



LIMPOPO

PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

VHEMBE WEST DISTRICT

GRADE 12



GEOGRAPHY P2 PRE-TRIAL EXAMINATION

18 AUGUST 2022

DURATION: 3 HOURS

MARKS: 150

INSTRUCTIONS AND INFORMATION

1. This question paper consists of TWO SECTIONS

SECTION A:

QUESTION 1: Rural and Urban (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 subsections of questions answered
5. Start EACH question at the top of a NEW page
6. Number the answers correctly according to the numbering system 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. 1020hPa, 14^oC and 45 m.
11. You may use a non-programmable calculator
12. You may use magnifying glass
13. Write neatly and legibly

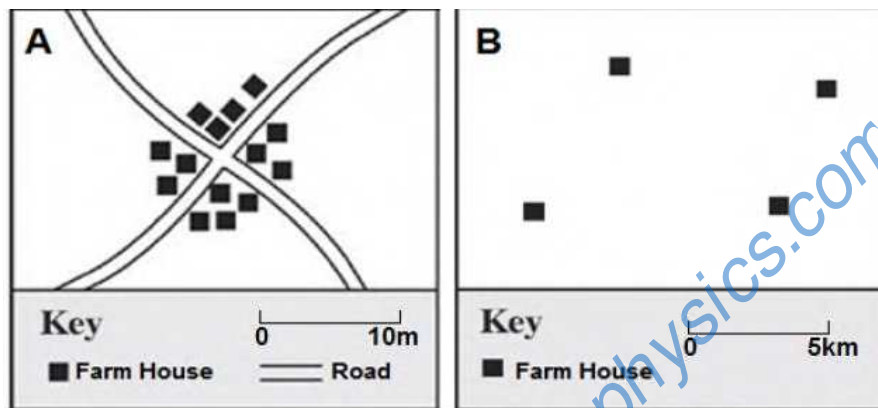
SPECIFIC INSTRUCTIONS AND INFORMATION FOR SECTION B

14. A 1: 50 000 topographic map 2930CB PIETERMARITZBURG and 1 : 10 000 orthophoto map 2930 C B 8 PIETERMARITZBURG are provided.
15. The area demarcated in RED on the orthophoto map represents the area covered by the orthophoto.
16. Show ALL calculations. Marks will be allocated for this
17. You must hand in the topographic and orthophoto map to the invigilator at the end of this examination session.

SECTION A : RURAL AND URBAN SETTLEMENT

QUESTION 1

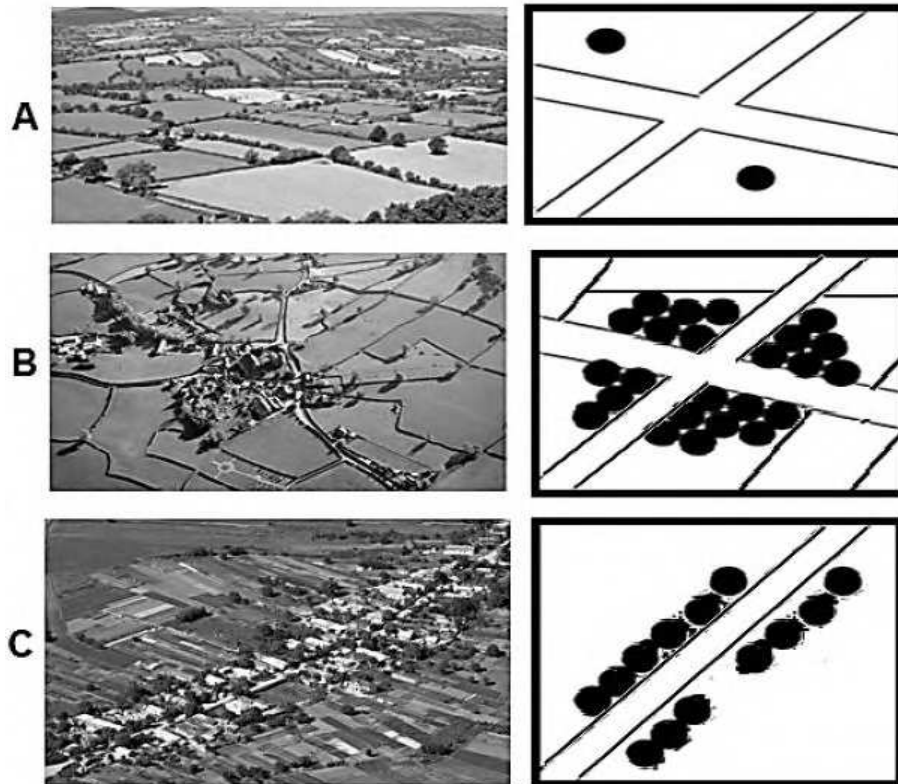
1.1 Refer to FIGURE 3.1 showing rural settlement patterns. Match the descriptions below with the rural settlement patterns A or B next to the question numbers (1.1.1-1.1.8)



[Source: <https://www.slideshare.net/xksinz/settlement-patterns>]

- 1.1.1 A nucleated settlement pattern
- 1.1.2 Lacks privacy
- 1.1.3 Sharing of farming equipment
- 1.1.4 Safety and security risk
- 1.1.5 Fragmented (broken plots) farm land
- 1.1.6 Far from basic services like shops and schools
- 1.1.7 Produces large yields
- 1.1.8 Requires large amounts of money to practice farming (8x1)(8)

1.2 Refer to FIGURE 1.2 on rural settlements. Match EACH of the descriptions below with ONE of diagrams A, B or C. You may choose the same settlements more than once. Write only the letter (A-C) next to the question numbers (1.2.1-1.2.7)



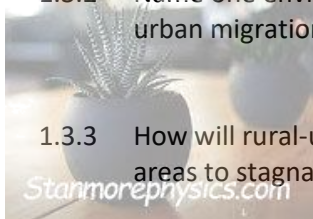
- 1.2.1 Farm houses are found in linear shape
- 1.2.2 Farm houses are far apart or scattered
- 1.2.3 Less safe and secure in this type of settlement
- 1.2.4 The shape is influenced by a single road
- 1.2.5 Settlement patterns associated with large commercial farms
- 1.2.6 The shape of settlement is stellar
- 1.2.7 Individual farmland tend to be elongated (long and narrow) (7x1)(7)

1.3 The increasing rate of rural-urban migration causes many problems for rural and urban settlements.

1.3.1 Define the term rural –urban migration (2x1)(2)

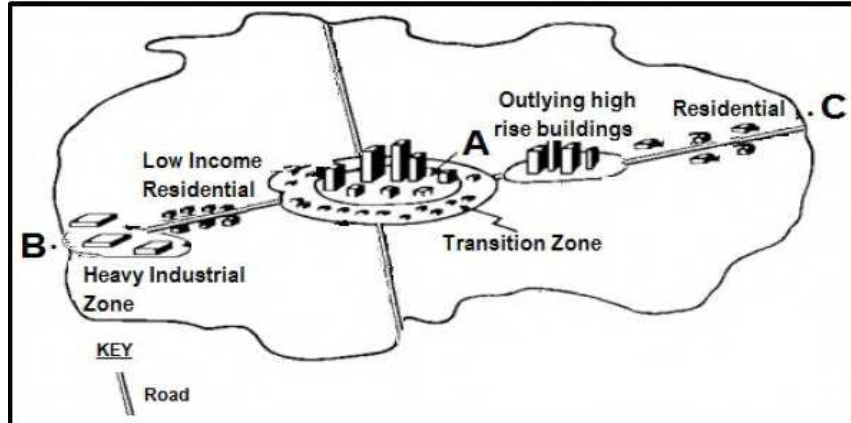
1.3.2 Name one environmental push factor responsible for rural-urban migration (1x1)(1)

1.3.3 How will rural-urban migration cause the economy of rural areas to stagnate(stop growing) (2x2)(4)



1.3.4 Write a paragraph of approximately EIGHT lines and explain why pull factors are a burden on urban municipalities (local government) (4x2)(8)

1.4 FIGURE 1.4 shows a simple sketch of urban land use zones.



1.4.1 Identify land use zone A (1X1)(1)

1.4.2 What evidence suggest that land use zone A has a high degree of accessibility (1x1)(1)

1.4.3 Indicate how the accessibility of land-use zone A impacts on the morphology of urban buildings (1x1)(1)

1.4.4 Draw a labelled urban profile from B to C (4X1)(4)

1.4.5 Answer the following questions with reference to the transition zone.

(a) Why are buildings in the transition zone poorly maintained (1x2)(2)

(b) Give a reason for the high land values in the transition zone (1x2)(2)

1.4.6 Give two reasons for the location of heavy industrial zone (2x2)(4)

1.5 Refer to FIGURE 1.5 an extract on environmental injustice

ENVIRONMENTAL INJUSTICE IN SOUTH AFRICA
By Nezir Sinani

Through its work at the Medupi site (mega coal-fired power station), Eskom is guilty of an environmental injustice. In South Africa it is the poor who bear the impact of poor air quality caused by coal-fired power stations. These power stations are situated close to poor mining communities who live in poorly built houses that provide little protection against bad air quality.

The location of the Medupi Power Station in the water-scarce region of Lephalale in Limpopo in South Africa, is another problem. The increase in mining and power generation activities, has increased the demand for water, thus there is less water available for communities in the area.

[Source: www.twitter.com/NezirSinani]

- 1.5.1 What is an environmental injustice (2x1)(2)
- 1.5.2 Name the environmental injustice caused by the coal-powered power station (1x1)(1)
- 1.5.3 Why are the poor mainly affected by environmental injustice named in QUESTION 1.5.2 (2X2)(4)
- 1.5.4 Discuss TWO negative effects of environmental injustice mentioned in QUESTION 1.5.2 (2X2)(4)
- 1.5.5 Suggest TWO measures that can be put in place to protect this community from the environmental injustice named in QUESTION 1.5.2 (2X2)(4)
- 1.5.6 Discuss the negative impact of location of Medupi Power station on the surrounding farming community (2x2)(4)

QUESTION 2

2.1 Table: 2.1 data relating to economic activities of South Africa

% change per annum	f...projected figures									
	2010	2011	2012	2013	2014	2015	2016	2017	2018f	
Agriculture, forestry & fishing	-0.3	1.3	0.6	1.5	5.6	-8.4	-7.6	3.4	5.4	
Mining & quarrying	5.3	-0.7	-2.9	4.0	-1.6	3.0	-2.9	0.1	1.6	
Manufacturing	5.9	2.9	1.9	0.7	0.0	0.1	-0.1	1.4	2.9	
Electricity, gas & water	2.4	1.4	-0.1	-0.6	0.0	-1.0	-0.5	2.1	4.1	
Trade, catering & accommodation	4.4	3.8	3.6	1.9	1.3	1.4	1.0	1.1	2.5	
Transport, storage & communication	1.7	3.0	2.5	2.0	2.3	1.4	0.5	0.9	2.2	
Finance, insurance & business services	1.2	4.1	3.0	3.0	2.2	2.8	1.9	2.0	3.6	
Community, social & personal services	0.4	2.4	2.1	1.8	1.4	1.1	1.0	1.2	2.0	
General government	2.7	4.5	3.6	3.1	3.0	0.9	1.1	0.6	1.0	
Total GDP growth	2.9	3.0	2.2	2.3	1.6	1.2	0.4	1.2	2.6	

- 2.1.1 Name the economic sector into which agriculture, forestry, and fishing is categorised.
- 2.1.2 Which primary economic activity has shown the lowest growth rate during the period 2010 to 2015
- 2.1.3 Which economic activity is projected to show the lowest growth rate in 2018
- 2.1.4 Name the tertiary economic activity that has the highest growth rate projected in 2018
- 2.1.5 Into which economic sector would general government be classified
- 2.1.6 Which year shows the highest total GDP growth of all economic sectors
- 2.1.7 Calculate the GDP growth rate of finance ,insurance and business services from 2016 to 2018 (7x1)(7)

2.2 Various options are provided as possible answers to the following questions. Choose the correct economic concept to answer the statements. Write down only the letter (A-D) next to the question numbers(2.2.1-2.2.8) e.g. 2.2.9 A

- 2.2.1 Transport is an example of thesector
 - A Primary
 - B Secondary

- C Tertiary
 - D Quaternary
- 2.2.2 Thesector is linked to research and development
- A Primary
 - B Secondary
 - C Tertiary
 - D Quaternary
- 2.2.3 The value of goods and services produced within the boundaries of a country is its
- A Gross domestic product
 - B Balance of trade
 - C Gross national product
 - D Balance of trade
- 2.2.4 Products that are sold overseas ,are sold on themarket
- A Import
 - B Export
 - C Home
 - D National
- 2.2.5 Value added goods are produced in the Sector .
- A Primary
 - B Secondary
 - C Tertiary
 - D Quaternary
- 2.2.6 Sugar cane farming is an example of farming
- A Small-scale commercial
 - B Small-scale subsistence
 - C Large scale farming
 - D Large scale subsistence
- 2.2.7 When an industry is situated close to a mineral source, it is known as a/an industry
- A Raw material orientated
 - B Market orientated
 - C Break-of-bulk point
 - D Ubiquitous
- 2.2.6 The process whereby industries migrate from core industrial regions to peripheral industrial regions

- A Centralisation
 - B Commercialisation
 - C Agglomeration
 - D Decentralisation
- (8x1)(8)

2.3 Read the case study below based on Durban Pinetown industrial region

MANUFACTURING SECTOR

The Durban-Pinetown Industrial Region is the second largest in the country, after PWV/Gauteng. The manufacturing sector is geared for export, with nearly a third of South Africa's manufactured exports being produced in KwaZulu-Natal. Its diversified nature is significant in the KwaZulu-Natal's economic growth rate, and generates 20 per cent of provincial employment.

The largest manufacturing industries are the automobile and component sector, pulp and paper products, chemicals and petrochemicals, and food and beverages.

The Durban-Pinetown Industrial Region has a competent shipbuilding and repair sector with an excellent skills base. Over the years a variety of ocean going vessels have been built as well as renowned luxury motorised yachts. At present the shipbuilding industry has good basic infrastructure. There are immense possibilities around the Durban shoreline, especially in the construction of ships or parts. World demand for ships is on the increase and such an investment would create many jobs in the area.

[Source: <http://kzntopbusiness.co.za/site/manufacturing/>]

- 2.3.1 Where would you rank Durban –Pinetown in terms of industrial output in South Africa (1x1)(1)
- 2.3.2 Quote evidence from the passage to show that secondary economic activities make a big contribution to the GDP (1X1)(1)
- 2.3.3 Which word in the article describe the significant role of the manufacturing sector in Kwazulu Natal's economic growth (1x1)(1)
- 2.3.4 Discuss reasons why the Durban-Pinetown region is ideal for ship building and repair industries (2X2)(4)
- 2.3.5 In a paragraph of approximately EIGHT lines ,discuss the positive impact of the Durban-Pinetown Industrial Region on the economic development in Kwazulu Natal (4x2)(8)

2.4 Study an extract below on an informal trading

THE SLEEPING GIANT – INFORMAL TRADE IN SOUTH AFRICA
19/04/2017

The SA food market is worth R485 billion. Of this, 66% is accounted for by the major supermarkets and branded superettes (R320 billion); while informal and wholesalers account for the rest of the total market.

Informal retail outlets have recorded the highest turnover growth in the retail food market in 2016, especially those who focus their attention on the township counter-service and spaza outlets.

Counter-service stores cropped up in many parts of the country and many of the owners of such stores are foreigners. Today it is estimated that over 85% of informal stores are run by foreigners. South Africans have chosen to rather rent their premises to these foreigners instead of using them for their own purpose. Informal traders often live on the premises and trade between 05:00 and 22:00 seven days a week.

[Source: <http://www.supermarket.co.za/news-article.asp?ID=6851&CatTags=16-Economic%20factors>]

- 2.4.1 Define the term informal trading (2x1)(2)
- 2.4.2 What is the total worth of South Africa food market? (1x1)(1)
- 2.4.3 What percentage of the figure stated in QUESTION 2.4.2 is accounted for by the formal trade market? (1x1)(1)
- 2.4.4 Give TWO reasons for high turnover (amount of goods sold) that spaza outlets in townships experience. (2x2)(4)
- 2.4.5 Write a paragraph of approximately EIGHT lines and explain why 85% of informal traders are foreigners (4x2)(8)

2.5 Figure 2.5 Dube Trade: Influence on Durban - Pine Industrial development Region

Industrial development zones creates new employment opportunities, increase exports of value added products, create opportunity for industrial decentralisation and also improves local socio-economic conditions. Dube trade port is set to be a major logistic platform for Southern Africa, as the port of Durban provides connectivity to 53 International destinations and access to local distribution networks. Dube trade port has huge potential to boost economic growth and job in the province, Kwazulu Natal premier, Zweli Mkhize also speaking at the launch said the Dube Trade Port would greatly expand the province's import and export capacity
[Adapted from
<http://www.vukuzenzele.gov.za/book/export/html/962>

- 2.5.1 In which province is the Dube Trade-port located (1x1)(1)
- 2.5.2 What is the main aim of this IDZ (1X2)(2)

- 2.5.3 How does an IDZ create opportunities for industrial decentralisation (2x2)(4)
- 2.5.4 State TWO advantages of industrial decentralisation for the core industrial regions in South Africa (2x2)(4)
- 2.5.5 Explain how Dube IDZ will improve the socio-economic conditions (2x2)(4)

SECTION B MAPWORK AND INTERPRETATION

QUESTION 3

3.1 The following questions below are based on the PIERTERMATITZBURG MAP 1:50000

- 3.1.1 The map index directly west of Pietermaritzburg is
- A Freestate
 - B Kwazulu Natal
 - C Mpumalanga
 - D Gauteng
- 3.1.2 The feature marked S in block D4 on the topographical map is a/an....
- A Mine dump
 - B Cutting
 - C Embankment
 - D Quarry
- 3.1.3 An orthophoto map is a Photograph which has contour lines. Spot heights, trigonometrical stations and other labelled features on it
- A Horizontal
 - B Vertical
 - C High oblique
 - D Low oblique
- 3.1.4 The difference in height between trigonometrical 263 numbered J on the topographical map and spot height 1106 numbered R on the topographical map.
- A 1246.2 m
 - B 1108 m
 - C 119.4 m
 - D 117.6 m

- 3.1.5 The exact distance between K in block B6 on the topographical map and block C6 in km is
- A 2.6 km
B 0.5 km
C 1.6 km
D 3.6 km
- (1x5)(5)



3.2 MAP CALCULATIONS AND TECHNIQUES

- 3.2.1 Calculate the vertical exaggeration of a cross section if the vertical scale is 1 cm = 40m and the horizontal scale is 1:50000. Show all calculations. Marks will be awarded for calculations. (4x1)(4)
- 3.2.2 Calculate the magnetic bearing from spot height 789 in block G5 to trigonometrical station 266 in block F5 on the topographical map for the present year. Marks will be awarded for calculations (6x1)(6)

3.3 Refer to both the topographical map and orthophoto map

Find the area names "Camp's Drift" in block **H8** on the topographical map. This is the site of some heavy industries

- 3.3.1 Give TWO reasons why this is a good situation for this kind of economic activity (2x2)(4)
- 3.3.2 Refer to the area marked **5** on the orthophoto map. Is the area considered to be a low income or high-income residential? (1x1)(1)
- 3.3.3 Give TWO reasons evident on the orthophoto map which have influenced the location of the residential area at slope **5** (2x2)(4)
- 3.3.4 The afforested area around Pietermaritzburg have been declared a green belt
- What does it mean (1x2)(2)
- 3.3.5 Of what significance/ importance is this to the residents of Pietermaritzburg (2x2)(4)
- 3.3.6 Identify the types of industries located in block E10 and E11

3.4 GIS
Refer to the orthophoto map

- 3.4.1 Define the term spatial data (2x1) (2)

3.4.2 Explain why buffering is important in the location of the following functions/services. School in block G10 on the topographical map (2x2)(4)

3.4.3 Classify the following as either spatial or attribute data
(a) A map showing housing density
(b) The shape of a ploughed field (2x1)(2)

TOTAL: 150



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MEMORANDUM

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SECTION A

Question 1

1.1

1.1.1 A (1)

1.1.2 A (1)

1.1.3 A (1)

1.1.4 B (1)

1.1.5 A (1)

1.1.6 B (1)

1.1.7 B (1)

1.1.8 B (1)

1.2

1.2.1 C (1)

1.2.2 A (1)

1.2.3 A (10)

1.2.4 C (1)

1.2.5 A (1)

1.2.6 B (1)

1.2.7 C (1)

1.3 RURAL URBAN MIGRATION

1.3.1 The movement of people from rural areas to urban areas (2)

1.3.2 Drought (1)

Floods (1)

Infertile soils (1)

Soil erosion (1)

Diseases and pests (1)

[ANY TWO]

1.3.3 Rural depopulation causes a reduction in labour force (2)

Insufficient threshold population to sustain basic services (2)

Closure of businesses/services because of less customers (2)

Decline in quality of services delivery (2)

Fewer job opportunities/unemployment (2)

Aging population because young leave the area (2)

Brain drain as educated people leave to rural areas (2)

Poor use of resources/farm lands (2)

Lack of productivity (declining profits) with an older labour force (2)

Fewer investments due to decrease in buying power (2)

[ANY TWO]

1.3.4

Higher municipal budgets/more money needed to cater for increased populations (2)

Increased pressure on municipal services (or give examples) (2)

Understanding of medical personnel (2)

Not enough specialist for the increased population numbers (2)

More demand for public transport (2)

Need to improve/increase infrastructure as population numbers increased (2)

Increased congestion on the roads/higher levels of traffic (2)

More accidents/increased rate of accident (2)

More demand for low cost housing (2)

More informal settlements (2)

Overcrowding as a result of influx of people (2)

Higher unemployment/ lack of jobs (2)

Higher levels of crime and other social ills (2)

Higher levels of air/noise/land/water pollution (2)

More difficult to control waste management (2)

More landfill sites created resulting in despoliation (2)

Increased pressure on education/overcrowded schools in urban areas (2)

More money required to maintain urban areas e.g. policing and creating buffer zones (2)

Municipal by-laws must be adjusted (2)

Increase in service delivery protests (2)

Increased number of people that are unwilling/reluctant to pay for services (2)

[ANY FOUR- ISSUE MUST BE QUALIFIED] (4X2) (8)

1.4 LAND USE ZONE

1.4.1 Central Business District/CBD (1)

1.4.2 The convergence of roads from various directions (1)

Central location (1)

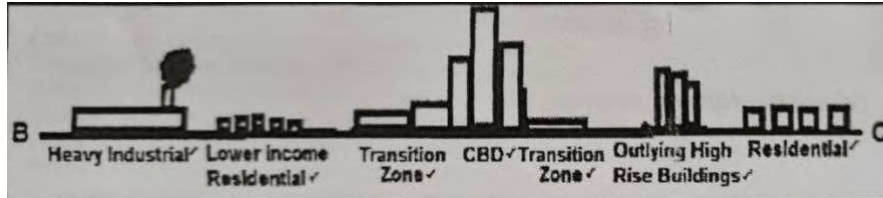
[ANY ONE]

1.4.3 High density of buildings in a small area (1)

High rise buildings/sky scrapers (1)

[ANY ONE]

1.4.4



[(1) mark for the shape of the sketch; any THREE labels, correctly positioned] (4x1) (4)

1.4.5

- a) Buildings are abandoned (2)
Landlords don't want to spend money on maintenance (2)
Many homeless/foreigners/refugees live in the abandoned buildings (2)
High crime rates (or give descriptive examples) make landlords reluctant to maintain buildings (2)
Constant vandalism that must be maintained (or explained examples) (2)
Occupants cannot afford to pay rent (2)
People that are renting are not prepared to maintain the buildings (2)
This is a mixed function zone (or give examples of different functions that have mixed) (2)

[ANY ONE] (1x2)(2)

- b) It is the future expansion areas for the CBD/Next to the CBD (2)
Located in the inner city and has high degree of accessibility (2)
[ANY ONE] (1x2)(2)

- c) Associated with air pollution (2)
Associated with noise pollution (2)
Away from higher and middle income residential areas (2)
Where the land is cheaper (2)
It is flat land (2)
Need enough space and room for expansion (2)
Closer to transport routes (2)
Nearby labour supply/lower income residential area (2)
It is situated closer to the raw material (2)
[ANY TWO] (2x2)(4)

1.5 ENVIRONMENTAL INJUSTICE

- 1.5.1 Any harmful substance/condition/activity causing damage to people and the Environment (1x2) (2)

1.5.2 Air pollution/poor quality of air (1) (1x1) (1)

1.5.3 They live close to the power stations (1) (1x1) (1)

1.5.4 More respiratory problems (2)

More skin ailments (2)

Increase in eye diseases (2)

Feeling of discomfort and lethargy (2)

Increased cost for medical care (2)

Negative impact on small-scale farmers (2)

Acid rain (2)

High maintenance costs due to acid rain (2)

Water will be contaminated/ polluted for livestock (2)

[ANY TWO] (2x2)(4)

1.5.5

Tall smoke stacks/chimneys to distribute the pollution at a higher level so that

Upper winds can disperse the air pollution (2)

Filters/scrubbers installed in chimneys to clean the air (2)

Legislation to protect peoples environmental rights (2)

Assistance in legal claims against polluters (2)

Frequent testing and monitoring of air quality (2)

Policing and implementing the polluter pay principle, imposing fines (2)

Compensation to the community for health care (2)

Relocate poor communities away from the power stations (2)

Improve housing conditions of the poor (2)

Create awareness campaigns educating people on their environmental rights (2)

Promote clean energy resources (2)

Create greenbelts to assist with cleaning of air (2)

[ANY TWO] (2x2)(4)

1.5.6

Less water for irrigation of crops (2)

Pollutants from power stations impacts on quality of soil leading to a decrease in farming (2)

- Reduction in production of crops/scale of farming is reduced (2)
- Production costs of farming increases (2)
- Prices of produce will increase (2)
- Profits for farming communities will diminish (2)
- Shortage of water for domestic water usage on farms (2)
- Some farms become abandoned due to lower yield (2)
- Acid stunts the growth of crops (2)
- Increase in food insecurity (2)

[ANY TWO]

(2x2)(4)

Question 2

2.1

- 2.1.1 Primary (1)
- 2.1.2 Agriculture, forestry and fishing (1)
- 2.1.3 General government (1)
- 2.1.4 Electricity, gas and water (1)
- 2.1.5 Tertiary (1)
- 2.1.6 2011 (1)
- 2.1.7 1.7% (1)

(7x1)(7)

2.2

- 2.2.1 C (Tertiary sector) (1)
- 2.2.2 D (Quaternary) (1)
- 2.2.3 A (Gross domestic product) (1)
- 2.2.4 B (Export) (1)
- 2.2.5 B (Secondary) (1)
- 2.2.6 C (Large scale commercial) (1)
- 2.2.7 A (Raw material orientated) (1)
- 2.2.8 D (Decentralisation) (1)

(8x1)(8)

2.3 DURBAN PINE TOWN

- 2.3.1 2nd (1)

(1x1) (1)

2.3.2 'The manufacturing sector is geared for export, (1) with nearly a third of south African's manufactured exports being produced in KZN' (1) (1x1) (1)

2.3.3 Diversified (1) (1x1)

2.3.4 A large skills base to provide a skilled and unskilled labour force (2)

Good infrastructure to import and export raw materials and finished goods (2)

World demand for ships creates opportunities for expansion (2)

Coastal location is favourable for the shipping industry (2)

[ANY TWO] (2x2) (4)

2.3.5 More employment opportunities are created (2)

Reduction in poverty due to people being employed (2)

Greater income results in an improved standard of living (2)

KZN home market will increase in strength as people have more money (2)

An increase in the export of goods will occur (2)

This encourages the growth of the gross domestic product (2)

High level of industrialisation attracts foreign investment (2)

Multiplier effect results in further economic development (2)

Results in new beneficiation initiatives developing (2)

Linked industries are developed to support major industries (2)

(4x2)(8)

2.4 INFORMAL TRADING

2.4.1 Informal trading refers to business activities which are unregistered and do not pay tax (1) (1x1) (1)

2.4.2 R485 Billion (1) (1x1) (1)

2.4.3 66% (1) (1x1) (1)

2.4.4 It is conveniently located close to customers (2)

Many people can walk to the informal trader (2)

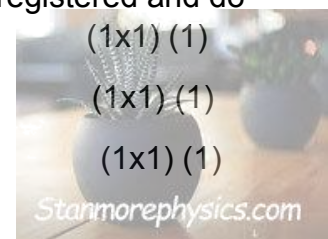
Most people lack private transport to travel to formal stores (2)

Goods are much cheaper than in a formal store (2)

Mainly sells low order/convenience goods (2)

Offers them an account (2)

No set opening and closing times/open 7 days a week (2)



Group purchasing by foreigners secure discounts (2)

Small range serviced by a low threshold population/locals buy often (2)

[ANY TWO] (2x2) (4)

2.4.5 Foreign nationals that come to South Africa struggle to find jobs (2)

Many foreign nationals cannot apply for formal jobs (2)

It is easier to start their own informal business (2)

Foreign nationals are entrepreneurial (2)

Prepared to take a minimal profit (2)

Foreign nationals have access to a lot of cheaper goods (2)

Foreign nationals have formal education but are prepared to do any job (2)

No restriction on business hours therefore shops can trade longer hours (2)

Strong work ethic to survive in a foreign country (2)

[ANY FOUR] (4x2) (8)

2.5 IDZ

2.5.1 Kwazulu Natal (1x1) (1)

2.5.2 To attract foreign investment and increase exports (1x2) (2)

2.5.3 Provide attractive service rebates/ government incentives/ tax rebates / duty imports/ infrastructure subsidy/ cheap and open land/ duty free imports on raw materials/ access to labour supply (2x2) (4)

2.5.4 Relieves pressure on infrastructure (2)

Less pollution (2)

Less pressure on services (2)

Reduces rural urban migration (2)

Less traffic congestion (2)

Less crime (2)

Reduces overcrowding (2)

[ANY TWO] (2x2) (4)

2.5.5 Providing job opportunities (2)

Up-skilling people (2)

Lowering crime rate (2)

Better standard of living (2)

- Improved infrastructure (2)
- Improved service delivery (2)
- Better housing (2)
- Contributes to the local economy (2)
- Industries are involved in social responsibility initiatives (2)

[ANY TWO]

(2x2) (4)

Section B MAP WORK AND INTERPRETATION

Question 3

3.1

3.1.1 D

3.1.2 A

3.1.3 B

3.1.4 D

3.1.5 C

(1x5) (5)

3.2

3.2.1 VE= VS/HS

$$VS = 1\text{cm} : 40 \times 100 = 400\checkmark$$

$$VS = 1:400$$

$$HS = 1: 50000$$

$$VE = 1:400 / 1:50000\checkmark$$

$$= 1/400 \times 50000/1$$

$$= 50/4\checkmark$$

$$= 12.5 \text{ times}\checkmark$$

(4)

3.2.2 True bearing: $334^{\circ}\checkmark$

(4x1) (4)

$$\text{Difference in years: } 2022-2016 = 6\checkmark$$

$$\text{Mean annual change: } 9'W\checkmark$$

$$\text{Total change: } 9'W \times 6 = 54'W\checkmark$$

$$\text{Magnetic declination for 2022: } 24^{\circ}45' + 54' W\checkmark$$

$$= 25^{\circ}39' \text{ west of true north}\checkmark$$

(6x1) (6)

3.3

3.3.1 It is located near transport route (2)

Situated near canal which act as a source of water (2)

Located on a flat land (2)

(2x2) (4)

3.3.2 Low income residential

(1x1) (1)

3.3.3 near railway line for transportation to work (2)

It's located closer to industries (work place) (2)

Land is cheaper on the outskirts (2)

[ANY TWO]

(2x2) (4)

3.3.4 Boundary between urban and rural areas which restrict further development or urban expansion

(1x2) (2)

3.3.5 They reduce carbon dioxide (2)

For aesthetic beauty (2)

Improves the quality of air (2)

[ANY TWO]

(2x2) (4)

3.3.6 Heavy industry

3.4 GIS

3.4.1 Data that gives the location of a feature

(2x1) (2)

3.4.2 Unauthorized entry (2)

Keep everyone within the school safe (2)

Avoid pollution (2)

Avoid accidents of the school is situated close to the road (2)

To avoid unwanted future expansion next to the school (2)

[ANY TWO]

(2x2) (4)

3.4.3 a) Attribute data

b) Attribute data

TOTAL: 150

