basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 12

GEOGRAPHY P1

NOVEMBER 2012

MARKS: 300

TIME: 3 hours

This question paper consists of 12 pages and a 12-page annexure.

INSTRUCTIONS AND INFORMATION

1. This question paper consists of FOUR questions.
2. Answer ANY THREE questions of 100 marks each.
3. **For the paragraph style question you may refer to ONE idea which you must discuss in depth OR to different ideas which you must discuss in less depth.**
4. ALL diagrams are included in the ANNEXURE.
5. Number ALL your answers in the CENTRE of the line.
6. Leave a line between subsections of questions answered.
7. Start each question at the top of a NEW page.
8. Number the answers correctly according to the numbering system used in this question paper.
9. Do NOT write in the margins of your ANSWER BOOK.
10. ENCIRCLE the numbers of the questions that you have answered on the front page of your ANSWER BOOK.
11. Where possible, illustrate your answers with labelled diagrams.
12. 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 which shows how temperatures over a city and its surrounding areas differ. This is an example of microclimate.

1.1.1 Give the concept used to describe the condition shown in FIGURE 1.1. (1 x 2) (2)

1.1.2 State the approximate surface temperature being experienced over the city centre. (1 x 2) (2)

1.1.3 Choose the correct word from those given in brackets. Write only the word next to the question number (1.1.3(a)–1.1.3(c)) in your ANSWER BOOK.

(a) Temperature (decreases/increases) outwards from **A**.

(b) Temperature (decreases/increases) upwards from **A** at night.

(c) Pollution (decreases/increases) the temperature at **A**. (3 x 2) (6)

1.2 Refer to FIGURE 1.2 showing a river and its tributaries and answer the questions that follow.

1.2.1 Give the concept used to describe an area drained by a main river and tributaries, as indicated in FIGURE 1.2. (1 x 2) (2)

1.2.2 Name the drainage pattern shown in the sketch. (1 x 2) (2)

1.2.3 What is the term used to describe where the river flows into the ocean as indicated by the letter **A**? (1 x 2) (2)

1.2.4 Which letter indicates a tributary? (1 x 2) (2)

1.2.5 Give the term used to describe a high-lying area that separates two streams in the same drainage basin, as indicated by the letter **C**. (1 x 2) (2)

1.3 Study the synoptic weather map (FIGURE 1.3) and answer the questions that follow.

1.3.1 Identify the low-pressure system labelled **A**. (1 x 2) (2)

1.3.2 Explain why pressure system **A** is referred to as a low-pressure cell. (1 x 2) (2)

1.3.3 What evidence is there on the map that it is winter? (2 x 2) (4)

1.3.4 Why are the weather conditions being experienced along the east coast of South Africa ideal for outdoor activities? (1 x 2) (2)

1.3.5 Give a reason for the overcast conditions at Marion Island. (1 x 2) (2)

1.3.6 Refer to weather system **B**.

(a) State ONE way in which it is likely to affect the weather of Cape Town in the next 24 hours. (1 x 2) (2)

(b) Why do these cyclones generally move in an easterly direction? (1 x 2) (2)

(c) Comment on the impact that these cyclones will have on tourism in the South-western Cape. (1 x 2) (2)

1.4 Refer to the newspaper article (FIGURE 1.4) titled 'SA's penguins on thin ice', and answer the questions that follow.

1.4.1 What does *global climate change* mean? (1 x 2) (2)

1.4.2 Give ONE reason for the rise in sea temperatures. (1 x 2) (2)

1.4.3 Besides the rise in temperature, state TWO factors identified by scientists as reasons for the decreasing penguin numbers. (2 x 2) (4)

1.4.4 The impact of climate change is a concern for all living in Southern Africa. In approximately 12 lines, suggest some measures that need to be put in place to address this problem. (6 x 2) (12)

1.5 Refer to FIGURE 1.5 illustrating river capture.

1.5.1 Define the term *river capture*. (1 x 2) (2)

1.5.2 River **C** is involved in active headward erosion.

(a) What does *headward erosion* mean? (1 x 2) (2)

(b) Give a possible reason for headward erosion taking place. (1 x 2) (2)

1.5.3 Will river capture impact on the flow characteristics of river **B** at its source? (1 x 2) (2)

1.5.4 Name the features labelled **D** and **E** that result from river capture. (2 x 2) (4)

1.5.5 River capture brings about changes in both captor and captured streams. Explain (approximately 12 lines) some of the physical changes that will occur in captor and captured rivers respectively. (6 x 2) (12)

1.6 Refer to FIGURE 1.6 which shows a river profile and answer the questions that follow.

1.6.1 What type of river profile is shown here? (1 x 2) (2)

1.6.2 Name TWO dimensions (shapes) of a river that can be seen in the illustrated river profile. (2 x 2) (4)

1.6.3 Name the dominant (main) type of erosion taking place in the river valley. (1 x 2) (2)

1.6.4 The river valley shows evidence of rejuvenation.

(a) What does *rejuvenation* mean? (1 x 2) (2)

(b) Give TWO pieces of evidence from FIGURE 1.6 to support the statement that rejuvenation has occurred. (2 x 2) (4)

1.6.5 Explain how and why the dimensions (shapes) of the river valley, illustrated in FIGURE 1.6, will change once rejuvenation occurs. (2 x 2) (4)

[100]

QUESTION 2

2.1 Refer to FIGURE 2.1 that shows factors that influence the weather and climate of South Africa. Complete the following sentences by filling in the missing word. Write down the word next to the question number (2.1.1–2.1.5).

2.1.1 The … ocean current keeps the east coast of South Africa warmer than the west coast.

2.1.2 The … causes places in the interior of the country to experience lower temperatures due to its higher altitude.

2.1.3 The position of South Africa in terms of its … generally results in stable conditions.

2.1.4 The steep slopes of the … prevent moisture from reaching the interior in winter.

2.1.5 The … ocean current contributes to dry, arid conditions along the west coast of South Africa. (5 x 2) (10)

2.2 Study FIGURE 2.2 which represents a typical slope. Match the statements below with the labels on the diagram.

2.2.1 This slope element is convex.

2.2.2 Rills and gullies are common on this slope.

2.2.3 Soil creep is common on this slope element.

2.2.4 This slope element is referred to as a constant slope.

2.2.5 The slope element is vertical. (5 x 2) (10)

2.3 Study FIGURE 2.3 which shows the frequency of occurrence of tropical cyclones.

2.3.1 Name the ocean with the highest number of tropical cyclones. (1 x 2) (2)

2.3.2 Explain why there is a lack of tropical cyclones along the equator (zero degree latitude). (1 x 2) (2)

2.3.3 What is the relationship between the occurrence of tropical cyclones and a sea temperature that exceeds 26,5 °C? (1 x 2) (2)

2.3.4 Give TWO reasons why tropical cyclones do not occur in the area marked **A**. (2 x 2) (4)

2.3.5 Explain why tropical cyclones dissipate when they move overland. (2 x 2) (4)

2.3.6 State the impact that these tropical cyclones will have on the economy of countries that lie in their path. (3 x 2) (6)

2.4 Refer to FIGURE 2.4 that is a cartoon about drought.

2.4.1 Explain the term *drought*. (1 x 2) (2)

2.4.2 What is the message of the statement: 'We won't be able to grow to this size anymore'? (2 x 2) (4)

2.4.3 Why is maize farming especially risky for small-scale (subsistence) farmers? (1 x 2) (2)

2.4.4 Africa urgently needs to address the problem of droughts. Make suggestions (approximately 12 lines) on how to sustainably reduce the impact of droughts. (6 x 2) (12)

2.5 FIGURE 2.5 shows landform features that result from canyon landscapes.

2.5.1 Identify the features labelled **A** and **B**. (2 x 2) (4)

2.5.2 Identify the underlying rock strata of both landforms **A** and **B** on the landscape. (1 x 2) (2)

2.5.3 State ONE difference between features **A** and **B**. (1 x 2) (2)

2.5.4 What is the main process of erosion that takes place at features **A** and **B** respectively? (2 x 2) (4)

2.5.5 Describe ONE characteristic of a canyon landscape evident on the diagram. (1 x 2) (2)

2.5.6 Discuss how the landscape shown in FIGURE 2.5 can be used by humans. You may refer to positive and/or negative impacts. (3 x 2) (6)

2.6 Refer to FIGURE 2.6 which is a cartoon showing river pollution.

2.6.1 Name TWO ways in which an urban area contributes to the pollution of rivers. (2 x 2) (4)

2.6.2 Suggest TWO measures that can be put in place to reduce water pollution from urban areas. (2 x 2) (4)

2.6.3 Write a paragraph (approximately 12 lines) assessing the negative impact that human activities have on rivers. (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 which shows a variety of settlements and land-use zones. Match the letters **A** to **E** in the FIGURE with the descriptions (3.1.1–3.1.5) below.

3.1.1 Informal settlement

3.1.2 Dispersed rural settlement

3.1.3 Traditional settlement

3.1.4 Central Business District (CBD)

3.1.5 Nucleated rural settlement (5 x 2) (10)

3.2 Choose a description from COLUMN B that matches a term in COLUMN A. Write only the letter (A–F) next to the question number (3.2.1–3.2.5) in your ANSWER BOOK.

COLUMN A		COLUMN B
3.2.1	Agglomeration	A developing industries in previously neglected and underdeveloped areas
3.2.2	Industrial decentralisation	
3.2.3	Spatial Development Initiatives (SDIs)	B no barriers to the import and export of goods and services
3.2.4	Free trade	C concentration of industries close to each other
3.2.5	Trade	D the exchange of goods and services for profit
		E industries that move away from core areas
		F industries that are built to encourage economic growth by attracting new investments

(5 x 2) (10)

3.3 Study FIGURE 3.3 which shows land-use in an urban area.

3.3.1 Describe ONE characteristic of the CBD. (1 x 2) (2)

3.3.2 State ONE factor that would have influenced the location of the regional shopping centre. (1 x 2) (2)

3.3.3 Give a brief description of the rural-urban fringe. (1 x 2) (2)

3.3.4 Recreational facilities are commonly found in the rural-urban fringe.

(a) Give evidence from the diagram to support the statement above. (1 x 2) (2)

(b) Why are the recreational facilities mentioned in QUESTION 3.3.4 found in the rural-urban fringe? (2 x 2) (4)

3.3.5 Describe ONE way in which industries located in the rural-urban fringe impact negatively on the environment. (1 x 2) (2)

3.3.6 Discuss TWO plans that the local government (city council) can use to correct the damage caused by these industries. (2 x 2) (4)

3.3.7 Name ONE way in which the green-belt land and the Oak Green Woods Country Park can play a role in the sustainable development of the rural-urban fringe. (1 x 2) (2)

3.4 Refer to TABLE 3.4 showing South Africa's main trading partners in 2010.

3.4.1 Which country is South Africa's main importing partner? (1 x 2) (2)

3.4.2 Which country is South Africa's main exporting partner? (1 x 2) (2)

3.4.3 Explain the term *balance of trade*. (1 x 2) (2)

3.4.4 Did South Africa experience a positive or negative balance of trade in 2010? (1 x 2) (2)

3.4.5 Write a paragraph (approximately 12 lines) and suggest possible ways to improve on the 2010 balance of trade. (6 x 2) (12)

3.5 Refer to the article titled 'Bitter Coffee' in FIGURE 3.5.

3.5.1 Why does Pedro feel so bitter about the profit he makes from planting coffee? (1 x 2) (2)

3.5.2 Who gets the largest share of the profit from the coffee industry? (1 x 2) (2)

3.5.3 Coffee is sold as an unprocessed product from Brazil. Explain how this affects Brazil's economic growth. (2 x 2) (4)

3.5.4 Globalisation has resulted in many developed countries buying cheap resources from developing countries.

(a) What does *globalisation* mean? (1 x 2) (2)

(b) Suggest TWO ways in which globalisation can be disadvantageous for developing countries. (2 x 2) (4)

3.6 Read the newspaper article on food production in FIGURE 3.6.

3.6.1 What does *food insecurity* mean? (1 x 2) (2)

3.6.2 Describe the injustice that is captured in the article. (2 x 2) (4)

3.6.3 In many parts of the world genetically modified crops are seen as a means of increasing food production.

(a) Explain the concept *genetic modification*. (2 x 2) (4)

(b) Discuss TWO advantages of genetic modification. (2 x 2) (4)

3.6.4 The increasing demand for food is a disturbing development. Give a detailed account (approximately 12 lines) as to why many Southern African countries are struggling to meet their food demands. (6 x 2) (12)

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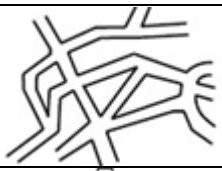
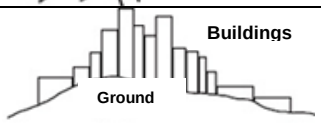
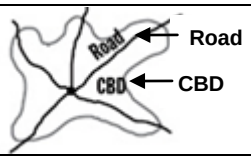
QUESTION 4

4.1 Match the sketches below with the descriptions provided. Write down only the letter (A-F) next to the question number (4.1.1–4.1.5) in your ANSWER BOOK.

SKETCHES	DESCRIPTIONS
4.1.1 	A star-shaped settlement
4.1.2 	B settlements that have a semi-circular shape
4.1.3 	C has many stop streets and robots
4.1.4 	D allows for the smooth flow of traffic
4.1.5 	E urban profile
	F cross-shaped settlement

(5 x 2) (10)

4.2 Choose the correct word(s) from those given in brackets. Write down only the word(s) next to the question number (4.2.1–4.2.5) in your ANSWER BOOK.

4.2.1 (Primary/Secondary) activities refer to the extraction of raw materials from the earth.

4.2.2 (Commercial/Subsistence) farming is concerned with cultivation for domestic use.

4.2.3 The balance of (trade/payment) is the financial statement showing the value of a country's transactions with the rest of the world.

4.2.4 (Quaternary/Tertiary) activities involve high-order services, such as research.

4.2.5 The value of goods and services produced in a country a year is known as the (gross national/gross domestic) product.

(5 x 2) (10)

4.3 Study the table below which illustrates the changing distribution of the world's urban population over the last 60 years.

YEAR	URBAN POPULATION %		TOTAL POPULATION (MILLIONS)
	DEVELOPING COUNTRIES	DEVELOPED COUNTRIES	
1950	38,4	61,6	730
1970	48,1	51,9	1 350
1990	63,4	36,6	2 380
2010 (estimate)	75,1	24,9	3 030

[Source: Google]

4.3.1 (a) Comment on the trend of the urban population percentage for developed countries over the past 60 years. (1 x 2) (2)

(b) Give a possible explanation for the trend mentioned in QUESTION 4.3.1(a). (2 x 2) (4)

4.3.2 What is the term used to describe the trend where an increasing number of people live in urban areas? (1 x 2) (2)

4.3.3 Discuss TWO economic push factors that encourage people to leave rural areas. (2 x 2) (4)

4.3.4 The increase in the urban population percentage in developing countries has created deterioration in city centres (urban blight). In a paragraph (approximately 12 lines) suggest ways in which the local government (city council) can solve the problem. (6 x 2) (12)

4.4 FIGURE 4.4 highlights some of the ways in which pollution occurs on the earth's surface.

4.4.1 Identify ONE cause of air pollution in the diagram. (1 x 2) (2)

4.4.2 Suggest ONE effect of air pollution and its likely impact, evident on the diagram. (2 x 2) (4)

4.4.3 Informal settlements are common on the banks of rivers in South Africa. These informal settlements also contribute to pollution on the earth's surface.

(a) What are *informal settlements*? (1 x 2) (2)

(b) Why do informal settlements develop on the banks of rivers? (1 x 2) (2)

(c) State ONE problem (excluding pollution) that these settlements located on the river banks cause. (1 x 2) (2)

(d) Discuss TWO methods used in South Africa to reduce the number of informal settlements. (2 x 2) (4)

4.5 Refer to FIGURE 4.5 based on the Orange River Project. One of the reasons why this project was developed, was to provide the drought-prone Eastern Cape with more water resources.

4.5.1 Name ONE dam that plays an important role in transferring water from the Orange River to the Eastern Cape. (1 x 2) (2)

4.5.2 Into which river in the Eastern Cape does the water of the Orange River finally flow? (1 x 2) (2)

4.5.3 Discuss the positive impact that the Orange River Project had on economic development in the Eastern Cape. (3 x 2) (6)

4.5.4 The Orange River Project was also developed to slow down rural-urban migration. Explain the role of the Orange River Project in slowing down rural-urban migration. (2 x 2) (4)

4.6 FIGURE 4.6, an article and map, is based on industrial activity in the Durban area.

4.6.1 Most of the industries located close to the harbour are bridge industries. What are *bridge industries*? (1 x 2) (2)

4.6.2 Why can the Durban harbour be described as a break-of-bulk point? (1 x 2) (2)

4.6.3 Why is the location of the industries seen to be a social injustice? (1 x 2) (2)

4.6.4 State why this area is ideal for the location of oil refineries. (1 x 2) (2)

4.6.5 Evaluate the importance of industrial activity for the economy of KwaZulu-Natal. (3 x 2) (6)

4.6.6 The location of industrial areas is influenced by a number of factors. Discuss (in approximately 12 lines) the role of transport and labour in developing Durban as an industrial area. (6 x 2) (12)

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GRAND TOTAL: 300