



NATIONAL SENIOR CERTIFICATE EXAMINATION  
NOVEMBER 2021

## **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 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

<b>QUESTION 1 INTEGRATED QUESTION: THE WATERBERG BIOSPHERE AND LEPHALALE</b>				
<b>1.1 Climate terminology</b>				
1.1.1	A measure of the reflectivity of a surface.	F	Albedo	
1.1.2	A line on a map connecting points having the same amount of rainfall.	I	Isohyet	
1.1.3	Polluted air above a city, prevented from rising by an inversion.	H	Pollution Dome	
1.1.4	The temperature to which air must be cooled for water vapour to condense.	D	Dew point	
1.1.5	An elongated area of high atmospheric pressure.	E	Ridge	
<b>1.2 Tropical cyclone</b>				
1.2.1	Identify TWO features in Figure 1 that prove it is a tropical cyclone.	<b>Any TWO of the following</b> <ul style="list-style-type: none"> <li>• Visible Eye</li> <li>• The name "Eloise"</li> <li>• Rain bands</li> <li>• Spiral</li> <li>• Cyclone on the east coast off the continent</li> <li>• Moving westerly</li> <li>• Impact – Causing damage and flooding</li> <li>• Date – it's summer</li> </ul>	Credit must be given for a reasonable and relevant alternative.	
1.2.2	Give ONE piece of evidence that Tropical Cyclone Eloise is in its mature stage.	<b>Any ONE of the following answers</b> <ul style="list-style-type: none"> <li>• It has a clear eye</li> <li>• Clear rain bands</li> </ul>	Credit must be given for a reasonable and relevant alternative.	
1.2.3	Name TWO impacts that Tropical Cyclone Eloise had when it made landfall.	<b>Any TWO of the following answers</b> <ul style="list-style-type: none"> <li>• Strong damaging winds</li> <li>• Heavy disruptive rain</li> <li>• Storms surge</li> <li>• Local flooding of rivers</li> <li>• Coastal flooding</li> <li>• Loss of communication</li> <li>• Loss of life</li> <li>• Infrastructure damage (including road etc.)</li> <li>• Livestock loss</li> <li>• Damage to water and sewage pipes</li> <li>• Damage to crops due to saltwater</li> <li>• Damage to ecosystem and biodiversity</li> </ul>	Credit must be given for a reasonable and relevant alternative.  Max. 1 mark if only one impact is given.  Answers must be clear and not vague one-word answers.	

1.2.4	Describe how typical tropical cyclones form.	<ul style="list-style-type: none"> <li>• They are formed over <b>warm ocean waters</b> near the equator. When warm, moist air over the ocean rises upward from near the surface, a cyclone is formed.</li> <li>• <b>Low pressure</b> draws air from the surrounding warm moist region.</li> <li>• The clouds then start <b>to rotate due to the Coriolis effect</b>.</li> <li>• They then start to move in the <b>Easterly wind belt</b>.</li> <li>• As the wind system rotates with increasing speed, an <b>eye gets formed in the middle</b>.</li> <li>• The centre of a cyclone is very calm and clear with very low air pressure.</li> <li>• Light variable wind on the surface (Could prevent vortex formation)</li> <li>• 5° to 30° latitude link to Coriolis</li> <li>• Large ocean area to draw moisture.</li> </ul>	<p><b>Credit must be given for a reasonable and relevant alternative description.</b></p> <p>They must show a full understanding of how a tropical cyclone forms.</p> <p><b>2 marks</b> for a general description or if there is missing information.</p> <p><b>4 marks</b> for a full and detailed description.</p>	
1.2.5	Identify ONE reason tropical cyclones affect the eastern side of continents.	<p><b>Any ONE of the following answers</b></p> <ul style="list-style-type: none"> <li>• Warm ocean currents on that side of continents</li> <li>• The move from East to west</li> <li>• Tropical oceans</li> <li>• Moving in the easterly wind belt</li> </ul>	<p><b>Credit must be given for a reasonable and relevant alternative.</b></p>	
1.2.6	Explain why tropical cyclones have a larger socio-economic impact on Mozambique than on a country like Japan or the USA.	<ul style="list-style-type: none"> <li>• Moz. is an LEDC</li> <li>• Japan and USA MEDC</li> <li>• Less chance to get a message to people</li> <li>• People's homes more likely to be damaged</li> <li>• Infrastructure damaged easily</li> <li>• Longer to get to regions</li> <li>• Longer to fix broken infrastructure</li> <li>• Less money to repair damage</li> <li>• Fewer chance people have insurance</li> <li>• Moz. already had issues with food security</li> </ul>	<p><b>Credit must be given for a reasonable and relevant alternative explanation.</b></p> <p>They must show a full understanding of the impact of a TC on and MEDC vs LEDC.</p> <p><b>2 marks</b> for a general <b>explanation</b> or if there is missing information.</p> <p><b>4 marks</b> for a full and detailed <b>explanation</b>.</p>	

<b>1.3 Tropical cyclones</b>				
1.3.1	Which province will be most affected by the storm?	Mpumalanga	Knowledge of South Africa	
1.3.2	How much rain is predicted in Lephalale?	• Between 50 and 80 mm	Read directly off the map	
1.3.3	Explain why the storm will have lost most of its energy when it reaches Lephalale.	<ul style="list-style-type: none"> <li>• As the storm moves inland:               <ul style="list-style-type: none"> <li>– Less moisture</li> <li>– No ocean to feed</li> <li>– Friction of the land</li> </ul> </li> </ul>	Credit must be given for a reasonable and relevant alternative explanation.	
1.3.4	How can remote sensing aid in the tracking and studying of tropical cyclones?	<ul style="list-style-type: none"> <li>• Use satellites               <ul style="list-style-type: none"> <li>– to track storms</li> <li>– Show intensity</li> <li>– Track winds</li> <li>– Track rainfall</li> </ul> </li> <li>• Use radar               <ul style="list-style-type: none"> <li>– Rainfall</li> <li>– Wind Speed</li> </ul> </li> <li>• Ocean buoys to measure changes in ocean levels.</li> <li>• Use to study from afar, people not in harm's way.</li> <li>• See the total impact, gain the big picture.</li> <li>• Track the path using computers and images.</li> </ul>	<b>Credit must be given for a reasonable and relevant alternative.</b> Candidates must show an understanding of remote sensing and how it is used in studying Tropical Cyclones.	
<b>1.4 Catchment and river management</b>				
1.4.1	Fluvial true and false			
	State whether the following statements are TRUE or FALSE. Write only the number of the question and whether it is True or False, for example: g False.			
(a)	The Mokolo River has a graded profile.	False		
(b)	The Mokolo Dam is a temporary base level of erosion.	True		
(c)	The Limpopo River is a tributary of the Mokolo River.	False		
(d)	The river system has a high drainage density.	False		
(e)	The drainage pattern for the Mokolo river is dendritic.	True		

1.4.2	Explain the terms			
(a)	Catchment area	The area from which rainfall flows into a river, lake, or reservoir.	<b>Candidates are free to develop their own approach to the question and responses will vary. This does not have to be a textbook explanation.</b>	
(b)	Heavily eutrophied	When a body of water becomes overly enriched with minerals and nutrients that induce excessive algae growth, this process may result in oxygen depletion of the water body after the bacterial degradation of the algae.		
1.4.3	Identify feature A.	Watershed Drainage divide		
1.4.4	Why is feature A not a fixed feature?	This is due to headward erosion that will change the position of the watershed. The concept of abstraction, the changing of the position of the watershed. Could link to river capture. Drainage basin enlarged / reduced.		
1.4.5	Use Figure 3 to determine the stream order of the Mokolo River.	3 <sup>rd</sup> order stream		
1.4.6	Explain the relationship between stream order and ... (a) length of streams. (b) the size of the drainage basin.	<b>Length of streams:</b> The higher the stream order, the longer the stream (vice versa) <b>Drainage basin size:</b> The higher the stream order, the larger the drainage basin (vice versa)	Candidate must show an understanding of the concept.  Answer must be clear to get full 2 marks	
1.4.7	Explain TWO ways in which water catchment and flow of a river system is affected by human activity.	<ul style="list-style-type: none"> <li>• Urban areas are less permeable</li> <li>• More runoff</li> <li>• Less infiltrations</li> <li>• More evaporations</li> <li>• More interception</li> <li>• More stores through dams</li> <li>• Turbidity</li> <li>• Eutrophication</li> <li>• Litter clogged up the channel</li> </ul>	<b>Credit must be given for a reasonable and relevant alternative explanation.</b>  <b>2 marks</b> for a general <b>explanation</b> or if there is missing information.  <b>4 marks</b> for a full and detailed <b>explanation</b> .	
1.4.8	Explain TWO hydrological changes that the Mokolo Dam would have on the river system.	<ul style="list-style-type: none"> <li>• Deposition upstream</li> <li>• Rejuvenation downstream</li> <li>• Siltation at the dam wall</li> <li>• Decrease the volume downstream</li> <li>• Evaporation increased in Lake (larger area)</li> <li>• Change in fog regime</li> </ul>	<b>Credit must be given for a reasonable and relevant alternative explanation.</b>  <b>2 marks</b> for a general <b>explanation</b> or if there is missing information.  <b>4 marks</b> for a full and detailed <b>explanation</b> .	

<b>1.5 Rural settlements</b>				
1.5.1	Use TWO words in the block below to describe the settlement at Zandrivier (labelled B).	Isolated farmstead Commercial farm		
1.5.2	Outline TWO differences between an isolated farmstead and a village.	<b>An isolated farmstead</b> <ul style="list-style-type: none"> <li>• Usually one family</li> <li>• No market or store</li> <li>• The only direct primary activity</li> <li>• No services</li> <li>• Little access to services</li> </ul> <b>Village</b> <ul style="list-style-type: none"> <li>• Larger population</li> <li>• Some access to services</li> <li>• Some services available</li> <li>• Cluster shape</li> <li>• More activities including a store</li> </ul>	<b>Credit must be given for a reasonable and relevant alternative.</b>  Candidates must cover differences in each.	
1.5.3	Identify TWO pieces of evidence that prove there is commercial farming in the area.	<ul style="list-style-type: none"> <li>• Names of farms</li> <li>• Dams</li> <li>• Reservoirs</li> <li>• Evidence of irrigation</li> <li>• Windbreaks</li> <li>• Source: Speak about exporting of produce</li> <li>• Boundaries and fences (1 Mark)</li> <li>• Access by road</li> <li>• A large area of farmland</li> </ul>	<b>Credit must be given for a reasonable and relevant alternative.</b>	
1.5.4	Identify TWO site factors for Vaalwater.	<ul style="list-style-type: none"> <li>• Access to water</li> <li>• Fertile soil</li> <li>• Road</li> <li>• Relief- flat land for agriculture</li> <li>• Close to the river</li> <li>• In the mountains (source)</li> </ul>	<b>Credit must be given for a reasonable and relevant alternative.</b>	
<b>1.6 Urban hierarchies</b>				
1.6.1	Compare the settlements of Marapong and Onverwacht. Use the following subheadings. <ul style="list-style-type: none"> <li>• Road surface</li> <li>• Amount of vegetation</li> <li>• Number of possible visible services</li> </ul>	<b>Road surface</b> <ul style="list-style-type: none"> <li>• Marapong <ul style="list-style-type: none"> <li>– Looks sand no tar</li> <li>– A large number of roads</li> <li>– Unstructured</li> </ul> </li> <li>• Onverwacht <ul style="list-style-type: none"> <li>– Tar and structured</li> </ul> </li> </ul>	<b>Credit must be given for a reasonable and relevant alternative.</b>  <b>2 marks per point</b> if compared well, with clear evidence.	

		<p><b>Amount of vegetation</b></p> <ul style="list-style-type: none"> <li>• Marapong <ul style="list-style-type: none"> <li>– Little to no vegetation</li> <li>– Brown</li> <li>– Visibly brown</li> </ul> </li> <li>• Onverwacht <ul style="list-style-type: none"> <li>– A lot of vegetation and trees</li> <li>– Green parks</li> <li>– Golf course</li> </ul> </li> </ul> <p><b>Number of possible visible services</b></p> <ul style="list-style-type: none"> <li>• Marapong <ul style="list-style-type: none"> <li>– Very few visible</li> <li>– Lower order</li> </ul> </li> <li>• Onverwacht <ul style="list-style-type: none"> <li>– Many visible</li> <li>– Higher-order</li> </ul> </li> </ul>	<p><b>1 mark per point</b> – if comparison is superficial.</p>	
1.6.2	Examine TWO possible reasons for the difference between the two settlements.	<p><b>Marapong</b></p> <ul style="list-style-type: none"> <li>• Informal settlement</li> <li>• Old apartheid settlement</li> <li>• Low-income area</li> <li>• Little to no investment</li> <li>• Little to no development</li> </ul> <p><b>Onverwacht</b></p> <ul style="list-style-type: none"> <li>• Old apartheid white settlement</li> <li>• Formal settlement</li> <li>• High to middle income</li> <li>• More money (income)</li> <li>• More investment</li> <li>• More developments</li> </ul>	<p><b>Credit must be given for a reasonable and relevant alternative.</b></p> <p><b>1 mark</b> per concept for a general discussion or if there is missing information.</p> <p><b>2 marks</b> per concept for a full and detailed discussion.</p> <p>Candidate must NOT just list reasons.</p>	
<b>1.7 Urban hierarchies</b>				
1.7.1	Which ONE of the three businesses has the lowest order of goods?	Checkers		
1.7.2	Why does Capitec Bank have the largest range?	Versus the other business, they would draw their customer from further away to operate.	Candidate must show an understanding of range.	
1.7.3	Why is Wimpy's location based on functional convenience?	Food outlet like Wimpy will choose its position based on their customers' needs. Businesses are found in an area for easy access for the customers.	Candidate must show an understanding of functional convenience.	







<b>1.8 Structure of the economy</b>				
1.8.1	Discuss ONE positive way tourism affects the informal sector.	<ul style="list-style-type: none"> <li>• Grow business</li> <li>• Grow linked businesses</li> <li>• More tourists could lead to more money made in sector</li> <li>• More jobs could be created</li> <li>• Community upliftment</li> <li>• More tax income for government</li> </ul>	<b>Credit must be given for a reasonable and relevant alternative discussion.</b>  1 mark for a general <b>discussion</b> or if there is missing information.  2 marks for a full and detailed <b>discussion</b> .	
1.8.2	Explain TWO ways tourism is used to uplift women within the economy.	<ul style="list-style-type: none"> <li>• More job opportunities</li> <li>• Encourage women to be independent</li> <li>• More encouragement for women education</li> <li>• Younger women entering job market</li> <li>• Image of stereotypical roles changed</li> </ul>	<b>Credit must be given for a reasonable and relevant alternative explanation.</b>  <b>2 marks</b> for a general explanation or if there is missing information.  <b>4 marks</b> for a full and detailed explanation.	

1.8.3	Essay		
<ul style="list-style-type: none"><li>• Please DO NOT tick when marking an essay – this confuses the checkers.</li><li>• Rather, underline valid and appropriate points and use the code system.</li></ul>	<div><div>GEOGRAPHY ESSAY CODES E – Excellent G – Good V – Vague R – Repetition I – Irrelevant F – Fair</div><div>CONTENT: <div><div></div></div>Underline relevant points if correct <div><div></div></div>Circle incorrect points EVIDENCE: ( ) Bracket evidence</div></div>		
1.8.3 You are asked to write a report of the Limpopo provincial government, in which you evaluate economic development in the Lephalale and greater Limpopo region.			
<ul style="list-style-type: none"><li>• Explain how the mines and the power stations will cause rural depopulation.</li></ul>	<ul style="list-style-type: none"><li>• Young people looking for work</li><li>• More opportunities in the area</li><li>• Less jobs in the rural areas</li><li>• More money to be made near infrastructures</li><li>• More social amenities</li><li>• Possible chance of upskilling</li><li>• New educational opportunities</li><li>• Pollution from the mines</li><li>• Better health care is available</li><li>• Better sanitation in urban areas</li></ul>	The candidate can show an understanding of push and pull factors.	
<ul style="list-style-type: none"><li>• Analyse how the game farms could benefit the region socio-economically.</li></ul>	<ul style="list-style-type: none"><li>• Job creation</li><li>• More taxation due to more income</li><li>• More taxation for municipality</li><li>• More conservation of the environment</li><li>• Skills development</li><li>• New educational drives</li><li>• Benefit development of communities</li><li>• Could develop linked industries</li><li>• Foreign investments increase</li></ul>		
<ul style="list-style-type: none"><li>• Describe the importance of the mines and power stations to the economy to Limpopo.</li></ul>	<ul style="list-style-type: none"><li>• Job creation</li><li>• Brings infrastructure to a region</li><li>• Drives linked industries</li><li>• New educational institutions</li><li>• Uplift the skills level</li><li>• New businesses to the region, more jobs</li><li>• Fuel and diesel prices</li><li>• Secondary linked industries</li></ul>		
<ul style="list-style-type: none"><li>• Evaluate the <i>hindrances to economic development</i> that is faced by Limpopo.</li></ul>	<ul style="list-style-type: none"><li>• Poor infrastructure</li><li>• Large unskilled populations</li><li>• Few established large urban areas (Access to fewer markets)</li></ul>		

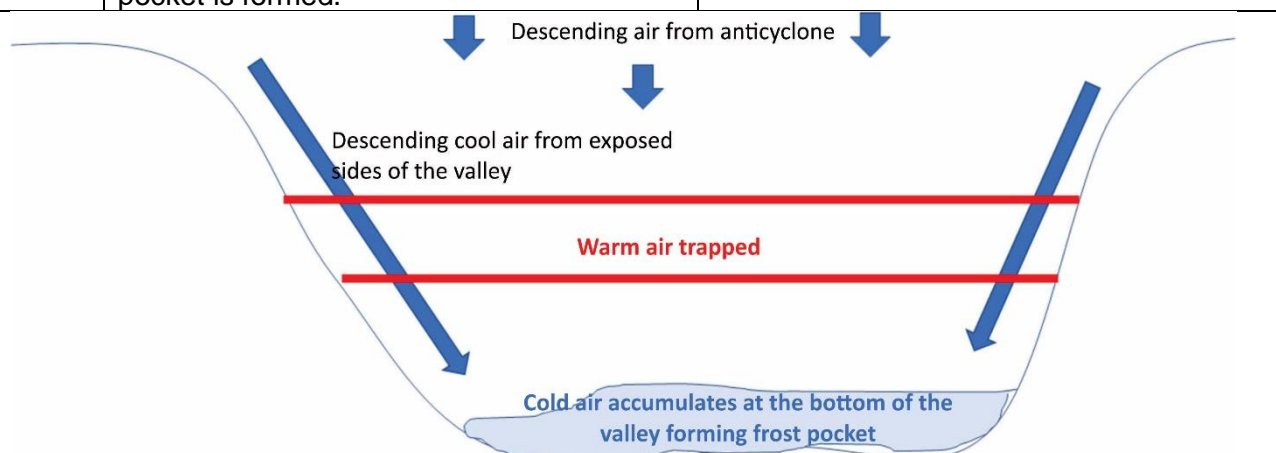
	<ul style="list-style-type: none"><li>• Very few skills and educational development centres</li><li>• Low education level</li><li>• More drive to locate in large urban centre</li><li>• Few industrial areas</li><li>• Poor access to water and resources</li><li>• Underdevelopment during apartheid</li><li>• Lockdowns and COVID 19</li><li>• Rand Values (fluctuations)</li><li>• Climatic limitations – Hot and dry</li><li>• Far from the harbours for export</li><li>• Topography of the area</li><li>• Poor governance</li><li>• Coal non-renewable</li><li>• Water shortages</li><li>• Labour unrest</li><li>• Fluctuations in mineral prices</li><li>• Load shedding</li></ul>	
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Criteria	Level 3 Excellent – Good	Level 2 Satisfactory	Level 1 Poor
<b>Writing skills</b> <ul style="list-style-type: none"> <li>Take into consideration structure and presentation.</li> <li>Use of brief introduction and conclusion.</li> <li>Logical discussion and use of subheadings.</li> </ul> <b>[4 marks allocated to this component]</b>	Suitable introduction and conclusion. Sophisticated, coherent and structured writing. Subheadings and paragraphs have been effectively used. The report is concise, well-structured and succinct. <b>4 marks</b>	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. <b>3 marks</b>	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. <i>1 = must be awarded for any form of written attempt / effort</i> <b>2–0 marks</b>
<b>Content knowledge</b> <ul style="list-style-type: none"> <li>Correct use of geographical terminology and concepts.</li> <li>Adherence to topic and subheadings.</li> </ul> <b>[12 marks allocated to this component]</b>	<ul style="list-style-type: none"> <li>Response thoroughly assesses the relevant content and detailed discussion of the topic.</li> <li>An effective and sustained evaluation with a sound conclusion.</li> <li>Response is well founded in detailed exemplar knowledge and strong conceptual understanding of the topic.</li> <li>Examples used are appropriate and integrated effectively into the response.</li> <li>Good usage of geographical terminology and concepts.</li> <li>An appropriate number of facts presented per subheading.</li> <li><u>Min</u> of 2 points for every sub-heading will earn candidate 10 marks.</li> <li>Extension work will provide a further 2 marks.</li> </ul> <b>12–9 marks</b>	<ul style="list-style-type: none"> <li>Response demonstrates some knowledge and understanding.</li> <li>Some relevant content.</li> <li>Response is broadly evaluative in character,</li> <li>comprising some explanatory or narrative content and a conclusion.</li> <li>Response develops from secure base of knowledge and</li> <li>understanding with the use of examples.</li> <li>An overview / general discussion of key issues.</li> <li>Displays a fair understanding of the topic however displays some inaccuracies or vagueness in some of their discussions.</li> <li>Basic usage of geographical concepts and terminology.</li> <li>60–50% of required facts presented per subheading.</li> <li>1 point per subheading, or 2 points provided and only 2 paragraphs.</li> </ul> <b>8–5 marks</b>	<ul style="list-style-type: none"> <li>Response makes a few general points about the topic.</li> <li>A descriptive response</li> <li>comprising a few simple points. Knowledge is basic and understanding may be poor and lack relevance to the question set. Digression from the topic.</li> <li>Weak grasp of concepts and terminology.</li> <li>Isolate and generic elements of understanding and knowledge.</li> <li>Superficial / poor discussion.</li> <li>Almost no relevant facts / subheading.</li> </ul> <b>4–0 marks</b>
<b>Supporting evidence – analysis and understanding</b> <ul style="list-style-type: none"> <li>The ability to analyse and evaluate the topic is assessed in this category.</li> <li>Reference made to case study material / fact file / source material provided.</li> <li>If appropriate, reference must be made to familiar / local or other examples.</li> </ul> <b>[4 marks allocated to this component]</b>	The candidate can 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. <b>4 marks</b>	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. <b>3 marks</b>	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. <b>2–0 marks</b>

<b>QUESTION 2 CLIMATE, WEATHER AND GEOMORPHOLOGY</b>				
<b>2.1 Subtropical anticyclones and associated weather conditions</b>				
	Study Figure 13 and complete the following questions by selecting the correct answer in each instance. Write the number of the question and the letter corresponding to your answer, for example: 1.1.0 A.			
2.1.1	The highest temperature for Gqeberha on 28 / 03 / 2020 is ... A 20 °C B 25 °C C 27 °C D 30 °C	<b>D</b>		
2.1.2	The highest expected wind speed is... A 34 km / h B 35 km / h C 36 km / h D 37 km / h	<b>C</b>		
2.1.3	The wind being experienced at Gqeberha is known as ... A berg wind. B monsoon. C typhoon. D jet stream.	<b>A</b>		
2.1.4	This wind is formed through... A rising air over the interior. B the low pressure forming over warm water. C air descending the escarpment. D air descending within a valley at night.	<b>C</b>		

2.1.5	<p>A typical weather station for this type of wind is ...</p> <p>A </p> <p>B </p> <p>C </p> <p>D </p>	<b>B</b>		
<b>2.2 Mid-latitude cyclones</b>				
2.2.1	Name the fronts at D and E.	<b>D – Cold Front</b> <b>E – Warm Front</b>		
2.2.2	Name the type of low pressure at F.	<b>F – Coastal Low / Cut-off low</b>		
2.2.3	Write a tweet describing the weather conditions to be expected as front D impacts Cape Town.	<p><b>Tweet / message should include</b></p> <ul style="list-style-type: none"> <li>• Decrease in temperature</li> <li>• Increase in wind speed</li> <li>• Heavy rain / thunderstorms</li> <li>• Cumulonimbus clouds with thunderstorms</li> <li>• Full cloud cover / overcast</li> <li>• Hail</li> <li>• Increase in pressure</li> <li>• Change in wind direction – backing</li> <li>• Decrease in humidity</li> <li>• Refers to the weather stations:</li> <li>• 13-19 temperature</li> <li>• 9 dew point</li> <li>• ¾ cloud cover</li> <li>• Nw / WNW wind</li> </ul>	<p>The Tweet must contain at least TWO weather conditions associated with MLC and Cold fronts.</p> <p>Must not be long and must be to the point. Reward must be given for clear information.</p> <p>2 Marks if too long or vague in description. 2 Marks MAX if only on weather condition describes or mentioned. 4 Marks if description is short and clear.</p>	

<b>2.3 Subtropical anticyclones and associated weather conditions</b>				
2.3.1	Name the weather systems at G and H.	<b>G</b> – Kalahari / Interior / Continental High Pressure / Ridge of High <b>H</b> – Low pressure trough / Thermal low / line thunderstorms / interior low pressure / moisture front.		
2.3.2	Identify the seasons in Figures 12 and 13.	<b>Figure 12</b> – Winter <b>Figure 13</b> – Summer		
2.3.3	Provide ONE reason for your answer in Question 2.3.2.	<b>Figure 12</b> <ul style="list-style-type: none"> <li>• Clear conditions</li> <li>• High pressure over the land</li> <li>• Frost over the interior</li> <li>• A ridge of High pressure</li> <li>• Land is dry</li> <li>• Temperatures are low</li> </ul> <b>Figure 13</b> <ul style="list-style-type: none"> <li>• Clouds overland</li> <li>• Possible thunderstorm</li> <li>• Low pressure over the interior</li> <li>• Line thunderstorms</li> </ul>	<b>Credit must be given for a reasonable and relevant alternative.</b>	
2.3.4	Explain why there is a lack of cloud cover in figure 12.	<ul style="list-style-type: none"> <li>• The anti-cyclone over the land</li> <li>• Lack of moisture</li> <li>• Cold, sinking air</li> <li>• Air warms adiabatically</li> <li>• Inversion layer blocking air movement over the escarpment</li> </ul>	<b>Credit must be given for a reasonable and relevant alternative.</b>	

2.4 Valley climate				
2.4.1	Name the season in which a frost pocket is most likely to occur.	Winter		
2.4.2	Draw a diagram to explain how this frost pocket is formed.			
			1 mark – descending air 1 mark – for showing the accumulation of cold air 2 marks – for the drawing	
2.5 Fluvial processes				
2.5.1	Select the terms in brackets that will make the statements TRUE. Write only the question number and the corresponding term, e.g. (d) river.			
(a)	The Diep river (I) is known as the (captive / <b>misfit</b> / <b>captor</b> ) river.	Misfit River		
(b)	The Kouga river (J) is known as the (captive / <b>misfit</b> / <b>captor</b> ) river.	Captor		
(c)	The feature labelled <b>K</b> is known as the (elbow <b>of capture</b> / <b>wind gap</b> / <b>knickpoint</b> ).	Elbow of capture		
2.5.2	Suggest TWO characteristics that the Kouga River would need to capture another river.	<ul style="list-style-type: none"><li>• Increase volume</li><li>• Increase gradient</li><li>• More rainfall adding volume (change in climate)</li><li>• Change in rock structure (hardness)</li><li>• Rejuvenation</li></ul>	Credit must be given for a reasonable and relevant alternative.	



2.6 Fluvial processes				
2.6.1	Using evidence from the photograph, prove the following true.			
(a)	The river is in the <i>upper course</i> .	<ul style="list-style-type: none"> <li>• Steep valley</li> <li>• V shaped valley</li> <li>• Limited infiltration</li> <li>• Hardrock</li> <li>• Steep gradient</li> <li>• Thunderstorms</li> <li>• Narrow channel</li> <li>• Little water in the channel</li> <li>• Mostly rock on the bed</li> </ul>		
(b)	The river is carrying mostly <i>bedload</i> .	Mostly rocks and boulders		
(c)	At this point, the river's most likely erosional process is <i>attrition</i> .	Rocks on the bed Small particles bumped against one another, becoming rounder.		
2.6.2	Why is flash flooding likely to happen at this point of the river?	<ul style="list-style-type: none"> <li>• Steep side valley</li> <li>• Narrow channel</li> <li>• Water collects in narrow gorge</li> </ul>	Credit must be given for a reasonable and relevant alternative.	
2.6.3	How does the channel size and shape affect stream discharge?	<b>Size</b> The wider the channel the more discharge A u-shaped valley allows more water to flow Evaporation <b>Shape</b> This will affect the amount of friction	Credit must be given for a reasonable and relevant alternative.  To be awarded full marks the candidate must explain both aspects.	
2.7 Fluvial processes				
2.7.1	What is the difference between an oxbow lake and a meander scar?	<b>ANY ONE of the following</b> <ul style="list-style-type: none"> <li>• Oxbow lake has water</li> <li>• Oxbow lake will have base flow</li> <li>• Meander scar has no water</li> </ul>	Credit must be given for a reasonable and relevant alternative.	
2.7.2	Did river erosion or deposition initially form the oxbow lake?	Erosion	The river's meander becomes longer, and the neck becomes narrower until it is cut off at the neck and the lake is formed.	

2.7.3	Examine the role that erosion and deposition has on the formation of floodplains and meanders.	<ul style="list-style-type: none"> <li>• Floodplains and meanders involve both erosion and deposition.</li> <li>• <b>Floodplains</b> result of deposition at times of high discharge when the flow exceeds bank full discharge.</li> <li>• This is dependent on erosion upstream and transportation downstream of bedload and suspended load.</li> <li>• Rivers meander across floodplains eroding the valley sides over time.</li> <li>• With changing conditions, rivers may erode into floodplains, creating river terraces.</li> <li>• Both erosion and deposition are essential in different parts of the meander curve with erosion on the outside of the bend and deposition on the inside.</li> <li>• Meanders formed by erosion and deposition as the river seeks to flow efficiently and minimise energy loss.</li> </ul>	<p><b>Credit must be given for a reasonable and relevant alternative.</b> The response should be on both erosional and depositional processes.</p> <p><b>2 marks</b> for a general explanation or if there is missing information.</p> <p><b>4 marks</b> for a full and detailed explanation.</p>	
2.7.4	List TWO economic benefits of a floodplain.	<ul style="list-style-type: none"> <li>• Floodplains act as natural filters</li> <li>• Flat land to build</li> <li>• Fertile soil to farm</li> <li>• Recreational industries: Many outdoor recreational activities – like fishing, hunting, camping, hiking, wildlife watching and boating – are made possible by or greatly enhanced by the natural processes of rivers and healthy floodplains.</li> <li>• Feeds baseflow / infiltration</li> <li>• Prevents flooding</li> </ul>	<p><b>Credit must be given for a reasonable and relevant alternative.</b></p>	

2.7.5	Examine TWO impacts of agriculture on a floodplain and river system.	<ul style="list-style-type: none"> <li>• Draws water from the system lowering the levels of the water.</li> <li>• Increased groundwater level in irrigated areas.</li> <li>• Decreased water flow downstream of sourced rivers and streams.</li> <li>• Increased evaporation in irrigated areas.</li> <li>• Increased evaporation in irrigated areas can cause instability in the atmosphere.</li> <li>• Increase levels of rainfall downwind of the irrigation.</li> <li>• Cause siltation.</li> <li>• Causes Eutrophication / pesticides.</li> <li>• Overusage of landscape.</li> <li>• Incorrect farming methods.</li> </ul>	<p><b>Credit must be given for a reasonable and relevant alternative.</b></p> <p>2 marks for a general explanation or if there is missing information.</p> <p>4 marks for a full and detailed explanation.</p>	
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<b>QUESTION 3 RURAL AND URBAN SETTLEMENT AND ECONOMIC GEOGRAPHY OF SOUTH AFRICA</b>				
<b>3.1 Settlement terminology</b>				
Choose a term from COLUMN A that matches the description in COLUMN B. Write only the letter next to the question number in the ANSWER BOOK, for example 3.1.0. H.				
3.1.1	Blight	<b>G</b>	Run-down and abandoned buildings.	
3.1.2	Greenbelt	<b>A</b>	An area in cities to stop development and the expansion of a city.	
3.1.3	Suburbanisation	<b>E</b>	When people, factories, offices and shops move out from the central cities, and into the suburbs.	
3.1.4	Market Town	<b>B</b>	A town provides shopping and service centres for the surrounding region.	
3.1.5	Bridging Point	<b>F</b>	A settlement where a river can be crossed and becomes a trading centre.	
<b>3.2 Urban settlement issues</b>				
3.2.1	Explain why fires are such a major threat in informal settlements.	<ul style="list-style-type: none"> <li>Population density</li> <li>Material used to build home</li> <li>Methods to cook and keep warm</li> <li>No adequate fire services</li> <li>No control of growth</li> <li>No safety infrastructure</li> <li>Spreads easily</li> <li>Distance to emergency services</li> <li>No funds to recover</li> <li>Accessibility issues for services</li> </ul>	<b>Credit must be given for a reasonable and relevant alternative.</b>	
3.2.2	How does rural urban migration influence the growth of informal settlements in South Africa?	<ul style="list-style-type: none"> <li>It will increase the size</li> </ul>	<b>Credit must be given for a reasonable and relevant alternative.</b>	
3.2.3	Evaluate TWO reasons why it is challenging to solve the problems experienced in informal settlements.	<ul style="list-style-type: none"> <li>Lack of funding</li> <li>Corruption</li> <li>Not dealing with the past</li> <li>Infrastructure too difficult</li> <li>No economic hubs in area</li> <li>Lack of taxes being paid</li> <li>Organically developed (no planning)</li> <li>Fewer functions for jobs</li> <li>As people moved out, new move-in</li> <li>Difficult to break the poverty cycle</li> <li>Densely populated, any problems difficult to solve</li> </ul>	<b>Credit must be given for a reasonable and relevant alternative.</b>  <b>1 mark</b> per point for a general explanation or if there is missing information.  <b>2 marks</b> per point for a full and detailed explanation.	

<b>3.3 Urban settlement issues</b>				
3.3.1	Explain invasion and succession.	This is when the <b>function</b> of a piece of land changes from one zoning to another. Change of one land use and replace by another, e.g. residential to commercial.	Candidates are free to develop their own approach to the question and responses will vary. This does not have to be a textbook explanation.	
3.3.2	Why are the land values so high within the zone of transition, when the buildings look run down?	The buildings are close to the CBD so they are expansive land values, but the building will probably be torn down so the building has no value and is left to get run down	<b>Credit must be given for a reasonable and relevant alternative.</b>	
3.3.3	Discuss the impact that <i>gentrification</i> has on the current residents of a renewed area.	<ul style="list-style-type: none"> <li>• The land value will increase along with rent and rates;</li> <li>• this will make the area too expensive for some people to stay.</li> <li>• Improve the area overall</li> <li>• High standard of living.</li> </ul>	<b>Credit must be given for a reasonable and relevant alternative.</b>	
<b>3.4 Urban structure and patterns</b>				
3.4.1	Explain the following terms:			
(a)	New town	A <b>planned urban centre</b> created in an undeveloped or rural area, especially with government sponsorship. Built from scratch.		
(b)	All-inclusive urban node	An area that has many different functions in one space. Like mixed used development. (Source can be used to get the answer.)	Candidates are free to develop their own approach to the question and responses will vary. This does not have to be a textbook explanation.	
(c)	Business Estate	A secure and access controlled gated business / office block. Group of offices or businesses		
3.4.2	Provide TWO situational factors that would attract development in this area.	<ul style="list-style-type: none"> <li>• Near the N2</li> <li>• M41</li> <li>• Close to Umhlanga (other suburbs)</li> <li>• Close to Gateway shopping centre</li> <li>• Approximately 17 kilometres from the CBD</li> <li>• 7 kilometres south of King Shaka</li> <li>• Allow linkage to harbour</li> </ul>		

3.4.3	Explore TWO benefits this development would have for the Umhlanga region.	<ul style="list-style-type: none"> <li>• More jobs</li> <li>• Skills development</li> <li>• Infrastructure development</li> <li>• Development of linked businesses</li> <li>• More functions are available to residents</li> <li>• Entertainment opportunities</li> <li>• Income – foreign exchange attracts investments</li> </ul>	<b>Credit must be given for a reasonable and relevant alternative.</b>  2 marks for a general explanation or if there is missing information.  4 marks for a full and detailed explanation.	
<b>3.5 Economic terminology</b>				
Choose a term from COLUMN A that matches the description in COLUMN B. Write only the letter next to the question number in the ANSWER BOOK, for example 3.4.0 H.				
3.5.1	Indirect taxation	H	The levying of tax on goods and services rather than income or profits.	
3.5.2	Commodity	C	A comparatively homogeneous product that can typically be bought in bulk.	
3.5.3	Deregulation	E	Removing legal restrictions on the amount of competition, the sorts of business done, or the prices charged within a particular industry.	
3.5.4	Footloose industries	A or F	Located all over the geographical area without concentration in one particular area.	
3.5.5	Raw material-oriented	G	Located close to the source of raw materials as it produces perishable goods.	
<b>3.6 Agriculture</b>				
3.6.1	Name ONE province where sugar is grown in South Africa.	<b>Any ONE of the following</b> <ul style="list-style-type: none"> <li>• KZN</li> <li>• Eastern Cape</li> <li>• Mpumalanga</li> </ul>		
3.6.2	Using sugar as your example, explain how the value chain works in industries.	<ul style="list-style-type: none"> <li>• Sugar is farmed – then is processed – then packaged – then sold</li> <li>• Full change of business activities that support changing sugar cane to finished product</li> </ul>	Candidate must show an understanding of the concept of the value chain and how it links to a product.	

3.6.3	Name TWO linked industries associated with the production of sugar.	<ul style="list-style-type: none"> <li>Any farming machinery</li> <li>Irrigation products</li> <li>Fertilisers</li> <li>Pesticide manufacturing</li> <li>Transportation of products</li> <li>Packaging</li> <li>Processing</li> <li>Food Processing &amp; beverage Baking</li> <li>Medical</li> <li>Biofuels</li> </ul>	<p><b>Credit must be given for a reasonable and relevant alternative.</b></p> <p><b>Don't just reward for giving industries. There must be a clear link to sugar.</b></p>	
3.6.4	Provide ONE possible environmental and ONE political factor to explain the low exports of refined sugar in 2015 / 16 and 2016 / 17.	<p><b>Environmental</b></p> <ul style="list-style-type: none"> <li>Drought</li> <li>Fires</li> <li>El Nino</li> <li>Climate change</li> </ul> <p><b>Political</b></p> <ul style="list-style-type: none"> <li>Economic downturn</li> <li>Exchange rate</li> <li>Land reform</li> <li>Sugar tax</li> <li>Low productivity</li> <li>Labour unrest</li> </ul>	<p><b>Credit must be given for a reasonable and relevant alternative.</b></p>	
3.6.5	Explain ONE economic factor that would affect the attempts to increase agricultural production, like sugar?	<ul style="list-style-type: none"> <li>Taxation</li> <li>Currency rate and fluctuation</li> <li>Labour relations</li> <li>Export duties</li> <li>Global economy</li> <li>Government policies (e.g., land tenure, marketing, animal welfare, labour relations)</li> <li>International trade agreements</li> <li>Public opinion and concerns</li> </ul>	<p><b>Credit must be given for a reasonable and relevant alternative.</b></p> <p>1 mark for a general explanation or if there is missing information.</p> <p>2 marks for a full and detailed explanation.</p>	

<b>3.7 Strategies for industrial development</b>				
3.7.1	List TWO factors that promote and TWO factors that limit economic development in KZN.	<p><b>Promote:</b></p> <ul style="list-style-type: none"> <li>• Plenty water – sugar refining and paper-making</li> <li>• Good transport network links to interior</li> <li>• Large local market – highest pop / 50% 100km from Durban</li> <li>• Close to Gauteng and overseas markets, esp. China, Asia and E. Africa</li> <li>• Large workforce / labour</li> <li>• A port</li> <li>• Resources e.g. sugar, milk, fruit, poultry</li> <li>• Warm climate – Pinetown 15km / 300m / flatter land</li> <li>• Affluent lifestyle – beaches, mountains, game reserves, golf courses</li> <li>• Gateway for trade – imported and exported commodities.</li> </ul> <p><b>Limit</b></p> <ul style="list-style-type: none"> <li>• High Humidity</li> <li>• Cost of land</li> <li>• Rolling topography</li> <li>• Unskilled labour force</li> <li>• Load shedding</li> <li>• Land expropriation</li> <li>• Energy Supply from Vryheid and Mpumalanga</li> <li>• Labour unrest</li> <li>• Heath issues of labour</li> </ul>	<p><b>Credit must be given for a reasonable and relevant alternative.</b></p> <p>Candidate can provide a list; however, one worded answer may be too vague, they must relate to the question</p>	



3.7.2	Explain ONE advantage that may result from industrial agglomeration.	<ul style="list-style-type: none"> <li>• Productivity spill overs</li> <li>• Functional magnetism</li> <li>• Informal business and economy established</li> <li>• Labour force may have more access to jobs</li> <li>• Easier to set up infrastructure</li> <li>• Lower transport costs</li> <li>• Shared facilities and services</li> </ul>	<p><b>Credit must be given for a reasonable and relevant alternative.</b></p> <p>1 mark for a general explanation or if there is missing information.</p> <p>2 marks for a full and detailed explanation.</p>	
3.7.3	Analyse TWO ways in which transport infrastructure influences the location of economic activity in KZN.	<ul style="list-style-type: none"> <li>• Close to harbour to export</li> <li>• Close to airport</li> <li>• Railway access</li> <li>• Road access</li> <li>• How quickly they can get goods to market</li> <li>• Industries still prefer to locate on growth axes such as motorways, major rivers and coastal locations</li> <li>• Industrial development along transport corridors</li> </ul>	<p><b>Credit must be given for a reasonable and relevant alternative.</b></p> <p>1 mark per concept for a general analysis or if there is missing information.</p> <p>2 marks per concept for a full and detailed analyses.</p> <p>Can be one type of transport with 2 impacts Or Two different types of transport.</p>	

**Total: 200 marks**