Province of the
EASTERN CAPE
EDUCATION

NATIONAL SENIOR CERTIFICATE

GRADE 10

NOVEMBER 2019

GEOGRAPHY P1

MARKS: **225**

TIME: **3 hours**

XGEOE1

This question paper consists of 14 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. Leave a line between subsections of questions answered.
5. Start EACH question on a NEW page.
6. Number the answers correctly according to the numbering system used in this question paper.
7. Number the answers in the centre of the line.
8. Do NOT write in the margins of the ANSWER BOOK.
9. Draw fully labelled diagrams when instructed to do so.
10. Answer in FULL SENTENCES, except where you have to state, name, identify or list.
11. Write neatly and legibly.

SECTION A: THE ATMOSPHERE AND GEOMORPHOLOGY

QUESTION 1

1.1 Refer to FIGURE 1.1 on global warming and answer the questions below.

1.1.1 The increase in average temperature on earth is called …

1.1.2 Name TWO greenhouse gases (GHGs) in the atmosphere.

1.1.3 The type of gas that is produced by cattle is (CFC/methane).

1.1.4 One major consequence of global warming that causes topsoil to become dry is (flood/drought).

1.1.5 The amount of carbon dioxide that a household, individual, company or other group emits through their activities is called (carbon footprint/climate change).

1.1.6 According to FIGURE 1.1, which living organism absorbs carbon?

1.1.7 State ONE possible solution to global warming that is evident in FIGURE 1.1 (8 x 1) (8)

1.2 Refer to FIGURE 1.2 showing continental drift to answer the questions that follow. Choose a letter from **A** to **C** that suits the statements below. A letter may be used more than once.

1.2.1 The world in the present day

1.2.2 The name of the supercontinent that existed about 200 million years ago

1.2.3 This supercontinent is divided into two

1.2.4 The world was one large landmass

1.2.5 All seven continents are clearly indicated

1.2.6 The Atlantic Ocean is evident between the continents

1.2.7 Large prehistoric continents in the southern and northern hemispheres (7 x 1) (7)

1.3 Refer to FIGURE 1.3 showing a synoptic weather map and answer the following questions.

1.3.1 Name the front labelled **B.** (1 x 1) (1)

1.3.2 Identify the high-pressure cell labelled **C** as South Atlantic or South Indian High pressure. (1 x 1) (1)

1.3.3 Describe TWO characteristics of the low-pressure cell labelled **D**. (2 x 2) (4)

1.3.4 Refer to the front labelled **A.**

(a) Identify the front labelled **A**. (1 x 1) (1)

(b) What type of rainfall is associated with front **A**? (1 x 1) (1)

(c) Discuss THREE possible weather conditions associated with front **A**. (3 x 2) (6)

1.4 Study FIGURE 1.4 showing the layers of the atmosphere and answer the questions that follow.

1.4.1 Name the layers labelled **A**, **B**, **C** and **D**. (4 x 1) (4)

1.4.2 State the approximate distance at layer **A**. (1 x 1) (1)

1.4.3 Mention the layer that contains the ozone (O_3). (1 x 1) (1)

1.4.4 Explain why commercial flights (aeroplanes) usually fly just below layer **B**. (1 x 2) (2)

1.4.5 In a paragraph of approximately EIGHT lines, discuss the importance of the atmosphere. (4 x 2) (8)

1.5 Refer to FIGURE 1.5 showing intrusive igneous activity and features to answer the following questions.

1.5.1 Define the term *intrusive igneous activity.* (1 x 1) (1)

1.5.2 Name the features labelled **B, C** and **D** as a volcanic pipe, lopolith or laccolith respectively. (3 x 1) (3)

1.5.3 When the feature labelled **A** is very large, it is known as a (monolith/sill). (1 x 1) (1)

1.5.4 List TWO landforms associated with intrusive igneous activity. (2 x 1) (2)

1.5.5 Describe the feature labelled **B.** (1 x 2) (2)

1.5.6 Discuss the formation of features **B**, **C** and **D**. (3 x 2) (6)

1.6 Carefully read the case study in FIGURE 1.6 about volcanic eruption in Mount Sinabung, Indonesia.

1.6.1 How many people were killed in the 2010 eruption? (1 x 1) (1)

1.6.2 Complete the sentence below by choosing the correct word in brackets:

Sinabung was (dormant/active) before it erupted in 2010 and has now become one of this South East Asian nation's most (dormant/active) volcanoes. (2 x 1) (2)

1.6.3 Why is Indonesia likely to have more volcanic activities? (1 x 2) (2)

1.6.4 Provide reasons why residents had been warned (told) to stay indoors. (2 x 2) (4)

1.6.5 Discuss the positive effects of volcanoes for the people of Indonesia. (3 x 2) (6)

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QUESTION 2

2.1 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 (2.1.1–2.1.7) in the ANSWER BOOK, for example, 2.1.8 D.

2.1.1 A sudden overflow of water which covers land:

A Floods
B Drought
C Climate change
D Ozone depletion

2.1.2 The temperature at which water condenses is …

A dew point.
B air temperature.
C cloud cover.
D precipitation.

2.1.3 This is the deliberate removal of trees:

A Preservation
B Conservation
C Afforestation
D Deforestation

2.1.4 The heat energy that the earth radiates is called …

A conduction.
B heat balance.
C latent.
D terrestrial radiation.

2.1.5 Incoming solar … is known as insolation.

A radiation
B absorption
C reflection
D scattering

2.1.6 Which of the following is a greenhouse gas?

A Nitrogen
B Oxygen
C Carbon dioxide
D Argon

2.1.7 The amount of water vapour in the air is …

A humidity.
B dehydration.
C crystallisation.
D sublimation. (7 x 1) (7)

2.2 Match the terms in COLUMN B with the descriptions in COLUMN A. write only the correct letter (A–I) next to the corresponding question number (1.2.1–1.2.8) in the ANSWER BOOK, for example, 1.2.8 K.

COLUMN A		COLUMN B	
2.2.1	A rock that has been changed by heat, pressure or both	A	Rock cycle
2.2.2	A molten rock	B	Metamorphic rock
2.2.3	The cycle of processes that causes rocks to form, break down, change and reform over time	C	Anticline
2.2.4	An example of igneous rock	D	Syncline
2.2.5	The bottom part of a fold	E	Igneous rock
2.2.6	Mountains formed by the compression of sedimentary rock strata during plate movement	F	Basalt
2.2.7	Rocks which form when magma cools	G	Gneis
2.2.8	Metamorphic rock which changes from granite	H	Fold mountain
		I	Magma

(8 x 1) (8)

2.3 Refer to FIGURE 2.3 showing factors affecting temperatures and answer the following questions.

2.3.1 Name the ocean currents on the:

(a) East coast of South Africa (1 x 1) (1)

(b) West coast of South Africa (1 x 1) (1)

2.3.2 Name the oceans along the coast of Amanzimtoti and Hondeklip Bay. (2 x 1) (2)

2.3.3 Differentiate between *maritime climate* and *continental climate.* (2 x 1) (2)

2.3.4 Calculate the temperature range (difference in temperature) between Hondeklip Bay and Amanzimtoti. (3 x 1) (3)

2.3.5 Give THREE reasons why the temperature in Amanzimtoti is higher than that of Hondeklip Bay although they are both located on the same latitudinal position. (3 x 2) (6)

2.4 Refer to FIGURE 2.4 showing relief rainfall.

2.4.1 This type of rainfall is common in the (Western Cape/ KwaZulu-Natal) province of South Africa. (1 x 1) (1)

2.4.2 Name the type of cloud indicated in FIGURE 2.4. (1 x 1) (1)

2.4.3 Mention the type of precipitation shown in FIGURE 2.4. (1 x 1) (1)

2.4.4 Explain how relief rainfall is formed. (2 x 2) (4)

2.4.5 Relief rainfall can be good and bad for farmers in the province where it occurs. In a paragraph of approximately EIGHT lines, discuss the positive and negative impacts of relief rainfall on farming. (4 x 2) (8)

2.5 Read the case study in FIGURE 2.5 and answer the questions that follow.

2.5.1 Define the term *earthquake*. (1 x 1) (1)

2.5.2 Why was the earthquake in Nepal the deadliest? (1 x 1) (1)

2.5.3 State the number of people who were injured in the earthquake. (1 x 1) (1)

2.5.4 Discuss the negative effects of the earthquake in Kathmandu. (2 x 2) (4)

2.5.5 Describe how buildings can be improved to withstand the effects of earthquakes. (1 x 2) (2)

2.5.6 The survivors of the earthquake asked for assistance (help) from all over the world. Suggest THREE ways to assist the survivors. (3 x 2) (6)

2.6 Refer to FIGURE 2.6 showing the internal structure of the earth and answer the following questions.

2.6.1 Identify the layers labelled **1**, **2**, **3**, and **4**. (4 x 1) (4)

2.6.2 List THREE main types of rocks that form within layer **1** or below earth surface. (3 x 1) (3)

2.6.3 Describe TWO uses of any of the rocks listed in QUESTION 2.6.2. (2 x 2) (4)

2.6.4 Explain TWO important uses of layer **1** to humans. (2 x 2) (4)

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SECTION B: POPULATION AND WATER RESOURCES

QUESTION 3

3.1 Select the correct answer from the list provided below to match the statements (3.1.1–3.1.8). Write only the correct word next to each question number, for example, 3.1.9 pyramid.

demographer; informal settlements; polygamy; regional migration; rural depopulation; mortality; overpopulation; HIV; xenophobia

3.1.1 The practice of having more than one wife at the same time

3.1.2 The movement of people within a country or a region

3.1.3 The decline (decrease) in the number of people living in rural areas

3.1.4 Unplanned settlements that are made of low-cost materials

3.1.5 Deaths within a given population

3.1.6 A virus that attacks CD4 cells which are part of the body's immune system

3.1.7 Areas where there are too many people for the resources available to support them

3.1.8 A person who studies populations (8 x 1) (8)

3.2 Match the term/concept in COLUMN B with the correct relevant descriptions in COLUMN A. Write only the correct letter (A–I) next to the corresponding number (3.2.1–3.2.7) in the ANSWER BOOK, for example, 3.2.9 K.

COLUMN A		COLUMN B	
3.2.1	The farming of fish or other marine life for food in the sea	A	Grey water
3.2.2	The amount of salt in the ocean	B	Marine pollution
3.2.3	Large-scale movements of water from one part of an ocean to another	C	Hydrological cycle
3.2.4	Used water which is still clean	D	Water transfer
3.2.5	The natural cycling of water between the oceans, the atmosphere and the land	E	Ocean currents
3.2.6	Introduction of harmful materials into the ocean	F	Mariculture
3.2.7	Moving water from one drainage basin to another	G	Salinity
		H	Ocean

(7 x 1) (7)

3.3 Refer to the case study in FIGURE 3.3 about HIV/Aids and answer the questions that follow.

3.3.1 When (date and month) is World Aids Day? (1 x 1) (1)

3.3.2 (a) What does the acronym ARV stand for? (1 x 1) (1)

(b) Give the number of people who were on ARV treatment in 2018. (1 x 1) (1)

(c) Mention TWO Aids-awareness campaigns according to the case study. (2 x 1) (2)

3.3.3 Comment on the trend of HIV infection rate from 2016 to 2018. (1 x 2) (2)

3.3.4 Discuss the impact of HIV/Aids on the population structure. (2 x 2) (4)

3.3.5 Describe TWO strategies that can be used to reduce the high HIV prevalence rate in the country. (2 x 2) (4)

3.4 Refer to FIGURE 3.4 showing average life expectancy among males in South Africa.

3.4.1 Define the term *life expectancy.* (1 x 1) (1)

3.4.2 Which province has respectively the lowest and highest life expectancy between 2011–2016? (2 x 1) (2)

3.4.3 Compare the life expectancy for the years 2011–2016 with 2016–2021. (1 x 2) (2)

3.4.4 Explain TWO factors that can decrease life expectancy among males. (2 x 2) (4)

3.4.5 Discuss THREE ways to advise males to improve life expectancy. (3 x 2) (6)

3.5 Read the extract below and answer the questions that follow.

> The ocean economy has been recognised by the government as an engine of growth because it serves as an important natural resource for humans, tourism, holidays, transport, fishing and scientific research. Ocean pollution is, however, a major concern as this decreases the quality of the activities mentioned above. It is predicted that by 2050, plastics will be more than the fishes in the ocean.

3.5.1 List any TWO tourism-related activities that can be undertaken in the oceans. (2 x 1) (2)

3.5.2 Name ONE pollutant in the ocean from the extract. (1 x 1) (1)

3.5.3 How can oceans be of benefit to the people of South Africa? (2 x 2) (4)

3.5.4 In a paragraph of approximately EIGHT lines, discuss measures that can be put in place to reduce ocean pollution. (4 x 2) (8)

3.6 Read the case study in FIGURE 3.6 and answer the questions that follow.

3.6.1 According to the case study, what was the cause of the floods?(1 x 1) (1)

3.6.2 Mention the effects of the flooding on the economy of KwaZulu-Natal Province. (2 x 1) (2)

3.6.3 How did Dube-Ncube warn residents and visitors to the province? (1 x 2) (2)

3.6.4 How would you advise motorists to be careful on roads that have been flooded? (2 x 2) (4)

3.6.5 Discuss THREE management strategies to minimise (reduce) the effects of floods. (3 x 2) (6)

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QUESTION 4

4.1 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 (4.1.1–4.1.7) in the ANSWER BOOK, for example, 4.1.8 D.

4.1.1 A person who migrates for political reasons is called a …

A political migrant.
B economic migrant.
C socio-economic migrant.
D social emigrant.

4.1.2 A sum of money sent by a worker to their families back home is …

A tax.
B remittance payment.
C black tax.
D pocket money.

4.1.3 A person who visits a place for the purpose of taking a holiday is a(n) …

A migrant worker.
B tourist.
C refugee.
D assailant.

4.1.4 A(n) … is an undocumented migrant.

A legal migrant
B migrant labour
C economic migrant
D illegal migrant

4.1.5 Which of the following can be used to control a high birth rate?

A Polygamy
B Migration
C Contraception
D Polyandry

4.1.6 A graph showing a country's population according to age groups and gender is called …

A population distribution.
B population density.
C population geography.
D population pyramid.

4.1.7 …occurs when there more people than available resources.

A Under-population
B Over-population
C Optimum population
D Even population (7 x 1) (7)

4.2 Refer to FIGURE 4.2 showing the different states of water to answer the following questions.

4.2.1 Give ONE example of the states of water below:

(a) Solid

(b) Liquid

(c) Gas

4.2.2 Select the most appropriate term/word below that matches the Greek number (i–v) in FIGURE 4.2. Use the following terms/words:

freezing; melting; crystallisation; condensation; evaporation

(8 x 1) (8)

4.3 Read the excerpt below and answer the questions that follow.

Somali refugee Hakeem has been living in South African for the past 20 years. 'We fled persecution in our birth countries and we are grateful that South Africa allows us to stay. There are challenges but they can be solved with us living among each other and not separately,' Hakeem said.

[Adapted from https://www.iol.co.za/dailynews]

4.3.1 Define the term *refugee.* (1 x 1) (1)

4.3.2 (a) Why did Hakeem flee his country of birth? (1 x 1) (1)

(b) Name ONE business activity refugees in South Africa engage in. (1 x 1) (1)

4.3.3 List TWO challenges that refugees encounter in South Africa. (2 x 2) (4)

4.3.4 Explain how South Africans can assist refugees. (2 x 2) (4)

4.3.5 Discuss how South Africa can benefit from the influx of refugees in the country. (2 x 2) (4)

4.4 Refer to FIGURE 4.4 showing rural-urban migration and answer the following questions.

4.4.1 What is *rural-urban migration?* (1 x 1) (1)

4.4.2 (a) List TWO push factors shown in FIGURE 4.4. (2 x 1) (2)

(b) List TWO pull factors shown in FIGURE 4.4 (2 x 1) (2)

4.4.3 Explain the problems that cities will experience as a result of too many people in urban areas. (2 x 2) (4)

4.4.4 Discuss THREE strategies government can adopt to keep people in rural areas. (3 x 2) (6)

4.5 Refer to FIGURE 4.5 and answer the questions that follow.

4.5.1 Refer to the bar graph and write down the following:

(a) The driest dam (1 x 1) (1)

(b) The fullest dam (1 x 1) (1)

4.5.2 List TWO ways Makhanda Municipality is currently using to manage the water crisis. (2 x 1) (2)

4.5.3 Explain TWO uses of dams. (2 x 2) (4)

4.5.4 In a paragraph of approximately EIGHT lines, discuss how people can sustainably save water at home. (4 x 2) (8)

4.6 Refer to FIGURE 4.6 and answer the following questions.

4.6.1 What does WWF stand for? (1 x 1) (1)

4.6.2 According to the extract, South Africa's fishing industry is worth how much? (1 x 1) (1)

4.6.3 Explain TWO important economic factors of the fishing industry. (2 x 2) (4)

4.6.4 How does overfishing negatively affect people and oceans? (2 x 2) (4)

4.6.5 Suggest TWO ways the government can use to ensure that the fishing industry is sustainable. (2 x 2) (4)

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GRAND TOTAL: 225