GAUTENG PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

PREPARATORY EXAMINATION

2022

MARKING GUIDELINES

GEOGRAPHY (PAPER 2) (10782)

28 pages

PRINCIPLES FOR MARKING GEOGRAPHY – 2022

The following marking principles were developed to standardise the marking processes.

MARKING

- ALL questions MUST be marked, irrespective of whether it is correct or incorrect.
- Where the maximum marks have been allocated for a particular question, place an Ⓜ over the remainder of the text to indicate the maximum marks have been achieved.
- A clear, neat tick must be used: √
  - If ONE mark is allocated, ONE tick must be used: √
  - If TWO marks are allocated, TWO ticks must be used: √√
  - The tick must be placed at the FACT for which the mark is being allocated.
  - Ticks must be kept SMALL, as various layers of moderation may take place.

- Incorrect answers must be marked with a clear, neat cross: **X**
  - Use MORE than one cross (x) across paragraph/discussion style questions to indicate that all facts have been considered.
  - Do NOT draw a line through an incorrect answer.
  - Do NOT underline the incorrect facts.

NOTE THE FOLLOWING

- If the numbering is incorrect or left out, as long as the sequence of answers to questions is followed, candidates can be credited.
- Spelling errors – if the answer is recognisable, award the marks, provided the meaning is correct.
- Be sensitive to the context of an answer, which may be stated in a different way.
- In questions where a letter is the accepted response, but the learner writes the actual answer – award the marks.

TOTALLING AND TRANSFERRING OF MARKS

- Each sub-question must be totalled.
  - Questions in Section A have five sub-sections, therefore five sub-totals per question is required. Section B has three sub-sections and three sub-totals.
  - Sub-section totals to be written in the right-hand margin at the end of the sub-section and underlined.
  - Sub-totals must be written legibly.
  - Leave space to write down moderated marks on different levels.
- Add sub-totals and transfer the total to the top left-hand margin next to question number.
- Transfer the total to the cover of the answer book.

MODERATION

Marking on each level of moderation is done in the same way as the initial marking. All guidelines for marking must be adhered to.

If a mark for a sub-question is changed after moderation, the moderator must strike off the marker's mark and write down the new mark as follows, ~~12~~ 16.

The total for the question must be recalculated, and similarly be struck off, and the new total to be written down as follows, ~~26~~ 36.

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 a possible answer to the following questions. Choose the correct answer and write only the letter (A – D) next to the question number (1.1.1 – 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 (1)/central business district

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

C (1)/ industrial

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

B (1)/transition

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

C (1)/Rural-urban fringe

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

A (1)/Central business district

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

C (1)/outlying business district

1.1.7 The land-use zone where most people live.

D (1)/Residential zone

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

B (1)/Rural-urban fringe

(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 number (1.2.1 – 1.2.7) in the ANSWER BOOK, for example 1.2.8 I.

1.2.1 ***H (1) Wet point***

1.2.2 ***G (1)/Rural settlements***

1.2.3 ***F (1)/Dispersed***

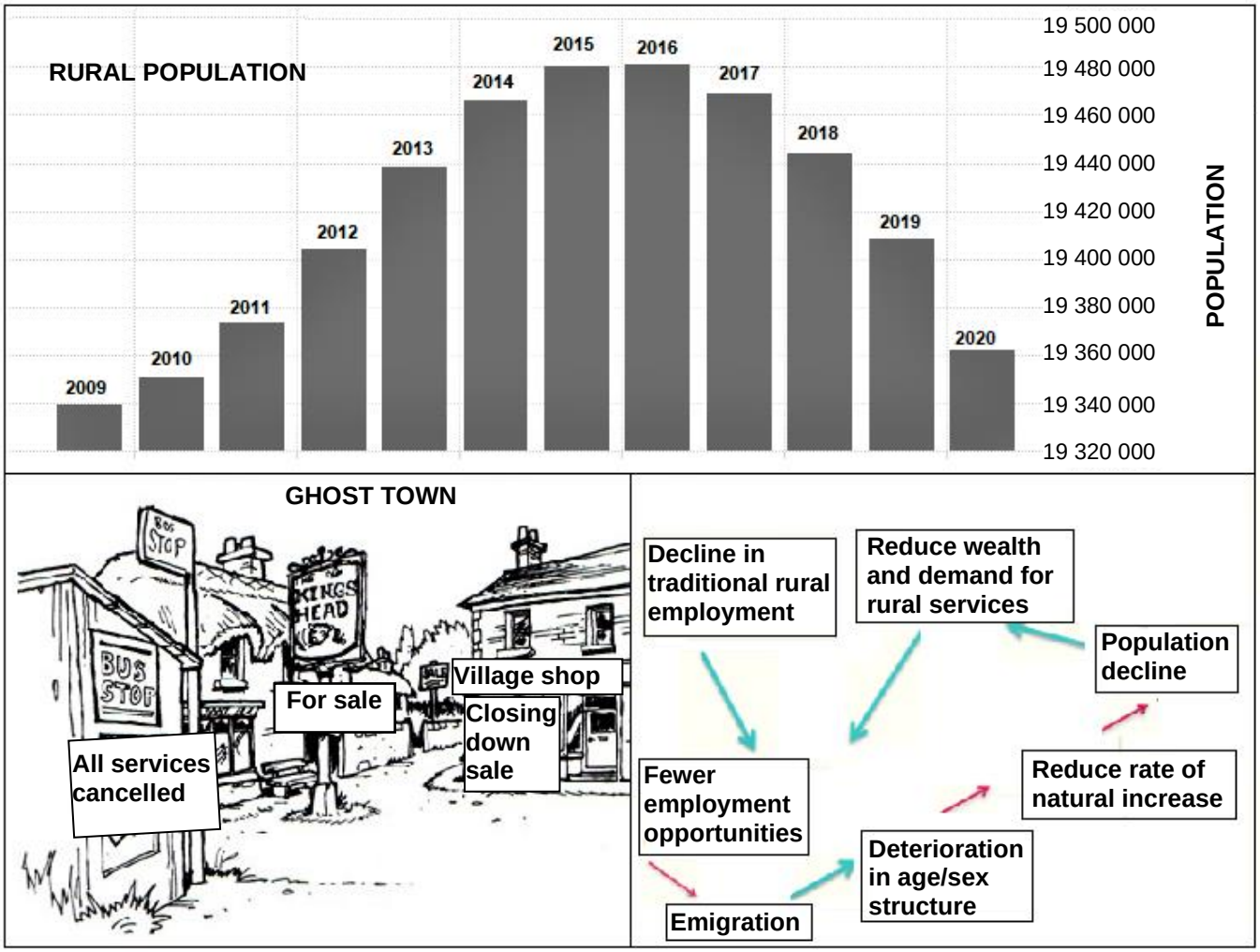
1.2.4 ***B (1)/Site***

1.2.5 ***C (1)/Nucleated***

1.2.6 ***A (1)/Urban settlements***

1.2.7 ***E (1)/Situation*** (7 x 1) (7)

1.3 Refer to the infographic on South Africa's rural population trends from 2009 until 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*.

The decline in the number of people living in a rural area. (2)
[CONCEPT] (1 x 2) (2)

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

The graph shows a decline in population from 2017 (19 480 000) to 2020 (19 320 000). (1) (1 x 1) (1)

1.3.3 Describe the impact of rural depopulation on the economy of rural areas.

Closing of schools, clinics and services (e.g. farms close down) means people will lose their jobs. (2)
There will be reduced wealth in rural areas therefore no buying power. (2)
Demand for rural services will be reduced – there will be people without jobs and without an income. (2)
Shops will close down as the buying market will be much smaller. (2)
Towns will become ghost towns because there will be fewer economic activities to support the maintenance of the infrastructure. (2)
Fewer job opportunities therefore less income. (2)
[Any TWO - Examples can be linked] (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 the impact of it on the rural economy as indicated in the infographic.

Advertise rural areas to attract people back to the area for more buying power. (2)
Create recreational attractions in rural areas to attract people to these areas/keep people in the area. (2)
Develop the rural areas into tourist attractions to give those areas an economic injection. (2)
Restore old buildings into tourist attractions or hotels to attract people to the area. (2)
Develop services (accept examples of services) to attract the youth back to the rural areas. (2)
Decentralisation of industries to rural areas to create jobs. (2)
Move industries to rural areas to attract more workers to rural areas. (2)
SDI will result in local government investing in spatial development in the area (2)
Infrastructure development to attract investment in the area (2)
[Any FOUR] (4 x 2) (8)

(15)

1.4 Refer to the case study on the growth of South African urban settlements.

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 live 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 massive strain on provision of services and fuels 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.*

An increase in the percentage or proportion of people living in urban areas. (2)
[CONCEPT] (1 x 2) (2)

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

Many opportunities for work and leisure (1)
Improved health (1)
Improved education (1)
Economic activities (1)
Services concentrated in a small area (1)
[Any ONE] (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.

Environment:
More people and activities in the urban areas will result in more environmental problems, e.g., pollution. (2)
Higher population density will result in exhaustion of natural resources. (2)
More infrastructure development e.g., roads, houses will result in destruction of the natural environment. (2)
More people will result in an increase in temperature (Urban Heat Island/pollution dome/smog) further resulting in an alteration to the natural environment (2)

Health:
More people will result in an increase in pollution which will have a negative effect on the health of people (2)
Higher population density results in more stress-related/heart conditions/anxiety. (2)
High population density will result in the rapid spread of diseases e.g., COVID-19. (2)
High population density will place pressure on health services which will result in deteriorating health conditions of the population. (2)

[ONE must be on the environment, and ONE must be on health conditions]
[Any TWO] (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.

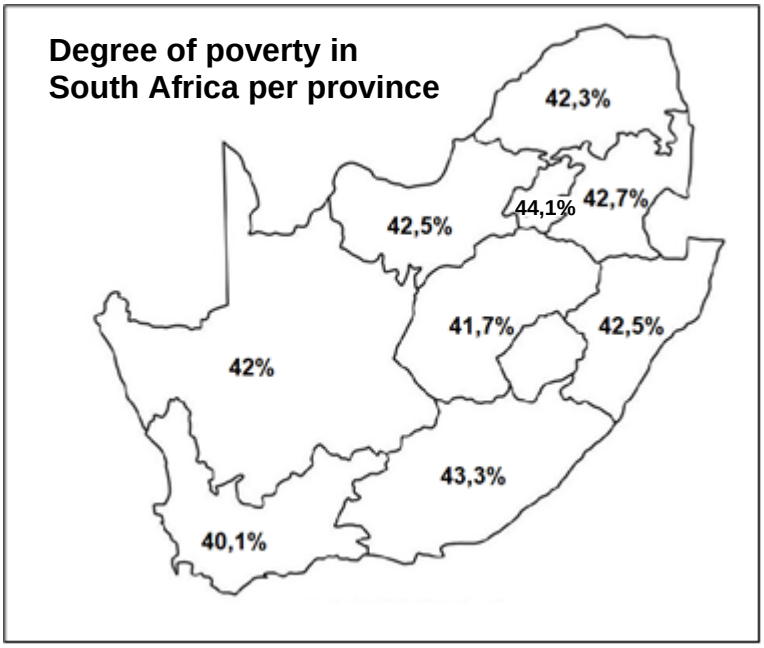
Gauteng is located centrally which means that it is very accessible (via road, air, rail). (2)
Gauteng has a high concentration of industries. (2)
Gauteng has a well-developed infrastructure. (2)
Gauteng is the economic hub of the country. (2)
Many opportunities for work and leisure can be found in Gauteng. (2)
(Any ONE) (1 x 2) (2)

1.4.5 Evaluate the effect of urbanisation on the provision of services in Gauteng.

More people will reduce safe, readily available, water supplies. (2)
High water demand results in poor provision of water for sanitation, drainage and solid waste collection. (2)
High demand on services will place a budgetary strain on municipalities (2)
High electricity demand will put strain on the delivery of electricity because of the increasing percentage of people in urban areas. (2)
Higher population requires more clinics to be built to supply medical services to a higher population in urban areas. (2)
More people in urban areas means more people that are littering which in turn means more needs to be spent on the removal of garbage. (2)
Pressure on already stressed public transport systems – people make use of e-hailers (Uber/Bolt) – more pressure on commuters' pockets. (2)
Higher demand on educational services (2)
[Any THREE] (3 x 2) (6)

[Accept other urban services] **(15)**

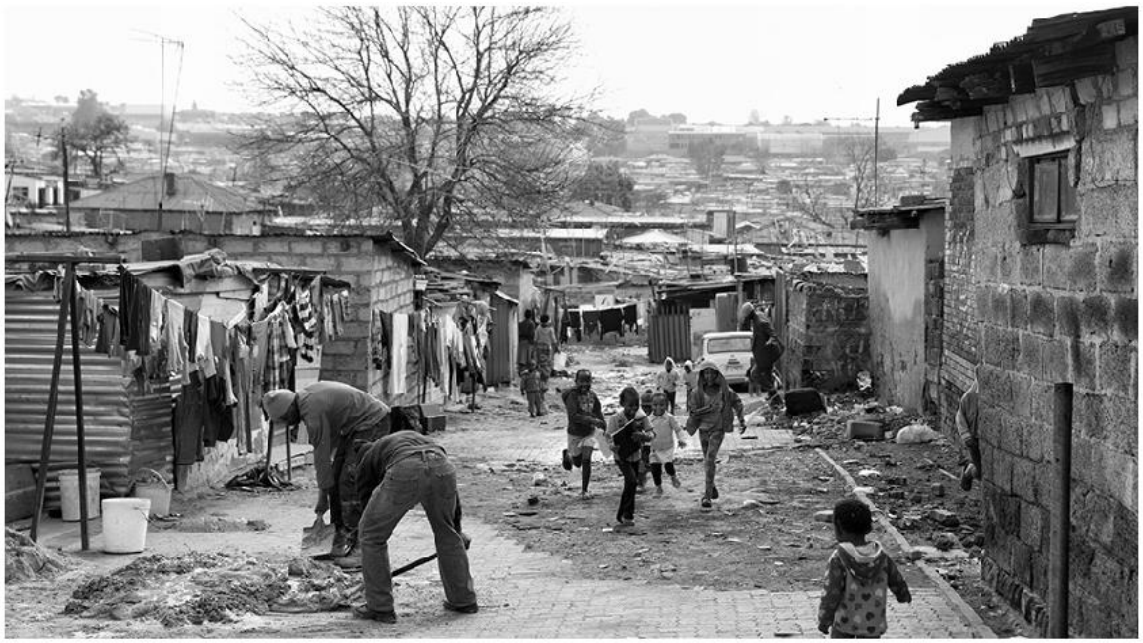
1.5 Refer to the following infographic on poverty in South Africa.



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.

Gauteng (1) (1 x 1) (1)

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

Huge influx of people from other provinces or countries increases the competition for jobs. (2)
Lower remuneration because of large pool of labourers. (2)
Unemployment because of large number of immigrants that are willing to work for lower pay. (2)
Unemployment because of lack of skills and qualifications (2)
[Any ONE] (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.

Poor building structures (1)
Children are in the streets and not at school/lack of education (1)
People doing tasks themselves because they cannot afford a professional to do the job/manual labour evident (1)
Poor infrastructure (e.g. housing, roads) (1)
[Any TWO] (2 x 1) (2)

1.5.3 Explain how unemployment contributes to poverty in urban areas.

People without an income cannot afford to pay bonds/rent and thus resort to informal settlements. (2)
People without an income cannot feed themselves and results in more beggars. (2)
High poverty rate because of unemployment puts more strain on the government in the issuing of social grants/more grants will have to be paid. (2)
Greater strain on taxpayers to subsidise grants. (2)
Increase in the number of homeless people as they do not have an income to afford proper houses. (2)
Unemployment will result in the increase of crime in urban areas. (2)
Municipalities spend money on feeding the poor instead of spending money on the improvement of infrastructure, etc. (2)
[Any TWO] (2 x 2) (4)

1.5.4 Suggest ways how the local government responsible for the area in the image above, can decrease poverty.

Assist the inhabitants in job creation, e.g. entrepreneurial programmes. (2)
Focus on projects which can generate sustainable income in the community. (2)
Distribution of food, clothing and basic necessities to the people living in the informal settlement. (2)
Supply the inhabitants with cheaper services like electricity and water. (2)
Provide successful mentorship programmes, life skills courses and career plotting projects to the inhabitants of the area. (2)
Develop women to run outreach programmes in the area. (2)
Invest money in skills development so that people can have an opportunity to get a decent job to earn a proper income. (2)
Increase grants to be more inflation related. (2)
Provide training opportunities to inhabitants to specialise in specific jobs so that they can get a job to earn an income. (2)
Partner with successful businesses outside the area to bring opportunities into the area for people to earn an income. (2)
[Any THREE] (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 number (2.1.1 – 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.

Primary sector (1)

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

Tertiary sector (1)

2.1.3 Sugar is manufactured at the refinery.

Secondary sector (1)

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

Quaternary sector (1)

2.1.5 Sales representatives market the sugar at retail stores.

Tertiary sector / Quaternary sector (1)

2.1.6 The sugar is exported to other countries. -

Tertiary sector (1)

2.1.7 Customers buy sugar online.

Tertiary sector (1)/Quaternary sector (1)

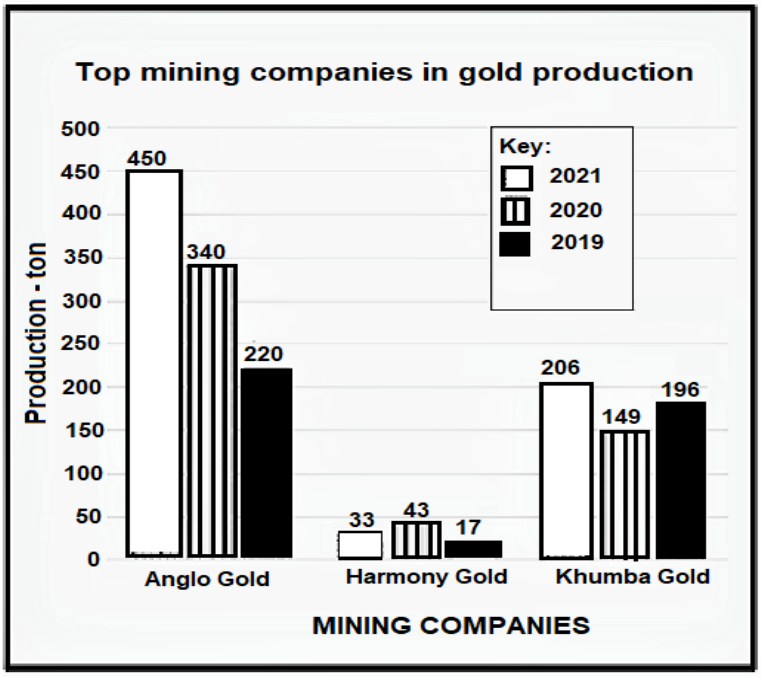
2.1.8 Preparation of farmland to plant sugar cane.

Primary sector (1) (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 number (2.2.1 – 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.

largest (1)

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

GDP (1)

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

Gauteng (1)

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

unskilled and skilled (1)

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

Reduces (1)

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

656(1)

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

Anglo Gold (1) (7 x 1) (7)

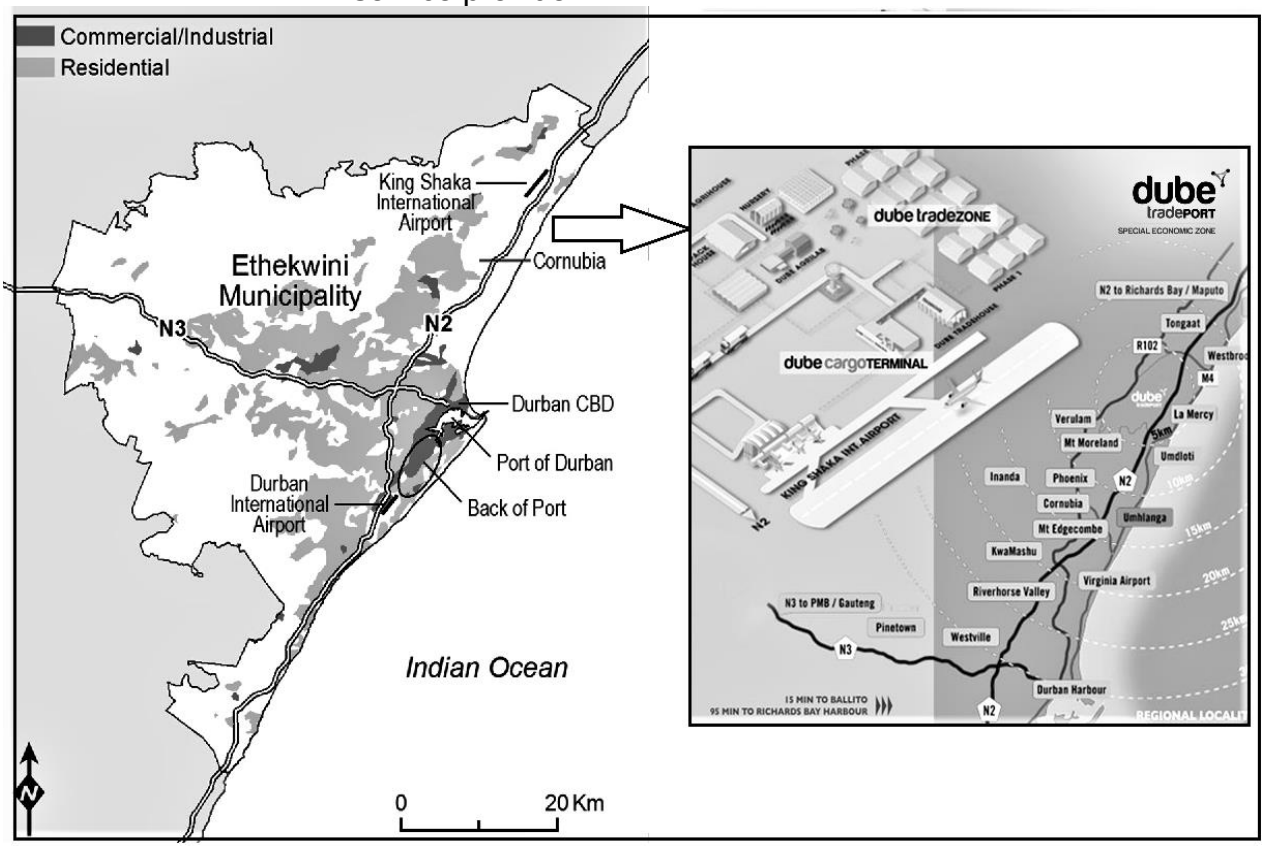
2.3 Refer to the infographic below showing information on the Dube TradePort IDZ.

DUBE TRADE PORT

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?

Industrial Development Zone (1) (1 x 1) (1)

2.3.2 Identify the province in which the Dube TradePort IDZ is located.

KwaZulu-Natal (1) (1 x 1) (1)

2.3.3 Name the main physical factor that influenced the location of the Dube TradePort IDZ.

Close to the Durban harbour (1)
Close to the King Shaka International Airport (1)
Well-developed infrastructure (1)
[Any ONE] (1 x 1) (1)

2.3.4 How does the Dube TradePort IDZ create the opportunity for industrial decentralisation?

Provides attractive service rebates/government incentives (water/electricity/transport) for relocated industries. (2)
Provides tax rebates/concessions for industries that are decentralised. (2)
Provides well-developed infrastructure that will lower the production costs. (2)
Provides cheaper and open land for future development/growth of the industry. (2)
Provides access to skilled and unskilled labour force. (2)
Provides access to harbours and transport links for export of products. (2)
[Any ONE] (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.

The IDZ assisted in the development of roads for the exporting and importing of more goods. (2)
Exporting of goods via the harbour will increase balance of trade. (2)
Exporting of goods via the airport will increase balance of trade. (2)
If more goods can be manufactured in this IDZ, more goods can be exported and will increase the balance of trade. (2)
[Any TWO] (2 x 2) (4)

2.3.6 Evaluate the socio-economic impact of the Dube TradePort IDZ on the local community.

The Dube TradePort will provide job opportunities that will reduce poverty. (2)
Upskilling people will help the people in the area to become skilled workers therefore they will receive a better income. (2)
Lowering of crime rates because people will have jobs. (2)
Poverty alleviation/better standard of living because Dube TradePort will bring money into the area. (2)
Improved infrastructure because of the upgrade of the roads and buildings that the community can use. (2)
Improved service delivery will help the local community to get access to running water and electricity. (2)
More/better housing will be provided for the community. (2)
Contributes to the local economy because more people will have work and be able to buy more from the local stores/increase in buying power. (2)
Industrialists are involved in social responsibility initiatives to build more schools and training facilities. (2)
The multiplier effect/development of associated or linked industries will provide more job opportunities. (2)
[Any THREE] (3 x 2) (6)
(15)

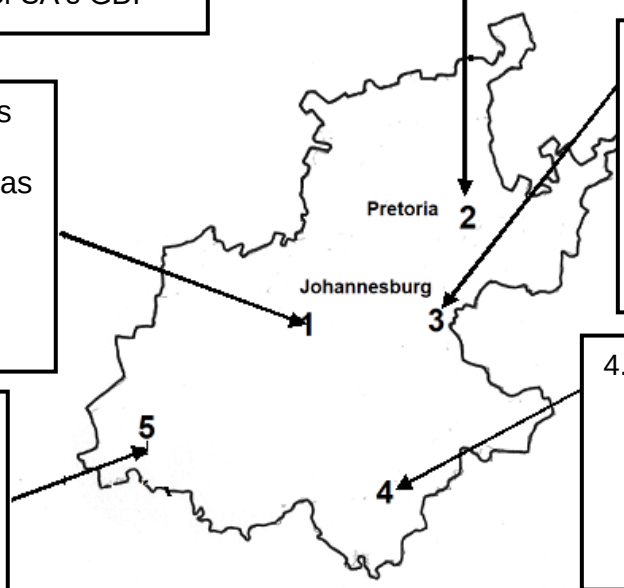
2.4 Refer to the information in the infographic on a core industrial region in South Africa and answer the questions that follow.

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.

Gauteng/PWV/Pretoria-Witwatersrand-Vereeniging (1) (1 x 1) (1)

2.4.2 Name TWO main industrial activities from the infographic located in this core industrial region.

Pharmaceutical industries (1)
Automotive sector (Motor vehicle parts and accessories) (1) (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.

It is a highly urbanised area, meaning there are many job / business opportunities. (2)
It is the economic hub of the country with two main cities in the province, namely Johannesburg and Pretoria. (2)
It contributes largely to the financial, manufacturing, transport, technology, and telecommunications sectors. (2)
This industrial area hosts a large number of overseas companies requiring a commercial base in Gauteng. (2)
It is home to the Johannesburg Stock Exchange, the largest stock exchange in Africa. (2)
Some of the largest companies in Africa and abroad are based in Gauteng, or have offices and branches here, e.g., Vodacom. (2)
[Any ONE] (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 strikes.

Lack of public transport (2) (1 x 2) (2)

2.4.5 This industrial region contributes 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.

It will have a significant impact on people getting to and from work – if they cannot get to work, they lose income. (2)
The taxi industry will lose money and they contribute a large amount to the GDP of the country. (2)
If people cannot reach their workplaces, less trade will take place therefore the GDP will decline. (2)
If people cannot go to work, factories will come to a standstill therefore no productivity. This will mean no income and the GDP will decline. (2)
The contribution of Gauteng to the GDP will decline because people will not have transport to get to work. (2)
If the workers do not go to work, they will not get paid and will have less money to spend on goods and services. (2)
The multiplier effect will be affected because people will not go to work, they will not have money to spend in the shops, which means that fewer shop workers are needed. (2)
Other industries that rely on workers using taxis will have a decline in production which means a decline in income for the day. (2)
[Any FOUR] (4 x 2) (8)

(15)

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

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 to 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's 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*.

A condition in which people do not have enough nutritious food and may not know where their next meal will come from. (2)
[CONCEPT] (1 x 2) (2)

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

Food shortage (1) (1 x 1) (1)

2.5.3 Describe how the unrest might have led to food insecurity.

The rioting and looting, especially in KZN, affected farm production as there were no workers. (2)
The rioting and looting hampered critical activities such as harvesting. (2)
Some products could not be harvested as a result of riot-related vandalism. (2)
Farmers failed to transport produce to the Durban ports for export. (2)
Deliveries to the market were not possible. (2)
Many workers in the agricultural sector in KZN were not able to report for work during the rioting. (2)
Distribution centres were not accessible, for the farming community to deliver their produce. (2)
Distribution centres were not able to deliver food to their clients to sell. (2)
Rioting and looting resulted in income losses of highly perishable products. (2)
[Any ONE] (1 x 2) (2)

2.5.4 Discuss the relationship between unemployment and food insecurity.

Unemployed people are less able to buy enough healthy food to feed themselves. (2)
When unemployment increases, food insecurity becomes a more serious problem. (2)
Hunger and poor nutrition can result in physical and mental weaknesses which will result in absenteeism from work. (2)
Food insecurity can cause unemployment and poverty because of the poor health of workers. (2)
The higher the unemployment, the higher the rate of food insecurity. (2)
[Any TWO] (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?

Protect food supply chains and consider them essential services. (2)
Prioritise the supply of food to the affected areas. (2)
Place an export ban on food products and supply the affected areas first. (2)
Create security at the food markets in these areas. (2)
Enhance food availability as a priority in the affected areas. (2)
Food emergency management systems need to be put in place. (2)
The movement of goods, including food and agricultural produce on the roads to these areas must be prioritised. (2)
Subsidise food prices so that people can afford to buy food. (2)

[Any THREE] (3 x 2) (6)
(15)

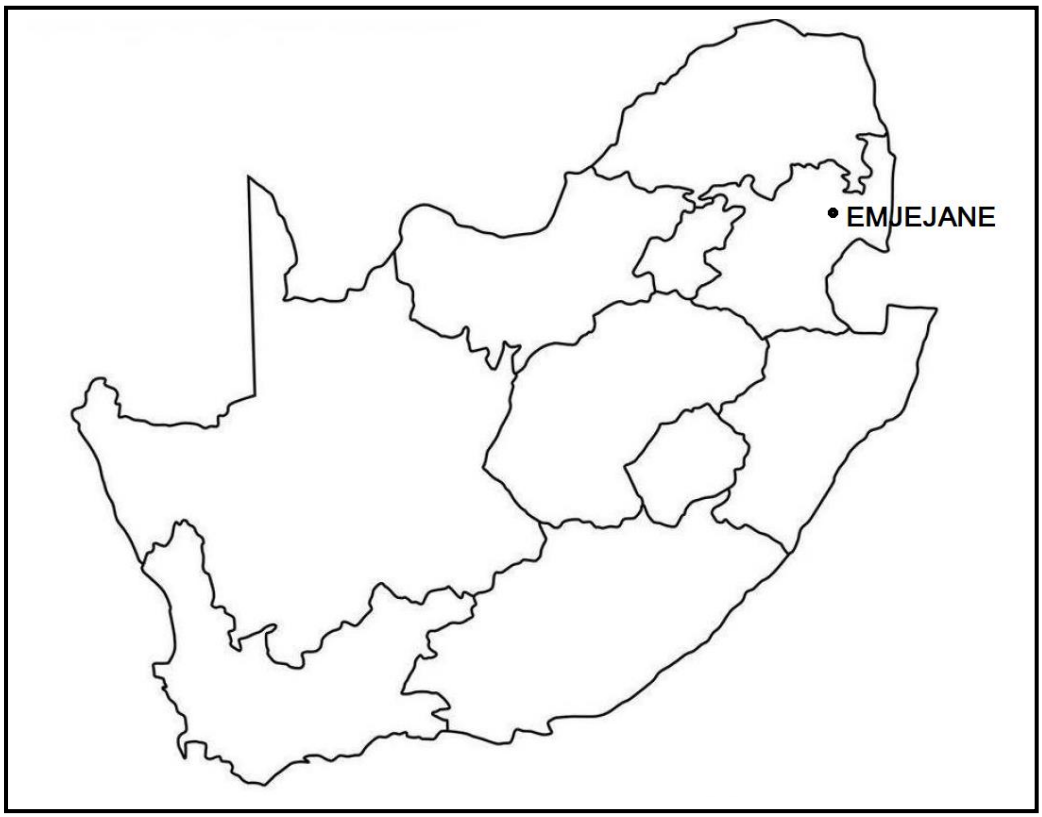
[60]

TOTAL SECTION A: 120

SECTION B

QUESTION 3: GEOGRAPHICAL SKILLS AND TECHNIQUES

BACKGROUND INFORMATION ON EMJEJANE



Coordinates: 25°26' S 31°41' E

Emjejane, formally 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

3.1.1 ***B (1)/country town***

3.1.2 ***C (1)/Mpumalanga***

3.1.3 ***D (1)/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 what year was the map constructed?

2014 (1) (1 x 1) (1)

3.1.5 Use the answer for QUESTION 3.1.4 to calculate the current difference in years.

2022 – 2014 = 8 (1) years (1 x 1) (1)

3.1.6 The annual change is 5' westwards. Calculate the mean annual change in 2022.

8 x 5' = 40' (1) (1 x 1) (1)

3.1.7 Use the answers to QUESTION 3.1.6 to calculate current magnetic declination.

18° 28' + 40' = 18° 68' = 19° 08' W of True North (1) (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**).

106° (2) – range (105° – 107°) (1 x 2) (2)

3.1.9 Use the answers to QUESTION 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**.

106° + 19° 08' = 125° 08' (1) Range (124º 08' – 126º 08') (1 x 1) (1)

(10)

3.2 MAP INTERPRETATION

Refer to the farming (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?

Acts as a wind barrier / The row of trees protects the citrus trees from the wind. (1) (1 x 1) (1)

3.2.2 Does farming in this area represent large-scale or small-scale farming?

Large scale farming (1) (1 x 1) (1)

3.2.3 Provide evidence from the map to support your answer to QUESTION 3.2.2.

Growing of crops on a large piece of land/estate (2)
Production is on a large scale. (2)
Generally, monoculture (One type of crop – Citrus) (2)

[Any ONE] (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.

Maputo Spatial Development Corridor (1) (1 x 1) (1)

3.2.5 Give evidence from the topographic map that the SDI mentioned in QUESTION 3.2.4 stimulates **i**nfrastructure development in Emjejane.

Roads under construction (1) (1 x 1) (1)

3.2.6 Discuss how the development identified in QUESTION 3.2.5 could have resulted in economic growth in Emjejane.

Provides jobs for locals in the construction of roads – uplift communities. (2)
Provides other infrastructure development (give examples). (2)
Encourages entrepreneurship – locals open businesses to supply the workers employed to build the roads. (2)
Encourages other related industries to develop around the N4 therefore creating more employment opportunities and generates more income. (2)
Passing road traffic will result in business development as the commuters will stop and buy produce. (2)
Passing traffic will bring income into the area. (2)
Development of roads encourages transportation of goods. (2)
[Any ONE] (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?

7 (1) (1 x 1) (1)

3.2.8 Provide evidence from the orthophoto map to support your answer to QUESTION 3.2.7.

No visible infrastructure e.g., roads (2)
No proper housing structures (2)
Dwellings look temporary/makeshift dwellings. (2)
Development looks unplanned. (2)
Clustering of building structures (2)

[Any ONE] (1 x 2) (2)

3.2.9 Where would most of the residents of the informal settlement be employed?

On the citrus estate (1)
In road construction (1)

[Any ONE] (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 combining 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 the railway tracks will follow.

Slope/relief of the land (1)
Drainage/water (1)
Type of soil/underlying rock structure (1)
[Any TWO] (2 x 1) (2)

3.3.2 Explain how data integration assisted city engineers when they planned the development of the railway tracks.

A summary of integrated data is produced which makes it easier to analyse data to determine the best way for the location of the railway line. (2)
Examples: The slope/relief will affect the drainage of water. (2)
The underlying rock structure and the relief of the area will support the building of railway tracks. (2)
[Any ONE] (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*?

Getting data about the earth's surface from a distance, without being in contact with the earth's surface. / Getting data from above / vertical (2)
[CONCEPT] (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?**

Data could be collected for inaccessible areas to determine where the ideal location will be to build the corridor. (2)
Large areas can be captured as images and analysed to identify the ideal area for the building of the corridor. (2)
Observation of the area could be done quickly. (2)
Developers had consistent images over time, of the area, to determine what would be the most cost effective. (2)
[Any ONE) (1 x 2) (2)
(8)

TOTAL SECTION B: 30

TOTAL: 150