NATIONAL SENIOR CERTIFICATE EXAMINATION
NOVEMBER 2024

GEOGRAPHY: PAPER I

MARKING GUIDELINES

Time: 3 hours 200 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 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.

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Marks must be awarded in line with:
- the specific content of the marking guideline or the generic level descriptors for the Question.
- the specific skills defined in the marking guideline or in the generic level descriptors for the Question.
- the standard of response required by a candidate as exemplified by the standardisation scripts.

Marks must be awarded **POSITIVELY:**
- Marks are awarded for correct/valid answers.
- Credit is given for valid answers that go beyond the scope of the syllabus referring to your Senior Sub Examiner or Examiner as appropriate.
- Marks are awarded when candidates clearly demonstrate what they know and can do.
- Marks are not deducted for errors.
- Marks are not deducted for omissions.
- Answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the Question as indicated by the mark scheme. The meaning, however, should be unambiguous.

Rules must be applied consistently, e.g., in situations where candidates have not followed instructions or in the application of generic level descriptors.

Marks should be awarded using the full range of marks defined in the marking guide for the Question; however, the use of the full mark range may be limited according to the quality of the candidate responses seen.

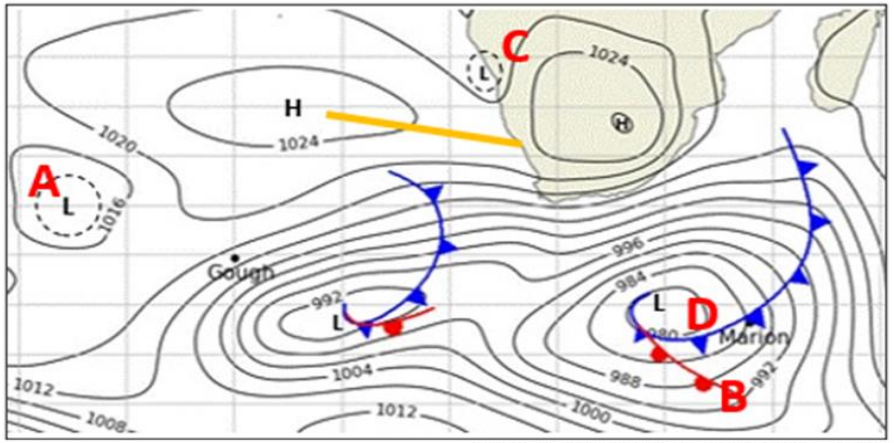
Marks awarded are based solely on the requirements as defined in the marking guidelines.
Marks should not be awarded with grade thresholds or grade descriptors in mind.

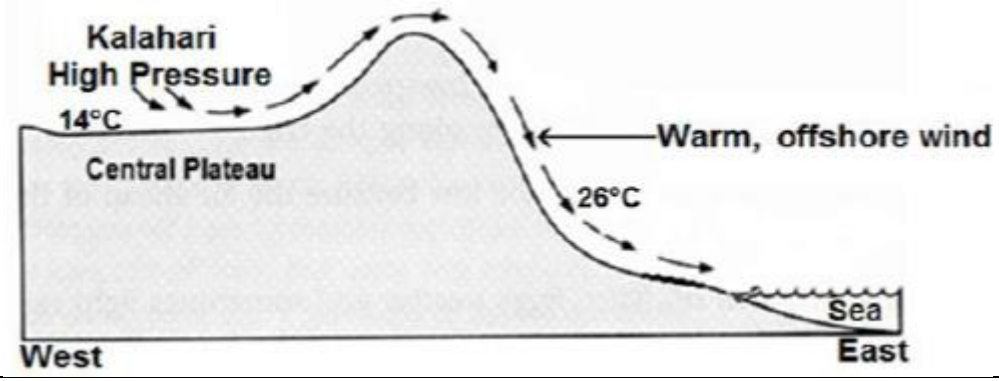
When marking the higher order question, please use the Essay coding system to make the moderation process more consistent, fair and easier.

Geography Essay Coding

E – Excellent
G – Good
F – Fair
V – Vague
R – Repetitive
I – Irrelevant

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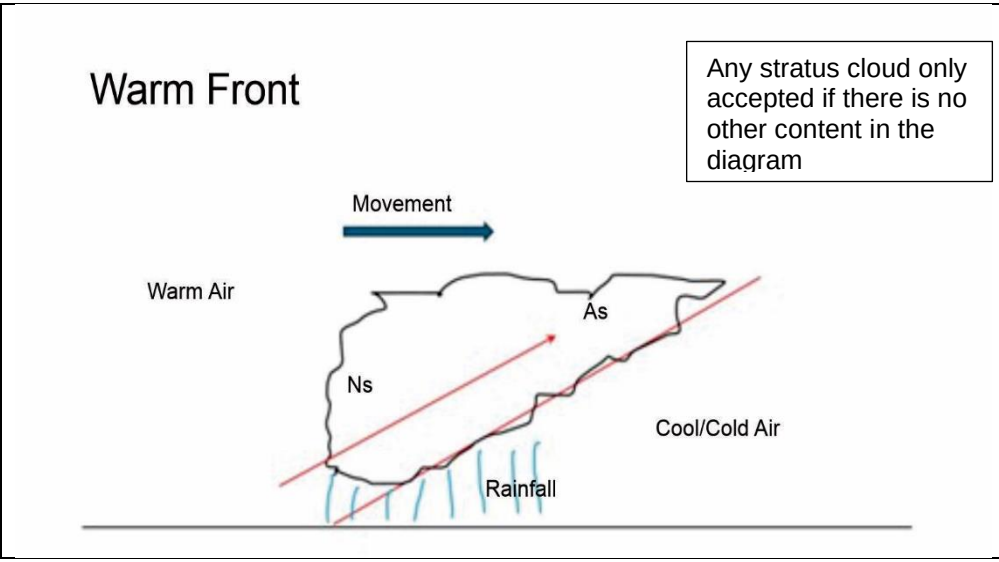
SECTION A	**INTEGRATED QUESTION:**		
QUESTION 1	**PHYSICAL GEOGRAPHY**		
1.1	**Synoptic chart and associated weather conditions**		
Study Figure 1, a synoptic chart (19/07/2024), before answering the following questions.			
1.1.1	Study Figure 1 and determine whether the following statements are TRUE or FALSE. Circle the correct answer.		
(a)	The extension of the high pressure along the yellow line is trough.		False
(b)	The dashed line around the low pressure at **A** means that the low pressure is weakening.		False
(c)	**B** on the synoptic chart is a warm front occlusion.		False
(d)	The weather system at Point **C** is responsible for scattered thunderstorms and showers across the eastern parts of South Africa.		False
1.1.2			
(a)	Explain what a *berg wind* is.		A hot, dry wind originating over the high central plateau of South Africa and blowing towards the coast. HP – LP – movement down a mountain
(b)	Draw an arrow on Figure 1 to show the direction of berg winds over South Africa on 9 July 2024.		ON THE IMAGE HP towards MLC Anticyclonic circulation around the continental HP  [Source: <https://www.weathersa.co.za>]

(c)	Draw a cross section to explain the formation of berg winds.  	HP LP (Coastal low) / MLC Wind movement/Warm Air Temperature indicated Blue / Red arrow showing temp diff

1.1.3 Refer to the weather system labelled **D** on Figure 1.

(a)	Name the stage of development of the weather system.	Occluding Accept: Mature Stage Stage 3 or Stage 4	
(b)	Give ONE reason for your answer.	1. Cold front has caught up with the warm front (for occluded) 2. Mature Stage – well-developed warm and cold front, pressure below 1000hPa / warm sector & cold sector	
(c)	Describe the weather which Marion Island could expect to experience on 9 July 2024.	Cold – temperatures dropping Wet – Light showers to heavy rain Cloud cover Decreasing air pressure Overcast conditions Cb Clouds Steep pressure gradient with strong winds Wind direction NW Thunderstorms Snow Hail Fog Dew point temp / humidity√	**Credit for a reasonable and relevant alternative answer:** The answer is simple and lacks depth in discussion; it may need more specific linking to the concept aspect. The answer is well-developed, comprehensive, and showcases a solid conceptual understanding. It explores the factors in-depth, establishes insightful points, and demonstrates critical thinking, resulting in a compelling and well-supported response with solid interconnections.

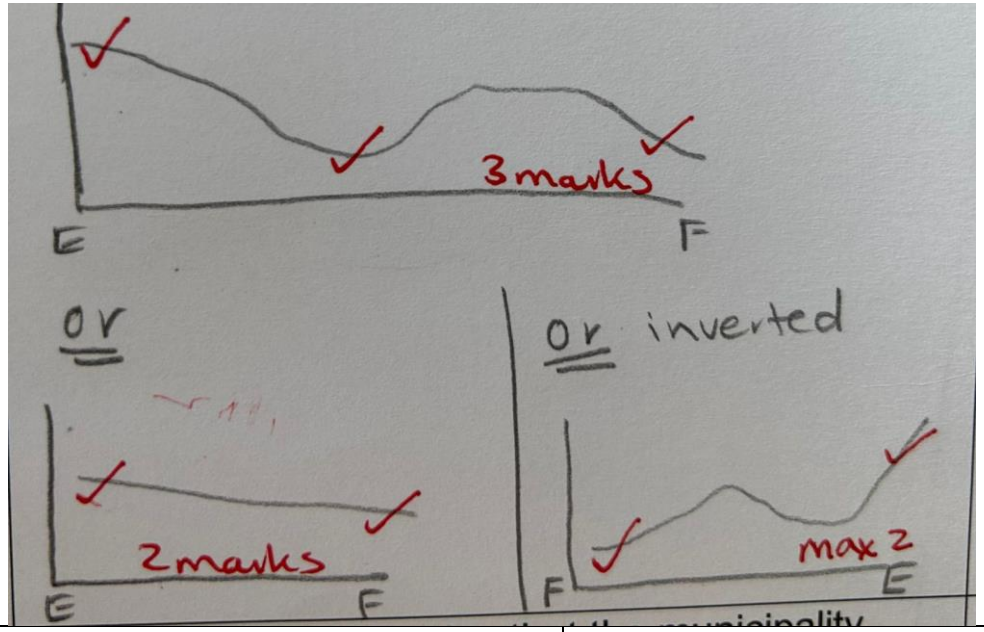
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1.1.4	Draw a cross section to illustrate the conditions of the front at **B**.	

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1.2	**Urban Climate**		
Study the satellite image below, which shows two weather stations located in Richards Bay.			
(a)	Indicate the predicted temperature at location **E**.	24,1 ºC	
(b)	Give ONE reason for your answer.	CBD (built up area) • Artifical surfaces • Lack of greenery • Transport • Pollution Any reasonable answer that indicates the increase in temperature Increased number of aircons Lower albedo	**Credit for a reasonable and relevant alternative answer:** The answer is simple and lacks depth in discussion; it may need more specific linking to the concept aspect.

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<table>
<tr><td>(c)</td><td>Using the line from Location E to Location F, draw a rough temperature line graph.</td><td colspan="2">
</td></tr>
<tr><td>(d)</td><td>Discuss TWO strategies that the municipality could implement to reduce the effect of urban heat islands.</td><td>• Greening the City: Adding more parks, green belts, and trees in cities helps reduce heat by providing shade, lowering surface temperatures, and cooling the air through evaporation. Green spaces also improve air quality, support wildlife, and offer places for recreation.
• Roof-top Gardens: Plants on rooftops help lower building temperatures by insulating and cooling the surrounding air. This reduces the need for air conditioning and helps combat urban heat.</td><td>Credit for a reasonable and relevant alternative assessment:

The response primarily discusses the topic with limited concept assessment. The candidate's understanding may be inaccurate or lacking in depth.
The response offers some assessment and discusses the link between concepts, the candidate shows decent knowledge and understanding, but the examples provided may need more detail or thorough development.</td></tr>
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		• **Vehicle Emissions:** Cars release heat and pollutants that contribute to urban heat. Reducing car use and switching to cleaner technologies can help lessen this effect. • **Industrial Monitoring:** Tracking emissions from factories helps manage and reduce their heat and pollution, leading to cooler urban areas. • **Decentralising Business and Industries:** Spreading out businesses and industries reduces heat concentration in city centres, lowers emissions, and encourages more green spaces in suburban areas. • **Reducing Cars on Roads During Business Hours:** Fewer cars on the road during peak times reduce heat, pollution, and energy absorption by road surfaces. Carpooling, flexible work hours, and public transportation can help achieve this. • **Remote Working:** Working from home cuts down on commuting, reducing vehicle emissions and traffic congestion, which helps lower urban heat and energy use in office buildings.	

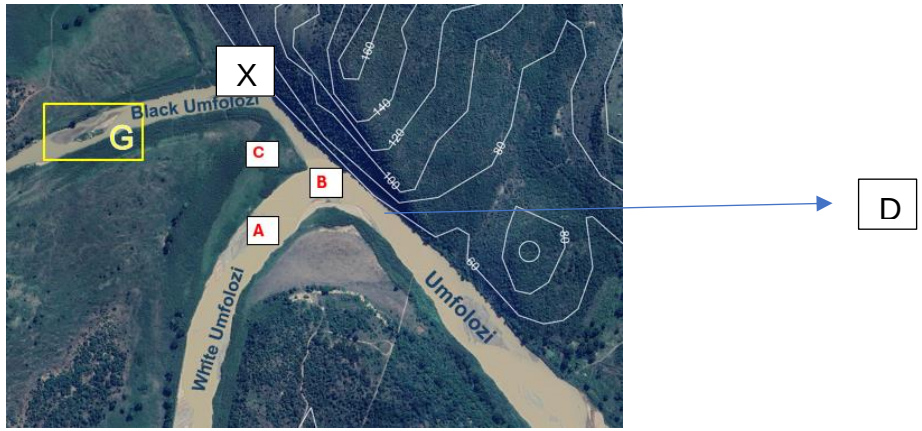
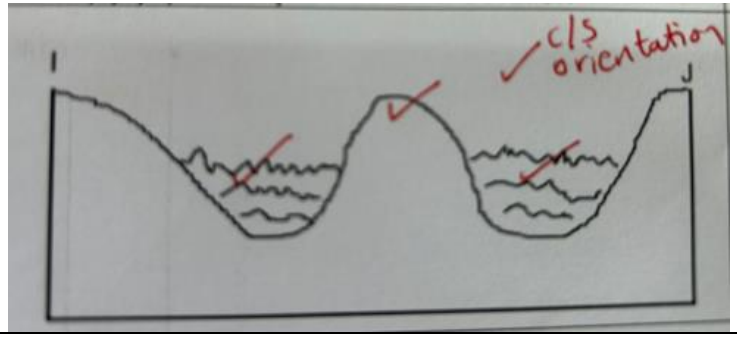
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1.3	**Hydrograph and Flooding**		
1.3.1	Refer to the hydrographs below. Which graph depicts a storm hydrograph in an urban area? Circle the correct label on the graph.	River 2	
1.3.2	Give ONE reason for your answer.	• **Impervious Surfaces:** Urban areas have surfaces like roads and pavements that don't absorb water, causing more runoff to flow into streams and rivers quickly. • **Increased Runoff:** With many impervious surfaces and efficient drainage systems, runoff reaches waterways faster, leading to higher flood peaks. • **Reduced Infiltration:** Urbanisation reduces the natural absorption of rainwater due to concrete and asphalt, causing faster runoff. • **Channel Modifications:** Changes to natural water channels, like adding drainage or detention basins, can alter water flow and increase flood intensity. • **Drainage Systems:** Stormwater systems are designed to quickly remove runoff, which can lead to higher peak flows and shorter response times. • **Land Use Changes:** Urbanisation replaces natural landscapes with buildings, increasing runoff and changing water flow.	**Credit for a reasonable and relevant alternative answer:** The answer is simple and lacks depth in discussion; it may need more specific linking to the concept aspect. The answer is well-developed, comprehensive, and showcases a solid conceptual understanding. It explores the factors in-depth, establishes insightful points, and demonstrates critical thinking, resulting in a compelling and well-supported response with solid interconnections.

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1.3.3	The image below shows the elevation of Richards Bay.		
(a)	The average elevation of Richards Bay is. Tick the correct answer.	10–20 m above sea level Add 30-40m	
(b)	Explain how the elevation of Richards Bay would influence the lag time and flood peak on a hydrograph for the Mhlatuze River indicated in the image.	Lag time (longer / time) – Gentle elevation – Rainwater will take time to filtrate into the river. – Large surface area, which has more infiltration. – Lag time will be slow – long and gentle. Flood peak (lower / height) – Low flood peak – Surface runoff will filtrate into the ground and run off into the sea – Much of the area is marsh/ wetland, which will slow down the water – Gentle elevation low flood peak	**Credit for a reasonable and relevant alternative assessment:** The response primarily explains the topic with limited concept assessment. The candidate's understanding may be inaccurate or lacking in depth. The response offers some assessment and discusses the link between concepts, but the discussion may be superficial. The candidate shows decent knowledge and understanding, but the examples provided may need more detail or thorough development

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1.4	**Fluvial Processes**		
1.4.1	Study the satellite image of the Umfolozi River below.		
(a)	Label the image by writing the letter of the label in the space provided on the image. 		
(b)	In which direction is the Umfolozi River flowing? Tick the correct answer.	Southeast	
1.4.2	Complete the table by circling the correct answer to make each statement TRUE.		
(a)(i)	The river channel pattern is …	Braided Stream	
(ii)	**H** is an area of …	Deposition	
(iii)	The feature at **K** is …	Terrace	
(iv)	Transportation of the river load is	Suspension and Solution	
(b)	Draw a cross section from I–J. 		cross-section built-up/island in the middle

(c)	Explain how the rejuvenation would impact the river channel pattern in Figure 5.	Braided stream/deposits will be washed away due to increased energy and the river channel will be come deeper.	**Credit for a reasonable and relevant alternative answer:** The answer is simple and lacks depth in explanation; it may need more specific linking to the concept aspect. The answer is well-developed, comprehensive, and showcases a solid conceptual understanding. It explores the factors in-depth, establishes insightful points, and demonstrates critical thinking, resulting in a compelling and well-supported response with solid interconnections.

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QUESTION 2 HUMAN GEOGRAPHY			
2.1 **Rural Settlement**			
2.1.1	Provide the correct term to describe each of these aspects of settlement in Photograph 1.		
	Settlement Pattern	Nucleated	
	Settlement Complexity	Unifunctional/Basic Services	
	Type of Farming	Subsistence farming with cattle	
	Site factor	Aspect	
2.1.2 (a)	Would this settlement be described as a wet-point or dry-point settlement?	A Dry-point settlement	
(b)	Give a reason for your answer.	Up on the slope – away from water in the valley Add: Above the floodline	
2.2	**Urban structures and patterns**		
2.2.1 (a)	Identify the street patterns for each area.	L – Unplanned irregular / planned irregular / irregular M – Grid Street Pattern/Rectangular	
(b)	Discuss ONE advantage for each street pattern.	L • Vary in plot size • Slows down traffic • Increase flow • Can adapt to natural land contours and existing land uses create a distinctive, charming atmosphere with varied street layouts and buildings. M • Plot size equal, easy to predict intersections • Easier to navigate due to its predictable and organised layout. Streets run parallel and perpendicular, making it simpler to find addresses. Traffic flow • Maximises use of space and allows for efficient planning and development.	**Credit for a reasonable and relevant alternative answer:** Each point must be discussed to credit the candidate

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		• Simplifies the planning of infrastructure such as roads, sewer systems, and utilities.	
2.2.2 (a)	List TWO characteristics of a heavy industrial area.	Edge of the CBD / City Air Pollution Noise Pollution, Water Pollution Unsightly Near transport routes Lots of space Flat Land Far from high income residential area Large buildings Close to a water source Cheap land	
(b)	Explain why there is open land between areas **L** and **M**.	• Green belt • Buffer between industrial area and the residential area • River limits the development	**Credit for a reasonable and relevant alternative answer:** The answer is simple and lacks depth in explanation; it may need more specific linking to the concept aspect. The answer is well-developed, comprehensive, and showcases a solid conceptual understanding. It explores the factors in-depth, establishes insightful points, and demonstrates critical thinking, resulting in a compelling and well-supported response with solid interconnections.
2.2.3			
(a)	Discuss why an effective transport system is important for industrial development.	POSITIVE OR NEGATIVE FACTORS Railway/roads all access for coal export. Consider: Industrial development along major roads Main built-up areas along major roads Shopping centres / Businesses	**Credit for a reasonable and relevant alternative answer:** The answer is simple and lacks depth in discussion; it may need more specific linking to the concept aspect.

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		Industrial areas along roads Transport access for workers Trade Access to harbour	The answer is well-developed, comprehensive, and showcases a solid conceptual understanding. It explores the factors in-depth, establishes insightful points, and demonstrates critical thinking, resulting in a compelling and well-supported response with solid interconnections.
(b)	Evaluate ways the Richards Bay municipality could enhance the transport system to improve industrial development.	<u>Solutions to the following problems</u>: Limited access Faulty infrastructure risks access Many trucks lead to delays in coal delivery Topography limits movement to and from RBCT. – Access to main roads for industry – Interconnectivity for linked industries – Fast/direct access in and out of the city – Quality of the roads – Alternate routes to destination – Dry port for storage outside of Richards Bay – Time restrictions on which trucks are allowed to access CBD. – Road Maintenance – Railways – Alternate routes	**Credit for a reasonable and relevant alternative answer:** The answer is simple and lacks depth in discussion; it may need more specific linking to the concept aspect. The answer is well-developed, comprehensive, and showcases a solid conceptual understanding. It explores the factors in-depth, establishes insightful points, and demonstrates critical thinking, resulting in a compelling and well-supported response with solid interconnections.
2.3	**RURAL SETTLEMENT ISSUES**		
(a)	List TWO positive contributions which the Tendele mine has made to the economic development in the area.	Employment Improved infrastructure Clinic Reduce poverty Working aged population is able to get work in the village	

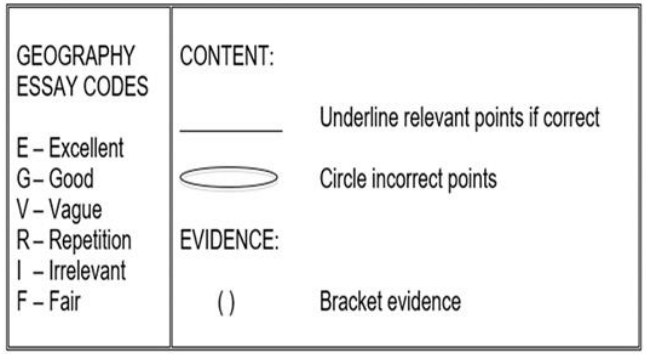
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		Diversity of age groups Attracts investment Increase GDP Purchasing Power	
(b)	What would the impact on the village be if the mine shut down?	POSITIVE OR NEGATIVE FACTORS • **Rural Depopulation:** People are moving away from rural areas due to fewer job opportunities and better prospects in cities. This leads to abandoned farms, businesses, and communities. • **Decay of Mining Infrastructure:** Mining activities can damage infrastructure like roads and bridges due to heavy use and pollution, causing it to deteriorate over time. No maintenance • **Lack of Land Rehabilitation:** Not restoring land after mining ends leads to environmental issues like soil erosion, water contamination, and loss of wildlife. This makes the land unusable for farming or other purposes. • **Loss of Income:** When mining stops or declines, communities dependent on it may lose their income, leading to economic hardships, reduced spending, and job losses.	**Credit for a reasonable and relevant alternative answer:** The answer is simple and lacks depth in discussion; it may need more specific linking to the concept aspect. The answer is well-developed, comprehensive, and showcases a solid conceptual understanding. It explores the factors in-depth, establishes insightful points, and demonstrates critical thinking, resulting in a compelling and well-supported response with solid interconnections. Could be positive Tourism, rehabilitation Illegal Mining Revert to agriculture and farming
(c)	Explain why the relocation of the villagers is NOT a classification of land reform.	The land was paid for by the mining company – private transaction. PAID FOR Not land reform Private company buying land from villagers Traditional leaders negotiated on behalf of the villagers. Consultative process	**Credit for a reasonable and relevant alternative answer:** The answer is simple and lacks depth in explanation; it may need more specific linking to the concept aspect. The answer is well-developed, comprehensive, and showcases a

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			solid conceptual understanding. It explores the factors in-depth, establishes insightful points, and demonstrates critical thinking, resulting in a compelling and well-supported response with solid interconnections.
2.4	**Economic Development and Coal Mining**		
	Complete the statement by circling the correct answer.		
(a)	49% of South Africa's coal is mined in…	(ii) – Opencast mining	
(b)	The highest quality ranked coal is…	(iii) – anthracite	
(c)	Production of pharmaceutical products from coal is defined as…	(i) – Linked industry / Value Added Product	
(d)	A factor which will NOT hinder coal mining in South Africa is …	(iii) – High concentrations of coal reserves	

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QUESTION 3 EXTENDED WRITING		
Rural Settlement / Economic Activity		
Please DO NOT tick when marking an essay – this confuses the checkers. **Rather, underline valid and appropriate points and use the code system.**		
The importance of linked industries in the economic development of Richard's Bay.	Linked industries - services which benefit each other. Tourism/accommodation – positive business meetings Transport services Naval Base Boating Chemical Industry All industries bring in development, employment and skills training. – improved standard of living Benefication	
Factors which favour the location of RBCT.	Export port Freight rail line 6 berths & 4 ship loaders East coast of SA – shorter trip to eastern hemisphere Close proximity to major coal field in SA + others Diverse labour pool – skilled and unskilled / training on the job Availability of water – reservoirs	
Factors which hinder the export of coal from RBCT.	Strikes + unrest Transport links/closing of roads Railway/Transnet not maintaining infrastructure Decrease in demand Harbour – limited access Power disruptions Wet coal Weather	

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	Move to alternate energy sources War / Ukraine Maintenance of harbour Infrastructure – favour / hinder	
Discuss the impact mechanisation will have on coal mining.	Positive • Better mining activity • Safer for miners • More produce • Quicker extraction of coal • More money • Improved skills	Negative • Loss of jobs • Too much coal and not enough demand • Reduced price of coal • Run out of resource • Zama Zama / Illegal mining • Pollution
	Note: You may draw on any examples you have studied to support your report discussion. Use the rubric below to guide the planning and structure of your report.	

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Criteria	Level 3 Excellent – Good	Level 2 Satisfactory	Level 1 Poor
Writing skills • Take into consideration structure and presentation. • Use of brief introduction and conclusion. • Logical discussion and use of subheadings.	Suitable introduction and conclusion. Sophisticated, coherent and structured writing. Subheadings and paragraphs have been effectively used. The report is concise, well-structured and succinct.	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.	Writing is weak and almost unintelligible. No introduction or conclusion provided. No use of / adherence to subheadings. Long sentences, poor grammar and ineffective use of paragraphs. The report is repetitive. Bullet points may have been used. *1 mark must be awarded for any form of written attempt / effort.*
Content knowledge • Correct use of geographical terminology and concepts. • Adherence to topic and subheadings.	Response thoroughly assesses the relevant content and detailed discussion of the topic. An effective and sustained evaluation with a sound conclusion. Response is well founded in detailed exemplar knowledge and strong conceptual understanding of the topic. Examples used are appropriate and integrated effectively into the response. Good usage of geographical terminology and concepts. An appropriate number of facts presented per subheading. Min of 2 points for every sub-heading will earn candidate 10 marks. Extension work will provide a further 2 marks.	Response demonstrates some knowledge and understanding. Some relevant content. Response is broadly evaluative in character, comprising some explanatory or narrative content and a conclusion. Response develops from secure base of knowledge and understanding with the use of examples. An overview / general discussion of key issues. Displays a fair understanding of the topic, however, inaccurate or vague in some discussions. Basic usage of geographical concepts and terminology. 60–50% of required facts presented per subheading. 1 point per sub-heading, or 2 points provided and only 2 paragraphs.	Response makes a few general points about the topic. A descriptive response comprising a few simple points. Knowledge is basic and understanding may be poor and lack relevance to the Question set. Digression from the topic. Weak grasp of concepts and terminology. Isolated and generic elements of understanding and knowledge. Superficial / poor discussion. Almost no relevant facts / subheadings.

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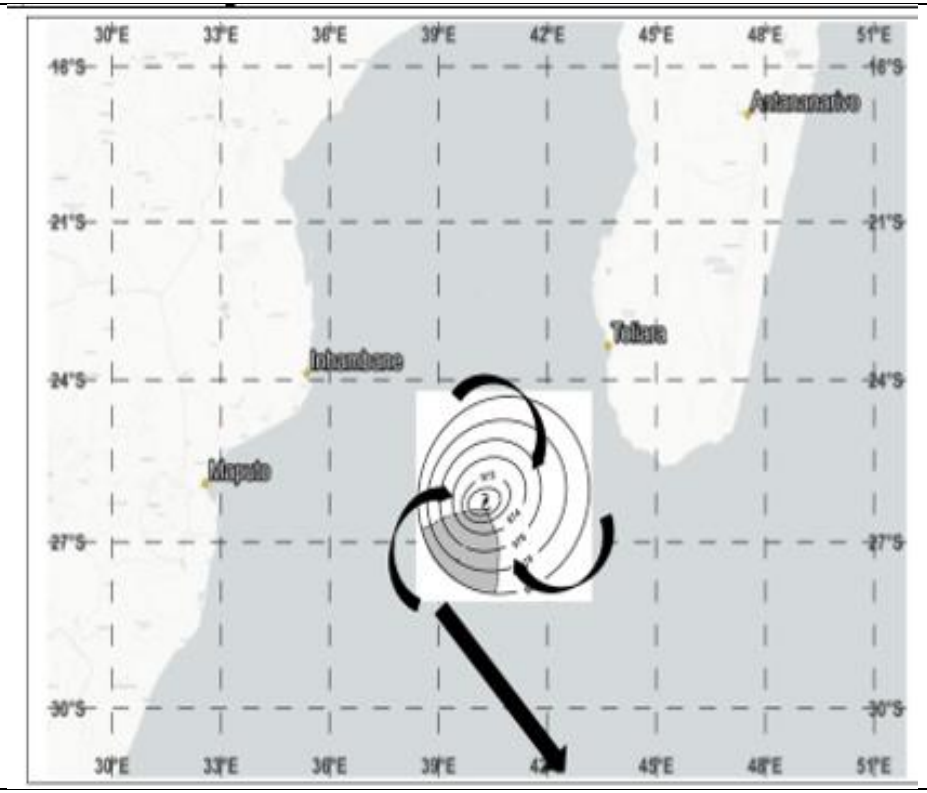
Supporting evidence – analysis and understanding • The ability to analyse and evaluate the topic is assessed in this category. • Reference made to case study material / fact file / source material provided. • If appropriate, reference must be made to familiar / local or other examples.	The candidate is able to argue and evaluate appropriately. There is strong evidence of accurate application of understanding and evidence provided. The report demonstrates the 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.	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 the discussion. Discussion lacks depth.	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 the topic.

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SECTION B	**CLIMATE, WEATHER AND GEOMORPHOLOGY**	
QUESTION 4	**CLIMATE AND WEATHER**	
4.1	**Climate Terminology**	
Provide a term for the following definitions. Write only the correct term in the space provided.		
4.1.1	The anticlockwise change in wind direction that occurs as a mid-latitude cyclone passes over.	Backing
4.1.2	Zone separating the cold polar air (easterlies) and warm tropical air (westerlies).	Polar Front
4.1.3	Occurs when there is an elongation of a low-pressure cell.	Trough/Saddle
4.1.4	Warm layer of air midway up a valley with cold air below as a result of inversion of temperature.	Thermal Belt / Inversion Layer

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4.2	**Tropical Cyclone**
Read the fact file below and study the satellite image of Tropical Cyclone Cheneso taken on Saturday 28 January 2023.	
4.2.1	Indicate the location of Tropical Cyclone Cheneso on 28 January 2023 at 11:00 and include the following on the synoptic sketch on the following page: (a) Eye (b) Pressure (c) Movement of wind (d) Leading Quadrant (e) Expected path for Tropical Cyclone Cheneso over the next couple of days.



4.2.2	Discuss ONE reason why Tropical Cyclone Cheneso was reclassified as a tropical storm between 19 January and 27 January 2023.	• Pressure increase/above 1000hPa • Wind slow down • Movement over land/causing friction • Storm decrease in intensity • Latent heat / evaporation • Specified wind speed below 150km/hr; therefore, not a TC	**Credit for a reasonable and relevant alternative answer:** The answer is simple and lacks depth in discussion; it may need more specific linking to the concept aspect. The answer is well-developed, comprehensive, and showcases a solid conceptual understanding. It explores the factors in-depth, establishes insightful points, and demonstrates critical thinking, resulting in a compelling and well-supported response with solid interconnections.
4.2.3	(a) Describe *torrential rain*.	Large amount of rain which falls rapidly	
	(b) Discuss TWO impacts Tropical Cyclone Cheneso's torrential rain will have on the people of Madagascar.	POSITIVE OR NEGATIVE FACTORS • **Destruction of Infrastructure**: Critical infrastructure such as roads, bridges, and buildings are often severely damaged or destroyed, disrupting transportation, communication, and essential services. • **Flooding of Homes**: Residential areas may experience extensive flooding, leading to the loss of personal belongings, displacement of families, and significant property damage. • **Damage to Crops and Farming**: Water can inundate agricultural lands, destroying crops and farmland, which in turn impacts the food supply and farmers' livelihoods. • **Decline in Tourism**: The aftermath of natural disasters often results in a decline in tourism, as damaged	**Credit for a reasonable and relevant alternative assessment:** The response primarily discusses the topic with limited concept assessment. The candidate's understanding may be inaccurate or lacking in depth. The response offers some assessment and discusses the link between concepts, but the discussion may be superficial. The candidate shows decent knowledge and understanding, but the examples provided may need more detail or thorough development

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		attractions and infrastructure make travel less appealing or even impossible, leading to economic losses for communities reliant on tourism. • **Prolonged Recovery Time and Financial Impact**: The recovery and rebuilding process can take an extended period, requiring significant financial resources and investment, further straining local economies. • **Loss of Livelihood**: Many people may lose their primary means of income due to the destruction of businesses, farms, and other sources of employment, leading to long-term economic hardship. • **Loss of Life and Wildlife**: Natural disasters can result in tragic loss of human life as well as the death or displacement of animals, disrupting local ecosystems and communities. • Erosion of soil – loss of top soil will effect ground • Water borne diseases • Water table is refilled, benefit	

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4.3 Valley Climate

Figure 10 shows a valley in the Drakensberg.

4.3.1 On Figure 10 below,

(a) Label wind **O** — KATABATIC WIND
(b) Draw in the mountain breeze — At the bottom of the valley
(c) Indicate if it is day or night feature — Night

Figure 10



Could draw a moon

4.3.2 In the morning, campers at the campsite indicated on the photograph will experience a frost pocket. Explain the concept of a frost pocket by completing the following table:

Calm/Clear night	Cold air drains down the valley slopes, collecting at the bottom Lower temperature at the bottom No movement/disturbance of air pocket Consider: Increases the formation of an inversion Terrestrial radiation occurs with the mixing of cold and warm air Condensation occurs on the valley floor	**Credit for a reasonable and relevant alternative answer:** The answer is simple and lacks depth in discussion; it may need more specific linking to the concept aspect. The answer is well-developed, comprehensive, and showcases a solid conceptual understanding. It explores the factors in-depth, establishes insightful points, and demonstrates critical thinking,

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			resulting in a compelling and well-supported response with solid interconnections.
	Winter	Temperature needs to drop below freezing for the frost to form In the valley Consider: Winter causes temperature to drop to below freezing point	**Credit for a reasonable and relevant alternative answer:** The answer is simple and lacks depth in discussion; it may need more specific linking to the concept aspect. The answer is well-developed, comprehensive, and showcases a solid conceptual understanding. It explores the factors in-depth, establishes insightful points, and demonstrates critical thinking, resulting in a compelling and well-supported response with solid interconnections.
	Movement of air in the valley	Warm air is displaced upwards to form inversion layer Stable/calm air in the bottom of the valley Warm air rising Cold air sinking *Consider:* Cold air drain down the slopes Displaces warmer air Inversion develops Condensation occur on the valley floor Water droplets freezes Diagram may be used	**Credit for a reasonable and relevant alternative answer:** The answer is simple and lacks depth in discussion; it may need more specific linking to the concept aspect. The answer is well-developed, comprehensive, and showcases a solid conceptual understanding. It explores the factors in-depth, establishes insightful points, and demonstrates critical thinking, resulting in a compelling and well-supported response with solid interconnections.

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QUESTION 5 GEOMORPHOLOGY			
5.1 **Fluvial terminology**			
5.1.1	Study Figure 11 below, provide labels as indicated in the table that follows.	P – tributary Q – confluence R – interfluve S – source ☐ – catchment area / drainage basin	
5.1.2	(a) Calculate the stream order for **T**.	FOUR	
	(b) Explain the relationship between stream order and the size of the drainage basin.	The larger the drainage basin the higher the stream order. Drainage basin is directly proportioinal to the stream order The more streams, the larger the drainage basin	**Credit for a reasonable and relevant alternative answer:** The answer is simple and lacks depth in explanation; it may need more specific linking to the concept aspect. The answer is well-developed, comprehensive, and showcases a solid conceptual understanding. It explores the factors in-depth, establishes insightful points, and demonstrates critical thinking, resulting in a compelling and well-supported response with solid interconnections.

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	(c) The Vaal River is superimposed. Explain what is meant by this statement.	A superimposed drainage system is one where the river's course and pattern have been 'superimposed' onto the underlying rock structure, often cutting through resistant geological features that were not initially present in the river's original landscape. Consider: The river inherited an older landscape Land is older than the river	**Credit for a reasonable and relevant alternative answer:** The answer is simple and lacks depth in explanation; it may need more specific linking to the concept aspect. The answer is well-developed, comprehensive, and showcases a solid conceptual understanding. It explores the factors in-depth, establishes insightful points, and demonstrates critical thinking, resulting in a compelling and well-supported response with solid interconnections.

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5.2 **Catchment and river management**			
5.2.1 (a)	In which direction is the river flowing?	Northwest	
(b)	Identify the drainage pattern.	Trellis	
(c)	The drainage density is …	Low density	
(d)	Discuss TWO factors, evident in the image, which influenced the rate of infiltration during the floods in the Western Cape.	• The gradient of the land is high in the upper reaches. • The trellis drainage pattern funnels water into the urban space. • Underlying geology will influence how permeable the surface would be. • Vegetation, high vegetation means more infiltration, so the forested areas would have the highest infiltration MUST BE DISCUSSED • Must link to infiltration • ONE MARK for listing • -residential landuse • Forest / woodlands • Cultivated Land • Orchid & vineyard	**Credit for a reasonable and relevant alternative assessment:** The response primarily discusses the topic with limited concept assessment. The candidate's understanding may be inaccurate or lacking in depth. The response offers some assessment and discusses the link between concepts, but the discussion may be superficial. The candidate shows decent knowledge and understanding, but the examples provided may need more detail or thorough development
(e)	Identify the TWO flood management systems in Figure 12.	Weir Dam Water reservoir	
(f)	Explain how ONE of the methods mentioned in Question 5.2.1 (e) would reduce flooding in the valley.	**Weirs**: manage the flow rate and water levels in rivers to prevent sudden flooding. **Dams**: store and control large volumes of water, releasing it slowly to prevent downstream flooding. Sediment / fertile soil	**Credit for a reasonable and relevant alternative answer:** The answer is simple and lacks depth in discussion; it may need more specific linking to the concept aspect.

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		Water Reservoirs: capture and store excess water during heavy rain, helping to control and reduce the risk of floods.	The answer is well-developed, comprehensive, and showcases a solid conceptual understanding. It explores the factors in-depth, establishes insightful points, and demonstrates critical thinking, resulting in a compelling and well-supported response with solid interconnections.
(g)	Explain how the following GeoSpatial tools can be used to reduce the impact of flooding on communities in this area:		
	• remote sensing	• **Flood Monitoring and Prediction:** Satellites and aerial images track weather, land use, and water levels to predict floods. This helps issue early warnings so communities can prepare or evacuate. • **Damage Assessment and Response:** After a flood, remote sensing provides detailed images to assess damage and plan emergency responses and recovery efforts. AWAY from flooding area	**Credit for a reasonable and relevant alternative answer:** The answer is simple and lacks depth in explanation; it may need more specific linking to the concept aspect. The answer is well-developed, comprehensive, and showcases a solid conceptual understanding. It explores the factors in-depth, establishes insightful points, and demonstrates critical thinking, resulting in a compelling and well-supported response with solid interconnections.
	• buffering	• **Risk Assessment and Zoning:** Creating restricted zones around flood-prone areas prevents construction and reduces flood damage by controlling development in high-risk areas. • **Infrastructure Design:** Buffers help design infrastructure to manage floods better. For example, buffer zones around flood-prone	**Credit for a reasonable and relevant alternative answer:** The answer is simple and lacks depth in explanation discussion; it may need more specific linking to the concept aspect.

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		areas can include flood defenses or natural barriers to absorb excess water and reduce flooding. GIS BUFFERING CONCEPT	The answer is well-developed, comprehensive, and showcases a solid conceptual understanding. It explores the factors in-depth, establishes insightful points, and demonstrates critical thinking, resulting in a compelling and well-supported response with solid interconnections.

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SECTION C	**RURAL AND URBAN SETTLEMENT AND ECONOMIC GEOGRAPHY OF SOUTH AFRICA**		
QUESTION 6	**SETTLEMENT**		
6.1	**Rural Settlements**		
Study the photograph below and select the term/s in bold that will make the statements TRUE. Circle the correct answer.			
(a)	The settlement in Photograph 3 would be classified as a/an (**village / subsistent farm / isolated farmstead**).	Isolated farmstead	
(b)	The settlement has a (**nucleated / dispersed / linear**) settlement pattern.	Dispersed	
(c)	The feature labelled **Z** is a (**farm dam / silo / solar panel**).	Solar panels	
(d)	The economic activity for this settlement is mostly (**large-scale commercial / subsistent / small-scale commercial**) farming.	Large scale commercial	
6.2	**Rural settlement issues**		
The bar graph below shows the number of agricultural households by province comparing 2011 and 2022.			
6.2.1	Which province has had the largest decline in agricultural households?	KwaZulu-Natal	
6.2.2	Give ONE reason why there has been a decline in agricultural households in most provinces of South Africa.	• Drought- in recent past • Rural-urban migration • Climate Change • Mechanisation • Cheaper to import. • Privatisation • Large companies buying smaller farms. • Land reform • Labour disputes • Farm murders • Farm security in general • Crime	**Credit for a reasonable and relevant alternative answer:** The answer is simple and lacks depth in discussion; it may need more specific linking to the concept aspect.

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6.2.3 HOT	Analyse how the decline in agricultural production could impact the food security of South Africa	• **Increase in Food Costs Due to Importing Expenses:** Higher costs for importing food, driven by transportation, tariffs, and exchange rate changes, make food more expensive for consumers. • **Dependence on Foreign Countries for Food Security:** If local food production drops, South Africa may rely more on other countries for food, making it vulnerable to global supply chain disruptions. • **Increased Pressure on Limited Resources:** Reduced local food production and increased reliance on imports put additional strain on South Africa's limited resources, such as water, land, and energy, which are crucial for agriculture. • **Rise in Malnutrition:** Higher food prices and reduced availability of affordable, nutritious food can lead to malnutrition, especially among children and low-income families, affecting long-term health and development. • **Economic Decline:** Higher food costs, more import dependence, and reduced local production can lead to broader economic issues, such as slower growth, higher inflation, and increased financial strain on households and businesses. • **Water shortage –** less food • **Decrease in food production / shortage of food = increase food insecurity**	**Credit for a reasonable and relevant alternative answer:** The answer is simple and lacks depth in analysing; it may need more specific linking to the concept aspect. The answer is well-developed, comprehensive, and showcases a solid conceptual understanding. It explores the factors in-depth, establishes insightful points, and demonstrates critical thinking, resulting in a compelling and well-supported response with solid interconnections.

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6.3 **Urban renewal**			
Read through the information provided below on the 'Old East Precinct' in Pretoria.			
6.3.1	Define the term *precinct*.	An area with a border with a specific function or purpose – quote from source	
6.3.2 (a)	Identify which land use zone the Old East Precinct is located in.	Residential	
(b)	Give ONE piece of evidence to support your answer.	Many houses Small property boundaries Vegetation Planned irregular street pattern	
6.3.3	Refer to Figure 14. Find the locations listed below and determine which GIS map technique was used to map the following features. Circle the correct answer.		
	(a) Golf Course (b) Hazelwood Road (c) Culture Club	Polygon Line Point	
6.3.4 (a)	Explain how the precinct has developed through the process of *functional magnetism*.	• There are many restaurants in the area • This has drawn many artists into the space. • Many more businesses have moved into the Office/workspace Concept of LIVE-WORK-PLAY • Mutual attraction • Business of similar functions • Cluster together to make business easier	**Credit for a reasonable and relevant alternative assessment:** The response primarily explain the topic with limited concept assessment. The candidate's understanding may be inaccurate or lacking in depth. The response offers some assessment and discusses the link between concepts, but the discussion may be superficial. The candidate shows decent knowledge and understanding, but the examples provided may need more detail or thorough development.
(b)	Predict the impact the precinct's development will have on the economic standing of the community.	This is an opinion question: **Positive Effects:** • **Economic Development**: leads to increased investment in the neighbourhood. This can result in new	**Credit for a reasonable and relevant alternative answer:** The answer is simple and lacks depth in discussion; it may need more specific linking to the concept aspect.

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		businesses, improved infrastructure, and enhanced public services. • **Property Value Increase**: Property values tend to rise as the area becomes more desirable. This can be beneficial for homeowners who see their property's value increase. • **Improved Amenities**: Gentrified areas frequently see upgrades in amenities such as parks, schools, and healthcare facilities, contributing to a better quality of life for residents. • **Reduced Crime Rates**: Investment and revitalisation often reduce crime, as increased economic activity and community involvement help improve safety. • **Cultural and Social Vibrancy**: New businesses and cultural institutions can enhance the vibrancy and diversity of the area, creating a more dynamic and engaging environment. **Negative Effects:** • **Displacement of Long-Term Residents**: As property values and rents rise, long-term, lower-income residents may be forced to move out due to unaffordability. This can disrupt established communities and social networks. • **Cultural Erosion**: Gentrification can lead to the loss of a neighbourhood's original cultural and historical identity, as new, often more affluent residents may not engage with or value the existing culture.	The answer is well-developed, comprehensive, and showcases a solid conceptual understanding. It explores the factors in-depth, establishes insightful points, and demonstrates critical thinking, resulting in a compelling and well-supported response with solid interconnections.

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		• **Social Tensions**: The influx of wealthier residents can create tensions between new and existing residents, leading to potential social conflict and division. • **Increased Cost of Living**: Rising property values and rents often lead to higher costs for goods and services, which can price out the original residents on fixed or lower incomes. • **Potential Loss of Affordable Housing**: The renovation of older, often affordable housing units into higher-end properties reduces affordable housing options for lower-income families.	
6.3.5	Once a month, there is a pop-up street market in the Old East Precinct.		
(a)	Explain why the food stalls at the Streetside Market are classified as informal trading.	Pop-up / Once a month / not permanent business Not contributing to tax The food stalls are there for a short time and not paying rent No business licence	**Credit for a reasonable and relevant alternative answer:** The answer is simple and lacks depth in explanation ; it may need more specific linking to the concept aspect. The answer is well-developed, comprehensive, and showcases a solid conceptual understanding. It explores the factors in-depth, establishes insightful points, and demonstrates critical thinking, resulting in a compelling and well-supported response with solid interconnections.
(b)	List ONE advantage and ONE disadvantage for informal traders.	Advantage • Contributes to the economy • Reduces unemployment and poverty • Entrepreneurship	

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		• Easy to start, not much capital • Fills a gap in the market • Tourist attraction • No tax • Flexi hours • Contribute to household income • No overhead expenses Disadvantage • Pay no tax • No control • Illegal or unsafe activities • Clutter formal business areas • Potential unhealthy • Pollution • Police intervention – close them down • Increase in pollution / litter	

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QUESTION 7 ECONOMY OF SOUTH AFRICA			
7.1	**Economic Terminology**		
7.1.1	The restoration of land and environmental values to a surface mine site after the coal is extracted.		F
7.1.2	The exchange of goods and services for money.		D
7.1.3	interorganizational networks which cluster around one commodity or product linking households, enterprises and states to one another with in the world's economy.		A
7.1.4	If price levels and/or interest rates are continuously changing in levels and percentages		C
7.1.5	A process involving the clustering or concentrating of people and/or activities.		B
7.2	**Canola production in South Africa**		
7.2	Study the infographic illustrating SOILL (Southern Oil Pty Ltd) and the production of canola in South Africa before answering the following questions.		
7.2.1	List TWO uses for canola.	• Margarine, cooking oil • Antistatic for paper and plastic wrap • Industrial lubricants • Biodiesel • Printing inks • Cosmetics: lip gloss, lipsticks, creams, shampoo, soaps, massage oils • Sunscreen and suntan oil • Toothpaste • Pesticides: fungicides, herbicides and insecticides • Oiled fabrics • Plasticisers • Bio-plastics • Habitat for bees • Flour • Animal feed	
7.2.2	List TWO factors favouring the Swellendam area as an ideal location for canola production.	Favourable weather conditions Soil quality (clay-loam / not sandy) Winter rainfall, cool temp - 21ºc Moderate to cool climate Warm, dry summers Labour	

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		Transport links Close to market Link industries Ideal altitude / topography	
7.2.3	Why was there a reduction in the production of canola in the Western Cape between 2015-2018?	• Drought • Extreme weather conditions • Climate Change	
7.2.4	Explain how canola production in Swellendam improves social justice in the farming community.	• **Canola Development Trust:** Invests in the region to boost economic growth and support local development. • **CanoLees Literacy Trust & Canotel Numeracy Program:** Provide educational support through bursaries and skills development to improve literacy and numeracy, enhancing job prospects and personal growth. • **15% of SOILL Reinvested in the Local Community:** Reinvests 15% of SOILL (a local fund) into community projects, focusing on helping disadvantaged individuals and supporting local development. • **Employment Opportunities and Local Income:** Creates jobs and income for local residents, which boosts the local economy and improves living standards. • **Improving Infrastructure:** Invests in upgrading roads, utilities, and facilities, benefiting businesses and the community, and enhancing quality of life. • **Community Projects:** Implements various projects to improve locals' well-being, such as social services, community centers, and support	**Credit for a reasonable and relevant alternative answer:** The answer is simple and lacks depth in explanation discussion; it may need more specific linking to the concept aspect. The answer is well-developed, comprehensive, and showcases a solid conceptual understanding. It explores the factors in-depth, establishes insightful points, and demonstrates critical thinking, resulting in a compelling and well-supported response with solid interconnections.

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		programs, fostering a resilient and engaged community. MUST BE DISCUSSED • Festival of yellow • Overall improvement of the area	

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7.3 **Secondary and tertiary sectors**			
Read the fact file below on Atlantis Special Economic Zone found in the Western Cape.			
7.3.1	Define *Special Economic Zone.*	Specific location in which some aspects of business environment differ from the rest of the country.	
7.3.2 (a)	Explain what is meant by *Greentech Hub.*	Green technology (COULD USE EXAMPLES) is an umbrella term that describes the use of technology and science to create products and services.	
(b)	Give ONE example of green energy which is present in the Western Cape.	Wind turbines. / wind Solar panels / solar Biomass	
7.3.3	List TWO industries located in the Western Cape.	Fishing Canning Winemaking Food products Textiles Footwear Oil refining Car assembly Chemicals Fertilisers Agriculture Mining Flowers	
7.3.4	Discuss how accessibility to *strong transport corridors* will promote foreign investment in the expansion of the Atlantis SEZ.	**Proximity to Cape Town (40 km):** The location is just 40 kilometres from Cape Town, offering easy access to the city's amenities, business centres, and attractions while still providing a degree of separation from the hustle and bustle of urban life.	**Credit for a reasonable and relevant alternative assessment:** The response primarily discusses the topic with limited concept assessment. The candidate's understanding may be

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		Cape Town International Airport: The area is conveniently located near Cape Town International Airport, providing excellent connectivity for domestic and international travel, making it an ideal spot for residents, tourists, and business travellers alike. **Saldanha Airport:** Saldanha Airport is also within reach, offering additional travel options and contributing to the area's accessibility for both local and regional flights. **Access to National Road:** The proximity to a major national road ensures efficient transportation and logistics, facilitating easy travel to and from the area, whether for daily commuting, business purposes, or tourism. This road connection also enhances the flow of goods and services, contributing to economic growth in the region. **MUST BE DISCUSSED – LINK TO IMPACT AS A RESULT OF FOREIGN INVESTMENT**	inaccurate or lacking in depth. The response offers some assessment and discusses the link between concepts, but the discussion may be superficial. The candidate shows decent knowledge and understanding, but the examples provided may need more detail or thorough development**.**

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7.3.5	Discuss TWO factors which hinder the economic development in the Western Cape.	• **Decentralisation**: The movement of authority and decision-making from central to local governments or regional entities can lead to more localised control but may also result in uneven development, with some areas benefiting more than others. • **Political Unrest**: political instability and unrest can create an unpredictable environment, leading to uncertainty in governance, disruption of daily life, and declining investor confidence. • **Strikes**: Frequent strikes across various sectors, such as labour, transport, or education, disrupt economic activities, slow productivity, and lead to prolonged tension between workers and employers. • **Energy Shortage**: A shortage of energy, particularly electricity, hampers industrial output, affects daily life, and deters investment. It can also lead to rolling blackouts and increased operational costs for businesses. • **Loss of Foreign Investment**: Due to instability, strikes, or energy shortages, foreign investors may withdraw their investments or refrain from entering the market, leading to	**Credit for a reasonable and relevant alternative assessment:** The response primarily discusses the topic with limited concept assessment. The candidate's understanding may be inaccurate or lacking in depth. The response offers some assessment and discusses the link between concepts, but the discussion may be superficial. The candidate shows decent knowledge and understanding, but the examples provided may need more detail or thorough development

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		reduced capital inflows, slower economic growth, and fewer job opportunities. • **Job Losses**: Economic challenges such as declining investments, strikes, and energy shortages can lead to widespread job losses, exacerbating poverty and unemployment rates, and creating a more significant burden on social welfare systems. • **Social Injustice**: Persistent inequalities and social injustices, including disparities in income, education, and access to resources, can lead to social unrest, protests, and a lack of social cohesion. • **Transport/Railway Strikes**: Strikes within the transport or railway sectors can severely disrupt the movement of goods and people, causing delays, increasing costs, and affecting the overall economy, especially industries reliant on timely logistics. • **Deterioration of Infrastructure**: The ongoing degradation of essential infrastructure, such as roads, bridges, and public facilities, can lead to	

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		inefficiencies in transport, reduced quality of life, and higher costs for businesses, ultimately hindering economic growth. • **Imports Cheaper Than Producing Locally**: When imports become cheaper than local production, it can lead to the decline of domestic industries, loss of jobs, and increased reliance on foreign goods, weakening the local economy. • **Decrease in Export Demands**: A reduction in demand for exports can lead to lower production levels, decreased revenue for local businesses, and a negative impact on the overall trade balance, further straining the economy. • **Drought** • **Semi-migration** • **Crime/gangs – limited growth**	

Total: 200 marks

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