



Province of the
EASTERN CAPE
EDUCATION

**NATIONAL
SENIOR CERTIFICATE**

GRADE 11

NOVEMBER 2016

GEOGRAPHY P1

MARKS: 225

TIME: 3 hours



This question paper consists of 16 pages.

INSTRUCTIONS AND INFORMATION

1. This question paper consists of four questions.
2. Answer any THREE questions of 75 marks each.
3. All diagrams are included in the ANNEXURE.
4. Number the questions correctly according to the numbering system used in this question paper. Number all your questions in the CENTRE of the line.
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, where possible.
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: PHYSICAL GEOGRAPHY: THE ATMOSPHERE AND GEOMORPHOLOGY

Answer at least ONE question in this section. If you answer ONE question in SECTION A, you MUST answer TWO questions from SECTION B.

QUESTION 1

1.1 FIGURE 1.1 is a synoptic weather map, compiled during a particular season. Various options are given as possible answers to the multiple-choice questions below. Choose the correct answer and write only the letter (A to D) next to the question number (1.1.1 to 1.1.8) in your ANSWER BOOK.

1.1.1 Air pressure is measured in ...

- A millimetres.
- B millibars.
- C degrees celsius.
- D kilometre per hour.

1.1.2 The lines which depict atmospheric pressure on synoptic weather maps are known as ...

- A isotherms.
- B isohyets.
- C isobars.
- D contours.

1.1.3 The atmospheric pressure reading at the letter **A**, is approximately ... hectopascals.

- A 1028
- B 1030
- C 1024
- D 1000

1.1.4 The air movement around weather system **B** is ...

- A clockwise.
- B anticlockwise.
- C descending.
- D out blowing.

1.1.5 The atmospheric pressure system being depicted by the letter **C** is a ...

- A wedge.
- B trough.
- C saddle.
- D low pressure.

- 1.1.6 The atmospheric pressure systems **A** and **D** are part of the ... belt.
- A polar high pressure
 - B sub-polar low pressure
 - C sub-tropical high pressure
 - D equatorial low pressure
- 1.1.7 The winds at weather station **E** are geostrophic because ...
- A the high pressure dominates the movement of air.
 - B it is overcast at both weather stations.
 - C coriolis force and pressure gradient force are in balance.
 - D the weather stations are very close to one another.
- 1.1.8 The synoptic weather map represents summer conditions in South Africa because of the following indicators on the map. Choose the indicator that does NOT fit.
- A High temperatures over the interior
 - B ITCZ is on the Tropic of Cancer
 - C Low pressure over the interior
 - D High pressure systems moved more southwards (8 × 1) (8)
- 1.2 Provide the names of the intrusive igneous rock that the descriptions below refer to. Write only the letter (**A** to **F**) from the sketch (FIGURE 1.2) next to the question number (1.2.1 to 1.2.7). A letter may be used more than once, for e.g. 1.2.8 G.
- 1.2.1 The Bushveld igneous complex is an example of this intrusion.
- 1.2.2 This intrusion is still connected to the magma chamber.
- 1.2.3 Provide the letter that represents a sill.
- 1.2.4 Solitary hills are being exposed after exogenous forces removed the top layers.
- 1.2.5 The landform that occurs after extrusive igneous activity.
- 1.2.6 The intrusion that developed because of the weight of the overlaying strata on the magma.
- 1.2.7 One of the characteristics of this intrusion is that it has a mushroom shape. (7 × 1) (7)

- 1.3 Use the information in FIGURE 1.3 showing global air circulation and answer the questions that follow.
- 1.3.1 Name the air pressure belt at **A**. (1 × 1) (1)
- 1.3.2 Identify the wind belt at **B**. (1 × 1) (1)
- 1.3.3 Explain why the wind at **B** moves in a westerly direction. (1 × 2) (2)
- 1.3.4 Explain the role of the winds at **B** in the development of the cumulonimbus clouds. (2 × 2) (4)
- 1.3.5 In a paragraph of approximately EIGHT lines discuss how the air circulation cell at **C** developed. (4 × 2) (8)
- 1.4 Read the article, *Agriculture minister has renewed hope SA will survive drought*, FIGURE 1.4 and answer the following questions.
- 1.4.1 What is a *drought*? (1 × 1) (1)
- 1.4.2 Differentiate between a *meteorological* and *agricultural* drought. (1 + 1) (2)
- 1.4.3 Name ONE short term effect, mentioned in the article, that the drought has on the economy of South Africa. (1 × 1) (1)
- 1.4.4 Explain what the Minister meant when he stated that the “drought has hit the poorest the hardest”. (2 × 2) (4)
- 1.4.5 Suggest THREE ways how the government can help to manage the negative consequences of droughts in South Africa. (3 × 2) (6)
- 1.5 Study FIGURE 1.5 providing information of the Deccan plateau which is a basaltic plateau in India and answer the questions that follow.
- 1.5.1 What type of rocks are associated with basaltic mountains? (1 × 1) (1)
- 1.5.2 Name the mountain ranges on either side of the Deccan plateau. (2 × 1) (2)
- 1.5.3 How do basaltic plateaus originate? (2 × 2) (4)
- 1.5.4 Line **A** on the photo represents the height of the mountain range. Explain why the height stayed the same over time. (1 × 2) (2)
- 1.5.5 Explain why basaltic plateaus receive low rainfall. (1 × 2) (2)
- 1.5.6 Evaluate the economic importance of horizontal landscapes like the basaltic plateaus. (2 × 2) (4)

1.6 Study FIGURE 1.6, which illustrate tors and answer the questions that follows:

- 1.6.1 Name ONE igneous intrusion that tors can originate from. (1 × 1) (1)
- 1.6.2 What is the rocks at **A** known as during the process of tor formation? (1 × 1) (1)
- 1.6.3 Name the type of igneous rock that **A** consists of. (1 × 1) (1)
- 1.6.4 Comment on the reasons as to why there is a difference in the current height of the surface although the original height was the same. (2 × 2) (4)
- 1.6.5 In a paragraph of approximately EIGHT lines, explain how tors develop. (4 × 2) (8)
- [75]**

QUESTION 2

- 2.1 Study the sketch, FIGURE 2.1, which indicates the development of Föhn winds. Choose the correct answer between brackets to make the statement true. Write ONLY the correct answer next to the question number (2.1.1 to 2.1.7), for e.g. 2.1.8 climatology
- 2.1.1 The descending air at **A** is on the (windward/leeward) side of the mountain.
- 2.1.2 The lapse rate at **B** is called the (wet adiabatic/dry adiabatic) lapse rate.
- 2.1.3 The lapse rate at **C** is (0,5 °C per 100 m/1 °C per 100 m).
- 2.1.4 The dew point temperature is reached at approximately (500 m/800 m).
- 2.1.5 The air temperature at **D** will be (16 °C/18 °C).
- 2.1.6 The continent where the Föhn wind occurs is (North America/Europe).
- 2.1.7 A similar type of wind as the one at **A** occurs on the coastal regions of South Africa, and is called a (berg wind/chinook). (7 × 1) (7)
- 2.2 FIGURE 2.2 is a sketch which depicts structural landscapes found in horizontally layered and inclined strata. Choose the correct letter between brackets which represents the feature being described. Write ONLY the letter from the sketch next to the question number (2.2.1 to 2.2.8), for e.g. 2.2.9 Geomorphology.
- 2.2.1 Landform (**A/B**) is known as a butte.
- 2.2.2 Homoclinal ridges are found at (**D/E**).
- 2.2.3 The landform at (**F/G**) is associated with inclined strata.
- 2.2.4 (**X/Y**) is the dip slope of the landform at **D**.
- 2.2.5 The landforms at (**A/D**) developed out of a canyon landscape.
- 2.2.6 The rocks at (**X/Y**) are less resistant.
- 2.2.7 Forestry will occur at (**X/Y**).
- 2.2.8 Scarp retreat will dominate at (**C/D**). (8 × 1) (8)

- 2.3 FIGURE 2.3 is a representation of monsoon conditions over the sub-continent of India.
- 2.3.1 What is the *ITCZ*? (1 × 1) (1)
- 2.3.2 Explain how the *ITCZ* plays a role in the formation of monsoon conditions over India. (2 × 2) (4)
- 2.3.3 Why does the wind at **A** change direction from south east to south west? (2 × 2) (4)
- 2.3.4 Comment on the fact that the summer monsoon is both a blessing and a curse for the people of India. (3 × 2) (6)
- 2.4 FIGURE 2.4 is a cartoonist's impression of the atmospheric conditions regarding the El-Niño occurrence. Refer to the images to answer the following questions.
- 2.4.1 Name the global winds represented by the blowing of the person in the sketch. (1 × 1) (1)
- 2.4.2 Explain the role that these winds (answer to QUESTION 2.4.1) play in the development of the El-Niño occurrence. (2 × 2) (4)
- 2.4.3 Discuss how the shifting of the clouds influences the farming activities in countries like Australia and Indonesia around **A**. (1 × 2) (2)
- 2.4.4 In a paragraph of approximately 8 lines, evaluate the impact of the different upwelling situations in the sketches, on the fishing industry of Chili and Peru at **B**. (4 × 2) (8)
- 2.5 Study FIGURE 2.5, showing the different slope elements, and answer the questions that follow.
- 2.5.1 Identify the slope element at **A** and provide the type of mass movement that will dominate on this slope. (1 + 1) (2)
- 2.5.2 Name the geomorphological process responsible for the formation of the talus slope. (1 × 1) (1)
- 2.5.3 Explain why the talus slope maintains a constant gradient. (1 × 2) (2)
- 2.5.4 Comment on the difference between vegetation covers at **B** and **C** respectively. (2 × 2) (4)
- 2.5.5 Evaluate the impact of slope **B** for human activity. (2 × 2) (4)

2.6 Different types of mass movements are being illustrated by FIGURE 2.6. Refer to the sketches and answer the questions that follow.

- 2.6.1 Define the term *mass movement*. (1 × 1) (1)
- 2.6.2 Comment on the possible cause of this type of mass movement at **A**. (1 × 2) (2)
- 2.6.3 Explain how the deforestation at **B** increased the mass movement illustrated on the sketch. (1 × 2) (2)
- 2.6.4 Comment on the dangers that the type of mass movement at **C** has for the people living at the base of the slope. (2 × 2) (4)
- 2.6.5 In a paragraph of approximately eight lines, discuss strategies you would implement to stabilise the area at **C**. (4 × 2) (8)
- [75]**

SECTION B: DEVELOPMENT AND NATURAL RESOURCES

Answer at least ONE question from this section. If you answer ONE question from SECTION B, you MUST answer TWO questions from SECTION A.

QUESTION 3

3.1 FIGURE 3.1 shows the different stages of Rostow's economic development model. Name the stage of the model that the following descriptions refer to. ONLY write the correct stage next to question number (3.1.1 to 3.1.8) for e.g. 3.1.9 Rostow.

3.1.1 Agriculture becomes commercialised and industrialised.

3.1.2 Number of people working in agriculture decreases.

3.1.3 Rapid urbanisation occurs.

3.1.4 Little capital for development.

3.1.5 Production of consumer goods increases.

3.1.6 A country with a human development index (HDI) of 0,9.

3.1.7 Number and type of industries increase.

3.1.8 Subsistence agricultural economy dominates. (8 × 1) (8)

3.2 Choose a term from COLUMN B that matches the description in COLUMN A. Write only word the letter (A to H) next to the question number (3.2.1 to 3.2.7), for e.g. 3.2.8 J.

COLUMN A		COLUMN B	
3.2.1	The amount of carbon a person contributes to polluting the atmosphere through his/her daily lifestyle.	A	Thermal energy
3.2.2	A substance that releases atomic radiation.	B	Kinetic energy
3.2.3	Conference of the United Nations regarding climate change in Durban.	C	Carbon footprint
3.2.4	Energy which is released when heat is transferred from one source to another.	D	Conventional energy sources
3.2.5	Stored energy which is released due to movement.	E	Radioactive
3.2.6	The measures taken to regulate the type and amount of energy being used.	F	COP 17
3.2.7	Consists of fossil fuels and other non-renewable resources.	G	Energy management
		H	Kyoto protocol

(7 × 1) (7)

- 3.3 Refer to FIGURE 3.3, illustrating the inequalities in development between developing and developed countries.
- 3.3.1 How do the illustrations depict inequality in development? (1 × 1) (1)
- 3.3.2 Name TWO living conditions illustrated by the cartoonist regarding people in developing countries. (2 × 1) (2)
- 3.3.3 By using the information on the sketches, differentiate between the countries by referring to ONE economic indicator and TWO social indicators of development. (3 × 2) (6)
- 3.3.4 Use both the sketches and the triangular graph to answer the following questions.
- (a) Which of the letters on the graph (**X** or **Y**) represents the workforce of developed countries? (1 × 2) (2)
- (b) Explain your answer to QUESTION 3.3.4(a). (2 × 2) (4)
- 3.4 The extract and map in FIGURE 3.4 shows contradictory viewpoints on globalisation and multinational corporations. Study these viewpoints carefully and answer the following questions.
- 3.4.1 What is a *multinational corporation*? (1 × 1) (1)
- 3.4.2 Name TWO negative viewpoints that people have of multinational corporations according to the extract. (2 × 1) (2)
- 3.4.3 Explain the contradictory (opposing) viewpoints regarding globalisation illustrated in the extract and map. (2 × 2) (4)
- 3.4.4 In a paragraph of approximately eight lines, evaluate the positive impact that multinational corporations might have on improving both the economy and services of Third World countries. (4 × 2) (8)
- 3.5 The illustrations in FIGURE 3.5 show methods being used to prevent soil erosion.
- 3.5.1 Name the soil erosion prevention practices at **A** and **B** respectively. (2 × 1) (2)
- 3.5.2 Why is soil a non-renewable resource? (1 × 1) (1)
- 3.5.3 Explain TWO advantages of method **A** in protecting the soil. (2 × 2) (4)
- 3.5.4 The sustainable management of soil erosion is important for countries like South Africa. Discuss in a paragraph of approximately EIGHT lines the negative effects that soil erosion will have on the broader economy of South Africa. (4 × 2) (8)

- 3.6 The extract in FIGURE 3.6 comes from president Zuma's, State of the Nations Address of 2015.
- 3.6.1 Name ONE short and medium term plans the government wants to implement to deal with South Africa's electricity challenges. (1 × 1) (1)
- 3.6.2 "The longterm plan involves finalising our long-term energy security masterplan", according to president Zuma. Explain TWO measures that should be included in such a 'masterplan' to increase the energy output in South Africa. (2 × 2) (4)
- 3.6.3 Eskom is forced to use load shedding as a measure to reduce the burden on power stations. Discuss the effects that loadshedding has on small businesses. (2 × 2) (4)
- 3.6.4 The use of diesel generators by Eskom, to fill the gap when power supply runs low, is common practice. Evaluate how sustainable this process is for the country as a whole. (3 × 2) (6)
- [75]**

QUESTION 4

- 4.1 Provide the term from the list below, which matches the descriptions with the questions that follow. Write **ONLY** the correct term next to the question number (4.1.1 to 4.1.7), for e.g. 4.1.8 Development.

Embargo	Humanitarian aid	Import quotas
Balance of trade	Bilateral aid	Economic development
Protectionism		Balance of payment

- 4.1.1 The ability of a country to have access to its resources to create economic wealth.
- 4.1.2 The balance between the monetary value of a country's exports and imports.
- 4.1.3 Restrictions put on imported goods, regarding its weight, volume and amount.
- 4.1.4 The import of goods from other countries is restricted.
- 4.1.5 Trade blockages are used to prevent the influx of commodities that might threaten local production.
- 4.1.6 Direct aid from one country to another.
- 4.1.7 Aid for individuals or countries in times of natural disasters or civil conflict. (7 × 1) (7)
- 4.2 FIGURE 4.2 are sketches of different energy sources for electricity/power generation. Various options are given as possible answers to the multiple-choice questions below. Choose the correct answer and write only the letter (A to D) next to the question number (4.2.1 to 4.2.8) in your ANSWER BOOK.
- 4.2.1 Which of the sources is not a renewable resource?
- A Biomass
B Water
C Natural gas
D Wind
- 4.2.2 Which type of electricity is produced in volcanic areas where the heat of the rocks is used to create enough energy?
- A Petroleum
B Coal
C Geo thermal
D Hydroelectricity

4.2.3 Provide the name of the energy which produces ethanol fuel through the use of sugar and maize.

- A Biomass
- B Geo thermal
- C Nuclear power
- D Thermal power

4.2.4 Which of the following sources is not a fossil fuel?

- A Oil
- B Natural gas
- C Uranium
- D Coal

4.2.5 Where panels are used to produce electrical energy.

- A Coal
- B Solar
- C Geo thermal
- D Wind

4.2.6 The source which produces nuclear energy.

- A Uranium
- B Coal
- C Petroleum
- D Natural gas

4.2.7 Which of the following sources has high potential, but is currently underutilised in South Africa?

- A Uranium
- B Coal
- C Water
- D Geo thermal

4.2.8 Which of the sources causes more acid rain in urban areas?

- A Natural gas
- B Biomass
- C Uranium
- D Coal

(8 × 1) (8)

- 4.3 Read the extract on *Fair trade* (FIGURE 4.3) and answer the following questions.
- 4.3.1 Define the term *Fair trade*. (1 × 1) (1)
- 4.3.2 Name ONE way in which fair trade benefits farmers in developing countries. (1 × 1) (1)
- 4.3.3 Explain how fair trade can help consumers reduce poverty, through everyday shopping, as stated in the extract. (1 × 2) (2)
- 4.3.4 Discuss TWO similarities between fair trade and free trade. (2 × 2) (4)
- 4.3.5 To be certified as fair trade, producers need to maintain good environmental protection when developing sustainable agriculture. In a paragraph of approximately eight lines, provide FOUR criteria that producers need to maintain, to uphold environmental standards in fair trade. (4 × 2) (8)
- 4.4 Study FIGURE 4.4, a bar graph depicting the gender differences between working minutes in some countries, and answer the following questions.
- 4.4.1 What is *gender equality*? (1 × 1) (1)
- 4.4.2 Which country shows a fair balance between paid and unpaid working minutes for women? (1 × 1) (1)
- 4.4.3 Discuss visible characteristics shown on the graph regarding *paid* and *unpaid working minutes* between men and women. (2 × 2) (4)
- 4.4.4 Comment on the attitude by some governments of third world countries towards women's access to resources. (2 × 2) (4)
- 4.4.5 Explain why women are important to the economic development of third world countries. (2 × 2) (4)
- 4.5 The photo, FIGURE 4.5, illustrates the non-sustainable use of a resource. Use the photo to answer the following questions.
- 4.5.1 Which term is used to describe the process in the photo? (1 × 1) (1)
- 4.5.2 Explain why the resource in the photo, can be seen as a renewable resource. (1 × 2) (2)
- 4.5.3 Why do you think the use of the resource as observed (seen) on the photo can be seen as *resource depletion* rather than *resource exploitation*? (1 × 2) (2)
- 4.5.4 Discuss the impact that this non-sustainable use of the resource will have on the environment. (2 × 2) (4)
- 4.5.5 How can the resource in the photo help the local community with economic development? (2 × 2) (4)

- 4.6 Refer to the diagram, FIGURE 4.6, illustrating the different power plants contributing to the national grid in South Africa.
- 4.6.1 Name the types of power stations **A**, **B** and **C** respectively. (3 × 1) (3)
- 4.6.2 From the sketch, identify TWO uses of electricity in South Africa. (2 × 1) (2)
- 4.6.3 Discuss the impact of power station **B** on the environment. (2 × 2) (4)
- 4.6.4 Use the diagram which shows how power is generated at **B** to explain in a paragraph of eight lines, the process of generating thermal electricity. (4 × 2) (8)
- [75]**
- TOTAL: 225**