NATIONAL SENIOR CERTIFICATE EXAMINATION
NOVEMBER 2020

# GEOGRAPHY: PAPER I

# MARKING GUIDELINES

Time: 3 hours 200 marks

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

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

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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).

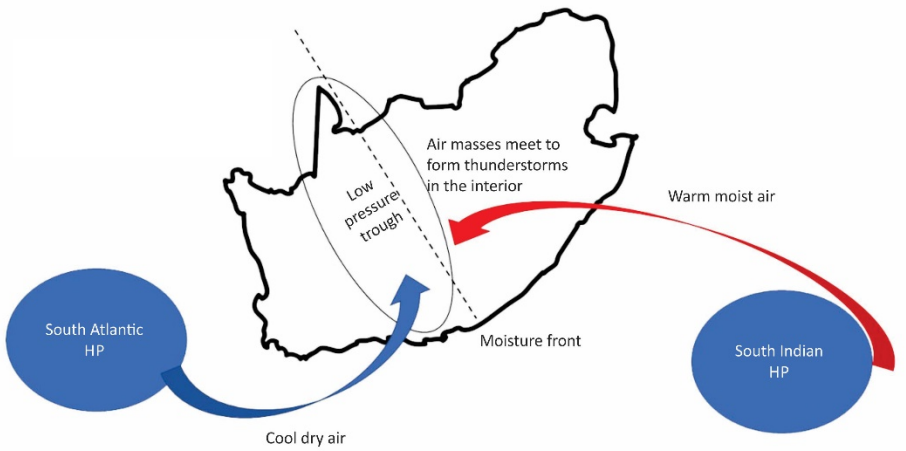
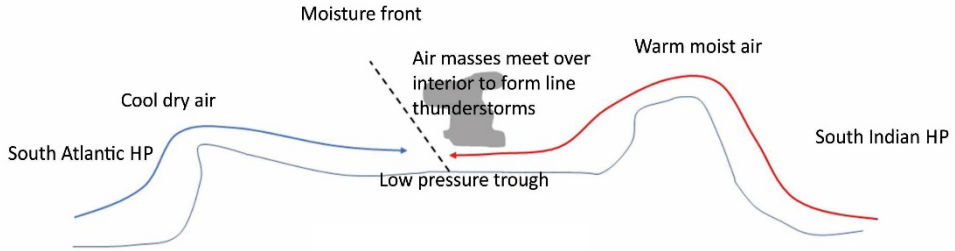
Marks awarded are based solely on the requirements as defined in the marking guidelines.
Marks should not be awarded with grade thresholds or grade descriptors in mind.

When marking 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)** – Repetition
**(I)** – Irrelevant

| QUESTION 1 – INTEGRATED QUESTION: THE GEOGRAPHY OF MALALANE AND MPUMALANGA | | | |
|---|---|---|---|
| **1.1** | **Questions** | **Answer** | **Notes** |
| 1.1.1 | The climatic region of Malalane can be described as …<br><br>A continental<br>B maritime<br>C Mediterranean<br>D coastal | A Continental | |
| 1.1.2 | The average annual rainfall is …<br><br>A 9 mm<br>B 60 mm<br>C 135 mm<br>D 716 mm | D 716 mm | |
| 1.1.3 | The seasonal average temperature range for Malalane is …<br><br>A 1 °C<br>B 9,1 °C<br>C 16,4 °C<br>D 25 °C | B 9,1 °C | |
| 1.1.4 | The annual mean temperature for Malalane is …<br>A 8,9 °C<br>B 16,5 °C<br>C 22 °C<br>D 25,5 °C | C 22 °C | |
| **1.2** | **Questions** | **Answer** | **Notes** |
| 1.2.1 | Name the main weather system responsible for the development of line thunderstorms over South Africa. | Either ONE of the following:<br>• low-pressure trough<br>• moisture front<br>• continental low<br>• thermal low<br>• If they put both SAHP and SIHP | Or any other relevant answer. |
| 1.2.2 | Name ONE other hazard not mentioned in the tweet. | Any ONE of the following:<br>• flash flooding<br>• heavy rains<br>• lightning | They can also give any other relevant hazard. |

<table>
<tr><td>1.2.3</td><td>Using a diagram, describe how line thunderstorms develop in South Africa.<br> 
</td><td colspan="2" rowspan="2">The candidate must show an understanding of how line thunderstorms form over the interior of South Africa.<br><br>They can either draw a synoptic view or a cross-section.<br><br>Credit must be given for understanding of Line thunderstorm development over South Africa.</td></tr>
<tr><td></td><td> 
</td></tr>
<tr><td>1.2.4</td><td>Explain why there is a thicker band of clouds to the east of the moisture front (line thunderstorms).</td><td>• This is due to the moisture that comes in from the east due to the warm Agulhas current that meets the cool, dry air of the Benguela current.<br>• Warm moist air from the east (more moisture) reaches the interior. Cold dense air from the west forces warm moist less dense air to rise. Air on the eastern side is more unstable. Large-scale condensation results in dense cloud formation.</td><td>The candidate must show an understanding that the moist air from the east will rise and form the clouds to the east of the MF.</td></tr>
</table>

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| 1.2.5 | Explain why the weather conditions associated with line thunderstorms are more severe than isolated (normal) thunderstorms. | Line thunderstorms:<br>• will have a strong up-draught<br>• are more organised<br>• are a collection of cells that move in the same direction<br>• a longer duration<br>• they cover a greater area<br>• a wider spread<br>• continuous feeding of moisture from the ocean, constant formation of cumulonimbus clouds along the moisture front<br>• stronger upliftment / rapid rising and condensation along the moisture front<br>• occurs any time of day<br>• associated with torrential or heavy rainfall and or hail<br>Normal thunderstorms:<br>• isolated<br>• have a much shorter duration<br>• occur over a small area<br>• do not have continuous source of moisture<br>• occur during late afternoon | This is an **explain** question so candidate must unpack the concept in detail. |
| **1.3** | **Questions** | **Answer** | **Notes** |
| 1.3.1 | Malalane lies in a valley along the Crocodile River. Name the wind that the town will experience during the day. | Anabatic<br>Or<br>Valley Wind | The wind will blow out of the valley during the day as the valley side will be warmer. |
| 1.3.2 | Explain why the smoke from the sugar processing factory gets trapped in the valley early in the morning on a clear day. | This is due to the formation of the inversion layer in a valley overnight.<br>The smoke is trapped and concentrated in the valley. | This is an **explain** question so candidate must unpack the concept in detail. |

 

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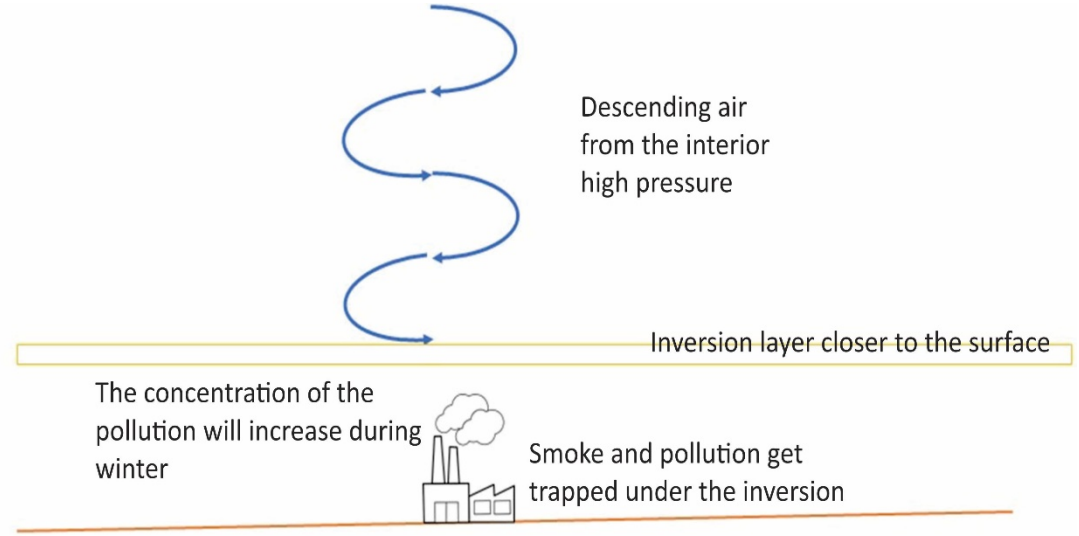
| 1.3.3 | With the aid of a diagram, explain why pollution concentrations will always be higher over the interior of South Africa during winter.<br>  <br> | The candidate must show an understanding of the effect of the interior high pressure on the concentration of pollution in the interior of South Africa.<br><br>***Marks must be awarded for understanding of the concept.*** |

| **1.4** | **Questions** | **Answer** | **Notes** |
|---|---|---|---|
| 1.4.1 (a) | The stage labelled **A** is known as the … course. | upper | |
| 1.4.1 (b) | The Kwena Dam is a … base level of erosion | temporary | |
| 1.4.1 (c) | The dam will cause … along the river course. | Rejuvenation / Headward Erosion | |
| 1.4.1 (d) | The crocodile river has a / an … profile. | ungraded | |
| 1.4.1 (e) | In stage **B** the main form of erosion is … | lateral erosion | |
| 1.4.1 (f) | Stage **C** is where the feature called a / an … is most likely to be found. | oxbow lake | |
| 1.4.2 | In which stage of the river will you find the greatest volume of water. Explain why. | • Lower / older / C<br>• The volume of water in a river is at its greatest in the lower course. This is due to the contribution of water from tributaries. The river channel is deep and wide and the land around the river is flat. | |

| 1.5 | Questions | Answer | Notes |
|---|---|---|---|
| 1.5.1 (a) | Define wetland. | Land consisting of marshes or swamps; saturated land.<br>Land under water | Candidates are free to develop their own approach to the question and responses will vary. This doesn't have to be a textbook explanation. |
| 1.5.1 (b) | Define drainage divide. | A drainage divide is elevated terrain that separates neighbouring drainage basins. | |
| 1.5.2 | Describe TWO benefits that a wetland adds to a river system. | Wetlands provide many societal benefits:<br>• food and habitat for fish and wildlife<br>• water quality improvement – filtration<br>• flood storage / control<br>• shoreline erosion control<br>• economically beneficial natural products for human use<br>• opportunities for:<br>– recreation<br>– education<br>– research<br>– tourism | This is an **Describe** question so candidate must unpack the concept in detail. |
| 1.5.3 | Assess TWO reasons why this development should ensure that it maintains the riparian zone along the river. | Maintaining or developing an attractive riparian zone can:<br>• increase your property value<br>• reduce property loss from excessive erosion<br>• protect water quality<br>• enhance wildlife habitat<br>• contribute to the natural beauty of the land<br>• dissipate noise from reservoir, traffic, roads and nearby properties<br>• reduce maintenance time and related costs<br>• provide privacy<br>• screen unsightly views<br>• enhance scenic views<br>• Flood prevention | This is an **Assess** question so candidate must unpack the concept in detail. |

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| 1.5.4 | Analyse THREE negative impacts that human activities can have on the catchment areas of rivers in South Africa. | • Storm water drains: run straight into our waterways, heavy rainfall can wash sediments, rubbish and pollutants into the rivers and eventually into the ocean.<br>• Overdrawing water: it can also affect people who use the water, for example, for irrigation or stock watering.<br>• Deterioration of the ecological integrity of this river system.<br>• Algal blooms: accelerated eutrophication.<br>• Sedimentation: waterways are clogged by soils collecting and accumulating. This is usually due to erosion by agricultural activities.<br>• Change in flood response – changes we make to our catchments can change the way they respond to flooding and cyclones.<br>• Increase of surface runoff: higher flood peak.<br>• Shorter lag time – Flood line<br>• Contaminants: include oils, animal waste, litter, fertilisers and weed sprays.<br>• Other contaminants: grass cuttings, leaves and soil can also upset the waterways' ecological balance. Some pollutants directly poison aquatic and marine plants and animals; others harm the environment through eutrophication or sedimentation. | This is an **analysis** question candidate must unpack the concept. |

 

| 1.6 | Questions | Answer | Notes |
|---|---|---|---|
| 1.6.1 | Name the street pattern of Malalane and Fish Eagle Bend. | Malalane – radial / Circular<br>Fish Eagle Bend – planned irregular / Irregular | |
| 1.6.2 | Name TWO features that influenced the shape and development of Malalane. | Any two of the following:<br>• the Crocodile River<br>• Buffalo Creek<br>• river<br>• the N4<br>• road<br>• highway<br>• railway line<br>• agricultural land<br>• farm land<br>• central focal point | |
| 1.6.3 | Explain why most of the businesses are found along the N4 highway. | • Its the main road through the region with the most traffic.<br>• Advertising<br>• Ease congestion | |
| 1.6.4 | The building labelled D is a major shopping centre that services the Malalane area. | | |
| 1.6.4 (a) | Define the terms: | | |
| 1.6.4 (a) (i) | Anchor tenant | A considerably larger tenant in a shopping mall, often a department store or retail chain. With their broad appeal, they are intended to attract a significant cross-section of the shopping public to the centre. | Candidates are free to develop their own approach to the question and responses will vary. This does not have to be a textbook explanation. |
| 1.6.4 (a) (ii) | Chain store | Retail outlet in which several locations share a brand, central management, and standardised business practices. | |
| 1.6.4 (b) | Analyse why retail chain stores need to consider the factors below when trying to find the best location for a retail business. | | |
| 1.6.4 (b) (i) | Range | Business must understand that their costumers or clients will only travel a certain distance to use / buy their service or product. | |
| 1.6.4 (b) (ii) | Threshold population | Business needs to have a minimum number of people living in / visiting (in the case of Malalane) a settlement for their service or product to be viable. | |

 

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| 1.6.4 (b) (iii) | Market area | • Whatever service or product a business is making available, it must consider the income level and type of society in which the business is established.<br>• Area which the shop is providing a service which is based on the income level or type of service offered. | |
| 1.6.5 | Some people move from larger urban areas to minor country towns. Suggest TWO different reasons why people might move to minor country towns like Malalane. | • Cities are congested.<br>• The fast-paced life in cities is not for everyone.<br>• Pollution.<br>• Job stress.<br>• Technology allows work from home, no need for offices.<br>• More people own cars and more people are able to live some distance away from where they work.<br>• Better transport links to and from rural and urban areas.<br>• More disposable income.<br>• Greater use of the countryside for leisure.<br>• More money or income possibilities.<br>• Service-driven economic benefits.<br>• More opportunities to move to the country.<br>• Internet and mobile usage has gone up, broadband and cheaper computers now available.<br>• Heath issues.<br>• Crime and safety.<br>• Retirement.<br>• Property prices.<br>• Return to home (ancestral) to join family.<br>• SDI – Opportunity for growth potential along development corridors. | |

 

| 1.7 | Questions | Answer | Notes |
|---|---|---|---|
| 1.7.1 | Calculate the total yield of cane crushed for 2019 / 2020 in MT per hectare. | 69,15 MT per hectare | Must be this answer as the values are given. |
| 1.7.2 | Account for the decrease in the area harvested between 2014 / 15 and 2016 / 17. | Any ONE explanation<br>• Introduction of sugar tax.<br>• Drought.<br>• Flooding.<br>• Economic slowdown.<br>• Power / electricity problems.<br>• Load shedding.<br>• Change in ownership of land.<br>• Insect / plant disease.<br>• Shrinkflation.<br>• Cheaper source from other countries.<br>• Labour disputes.<br>• Product change as higher cash crops.<br>• Dube trade port. | |
| 1.7.3 | Name TWO major uses of sugar in south Africa. | Although the main reason for the use of sugar is its sweet taste, sugar has many other functions in food technology.<br>• preservative<br>• texture modifier<br>• fermentation substrate<br>• flavouring<br>• colouring agent<br>• bulking agent<br>• explosives<br>• for export<br>• medicine<br>• cosmetics<br>• biogas<br>• fuel | The candidate can just list the uses. |

 

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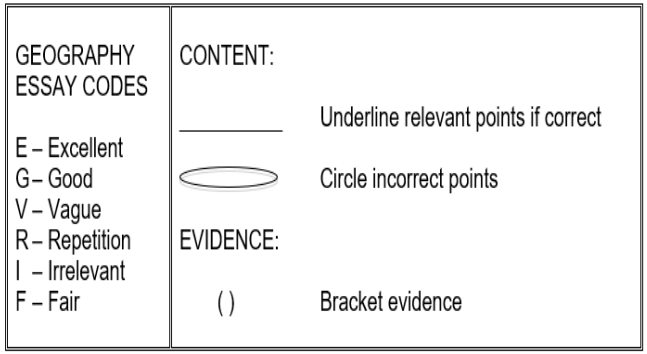
| 1.7.4 | Besides Mpumalanga, where else in South Africa is sugar cane grown? | KwaZulu-Natal<br>Eastern Cape | |
| 1.7.5 | In 2018, South Africa introduced a sugar tax. Discuss TWO possible impacts this might have had on the sugar industry. | • Sugary products became more expensive.<br>• Direct job losses.<br>• Indirect job losses in linked industries.<br>• More admin for businesses.<br>• Low-income groups have less money to spend.<br>• Losses in the farming industry.<br>• Production increased possibly to account for tax.<br>• Sugar industry weakness because of less people buying. | This is an **Discuss** question so candidate must unpack the concept in detail. |
| **1.8** | **Questions** | **Answer** | **Notes** |
| 1.8.1 | Match the columns | | |
| 1.8.1 (a) | Land restitution | E Giving land back to people who lost their land as a result of racially discriminatory practices during apartheid. | |
| 1.8.1 (b) | Value chain | C The process by which value is added to a product. This includes production, marketing, and the provision of after-sales service. | |
| 1.8.1 (c) | Sustainability | A To avoid the depletion of natural resources in order to maintain an ecological balance. | |
| 1.8.1 (d) | Agronomists | F They also work to improve the quality of seed and the nutritional value of crops. | |

| 1.8.2 Essay | |
|---|---|
| • Please DO NOT tick when marking an essay – this confuses the checkers.<br>• Rather, underline valid and appropriate points and use the code system. |  |
| • Outline the benefits of this project / partnership.<br>• Evaluate why land reform is needed in South Africa. | |
| • Drawback of the current land reform process in South Africa. | • The process is very slow.<br>• Very difficult to prove claims.<br>• Unwilling participants.<br>• Unresolved historical grievances.<br>• Failure of projects (including land restitution projects).<br>• New farmers are unskilled.<br>• New farmers are under-resourced.<br>• Poor education in agricultural management.<br>• Politicians and other stakeholders have largely focused on the land acquisition.<br>• Inadequate post-settlement support.<br>• Poor planning.<br>• Infighting within communities.<br>• Favours capital-intensive commercial farming unsuitable to the beneficiaries.<br>• Agricultural entities becoming ghost farms after land reform.<br>• In some cases, farm infrastructure was stolen and production halted.<br>• Can lead to frustration, violence and farm murders.<br>• Could lead to food insecurity – linked to lack of skills.<br>• Corruption at government level.<br>• Interference from political parties – disrupts the process. |

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| • Discuss what support the government can provide to the people resettled on the land once land reform has taken place. | • An important component of land reform is for the beneficiaries to become self-sufficient.<br>• It needs to take measures to make sure that redistributed land is used productively.<br>• Provision of post-settlement support.<br>• There needs to be a mentoring system.<br>• Enough financial backing.<br>• Private–public partnership.<br>• Education and upskilling of the youth in the region.<br>• Create co-op farms.<br>• Establish monitoring institutions to protect land.<br>• Set land-transfer targets.<br>• Enable more rapid transfer.<br>• Strategies to build business confidence in the agri-business sector.<br>• Accelerated training in agricultural sciences.<br>• Make farming easier.<br>• More worthwhile new mechanisms.<br>• Change the way the agricultural economy works in South Africa.<br>• Individualist freeholding may be inadequate and often wildly inappropriate.<br>• Alternative to present tenure practices.<br>• Chiefs and communities should be held accountable if they are unable to improve their land.<br>• Added services and infrastructure:<br>– Electricity – solar or wind<br>– New education facilities<br>– Cell phone tower – for connectivity<br>• Irrigation schemes – boreholes |

 

| Criteria | (Level 3)<br>Excellent – Good | (Level 2)<br>Satisfactory | (Level 1)<br>Poor |
|---|---|---|---|
| ***Writing skills***<br>• Take into consideration structure and presentation.<br>• Use of brief introduction and conclusion.<br>• Logical discussion and use of subheadings. | Suitable introduction and conclusion.<br>Sophisticated, coherent and structured writing.<br>Subheadings and paragraphs have been effectively used.<br>The report is concise, well-structured and succinct. | Introduction and conclusion present, although not ideal.<br>Attempts to adhere to subheadings and use of paragraphs.<br>Report deviates from the point in places and lacks brevity. | Writing is weak and almost unintelligible. No introduction or conclusion provided. No use / adherence to subheadings. Long sentences, poor grammar and ineffective use of paragraphs. The report is repetitive. Bullet points may have been used. |
| ***Content knowledge***<br>• Correct use of geographical terminology and concepts.<br>• Adherence to topic and subheadings. | Relevant content and detailed discussion of the topic.<br>Good usage of geographical terminology and concepts.<br>An appropriate number of facts presented and developed per subheading. | Some relevant content.<br>An overview / general discussion of key issues.<br>Basic usage of geographical concepts and terminology.<br>(60–50% of required facts presented per subheading). | Digression from the topic.<br>Weak grasp of concepts and terminology.<br>Superficial / poor discussion.<br>Almost no relevant facts / subheading. |
| ***Supporting evidence – analysis and understanding***<br>• The ability to analyse and evaluate the topic is assessed in this category.<br>• Reference made to case study material / fact file / source material provided.<br>• If appropriate, reference must be made to familiar / local or other examples. | The candidate is able to argue and evaluate appropriately.<br>There is strong evidence of accurate application of understanding and evidence provided.<br>The report demonstrates the understanding and integration of relevant case study / fact file / source material into the context of the report.<br>Looking for evidence of unpacking content and high-order integration. | Superficial links made to case study / fact file / source material.<br>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.<br>Supporting evidence does not always relate appropriately to the subheading or context of the discussion.<br>Discussion lacks depth. | Limited to no reference made to case study / fact file / source material.<br>Examples not provided.<br>Has little to no geographical meaning.<br>Little analysis or understanding.<br>Demonstrates minimal understanding of the topic. |

 

| QUESTION 2 – CLIMATE, WEATHER AND GEOMORPHOLOGY | | | |
|---|---|---|---|
| **2.1** | **Questions** | **Answer** | **Notes** |
| | Study the labels on the synoptic chart and select the words in brackets that will make the statement TRUE. | | |
| 2.1.1 | Pressure system **E** is over the (Indian / Atlantic / Arctic) Ocean. | Atlantic | It's the south Atlantic high pressure. |
| 2.1.2 | This synoptic weather map depicts (spring / summer / winter) conditions. | winter | Cold front right across the country. |
| 2.1.3 | The system at **F** is known as the (South Atlantic / South Indian / interior) anticyclone. | South Indian | |
| 2.1.4 | The weather associated with pressure cell **F** is (stable / unstable / fluctuating). | stable | |
| 2.1.5 | The circulation of air at weather system **G** is (anticlockwise / clockwise / downward). | clockwise | |
| 2.1.6 | The common wind associated with the low pressure **at G** (katabatic / berg / anabatic). | berg | |
| **2.2** | **Questions** | **Answer** | |
| 2.2.1 | Explain why warm fronts (**I**) seldom influence the weather of South Africa? | • Warm fronts are usually positioned too far south to have any effect on South Africa.<br>• Doesn't go over South Africa.<br>• Only cold fronts cross south Africa.<br>• WF to short (Source Material). | |
| 2.2.2 | Elaborate on how a warm front occlusion can occur as the next stage of development of this mid-latitude cyclone. | • This is when the air ahead of the warm front is cooler than the air behind the cold front. When the fonts meet the cold front is pushed above the warm front.<br>• Air Masses catch up.<br>• Air is displaced. | |

 

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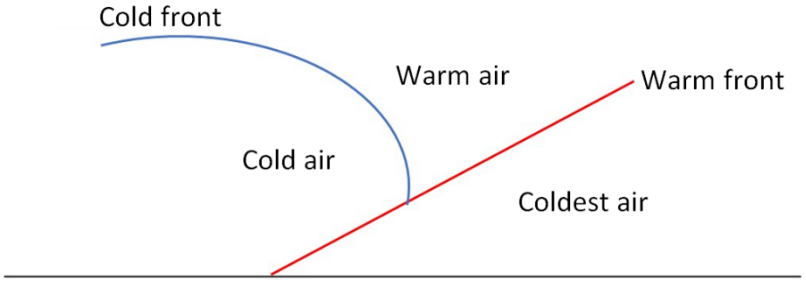
| 2.2.3 | Draw cross section from **J** to **K** of the warm front occlusion.<br>  <br> | | |
| **2.3** | **Questions** | **Answer** | **Notes** |
| 2.3.1 | How many tropical cyclones occurred before Kenneth in 2019?<br>A 9<br>B 10<br>C 11<br>D 12 | B 10 | |
| 2.3.2 | Why does the intensity of the storm weaken as it moves over land?<br>A The water is too cool.<br>B The humidity of the air increases.<br>C The wind direction changes.<br>D It loses the moisture source and friction. | D It loses the moisture source and friction | |
| 2.3.3 | The Mozambique Channel is an ideal region for the development of tropical cyclones because of the …<br>A warm water of the east coast.<br>B cold ocean current.<br>C ITCZ.<br>D the trade winds. | A warm water of the east coast | |

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| 2.3.4 | What causes the dangerous quadrant / semicircle to form?<br>A Wind direction is the same direction as the movement of the storm.<br>B The wind shear direction within the vortex.<br>C The jet stream direction in the upper atmosphere.<br>D Air circulation around the low pressure. | A Wind direction is the same direction as the movement of the storm. | |
| 2.3.5 | Which of the following conditions are found at the centre or the eye of the storm?<br>A strong winds<br>B heavy rains<br>C clear and calm<br>D cold temperatures | C Clear and calm | |
| **2.4** | **Questions** | **Answer** | **Notes** |
| 2.4.1 | Identify the part of the city that experiences the highest temperature. | • CBD<br>• City Centre<br>• Sandton CBD<br>• All the tall buildings | Any understanding that the centre of the city will be the warmest. |
| 2.4.2 | List TWO causes of an urban heat island. | • The materials that buildings are built with.<br>• Larger surface area.<br>• Fewer water sources.<br>• Dark colours of surfaces.<br>• Inversion layer.<br>• High concentration of people.<br>• High concentration of activities.<br>• The amount of heat-absorptive surfaces.<br>• Anthropogenic heat.<br>• Pollution.<br>• Lack of vegetation. | Mark(s) can be awarded for:<br>The understanding that cities built up make the surroundings and peripheral areas warmer. |

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| 2.4.3 | Explain why most major cities will experience a pollution dome. | • The urban heat island that causes a city to heat up caps the dust and other particulates at a low level in the atmosphere. If there is not a strong enough wind, then this dome that is created remains intact and causes the heated-up air within the urban heat island.<br>• Inversion layer traps pollution<br>• Large number of sources of pollutions, i.e. factories | |
| 2.4.4 | Suggest TWO measures that can be taken to reduce the effects of a pollution dome. | • Reduce traffic by promoting walking AND cycling.<br>• Eliminate polluting vehicles with limited access zones.<br>• Establish a construction industry that respects air quality.<br>• Stop building roads.<br>• Retrofit polluting vehicles.<br>• Green the city.<br>• Imposes fines.<br>• Clean air act. | **Focus on:**<br>Factors that reduce air pollution and / or<br>Factors to reduce urban heat island. |
| **2.5** | **Questions** | **Answer** | **Notes** |
| 2.5.1 (a) | The unit used for the discharge of the river is known as … | cumec. | |
| 2.5.1 (b) | Rainfall on the hydrograph is measured in … | millimetres. | |
| 2.5.1 (c) | The point where the rainfall event is highest is known as … | peak rainfall. | |
| 2.5.1 (d) | The point where the discharge continues to rise is known as … | rising limb. | |
| 2.5.2 | Examine TWO factors that affect a storm hydrograph during a rainfall event. | • Precipitation, type and intensity.<br>• Nature of surface.<br>• Vegetation cover.<br>• Soil / rock type.<br>• Slope.<br>• Basin morphology and size.<br>• Deforestation. | |

 

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| | | • Afforestation.<br>• Land use.<br>• Dam / reservoirs.<br>• Infiltration.<br>• Run-off (not discharge).<br>• Shape of the drainage basin.<br>• Flooding.<br>• Base flow.<br>• Drainage density.<br>• Location of the recording station. | |
| 2.5.3 | Explain how a hydrograph's shape is related to the drainage basin's shape. | • The shape of the drainage basin also affects runoff and discharge.<br>• Drainage basins that are more circular lead to shorter lag times and a higher peak discharge than those that are long and thin because water has a shorter distance to travel to reach a river. | This is an **Explain** question so candidate must unpack the concept in detail. |
| **2.6** | **Questions** | **Answer** | **Notes** |
| 2.6.1 | Name and describe ONE erosional process that could happen at **M**. | • Abrasion or corrosion – This is when large pieces of bedload material wear away the riverbanks and bed.<br>• Attrition – This is when the bed load itself is eroded when sediment particles knock against each other and break, becoming more rounded and smaller.<br>• Hydraulic action – This is when the force of water erodes softer rock.<br>• Solution or corrosion – This is when acidic water erodes rock.<br>• Accept the following if explanation in given fully:<br>– Undercutting<br>– Lateral erosion<br>– Horizontal erosion | |

 

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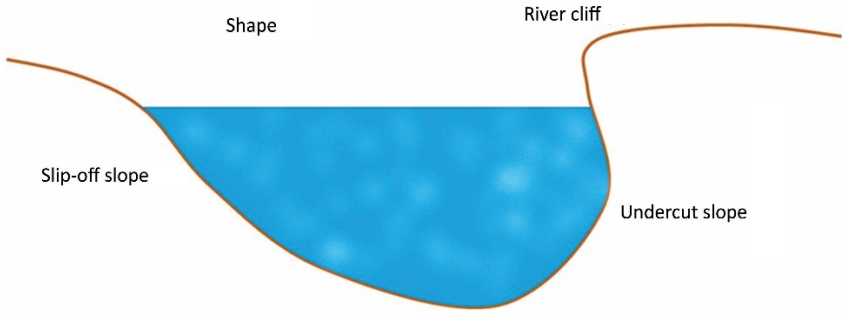
| 2.6.2 | Draw and label a cross-section along the line **L** to **M** to show the following:<br>(a) the likely differences in the depth of the channel;<br>(b) a slip-off slope;<br>(c) a river cliff.<br>(d) undercut | | |
| |  | | Must show the shape of a meander.<br>This must be a cross-section or profile. |
| **2.7** | **Questions** | **Answer** | **Notes** |
| 2.7.1 | Determine the settling velocity of a … | | |
| 2.7.1 (a) | • 0,5 mm sand particle | ± 25–35 Cumec | |
| 2.7.1 (b) | • 50 mm pebble | ± 2 000–3 000 Cumec | |
| 2.7.2 | Studying the Hjulström curve, explain the relationship between velocity, deposition and erosion for various particle sizes. | The faster the water is flowing, the larger the particles that can be transported. | Candidate must focus on ALL FOUR aspects in explanation.<br>• Velocity<br>• Deposition<br>• Erosion<br>• Particle Size |

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| 2.7.3 | Assess TWO possible limitations of the Hjulström curve. | • Does not take the water depth into account.<br>• Does not show that:<br>– sedimentation is caused by flow velocity deceleration<br>– erosion is caused by flow acceleration<br>• Rough estimates – not a linear scale.<br>• Assumes that the river is uniform.<br>• Difficulty to read the graph.<br>• Doesn't speak to volume.<br>• Doesn't speak to flotation load.<br>• Doesn't speak to gradient.<br>• Shape of the land.<br>• Shape of the drainage basin.<br>• Friction of the bed load.<br>• Stage of Development / course of the river.<br>• Channel shape is not accounted for. | The candidate must show a basic understanding of how the HC works and what it doesn't show. |

 

| QUESTION 3 – RURAL AND URBAN SETTLEMENT AND ECONOMIC GEOGRAPHY OF SOUTH AFRICA | | | |
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| **3.1** | **Questions** | **Answer** | **Notes** |
| | State whether the following statements are TRUE or FALSE. Write only the number of the question and whether it is true or false. E.g. 3.1.0 False. | | |
| 3.1.1 | A central place is any settlement that provides goods and services for smaller neighbouring settlements. | True | |
| 3.1.2 | A round settlement often follows features such as roads and / or rivers. | False | |
| 3.1.3 | Filtering is a process whereby social groups move from one residential area to another, leading to changes in the social nature of residential areas. | True | |
| 3.1.4 | A dry point settlement is located where the main advantage is a water supply in an otherwise dry area. | False | |
| 3.1.5 | The zone of transition is found between the built-up area and the countryside, and there is often competition for land use. | False | |
| **3.2** | **Questions** | **Answer** | **Notes** |
| 3.2.1 | | | |
| 3.2.1 (a) | This settlement is known as a / an (isolated farmstead / hamlet / town). | hamlet | |
| 3.2.1 (b) | The physical factor responsible for the choice of site for this settlement is the (flat land / river / valley). | flat land | |
| 3.2.1 (c) | This settlement is (unifunctional / multifunctional / quadfunctional). | unifunctional | |
| 3.2.2 | Name ONE service that is being provided to this settlement. | Electricity<br>Telephone<br>Refuse removal<br>Long drop<br>Sewage<br>Road<br>Storm drain | Power line can be seen in the photograph. |

 

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| 3.2.3 | Discuss TWO issues around service delivery for a settlement like the one in photograph. | • Roads are dirt roads and they are often in poor condition.<br>• Water supply systems are often insufficient or poorly maintained.<br>• The sewerage system often does not function as it should.<br>• No waste removal.<br>• Schools.<br>• Clinics.<br>• Food and shops.<br>• Telecommunication.<br>• Electricity.<br>• Safety and security.<br>• Poor public transport. | • This is a Discuss question so candidate must unpack the concept in detail.<br>• Make allowance for any reasonable and logical answer. |
| **3.3** | **Questions** | **Answer** | **Notes** |
| 3.3.1 | Name TWO factors that could affect land value. | • Access economic activities.<br>• Neighbourhood amenities.<br>• Present and future land use.<br>• Demand and supply function.<br>• Location and transport linkages.<br>• Physical attributes.<br>• Access to utilities.<br>• Location.<br>• Distance and situations in relation to informal settlements.<br>• Distance from factories.<br>• Prestige / status.<br>• Functional Magnetism.<br>• Crime.<br>• History of the area. | Make allowance for any reasonable and logical answer. |
| 3.3.2 | Predict TWO urban issues that could be faced by South African cities by 2050. | • Environmental threats e.g. pollution<br>• Rapid urbanisation, which strains basic infrastructure, coupled with more frequent and extreme weather events linked to global climate change, will exacerbate the impact of environmental threats.<br>• There might be fierce competition for scarce resources such as water, food and energy.<br>• Access to these resources will have to be managed properly and fairly. | This is a very open-ended question due to the fact that it asks the candidate to **predict**. However, each point must have clear detail: |

 

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| | | • Lack of viable technology.<br>• Poor governance.<br>• Corruption.<br>• Ageing population.<br>• Inadequate health-care facilities.<br>• Housing shortages.<br>• Social segregation – Xenophobia<br>• New forms of governance.<br>• Challenges mobility of people within and between urban areas. i.e. public transport.<br>• Traffic congestion.<br>• Loss of community.<br>• Lack of space to expand. (i.e. Land)<br>• Land becoming too expensive for the average person.<br>• Increase in the cost of living.<br>• Overcrowding.<br>• Over population.<br>• Spread of diseases.<br>• Crime and violence.<br>• Aging infrastructure.<br>• Urban decay. | |
| 3.3.3 | Propose THREE sustainable strategies to deal with expanding urban settlements. | • Develop transportation and mobility systems to ease traffic.<br>• Include mass transit public transport.<br>• Effective energy systems.<br>• Invest in renewable sources (solar, wind or hydro).<br>• Environmental protection – greenbelt<br>• Pollution management<br>• Effective waste management.<br>• Public space and land development.<br>• Build effective infrastructure for growing population by building sewage conduits, water pipes, optic fibre and electricity lines; increasing security and fire fighters; and building and staffing local clinics and primary schools.<br>• Spatial equality and social equality.<br>• Provide basic services. | |

 

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| | | • Develop effective, accountable and transparent job creation, informality and entrepreneurship.<br>• Actively promote local economic development by creating employment localities.<br>• Develop structured Informal sector.<br>• Deal effectively with urban conflict, violence and crime.<br>• Deal with social tensions and inequalities.<br>• Densification – new high-rise buildings.<br>• Mixed-use estates.<br>• Smaller homes and properties.<br>• Modest residences for modest lifestyles.<br>• Houseboats: promote sustainability.<br>• Shipping containers – Lower cost housing<br>• Urban renewal.<br>• Promote urban-rural Migrations – telecommute. | |
| **3.4** | **Questions** | **Answer** | **Notes** |
| 3.4.1 | Explain why Limpopo has the highest percentage of informal employment. | • A low-income province with a high population.<br>• Previous homelands.<br>• Breadwinners not in province in major centres.<br>• Lack of Formal employment.<br>• Weak manufacturing centres.<br>• More agriculture – seasonal work.<br>• Limpopo is a border province. Foreign nationals (Botswana, Zimbabwe and Mozambique), when they do not get into formal sector, they are absorbed into informal sector. | Candidate must show the understanding that there is a link between income level and the amount of people who work in the informal sector. |
| 3.4.2 | Suggest TWO reasons why trade makes up 41% of the informal economy. | • Trading in the informal economy has a very low barrier to entry.<br>• It is very easy and cheap to buy a few products.<br>• Set up a makeshift table anywhere and sell your products. | |

 

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| | | • No qualification is needed and there is little to no red tape.<br>• Goods can be moved easily, transportation. | |
| 3.4.3 | Evaluate the importance of female workers to the informal sector of the economy. | • They are often the drivers of the informal economy as they have less access to the formal economy.<br>• Many households are headed by women, so they need to support their dependents.<br>• Many women are single income earners and support the entire family.<br>• Many women are home based to look after families and can work at home (crafts and salons) to bring income.<br>• Females make up a higher proportion of the informal – contribute more.<br>• Traditional gender roles – more woman. | This is an **Evaluate** question so candidate must unpack the concept in detail.<br><br>**Can be explained well in depth.** |
| 3.4.4 | Discuss TWO ways in which informal traders can be empowered to make a meaningful contribution to the South African economy. | • Space for them to operate.<br>• Give support – financial or skills development.<br>• Upskill the people involved.<br>• Allow registration for protections.<br>• Partnering with established businesses.<br>• Grant the same rights and privileges of formal business Loans and capital being provided to small businesses or entrepreneurs.<br>• Provision of facilities to informal traders could provide a more sustainable platform in which business can function.<br>• Provide a connection to the possible marketers and customers.<br>• Help with advertising / marketing | Can be 2 vague answers or listed as single marks |

 

| 3.5 | Questions | Answer | Notes |
|---|---|---|---|
| 3.5.1 | Define the following terms: | | |
| 3.5.1 (a) | Agri-processing | Manufacturing that processes raw materials and intermediate products derived from the agricultural sector.<br>**or**<br>Transforming products that originate from farming. | Candidates are free to develop their own approach to the question and responses will vary. This doesn't have to be a textbook explanation.<br><br>CONCEPT |
| 3.5.1 (b) | Green fields development | Development of land not previously used for residential, commercial or industrial purpose. | |
| 3.5.2 | Explain why South Africa could earn more money by exporting agricultural products in a processed form. | • Higher value of the product.<br>• Benefits link industry such as cans.<br>• More likely to buy product.<br>• Could have lower import taxes.<br>• Creates jobs in the industry.<br>• Beneficiation. | *Explanation* shows an understanding of adding value to a product. |
| 3.5.3 | Classify the economic sector that the Dube iConnect precinct falls under. | Quaternary / Tertiary | This can either be providing IT or as a service in the mind of a candidate. |
| 3.5.4 | List THREE factors that promote industrial development in the KwaZulu-Natal region. | • Two large harbours.<br>• New airport.<br>• IDZ – Richards Bay.<br>• Tourism potential.<br>• Plenty of water – sugar refining and papermaking.<br>• Good transport network links to interior.<br>• Large local market – highest pop / 50% 100 km from Durban.<br>• Good access to Gauteng and overseas markets, especially China, Asia and East Africa.<br>• Large workforce.<br>• Availability of resources, e.g. sugar, milk, fruit, poultry.<br>• Warm climate – Pinetown 15 km / 300 m / flatter land.<br>• Affluent lifestyle – beaches, mountains, game reserves, golf courses.<br>• Demand for goods. | |

 

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| 3.5.5 | List TWO situational factors that can be seen in Figure 14 that determined the location of the Dube Trade Port. | • 10 minutes to Umhlanga.<br>• 30 minutes to Durban centre.<br>• 45 minutes to Durban harbour.<br>• 50 minutes to Dube Automotive.<br>• Along the N2.<br>• 95 minutes to Richards Bay.<br>• 15 minutes to Ballito.<br>• Close to railway route. | They ***must*** use the information from the diagram.<br>They don't have to be specific. |
| 3.5.6 | Explore the importance of the Dube Trade Port development to the economy of KwaZulu-Natal. | • Job creation.<br>• Links industrial development.<br>• More foreign income.<br>• Improved education.<br>• Drives infrastructural development.<br>• Attracts targeted foreign and domestic investments.<br>• Drives industrial development.<br>• Drives backward and forward economic linkages. | This is an **Explore** question so candidate must unpack the concept in detail. |

**Total: 200 marks**