GAUTENG PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

JUNE EXAMINATION
GRADE 12

2025

MARKING GUIDELINES

GEOGRAPHY

(PAPER 2)

24 pages

PRINCIPLES FOR MARKING GEOGRAPHY - 2025

The following marking principles are developed to standardise 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 M 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 that a mark is being allocated for.
  - 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 across a paragraph/discussion style question 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 recognisable, award the marks provided the meaning is correct.
- Be sensitive to the sense 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 marks.

TOTALLING AND TRANSFERRING OF MARKS:

- Each sub question must be totalled.
  - Questions in Section A have five subsections, therefore five subtotals per question are required. Section B has three subsections and three subtotals.
  - Subsection totals to be written in the right-hand margin at the end of the subsection.
  - Subtotals must be written legibly.
  - Leave space to write in moderated marks on different levels.
- Total subtotals and transfer totals to top left-hand margin next to question number.
- Transfer total to cover of 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 through the marker's mark and write down the new mark. ~~12~~ 16

The total for the question must be re-calculated and similarly be struck off and the new total to be written down. ~~26~~ 36

QUESTION 1: 22

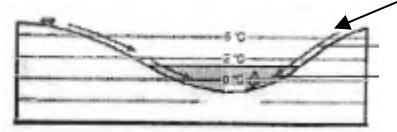
1.1.1 A (South Atlantic High) ✓
1.1.2 B (Kalahari High) ✓
1.1.3 B (South Indian) X

1.2.1 Melting snow ✓
1.2.2 Mouth X
1.2.3 Third order ✓

1.3.1 Katabatic X

1.3.2 1 occurs during the day while 2 occurs at night ✓✓

1.3.3 Cold air rolls down into the valley and forms an inversion ✓✓
Air flows downslope ✓✓



1.4.1 Shape of front concave X
Steep gradient of front ✓

1.4.2 Warm air undercuts the cold air X ✓✓

1.4.3 Air behind the cold front is colder than the air in front. Cold air moves faster than warm air ahead of it. Cold front catches up with the warm front. ✓✓

1.5.1 (a) A river that only flows all year-round X
(b) The river channel is wide X ✓✓ ✓✓
(c) Regularity of rainfall and the soil type over which the streams flow. ✓ X

1.5.2 Gauteng and the Eastern Cape

1.5.3 The cost of food production will increase as it is costly to buy purified water. Farmers will have to buy more chemicals to purify water. Chemicals cost a lot, and this will increase production costs. It will be costly to purify water for use in electricity generation. These costs will be in electricity prices. Costs will increase the price of electricity during production. There will be less clean water to generate hydroelectricity. √√ M

SECTION A: RURAL AND URBAN SETTLEMENTS

QUESTION 1: RURAL SETTLEMENT

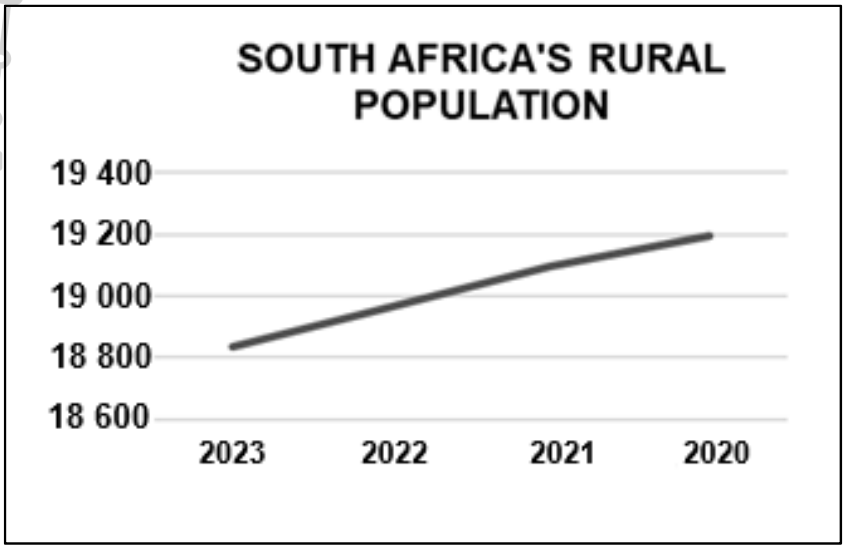
1.1.1 **B (1)/ site**
1.1.2 **B (1)/ Dry-point settlement**
1.1.3 **C (1)/ (i) and (iii)**
1.1.4 **B (1)/ situation**
1.1.5 **A (1)/ wet-point settlement**
1.1.6 **C (1)/ (i) and (iii)**
1.1.7 **D (1) function**

(7 x 1) (7)

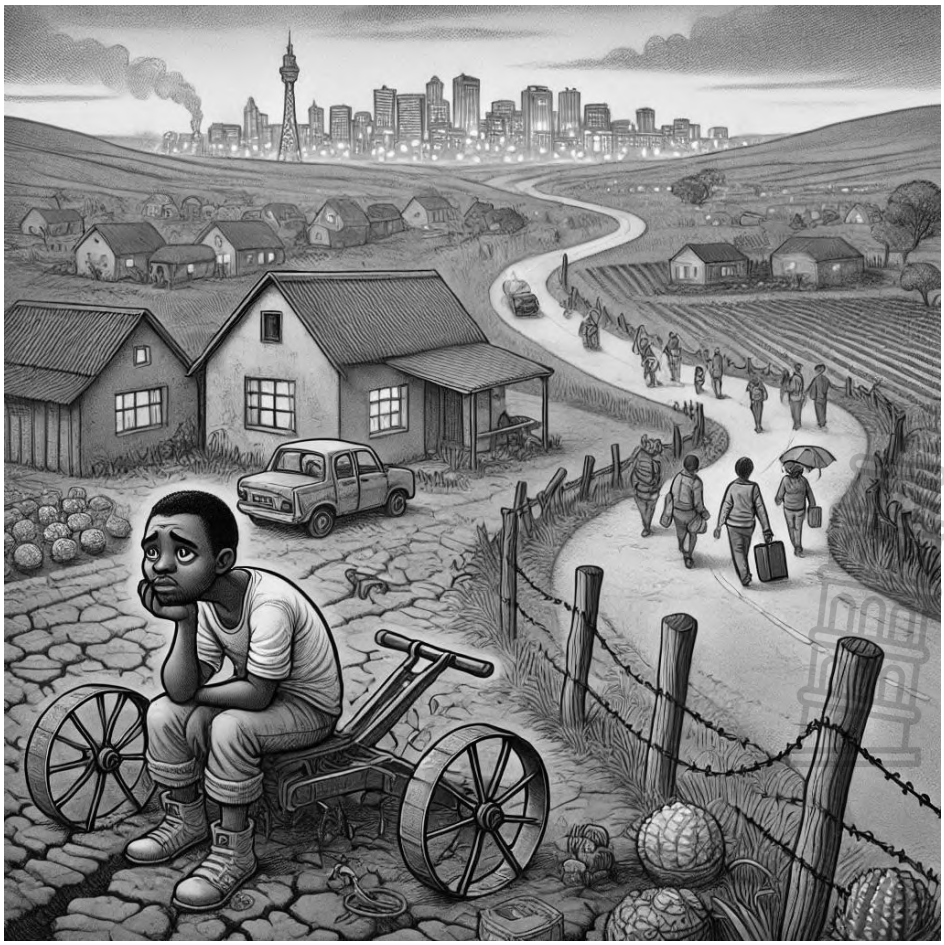
1.2.1 **A (1)**
1.2.2 **A / B (1)**
1.2.3 **C (1)**
1.2.4 **D (1)**
1.2.5 **B (1)**
1.2.6 **D (1)**
1.2.7 **A (1)**
1.2.8 **C (1)**

(8 x 1) (8)

1.3 Refer to the infographic showing rural depopulation.



[Source: https://www.macrotrends.net/global-metrics/countries/zaf/south-africa/rural-population?utm_source= chatgpt.com]



[Source: Examiner's own sketch on ChatGPT]

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

The decline in the population or size of rural areas due to people moving to cities. (concept) (2)

1.3.2 Refer to the infographic and indicate the trend in die population size in rural areas from 2020 – 2023. (1 x 1) (1)

It is declining (1)

1.3.3 According to the infographic, what can be the reason for rural depopulation. (1 x 2) (2)

People in the rural areas move to the urban areas (2)
Deteriorated land (2)
Land is infertile(2)
Lack of entertaining opportunities / isolation (2)
Lack of jobs (2)
Mechanisation (2)
Drought (2)
[Any ONE]

1.3.4 Explain why the young person in the infographic is sad. (1 x 2) (2)

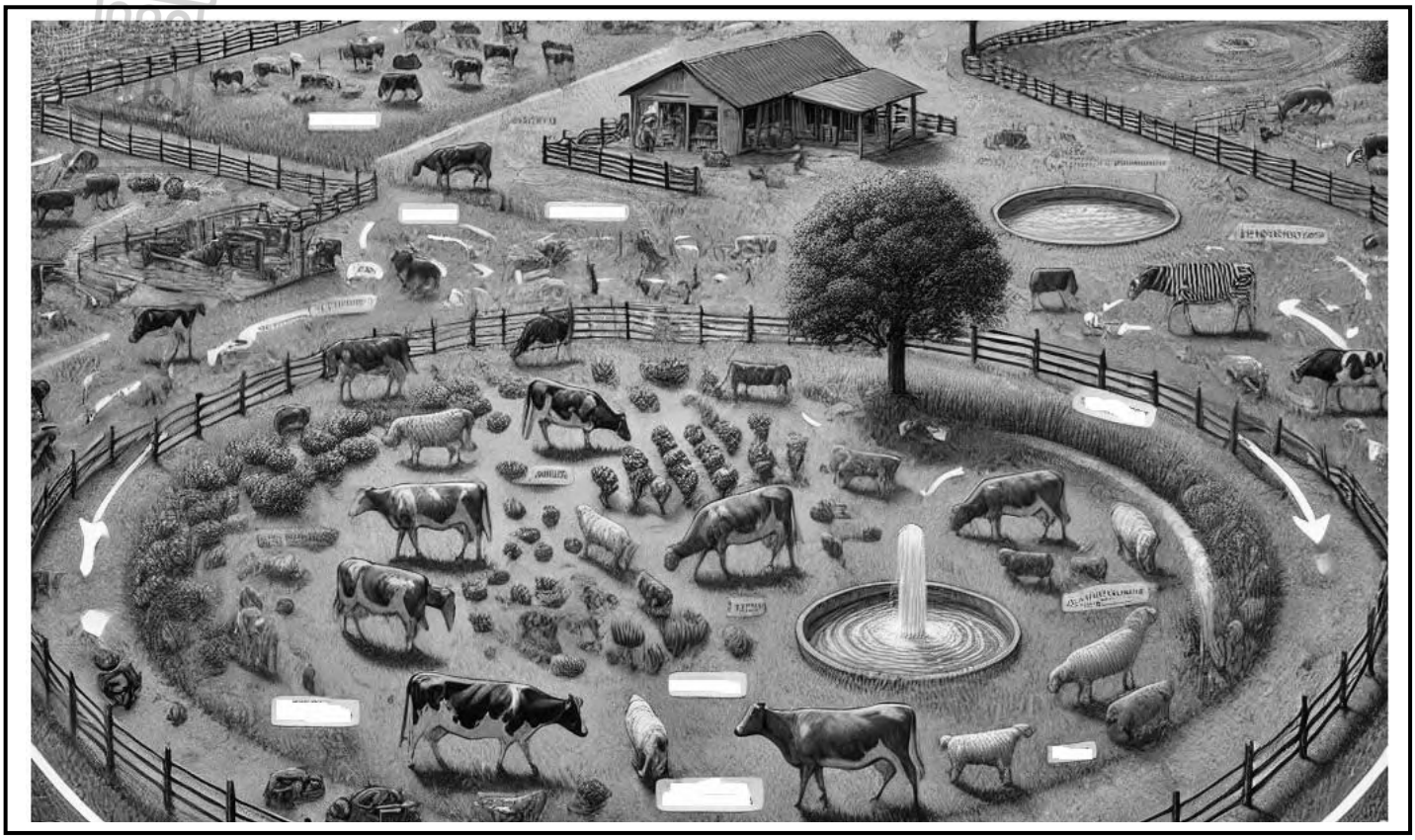
He has no job (2)
His friends and family are leaving him behind.(2)
There is no entertainment opportunities (2)
[Any ONE]

1.3.5 In a paragraph of approximately EIGHT lines, explain how rural depopulation will negatively impacts the economic development of rural areas. (4 x 2) (8)

Loss of skilled labour will results in drop in production and therefore less income.(2)
Shops will close down due to fewer customers and this will results in loss of income (2)
Businesses close down due to lack of workers, this results in less revenue (2)
Closing down of shops and businesses results in loss of jobs and income (2)
Less government allocation will be given to areas with fewer people, and this will result in less money for rural development.(2)
Decline in wages therefore decline in buying power and consumer spending (2)
Land values will drop thus influencing property values (2)
People loose their jobs and therefore it will result in poverty (2)
Few or no economic investment in rural areas due to loss of skilled labour (2)

Decrease in tax revenue making in harder to fund services and infrastructure (2)
Ageing population cannot contribute to the economy of the rural areas (2)
[NB a learner must refer to a factor and a qualifier]
[Any FOUR]

1.4 Refer to the diagram of land use in rural settlements and answer the questions that follow.



[Source: Examiners own sketch from ChatGPT]

1.4.1 Define the concept *land use*. (1 x 2) (2)

The specific function for which the land is used (2)
[CONCEPT]

1.4.2 Identify the land use depicted in the diagram. (1 x 1) (1)

Farming (accept examples) (1)
Grazing (accept examples) (1)
Conservation (1)
Animal husbandry (1)
[Any ONE]

1.4.3 Explain how rural-urban migration will negatively influence land use in rural areas. (2 x 2) (4)

Abandoned agricultural land as fewer individuals remain in rural areas to cultivate and manage agricultural land (2)
Loss of labor force depletes the workforce, making it challenging to maintain large-scale agricultural operations (2)
Shift to less productive land use can harm ecosystems and reduce the land's sustainability. (2)
Decline in land investment - therefore is less incentive to invest in infrastructure, irrigation, and soil conservation techniques (2)
Encroachment on natural ecosystems – reduced monitoring of the land, allowing illegal activities like deforestation or poaching to flourish. (2)
Fragmentation of land reduces the efficiency of land use, making it harder to implement large-scale, cohesive agricultural projects. (2)
Cultural and traditional land use practices which can lead to less environmentally friendly land use and the deterioration of rural landscapes. (2)
[Any TWO]

1.4.4 Explain the importance of the sustainability of land use in rural areas. (2 x 2) (4)

Ensuring food security (2)
Preserving natural resources (2)
Supporting rural livelihoods (2)
Maintaining biodiversity (2)
Mitigating climate change (2)
Preventing land degradation and desertification (2)
Enhancing water management (2)
Promoting social stability (2)
Cultural preservation (2)
Contributing to national economies (2)
[Any TWO]

1.4.5 Suggest strategies to promote sustainability of land use in rural areas. (2 x 2) (4)

Adopt sustainable agricultural practices (accept examples) (2)
Promote land-use planning (2)
Protect and restore natural ecosystems (2)
Encourage sustainable livelihoods (2)
Improve resource efficiency (2)
Promote education and training (2)
Leverage technology (2)
Support policies and incentives (2)
Promote local and regional economies (2)
Monitor and evaluate land use (2)
Community involvement. (2)
[Any TWO]

1.5 Refer to the article on land reform and answer the questions that follow.

NEARLY R2 BILLION SPENT ON FAILED LAND REFORM

Despite the South African government acquiring 432 038ha of land in the Free State under various land reform redistribution programmes since 1994, at a cost of R1 881 billion to the taxpayer, this land was not being used for commercial food production. This was according to Dr Roy Jankielsohn, the DA's caucus leader in the Free State.

"In addition, municipalities in the province own 203 plots of vacant land that amount to 245 379ha, which means a total of 677 417ha of potentially productive land is lying dormant."

The Free State was a case study of what was happening in the rest of the country, he said. It could be safely assumed that this trend of failure was continuing in all the other provinces, except in the Western Cape.

Jankielsohn told Farmer's Weekly that it seemed as if government was oblivious to the threat it posed to food security in the country.

[Source: https://www.farmersweekly.co.za/agri-news/south-africa/nearly-r2-billion-spent-on-failed-land-reform/]

1.5.1 Define the concept *land reform*. (1 x 2) (2)

Land reform refers to the policies that redress the injustices of apartheid government system [CONCEPT] (2)

1.5.2 According to the article, identify a challenge associated with land reform? (1 x 2) (2)

(In addition, municipalities in the province own 203 plots of vacant land that amount to 245 379ha, which means a total of 677 417ha of) potentially productive land is lying dormant (2)
Land was not being used for commercial food production (2)
Potentially productive land is lying dormant (2)
(Land reform redistribution programmes since 1994, at a cost of R1 881 billion to the taxpayer, this land) was not being used for commercial food production.
[Any ONE]

1.5.3 Suggest possible reasons for the challenge identified in QUESTION 1.5.2. (2 x 2) (4)

Lack of financial resources, technical skills, and agricultural training (2)
Limited access to seeds, equipment, water, and other farming essentials (2)
Bureaucratic inefficiencies and lengthy legal processes which delays the transfer of land titles (2)
Disputes over land ownership or communal ownership (2)
Land allocated through reforms is unsuitable for agricultural activities (2)
Lack of financing (2)
Many rural areas are far from markets, making it difficult to sell products or goods (2)
Inconsistent or unclear policies regarding land reform (2)
Land conflicts within communities or families (2)
Rural-urban Migration (2)
Climate change (2)
Land degradation (2)
[Any TWO]

1.5.4 Identify the social challenge caused by land reform mentioned in the article. (1 x 1) (1)

Food security (1)

1.5.5 Suggest strategies to improve the process of land reform in the country. (3 x 2) (6)

Simplify legal procedures (2)
Enforce clear land rights (2)
Land use planning (2)
Inclusive decision-making (2)
Customary rights recognition (2)
Access to credit (2)
Capacity building (2)
Infrastructure development (2)
Anti-corruption measures (2)
Local mediation committees to resolve disputes (2)
Strengthen judicial systems to handle land-related cases more efficiently (2)
Link land reform beneficiaries to markets for their produce (2)
Encourage agro-processing, cooperatives, and value-added activities to increase income generation (2)
Monitoring of the process (2)
[Any THREE]

[60]

QUESTION 2: URBAN SETTLEMENTS

2.1.1 Z (1)/Threshold population
2.1.2 Z (1)/more; less
2.1.3 Y (1)/Conurbation
2.1.4 Z (1)/Central place theory
2.1.5 Y (1)/Range of goods
2.1.6 Z (1)/Urban sprawl
2.1.7 Y (1)/Lower-order functions and services

(7 x 1) (7)

2.2.1 B (1)/Multiple nuclei model
2.2.2 B (1)/E is found far away from any pollution
2.2.3 A (1)/high-income residential areas
2.2.4 B (1)/(ii) and (iv)
2.2.5 A (1)/ Strict segregation of urban areas based on race
2.2.6 C (1)/Socio-economic inequalities and spatial segregation.
2.2.7 D (1)/Fragmented urban spaces with segregated informal settlements
2.2.8 D (1)/(ii) and (iv)

(8 x 1) (8)

2.3 Study the following DIAGRAM and then answer the questions that follow.



[Source: Examiners own sketch from ChatGPT]

2.3.1 Define the term *gentrification.* (1 x 2) (2)

The modernisation and improvement of old houses near the city centre. (Concept) (2)

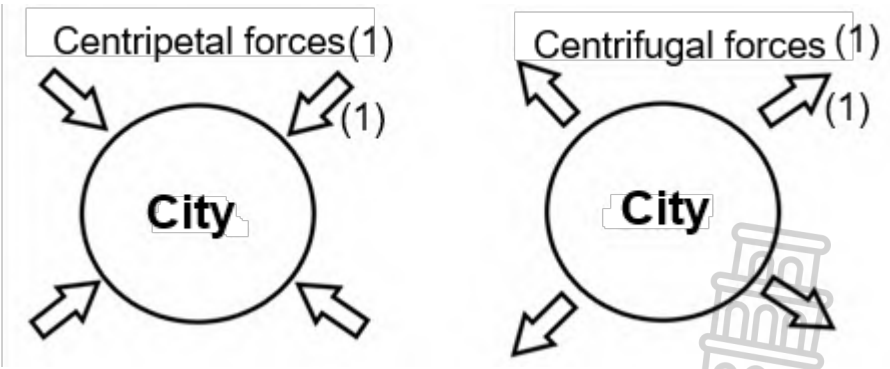
2.3.2 Give an example of gentrification from the DIAGRAM. (1 x 1) (1)

[Luxury cuddy] COMING SOON (1)

2.3.3 From the DIAGRAM, identify an economic reason why urban renewal must take place. (1 x 2) (2)

Buildings should not stand empty, rather income can be derived from the building (2)
Can attract other businesses back to the CBD. (2)
Business in a once derelict area will attract the business and bring in money for those residents. (2)
Attract wealthy residents back into the city therefore increase spending (2)
[Any ONE – must be economical]

2.3.4 Distinguish between centripetal and centrifugal forces using clearly labelled sketches. (4 x 1) (4)



2.3.5 Predict what could happen to a city centre if decentralization continues. (1 x 2) (2)

Negative:
CBD can become run down (2)
Businesses and residential areas will have to move out of CBD due to a lack of customers (2)
CBD will loose customers (2)
Illegal occupation of vacant buildings (2)
Encourage urban blight (2)
Increase social ills (accept examples) (2)
Decrease in service delivery (2)
Positive:

Opportunity for urban renewal/gentrification (2)
Less traffic congestion in the city centre (2)
Reducing of overcrowding (2)
Crime will be lower in the CBD as there are less people (2)
Better service delivery in the CBD (2)
Less competition (2)
[Any ONE]

2.3.6 Evaluate the success of urban renewal in South African inner cities. (2 x 2) (4)

<u>Yes it was successful:</u>
Markets are held in the city centre to attract people back to the city (2)
Cape Town preserves the heritage of our country and facades are practiced here (2)
New Town in Johannesburg where buildings are renovated (2)
New restaurants in Maboneng (2)
<u>It was not successful:</u>
Some cities still do not show any form of urban renewal, e.g. Marabastad
Building in Johannesburg and Pretoria CBD is still dilapidated (2)
Corruption of municipalities not spending money on urban renewal (2)
(Learner must give an example of why it is not successful)
(Learner can use examples.)
[Any TWO]

2.4 Study the case study on informal settlements.

JOE SLOVO, CAPE TOWN

Joe Slovo is one of the largest informal settlements in South Africa. It was founded in the early 1980s in Cape Town's oldest African township, Langa. Its relatively good location in terms of transport and employment opportunities made it one of the fastest growing informal settlements in the city between 1994 and 2004. The phased redevelopment since 2004 is an example of the evolution of the post-apartheid housing policy and shows how it is possible to overcome the legacy of segregating the non-white poor population into remote areas, low density, underserved and environmentally fragile areas.

The project, which started like any other "top-down" policy where authority was imposed, has transformed into an opportunity to learn how to best ensure the development of housing for lower-income sectors. It also demonstrates that different principles of housing (livelihood, safety, resilience and self-management) are so interrelated that they cannot function in isolation from one another.

[Source: Adapted from: https://rchi.mit.edu/joe-slovo]

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

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It is an unplanned residential area of self-built homes that are built from reclaimed and salvaged materials on land to which the occupants usually have no legal claim. (Concept) (2)

2.4.2 Quote from the passage that indicates a factor that gave rise to the rapid growth of the Joe Slovo informal settlement. (1 x 1) (1)

"good location in terms of transport and job resources" (1)

2.4.3 Explain the importance of social development in an informal settlement like Joe Slovo. (1 x 2) (2)

Development of housing (2)
Access to clean water (2)
Access to sanitation (2)
Restore the dignity of people (2)
Give people a sense of ownership and belonging (social involvement) (2)
Access to electricity (2)
[Any ONE]

2.4.4 Explain the advantage of a "bottom-up" policy for the development of informal settlements. (1 x 2) (2)

Communities can explain to stakeholders what the problems are in their own community (2)
Problems can be addressed more directly (2)
Community buy in (2)
Give the people of the community a sense of involvement (2)
Giving the people a sense of ownership (2)
[Any ONE]

2.4.5 In a paragraph of approximately EIGHT lines evaluate the impact of the rapid expansion of informal settlements on the environment. (4 x 2) (8)

Deforestation can occur to make way for housing (2)
Trees are cut down for firewood or to build houses with (2)
Pollution of water sources due to a loss of the necessary infrastructure (2)
Soil erosion is more likely to occur due to the lack of the vegetation (2)
Destruction of natural habitat of natural environments (2)
Interruption of ecosystems (2)
Increase in [air/land/water] pollution (2)
Burning of fossil fuels contributes to global warming (2)
Expansion of informal settlements put pressure on wetlands (2)
Houses are packed closely to each other – vulnerable for fires (2)
Expansion of informal settlement put strain on natural drainage systems (infiltration) (2)
Expansion of informal settlements place a strain on wetlands or lets wetlands diminish (2)
Removal of vegetation increases risk of erosion and flooding during rain (2)
Informal settlements grow faster than cities can provide services (2)
Leads to overuse or breakdown of existing water, sewage, and transport systems (2)
Dirty water and poor sanitation cause diseases like cholera, typhoid, and diarrhoea (2)

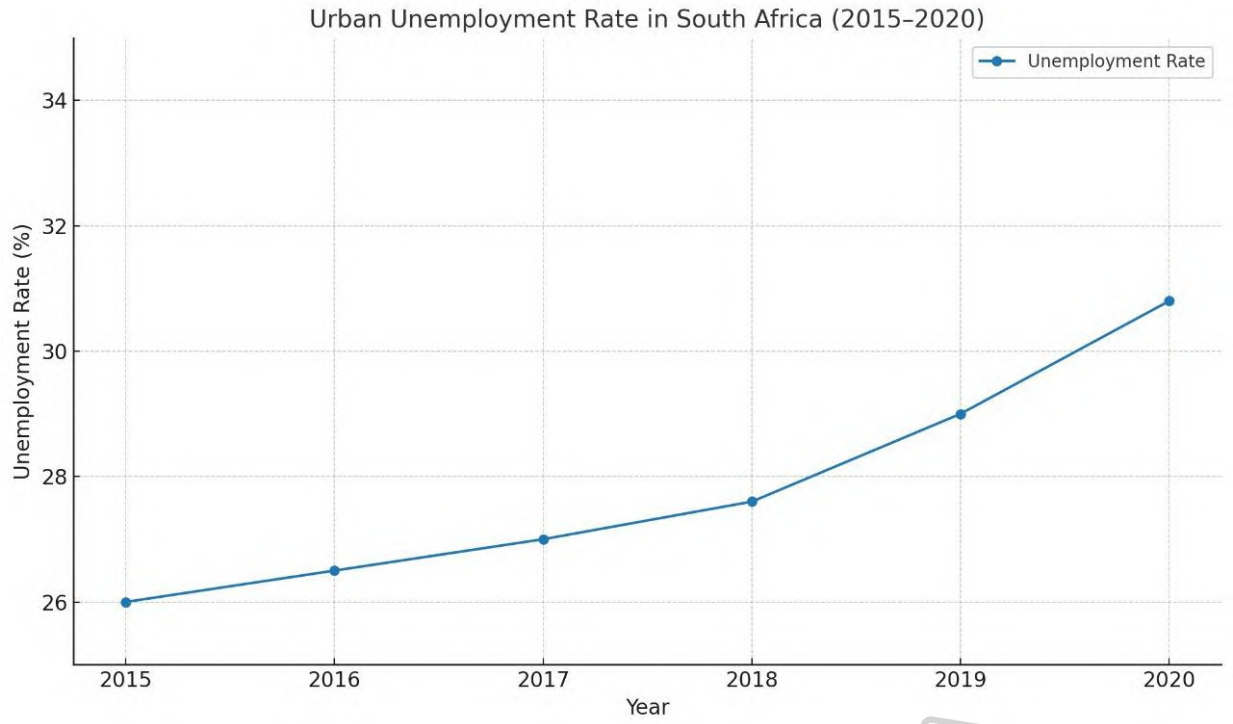
Houses are packed closely together and made of flammable materials (2)
Fires can spread quickly and cause loss of life and property.
Informal settlements are often built on unsafe land (e.g., floodplains, steep slopes) (2)
Makes residents more vulnerable to floods, landslides, or strong winds (2)
Schools, clinics, and roads become overcrowded and poorly maintained. - This lowers the quality of education, healthcare, and transportation (2)
Residents of informal settlements often face stigma or discrimination. - They may have limited political voice or legal rights (2)
[Answer should apply to the environment – physical and human environment]

2.5 Study the infographic and answer the questions that follow.

ECONOMIC INJUSTICES IN URBAN AREAS IN SOUTH AFRICA (2015–2020)

During this period, urban areas in South Africa experienced growing economic injustices due to persistent unemployment, poverty, and systemic inequality. Economic inequalities were particularly problematic in cities such as Johannesburg, Cape Town and Durban, reflecting structural challenges and limited economic opportunities for marginalised groups.

[Source: Examiner's own reading from ChatGPT]



[Source: Examiner's own infographic from Chat GPT]

2.5.1 Explain what is meant by the term *economic justice*. (1 x 2) (2)

The fairness of a coexistence in relation to the distribution of wealth/income/salaries. (Concept) (2)

2.5.2 Calculate the difference in unemployment rate between 2015 and 2020. (1 x 1) (1)

31% - 26% = 5% (1) [Range: 30,5 – 31]

2.5.3 Identify TWO possible reasons why the unemployment rate increased from 2015 to 2020. (2 x 2) (4)

Rapid urbanization means that there are few job opportunities (2)
2019 and 2020 were the period during which COVID claimed people's jobs (2)
Systematic inequalities (2)
Limited economic opportunities (2)
Structural challenges (2)
Lack of skills for specific jobs (2)
Fourth industrial revolution / artificial intelligence taking over jobs / Robotics (2)
Economic recession – companies closed (2)
[Any TWO]

2.5.4 Provide a quote from the text that indicates economic injustices that occur in Durban, Cape Town and Johannesburg. (1 x 2) (2)

"persistent unemployment, poverty and systemic inequality" (2)

2.5.5 Suggest THREE ways in which economic injustices in urban areas in South Africa can be remedied (solved). (3 x 2) (6)

Create jobs that provide equal opportunities for all racial groups (2)
Inequalities within the workplace must disappear (2)
Create jobs that create stability for the communities in less privileged areas (2)
Get rid of corrupt officials that take bribes (2)
Encouraging entrepreneurship that provide jobs (accept examples) (2)
Skills development for people living in urban areas (2)
Infrastructural development / maintenance (accept examples (2)
Attract foreign and local investments to create more job opportunities (2)
Subsidies for water and electricity use for small businesses (2)
Financial assistance to start up businesses (2)
[Any THREE]

[60]

TOTAL SECTION A: 120

SECTION B

QUESTION 3: GEOGRAPHICAL SKILLS AND TECHNIQUES

BACKGROUND INFORMATION ON POTCHEFSTROOM



Co-ordinates: 26° 42' 52"S; 27° 5' 49"E

Potchefstroom is an academic city in the Northwest Province of South Africa. It hosts the Potchefstroom Campus of the North-West University. Potchefstroom is on the Mooirivier, approximately 120 km west-southwest of Johannesburg and 45 km east-northeast of Klerksdorp.

The city has very few industries and is known for its clean air and a low crime rate. It is an important industrial, service and agricultural growth point of the Northwest Province. Industries in Potchefstroom include steel, food, and chemical processing. The chicken industry is of key importance.

[Source: https://en.wikipedia.org/wiki/Potc hefstroom ; https://www.iinfo.co.za/content/about-potchefstroom]

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

ENGLISH	AFRIKAANS
Diggings	Uitgrawings
Purification plant	Watersuiweringsaanleg
Golf course	Gholfbaan
Sewerage works	Rioolwerke
Aerodrome	Lughawe/Vliegveld
University	Universiteit

3.1 MAP SKILLS AND CALCULATIONS

3.1.1 The contour interval on the topographic map is …metres.

A 5
B 10
C 15
D 20 (1 x 1) (1)

D/20 (1)

3.1.2 The length of the bridge in block **B5** is … metres.

A 100
B 125
C 150
D 200 (1 x 1) (1)

C/150 (1)

3.1.3 (a) The true bearing from the benchmark in block **A2** to trigonometrical beacon 174 at **F** in block **B1** … (1 x 1) (1)
(b) The direction from the benchmark in block **A2** to the trigonometrical beacon 174 at **F** in block B**1** is … (1 x 1) (1)

(a) ***207° (range: 206°-208°) (1)***
(b) ***South-southwest (1)***

3.1.4 Calculate the area of the swimming pool at **5** on the orthophoto map in metres. The length of the pool is 1 cm on the orthophoto map.

Formula: length x breadth. (4 x 1) (4)

Breadth = 0,7 cm (1) (range: 0,6-0,8)
1 cm x 0,7 cm
100 m (1) x 70 m (1) (range: 60 – 80)
7000 m² (1) (range: 6000 – 8000)

3.1.5 The swimming pool on the orthophoto map appears (smaller/bigger) than on the topographic map due to the difference in scale. (1 x 1) (1)

bigger (1)

3.1.6 Give the latitude for the cemetery at **G** in block **B1** if the longitude information is 27°03´40´´ E. (1 x 1) (1)

26°40´25´´ S (1)
(NB: the seconds can range from 22´´ - 28´´)

[10]

3.2 MAP INTERPRETATION

3.2.1 Potchefstroom can be classified as a … settlement and a … town.

(i) nucleated
(ii) dispersed
(iii) specialised
(iv) trade and transport

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

A ((i) and (iii)) (1)

Refer to the topographic map.

3.2.2 (a) Identify the rural land use in block **A5** at **H**. (1 x 1) (1)

Farming / Agriculture / Cultivation (1)

(b) Give evidence from the topographic map for the choice of site of the land use identified in QUESTION 3.2.2(a). (1 x 1) (1)

Flat land (1)
Availability of water (1)
[Any ONE]

Refer to the topographic map.

3.2.3 Identify the settlement pattern of, "Wag 'n bietjie" at **I** in block **A4**. (1 x 1) (1)

Nucleated settlement (1)

3.2.4 Explain how closeness to the market is an advantage for the settlement "Wag 'n bietjie" in QUESTION 3.2.3. (1 x 2) (2)

Perishable products to be close to the market (2)
Save on transport costs to the market (2)
[Any ONE]

Refer to the orthophoto map.

3.2.5 (a) Identify the land-use zones at **6** and **7**. (2 x 1) (2)

6 – (heavy) industrial land-use zone (1)
7 – residential land-use zone (1)

(b) Give a reason for the location of land-use zone **6**. (1 x 2) (2)

Flat land (2)
Close to the railway line (2)
Close to the national routes (2)
Water close by (2)
Next to the low income residential area – labour force (2)
Land is cheaper (2)
Availability of large land (2)
[Any ONE]

Refer to the topographic map.

3.2.6 Give a reason for the ~~choice~~ construction of the street pattern for Grimbeekpark in block **E4** at **J**. (1 x 2) (2)

It is a new developed residential area (2)
Reduce traffic congestion (2)
Limited space (2)
Easy to construct (2)
Easy to maintain (2)
Topography in the area (2)
[Any ONE]

3.3 GEOGRAPHIC INFORMATION SYSTEMS (GIS)

3.3.1 Define the term *Geographic Information system*. (1 x 2) (2)

A computer system of hardware, software and methods to capture, manage, manipulate, analyse, model and display data (2)
[CONCEPT]

Refer to the topographic map.

3.3.2 (a) Which GIS components were used to compile the topographic map? (1 x 1) (1)

Hardware (1)
Software (1)
Data (1)
People (1)
Processes / Methods (1)

[Any ONE]

(b) Name the GIS source that was used to create the topographic map. (1 x 1) (1)

(Vertical) aerial photo (1)
Orthophoto map (1)

(c) Identify the type of GIS data depicted by the topographic map. (1 x 1) (1)

Vector data (1)
Spatial data (1)
Attribute data (1)
[Any ONE]

Refer to the orthophoto map.

3.3.3 (a) The orthophoto map is an example of (spatial data/remote sensing). (1 x 1) (1)

remote sensing (1)

(b) Give a reason for your answer to QUESTION 3.3.3 (a). (1 x 2) (2)

Photo taken from a distance/above (2)

TOTAL SECTION B: 30

TOTAL: 150