



NATIONAL SENIOR CERTIFICATE EXAMINATION
NOVEMBER 2018

GEOGRAPHY: PAPER I

MARKING GUIDELINES

Time: 3 hours

300 marks

These marking guidelines are prepared for use by examiners and sub-examiners, all of whom are required to attend a standardisation meeting to ensure that the guidelines are consistently interpreted and applied in the marking of candidates' scripts.

The IEB will not enter into any discussions or correspondence about any marking guidelines. It is acknowledged that there may be different views about some matters of emphasis or detail in the guidelines. It is also recognised that, without the benefit of attendance at a standardisation meeting, there may be different interpretations of the application of the marking guidelines.

SECTION A GEOGRAPHICAL ISSUES**QUESTION 1 GEOGRAPHICAL CASE STUDY: THE GEOGRAPHY OF THE ORANGE / SENQU RIVER BASIN AND THE NORTHERN CAPE****1.1 Catchment and river management**

- (a) (i) The area from which rainfall flows into a river, lake, or reservoir. Area drained by a river
- (ii) The amount / volume of evaporation that would occur if a sufficient water source were available.

- (b) Candidates must show calculation to get full marks.

Height difference: $3\,300\text{ m} - 0\text{ m} = 3\,300\text{ m}$

Distance: $2\,300\text{ km} \times 1\,000 = 2\,300\,000\text{ m}$

1: 696,97

(c)	Constructed knickpoint	(Any one) Gariep Dam Vanderkloof Dam
	Natural knickpoint	Augrabies Falls

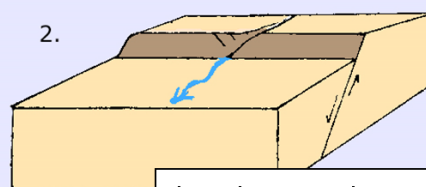
- (d) A river is said to be rejuvenated when it is eroding the landscape in response to a lowering / change of its base level. Evidence of headward / downcutting / vertical erosion
- (e) It cannot be graded as it has many knickpoints / temporary base level of erosion (dams and waterfalls) along the river system, therefore the profile is not smooth. multiconcave

(f)

River flows over landscape

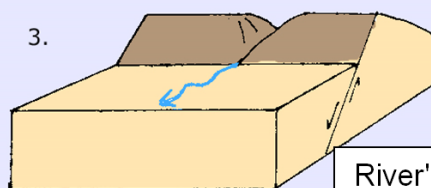


2.



Landscape changes due to folding or faulting.

3.



River's erosive energy is stronger or equal to the change and therefore the river doesn't change its course.

River is generally regarded to be older than the landscape it flows through.

River erodes through uplifted landscape. River not influenced by underlying strata

- (g) This is due to the influence of the air circulation of the SAHP and SIHP and the amount of moisture they push into the interior from the dry west & humid east ocean currents which creates 500 mm isohyet.

1.2 Settlement and fluvial processes

- (a) Linear
ANY ONE OF THE FOLLOWING:
- The settlement built along the river
 - The shape of the island
 - The road running through the settlement
- (b) ANY TWO OF THE FOLLOWING ANSWERS:
- Along the Orange River
 - On fertile soil
 - A lot of water
 - Very dry climate
 - Wet-point settlement
 - Floodplain
 - Flat land
 - Alongside a road
- (c) Wet-point
This is due to ...
- being next to the river in the dry region
 - being built right next to the river
- (d) ANY TWO REASONABLE ANSWERS
- It seems to have functions within the settlement, but not enough to be a town. Low order functions / low number of functions
 - The population seems higher than you would find in a hamlet, but not enough to be a town. Town is not built-up enough
 - Mostly uni-functional activity so cannot be regarded as urban.
- (e) Braided.
- (f) A braided channel is one that is divided into smaller channels by temporary islands. Braided channels tend to form in rivers that have a significant amount of sedimentary load, a steep profile and where discharge regularly fluctuates.
OR
When the river's carrying capacity is exceeded, the river deposits its load into the channel. This usually happens in a very dry region.
- (g) The river has created very rich soil from the alluvium.
The braiding has made many fertile islands that can be used for farming.
NOT mining

1.3 Agriculture and valley climates

- (a) Primary.
- (b) Found in a valley and along the river.
The valley could have created a frost pocket.
The river creates moderating effect.
The aspect of the valley plays a role as grapes enjoy dry soil.
Flooding
Water supply (not related to climate)
Cool microclimate
Soil fertility
Thermal belt position
- (c) ANY TWO RELEVANT ANSWERS
- Low workforce HIV / AIDS
 - Low infrastructure
 - Far from markets
 - Soil erosion
 - Fuel price
 - Theft
 - Land claims
 - Pollution
 - Insects
 - Strong winds
 - Frost pocket
 - Flooding
- (d) ANY THREE RELEVANT POINTS
- Creates more jobs
 - Diversification of economy
 - Creates better infrastructure
 - Attracts other businesses
 - Attracts investment
 - Improves buying power

1.4 **Khi Solar One post-apartheid economic development**

- (a) Energy that uses sources that can be used over and over again. Is not finite
- (b) **ANY TWO RELEVANT POINTS**
Northern Cape receives a high amount of solar energy due to low rainfall and clear skies for more days than many other regions. Available space.
- (c) **ANY THREE RELEVANT POINTS**
Candidates are expected to **EVALUATE** and should therefore expand on and explain each point.
- More jobs
 - Better infrastructure
 - Improved education
 - More services provided
 - More skilled jobs available
 - More skills development in the region
 - Attracts investment
 - 1 item social
 - 1 item economic
 - 1 evaluation / opinion

1.5 **Urban climates**

CRITERIA	MARKS	Candidates Mark
Writing skills <ul style="list-style-type: none"> • Taking into consideration structure and presentation. • Use of brief introduction and conclusion. • Logical discussion and use of subheadings. 	5	
Content knowledge <ul style="list-style-type: none"> • Correct use of geographical terminology and concepts. • Adherence to topic and subheadings. 	10	
Supporting evidence – analysis and understanding <ul style="list-style-type: none"> • The ability to analyse and evaluate the topic is assessed in this category. • Reference made to case study material / fact file / source material provided. • If appropriate, reference must be made to familiar / local or other examples. 	5	
Total for essay	20	

Criteria	(Level 3) Excellent – Good	(Level 2) Satisfactory	(Level 1) Poor
Writing skills <ul style="list-style-type: none"> Taking into consideration structure and presentation. Use of brief introduction and conclusion. Logical discussion and use of subheadings. <p>[5 marks allocated to this component]</p>	<p>Suitable introduction and conclusion. Sophisticated, coherent and structured writing. Subheadings and paragraphs have been effectively used. Report is concise, well-structured and succinct.</p> <p>(4–5 marks)</p>	<p>Introduction and conclusion present, although not ideal. Attempts to adhere to subheadings and use of paragraphs. Report deviates from the point in places and lacks brevity.</p> <p>(3 marks)</p>	<p>Writing is weak and almost unintelligible. No introduction or conclusion provided. No use / adherence to subheadings. Long sentences, poor grammar and ineffective use of paragraphs. Report is repetitive. Bullet points may have been used. 1 = must be awarded for any form of written attempt / effort</p> <p>(0–2 marks)</p>
Content knowledge <ul style="list-style-type: none"> Correct use of geographical terminology and concepts. Adherence to topic and subheadings. <p>[10 marks be allocated here]</p>	<p>Relevant content and detailed discussion of topic. Good usage of geographical terminology and concepts. Appropriate number of facts presented / subheading. Min of 2 points for every sub-heading will earn candidate 10 marks. Extension work will provide a further 2 marks.</p> <p>(8–10 marks)</p>	<p>Some relevant content. An overview / general discussion of key issues. Basic usage of geographical concepts and terminology. (60–50% of required facts presented / subheading). 1 point / sub-heading, or 2 points provided and only 2 paragraphs.</p> <p>(5–7 marks)</p>	<p>Digression from the topic. Weak grasp of concepts and terminology. Superficial / poor discussion. Almost no relevant facts / subheading.</p> <p>(0–4 marks)</p>
Supporting evidence – analysis and understanding <ul style="list-style-type: none"> The ability to analyse and evaluate the topic is assessed in this category. Reference made to case study material / Fact File / source material provided. If appropriate, reference must be made to familiar / local or other examples. <p>[5 marks allocated to this component]</p>	<p>The candidate is able to argue and evaluate appropriately. There is strong evidence of accurate application of understanding and evidence provided. Report demonstrates understanding and integration of relevant case study / Fact File / source material into the context of the report. Looking for evidence of unpacking content and high-order integration.</p> <p>(4–5 marks)</p>	<p>Superficial links made to case study / Fact File / source material. Although reference to supporting examples has been made, it is not clear that the candidate has a good understanding of the example / case study material. Supporting evidence does not always relate appropriately to the subheading or context of discussion. Discussion lacks depth.</p> <p>(3 marks)</p>	<p>Limited to no reference made to case study / Fact File / source material. Examples not provided. Has little to no geographical meaning. Little analysis or understanding. Demonstrates minimal understanding of topic.</p> <p>(0–2 marks)</p>

In your report you must cover the following aspects:

- **Outline the observed temperature variation (rural vs urban)**

- Rural areas are cooler than urban
- Kanoneiland is cooler than Upington, particularly during the winter months

Upington approximately 2°C higher than Kanoneiland throughout the year

Greatest difference in early mornings in Spring. Smallest difference in Summer daytime temps.

- **Describe possible causes of heat in an urban area**

- Albedo effect. Dark colours absorb heat, light colours reflect
- More surface heat retention
- More artificial heat – aircons, cars, factories
- More tar, darker building material
- More pollution to trap the heat
- Population numbers – accepting body heat (some textbooks mention this)

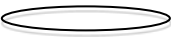
- **Evaluate how the UHI has exacerbated* the temperatures felt in Upington**

- Upington is in a warm / arid region, this will make it even warmer
- More wind will move more dust around due to the arid region
- More dust would make dust dome thicker and absorb more heat energy, making it warmer.
- More pollution would add to the trapped heat in the settlement
- Impacts on human health and performance

- **Explore solutions urban areas such as Upington could implement**

- Rooftop gardens
- Paint using different colours – rather mention lighter colours
- Build with more reflective material
- Public Transport, less pollution, lift clubs, walking and cycling
- More green areas within the urban space
- More open water
- Building design and / or orientation – prevailing wind. Aerodynamic building shapes
- Renewable energies, e.g. solar power
- Filters on chimneys
- Fine companies that pollute

- Please **DO NOT** tick when marking an essay – this confuses the checkers.
- Rather, underline valid and appropriate points and use the code system below.

GEOGRAPHY ESSAY CODES	CONTENT
E – Excellent G – Good V – Vague R – Repetition I – Irrelevant F – Fair	<p>_____ Underline relevant points if correct</p> <p> Circle incorrect points</p> <p>EVIDENCE</p> <p>Place in () brackets where candidates have used evidence</p>

SECTION B CLIMATE, WEATHER AND GEOMORPHOLOGY**QUESTION 2 MID-LATITUDE CYCLONE, TROPICAL CYCLONE, LOCAL WEATHER, RIVER BASIN STUDY, RIVER CHANNEL AND FEATURES, DROUGHT****2.1 Mid-latitude cyclone**

- (a) D Isotherms
- (b) A Cold sector
- (c) A Kalahari / interior anticyclone
- (d) A Backing
- (e) C Rainy with a strong south-
D Thunderstorms, gale force winds

2.2 Tropical cyclones

- (a) Eye of the storm / centre or middle of storm / eye wall
- (b) ANY TWO RELEVANT POINTS
 - Warm ocean with a temperature greater than 26 or 27 degrees
 - Coriolis effect
 - Low wind shear / light and variable winds
 - Deep low-pressure / low pressure cell
 - High humidity
 - High evaporation rate
 - Area of development between 5 and 25 degrees S / tropical regions
 - Latent heat
 - Undisturbed period of several days

(c)	Inhambane	80 to 100 km / h
	Vilanculos	60 to 80 km / h

- (d) Inhambane will experience most strong winds and worst effects. This is due to it being the dangerous semi-circle where the winds are moving in the same direction as the storm, which makes them stronger.
First or leading quadrant storm is compressed leading to steeper pressure gradient and stronger winds.
Inhambane has onshore winds resulting in the storm surge and more damage.
Not acceptable to say that Inhambane is closer to the eye.

(e) ANY TWO / Three RELEVANT POINTS

Candidates are expected to EVALUATE and should therefore expand on and explain each point.

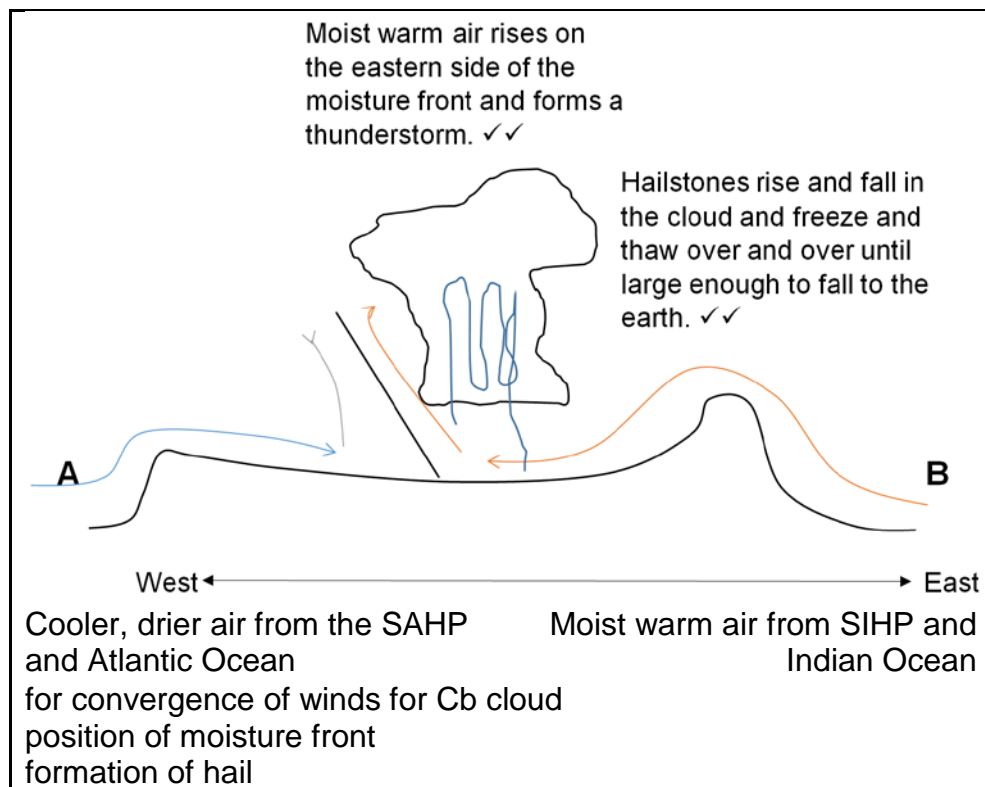
- Mozambique is an LEDC
- Poorly built houses
- Poor infrastructure
- No warning system
- Poor evacuation procedures
- Lack stocks of food and water
- Lack of insurance
- Monoculture / subsistence farmers therefore more affected
- Lack of medical care / water borne diseases
- Impact on the economy

2.3 Local weather

(a) ANY ONE RELEVANT POINT

- Low-pressure trough / low pressure / trough / interior low / thermal low
- Moisture front

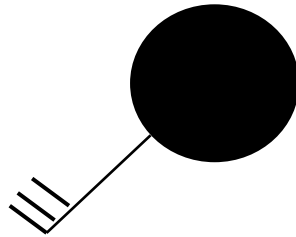
(b)



- (c) Weather station symbol must have the following elements

The stations can have any three of the following.

- Rainfall ● ▽
- Strong winds 25 – 50 knots
- Overcast 6 / 8 to 8 / 8
- Wind directions from South East to South West
- Temperatures: Above 18 and range less than 5



- (d) ANY TWO RELEVANT POINTS
- Blocked drains create more impermeable surfaces
 - Fewer infiltrations, therefore more runoff
 - More river channelisation

2.4 Drainage systems in South Africa

- (a) (i) Drakensberg
- (ii) Deposition
- (iii) Interfluve
- (iv) Dendritic
- (b) (i) Hydrograph A
- (ii) ANY TWO RELEVANT ANSWERS
- This is a summer rainfall region
 - This would be a permanent river due to the regions it is found in
 - The river is being fed by the Vaal / Tugela and Lesotho Highlands Water Projects

If hydrograph C is chosen in (i) then this is a summer rainfall region is marked correct

If hydrograph B is chosen in (i) then this is a permanent river is marked correct

(iii) ANY TWO RELEVANT ANSWERS

- Increases the flood peak
- Shortens the lag time
- Makes the rising limb steeper

If stated that urban areas increased water off-take then reduced discharge was accepted.

(iv) ANY THREE RELEVANT ANSWERS

Candidates are expected to ELABORATE and should therefore expand on and explain each point.

- Gauteng is not built on a major water source
- South Africa has a very variable rainfall
- Water for very large populations / demand is increasing
- Major industries in the Gauteng region need water
- Need for irrigation
- Used to generate HEP
- Low rainfall

2.5 River channel, fluvial process and fluvial features

- (a) Upper / Youthful
- (b) Turbulent
- (c) Rapid or Steep sided Valley / V shaped Valley
- (d) Rapids are areas of shallow, fast-flowing water in a stream. Rapids tend to form in younger streams, with water flow that is straighter and faster than in older streams. Softer rocks in the streambed erode, or wear away, faster than harder rocks. This process is known as differential erosion.
Or
Downward erosion caused by the turbulent flow of the river.
- (e) Traction or saltation
- (f) This occurs when the river is in flood.
The channel then has enough energy to carry the boulders along the river bed.
Steep gradient / fast moving

2.6 Dams and drought

- (a) Water security can be defined as the ability to access sufficient quantities of clean water to maintain adequate standards of food and goods production, proper sanitation, and sustainable health care.
- (b) $56,4 - 36,2 = 20,2$
 $20,2 / 56,4 \times 100 = 35,82\%$ (from 35–36%)

- (c) Two marks are given for the design of the Infographic / 1 mark for design structure and 1 mark for differentiating between consequences and solutions

"An infographic (information graphic) is a representation of information in a graphic format designed to make the data easily understandable at a glance."

ANY TWO RELEVANT POINTS under one and one point under the other

- Consequences
 - Industry cannot operate normally – job losses
 - Agriculture cannot irrigate – job losses, food insecurity
 - Water becomes more expensive to the people
 - Loss of tourism
 - Water restrictions (if used as a consequence cannot be used as a solution)
- Solutions
 - Desalinisation
 - Boreholes
 - Fines for overuse
 - More dams
 - Covered reservoirs / pools
 - Rain water harvesting
 - Storage tanks
 - Water restrictions
 - Grey water usage
 - Inter-basin transfers

SECTION C RURAL AND URBAN SETTLEMENT AND ECONOMIC GEOGRAPHY OF SOUTH AFRICA**QUESTION 3 RURAL SETTLEMENT, URBANISATION, INFORMAL SETTLEMENTS, URBAN FUNCTIONS, MIXED-USE DEVELOPMENT AND URBAN RENEWAL, LAND REFORM, ECONOMIC SECTORS, GAUTENG, DIAMOND MINING****3.1 Rural settlement**

- (a) (i) Pattern – Dispersed accepted all as photograph not clear
- (ii) Shape – Round
- (iii) Type – Farmstead
- (iv) Type of farming activity– Subsistence
- (b) ANY THREE RELEVANT POINTS
Candidates are expected to ASSESS and should therefore expand on and explain each point.
- As rural areas develop they change their functions
 - The development of infrastructure
 - Development of homes
 - Counter-urbanism causes rural areas to develop more
 - Functions that should be found in urban areas are found in rural areas
 - Just Differentiation between rural and urban areas – max 4
 - NO – as distinction is clear as more rural depopulation occurring resulting in decline in services in rural area
 - Linking comparison to differences in MEDC and LEDC

3.2 Urbanisation

- (a) 504 people per day
 $21 \times 24 = 504$
- (b) ANY TWO RELEVANT ANSWERS
- Discuss push or pull factors (push e.g. drought; conflict; mechanization)
 - More jobs in urban areas
 - Bright light syndrome
 - Lack of rural jobs
 - Perceived better jobs in urban areas
 - Better services in urban areas
 - Rural-urban migration
 - Better quality of life / improved standard of living
 - Migrant labour / join families
 - Better access to education
 - Health care opportunities
 - Perceived idea of increased housing opportunities in urban
 - Improved Infrastructure

- (c) Candidates are expected to **ASSESS** the benefits and should therefore expand on and explain each point.
- More education opportunities
 - Possibility of jobs
 - Possibility of better housing
 - Possibility of better services
 - Possibility of better infrastructure
 - Possibility of better shops
 - Possibility of better healthcare
 - Safer in urban (better security, away from farm murderers)
 - Entertainment opportunities
 - Jobs (1 mark) – no explanation
 - Housing (1 mark) – no explanation

3.3 Informal settlement

- (a) **ANY ONE RELEVANT PIECE OF EVIDENCE**
- Houses are made of makeshift material.
 - No proper infrastructure visible.
 - Shacks
- (b) **ANY ONE**
- Electricity
 - Power cables
 - Road
 - Telephone lines
 - Street lights
- (c) **ANY TWO RELEVANT ANSWERS**
- Candidates are expected to **EXPLORE** and should therefore expand on and explain each point.
- Fires
 - Cold
 - Flash Floods
 - Crime
 - Unemployment
 - Heat
 - Lack of services(poor sanitation, spreading of diseases)
 - No fixed address (cannot open accounts, etc.)
 - Cost of transport
 - Privacy issues / overcrowding

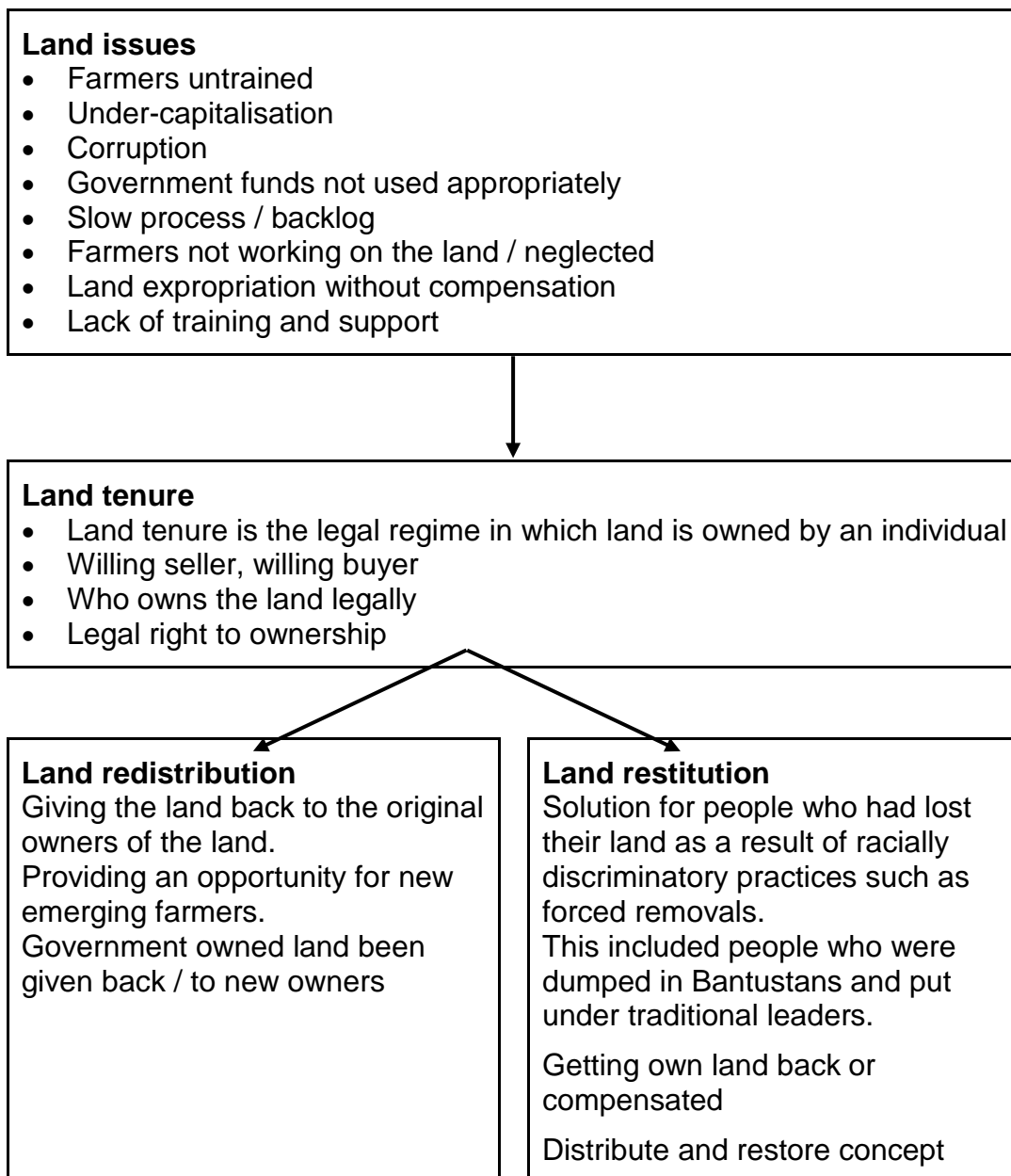
3.4 Urban functions

- (a) B / meat world
- (b) Any option with justification
Adam's Bait Shop / C
ANY ONE RELEVANT ANSWER
- Fishing is very specialised.
 - Fewer people would use the store but they would travel further to do so.
- B – can justify that they would travel far to the specialised halaal butcher
- A – car wash with justification (specialized service, will travel far to get)
- (c) Functional convenience
ANY ONE REASONABLE ANSWER
- The businesses are on the corner of the road
 - The businesses are unrelated and won't help each other and are not in competition
 - Accessible / Convenient as on the corner

3.5 Mixed-use development and urban renewal

- (a) (i) Mixed-use development is a type of urban development that blends residential, commercial, cultural, institutional, or entertainment uses, where these functions are physically and functionally integrated and provide pedestrian connections.
Eat / sleep / play area
Integrated area
More than 1 use
- (ii) The area within the walls or perceived boundaries of a particular building or place.
OR
An area in a town designated for specific or restricted use, especially one that is closed to traffic.
Area designed or reserved for a specific use
- (b) ANY THREE RELEVANT ANSWERS
Must be ONE social and ONE economic consequence and any other; can be positive or negative
- The property value will rise
 - More congestion (people and vehicles)
 - New businesses will be established
 - More high-end jobs available
 - People displaced
 - People cannot afford to live in the area
 - Increased trade
 - More crime
 - Overburdened infrastructure
 - More tax for the municipality
 - Entertainment opportunities
 - More business resulting in more competition

3.6 Land reform



3.7 Structure of the economy and informal sector

(a) Quaternary / tertiary

(b) ANY TWO RELEVANT POINTS

- Soweto has a much bigger population than Sandton, but Soweto has poor infrastructure and hence low fixed-line internet access.
- Soweto has a high demand for internet access and because cell phones are readily available, internet access through cell phones is high, despite cell phone data being more expensive.
- Sandton is an exceptionally wealthy financial and commercial centre with excellent infrastructure and massive investment and development and consequentially very high internet access, especially via fixed lines.
- More businesses in Sandton therefore more fixed line compared to data.

- (c) (i) An economy that is neither taxed nor monitored by any form of government. Unlike the formal economy, activities of the informal economy are included in neither the gross national product (GNP) nor the gross domestic product (GDP) of a country.

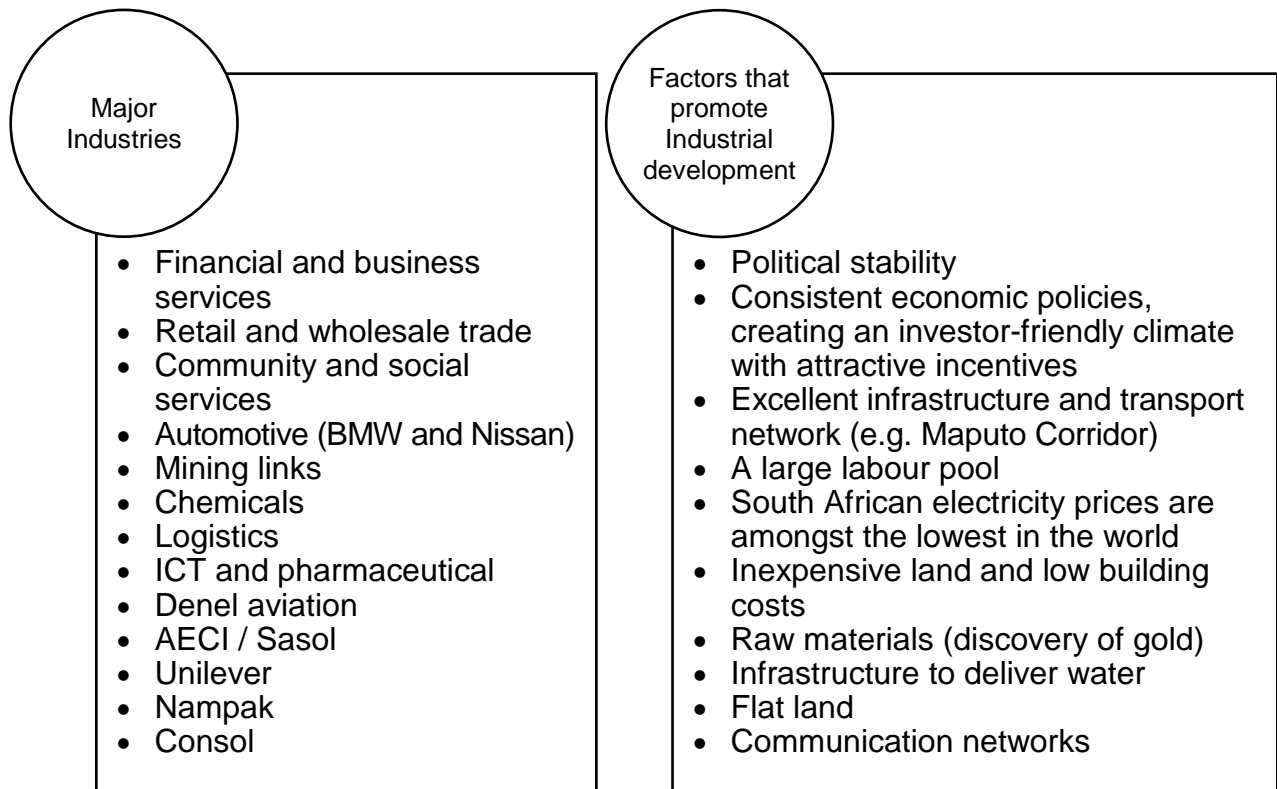
(ii) ANY REASONABLE ANSWER

This is a DISCUSS question so the candidate cannot just list.

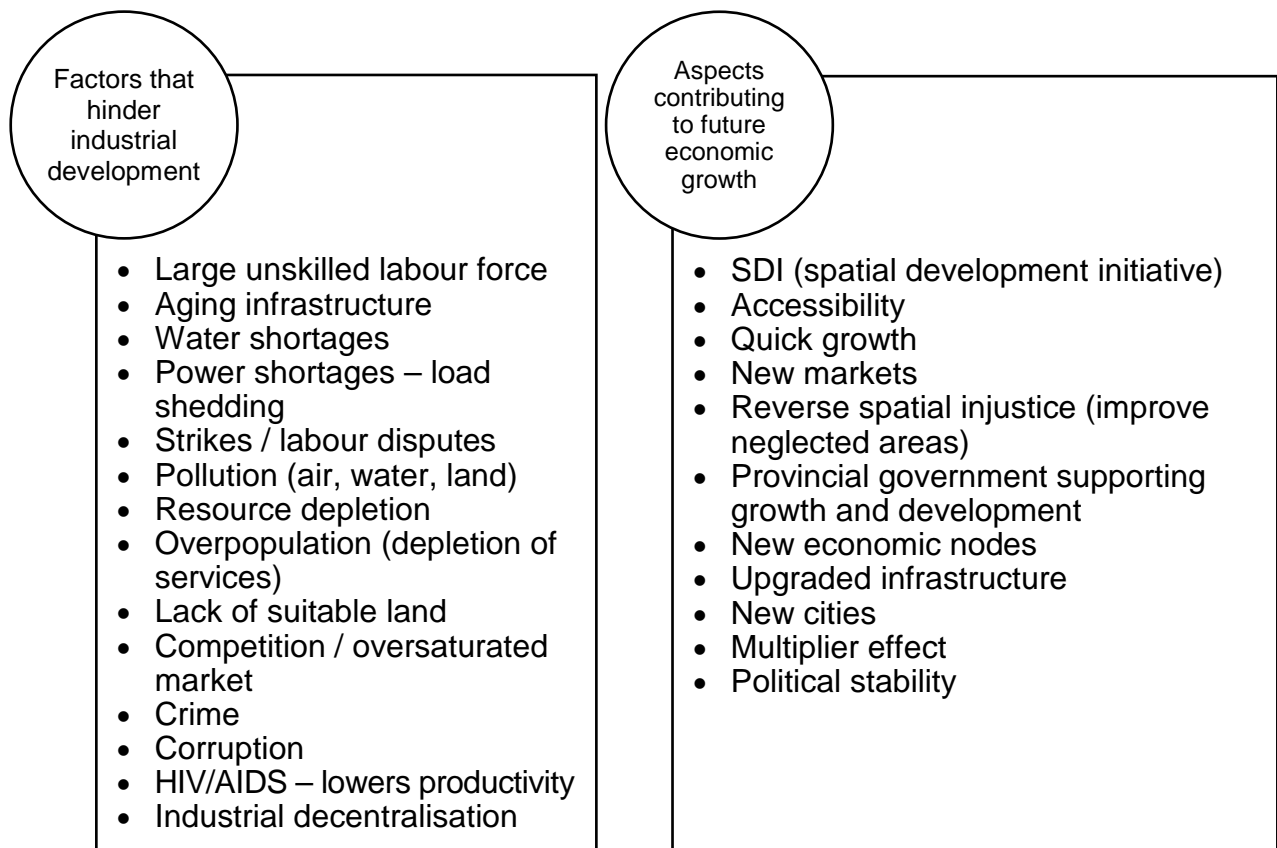
- Very easy to sell on the side of the road
- Cheap product
- Moves very quickly
- In many cases untraceable
- Demand for data is increasing
- Convenient
- No overheads
- Easy movable product
- Do not need high level of skills (low level of education)
- No processing needed in order to sell

3.8 Gauteng

Mindmap – ONE point under each heading and any TWO others



Gauteng



3.9 Diamond mining

- (a) (i) Maximum production
Full capacity
- (ii) An (igneous) rock, which sometimes contains diamonds.
- (b) Botswana
- (c) • The world economy stabilised (many countries moved forward with the end of the Cold War).
• More people had access to money and bought diamonds.
• Increased demand
• Improved mining techniques
• New reserves found
- (d) • The world economy in a better shape.
• Moving out of the recession of 2008.
• Supply and demand in balance (influence of De Beers?)
• Stable but not increasing

Total: 300 marks