark allocation is as follows:
 $2 \times 1 = 2$ means that TWO facts are required for ONE mark each
 $2 \times 2 = 4$ 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**QUESTION 1**

- 1.1 Choose a term/concept from COLUMN B that matches the climatological description in COLUMN A. Write only the letter (A–I) next to the question number (1.1.1–1.1.8) for example 1.1.9 J.

COLUMN A		COLUMN B	
1.1.1	An open space reserved for parks or recreation areas in a city to reduce temperatures	A	South Atlantic igh
1.1.2	Receives names alphabetically as they occur	B	Green belt
1.1.3	Dew point temperature drops below freezing point and this type precipitation occurs in thie lower part of the valley	C	Pollution dome
1.1.4	A pressure system over the cold ocean to the west of South Africa	D	Frost pocket
1.1.5	In a valley, settlements will mostly develop in this zone	E	Tropical cyclones
1.1.6	Occurs during summer over the central interior	F	South Indian High
1.1.7	The angle of slopes in relation to the sun's rays	G	Thermal belt
1.1.8	The mass of polluted air above the city	H	Slope aspect
		I	Heat low

(8 x 1)

(8)

- 1.2 FIGURE 1.2 shows types of rivers. Match the labels below with the letters in FIGURE 1.2. Write only the letter (A–G) next to the question number (1.2.1–1.2.7), for example 1.2.8 H. Use each letter only once.

- 1.2.1 Water table during the dry season
- 1.2.2 Water table during the rainy season
- 1.2.3 Periodic river
- 1.2.4 Permanent river
- 1.2.5 Level of base flow
- 1.2.6 Groundwater zone
- 1.2.7 Watershed

(7 x 1)

(7)

- 1.3 Refer to FIGURE 1.3 based on a synoptic weather map, depicting a mid-latitude cyclone.
- 1.3.1 (a) Identify the season represented by the synoptic map. (1 x 1) (1)
- (b) Give TWO pieces of evidence to support your answer in QUESTION 1.3.1(a). (2 x 1) (2)
- 1.3.2 Refer to the mid-latitude cyclone at **A**.
- (a) What determines the direction of movement of **A**? (1 x 1) (1)
- (b) Comment on the influence of **A** on the air temperature and air pressure of Cape Town and Port Elizabeth. (3 x 2) (6)
- 1.3.3 Draw a cross-section of the stage of development from **B** to **C**. Your diagram must include an understanding of the air mass in front of and behind the front. (4 x 1) (4)
- 1.4 Study FIGURE 1.4 which shows a satellite image of a travelling disturbance.
- 1.4.1 Does the satellite image depict a *coastal low* or a *line thunderstorm*? (1 x 1) (1)
- 1.4.2 Name and describe the air masses at **A** and **B** respectively. (2 + 2) (4)
- 1.4.3 Refer to the front depicted on the satellite image.
- (a) Provide the name of the front on the satellite image. (1 x 1) (1)
- (b) Describe the movement of the air masses as they meet along the front mentioned in QUESTION 1.4.3(a). (2 x 1) (2)
- 1.4.4 In a paragraph of approximately EIGHT lines, describe the positive impact of the travelling disturbance identified in QUESTION 1.4.1 on the agriculture in the interior of South Africa. (4 x 2) (8)
- 1.5 Refer to FIGURE 1.5 which illustrates a drainage pattern and drainage density.
- 1.5.1 Name the drainage pattern depicted in FIGURE 1.5. (1 x 1) (1)
- 1.5.2 Provide TWO characteristics of this drainage pattern. (2 x 1) (2)
- 1.5.3 How will a rectangular drainage pattern differ from the pattern mentioned in QUESTION 1.5.1? (2 x 2) (4)

- 1.5.4 Refer to the drainage densities of the drainage patterns **A** and **B**.
- (a) What is *drainage density*? (1 x 1) (1)
 - (b) Does drainage basin **A** or **B** have a higher drainage density? (1 x 1) (1)
 - (c) Name TWO ways in which the density of drainage basins can be determined. (2 x 1) (2)
 - (d) Explain how the underlying rock resistance may have influenced the difference in drainage density between **A** and **B**. (2 x 2) (4)
- 1.6 Refer to the CASE STUDY in FIGURE 1.6 on priority issues for catchment management in South Africa.
- 1.6.1 Name the international non-governmental organisation working with the South African government on catchment management programs. (1 x 1) (1)
 - 1.6.2 Why is the preservation of wetlands so important in the management of catchment areas? (1 x 2) (2)
 - 1.6.3 Provide TWO management programs from the case study that aim to improve catchment management. (2 x 2) (4)
 - 1.6.4 In a paragraph of approximately EIGHT lines, propose sustainable strategies to the Department of Water Affairs, for the improvement in the supply and quality of water in South Africa. (4 x 2) (8)
- [75]**

QUESTION 2

- 2.1 Refer to FIGURE 2.1 showing the development of a berg wind. Choose ONE term in brackets to make each of the following statements TRUE. Write only the correct word next to the number (2.1.1–2.1.7).
- 2.1.1 The pressure system labelled **A** is the (South Atlantic / Kalahari) High.
- 2.1.2 The circulation at **A** is associated with a spiralling (anticlockwise / clockwise) movement of air.
- 2.1.3 The low pressure system labelled **B** is a (coastal low / mid-latitude cyclone).
- 2.1.4 The wind direction at **C** is (north west / north east).
- 2.1.5 The type of weather system that forms after the berg wind, is a (tropical/ mid-latitude) cyclone.
- 2.1.6 The high temperature range experienced at station model **X**, is caused by (onshore / off shore) winds.
- 2.1.7 As the air descends down the plateau, it will warm up adiabatically at approximately (0,5 °C for each 100 m / 1 °C for each 100 m). (7 x 1) (7)
- 2.2 Refer to FIGURE 2.2. Various options are provided as possible answers to the following questions. Choose the correct answer and write only the letter (A–D) next to the question number (2.2.1–2.2.8), for example 2.2.9 D.
- 2.2.1 The ... represents the different stages of the river.
- A longitudinal profile
B vertical profile
C cross-section profile
D top view
- 2.2.2 An oxbow lake is most likely to be present in the ...
- A middle course.
B lower course.
C medium course.
D upper course.
- 2.2.3 The cross sections **F**, **G** and **H** are best labelled as ... courses respectively.
- A lower, middle, upper
B lower, upper, middle
C upper, lower, middle
D middle, lower, upper
- 2.2.4 In the lower course of the river, the floodplain ...
- A erodes vertically.
B consists of deposited silt.
C is absent.
D increases in tributaries.

2.2.5 A delta is formed in the ... course.

- A upper
- B middle
- C medium
- D lower

2.2.6 Increased velocity of flowing water within a meandering river will form an undercut bank in the ... course.

- A upper
- B middle
- C medium
- D lower

2.2.7 The upper course usually has a ... profile.

- A convex
- B smooth concave
- C multi-concave
- D terraced

2.2.8 A common fluvial landform in the lower course is ...

- A rapids.
- B braided streams.
- C knickpoint waterfalls.
- D interlocking spurs.

(8 x 1) (8)

2.3 Refer to FIGURE 2.3 showing lines that represent the temperatures of the city of London and surrounding areas.

2.3.1 Identify the lines depicted in FIGURE 2.3. (1 x 1) (1)

2.3.2 Calculate the difference in temperature between Edgware and the city. (1 x 1) (1)

2.3.3 What term is used to describe the high temperatures over the city? (1 x 1) (1)

2.3.4 Explain the reason for the use of the term mentioned in QUESTION 2.3.3. (1 x 2) (2)

2.3.5 Discuss THREE reasons for the occurrence of the climatic phenomenon mentioned in QUESTION 2.3.3. (3 x 2) (6)

2.3.6 Evaluate the impact of the **R. Thames** (river) on the temperatures of the city. (2 x 2) (4)

2.4 FIGURE 2.4 is a diagram showing an inversion layer affecting a valley.

- 2.4.1 What is a *temperature inversion*? (1 x 1) (1)
- 2.4.2 Name the type of precipitation that occurs when the trapped smoke and fog mixes. (1 x 2) (2)
- 2.4.3 Study the graph and comment on the changes in temperature with altitude. (2 x 2) (4)
- 2.4.4 In a paragraph of approximately EIGHT lines discuss how the inversion layer impacts on human activity in the valley. (4 x 2) (8)

2.5 Refer to FIGURE 2.5 which demonstrates the process of river capture.

- 2.5.1 What is *river capture*? (1 x 1) (1)
- 2.5.2 How would you describe the difference in topography (height) of the rivers at **A** and **B**? (1 + 1) (2)
- 2.5.3 Explain how the difference in topography (height) contributed to river capture. (2 x 2) (4)
- 2.5.4 Determine the positive impact of river capture on subsistence farming activities at **C**. (2 x 2) (4)
- 2.5.5 Explain the effect of river capture on the aquatic life of stream **D**. (2 x 2) (4)

2.6 Refer to FIGURE 2.6 showing river terraces along a river.

- 2.6.1 Are terraces associated with *superimposed drainage patterns* or *antecedent drainage patterns*? (1 x 1) (1)
- 2.6.2 Are terraces **A** *paired* or *unpaired*? (1 x 1) (1)
- 2.6.3 Give a reason for your answer to QUESTION 2.6.2. (1 x 1) (1)
- 2.6.4 Explain how river rejuvenation results in the formation of river terraces. (2 x 2) (4)
- 2.6.5 In a paragraph of approximately EIGHT lines, comment on the impact of river terraces on human activities. (4 x 2) (8)

[75]

SECTION B: RURAL AND URBAN SETTLEMENTS**QUESTION 3**

- 3.1 Choose a term from COLUMN B that matches the description in COLUMN A. Write only the letter (A–I) next to the question number (3.1.1–3.1.8), for example 3.1.9 J.

COLUMN A		COLUMN B	
3.1.1	A grouping of people, activities, building structures and communication networks that function as a single integrated system	A	pattern
3.1.2	The distribution of buildings in a settlement in relation to each other, irrespective of the environment	B	function
3.1.3	The detailed appearance of an individual settlement with respect to its shape and arrangement of buildings	C	internal structure
3.1.4	The exact physical land on which settlements are built	D	nucleated
3.1.5	Where buildings are usually close to one another	E	site
3.1.6	The fundamental difference between a rural and an urban settlement	F	settlement
3.1.7	The place where lack of social life is a disadvantage for the inhabitants.	G	situation
3.1.8	The relationship between a settlement and its immediate surroundings e.g. general relief or transport routes	H	shape
		I	dispersed

(8 x 1) (8)

3.2 Study FIGURE 3.2, showing urbanisation and urban growth in Africa.

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 (3.2.1–3.2.7) in the ANSWER BOOK, for example 3.2.8 A.

3.2.1 The process by which an increasing percentage of the total population is accommodated in the urban area is referred to as ...

- A urban growth.
- B urban expansion.
- C urbanisation.
- D urban sprawl.

3.2.2 The percentage of the total population living in urban settlements at any given time is referred to as the ...

- A settlement percentile.
- B rate of urbanisation.
- C rate of depopulation.
- D level of urbanisation.

3.2.3 The predicted increase in percentage of people living in the urban area between 2016 and 2040 is ... %.

- A 02
- B 40
- C 13
- C 53

3.2.4 The total number of people living in urban areas in 2016 was ... million people.

- A 488
- B 563
- C 732
- D 791

3.2.5 The current (2018) predicted population in Africa that are living in urban areas is approximately ... million people.

- A below 488
- B above 563
- C between 520 and 530
- D 791

3.2.6 A major effect of urban growth that is likely to be experienced in 2050 will be a/an ...

- A shortage of housing.
- B decrease in population.
- C increase in food security.
- D increase in biodiversity.

3.2.7 In which year will half of Africa's population be living in urban areas?

- A 2035
- B 2020
- C 2040
- D 2050

(7 x 1) (7)

3.3 Refer to FIGURE 3.3, a photograph showing a settlement in KwaZulu-Natal.

3.3.1 Is the settlement in the photograph a *rural* or *urban* settlement? (1 x 1) (1)

3.3.2 State the pattern of distribution evident in this settlement. (1 x 1) (1)

3.3.3 Classify the settlement identified in QUESTION 3.3.1 according to its size/complexity. (1 x 1) (1)

3.3.4 Name and explain ONE physical factor that influenced the site of this settlement. (2 x 2) (4)

3.3.5 How has culture and tradition influenced the farming practices of this settlement? (2 x 2) (4)

3.3.6 Explain how the reduction of cultivated land would impact on the rate of rural depopulation in the depicted settlement. (2 x 2) (4)

3.4 Refer to FIGURE 3.4, illustrating a rural process.

3.4.1 Identify the process indicated by the **Movement of people**. (1 x 1) (1)

3.4.2 Name a possible social pull factor that may have caused this **Movement of people**. (1 x 1) (1)

3.4.3 Rural depopulation is a consequence of this process mentioned in QUESTION 3.4.1.

(a) Define the term *rural depopulation*. (1 x 1) (1)

(b) How will this depopulation affect local businesses in this area? (2 x 2) (4)

3.4.4 The family at **A** expect to have a better future by moving to the indicated area. In a paragraph of approximately EIGHT lines, discuss the positive impact on the future standard of living of this family. (4 x 2) (8)

3.5 Study FIGURE 3.5 which illustrates services offered in urban areas.

- 3.5.1 Using the photograph, name any TWO goods being sold in this market. (2 x 1) (2)
- 3.5.2 Determine if the goods being sold by traders are *high order goods* or *low order goods*. (1 x 1) (1)
- 3.5.3 Give a reason for your answer to QUESTION 3.5.2. (1 x 2) (2)
- 3.5.4 Why would the cost of goods (ANSWER to QUESTION 3.5.1) be low? (1 x 2) (2)
- 3.5.5 Comment on the threshold population for the type of goods being sold. (1 x 2) (2)
- 3.5.6 The goods being sold are mostly traded in the CBD. Why would determining a range for the goods be difficult? (3 x 2) (6)

3.6 Study FIGURE 3.6 on an issue related to rapid urbanisation.

- 3.6.1 Identify the issue related to rapid urbanisation. (1 x 1) (1)
- 3.6.2 What is the relationship between landownership in residential urban settlements and the wealthy? (1 x 2) (2)
- 3.6.3 Use the cartoon to suggest TWO probable (most likely) challenges experienced by families in residential urban settlements. (2 x 2) (4)
- 3.6.4 Write a paragraph of approximately EIGHT lines to discuss ways in which the Department of Human Settlements can improve the challenges (suggested in QUESTION 3.6.3) of rapid urbanisation in residential urban settlements. (4 x 2) (8)

[75]

TOTAL: 225

