basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE



GRADE 12

GEOGRAPHY P2

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NOVEMBER 2024

MARKS: 150

TIME: 3 hours

This question paper consists of 18 pages.

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INSTRUCTIONS AND INFORMATION

1. This question paper consists of TWO sections.

   SECTION A
   QUESTION 1: RURAL AND URBAN SETTLEMENTS (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 the 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 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. 1 020 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 topographical map 2926AA BLOEMFONTEIN-NOORD (NORTH) and a 1 : 10 000 orthophoto map 2926AA 10 BLOEMFONTEIN-NOORD (NORTH) are provided.

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

16. Show ALL calculations. Marks will be allocated for steps in calculations.

17. You must hand in the topographical and orthophoto map to the invigilator at the end of this examination.

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

QUESTION 1: RURAL AND URBAN SETTLEMENTS

1.1 Match the statements in COLUMN A with the options in COLUMN B. Write only the letter (**Y** or **Z**) next to the question numbers (1.1.1 to 1.1.8) in the ANSWER BOOK, e.g. 1.1.9 Y.

	COLUMN A	COLUMN B
1.1.1	Exact piece of land that a settlement is built on	**Y** situation **Z** site
1.1.2	The situation of a commercial livestock farm is influenced by …	**Y** topography **Z** markets
1.1.3	Settlements located close to a water source in arid areas	**Y** wet-point **Z** dry-point
1.1.4	The shape of this settlement is influenced by a river	**Y** circular **Z** linear
1.1.5	The largest rural settlement type	**Y** village **Z** hamlet
1.1.6	Greater profits are associated with this settlement pattern	**Y** dispersed **Z** nucleated
1.1.7	Land returned to the original owners	**Y** land restitution **Z** land tenure
1.1.8	An economic challenge of land reform	**Y** poverty **Z** legal disputes

(8 x 1) (8)

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1.2 Various options are provided as possible answers to the following questions. Choose the answer and write only the letter (A–D) next to the question numbers (1.2.1 to 1.2.7) in the ANSWER BOOK, e.g. 1.2.8 D.

1.2.1 The smallest urban settlement in an urban hierarchy is a …

A city.
B metropolis.
C town.
D megalopolis.

1.2.2 A … has the smallest number of settlements.

A conurbation
B city
C town
D megalopolis

1.2.3 A ... is the largest settlement type found in South Africa.

A megalopolis
B conurbation
C metropolis
D city

1.2.4 A ... is an urban settlement type made up of a major city and towns.

A metropolis
B conurbation
C city
D megalopolis

1.2.5 The ... of a city covers a larger area than a town.

A range
B sphere of influence
C threshold population
D service area

1.2.6 A university has a ... range and a ... sphere of influence than a school.

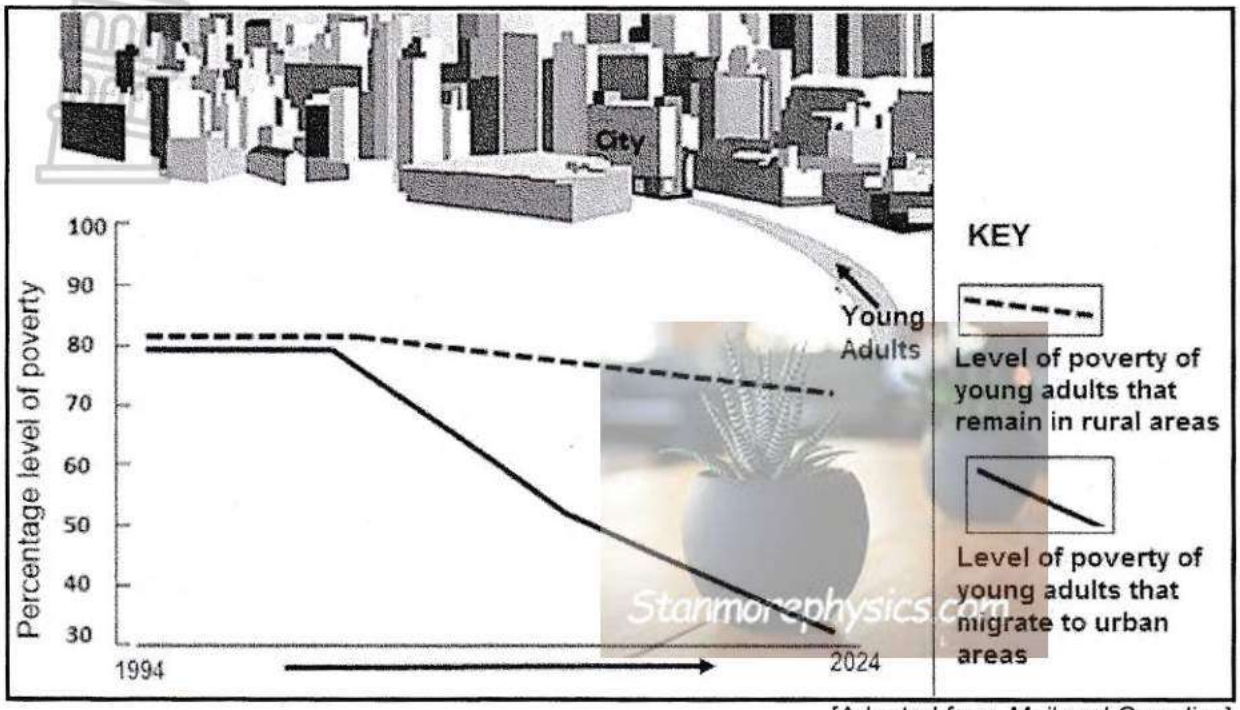
A smaller; larger
B smaller; smaller
C larger; larger
D larger; smaller

1.2.7 The range associated with the purchase of a motor vehicle is greater than the purchase of bread because it is:

(i) More expensive
(ii) Purchased on a daily basis
(iii) Not purchased frequently
(iv) Less expensive

A (i) and (iii)
B (ii) and (iv)
C (i) and (ii)
D (iii) and (iv) (7 x 1) (7)

1.3 Refer to the sketch and graph below showing the levels of poverty caused by rural-urban migration.



[Adapted from *Mail and Guardian*]

1.3.1 Define the term *rural-urban migration*. (1 x 2) (2)

1.3.2 According to the graph, the percentage level of poverty decreased by a smaller amount in (rural/urban) areas. (1 x 1) (1)

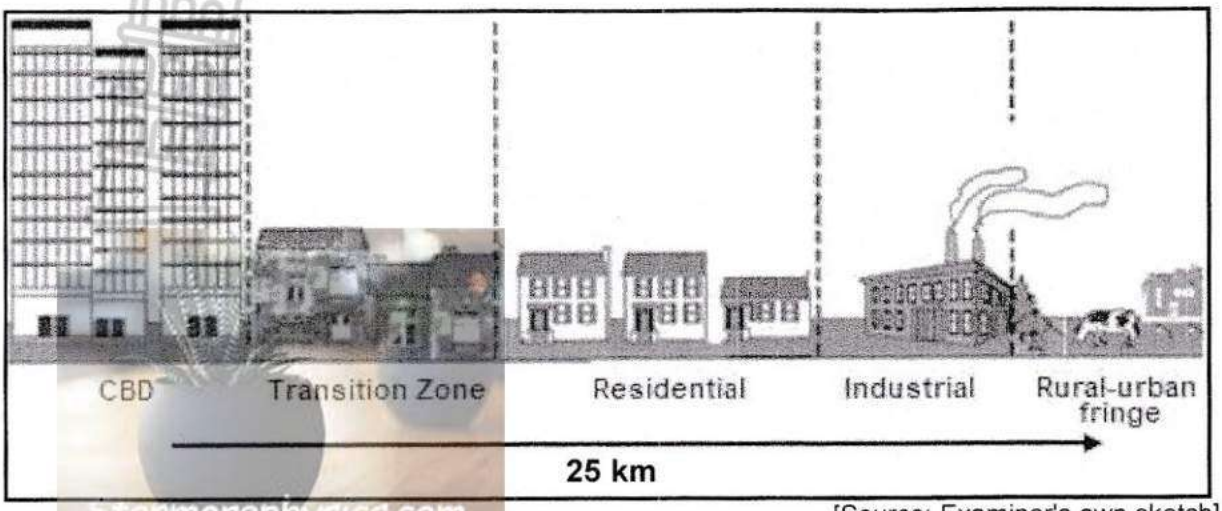
1.3.3 How has unemployment contributed to this trend in poverty levels (answer to QUESTION 1.3.2)? (1 x 2) (2)

1.3.4 How does the movement of young adults to urban areas have a negative social impact on the rural community? (2 x 2) (4)

1.3.5 Suggest strategies that can be introduced in rural areas to reduce the movement of young adults to urban areas. (3 x 2) (6)

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1.4 Refer to the sketch below showing an urban profile.



[Source: Examiner's own sketch]

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1.4.1 Define the concept *urban profile*. (1 x 2) (2)

1.4.2 Comment on the height of buildings in the CBD in comparison to those in the rural-urban fringe. (1 x 1) (1)

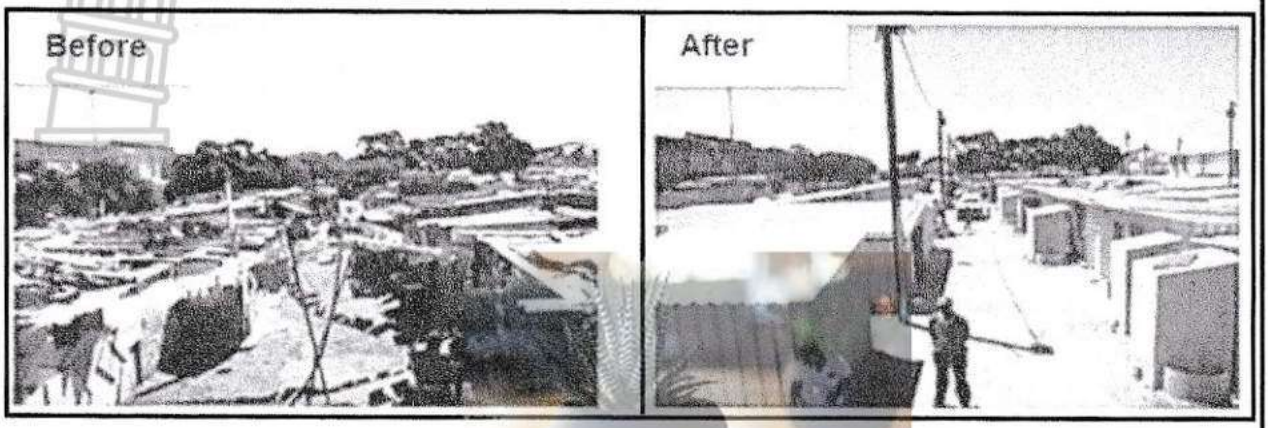
1.4.3 How has the demand for land influenced the density of buildings in the CBD? (1 x 2) (2)

1.4.4 Why are both the transition zone and rural-urban fringe referred to as zones of change? (2 x 2) (4)

1.4.5 Suggest economic reasons why the rural-urban fringe would be an attractive location for commercial activities. (3 x 2) (6)

1.5 Refer to the photographs and extract below on informal settlements.

UPGRADING OF INFORMAL SETTLEMENTS



Informal settlements are generally located on any vacant land that is available. Informal settlements are characterised by a lack of basic services, pollution, overcrowding and poor waste management that impact negatively on the environment and poses a health risk. In spite of this, the number of informal settlements is growing.

What are the solutions to informal settlements? Rather than disrupting important social and economic networks by uprooting and relocating residents, upgrading programmes would be associated with social benefits for the people in informal settlements. Such programmes can improve neighbourhood infrastructures, while low-income residents remain on site.

Upgrading informal settlements creates income-generating opportunities that can directly benefit local companies and residents. This is particularly helpful for workers if jobs are created within the community. In many cases, young people within these settlements will be directly employed in upgrading projects.

[Adapted from https://www.african-cities.org/upgrading-informal-settlements-in-african-cities and https://www.google.com/search?q=informal+settlements]

1.5.1 Define the term *informal settlement.* (1 x 2) (2)

1.5.2 State ONE factor in the extract that has a negative impact on the health of residents in informal settlements. (1 x 1) (1)

1.5.3 Explain TWO economic reasons for the increase in informal settlements. (2 x 2) (4)

1.5.4 In a paragraph of approximately EIGHT lines, explain how the upgrading (improvement) of informal settlements would have a positive social impact for people living in these settlements. (4 x 2) (8)

[60]

QUESTION 2: ECONOMIC GEOGRAPHY OF SOUTH AFRICA

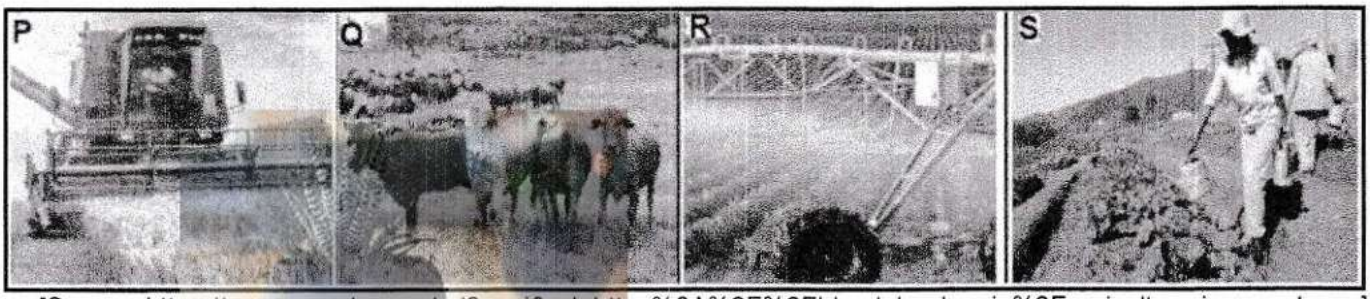
2.1 Various options are provided as possible answers to the following questions. Choose the answer and write only the letter (A–D) next to the question numbers (2.1.1 to 2.1.8) in the ANSWER BOOK, e.g. 2.1.9 D.

2.1.1 The main difference between small-scale and large-scale farming is the …

A size of farm holdings.
B use of research technology.
C types of farmers.
D impact on the market.

Refer to the photographs on small- and large-scale farming below to answer QUESTIONS 2.1.2 and 2.1.3.

2.1.2 Photograph … below illustrates small-scale farming.



[Source: https://www.google.com/url?sa=i&url=https%3A%2F%2Fblog.ipleaders.in%2Fagriculture-income-types]

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A P
B Q
C R
D S

2.1.3 A characteristic of small-scale farming evident in the photograph is …

A the use of hybrid seeds.
B that it is only export-orientated.
C the high capital investment.
D the use of manual labour.

2.1.4 … is an economic advantage for a farmer practising large-scale farming.

A The use of machinery
B Larger profits
C A large labour force
D The practising of monoculture

2.1.5 Cattle farming is an activity in the … economic sector.

A primary
B secondary
C tertiary
D quaternary

2.1.6 Distribution of dairy products is an activity in the … economic sector.

A primary
B secondary
C tertiary
D quaternary

2.1.7 A factor favouring cattle farming in South Africa is …

A heavy rainfall.
B high temperatures.
C available grazing land.
D climatic variation.

2.1.8 Challenges faced by small-scale cattle farmers in South Africa are:

(i) High rate of unemployment
(ii) Animal diseases
(iii) Semi-arid land
(iv) Export market

A (i) and (ii)
B (ii) and (iii)
C (i) and (iv)
D (iii) and (iv) (8 x 1) (8)

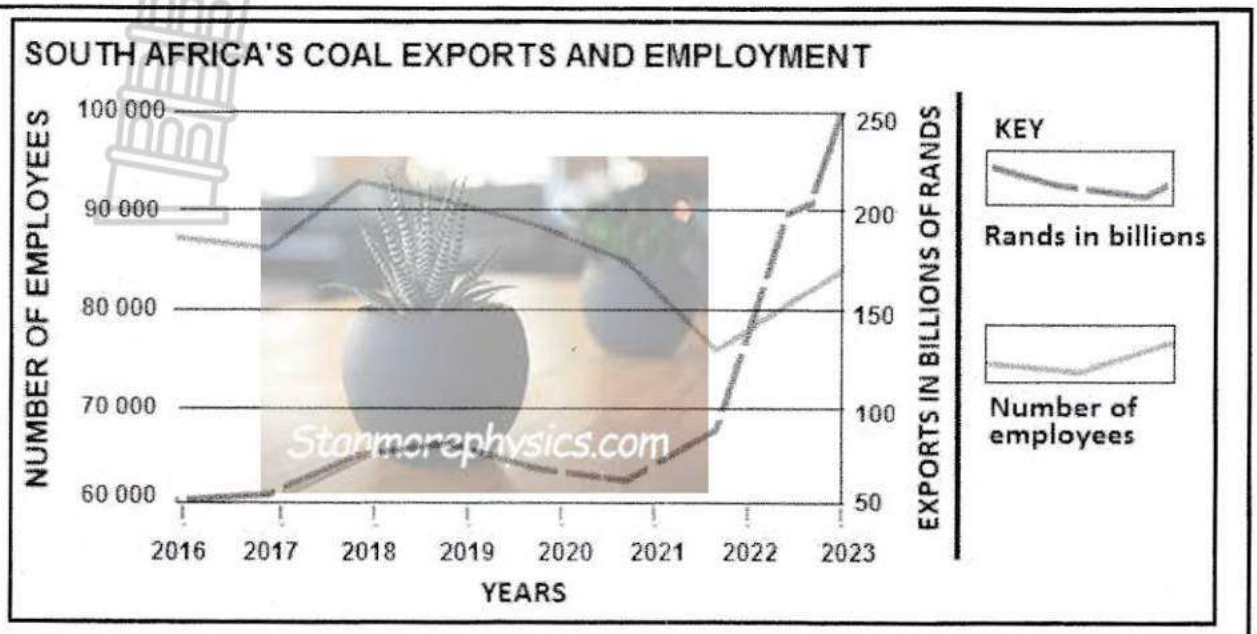
2.2 Match the statements in COLUMN A with the options in COLUMN B. Write only **Y** or **Z** next to the question numbers (2.2.1 to 2.2.7) in the ANSWER BOOK, e.g. 2.2.8 Y.

	COLUMN A	COLUMN B
2.2.1	The main purpose of an industrial development zone (IDZ) is to promote …	**Y** exports **Z** imports
2.2.2	SDIs are generally located in … areas.	**Y** underdeveloped **Z** developed
2.2.3	A positive economic impact of spatial development initiatives (SDIs) is …	**Y** improved quality of life **Z** upgraded infrastructure
2.2.4	A social challenge experienced in the Saldanha Bay IDZ is …	**Y** unskilled workforce **Z** poor harbour facilities
2.2.5	The main industry associated with the West Coast SDI is a/an …	**Y** automotive plant **Z** steel plant
2.2.6	The South-western Cape core industrial region is restricted by …	**Y** few mineral resources **Z** small local markets
2.2.7	A physical factor that promotes industries in the South-western Cape core industrial region is …	**Y** overseas markets **Z** coastal location

(7 x 1) (7)

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2.3 Refer to the graph and extract below on coal mining in South Africa.



The high-quality coal reserves in South Africa have been decreasing over the years.

Shallow and high-quality resources in the Emalahleni (Witbank) coal field have been depleted. Mining companies are required to find other more cost-effective methods to extract the deeper, low quality coal seams of the basin.

[Adapted from https://www.miningforschools.co.za/lets-explore/coal/south-african-coal-mining-today]

2.3.1 According to the graph, what amount of coal, in billions, was exported in 2023? (1 x 1) (1)

2.3.2 What has been the general trend in profits from the export of coal in recent years? (1 x 1) (1)

2.3.3 According to the graph, between which years was the smallest number of employees recorded in the coal mining industry? (1 x 1) (1)

2.3.4 Give ONE possible reason for the small number of employees (answer to QUESTION 2.3.3). (1 x 2) (2)

2.3.5 According to the extract, the high-quality coal reserves in South Africa have been decreasing over the years.

Explain the negative impact of decreasing high-quality coal reserves for the future supply of power in South Africa. (2 x 2) (4)

2.3.6 Explain why the coal mining industry is important to the economy of South Africa. (3 x 2) (6)

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2.4 Refer to the infographic below on the Gauteng (PWV) core industrial region.

CHANGE IN GAUTENG'S (PWV) MANUFACTURING SECTOR

Gauteng (PWV) is the biggest contributor to South Africa's gross domestic product (GDP). Gauteng's (PWV) most important economic sectors are financial and business services, logistics and communications, manufacturing, property, telecommunications and trade.

About 10 000 businesses involved in the province's manufacturing sector employ over half a million people. The economy of the province is moving away from traditional heavy industry markets and low value-added production* to sophisticated high value-added production**, particularly in information technology, telecommunications and other high-tech industries.

GLOSSARY
***Low value-added production:** basic production that uses traditional technology and manual labour to operate machinery
****High value-added production:** production that uses advanced technology, is highly efficient, e.g. robotics to operate machinery

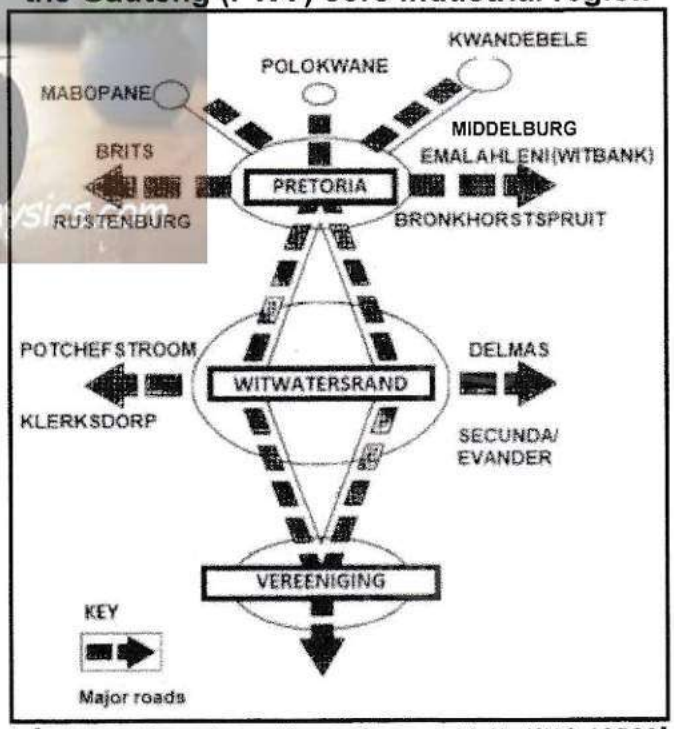
[Adapted from https://www.google.com/search?q=in-Gauteng+industrial+region]

Statistics for Gauteng (PWV) core industrial region

- 20% of South Africa's population
- 31% of SA's labour force in all economic sectors
- 22% contributed to the mining sector
- 38% contribution to the GDP of South Africa
- 45% of South Africa's manufacturing capacity

[Adapted from 'Growing Gauteng Together' (GGT 2030)]

Major roads that link main industrial areas in the Gauteng (PWV) core industrial region



[Adapted from https://journals.co.za/doi/pdf/10.10520]

2.4.1 Refer to the statistics and state the percentage that the Gauteng (PWV) core industrial region contributes to the GDP of South Africa. (1 x 1) (1)

2.4.2 Quote evidence from the extract that shows why 31% of South Africa's labour force is found in the Gauteng (PWV) core industrial region. (1 x 2) (2)

2.4.3 Refer to the sketch and explain the role of the major roads in supporting industrial development in the Gauteng (PWV) core industrial region. (2 x 2) (4)

2.4.4 Explain TWO challenges faced by the Gauteng (PWV) core industrial region. (2 x 2) (4)

2.4.5 Suggest ONE advantage and ONE disadvantage of industries moving towards high value-added production in the Gauteng (PWV) core industrial region. (2 x 2) (4)

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2.5 Refer to the extract and graph below on the informal sector.

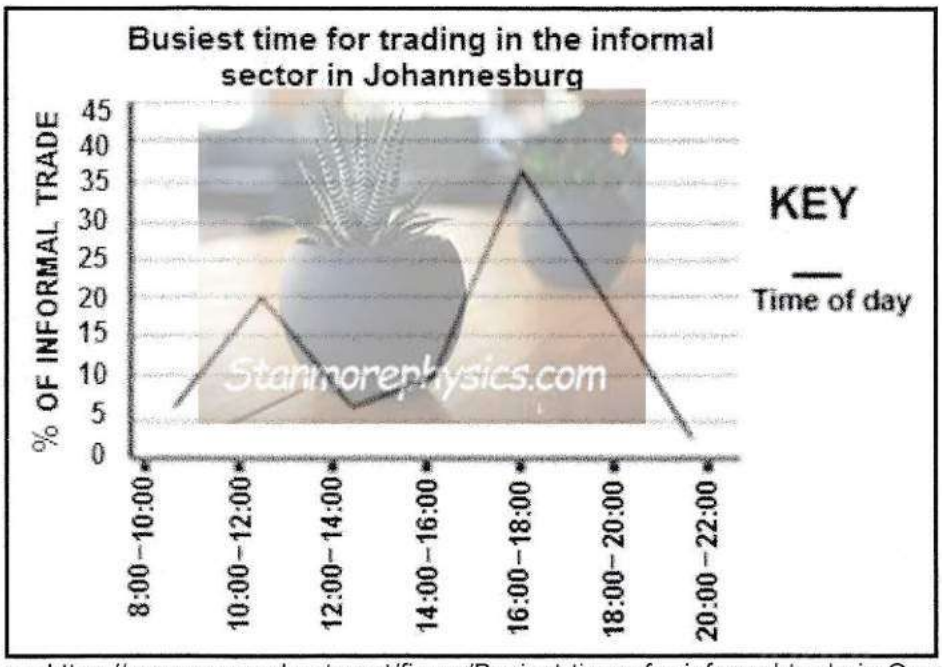
REGULATING TRADING IN THE INFORMAL SECTOR

Trading in the informal sector has always been a part of South Africa's economy, 30% of which occurs in Johannesburg.

The city of Johannesburg has informal trading by-laws that currently regulate trading in the informal sector. The municipality may declare any place to be an area in which informal trading is restricted or prevented. The restrictions include traders sleeping overnight as it exposes them to criminal activity. Anyone not complying with these regulations can be charged a fine of up to R500.

Car window washers and other informal traders are part of a large group of poor South Africans who have been economically excluded and who are trying to find their own way to support their families. Human rights lawyers have said that certain regulations could be 'punishing people just for being poor'.

[Adapted from https://hsf.org.za/publications/hsf-briefs/informal-trading-in-johannesburg]



[Adapted from https://www.researchgate.net/figure/Busiest-times-for-informal-trade-in-Orange-Farm-and-Johannesburg-Inner-City_fig4_306262758]

2.5.1 According to the extract, what is the percentage of informal trading that takes place in Johannesburg? (1 x 1) (1)

2.5.2 Quote evidence from the extract why trading has been restricted in Johannesburg at night. (1 x 1) (1)

2.5.3 According to the graph, which is the busiest time period for trading in the informal sector? (1 x 1) (1)

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2.5.4 Suggest TWO reasons for the rapid growth of the informal sector in the city of Johannesburg. (2 x 2) (4)

2.5.5 In a paragraph of approximately EIGHT lines, explain measures that the municipality can put in place to assist traders in the informal sector to operate under more favourable conditions. (4 x 2) (8)

[60]

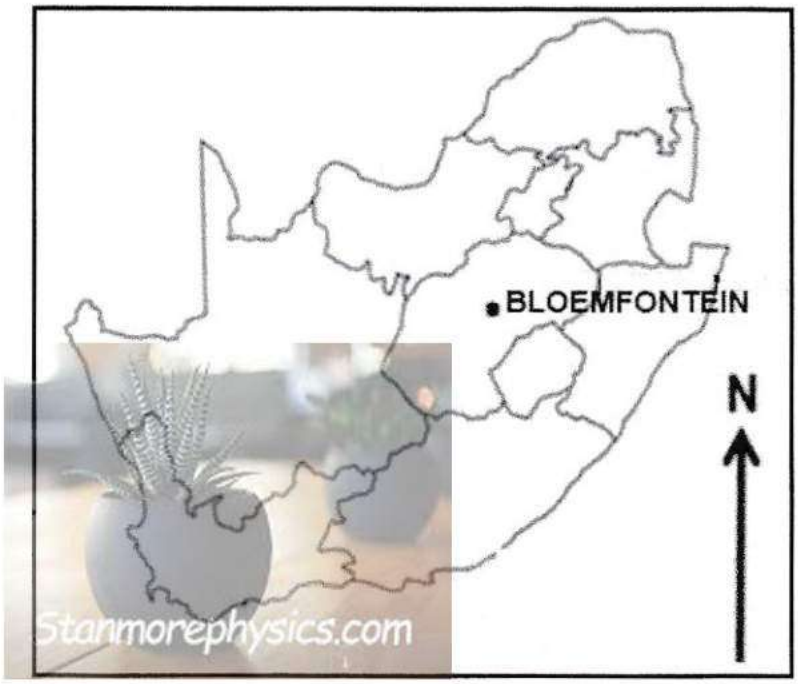
TOTAL SECTION A: 120

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SECTION B

QUESTION 3: GEOGRAPHICAL SKILLS AND TECHNIQUES

GENERAL INFORMATION ON BLOEMFONTEIN



Coordinates: 29°05'S; 26°09'E

Bloemfontein is the capital city of the Free State. It is located in central South Africa on the southern edge of the Highveld. The area is generally flat with isolated hills. Although agriculture is the main primary activity, businesses mainly drive Bloemfontein's economy.

Due to the many businesses, it has attracted more people into the area. This has led to many new developments.

[Adapted from https://en.wikipedia.org/wiki/Bloemfontein]

The following English terms and their Afrikaans translations are shown on the topographical map:

ENGLISH	AFRIKAANS
Spring	Spruit
Game reserve	Wildreservaat
Roads under construction	Paaie onder konstruksie

3.1 MAP SKILLS AND CALCULATIONS

3.1.1 The (topographical map/orthophoto map) has a smaller scale. (1 x 1) (1)

3.1.2 A small-scale map shows:

(i) A small area
(ii) Greater detail
(iii) A large area
(iv) Less detail

A (i) and (ii)
B (ii) and (iv)
C (i) and (iii)
D (iii) and (iv) (1 x 1) (1)

3.1.3 The grid reference of the reservoir at **F** in block **B1** on the topographical map is …

A 26°10'12"S; 29°02'55"E.
B 29°02'55"S; 26°10'12"E.
C 29°01'55"S; 26°10'25"E.
D 26°10'25"S; 29°01'55"E. (1 x 1) (1)

Refer to the orthophoto map.

3.1.4 Determine the true bearing of spot height 1431 at **6** in block **A3** from spot height 1427 at **7** in block **B4**. (1 x 1) (1)

Refer to the topographical map.

3.1.5 Calculate the average gradient from spot height 1358 at **G** in block **A3** to trigonometrical station 96 at **H** in block **C4**.

Use the following information: The distance between spot height 1358 and trigonometrical station 96 is 7,8 cm.

Formula: $\frac{\text{Vertical Interval (VI)}}{\text{Horizontal Equivalent (HE)}}$ (4 x 1) (4)

3.1.6 Is the gradient (answer to QUESTION 3.1.5) steep or gentle? (1 x 1) (1)

3.1.7 Why would this gradient (answer to QUESTION 3.1.6) be an advantage for road construction? (1 x 1) (1)

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3.2 MAP INTERPRETATION

3.2.1 The main settlement pattern at area **8** in blocks **D1** and **E1** on the orthophoto map is ...

A dispersed.
B nucleated.
C linear.
D circular. (1 x 1) (1)

Refer to the Woodland Hills settlement in block **B2** on the topographical map.

3.2.2 (a) What evidence suggests that this suburb is still undergoing development? (2 x 1) (2)

(b) Explain the negative impact that this development could have on farming in the area. (1 x 2) (2)

Refer to the residential area at **9** in blocks **B4** and **C4** on the orthophoto map.

3.2.3 (a) How did topography influence the development of the gridiron street pattern evident in this residential area? (1 x 1) (1)

(b) Explain ONE economic advantage that residents in the residential area at **9** will experience as a result of its location. (1 x 2) (2)

Refer to blocks **A1/A2** and **B1/B2** on the topographical map.

3.2.4 (a) Identify the primary activity practised in blocks **A1/A2** and **B1/B2**. (1 x 1) (1)

(b) Why is this primary activity (answer to QUESTION 3.2.4(a)) practised on a large scale? (1 x 1) (1)

(c) Identify TWO strategies that were put in place in blocks **A1/A2** and **B1/B2** to ensure a regular water supply for the primary activity. (2 x 1) (2)

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3.3 GEOGRAPHICAL INFORMATION SYSTEMS (GIS)

3.3.1 The process of converting data from raster to vector format is called data …

A analysis.
B integration.
C layering.
D manipulation. (1 x 1) (1)

3.3.2 Explain how the data was converted from the vertical aerial photograph (used to make the orthophoto map) to the topographical map. (1 x 2) (2)

Refer to block **A3** on the topographical map.

3.3.3 Redraw block **A3** and insert only the following features:

(a) A human-made line feature (1 x 1) (1)

(b) A human-made polygon feature (1 x 1) (1)

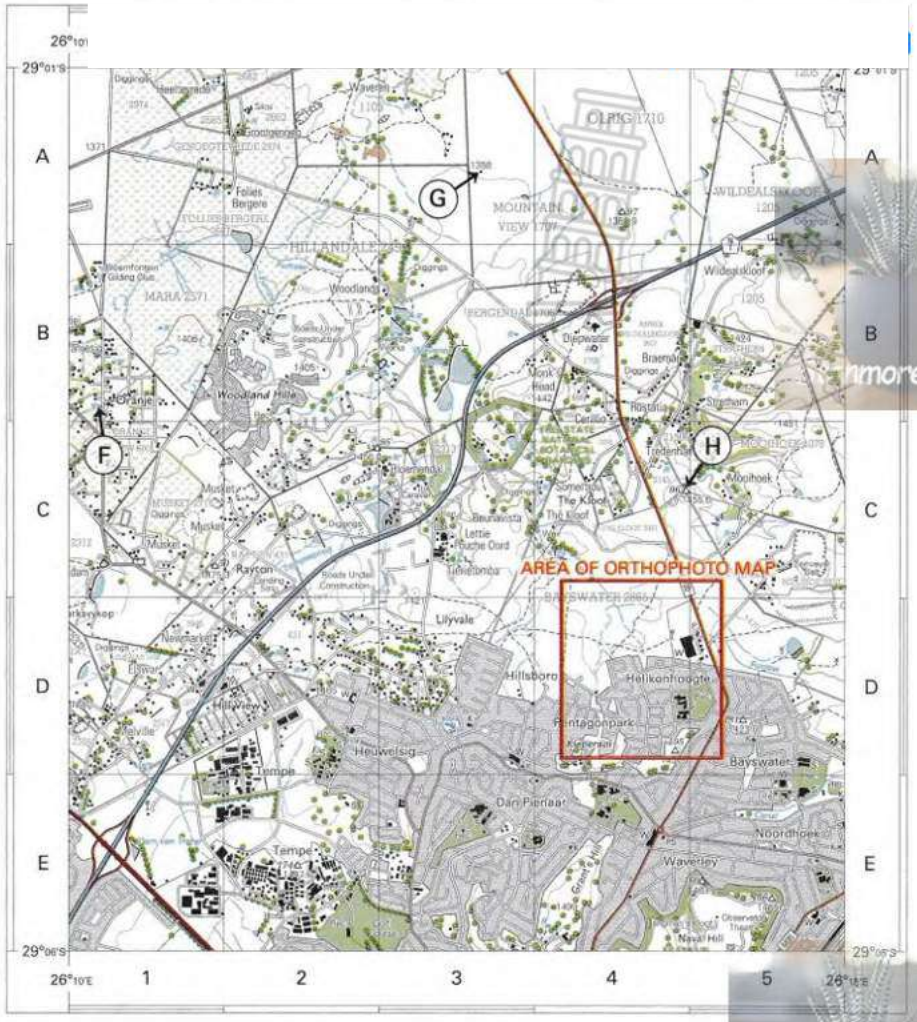
3.3.4 Define the concept *data integration*. (1 x 2) (2)

3.3.5 Name the method of data integration used on the topographical map. (1 x 1) (1)

TOTAL SECTION B: 30
GRAND TOTAL: 150

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EXTRACT FROM 2926AA BLOEMFONTEIN-NOORD(NORTH) 1:50 000



EXTRACT FROM 2926AA 10 BLOEMFONTEIN-NOORD(NORTH) ortho - rectified image 1:10 000



CONTOUR INTERVAL 20 METRES / KONTOERTUSSENRUIMTE 20 METER

Mean magnetic declination 21°34' West of True North (October 2011).
Mean annual change 3' Westwards (Oct. 2011 - Sept. 2012).

REFERENCE

- National Freeway; National Route
- Arterial Route
- Main Road
- Secondary Road; Bench Mark
- Other Road; Bridge
- Track and Hiking Trail
- Railway; Station or Siding
- Other Railway; Tunnel
- Embankment; Cutting
- Power Line
- Built-up Area (High, Low Density)
- Buildings; Ruin
- Post Office; Police Station; Store
- Place of Worship; School; Hotel
- International Boundary and Beacon
- Provincial Boundary
- Protected Area
- Perennial River
- Perennial Water
- Non-perennial River
- Non-Perennial Water
- Dry Water Course
- Dry Pan
- Marsh and Vlei
- Pipeline (above ground)
- Water Tower; Reservoir; Water Point
- Coastal Rocks
- Prominent Rock Outcrop
- Fence; Wall
- Windpump; Monument
- Communication Tower
- Mine Dump; Excavation
- Trigonometrical Station; Marine Beacon
- Lighthouse and Marine Light
- Cemetery; Grave
- Erosion; Sand
- Woodland
- Cultivated Land
- Orchard or Vineyard
- Recreation Ground
- Row of Trees
- Original Farms

CONTOUR INTERVAL 5 METRES - KONTOERTUSSENRUIMTE 5 METER

VERKLARING

- Nasionale Deurpad; Nasionale Roete
- Hoofverkeersroete
- Hoofpad
- Sekondêre Pad; Padgetmerk
- Ander Pad; Brug
- Dowwe Pad en Voetslaanpad
- Spoorweg; Staaie of Sylyn
- Ander Spoorweg; Tonnel
- Opvulling; Deurgrawing
- Kraglyn
- Beboude Gebied (Hoë, Lae Digtheid)
- Gebou; Murasie
- Poskantoor; Polisiestasie; Winkel
- Plek van Aanbidding; Skool; Hotel
- Internasionale Grens en Baken
- Provinsiale Grens
- Bewarings Gebied
- Standhoudende Rivier
- Standhoudende Water
- Nie-standhoudende Rivier
- Nie-standhoudende Water
- Droë Loop
- Droë Pan
- Moeras en Vlei
- Pyplyn (bo die grond)
- Watertoring; Reservoir; Waterpunt
- Kuslynrotse
- Prominente Klipbank
- Draadheining; Muur
- Windpomp; Monument
- Kommunikasietoring
- Mynhoop; Uitgrawing
- Peilbaken; Seevaartbaken
- Vuurtoring en Seevaartlig
- Begraafplaas; Graf
- Erosie; Sand
- Beboste Gebied
- Bewerkte Land
- Boord of Wingerd
- Ontspanningsterrein
- Rye Bome
- Oorspronklike Plase

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