GAUTENG PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

PREPARATORY EXAMINATION

2022

10782

GEOGRAPHY

PAPER 2

TIME: **3 hours**

MARKS: **150**

17 pages

INSTRUCTIONS AND INFORMATION

1. This question paper consists of TWO SECTIONS:

   SECTION A:
   QUESTION 1: Rural and Urban Settlement (60)
   QUESTION 2: Economic Geography of South Africa (60)

   SECTION B:
   QUESTION 3: Geographical Skills and Techniques (30)

2. Answer ALL THREE questions.

3. ALL diagrams are included in the QUESTION PAPER.

4. Leave a line between sub-sections of questions answered.

5. Start EACH question at the top of a NEW page.

6. Number the answers correctly according to the numbering system used in this question paper.

7. Do NOT write in the margins of the ANSWER BOOK.

8. Draw fully-labelled diagrams when instructed to do so.

9. Answer in FULL SENTENCES, except when you have to state, name, identify or list.

10. Units of measurement MUST be indicated in your final answer, e.g., 1020 hPa, 14°C and 45 m.

11. You may use a non-programmable calculator.

12. You may use a magnifying glass.

13. Write neatly and legibly.

SPECIFIC INSTRUCTIONS AND INFORMATION FOR SECTION B

14. A 1:50 000 topographic map **2531BC EMJEJANE** and a 1:10 000 orthophoto map **2531BC 19 EMJEJANE** are provided.

15. The area demarcated in RED/BLACK on the topographic map represents the area covered by the orthophoto map.

16. Show ALL calculations where applicable. Marks will be allocated for this.

17. You must hand in the topographic and orthophoto maps to the invigilator at the end of this examination session.

SECTION A: RURAL AND URBAN SETTLEMENTS AND THE ECONOMIC GEOGRAPHY OF SOUTH AFRICA

QUESTION 1: RURAL AND URBAN SETTLEMENTS

1.1 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 numbers (1.1.1 to 1.1.8) in the ANSWER BOOK, e.g., 1.1.9 D.

1.1.1 The main commercial zone of an urban area is the …

A central business district.
B transition zone.
C industrial zone.
D outlying business district.

1.1.2 The … land-use zone is characterised by the most pollution.

A central business district
B rural-urban fringe
C industrial
D residential

1.1.3 The … land-use zone is unattractive, with high land values.

A central business district
B transition
C industrial
D residential

1.1.4 The land value in this land-use zone is the cheapest.

A Central business district
B Transition zone
C Rural-urban fringe
D Residential zone

1.1.5 The land-use zone that has the highest building density.

A Central business district
B Transition zone
C Rural-urban fringe
D Outlying business district

1.1.6 A commercial zone situated in the suburbs is known as the …

A central business district.
B rural-urban fringe.
C outlying business district.
D industrial zone.

1.1.7 The land-use zone where most people live.

A Industrial zone
B Transition zone
C Central business district
D Residential zone

1.1.8 Airports are usually located in this land-use zone.

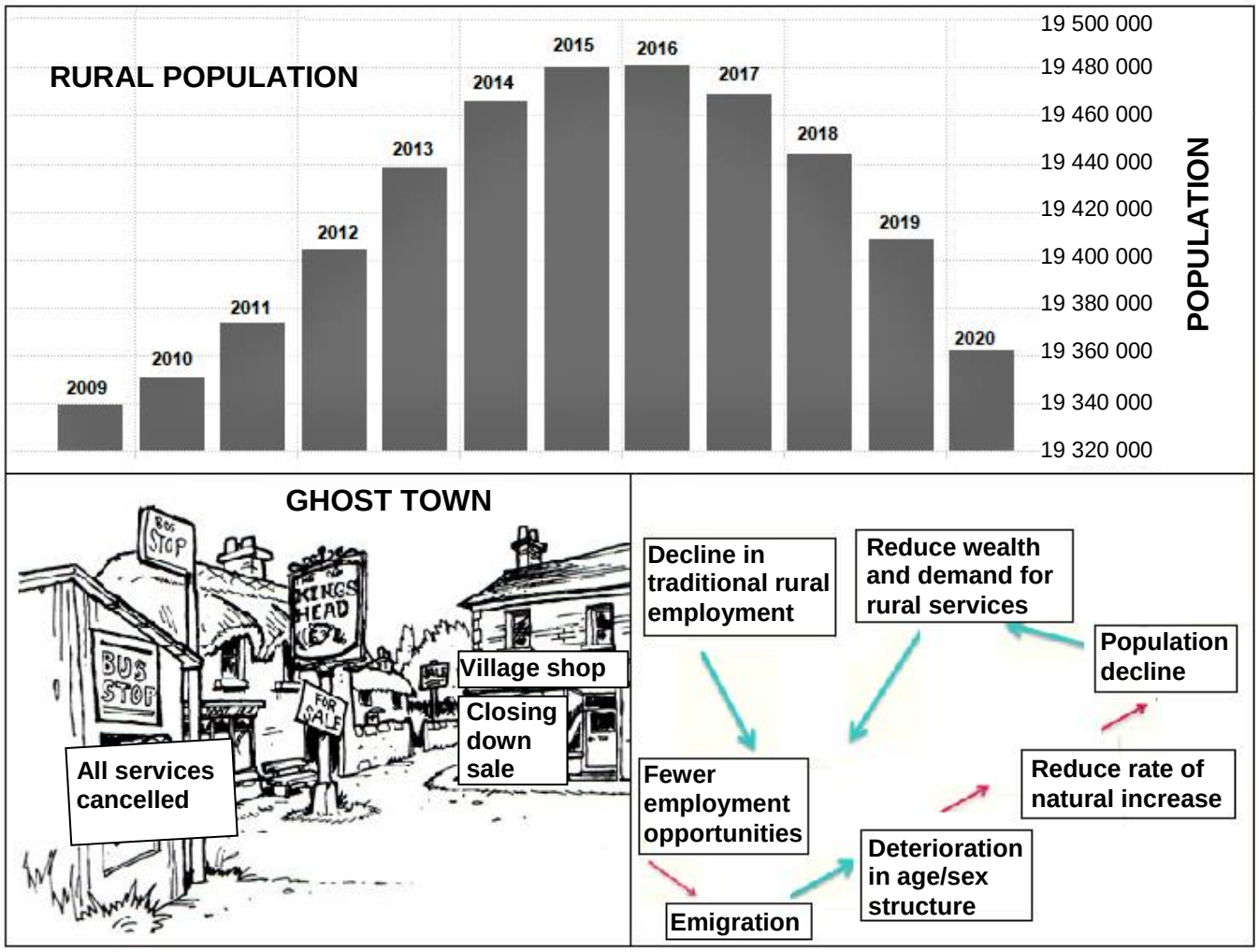
A Central business district
B Rural-urban fringe
C Residential zone
D Transition zone (8 x 1) (8)

1.2 Choose a term from COLUMN B that matches the description in COLUMN A. Write only the letter (A – H) next to the question numbers (1.2.1 to 1.2.7) in the ANSWER BOOK, for example 1.2.8 I.

COLUMN A		COLUMN B
1.2.1	A settlement found in an area where water is scarce	A Urban settlements
1.2.2	Uni-functional settlements	B Site
1.2.3	Settlements and buildings that are located far apart from each other	C Nucleated
1.2.4	The actual ground that a settlement occupies	D Dry point
1.2.5	Settlements that are located close to each other	E Situation
1.2.6	Multi-functional settlements	F Dispersed
1.2.7	The relationship between a settlement and its surrounding environment	G Rural settlements
		H Wet point

(7 x 1) (7)

1.3 Refer to the infographic on South Africa's rural population trends from 2009 to 2020 and answer the questions that follow.



[Sources: https://tradingeconomics.com/south-africa/rural-population-wb-data.html; https://slideplayer.com/slide/4385253/; https://slideplayer.com/slide/7501747/]

1.3.1 Define the term *rural depopulation*. (1 x 2) (2)

1.3.2 Give evidence from the population graph that rural depopulation is a reality in South Africa. (1 x 1) (1)

1.3.3 Describe the impact of rural depopulation on the economy of rural areas. (2 x 2) (4)

1.3.4 In a paragraph of approximately EIGHT lines, make suggestions to the local government on how to reduce the trend of rural depopulation, and explain the impact it will have on the rural economy as indicated in the infographic.

(4 x 2) (8)

(15)

1.4 Refer to the case study on the growth of South African urban settlements below and answer the questions that follow.

THE GROWTH OF SOUTH AFRICAN URBAN SETTLEMENTS

In 1990, 52% of South Africans lived in urban settlements, but a mere 30 years later, more than 67% of South Africa's population lives in cities and towns. The population density within the nation has risen, reaching 46 inhabitants per square kilometre, meaning more people are sharing less space. Many opportunities for work and leisure can be found in the urban locations of South Africa. In theory, urban settlements create conditions for improved health, education and economic activity because services are concentrated over a small area. In practice, however, rapid urbanisation degrades environmental and health conditions, places a massive strain on the provision of services and fuels (encourages) crime and social tension.

Gauteng has the biggest and fastest growing population of all nine provinces in South Africa. The province experienced a population increase of 33,7% between 2010 and 2020, which is more than double the average national population increase.

[Source: Adapted from *Oxford South African Thematic Atlas for Grades 7-9*]

1.4.1 Define the term *urbanisation*. (1 x 2) (2)

1.4.2 Give ONE factor from the case study which indicates why people prefer to live in urban areas. (1 x 1) (1)

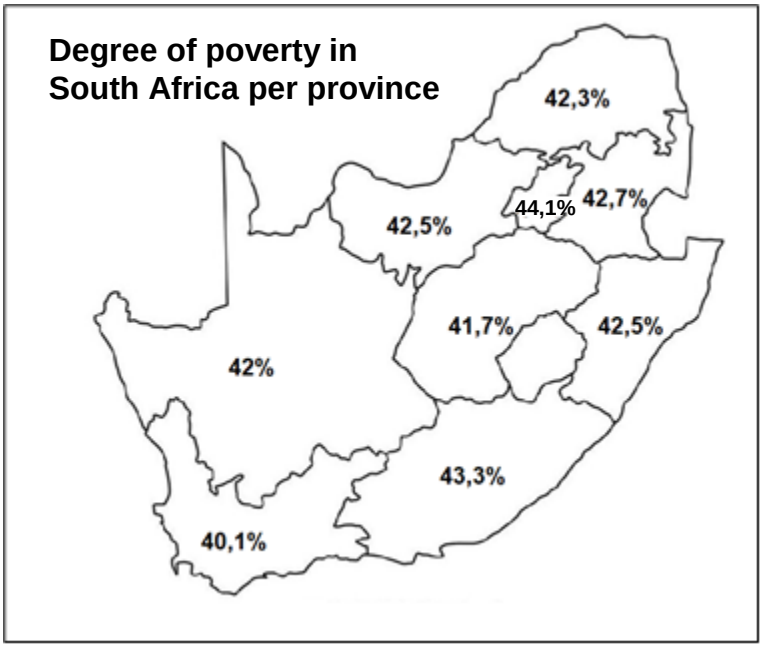
1.4.3 According to the case study, "rapid urbanisation degrades environmental and health conditions". Describe how rapid urbanisation results in the degradation of environmental and health conditions. (2 x 2) (4)

1.4.4 Explain why the case study refers to Gauteng as the province with the biggest and fastest-growing population in South Africa. (1 x 2) (2)

1.4.5 Evaluate the effect of urbanisation on the provision of services in Gauteng. (3 x 2) (6)

(15)

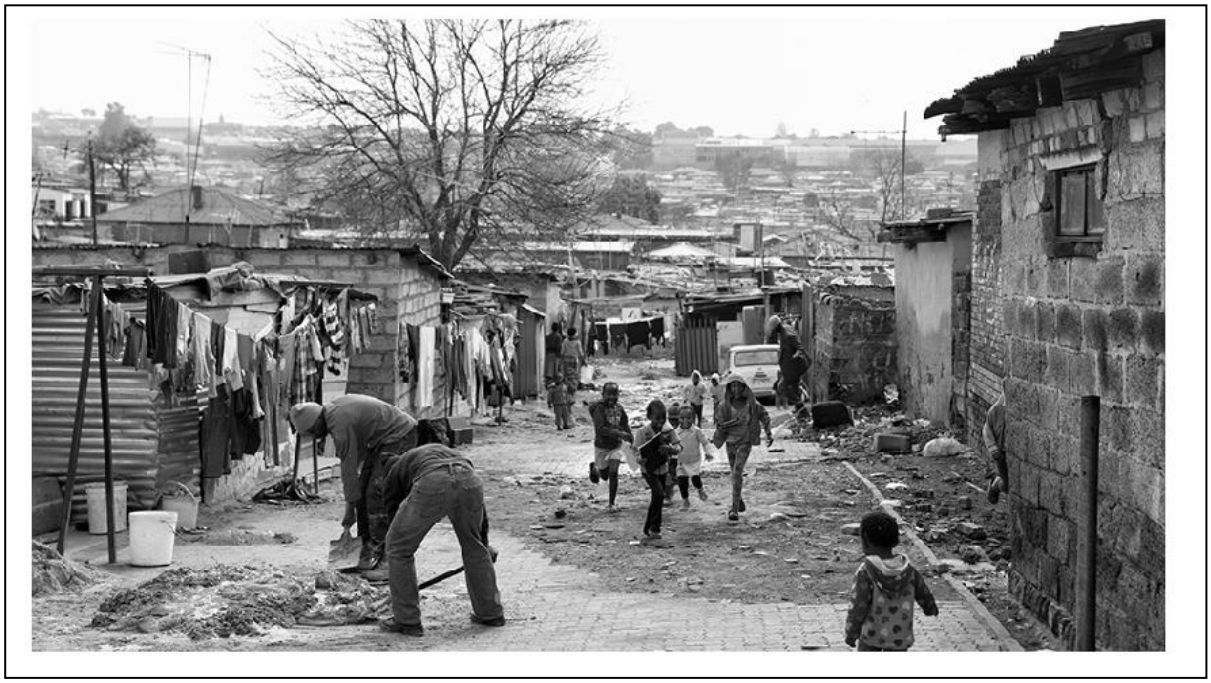
1.5 Refer to the following infographic on poverty in South Africa and answer the questions that follow.



Poverty is easy to see but less easy to define – or to measure across a city, a province or a country. Many measures of poverty are based on money. If a person lives on less than a certain threshold of income, they are considered to be living in poverty.

Robert Haveman

INFORMAL SETTLEMENT



[Source: https://southafrica-info.com/people/mapping-poverty-in-south-africa/]

1.5.1 (a) Identify the province in the infographic with the highest poverty rate in South Africa. (1 x 1) (1)

(b) Account for the higher poverty rate in the province identified in QUESTION 1.5.1 (a). (1 x 2) (2)

1.5.2 Give TWO examples which indicate that the people in the photo image of the infographic are living in poverty. (2 x 1) (2)

1.5.3 Explain how unemployment contributes to poverty in urban areas. (2 x 2) (4)

1.5.4 Suggest ways in which the local government responsible for the area in the image above, can decrease poverty. (3 x 2) (6)

(15)

[60]

QUESTION 2: ECONOMIC GEOGRAPHY OF SOUTH AFRICA

2.1 Give ONE term to describe each of the following economic activities in the sugar industry, by choosing a term from the list below. You may use a term more than once. Write only the term next to the question numbers (2.1.1 to 2.1.8) in the ANSWER BOOK.

Primary sector, Secondary sector, Tertiary sector, Quaternary sector

2.1.1 A sugar farmer employs labourers to harvest sugar cane.

2.1.2 Sugar cane is transported by truck to a sugar factory.

2.1.3 Sugar is manufactured at the refinery.

2.1.4 An advertising agency is used to design the logo for the packaging of the sugar.

2.1.5 Sales representatives market the sugar at retail stores.

2.1.6 The sugar is exported to other countries.

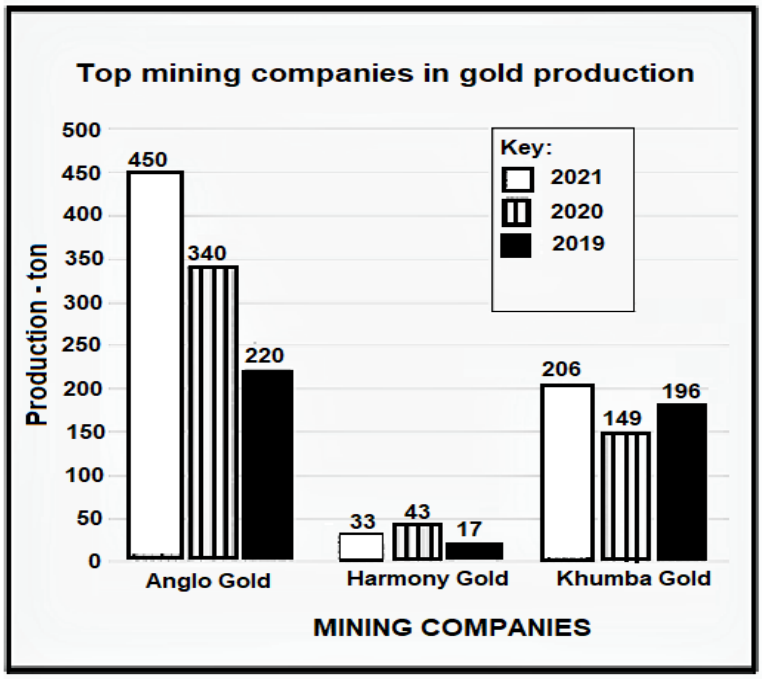
2.1.7 Customers buy sugar online.

2.1.8 Preparation of farmland to plant sugar cane (8 x 1) (8)

2.2 Refer to the infographic on gold and choose the appropriate word(s) in brackets to make the sentence TRUE. Write down only the question numbers (2.2.1 to 2.2.7) and the correct answer in the ANSWER BOOK.

GOLD – KEY FACTS AND FIGURES

- The Witwatersrand Basin remains the world's largest gold resource.
- Gold sales (contribution to GDP) increased by 3,7% to R72,6 billion in 2019.
- Gold production decreased to 101,3 tonnes in 2019.
- At the current gold price more than half of the South African gold mining industry is marginal.
- South African gold only accounts for 4,2% of global gold production.
- Employment in the gold sector has declined over the years.
- The gold industry currently employs 95 130 people (both skilled and unskilled).
- Total employee earnings have soared from R15,9 billion in 2008 to R24,3 billion in 2019 (27,6 billion in 2018).



[Adapted source: https://www.moneyweb.co.za/mineweb/anglogold-ashanti-bumped-off-list-of-top-10-mining-companies/ and https://www.mineralscouncil.org.za/sa-mining/gold]

2.2.1 Mining is the (largest/smallest) contributor to the primary sector.

2.2.2 The total value of goods and services produced in a country in one year is known as the (GNP/GDP).

2.2.3 The Witwatersrand Basin is located in the (Gauteng/Limpopo) province.

2.2.4 Gold mining companies employ (unskilled and skilled/only unskilled) labour.

2.2.5 The low thermal gradient of South Africa's rock layers (reduces/increases) mining costs.

2.2.6 Anglo Gold and Khumba Gold combined, produced (656/489) tons of gold in 2021.

2.2.7 (Anglo Gold/Harmony Gold) mining company produces the most gold in South Africa. (7 x 1) (7)

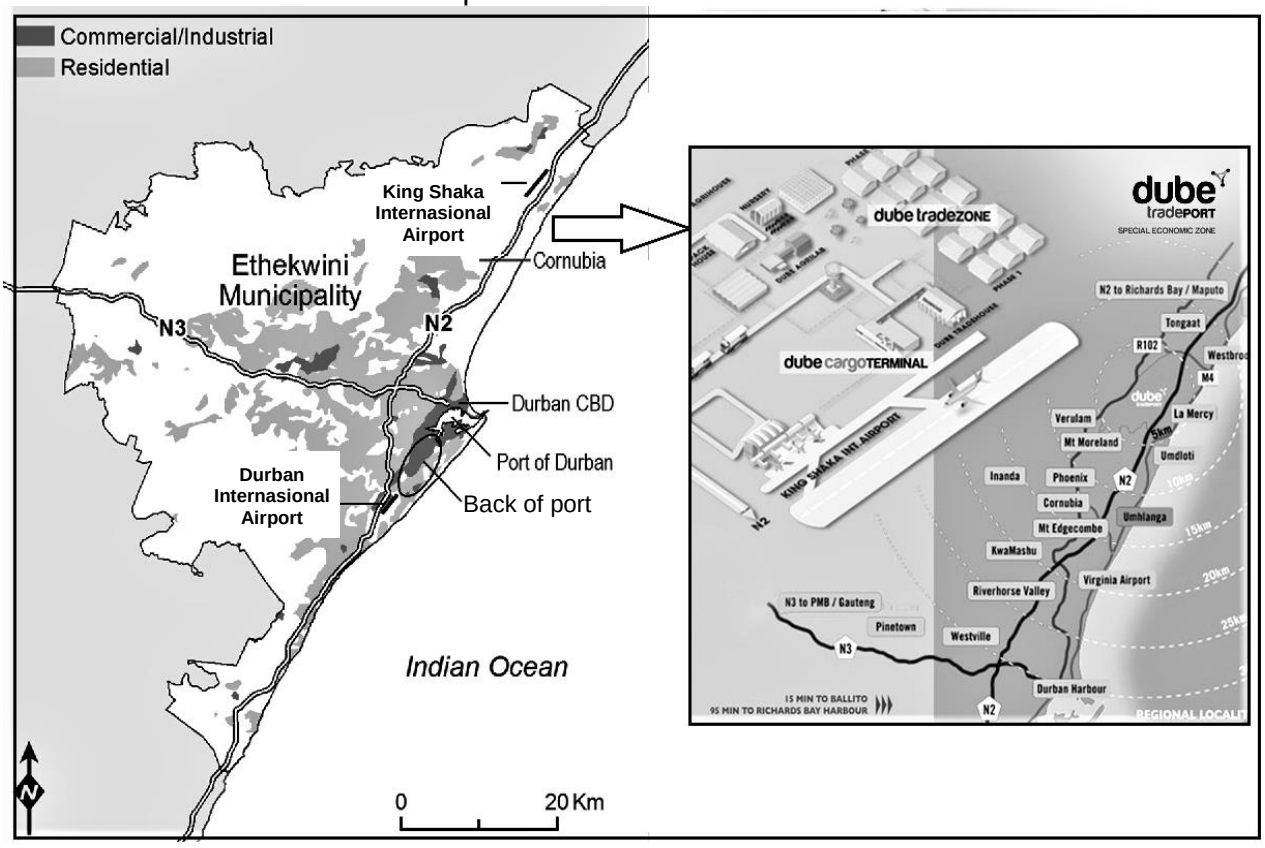
2.3 Refer to infographic below showing information on the Dube TradePort IDZ and answer the questions that follow.

DUBE TRADEPORT IDZ

Strategically located on the east coast of South Africa, linked to two of Africa's major seaports, major national roads and home to King Shaka International Airport, the Dube TradePort is strategically positioned at the intersection of local and global intermodal transport routes.

The Dube TradePort is a 50-year master-planned airfreight and passenger hub, comprising five business zones:

1. Dube Trade Zone: For electronics, pharmaceuticals and aerospace manufacturing, assembling, and distribution.
2. Dube Cargo Terminal: A state of the art cargo handling facility with digital tracking and secure cargo flow through on-site statutory bodies.
3. Dube Agri Zone: An advanced agricultural precinct that provides world-class facilities.
4. Dube City: A 12-hectare premium business and hospitality precinct, just 3 minutes from the passenger terminal.
5. Dube iConnect: A cutting-edge telecommunications platform and premier cloud service provider.



[Sources: file:///C:/Users/GEO/Downloads/208227-Article%20Text-517726-1-10-20210607%20(1).pdf http://www.tikzn.co.za/images/exportweek/presentations/EPW2018/Day%203%20-%20Dube%20TradePort%20Presentation.pd https://www.dubetradeport.co.za/Pages/Special Economic Zone]

2.3.1 What does the abbreviation IDZ stand for? (1 x 1) (1)

2.3.2 Identify the province in which the Dube TradePort IDZ is located. (1 x 1) (1)

2.3.3 Name the main physical factor that influenced the location of the Dube TradePort IDZ. (1 x 1) (1)

2.3.4 How does the Dube TradePort IDZ create the opportunity for industrial decentralisation? (1 x 2) (2)

2.3.5 Discuss how the infrastructural (infrastructure) development of the Dube TradePort IDZ can contribute to a positive balance of trade for the country. (2 x 2) (4)

2.3.6 Evaluate the socio-economic impact of the Dube TradePort IDZ on the local community. (3 x 2) (6)

(15)

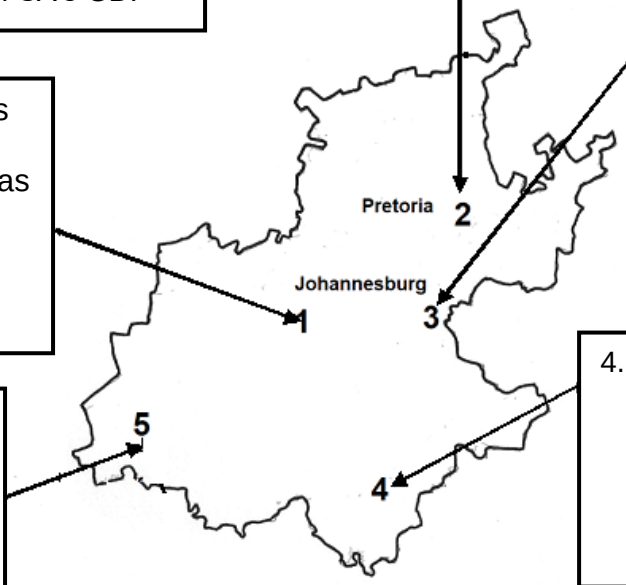
2.4 Refer to the information in the infographic on a core industrial region in South Africa and answer the questions that follow.

FACTS:

- ✓ 20% of SA's population lives here
- ✓ 370 people/km^2
- ✓ 97% urbanised
- ✓ 70% of SA's labour force lives here
- ✓ 22% contribution to mining sector
- ✓ Contribution to 38% of SA's GDP

2. The Northern Corridor is anchored around Tshwane as the administrative capital of the city and the hub of the automotive sector, research, development, innovation and the knowledge-based economy.

1. The Central Corridor is anchored around the City of Johannesburg as the hub of financial services, ICT and pharmaceutical industries.



3. The Eastern Corridor is anchored around the economy of the Ekurhuleni Metro as the hub of manufacturing, logistics and transport.

4. The Southern Corridor encompasses the Sedibeng District and the creation of new industries, new economic nodes and new cities.

5. The Western Corridor encompasses the economy of the current West Rand district and the creation of new industries, new economic nodes and new cities.

A problem in this area

TAXI STRIKE: Scores of Soweto commuters left stranded

Scores of taxi commuters were left stranded in parts of Soweto after operators downed tools. Some commuters were seen standing near traffic intersections hoping for other forms of public transport to ferry them to various destinations. Others were seen hitchhiking so that they could get to work. The Bara Taxi Rank, usually abuzz with activity, was a ghost town on Wednesday. Street vendors were also affected by the strike.

[Sources: https://link.springer.com/chapter/10. https://www.news24.com/Tags/Topics/taxi%20]

2.4.1 Identify the core industrial region depicted in the source. (1 x 1) (1)

2.4.2 Name TWO main industrial activities from the infographic located in this core industrial region. (2 x 1) (2)

2.4.3 From an economic point of view, suggest why 20% of the population in South Africa lives in this core industrial region. (1 x 2) (2)

2.4.4 Predict from the infographic, a challenge that commuters will experience in the core industrial region due to the population density and taxi strike. (1 x 2) (2)

2.4.5 This industrial region contributes up to 38% of the country's GDP. In a paragraph of approximately EIGHT lines, analyse the economic impact that a taxi strike in this core industrial region will have on the GDP of the country. (4 x 2) (8)

(15)

2.5 Refer to the interview between Refiwe Moloto and Zanele Khomo below, about food security in KwaZulu-Natal and answer the questions that follow.

Cape Talk Show host Refiwe Moloto chats to Zanele Khomo from the Durban Chamber of Commerce and Industry about the looting in KZN.

The Durban Chamber of Commerce and Industry has warned that the civil unrest and public violence in KwaZulu-Natal will most likely lead to job losses and food shortages in the country.

"KZN specifically contributes 16% of South Africa's GDP, so such damage is detrimental to our economy," says Zanele Khomo, the Chief Growth Officer of the Durban Chamber of Commerce and Industry.

Khomo says the looting and destruction will result in food insecurity and loss of livelihoods as many factories and food producers shut down.
According to the Durban Chamber of Commerce and Industry, the cost of the damage in the province had already exceeded R100 million on Monday and it is expected to keep rising in the days and weeks to come.

Khomo says officials from the Durban Chamber of Commerce and Industry met with KwaZulu-Natal Premier, Sihle Zikalala, on Monday to provide an assessment of the situation.

[Adapted from source: https://www.capetalk.co.za/articles/421778/kzn-looting-will-affect-food-securty-job-security-and-livelihoods-durban-chamber-of-commerce, Capetalk 567 AM]

2.5.1 Define the term *food insecurity*. (1 x 2) (2)

2.5.2 Quote ONE direct consequence from the extract, of the civil unrest and public violence in KwaZulu-Natal, on food security. (1 x 1) (1)

2.5.3 Describe how the unrest might have led to food insecurity. (1 x 2) (2)

2.5.4 Discuss the relationship between unemployment and food insecurity. (2 x 2) (4)

2.5.5 What strategies can the government implement to prevent food insecurity in the areas affected by the civil unrest and public violence in KwaZulu-Natal? (3 x 2) (6)

(15)

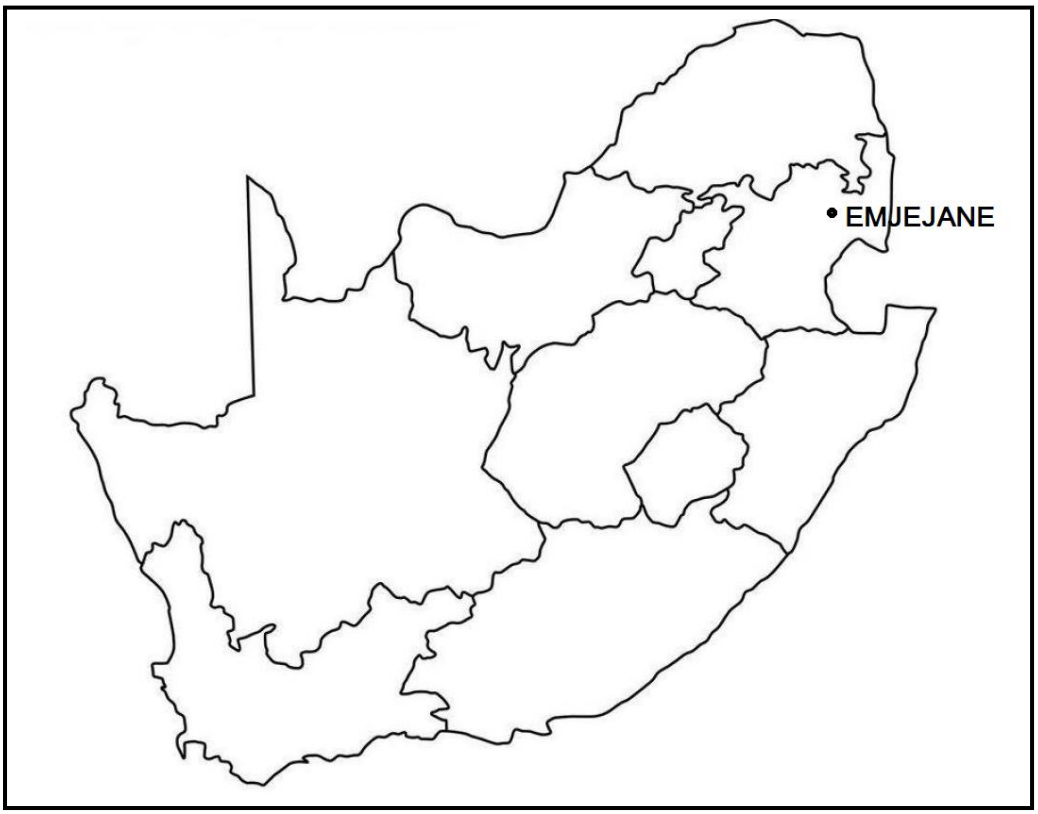
[60]

TOTAL SECTION A: 120

SECTION B

QUESTION 3: GEOGRAPHICAL SKILLS AND TECHNIQUES

BACKGROUND INFORMATION ON EMJEJANE



Coordinates: 25°26' S 31°41' E

Emjejane, formerly known as Hectorspruit, is a small farming town situated between Kaapmuiden and Komatipoort on a southern tributary of the Crocodile River in Mpumalanga, South Africa. The farms in the region produce sugar cane, subtropical fruit and vegetables. The location of Emjejane creates excellent opportunities for prospective investors and businesses to establish themselves in the area along the N4 transport route servicing the Maputo Spatial Development Corridor.

[Source: https://mpumalanga.online/emjejane/]

The following English terms and their Afrikaans translations are shown on the topographic map.

ENGLISH	AFRIKAANS
Diggings	Uitgrawings
Firebreak	Voorbrand

3.1 MAP SKILLS AND CALCULATIONS

Choose the correct answer for questions 3.1.1 – 3.1.3 from the options below. Write down only the letter (A – D).next to the question numbers (3.1.1 to 3.1.3).

3.1.1 According to the urban hierarchy, Emjejane is classified as a …

A city.
B country town.
C hamlet.
D metropolitan area.

3.1.2 Emjejane is located in the … province.

A Limpopo
B North West
C Mpumalanga
D KwaZulu-Natal

3.1.3 The farms in the region of Emjejane produce mainly …

A sugar cane.
B sub-tropical fruit.
C vegetables.
D all of the above. (3 x 1) (3)

Refer to spot height 274 (block **A1**) and spot height 271 (block **B3**) on the topographic map.

3.1.4 In which year was the map constructed? (1 x 1) (1)

3.1.5 Use the answer to QUESTION 3.1.4 to calculate the current difference in years. (1 x 1) (1)

3.1.6 The annual change is 5' westwards. Calculate the mean annual change in 2022. (1 x 1) (1)

3.1.7 Use the answer to QUESTION 3.1.6 to calculate current magnetic declination. (1 x 1) (1)

3.1.8 Calculate the true bearing of spot height 271 (in block **B3**) from spot height 274 (in block **A1**). (1 x 2) (2)

3.1.9 Use the answers to QUESTIONS 3.1.7 and 3.1.8 to calculate the magnetic bearing from spot height 274 in block **A1**, to spot height 271 in block **B3**. (1 x 1) (1)

(10)

3.2 MAP INTERPRETATION

Refer to the farming area (Hectorspruit Citrus Estates) in block **D1** of the topographic map.

3.2.1 What is the purpose of the straight rows of trees on the Hectorspruit Citrus Estate? (1 x 1) (1)

3.2.2 Does farming in this area represent large scale or small scale farming? (1 x 1) (1)

3.2.3 Provide evidence from the map to support your answer to QUESTION 3.2.2. (1 x 2) (2)

Refer to the N4 highway that runs from the east to the west on the topographic map.

3.2.4 Identify the SDI that developed along the N4 highway. (1 x 1) (1)

3.2.5 Give evidence from the topographic map that the SDI mentioned in QUESTION 3.2.4 stimulates infrastructure development in Emjejane. (1 x 1) (1)

3.2.6 Discuss how the development identified in QUESTION 3.2.4 could have resulted in economic growth in Emjejane. (1 x 2) (2)

Refer to Settlement **7** and Settlement **8** on the orthophoto map.

3.2.7 Which of the settlements, **7** or **8**, is considered an informal settlement? (1 x 1) (1)

3.2.8 Provide evidence from the orthophoto map to support your answer to QUESTION 3.2.7. (1 x 2) (2)

3.2.9 Where would most of the residents of the informal settlement be employed? (1 x 1) (1)

(12)

3.3 GEOGRAPHICAL INFORMATION SYSTEMS (GIS)

Refer to the railway tracks in Block **A1** and **B1** on the orthophoto map.

3.3.1 Data integration is the combination of different types of data and data layers of a specific area for the purpose of decision-making. List TWO data layers that an engineer will consider before planning the route that the railway tracks will follow. (2 x 1) (2)

3.3.2 Explain how data integration assisted city engineers when they planned the development of the railway tracks. (1 x 2) (2)

Refer to the orthophoto map.

3.3.3 Data for the orthophoto map was gathered through the process of remote sensing. Define *remote sensing*? (1 x 2) (2)

3.3.4 How did remote sensing assist developers in the development of the Maputo Corridor (N4) along blocks **D4** and **D5?** (1 x 2) (2)
(8)

TOTAL SECTION B: 30

TOTAL: 150

END