basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 12

GEOGRAPHY P1

FEBRUARY/MARCH 2011

MARKS: 300

TIME: 3 hours

This question paper consists of 14 pages and a 15-page annexure.

INSTRUCTIONS AND INFORMATION

1. This 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 a simplified cross-sectional sketch of the tri-cellular arrangement of atmospheric circulation. Choose the correct term between brackets to make each of the statements below TRUE. Write the term next to the question number (1.1.1 – 1.1.5) in the ANSWER BOOK.

1.1.1 **A** represents the (polar/moisture) front.

1.1.2 **B** is the (tropical/mid-latitude) cell.

1.1.3 **C** represents a zone of (low/high) pressure.

1.1.4 **D** represents the (westerly/tropical easterly) wind belt.

1.1.5 Surface (convergence/divergence) takes place at **E**. (5 x 2) (10)

1.2 Refer to FIGURE 1.2 illustrating the movement of material down a slope. Indicate whether the following statements are TRUE or FALSE. Write 'true' or 'false' next to the question number (1.2.1 – 1.2.5) in the ANSWER BOOK.

1.2.1 FIGURE 1.2 illustrates mass movement.

1.2.2 FIGURE 1.2 illustrates a rock fall.

1.2.3 The movement of material down a slope, illustrated in FIGURE 1.2, can only occur if rainwater acts as a lubricant.

1.2.4 The movement of material down a slope, illustrated in FIGURE 1.2, is a slow movement.

1.2.5 The material is moving down-slope under the influence of gravity. (5 x 2) (10)

1.3 FIGURE 1.3 illustrates a large industrial city that developed on a valley floor. Air movement occurs along the slopes.

1.3.1 Does FIGURE 1.3 illustrate day-time or night-time conditions? (1 x 2) (2)

1.3.2 Give ONE reason for your answer to QUESTION 1.3.1. (1 x 2) (2)

1.3.3 With reference to FIGURE 1.3, explain why the smog is trapped on the valley floor. (2 x 2) (4)

1.3.4 The layer of smog will increase temperatures over the city. Explain why this is the case. (2 x 2) (4)

1.3.5 Name TWO possible measures that can be introduced to reduce the formation of smog on the valley floor. (2 x 2) (4)

1.4 FIGURE 1.4 is a satellite image of a mid-latitude cyclone approaching Cape Town. The satellite image shows typical winter conditions for South Africa.

1.4.1 Excluding the position of the mid-latitude cyclone, give evidence from the satellite image that typical winter conditions are shown. (1 x 2) (2)

1.4.2 Why do mid-latitude cyclones usually pass over Cape Town during the winter season? (2 x 2) (4)

1.4.3 Draw a simple, free-hand cross section through the front labelled **Q**. Clearly indicate the position of the cold air mass, air movement and the main rain-bearing cloud associated with front **Q**. (3 x 2) (6)

1.4.4 Write a single paragraph (no longer than 12 lines) predicting, and explaining, any THREE weather changes inhabitants of Cape Town will experience within the next 24 hours as front **Q** passes over. (6 x 2) (12)

1.5 Refer to FIGURE 1.5 illustrating the process of river capture.

1.5.1 Compare the heights of rivers **A** and **B**. (1 x 2) (2)

1.5.2 Why is the height difference, referred to in QUESTION 1.5.1, necessary for river capture to occur? (2 x 2) (4)

1.5.3 What name is given to feature **D**? (1 x 2) (2)

1.5.4 Describe TWO changes that took place in river **C** after river capture had occurred. (2 x 2) (4)

1.5.5 Explain why one can say that the lower reaches of river **B** rejuvenated itself after river capture had occurred. (2 x 2) (4)

1.6 Refer to FIGURE 1.6 illustrating the impact of human activity on a drainage basin.

1.6.1 Name ONE human activity, visible in FIGURE 1.6, that had an impact on the drainage basin. (1 x 2) (2)

1.6.2 Describe the changes that you can observe in the drainage basin over a period of time. (2 x 2) (4)

1.6.3 Discuss the importance of maintaining a drainage basin in its natural state. (3 x 2) (6)

1.6.4 Write a single paragraph (no longer than 12 lines) describing, with reasons, how the changes mentioned in QUESTION 1.6.2, will impact on run-off and infiltration in the illustrated drainage basin.

(6 x 2) (12)

[100]

QUESTION 2

2.1 FIGURE 2.1 illustrates a very specific weather system that can affect the weather along the east coast of southern Africa. 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 (2.1.1 – 2.1.5) in the ANSWER BOOK.

cumulonimbus; cumulus; polar front, eye; hurricane strength winds; coastal low pressure; tropical cyclone; thunderstorms; drizzle

2.1.1 ...	type of weather system illustrated
2.1.2 ...	main cloud type surrounding the centre of this weather system
2.1.3 ...	name given to the centre of this weather system
2.1.4 ...	type of precipitation associated with this weather system
2.1.5 ...	wind associated with this weather system

(5 x 2) (10)

2.2 Refer to FIGURE 2.2 showing a cross-sectional sketch of a structural landform. 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 diagram shows a cross section through a …

A tor.
B dome.
C cuesta.
D batholith.

2.2.2 The structural landform develops from …

A massive igneous rock.
B tilted sedimentary rock.
C horizontal sedimentary rock.
D folded igneous rock.

2.2.3 Slope **K** is known as the … slope.

A scarp
B dip
C debris
D vertical

2.2.4 … will most likely take place on slope **L**.

A Rock falls
B Land slides
C Slumping
D Soil creep

2.2.5 The drainage pattern most likely to develop on slope **L** is …

A dendritic.
B trellis.
C rectangular.
D radial. (5 x 2) (10)

2.3 Refer to FIGURE 2.3 showing the different positions of the upper air inversion layer over South Africa.

2.3.1 Define the term *temperature inversion*. (1 x 2) (2)

2.3.2 Name the high-pressure cell that forms over the plateau in sketch A. (1 x 2) (2)

2.3.3 Explain the origin of the high-pressure system named in QUESTION 2.3.2. (2 x 2) (4)

2.3.4 Explain how the varying positions of the inversion layer, as shown in FIGURE 2.3 in sketches A and B, will influence the amount of rainfall received over the South African interior in summer and winter. (2 x 2) (4)

2.3.5 Discuss how the varying amounts of rainfall over the South African interior in summer and winter, will impact on farming activities there. (2 x 2) (4)

2.4 Refer to FIGURE 2.4 and also read the extract dealing with human response to global warming.

2.4.1 Define the term *global warming*. (1 x 2) (2)

2.4.2 Not all people believe that global warming is a reality. With reference to the cartoon, give ONE reason for this statement. (1 x 2) (2)

2.4.3 What was the main aim of the Kyoto Protocol? (1 x 2) (2)

2.4.4 State, giving ONE reason, whether the Kyoto Protocol achieved its objective or not. (2 x 2) (4)

2.4.5 Give ONE possible reason why countries, such as the USA and Australia, were not prepared to commit to the Kyoto Protocol. (1 x 2) (2)

2.4.6 Write a single paragraph (no more than 12 lines) outlining the negative impact of global warming on Africa and its inhabitants. (6 x 2) (12)

2.5 FIGURE 2.5 illustrates a typical slope.

2.5.1 Describe the shape of the crest. (1 x 2) (2)

2.5.2 Why is the cliff slope so steep? (1 x 2) (2)

2.5.3 Where did the debris fragments on the talus slope come from? (1 x 2) (2)

2.5.4 Name TWO characteristics of the talus slope. (2 x 2) (4)

2.5.5 Name the slope element labelled **D**. (1 x 2) (2)

2.5.6 Suggest why slope element **D** supports the growth of more vegetation than the slope element above it. (2 x 2) (4)

2.6 FIGURE 2.6 illustrates the stream profiles of a typical South African river from its source to its river mouth. Various base levels of erosion are indicated along the stream profile.

2.6.1 What is a *base level of erosion*? (1 x 2) (2)

2.6.2 Identify ONE temporary base level of erosion in FIGURE 2.6. (1 x 2) (2)

2.6.3 Draw a labelled longitudinal profile of the river illustrated in FIGURE 2.6, clearly showing how the temporary base levels of erosion could have influenced the shape thereof. (2 x 2) (4)

2.6.4 How would you describe the longitudinal profile that you have drawn in QUESTION 2.6.3? (1 x 2) (2)

2.6.5 Name ONE of the most noticeable changes visible in the cross-section profiles of the river from its source to its river mouth. (1 x 2) (2)

2.6.6 Write a single paragraph (no more than 12 lines) explaining why the cross-section profiles of the river change from its source to its river mouth. (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 the influence of site on settlements. Match the letters **A** to **E** with the site names given below. Write down the letters (A – E) next to the question numbers (3.1.1 – 3.1.5) in the ANSWER BOOK.

3.1.1 Wet-point site

3.1.2 Defensive site

3.1.3 Gap site

3.1.4 Dry-point site

3.1.5 Break-of-bulk point (5 x 2) (10)

3.2 Choose a description from COLUMN B that matches a term in COLUMN A. Write down only the letter (A – F) 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	Balance of trade	A	no barriers to the import and export of goods and services
3.2.2	Free trade	B	exchange of goods and services between countries
3.2.3	Agglomeration	C	the difference in value between imports and exports
3.2.4	Import substitution	D	value of all goods and services produced in a country in one year
3.2.5	Trade	E	concentration of industries in the core areas
		F	replacement of goods previously purchased from other countries with locally manufactured goods

(5 x 2) (10)

3.3 Rapid urban growth and urban expansion have a major impact on large cities in South Africa. Refer to FIGURE 3.3 illustrating the urban profile of a large city in South Africa schematically.

3.3.1 Distinguish between *urban growth* and *urban expansion*. (2 x 2) (4)

3.3.2 Give a brief description of the shape of the urban profile of the city illustrated in FIGURE 3.3. (2 x 2) (4)

3.3.3 Explain why this city's urban profile assumed the shape as illustrated in QUESTION 3.3.2. (2 x 2) (4)

3.3.4 What land use occurs where the urban profile peaks? (1 x 2) (2)

3.3.5 Give ONE reason why the land use mentioned in QUESTION 3.3.4 occurs where the urban profile peaks. (1 x 2) (2)

3.4 Refer to the simplified land-use map FIGURE 3.4.

3.4.1 Give ONE reason that suggests that zone **1** is the CBD. (1 x 2) (2)

3.4.2 Zone **2** is the transitional zone.

(a) Indicate whether heavy or light industries are likely to be found here. (1 x 2) (2)

(b) Give ONE reason for your answer to QUESTION 3.4.2(a). (1 x 2) (2)

(c) Why is this zone commonly referred to as the 'zone of decay'? (1 x 2) (2)

3.4.3 Indicate, with a reason, which urban land-use model best describes the land-use pattern of this city. (2 x 2) (4)

3.4.4 Photograph **Y** represents **Y** in FIGURE 3.4. In a single paragraph (no more than 12 lines), outline any problems, and possible solutions, that the shanty town/informal settlement poses to the city authorities. (6 x 2) (12)

3.5 Read the edited extract on informal trade below before answering the questions that follow.

INFORMAL TRADE CRUCIAL FOR JOBS
Mail and Guardian

Every day a bus, usually packed to capacity, leaves Malawi for South Africa. Most of the passengers are informal traders, off to sell wooden curios in the main South African cities of Johannesburg, Durban and Cape Town.

Malawi has a population of 12 million, of whom 65% live below the poverty line of less than a dollar per day. Economic analyst, Mavuto Bamusi, speaks highly of the effective role informal cross-border traders play in the Malawian economy. He says this type of trade offers economic opportunities to women and youth in the country who would otherwise not be employed.

The concern is that usually they face all kinds of social and economic injustices, such as harassment by public authorities. They undergo unnecessary checks which are unregulated. He says the other disadvantage is that most of the traders are not literate.

3.5.1 Give ONE reason for Malawians engaging in informal trade. (1 x 2) (2)

3.5.2 Why is informal trade also referred to as the 'invisible economy'? (1 x 2) (2)

3.5.3 Explain TWO ways in which informal trade impacts on the formal sector. (2 x 2) (4)

3.5.4 Quote any TWO social injustices from the article that informal traders experience. (2 x 2) (4)

3.5.5 Name ONE advantage and ONE disadvantage of Malawians engaging in informal trade in South Africa. (2 x 2) (4)

3.6 Study the pie graph (FIGURE 3.6), which shows the composition of South Africa's GDP.

3.6.1 Define the term *gross domestic product*. (1 x 2) (2)

3.6.2 Give TWO examples of tertiary activities from FIGURE 3.6. (2 x 2) (4)

3.6.3 Calculate the percentage contribution made by the primary sector to the GDP. (1 x 2) (2)

3.6.4 A significant part of South Africa's budget in the last financial year was allocated to transport and communication. Give TWO possible reasons for this decision. (2 x 2) (4)

3.6.5 In a single paragraph (no more than 12 lines) discuss why a collapse in the South African agricultural industry can impact negatively on the development of South Africa's economy. (6 x 2) (12)

[100]

QUESTION 4

4.1 Refer to FIGURE 4.1 showing travel patterns for shopping. Give ONE term for each of the following descriptions:

4.1.1 **A** depicts the maximum distance a customer is prepared to travel in order to purchase a product

4.1.2 The term used for products, such as **B**, which are used on a daily basis and are relatively cheap

4.1.3 **C** refers to the catchment area from where an urban area draws its customers

4.1.4 The minimum number of customers to make a service profitable

4.1.5 **E** is an urban area that provides services to the surrounding rural area (5 x 2) (10)

4.2 Read the extract below and answer the question that follows.

HURRY UP: THE GOVERNMENT'S PLAN FOR BLACKS TO OWN MORE LAND IS FLAGGING

With the aim of redressing the racially skewed pattern of land ownership that has existed since whites conquered South Africa hundreds of years ago, the government's land-reform programme is a shambles. Launched in 1994, the plan was to redistribute 30% of white-owned farmland to poor blacks. So far, barely 5% has been handed over.

The recession-burdened government faces more pressing demands, such as the provision of basic services to the country's increasingly turbulent poor black townships. Mr Zuma still cites land reform as one of his five top priorities. But it no longer has the same urgency.

Choose an item from COLUMN B that matches a description from COLUMN A. Write down only the letter (A – F) next to the question number (4.2.1 – 4.2.5) in the ANSWER BOOK, for example 4.2.6 H.

COLUMN A		COLUMN B
4.2.1	Global strategy concerned with developing sustainable programmes	A land restitution B land tenure reform
4.2.2	Process of compensating people for land lost during forced removals	C communal landownership D Land Act of 1913
4.2.3	Prevents the illegal or unfair eviction of long-term tenants on farms	E Agenda 21 F land redistribution
4.2.4	Provide the previously disadvantaged with farmland	
4.2.5	In the apartheid era this legislation discriminated against certain race groups purchasing land	

(5 x 2) (10)

4.3 Refer to FIGURE 4.3 showing the movement of people between rural areas and cities.

4.3.1 Name ONE neighbouring country from which South African cities attract migrants. (1 x 2) (2)

4.3.2 Define the term *migrant*. (1 x 2) (2)

4.3.3 Give TWO reasons why many people leave the rural areas and move to South African cities. (2 x 2) (4)

4.3.4 Explain how the movement, represented by **A**, impacts on the functioning of cities. (2 x 2) (4)

4.3.5 Give TWO reasons why migrants are sometimes not accepted by locals in South African cities. (2 x 2) (4)

4.4 Examine FIGURE 4.4 which shows an urban area and its surroundings.

4.4.1 Define the term *rural-urban fringe*. (1 x 2) (2)

4.4.2 Give ONE reason why the golf course is located in the rural-urban fringe. (1 x 2) (2)

4.4.3 Give the term used to describe the movement of supermarkets and other retail stores out of the CBD to the suburbs. (1 x 2) (2)

4.4.4 State TWO factors that would have favoured the location of the business park in FIGURE 4.4. (2 x 2) (4)

4.4.5 Which urban land-use model best describes the arrangement of the various land-use zones? (1 x 2) (2)

4.4.6 The inner city areas of many South African cities are declining (businesses are moving out). Write a single paragraph (no more than 12 lines) explaining why the inner city area is losing its importance. Also mention some disadvantages of this decline for the inner city areas. (6 x 2) (12)

4.5 Refer to FIGURE 4.5 showing various examples of activities within the formal and informal sectors of South Africa's economy. These activities are all part of South Africa's tertiary sector.

4.5.1 Define the term *formal economic activity*. (1 x 2) (2)

4.5.2 Give ONE example of a formal economic activity. (1 x 2) (2)

4.5.3 Why can one say that informal and formal activities are all part of South Africa's tertiary activities? (1 x 2) (2)

4.5.4 The informal sector's contribution to South Africa's GDP is limited. Why is this so? (2 x 2) (4)

4.5.5 Name THREE ways in which the position of the informal sector in the South African economy can be strengthened. (3 x 2) (6)

4.6 Study FIGURE 4.6 which is a picture capturing an important message about water as a resource.

4.6.1 What message does the picture give about the future availability of water? (1 x 2) (2)

4.6.2 South Africa, as a country, has been experiencing water shortages on a regular basis. Give TWO possible reasons for these water shortages. (2 x 2) (4)

4.6.3 Name ONE water-transfer scheme that has been introduced to ease the water problem in South Africa. (1 x 2) (2)

4.6.4 Give TWO reasons why it is important to protect South Africa's scarce water supplies for future generations. (2 x 2) (4)

4.6.5 Write a single paragraph (no longer than 12 lines) explaining sustainable ways of ensuring that we have adequate water supplies for future generations, yet maintain a good growth rate of the economy. (6 x 2) (12)

[100]

GRAND TOTAL: 300

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