



basic education

Department:
Basic Education
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NATIONAL SENIOR CERTIFICATE

GRADE 12

GEOGRAPHY P1

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MARKS: 300

TIME: 3 hours

This question paper consists of 14 pages and a 17-page annexure.

INSTRUCTIONS AND INFORMATION

1. The question paper consists of FOUR questions.
2. Answer ANY THREE questions of 100 marks each.
3. ALL diagrams are included in the ANNEXURE.
4. Number ALL your answers in the CENTRE of the line.
5. Leave a line open between subsections of questions answered.
6. Start each question at the top of a NEW page.
7. Number the answers correctly according to the numbering system used in this question paper.
8. Do NOT write in the margins of your ANSWER BOOK.
9. ENCIRCLE the numbers of the questions that you have answered on the front page of your ANSWER BOOK.
10. Where possible, illustrate your answers with labelled diagrams.
11. Write clearly and legibly.

SECTION A: CLIMATE AND WEATHER, FLUVIAL PROCESSES AND STRUCTURAL LANDFORMS

Answer at least ONE question from this section.

QUESTION 1

1.1 Refer to FIGURE 1.1 showing global pressure belts and winds. Various options are given as possible answers to the following questions. Choose the answer and write only the letter (A – D) next to the question number (1.1.1 – 1.1.5) in the ANSWER BOOK, for example 1.1.6 A.

1.1.1 FIGURE 1.1 illustrates ... circulation.

- A primary
- B secondary
- C tertiary
- D upper atmospheric

1.1.2 Convergence occurs in this area to form the ITCZ:

- A **W**
- B **X**
- C **Y**
- D **Z**

1.1.3 The westerlies and polar winds converge here to form the polar front:

- A **W**
- B **X**
- C **Y**
- D **Z**

1.1.4 The northwesterlies diverge from this pressure belt:

- A **W**
- B **X**
- C **Y**
- D **Z**

1.1.5 This area is associated with the origin of the polar easterlies:

- A **W**
- B **X**
- C **Y**
- D **Z**

(5 x 2) (10)

1.2 Refer to FIGURE 1.2 showing a river system. Complete the following by filling in the missing word(s). Choose from the list below and write only the word(s) next to the question number (1.2.1 – 1.2.5) in the ANSWER BOOK.

confluence; source; interfluve; catchment; dendritic; river mouth; trellis; watershed

1.2.1 ...	A area of a drainage basin which supplies a river with water
1.2.2 ...	B point where two or more streams meet
1.2.3 ...	C high-lying area that separates two streams within the same drainage basin
1.2.4 ...	D high-lying area forming the boundary of a drainage basin
1.2.5 ...	E drainage pattern that has developed at E

(5 x 2) (10)

1.3 Study the information on tropical cyclone Fanele in FIGURE 1.3 before answering the questions below.

- 1.3.1 State ONE condition that would have favoured the initial development of tropical cyclone Fanele. (1 x 2) (2)
- 1.3.2 Give ONE piece of evidence from the satellite image to suggest that tropical cyclone Fanele is in its mature stage. (1 x 2) (2)
- 1.3.3 Why does tropical cyclone Fanele generally move from east to west? (1 x 2) (2)
- 1.3.4 Explain why tropical cyclone Fanele weakens when it moves over the southern highlands of Madagascar. (2 x 2) (4)
- 1.3.5 What was the duration of tropical cyclone Fanele? (1 x 2) (2)
- 1.3.6 Give TWO reasons why the impact of tropical cyclones on human life is more severe in developing than in developed countries. (2 x 2) (4)

1.4 Refer to the source material in FIGURE 1.4 based on the climate summit held in Copenhagen.

- 1.4.1 Name the greenhouse gas being emitted into the urban environment in Cartoon A. (1 x 2) (2)
- 1.4.2 Besides industrial activity, explain TWO other factors that contribute to high temperatures in urban environments. (2 x 2) (4)
- 1.4.3 Identify the greenhouse gas, associated with farming activities (Cartoon B), that is emitted into the atmosphere. (1 x 2) (2)

- 1.4.4 More severe flooding is an indirect result of increased greenhouse gases in the atmosphere. Name TWO negative effects of flooding on farming activities. (2 x 2) (4)
- 1.4.5 Environmental groups were not happy with the decisions taken in respect of global warming at the Copenhagen Accord/Summit. With reference to Cartoon **D**, write a single paragraph (no longer than 12 lines), discussing possible solutions that delegates from developing countries could have proposed to reduce global warming. (6 x 2) (12)
- 1.5 FIGURE 1.5 contains information on a type of mass movement (mudslide).
- 1.5.1 What evidence in the sketch indicates that a mudslide has occurred? (1 x 2) (2)
- 1.5.2 How was typhoon Morakot responsible for triggering the mudslide in Taiwan? (1 x 2) (2)
- 1.5.3 State the economic impact of mass movements on small villages like the one in Taiwan. (2 x 2) (4)
- 1.5.4 Suggest TWO ways in which humans are responsible for causing mass movements. (2 x 2) (4)
- 1.5.5 Explain any TWO precautionary measures (methods) that people should adopt (put in place) before using slopes for development. (2 x 2) (4)
- 1.6 Refer to FIGURE 1.6 which shows a river system and its flow hydrograph.
- 1.6.1 What is a *river system*? (1 x 2) (2)
- 1.6.2 Explain how the following factors influence the amount of water (discharge) that flows in the stream:
- (a) Impermeable bedrock (1 x 2) (2)
- (b) Dense vegetation (1 x 2) (2)
- 1.6.3 Determine the stream order at point **X** where the stream flows out of the drainage basin. (1 x 2) (2)
- 1.6.4 What evidence suggests that this is a superimposed stream? (1 x 2) (2)
- 1.6.5 State the lag time on the flow hydrograph. (1 x 2) (2)
- 1.6.6 The proposed development of a new urban settlement along the stream would influence the flow characteristics of the stream. Write a single paragraph (no longer than 12 lines) describing, with reasons, how the proposed urban development along the stream will change the lag time and the flood peak indicated on the flow hydrograph. (6 x 2) (12)

[100]

QUESTION 2

- 2.1 Refer to FIGURE 2.1 showing the tri-cellular arrangement of atmospheric circulation. Match each statement below with the Hadley/tropical, Ferrel/mid-latitude or polar cell.
- 2.1.1 Convergence of surface air causes uplift along the equator.
- 2.1.2 Occurs between 60° – 90° N of the equator.
- 2.1.3 Air in the upper atmosphere is heated as it moves towards the equator.
- 2.1.4 This is a heat-generated cell of circulation.
- 2.1.5 Develops on the northern side of the polar front. (5 x 2) (10)
- 2.2 Study FIGURE 2.2 showing a photograph of a section of a river. Various options are given as possible answers to the following questions. Choose the answer and write only the letter (A – D) next to the question number (2.2.1 – 2.2.5) in the ANSWER BOOK, for example 2.2.6 A..
- 2.2.1 The feature labelled **Y** is a/an ...
- A undercut slope.
 - B slip-off slope.
 - C ox-bow lake.
 - D dip slope.
- 2.2.2 The section of the river shown in the photograph is in its ... course.
- A upper
 - B middle
 - C lower
 - D base
- 2.2.3 During a flood the river is likely to break through at point **Z**, resulting in the formation of a/an ...
- A rapid.
 - B ox-bow lake.
 - C meander.
 - D floodplain.
- 2.2.4 The river shown in this photograph flows throughout the year and is therefore referred to as ...
- A episodic.
 - B permanent/perennial.
 - C seasonal.
 - D periodic.

- 2.2.5 The river shown in this photograph displays a ... stream channel pattern.
- A dendritic
B braided
C rock-controlled
D meandering (5 x 2) (10)
- 2.3 Refer to the synoptic weather map in FIGURE 2.3 and answer the questions below.
- 2.3.1 Identify the low pressure cell labelled **A**. (1 x 2) (2)
- 2.3.2 Indicate why the surface winds that diverge out of cell **B** are dry and cold. (1 x 2) (2)
- 2.3.3 Which of the mid-latitude cyclones, labelled **C** and **D**, originated first? (1 x 2) (2)
- 2.3.4 Give ONE reason for your answer to QUESTION 2.3.3. (1 x 2) (2)
- 2.3.5 Give the term used to describe a series of mid-latitude cyclones passing over an area in quick succession. (1 x 2) (2)
- 2.3.6 Name TWO effects of mid-latitude cyclones on farming in the Southwestern Cape. (2 x 2) (4)
- 2.3.7 What will happen to low-pressure cell **A** if mid-latitude cyclone **C** moves further eastwards? (1 x 2) (2)
- 2.4 Refer to FIGURE 2.4 showing the development of the South African berg wind. Strong subsidence over the plateau of South Africa results in a well developed high-pressure cell over the interior that will result in specific weather conditions there.
- 2.4.1 Name the high-pressure cell visible in FIGURE 2.4, that results from subsidence over the plateau. (1 x 2) (2)
- 2.4.2 How does the berg wind affect the weather along the southeast coast of South Africa? (2 x 2) (4)
- 2.4.3 Name the environmental hazard associated with the development of berg winds. (1 x 2) (2)
- 2.4.4 State ONE possible measure that can be introduced to reduce the impact of the environmental hazard named in QUESTION 2.4.3 (1 x 2) (2)
- 2.4.5 During which season do berg winds mainly affect the weather along the southeast coast of South Africa? (1 x 2) (2)

- 2.4.6 The high-pressure cell over the interior can result in drought which is a common climatic hazard in large parts of South Africa. Write a single paragraph (no more than 12 lines) in which you evaluate the effects of droughts in South Africa. In your answer refer to the environment and economic activities. (6 x 2) (12)
- 2.5 FIGURE 2.5 illustrates a structural landscape typically found in the Karoo.
- 2.5.1 Identify landforms **P** and **Q** respectively. (2 x 2) (4)
- 2.5.2 What evidence in FIGURE 2.5 suggests that landforms **P** and **Q** developed from the same landform that existed earlier? (1 x 2) (2)
- 2.5.3 Which rock type in FIGURE 2.5 is the most resistant to erosion? (1 x 2) (2)
- 2.5.4 Give ONE reason for your answer to QUESTION 2.5.3. (1 x 2) (2)
- 2.5.5 Briefly describe how landform **P** will change into landform **Q**. (3 x 2) (6)
- 2.6 FIGURE 2.6 illustrates the concept of river capture/stream piracy.
- 2.6.1 Name ONE factor which could have resulted in the Berg River eroding through the watershed to capture the Kort River. (1 x 2) (2)
- 2.6.2 Name TWO features of river capture that could develop at point **X**. (2 x 2) (4)
- 2.6.3 Why is the beheaded stream (Kort River) in sketch **B** referred to as a misfit stream? (1 x 2) (2)
- 2.6.4 Name TWO effects that river capture has on the captor stream (Berg River) in sketch **B**. (2 x 2) (4)
- 2.6.5 Write a single paragraph (no more than 12 lines) presenting a detailed report on how river capture influences human activities along the Kort and the Berg Rivers respectively. (6 x 2) (12)
- [100]**

SECTION B: PEOPLE AND PLACES: RURAL AND URBAN SETTLEMENTS, PEOPLE AND THEIR NEEDS

Answer at least ONE question from this section.

QUESTION 3

3.1 Refer to FIGURE 3.1 illustrating settlement patterns. Indicate whether the following statements are TRUE or FALSE. Choose the answer and write down only 'true' or 'false' next to the question number (3.1.1 – 3.1.5) in the ANSWER BOOK.

3.1.1 FIGURE 3.1 illustrates urban settlements.

3.1.2 **C** developed a linear shape.

3.1.3 **B** represents isolated farmsteads.

3.1.4 **A** shows a dispersed/isolated pattern.

3.1.5 **D** shows a randomly dispersed pattern. (5 x 2) (10)

3.2 Choose a statement from COLUMN B that matches a term from COLUMN A. Write down only the letter (A – G) next to the question number (3.2.1 – 3.2.5) in the ANSWER BOOK, for example 3.2.6 H.

COLUMN A		COLUMN B
3.2.1	Gross domestic product	A value added to raw materials
3.2.2	Tertiary activity	B company which has outlets/shops in different countries
3.2.3	Informal sector	C provision of services
3.2.4	Balance of trade	D value of all goods and services produced in a country in one year
3.2.5	Multi-national corporation	E value of all finished goods and services produced by a country's permanent inhabitants in one year
		F the trade involving businesses not registered with the government and occupying premises illegally
		G the difference in value between a country's imports and exports

(5 x 2) (10)

- 3.3 Rapid urban expansion has had a major impact (influence) on large cities in South Africa. Refer to FIGURE 3.3 based on the process of urbanisation.
- 3.3.1 Define the term *urban expansion*. (1 x 2) (2)
- 3.3.2 What message is the cartoonist trying to convey (get across) to us about the expansion of cities? (1 x 2) (2)
- 3.3.3 What do you understand by the term *megalopolis*? (1 x 2) (2)
- 3.3.4 Give the geographical term used to describe the uncontrolled expansion of a residential area on the outskirts of an urban area. (1 x 2) (2)
- 3.3.5 State TWO challenges that city councils experience with regard to the expansion of cities. (2 x 2) (4)
- 3.3.6 Suggest TWO environmentally-friendly measures to prevent uncontrolled urban expansion. (2 x 2) (4)
- 3.4 Refer to FIGURE 3.4 showing the cycle of rural decay which also occurs in the South African landscape. This often results in rural-urban migration resulting in specific problems for rural areas.
- 3.4.1 Define the term *rural-urban migration*. (1 x 2) (2)
- 3.4.2 Name TWO push factors that may result in rural-urban migration. (2 x 2) (4)
- 3.4.3 Discuss THREE consequences (results) of rural-urban migration for the South African rural community. (3 x 2) (6)
- 3.4.4 Write a single paragraph (no more than 12 lines) in which you discuss sustainable strategies that can be used to manage South Africa's declining rural settlements. (6 x 2) (12)
- 3.5 Refer to FIGURE 3.5 showing South Africa's largest industrial region.
- 3.5.1 Identify the industrial region shown in FIGURE 3.5. (1 x 2) (2)
- 3.5.2 Name any ONE of the dominant industrial activities found in the industrial region mentioned in QUESTION 3.5.1. (1 x 2) (2)
- 3.5.3 Discuss any THREE factors that favoured industrial development in the industrial region illustrated in FIGURE 3.5. (3 x 2) (6)
- 3.5.4 Discuss THREE problems associated with industrial development in the industrial region illustrated in FIGURE 3.5. (3 x 2) (6)

- 3.6 Read the extract in FIGURE 3.6 before answering the following questions.
- 3.6.1 What is a *bi-national construction project*? (1 x 2) (2)
- 3.6.2 Define the term *water-transfer scheme*. (1 x 2) (2)
- 3.6.3 With reference to the water resources of South Africa, give TWO reasons why the country initiated (started) the development of the Lesotho Highlands Water Project. (2 x 2) (4)
- 3.6.4 With reference to the quality of life of the people of Lesotho, evaluate TWO possible injustices (problems) associated with the development of the Lesotho Highlands Water Project. (2 x 2) (4)
- 3.6.5 Despite the above-mentioned injustices, both Lesotho and South Africa gained from the development of the Lesotho Highland Water Project. Write a single paragraph (no more than 12 lines) to discuss the advantages of the Lesotho Highlands Water project for both Lesotho and South Africa. (6 x 2) (12)
- [100]**

QUESTION 4

- 4.1 Refer to FIGURE 4.1 illustrating the population of urban centres and the number of functions they offer. Indicate whether the following statements are TRUE or FALSE. Choose the answer and write down only 'true' or 'false' next to the question number (4.1.1 – 4.1.5) in the ANSWER BOOK.
- 4.1.1 The larger the urban centre, the fewer the urban functions offered.
- 4.1.2 Urban centres **C** and **D** are central places.
- 4.1.3 The urban centres at **E** have a larger sphere of influence than the urban centres at **B**.
- 4.1.4 The urban centres at **E** have a larger range than the urban centres at **F**.
- 4.1.5 The urban centre at **A** provides mainly low-order service functions. (5 x 2) (10)

- 4.2 Various options are given as possible answers to the following questions. Choose the answer and write only the letter (A – D) next to the question number (4.2.1 – 4.2.5) in the ANSWER BOOK, for example 4.4.6 A.
- 4.2.1 An industry will locate close to the raw material if ...
- A the raw material loses much of its weight during processing.
 - B the raw material gains more weight during processing.
 - C it is easier to transport the raw material than the final product.
 - D it is less expensive to transport the raw material than the final product.
- 4.2.2 Industries that are not strongly affected by locational factors are known as ... industries.
- A market-orientated
 - B raw-material orientated
 - C footloose
 - D bridge
- 4.2.3 A cash crop is a crop that ...
- A requires a lot of money to cultivate.
 - B is cultivated mainly for sale.
 - C is cultivated mainly for own use.
 - D can only be grown in rich countries.
- 4.2.4 The following development programme focused mainly on social aspects of development in South Africa:
- A SDI
 - B IDZ
 - C GEAR
 - D RDP
- 4.2.5 The provision of transport is a ... economic activity.
- A primary
 - B secondary
 - C tertiary
 - D quaternary
- (5 x 2) (10)
- 4.3 Refer to FIGURE 4.3 showing the various land-use zones found in a city. Compatibility can play a role in the location of certain land-use zones.
- 4.3.1 Define the term *land-use zone*. (1 x 2) (2)
- 4.3.2 Which land-use zone takes up the most space in a city? (1 x 2) (2)
- 4.3.3 What does the term *compatibility of land-use zones* mean? (1 x 2) (2)

- 4.3.4 Name TWO land-use zones in FIGURE 4.3 that are not compatible. (2 x 2) (4)
- 4.3.5 Give reasons why the two land-use zones mentioned in QUESTION 4.3.4 are not compatible. (3 x 2) (6)
- 4.4 Refer to FIGURE 4.4 showing some of the injustices/problems experienced in an expanding urban settlement. These injustices/problems are also typical of many South African cities.
- 4.4.1 Name ONE social injustice and ONE environmental injustice, visible in FIGURE 4.4, which is typical of South African cities. (2 x 2) (4)
- 4.4.2 Give ONE possible cause of EACH of the injustices that you mentioned in QUESTION 4.4.1. (2 x 2) (4)
- 4.4.3 Explain why municipal bylaws (laws introduced by the local municipality) can be regarded as both an advantage and a disadvantage in cities. (2 x 2) (4)
- 4.4.4 With reference to FIGURE 4.4, write a single paragraph (no longer than 12 lines) and discuss possible sustainable strategies/solutions to some of the problems visible in FIGURE 4.4. (6 x 2) (12)
- 4.5 2010 has been a historic year for South Africa due to the hosting of the Soccer World Cup. Refer to FIGURE 4.5 which captures a small part of the build-up process to this event, namely the manufacturing of soccer balls. The manufacturing of soccer balls in countries far away from where they are used, is an example of globalisation.
- 4.5.1 Define the term *globalisation*. (1 x 2) (2)
- 4.5.2 Give TWO reasons why this multinational corporation uses less developed countries to produce their soccer balls. (2 x 2) (4)
- 4.5.3 Explain how the hosting of the Soccer World Cup has promoted globalisation in South Africa. (3 x 2) (6)
- 4.5.4 Give TWO reasons, from the passage, to prove that Omar is exploited as a worker. (2 x 2) (4)
- 4.6 Read the extract below before answering the questions that follow.

The right of access to food is included in section 27 of the South African Constitution. The Constitution obliges the state to provide legislation and other supporting measures to ensure that all citizens are able to meet their basic food needs. The strategic framework for action to achieve food security was first outlined in the RDP in 1994 which identified food security as a basic human need. In 2000 the cabinet decided to launch an updated national food security strategy to streamline, harmonise and integrate diverse food security sub-programmes in South Africa into the Integrated Food Security Strategy.

4.6.1	Define the term <i>food security</i> .	(1 x 2)	(2)
4.6.2	What does the abbreviation RDP stand for?	(1 x 2)	(2)
4.6.3	Name TWO factors that contribute to food insecurity in South Africa.	(2 x 2)	(4)
4.6.4	Briefly discuss the role that genetically modified food could play in ensuring food security in South Africa.	(2 x 2)	(4)
4.6.5	Write a single paragraph (no longer than 12 lines) and name possible strategies that have been implemented and that could still be implemented to prevent food insecurity in southern Africa.	(6 x 2)	(12)
			[100]
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