GAUTENG PROVINCE
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PREPARATORY EXAMINATION

2019

MARKING GUIDELINES

GEOGRAPHY P1 (10781)

30 pages

GAUTENG DEPARTMENT OF EDUCATION

PREPARATORY EXAMINATION

GEOGRAPHY
(Paper 1)

MARKING GUIDELINES

INFORMATION BEFORE COMMENCEMENT OF MARKING FOR INTERNAL AND EXTERNAL MODERATION PURPOSES.

1. Use a single tick for the allocation of ONE (1) mark. ✓

2. Use TWO ticks for the allocation of TWO (2) marks. ✓✓

3. Ticks MUST be placed, on / on top of / at the end of the correct response, in the sentence.

4. A cross (*X*) MUST be placed at the end of each incorrect / invalid sentence or response.

5. All paragraph questions must include the use of the symbol:

   M … when a candidate has achieved 8 marks.

   (DO NOT allocate marks to candidates where paragraphs are not completed in full sentences.)

   (DO NOT allocate marks where vague responses are given in paragraph responses that do not include an appropriate link to the responses in the Marking Guideline.)

6. Each sub-section MUST have a total reflected on the right hand margin e.g. 1.1 should be a total out of (7) and 1.2 should be a total out of (8) and 1.3 should be a total out of (14) ….

7. The sub-total for each sub-section must be CORRECTLY added to give you a TOTAL for the question, which must be written in the CENTRE at the beginning of the answered question.

8. The totals for each completed question MUST be written on the FRONT page with a GRAND TOTAL out of 225.

9. Marking MUST be completed in RED pen.

10. First level Moderation (HOD / Senior Teacher) MUST be completed in BLACK pen.

11. Second level Moderation (Cluster / Circuit) MUST be completed in GREEN pen.

12. You are encouraged to engage with the Marking Guideline and ADD appropriate (valid) responses that may have been omitted during the completion of this marking guideline. For moderation purposes you are required to write these additions on your marking guideline in RED and include the amended marking guideline as part of an educator portfolio of evidence for external moderation purposes.

SECTION A: CLIMATE, WEATHER AND GEOMORPHOLOGY

QUESTION 1

1.1 Refer to FIGURE 1.1 that displays the influence of slope aspect. Various options are provided as possible answers to the following questions. Choose the answer and write only the letter (A – D) next to the question number (1.1.1 – 1.1.7) in the ANSWER BOOK, for example 1.1.8 A.

1.1.1 Slope aspect refers to …

A the movement of air up slopes due to convection.
B the direction of the valley in relation to the sun's rays.
C a zone where the air is warmer than normal.
D a scientific study of weather and climate.

B

1.1.2 FIGURE 1.1 represents a landform in the … hemisphere.

A northern
B north-western
C southern
D western

C

1.1.3 Slope **E** represents the … slope.

A cooler / shady
B warmer / sunny
C cooler / dry
D warmer / rainy

A

1.1.4 Slope **F** receives …

A more insolation because it faces the south pole.
B less insolation because it faces the equator.
C more insolation because it faces the equator.
D less insolation because it faces the south pole

C

1.1.5 … slopes in South Africa, are longer in the shade during the day, especially in winter.

A West-facing
B East-facing
C North-facing
D South-facing

D

1.1.6 Areas falling in the shadow zone of the slope are heated only through …

A insolation.
B reflection.
C advection.
D convection.

B

1.1.7 Cabbage needs a lot of shade for maximum growth. The farmer will use this information to plant on slope … to ensure a higher crop yield.

A H
B E
C F
D G

B

(7 x 1) (7)

1.2 Choose a term from **COLUMN B** that matches the geomorphological description in **COLUMN A**. Write only the letter (A – I) next to the question number (1.2.1 – 1.2.8) in the ANSWER BOOK, for example 1.2.9 J.

COLUMN A		COLUMN B
1.2.1	The volume of water passing a point in a certain amount of time	***B River discharge (1)***
1.2.2	The flow of water over an uneven river bed	***A Turbulent flow (1)***
1.2.3	The area that separates two or more drainage basins	***D Watershed (1)***
1.2.4	The lowest level to which a river can erode	***G Permanent base erosion (1)***
1.2.5	A balance between the rate of erosion and deposition in a river	***F Graded river (1)***
1.2.6	The profile of a river from its source to its mouth	***I Longitudinal profile (1)***
1.2.7	A river profile that has multiple temporary erosion bases	***E Ungraded (1)***
1.2.8	A stream that flows smoothly over an even river bed	***C Laminar flow (1)***

(8 x 1) (8)

1.3 Refer to FIGURE 1.3 showing an occlusion front in the mid-latitude cyclone.

1.3.1 Does the occlusion front occur in a mid-latitude cyclone or in a tropical cyclone?

Mid-latitude cyclone (1) (1 x 1) (1)

1.3.2 During which season is the weather system depicted in FIGURE 1.3 dominant over South Africa?

Winter (1) (1 x 1) (1)

1.3.3 Identify the front that is lifted from the surface during the occlusion stage as depicted in FIGURE 1.3.

***Cold front* (2)** (1 x 2) (2)

1.3.4 Explain how the upliftment of the front lead to the formation of the clouds at **A**.
Warm air is forced to rise. As air rise temperature decrease according to the adiabatic laps rate.
As air cools down condensation takes place and clouds forms (2)
(1 x 2) (2)

1.3.5 Describe the air movement in FIGURE 1.3 that resulted in the rise of the front identified in Question 1.3.3

The cold front moves faster than the warm front / the warm front moves slower than the cold front (2)
The cold front mainly moves forward and the warm front moves forward and upwards (2)
The cold front starts to catch up to the warm front (2)
The cold air wedges under the warm air (2)
As this continues, the warm sector narrows (2)
(ANY TWO) (2 x 2) (4)

1.3.6 Explain why the inhabitants of the settlement at **B** will experience an increase in temperature as the occlusion system passes over.

The air at B is colder (2) than the approaching air of the cold front (2)
OR
The air of the approaching cold front is warmer (2) than the air experienced at B (2) (2 x 2) (4)

1.4 FIGURE 1.4 shows berg winds and coastal low conditions on the east coast of South Africa.

1.4.1 Name TWO atmospheric conditions visible from FIGURE 1.4 that are necessary for berg winds to develop.

Dominance of the high pressure on the plateau and coastal low pressure on the east coast (1)
Wind blows from the high pressure on the plateau to the coastal low (1)
Berg winds are offshore winds descending from the high plateau to the sea (1)
The presence of the high pressure (1020 hPa) over the interior (1)
The presence of the coastal low (850 hPa) (1)
(ANY TWO) (2 x 1) (2)

1.4.2 List the weather conditions that occur when the berg winds reach the coast.

Hot (1) and dry (1) conditions will be experienced. (2 x 1) (2)

1.4.3 Explain why the weather conditions mentioned in Question 1.4.2 develop.

Berg winds warm up adiabatically / 1°C / 100m descent (2)
Descending air is stable and condensation does not occur (2)
Air heats up through descent thus lowering the humidity (2)
(ANY TWO) (2 x 2) (4)

1.4.4 Compare in a paragraph of approximately EIGHT lines, the influence of the off-shore flow (**B**) of the berg winds and the on-shore flow (**A**) of the coastal low pressure on farming in this area.

<u>OFF-SHORE</u>:
Air flow is hot and dry and therefore could damage crops (2)
Crops will be destroyed / because it dries out (2)
The hot, dry conditions reduce productivity (2)
Subsistence farmers could suffer from food insecurity / starvation (2)
Associated with fires which will destroy crops (2)
Livestock could be burnt to death (2)
Vegetation could dry out (2)
The soil quality will deteriorate (2)
Soil erosion because of loss of vegetation (2)

<u>ON-SHORE</u>:
Air flow from the ocean will bring moist conditions to the shore / farms (2)
Partly cloudy conditions will occur and reduce evaporation on the farms (2)
Drizzle or soft rain due to the rising air is positive for farming (2)
(ANY FOUR. MUST COMPARE OFF-SHORE AND ON-SHORE MOVEMENT ON FARMING.) (4 x 2) (8)

1.5 Study FIGURE 1.5 which illustrates two different drainage patterns.

1.5.1 Identify the drainage patterns depicted in FIGURE 1.5 **A** and **B**.

A – Dendritic pattern (1) and B – Trellis pattern (1) (2 x 1) (2)

1.5.2 Describe ONE difference in the tributaries of drainage pattern **A** and **B**.

A / Dendritic – The tributaries is longer than the tributaries of B / Trellis (1)
A / Dendritic - The tributaries join the mainstream with a sharper angle than the tributaries of B / Trellis (1)
(2 x 1) (2)

1.5.3 Give a reason for drainage basin **A** having a lower drainage density.

The average length of the streams in area A (km²) is less than in area B (2)
(MUST REFER TO AREA AND LENGTH) (1 x 2) (2)

1.5.4 Identify the stream order of the main stream at **X** in DIAGRAM **A**.

(Order) 4 (2) (1 x 2) (2)

1.5.5 The streams within a drainage basin develop their patterns depending on the underlying rock structure, slope of the land and the precipitation in the area. Discuss these THREE components relating to the drainage pattern in FIGURE 1.5 **B**.

<u>UNDERLYING ROCK STRUCTURES:</u>
Folded sedimentary rock (2)
Alternating layers of hard and soft rock (2)
The parallel valleys are formed in the softer rock and the hard rock forms the mountain slopes (2)

<u>SLOPE OF THE LAND:</u>
Gentle slopes of folded sedimentary rock (2)
Alternative layers of hard and soft rock forms gentle slopes (2)
Where streams / tributaries flow down to join the main stream (2)

<u>RAINFALL CONDITIONS:</u>
Dry area / less precipitation (2)
The drainage pattern will be denser in areas with higher rainfall and less dense in arid areas (2)
Short tributaries develop when dry conditions occur. (2)
(MUST NAME ONE AT EACH FACTOR) (3 x 2) (6)

1.6 Refer to FIGURE 1.6 showing the process of river capture.

1.6.1 Define the term *river capture.*

It occurs where a river intercepts the head water of a river flowing on a higher level (1)
(CONCEPT) (1 x 1) (1)

1.6.2 Name the process that occurred at **A** that caused river capture to take place.

Headward erosion (1) (1 x 1) (1)

1.6.3 Suggest a reason for river **C** eroding through the watershed.

Softer rock layers result in more erosion (2)
Steeper gradient results in more erosion (2)
More rainfall will increase the streamflow and results in more erosion (1)
(Any ONE) (1 x 2) (2)

1.6.4 Explain why the river confluence at **D** will increase the chances of flooding.

The water of both rivers join and accumulate (2)
The volume of the water increased at D (2)
There is an increase in the river's energy (2)
Increase in the river's velocity/speed (2)
(ANY TWO) (2 x 2) (4)

1.6.5 In a paragraph of approximately EIGHT lines, explain why the settlement at **E** is prone to regular flooding and suggest sustainable methods that the municipality can implement to reduce the impact of flooding on the settlement.

<u>FLOODING</u>:
The volume of water in river C will increase because of river capture (2)
The confluence of more than one tributary will increase the river discharge and volume (2)
Because of location of settlements on the floodplain it increase the chances of flooding (2)

<u>SUSTAINABLE METHODS</u>:
Create buffer zones near rivers / floodplains to prevent development (2)
Channel the storm water away from the settlements (2)
Increase of vegetation (afforestation) along the riverbanks to slow velocity and increase infiltration (2)
Upgrade the storm water pipes to accommodate large volumes of water (2)
Maintenance of water pipes / storm water pipes (2)
Build dams in upper course of one or both rivers (2)
(ANY FOUR, MUST REFER TO FLOODING AND SUSTAINABLE METHODS)

(4 x 2) (8)
(75)

QUESTION 2

2.1 The following statements are based on anti-cyclones. Choose the correct word(s) given in brackets. Write only the correct word(s) next to the question number (2.1.1 – 2.1.8) e.g. 2.1.9 middle, to make the statements correct.

2.1.1 A dominant Kalahari anti-cyclone is associated with (summer / winter) in South Africa.

winter (1)

2.1.2 The air circulation in the anti-cyclonic cells in the southern hemisphere is (clockwise / anticlockwise).

anti-clockwise (1)

2.1.3 The anti-cyclonic cells are characterised by (descending / ascending) air.

descending (1)

2.1.4 The anti-cyclonic cells move (southwards / northwards) in summer.

northwards (1)

2.1.5 The (Kalahari / South Indian) anticyclone moves away from the coast during summer.

South Indian (1)

2.1.6 The influence of the Kalahari anti-cyclone is (weaker / stronger) during summer.

weaker (1)

2.1.7 South Africa is situated in the (tropical / subtropical) anti-cyclonic zone.

sub-tropical (1)

2.1.8 Anticyclones are associated with (stable / unstable) weather.

Stable (1) (8 x 1) (8)

2.2 Refer to FIGURE 2.2, which shows antecedent and superimposed drainage patterns. Indicate whether each of the statements below refers to DIAGRAM **A** OR DIAGRAM **B**. Write only **A** or **B** next to the question number (2.2.1 – 2.2.7) e.g. 2.2.8 A

2.2.1 Diagram … illustrates an antecedent drainage pattern.

A (1)

2.2.2 The diagram that illustrates a superimposed drainage pattern is …

B (1)

2.2.3 Drainage pattern … developed where weathering and erosion removed the softer rock layers.

B (1)

2.2.4 Diagram … represents a drainage pattern where the river is older than the surrounding landscape.

A (1)

2.2.5 In diagram … the river eroded through resistant rocks.

B (1)

2.2.6 Drainage pattern … developed before existing geology.

A (1)

2.2.7 The river in diagram … developed its course before the escarpment was elevated.

A (1) (7 x 1) (7)

2.3 FIGURE 2.3 is a diagram of a tropical cyclone.

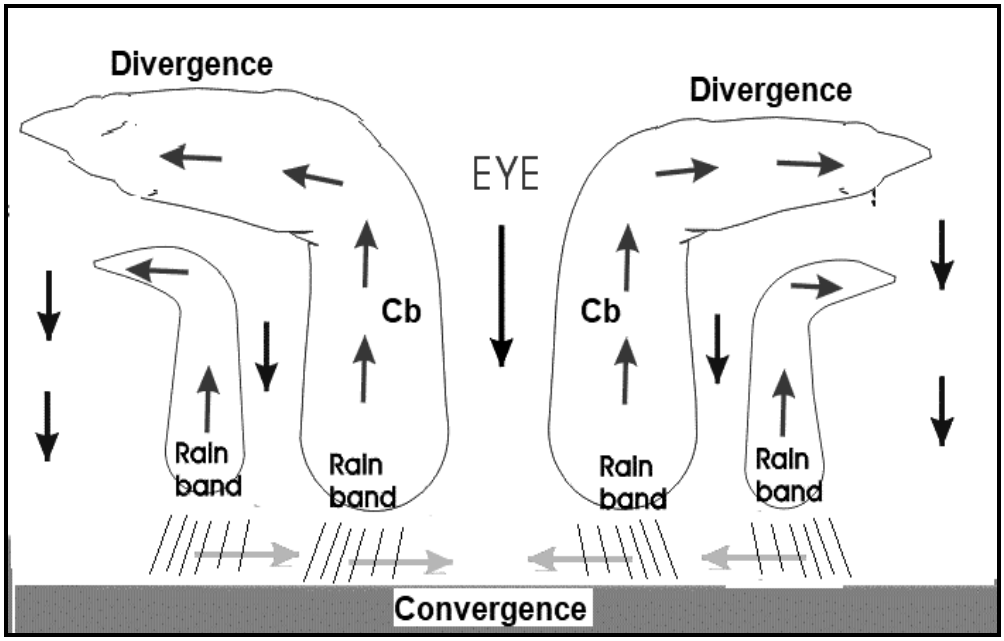
2.3.1 What does the name Catherine reveal about the number of cyclones that occurred in this season?

That it is the third tropical cyclone in the season. (1) (1 x 1) (1)

2.3.2 This tropical cyclone occurred in the southern hemisphere. Substantiate this statement with evidence from FIGURE 2.3.

The eye indicates a clockwise rotation (2)
Occurs in the Southern tropics (2)
Situated south from the equator (2)
The location of South Africa is visible (2)
The location of Madagascar is visible (2)
(ANY TWO) (2 x 2) (4)

2.3.3 Draw a labelled, free-hand cross-section indicating the air movement, cloud formation and rainfall in the tropical cyclone.



Subsiding air (1), ascending air (1), convergence (1), cumulonimbus clouds (1), divergence (1), rainfall (1)
(ANY FOUR. MUST INDICATE AIR MOVEMENT, CLOUDS AND RAINFALL) (4 x 1) (4)

2.3.4 Will the dangerous semi-circle in the Southern Hemisphere develop at **C** or **D** as indicated in FIGURE 2.3?

C (1) (1 x 1) (1)

2.3.5 Explain which weather conditions can be expected in the dangerous semi-circle.

Strong convection currents develop because of divergence in the upper air and convergence on the surface (2)
Hurricane-strength winds occur because the direction of the winds in the cyclone is the same as the direction of the forward movement of the cell development (2)
The vertical evolution of the cumulonimbus clouds is higher due to stronger convection currents and wind speed (2)
Thickest clouds because of strong convection currents (2)
Torrential rainfall with thunder and lightning is worst in this quadrant (2)
Stronger wind, more devastating hail, stormy rainfall in this quadrant (2)
The stormy conditions are always the greatest in this quadrant (2)
(ANY THREE) (3 x 2) (6)

2.4 Refer to FIGURE 2.4 based on urban and rural climates.

2.4.1 Hygroscopic nuclei occur over urban and rural areas. What are *hygroscopic nuclei*?

They are particles of smoke and dust and they serve as condensation surfaces
(CONCEPT) (1 x 1) (1)

2.4.2 Identify ONE activity from FIGURE 2.4 that causes hygroscopic nuclei to develop.

CO_2 emissions from vehicles (1)
Dust from buildings (1)
Emissions of carbon dioxide from air cons (1)
Dust from rural areas (1)
Pollen from agricultural activities (1)
(ANY ONE) (1 x 1) (1)

2.4.3 Why does the urban area experience a warmer micro-climate as compared to the rural area?

In urban areas there are more tarred roads and in rural areas fewer tarred roads (2)
Concrete surfaces in urban areas no / less concrete surfaces in rural areas (2)
Rural areas have more water features that reduce temperature than urban areas (2)
Rural areas have more vegetation than urban areas (2)
More building surfaces of bricks/concrete in urban areas that absorb heat (2)
Vertical buildings / development absorb more incoming sunrays in urban areas (2)
(ANY TWO) (2 x 2) (4)

2.4.4 Describe in a paragraph of approximately EIGHT lines how temperature and hygroscopic nuclei influence the amount and occurrence of precipitation over urban areas.

HYGROSCOPIC
There is more dust and pollutants (CO2) / hygroscopic nuclei in the urban area than the rural are (2)
More hygroscopic nuclei increase the possibility of condensation and cloud formation in urban area (2)
Condensation takes place around hygroscopic nuclei (2)
More precipitation will occur in urban areas because more condensation takes place (2)

TEMPERATURE
Warmer air can hold more water vapour (2)
Higher temperature has a greater saturation capacity (2)
Winds converging on urban areas bring moisture from rural areas (2)
Storms lasts longer and are more severe because of greater water vapour capacity (2)
Fog occurs more often, especially in the winter (2)
(ANY FOUR. MUST REFER TO BOTH NUCLEI AND TEMPERATURE.) (4 x 2) (8)

2.5 FIGURE 2.5 shows the Orange River catchment area.

2.5.1 Define the term *catchment area*.

The area over which rain falls that is caught by a drainage basin (1)
(CONCEPT) (1 x 1) (1)

2.5.2 How does the catchment area suggest that the Orange River is an exotic river?

The Orange River receives its water from the regions of high rainfall and flows to dry regions (1) (CONCEPT) (1 x 1) (1)

2.5.3 The water in the Vaal Dam is highly polluted. Why will the pollution of the Vaal dam have an influence on the settlement at **A**?

Settlement A is located downstream from the Vaal dam (2) OR
Water flows downstream to settlement A (2)
Water flows from the Vaal dam in a westerly direction (2)
(ANY ONE) (1 x 2) (2)

2.5.4 Explain how the pollution in the Vaal Dam will negatively affect the health of inhabitants of settlement **A**.

The settlement will not have clean water to use (2)
The agriculture downstream will be influenced negatively / there will be no clean and safe water to use for agricultural purposes (2)
The pollution can cause water borne diseases that will influence the inhabitant's health (2)
More money will be spent to treat the water before it can be safely used (2)
(ANY TWO) (2 x 2) (4)

2.5.5 In a paragraph of approximately EIGHT lines, discuss sustainable management strategies that can be implemented to ensure a healthy catchment area in the Orange River basin.

Harsh penalties for industries / agriculture etc. that pollute (2)
Remove informal settlements / relocate informal settlements away from the flood line (2)
Maintain and upgrade sewage pipes (2)
Educate farmers on better farming methods (2)
Educate farmers on the effects of fertilizers and pesticides on the rivers (2)
Introduce re-vegetation and afforestation programs (2)
Educate the communities on the damage they do by polluting the rivers (2)
Enforce better heavy metal disposal methods (2)
Conserve wetlands (2)
(ANY FOUR) (4 x 2) (8)

2.6 FIGURE 2.6 illustrates the formation and usage of a floodplain and natural levees.

2.6.1 Define the term *natural levee.*

When flooding occurs, the largest material will be deposited on the bank of the river, to form a natural embankment/levee (1)
(CONCEPT) (1 x 1) (1)

2.6.2 Will the coarse sediment or the fine sediment be deposited first when flooding occurs?

Coarse sediment (1) (1 x 1) (1)

2.6.3 Account for the different layers of silt found on the floodplain.

Each time the river overflows, it deposits material (2)
The type of material may vary in texture thus many different layers (2)
Silt / sediment is deposited in a new layer (2)
Slow movement of water over the floodplain causes deposition of silt (2) (4)
Flood water flows higher than the river banks / sediment is deposited (2)
(ANY TWO) (2 x 2)

2.6.4 Why is the deposition of silt positive for the farming community?

The silt increases the fertility of the soil (2)
Fertile soil increases the growth of vegetation (2)
Fertile soil increases the production of crops (2)
Higher crop production results in higher income (2)
Fertile soil results in lower input costs (2)
(ANY TWO) (2 x 2) (4)

2.6.5 Although natural levees often prevent flooding, floods still occur in the event of great discharge. Discuss the negative influence of flooding on the farming community.

Flooding could result in the loss of farmer's lives (2)
Damage to property – farm house and sheds (2)
Destruction of crops (2)
Loss of livestock (2)
Deterioration of health conditions owing to waterborne diseases (2)
Infrastructure such as power plants, roads and bridges are damaged which leads to some economic activities / influencing the profits of farmers negatively (2)
People are forced to leave their homes – rural / urban migration (2)
Loss of land value in the floodplains can leave farming communities economically vulnerable (2)
(ANY FOUR) (2 x 2) (4)

(75)

SECTION B: RURAL AND URBAN SETTLEMENTS AND SOUTH AFRICAN ECONOMIC GEOGRAPHY

QUESTION 3

3.1 Refer to FIGURE 3.1. Match the descriptions below with settlements **A** or **B**. Choose the answer and write only the letter **A** or **B** next to the question number (3.1.1 – 3.1.8) in the ANSWER BOOK, for example 3.1.9 **A**.

		Answers
3.1.1	The type of settlement that is mainly unifunctional	***B***
3.1.2	The settlement where the land value is high	***A***
3.1.3	These settlements include hamlets.	***B***
3.1.4	This settlement is associated with primary activities.	***B***
3.1.5	This settlement will occupy a high position in the urban hierarchical rank order.	***A***
3.1.6	The settlement that is associated with secondary and tertiary activities	***A***
3.1.7	A metropolis is an example of this type of settlement.	***A***
3.1.8	This settlement relies on a central place for tertiary services.	***B***
	(8 x 1)	(8)

3.2 Study the map in FIGURE 3.2 which shows the FOUR core industrial areas of South Africa, represented by the letters **A, B, C** and **D.**

3.2.1 Mention the term used to describe an over-concentration of industries in a few core areas.

Industrial centralization (1)

3.2.2 Name the industrial area at letter **A** that represents the economic hub of South Africa.

Gauteng / PWV (1)

3.2.3 In which industrial area is the textile industry the dominant secondary activity in the economy?

B / KwaZulu-Natal (1)

3.2.4 What promotes export and industrial development in area **B?**

Harbour / Presence of a harbour (2)

3.2.5 Which letter on the map represents the industrial region that deals mainly with motor vehicles and related motor vehicle accessories?

C (1)

3.2.6 Name the industrial area where water availability will most likely be a limiting factor in industrial development.

South-west Cape / Gauteng (1)
(Any ONE)

3.2.7 Name the industrial region where fish and fruit are the raw materials for many secondary industries.

South-western Cape (1) (7 x 1) (7)

3.3 Refer to FIGURE 3.3 showing a rural settlement.

3.3.1 Identify the settlement pattern displayed in FIGURE 3.3.

Nucleated (1) (1 x 1) (1)

3.3.2 Mention ONE advantage for farmers living in such a settlement. (Answer to Question 3.3.1)

More interaction with people (2)
Safer as there are more people (2)
Help is available when needed (2)
Can share ideas on how to solve problems (2)
Can share the cost of tools / machinery (2)
Less capital needed as they share implements (2)
Financial help available when needed (2)
Land can be consolidated easier to become more profitable (2)
(ANY ONE) (1 x 2) (2)

3.3.3 State ONE physical factor that could have influenced the site of this settlement.

Gentle gradient / flat land on the valley floor (2)
Steeper slopes towards the mountain range (2)
Availability of fertile soil (2)
(***ANY ONE)*** (1 x 2) (2)

3.3.4 Many inhabitants in this valley choose to move to urban areas. Explain ONE economic push factor that will influence their decision.

Lack of employment / Job opportunities (2)
Job losses (2)
Low paying jobs / employment (2)
Lack of employment diversity (2)
Natural disasters / hazards lead to economic instability (2)
Crop failure decrease profits (2)
(ANY ONE) (1 x 2) (2)

3.3.5 Write a paragraph of approximately EIGHT lines in which you suggest sustainable measures to attract tourists to this village to prevent rural depopulation of the farming community.

Advertising on highways near the settlement to attract attention of tourists outside the rural settlement (2)
Establishment of a tourist board to promote the area (2)
Initiation of music / art festivals to promote tourism (2)
Investing in infrastructure for tourism (2)
Improve roads to make the settlement more accessible (2)
Restoring historical sites to attract tourists (2)
Building more recreational facilities that will attract tourists (2)
Develop ecotourism sites and adventure activities (2)
(ANY FOUR) (4 x 2) (8)

3.4 Study FIGURE 3.4 on migration and urbanisation in South Africa.

3.4.1 What percentage of South Africans live in urban areas?

57,5% (1) (1 x 1) (1)

3.4.2 Calculate the percentage of the population in Gauteng that resides (lives) in rural areas.

2,8% (1) (1 x 2) (2)

3.4.3 Describe TWO possible economic reasons why Gauteng has the largest number of migrants into the province.

Job / Employment opportunities attract people (2)
Higher-paying jobs / employment (2)
Higher standard of living (2)
Diverse economic activities attract people (2)
Economic hub of the country (2)
(ANY TWO) (2 x 2) (4)

3.4.4 Explain how rapid urbanisation may lead to housing problems for the migrants.

The number of immigrants exceeds the availability of housing (2)
Large numbers of immigrants are unemployed and cannot afford formal housing (2)
Not enough space to develop housing projects (2)
Unplanned groups of housing (informal) units constructed on land that occupants have no legal claim to (1)
Unlawful occupation of buildings and land because of lack of housing (2
Poor quality of housing available (2))
(Any TWO) (2 x 2) (4)

3.4.5 Recommend TWO strategies that the government could implement to reduce the housing problems associated with the large influx of migrants into cities.

Construct low cost (RDP) houses for the inhabitants (2)
Provide basic services such as water / sewage / electricity / waste disposal in low cost residential areas (2)
Upgrade of low cost housing by improving the infrastructure (2)
Restructuring of old buildings into formal housing units (2)
Formal planning of settlements (2)
(ANY TWO) (2 x 2) (4)

3.5 Study the article on mining in FIGURE 3.5.

3.5.1 For what does the abbreviation *GDP* stand for?

Gross Domestic Product (1) (1 x 1) (1)

3.5.2 What is the contribution of gold mining to the GDP of South Africa?

± R4,7 Trillion (1) (1 x 1) (1)

3.5.3 Identify TWO national factors in the article that has resulted in the decline of the mining industry's contribution to the GDP.

Exchange rates (2)
Increase in production costs (2)
Rise in labour costs (2)
(ANY TWO) (2 x 1) (2)

3.5.4 Calculate the number of jobs lost in the mining industry between 1994 and 2018.

274 000 (2) (1 x 2) (2)

3.5.5 Describe how protests influenced the availability of jobs in the mining industry.

Protest actions reduce the productivity of the mine (2)
Less miners are actively busy in the production process (2)
If production decrease less miners are employed (2)
Lower production results in less miners that is employed by the mining company (2)
Mining company close down and lead to retrenchment of miners (2)
(Any TWO) (2 x 2) (4)

3.5.6 Explain how the decrease in the contribution of the mining industry to GDP will affect economic development in South Africa.

If the Rand to Dollar exchange rate is high (2), mines are more profitable (2)

OR

If the Rand to Dollar exchange rate is low (2), mines are less profitable (2) (2 x 2) (4)

3.6 Study the article on the Saldanha Bay IDZ in FIGURE 3.6.

3.6.1 In which South African province is the Saldanha Bay IDZ situated?

Western Cape (1) (1 x 1) (1)

3.6.2 According to the article, what is the main reason for limited economic growth in the region?

Infrastructure bottleneck (1) backlogs / delays (1)
(Any ONE) (1 x 1) (1)

3.6.3 Name TWO types of infrastructure that promote industries at the Saldanha Bay IDZ.

Deep-water port (2)
Rail link / Railway (2)
(ANY TWO) (2 x 1) (2)

3.6.4 Explain why government located IDZs away from major metropolitan areas.

To develop areas outside of the established industrial regions (2)
To develop economic growth of industrial activities (2)
To provide industrial infrastructure linked to international sea ports or air ports for export-orientated manufacturing industries (2)
(Any TWO) (2 x 2) (4)

3.6.5 The Saldanha Bay IDZ is situated in close proximity to Parker's Town holiday resort. In a paragraph of approximately EIGHT lines, explain how the Saldanha Bay IDZ will have a positive impact on the economic development of these resort towns.

Increase in housing demands will encourage housing development (2)
Increase in property prices (2)
Increase in rental prices (2)
Higher / more frequent occupancy for hotels / guesthouses (2)
Job creation (2)
Increase in entrepreneurship (2)
Increase in auxiliary businesses (2)
Increased support for businesses like restaurants (2)
Not reliant on the festive season for income / Sustained income throughout the year (2)
Development of leisure infrastructure / infrastructure (2)
(ANY FOUR) (4 x 2) (8)

(75)

QUESTION 4

4.1 Refer to FIGURE 4.1 that shows urban land use zones. Match the statements below with the labels of the diagram. Write the label next to the question number (4.1.1 – 4.1.7) in the ANSWER BOOK, for example 4.1.8 Greenbelt.

4.1.1 Some buildings in this zone are constructed of discarded / salvaged material.

Low income housing / informal settlement (1)

4.1.2 This is a zone of mixed functions.

Zone of transition (1)

4.1.3 The highest land values of the city are found in this zone.

CBD (1)

4.1.4 This zone is characterized by neglected buildings.

Transition zone (1)

4.1.5 The highest pollution levels in the city are recorded in this zone.

Industrial zone (1)

4.1.6 Graveyards or airports are often situated in these zones.

Rural-Urban fringe (1)

4.1.7 The zone where people with higher incomes prefer to reside (live).

High income residential (1) (7 x 1) (7)

4.2 Choose the term from **COLUMN B** that matches the description in **COLUMN A.** Write only the letter (A – I) next to the question number (4.2.1 – 4.2.8) in the ANSWER BOOK, for example 4.2.9 J.

COLUMN A		COLUMN B	
4.2.1	The economic classification of the agricultural sector	***D***	**Primary (1)**
4.2.2	The processing of goods to increase their economic value	***G***	**Secondary activity (1)**
4.2.3	Products that are purchased from other countries	***I***	**Imports (1)**
4.2.4	The economic sector that includes health, finance and other services	***F***	**Tertiary (1)**
4.2.5	The exchange of goods and services between countries for monetary gain	***A***	**Trade (1)**
4.2.6	Taxes placed on imported goods	***H***	**Tariffs**
4.2.7	The total value of goods and services produced in a country in one calendar year	***B***	**Gross Domestic Product (1)**
4.2.8	The sector associated with research and development	***C***	**Quaternary (1)**
			(8 x 1)

(8)

4.3 Study FIGURE 4.3 showing urban expansion.

4.3.1 What is meant by *urban expansion*?

The increase of the actual physical size of an urban area (CONCEPT) (1) (1 x 1) (1)

4.3.2 Name the geographical process when people move from area **B** to area **A**.

Rural-urban migration (1) (1 x 1) (1)

4.3.3 Account for the concentration of buildings in the CBD at **A.**

High property values result in dense building density (2)
Competition for land (2)
High accessibility in the zone (2)
Usually located in centre / city centre (2)
Most likely the city started at CBD, thus many activities (2)
(ANY ONE) (1 x 2) (2)

4.3.4 With regard to property values, explain why the rural residents at **B** would wait for the city to expand.

They expect their property value to increase as the city expands and gets closer (2) (1 x 2) (2)

4.3.5 Explain TWO problems in the CBD that would result in businesses choosing to move to the outskirts of the city.

Traffic congestion restricts access (2)
Pressure on services such as water / electricity / refuse removal (2)
Increased competition between businesses (2)
Overcrowding of people and activities (2)
Crime / corruption in CBD (2)
Degradation of buildings / services / infrastructure (2)
Prestige of having a business / shop in suburban shopping center (2)
Older and dilapidated buildings (2)
CBD viewed as being old-fashioned / outdated (2)
(ANY TWO) (2 x 2) (4)

4.3.6 Predict TWO environmental consequences for the rural area that may occur as a result of the urban expanding.

Water / air / noise pollution in rural area (2)
Removal of plants / vegetation / deforestation (2)
Soil erosion because of deforestation (2)
Destruction of ecosystems (2)
Loss of biodiversity (2)
Smaller area for agriculture available (2)
Increase in temperatures as more artificial surfaces emerge (2)
Soil will be covered with artificial material (2)
(ANY TWO) (2 x 2) (4)

4.4 Study FIGURE 4.4, a cartoon showing traffic congestion.

4.4.1 Define the term *traffic congestion*

A condition on transport networks that occurs as vehicle use and numbers increase (CONCEPT) (1 x 1) (1)

4.4.2 Mention the type of pollution caused by traffic congestion as shown in the diagram.

Air pollution (1)
OR
Carbon-monoxide pollution (1)
(ANY ONE) (1 x 1) (1)

4.4.3 Describe ONE effect that this type of pollution has on the physical health of commuters.

It will cause respiratory diseases / conditions (2)
Commuters may have trouble breathing (2)
Can cause commuters to experience asthma / sinus (2)
Can result in eye and skin irritation (2)
Experience physical distress (2)
(Any ONE) (1 x 2) (2)

4.4.4 (a) Describe the action that was taken in an attempt to reduce traffic congestion in this city?

Roads were widened (2)
Additional lane constructed (2)
(ANY ONE) (1 x 2) (2)

(b) Comment on the success of the action taken.
(Answer to Question 4.4.4 (a))

It was not successful/Traffic congestion remains/Traffic congestion is still evident (2) (1 x 2) (2)

4.4.5 In a paragraph of approximately EIGHT lines, discuss other solutions that can be implemented to reduce traffic congestion in a city.

<u>CONGESTION:</u>
Increased public transport networks (2)
Restricted road usage (2)
Synchronized robots (2)
One-way streets (2)
Subsidize public transport to encourage use (2)
Designated lanes for buses and other public transport services (2)
Use of flexi-time for businesses (2)
Encourage lift clubs (2)
Park and ride facilities (2)
Building of ring roads around the congested area (2)
(ANY FOUR) (4 x 2) (8)

4.5 Study FIGURE 4.5 which is a photograph of an informal business located close to a shopping complex.

4.5.1 Define the concept *informal sector*.

The sector of the economy that is not officially registered and does not pay tax (CONCEPT) (1) (1 x 1) (1)

4.5.2 Suggest ONE reason why people would choose to support these informal traders instead of the nearby formal businesses in the shopping complex.

Goods may be cheaper (2)
Convenience because it's closer to them (2)
Can purchase in smaller quantities (2)
Goods usually fresher (2)
Social responsibility to support informal businesses (2)
Goods may be of better quality (2)
Site is closer to the public transport (2)
(ANY ONE) (1 x 2) (2)

4.5.3 Describe TWO risks from FIGURE 4.5 to which the informal traders could be exposed.

Exposure to the weather elements (2)
Crime (2)
Lack of basic facilities (2)
Competition with other vendors (2)
Harassment by authorities (2)
Xenophobia (2)
(ANY TWO) (2 x 2) (4)

4.5.4 Write a paragraph of approximately EIGHT lines proposing measures that local authorities could implement to improve the working conditions of informal traders.

Provision of designated trading areas (2)
Construction of sheltered trading facilities (2)
Providing secure facilities for storage of stock (2)
Providing visible security / policing at trading areas (2)
Issuing of permits for trading (2)
Training informal traders on basic business management skills (2)
Providing access to legal aid for informal traders (2)
(ANY FOUR) (4 x 2) (8)

4.6 Study the article on food security in South Africa in FIGURE 4.6.

4.6.1 Define the term *food security*.

When citizens of a country have access to sufficient, nutritious food at any given time (CONCEPT) (1) (1 x 1) (1)

4.6.2 According to the article, which TWO environmental factors threaten South Africa's food security?

Drought (1)
Unpredictable weather patterns (1) (2 x 1) (2)

4.6.3 Why is maize considered a critical crop in ensuring South Africa's food security?

Maize is the staple food of the majority of South Africans (2)
(1 x 2) (2)

4.6.4 Why are the small-scale farmers more susceptible to (affected by) negative environmental conditions?

They have less capital to absorb the rising costs (2) (1 x 2) (2)

4.6.5 Suggest TWO ways in which the South African government can help small-scale maize farmers to increase crop production in order to ensure food security.

Training of farmers on modern farming methods (2)
Provision of high-yield seeds (2)
Provision of irrigation (2)
Encourage the use of fertilizers (2)
Improve market access (2)
Provide loans to purchase machinery (2)
Introduce the use of pesticides (2)
Consolidation of smaller farms into larger productive units (2)
Implement Land Reform Policies (2)
(ANY TWO) (2 x 2) (4)

4.6.6 Describe TWO ways how the increase in crop production will create a positive impact on South Africa's economy.

Food security achieve economic growth (2)
Development of industries related to food production (2)
Can lead to more employment – larger tax base (2)
No need to import food at higher prices (2)
Food prices will drop (2)
Possibility of exporting food – increase in foreign exchange (2)
Can result in a positive balance of trade (2)
(ANY TWO. MUST BE POSITIVE.) (2 x 2) (4)
(75)

TOTAL: 225