



JENN

Training and Consultancy

The path to enlightened education

SUBJECT: GEOGRAPHY

GRADE 12

TEACHER AND LEARNER REVISION ACTIVITIES

Topic 1

CLIMATOLOGY

Topic2

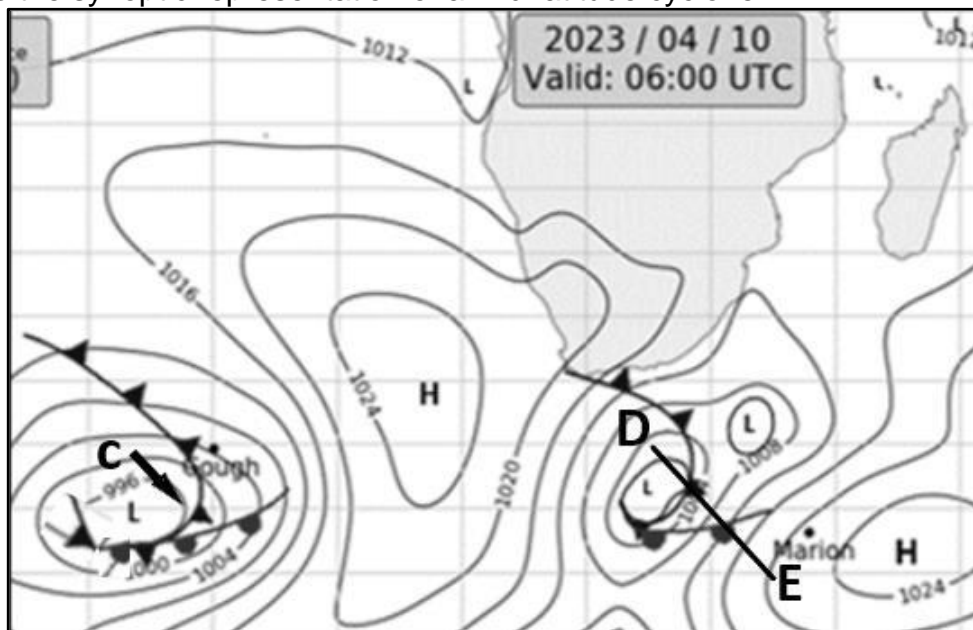
GEOMOPHOLOGY

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Activity 1.1 Midlatitude cyclones

Refer to the synoptic representation of a mid-latitude cyclone.



- | | | | |
|-------|--|-------|-----|
| 1.1.1 | Which season is represented by the synoptic weather map? | (1x1) | (1) |
| 1.1.2 | Give evidence from the synoptic weather map to support your answer to QUESTION 1.1.1. | (1x2) | (2) |
| 1.1.3 | In which stage of development is the mid-latitude cyclone marked C on the synoptic weather map? | (1x2) | (2) |
| 1.1.4 | Provide evidence from the synoptic weather map to support your answer to QUESTION 1.1.3. | (1x2) | (2) |
| 1.1.5 | Draw and label a cross section along line D and E on the synoptic weather map. | (4x1) | (4) |
| 1.1.6 | Explain why there are differences between cloud types associated with fronts along line D and E on the synoptic weather map? | (2x2) | (4) |

Activity 2 Refer to the extract below on mid-latitude cyclones.

Wind, rain warning issued for Western Cape as more than 6 000 residents deal with flooding as a result of the expected cold front: 29 June 2021.

Cebelihle Mthethwa

The SA Weather Service (SAWS) has warned of gale force winds, with possible gusts of 100km/h over parts of the Northern, Western and Eastern Cape from Tuesday evening, as well as disruptive rainfall for Cape Town and the Cape Winelands.

Anton Bredell, Western Cape MEC for local government, environmental affairs and development planning, said there was a storm warning of Orange level 8, to indicate the severity of the wind, which could be expected until Thursday.

"The SAWS warns that strong to gale north-westerly winds, with intense gusts (100 to 140 km/h), can be expected over the interior of the province, as well as along the coastal regions between Alexander Bay and Saldanha," he said in a statement.

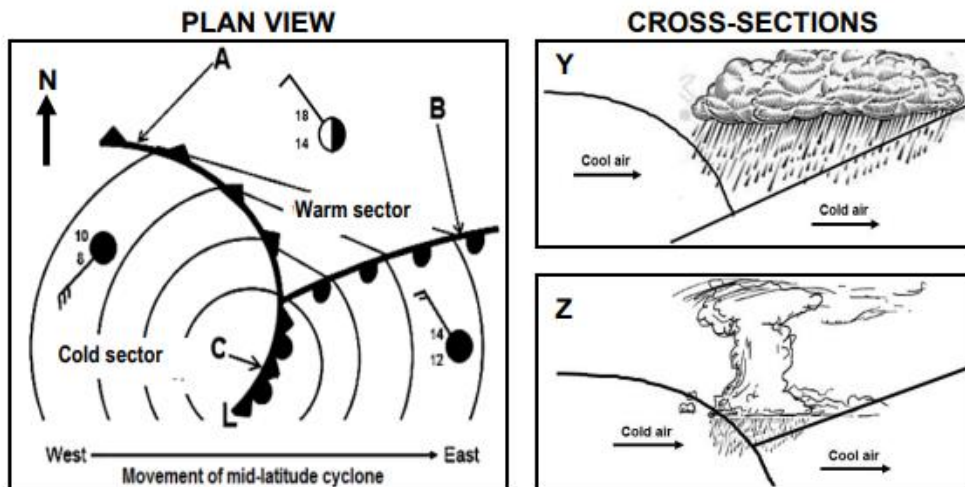
"Travelling around the province over the next two days will be increasingly difficult and certain vehicles may be at risk of falling over as result of crosswinds. This is a concern on all major motorways, including the N1, N7 and N14." Bredell says conditions at sea and in smaller harbours may be similarly challenging and dangerous. "We urge that people take precautionary measures and in case of emergency, reach out to the disaster response teams who remain on standby."

As winter storms and heavy rains continue to batter (strike repeatedly) Cape Town, around 6 300 people have been affected by localised flooding.

[Adapted from <https://www.news24.com> › news24 › southafrica › news]

- | | | | |
|-------|--|-------|-----|
| 1.2.1 | Name the season referred to in the extract. | (1x1) | (1) |
| 1.2.2 | Quote a reason from the heading of the extract for the strong winds and flooding. | (1x1) | (1) |
| 1.2.3 | According to the extract, why will it be difficult to move around the province? | (1x1) | (1) |
| 1.2.4 | How could the strong to gale north-westerly winds, affect the coastal regions between Alexander Bay and Saldanha? | (2x2) | (4) |
| 1.2.5 | Why would an estimated 6 300 people be affected by localised flooding despite being issued with warnings. | (2x2) | (4) |
| 1.2.6 | Suggest TWO measures, (beside warnings) which the authorities in the Western Cape could implement to reduce the negative impact of the cold front. | (2x2) | (4) |

Activity 1.3 Refer to the sketches below on a mid-latitude cyclone



- 1.3.1 Name the wind belt that causes the easterly movement of the mid-latitude cyclone (1x1) (1)

Refer to the plan view.

- 1.3.2 Identify front **A**. (1x1) (1)

- 1.3.3 Which ONE of fronts **A** or **B** is moving faster? (1x1) (1)

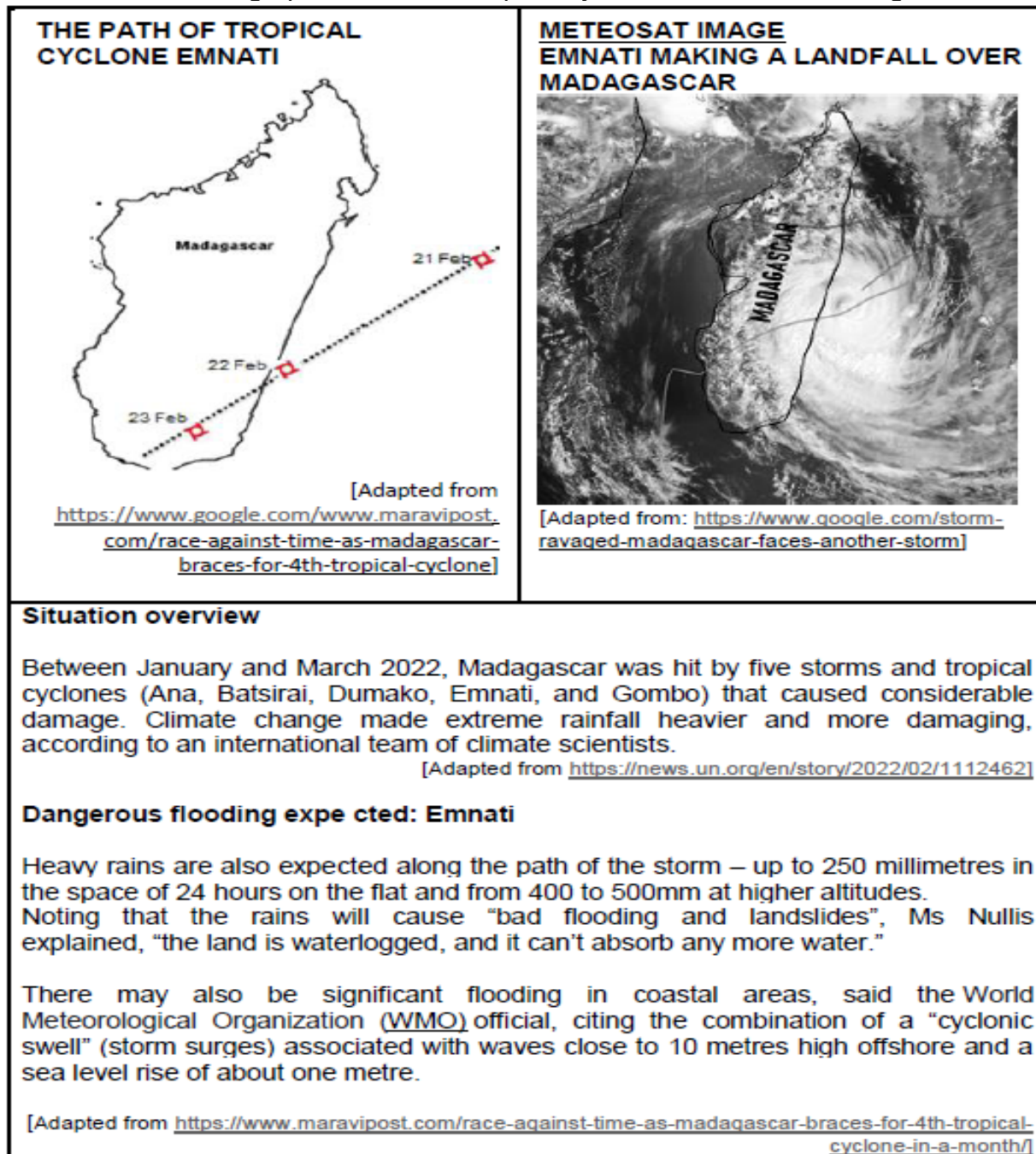
- 1.3.4 Give a reason for your answer to QUESTION 1.3.3. (1x2) (2)

- 1.3.5 Give evidence from the sketch that the mid-latitude cyclone is found in the Southern Hemisphere. (1x2) (2)

Refer to the cold front occlusion **C** and the cross-sections.

- 1.3.6 a. Which ONE of the cross-sections **Y** or **Z** represents the cold front occlusion at **C**? (1x2) (2)
- b. Give evidence that **C** is a cold front occlusion. (1x2) (2)
- c. Explain how the cold front occlusion developed. (2x2) (4)

2.1 Refer to the infographic below on Tropical cyclone Emnati over Madagascar.



Refer to the path of Tropical Cyclone Emnati.

- | | | | |
|------------------------|---|-------|-----|
| 2.1.1 | In which direction is Tropical cyclone Emnati moving? | (1x1) | (1) |
| 2.1.2 | Give a date on which Tropical cyclone Emnati made landfall. | (1x1) | (1) |
| Refer to the meteosat. | | | |
| 2.1.3 | What happens to Tropical cyclone Emnati as it makes landfall? | (1x1) | (1) |
| 2.1.4 | Give a reason for your answer to QUESTION 2.1.3.
Refer to the extract. | (1x2) | (2) |

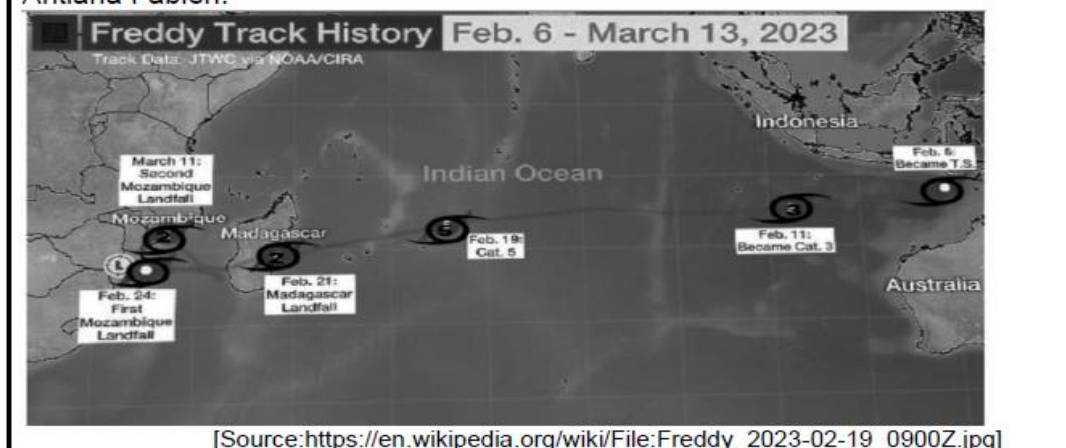
2.1.5 Name the first and last tropical cyclone to strike Madagascar. (2x1) (2)

2.1.6 In a paragraph of approximately EIGHT lines, explain the negative impact of flooding on the natural (physical) environment in Madagascar. (4x2) (8)

2.2 Refer to the infographic on tropical cyclone Freddy.

DATE	CATEGORY	Very Intense Tropical Cyclone Freddy was an exceptionally long-lived, powerful, and deadly storm that traversed the southern Indian Ocean for more than five weeks in February and March 2023. Freddy is both the longest-lasting and highest-ACE-producing tropical cyclone ever recorded worldwide. It was the fourth named storm of the 2022–23 Australian region cyclone season, and the second very intense tropical cyclone of the season "It's a dry cyclone compared to Batsirai, so it brought fewer rains, but the winds were stronger, this is why infrastructure was badly affected," The wind is destructive, South Africa be on alert warning from risk management senior official Faly
6 FEB 2023	Category ONE	
9 FEB 2023	Category ONE	
12 FEB 2023	Category TWO	
15 FEB 2023	Category FOUR	
18 FEB 2023	Category FOUR	
21 FEB 2023	Category TWO	
24 FEB 2023	Category TWO	
01 MAR 2023	Tropical disturbance	
05 MAR 2023	Category THREE	
11 MAR 2023	Category TWO	

Aritiana Fabien.



2.2.1 How many cyclones occurred before Freddy in the Australian region? (1x1) (1)

2.2.2 According to the extract why is tropical cyclone Freddy considered a historical tropical cyclone? (1x1) (1)

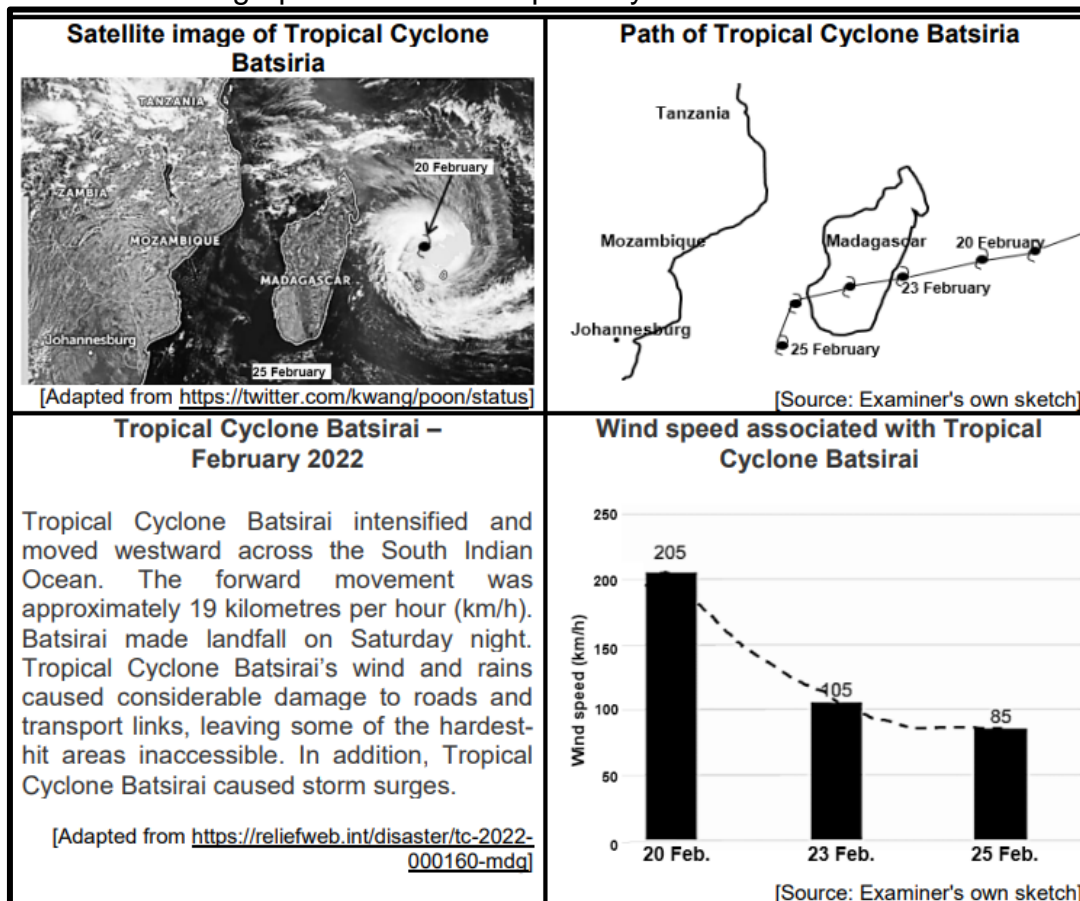
2.2.3 Refer to the extract. Why was tropical cyclone Freddy known as a dry cyclone? (1x1) (1)

2.2.4 Why were people in South Africa, affected by tropical cyclone Freddy, warned to take precautions. (1x2) (2)

2.2.5 Explain why tropical cyclone Freddy was downgraded to category two on 21 February 2023. (1x2) (2)

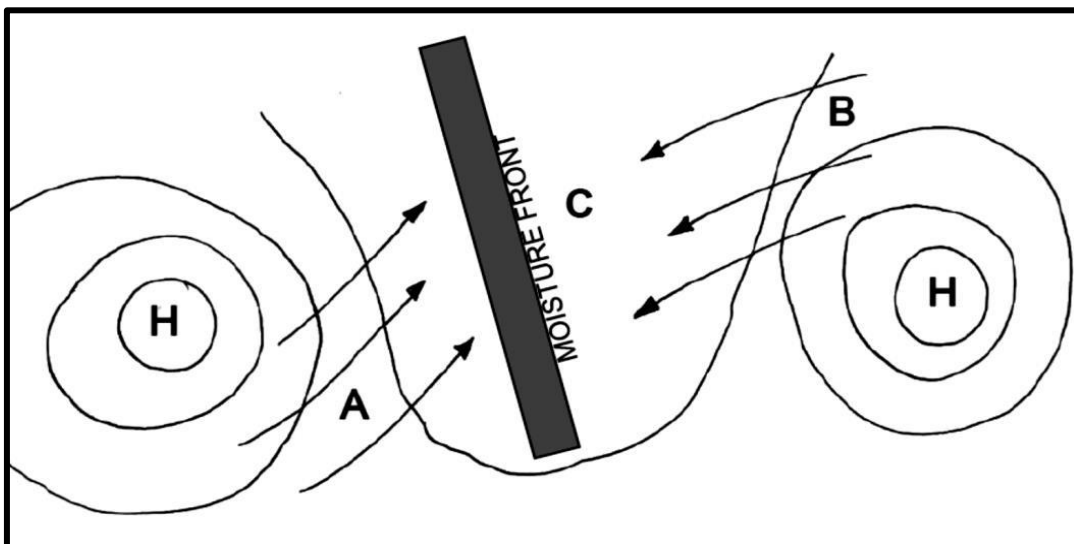
2.2.6 In a paragraph of approximately EIGHT line, explain the physical impact of tropical cyclone Freddy on the coastal area of Mozambique. (4x2) (8)

2.3 Refer to the infographic below on Tropical Cyclone Batsirai.



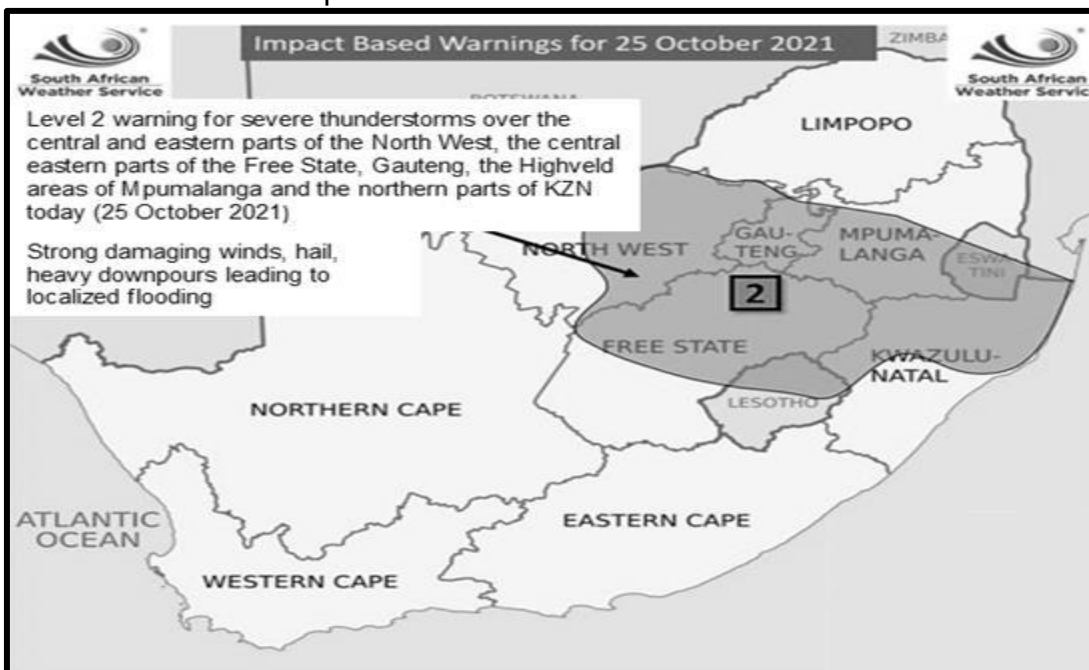
- 2.3.1 Give the date on which Tropical Cyclone Batsirai reached the mature stage. (1x1) (1)
- 2.3.2 According to the infographic, Tropical Cyclone Batsirai moved westward across the South Indian Ocean. Give ONE reason for this movement. (1x2) (2)
- 2.3.3 Suggest TWO reasons for the large decrease in wind speed between 20 and 25 February 2022. (2x2) (4)
- 2.3.4 How could storm surges negatively impact the physical environment on the east coast of Madagascar? (2x2) (4)
- 2.3.5 Explain the importance of monitoring tropical cyclones like Batsirai for Madagascar. (2x2) (4)

3.1 Refer to the sketch below on line thunderstorms.

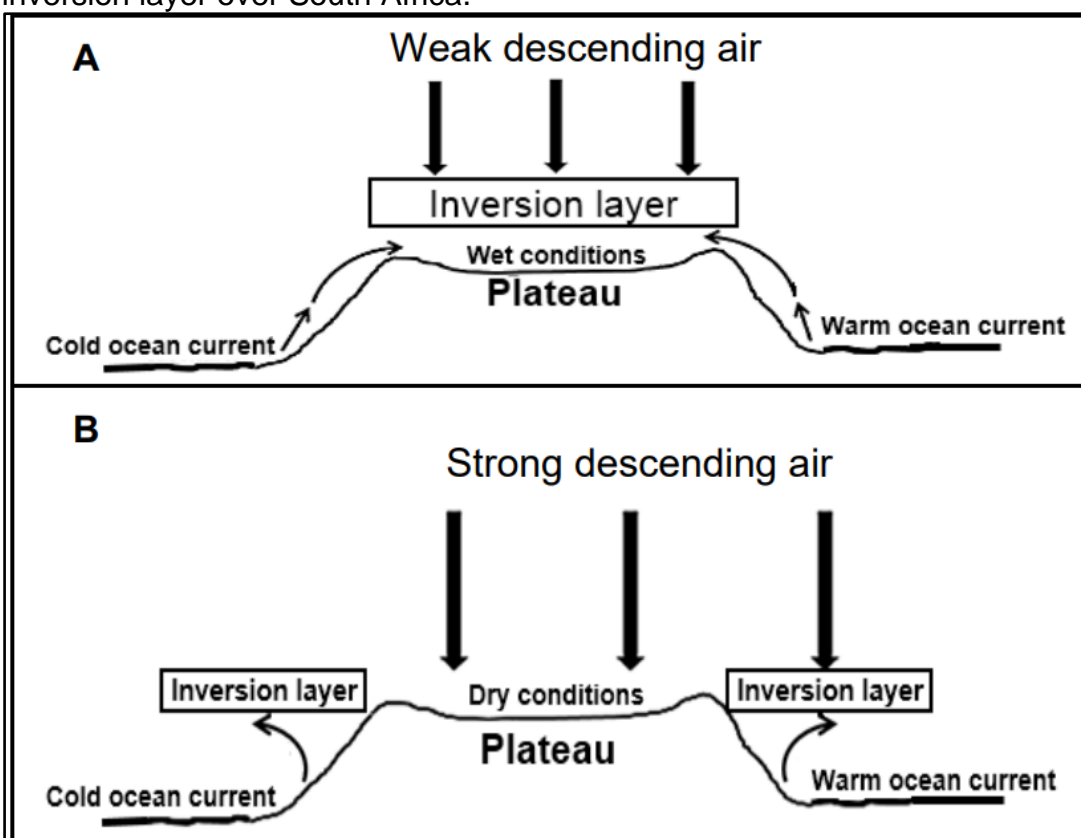


- | | | | |
|-------|---|-------|-----|
| 3.1.1 | What are line thunderstorms? | (1x2) | (2) |
| 3.1.2 | How do line thunderstorms differ from general thunderstorms experienced over South Africa? | (1x1) | (1) |
| 3.1.3 | Explain the significance of the wind B in the formation of line thunderstorms | (2x2) | (4) |
| 3.1.4 | Draw a weather symbol for area C indicating cloud cover and wind direction. | (2x1) | (2) |
| 3.1.5 | How would line thunderstorms negatively impact the soil and the aesthetic appeal of area C? | (3x2) | (6) |

3.2 Refer to the sketch map and the extract below..



- 3.2.1 Identify TWO provinces that received level 2 warnings for severe thunderstorms. (2x1) (2)
- 3.2.2 Why are these provinces (answer to QUESTION 3.2.1) vulnerable (at risk) to line thunderstorms? (1X2) (2)
- 3.2.3 Describe the moisture content of the winds which are responsible for the formation of line thunderstorms. (2X1) (2)
- 3.2.4 Draw a rough sketch to represent the development of line thunderstorms, indicating the direction of winds and a moisture front. (3X1) (3)
- 3.2.5 Explain how the weather conditions expected over the interior of South Africa will negatively affect farming, especially in the Free State (3X2) (6)
- 3.3 Refer to the sketches below showing the changes in the position of the inversion layer over South Africa.



- 3.3.1 Identify the season illustrated in sketch A. (1X1) (1)
- 3.3.2 Give a reason for your answer to QUESTION 3.3.1. (1X2) (2)
- 3.3.3 Identify TWO factors, visible in sketch B, which influence the climate of South Africa. (2X1) (2)
- 3.3.4 Explain the role played by descending air in the development of the inversion layer. (1X2) (2)

- 3.3.5 In a paragraph of approximately EIGHT lines, describe how the position of the inversion layer in sketches **A** and **B** influences the amount of rainfall in the interior of South Africa. (4X2) (8)

- 3.4 Read the blog (journal entry) in FIGURE 2.4 based on South African berg winds

BERG WINDS IN KWAZULU-NATAL

Blog one

Since Sunday we have experienced berg wind conditions here in KwaZulu-Natal. These winds are caused by a high-pressure system lying over the interior of South Africa and this forces the air over the escarpment and down the leeward side of the Drakensberg. Temperatures can rise to as high as thirty degrees Celsius in a few hours. These winds can have a speed varying from 10 km per hour to over 100 km per hour and it can be very destructive.

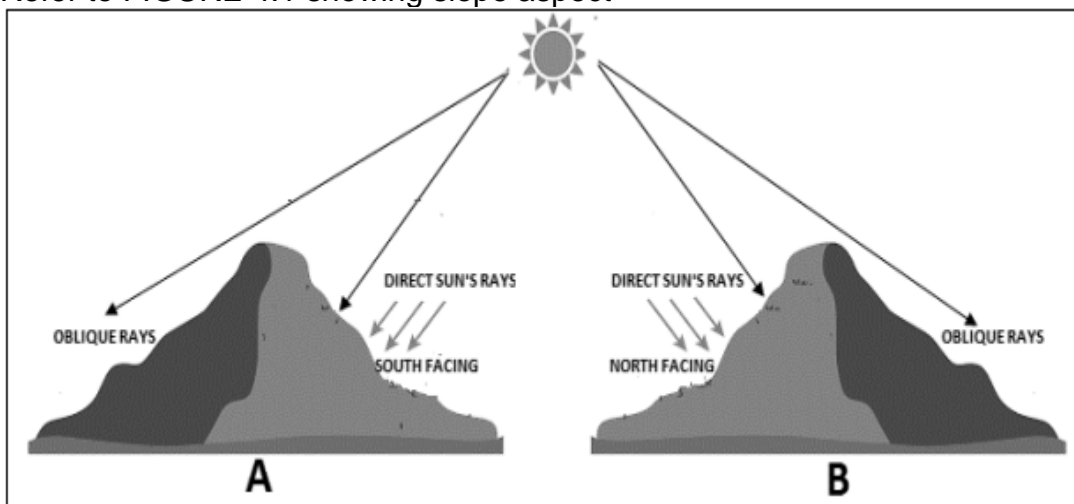
Blog two

On Sunday the wind was very strong, and the temperatures here in our district rose from the mid-teens last week to the high twenties yesterday and today. This time of the year is also known as the fire season in KZN. These hot, dry winds are very conducive to fires. A fire driven by a 100 km an hour berg wind is unstoppable. No farmer dare leave his farm during this time, as a fire could wipe out a lifetime of work.

[Adapted from drakensview.blogspot.com]

- 3.4.1 According to the blog, on which side of the mountain do berg winds descend? (1x1) (1)
- 3.4.2 Name the high-pressure system referred to in the blog. (1x1) (1)
- 3.4.3 Berg winds are associated with the presence of a coastal low pressure.
- a. What is a coastal low pressure? (1x1) (1)
- b. What role does a coastal low pressure play in the formation of berg winds? (1x2) (2)
- c. Why are berg winds associated with high temperatures? (1x2) (2)
- 3.4.4 Explain the negative economic impact of the fires mentioned in the blog, on farming in the area. (2x2) (4)
- 3.4.5 Suggest strategies that farmers could implement to reduce the effects of fires associated with berg winds. (2x2) (4)

4.1 Refer to FIGURE 4.1 showing slope aspect



[Adapted from <https://www.nmfias.com/temperature-distribution-earth-heat-budget-heat-balance/>]

4.1.1 Define the concept slope aspect (1x1) (1)

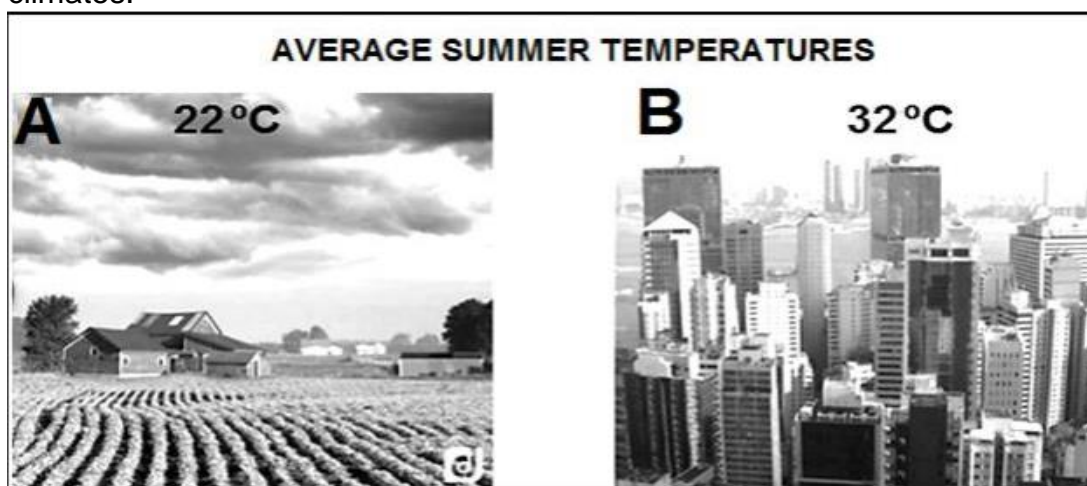
4.1.2 Does A or B represent the Southern Hemisphere? (1x1) (1)

4.1.3 Give a reason evident from the sketch for your answer to QUESTION 4.1.2. (1x2) (2)

4.1.4 How does slope aspect influence the microclimate of valley slopes with regard to:
 a. Temperature (1x2) (2)
 b. Evaporation (1x2) (2)

4.1.5 Explain the influence of slope aspect in the Southern Hemisphere on the following:
 a. Farming (1x2) (2)
 b. Human settlements (2x2) (4)

4.2 Refer to the figure below based on the differences between rural and urban climates.

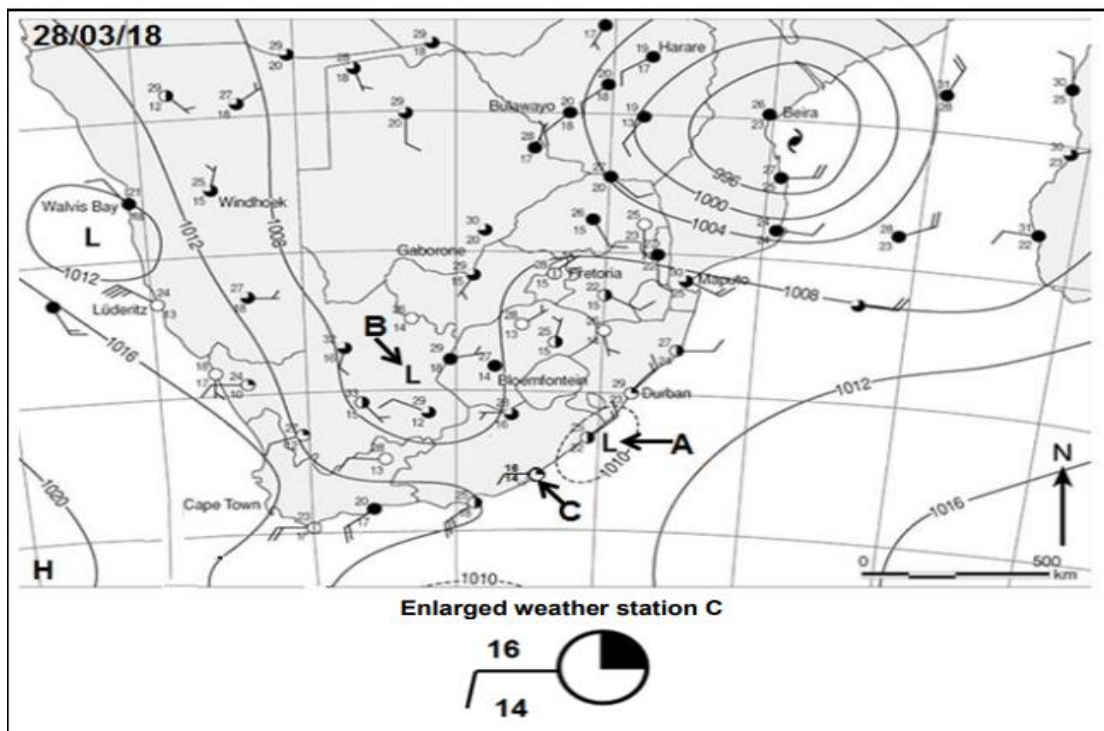


[Adapted from www.slideshare.net/Nandini1810/difference-of-climate-conditions-between-urban-and-rural/]

4.2.1 Will A or B generally experience lower wind speeds? (1x1) (1)

- 4.2.2 What evidence in the photograph indicates that A experiences higher evaporation rates than B? (1x2) (2)
- 4.2.3 Why does B experience more frequent rainfall than A? (1x2) (2)
- 4.2.4 Explain how the geometric shape of the buildings in the city causes a greater absorption of heat. (1x2) (2)
- 4.2.5 In a paragraph of approximately EIGHT lines, discuss how artificial surfaces and urban activities contribute to higher temperature recordings in B. (4x2) (8)

4.3 READING AND INTERPRETING SYNOPTIC WEATHER MAPS

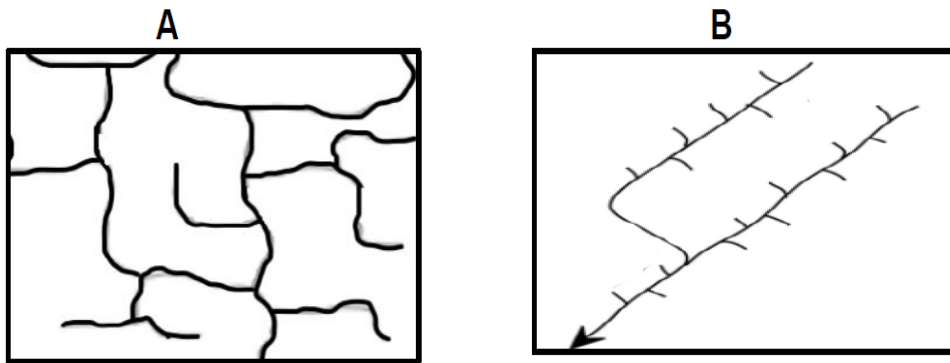


- 4.3.1 What are the lines representing air pressure on the map called? (1x1) (1)
- 4.3.2 Give TWO pieces of evidence that the season depicted is summer. (2x1) (2)
- 4.3.3 State the general movement of air pressure cell A (1x1) (1)
- 4.3.4 Refer to air pressure cell **B**.
- (a) Name this pressure cell. (1x1) (1)
- (b) Explain how air pressure cell **B** influences the summer rainfall pattern in the interior of South Africa (2x2) (4)
- 4.3.5 Refer to the weather station model at C
- (a) Give evidence from weather station model C that suggests that there is little possibility of rain. (1x2) (2)

(b) Account for the air temperature and wind direction recorded at weather station C.

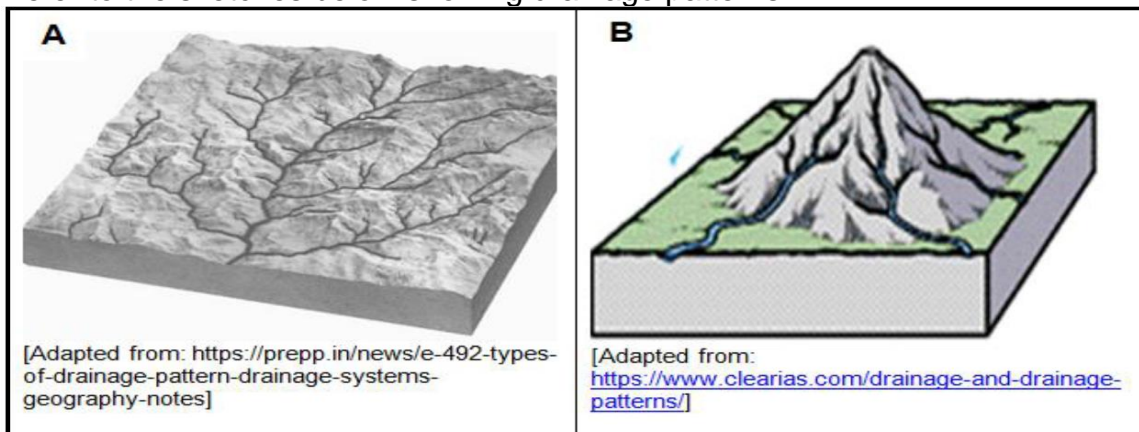
(2x2) (4)

5.1 Refer to the sketches A and B showing two types of drainage patterns.



- 5.1.1 Define the concept drainage pattern. (1x2) (2)
- 5.1.2 Identify the drainage patterns labelled A and B. (2x1) (2)
- 5.1.3 Name the underlying rock structure that gives rise to drainage pattern B. (1x1) (1)
- 5.1.4 Describe ONE similarity between the joining of the tributaries and the main streams of drainage patterns **A** and **B**. (1x2) (2)
- 5.1.5 Describe ONE difference between the main streams of drainage patterns A and B. (1x2) (2)
- 5.1.6 Account for the short tributaries in drainage pattern B in comparison to the length of the main river? (1x2) (2)
- 5.1.7 Explain how the main stream in drainage pattern A developed its shape (2x2) (4)

5.2 Refer to the sketches below showing drainage patterns.

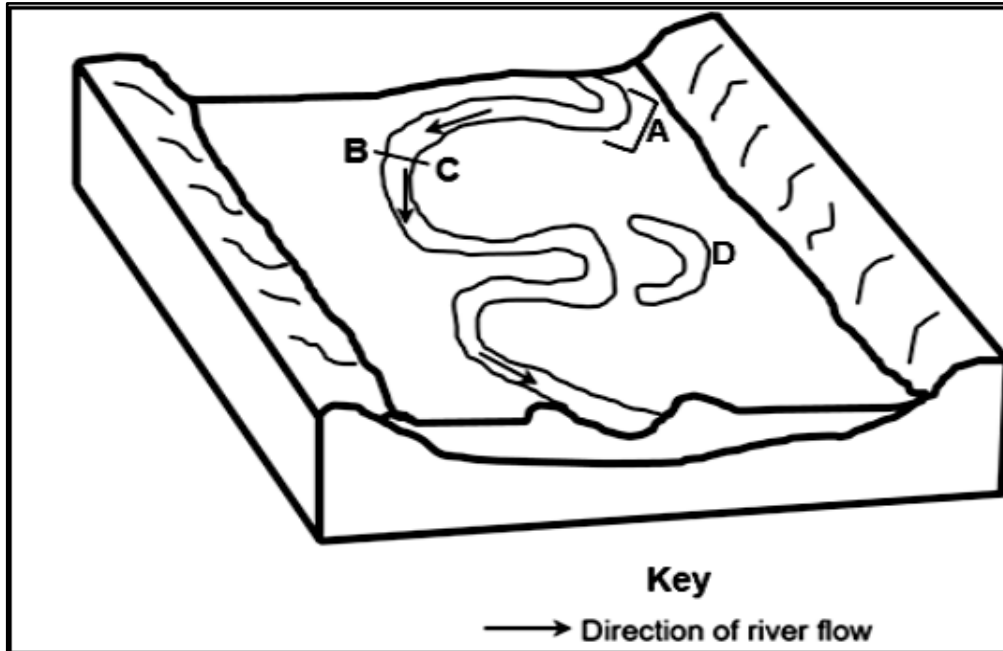


- 5.2.1 Identify the drainage pattern in sketch B. (1x1) (1)
- 5.2.2 Draw a labelled plan-view of drainage pattern in sketch B. (2x1) (2)
- 5.2.3 Give evidence from sketch A that the drainage pattern has a high drainage density (1x2) (2)

5.2.4 Explain how gradient and rainfall can influence the drainage density of the drainage pattern in sketch B. (2x2) (4)

5.2.5 What impact will lack of rainfall have on first-order streams of sketch A? (2x2) (4)

5.3 Refer to the sketch on fluvial landforms below



5.3.1 The fluvial landforms, illustrated in the sketch, are mainly found in the (middle/lower) course (1x1) (1)

5.3.2 Identify fluvial landform A on the sketch. (1x1) (1)

5.3.3 (a) Draw a rough cross-section from **B** to **C**. (2x1) (2)

(b) Will erosion take place at B or C? (1x1) (1)

(c) Give a reason for your answer to QUESTION 5.3.3(b). (1x2) (2)

5.3.4 In a paragraph of approximately EIGHT lines, describe the processes that resulted in the change of fluvial landform **A** to an ox-bow lake at **D**. (4x2) (8)

5.4

DELTA'S ARE SINKING

The world's river deltas take up less than 0.5% of the Earth's land area, but they are home to hundreds of millions of people. With fertile soils and easy access to the coast, deltas are important areas for food production. They also have unique ecosystems. Now many of the world's deltas are facing a crisis. Sea levels are rising as a result of climate change, while deltas are sinking.

As sediments in deltas compact under their own weight, deltas naturally sink. If left undisturbed, new river sediment can accumulate and help to maintain the delta surface above sea level.

But deltas are now subsiding much faster than they would do naturally. That's due to groundwater being pumped from aquifers (permeable rock) underneath them and used to irrigate crops and provide water for rapidly growing cities. Under these conditions, only the continued deposition of sediment on deltas can keep them from 'drowning'.

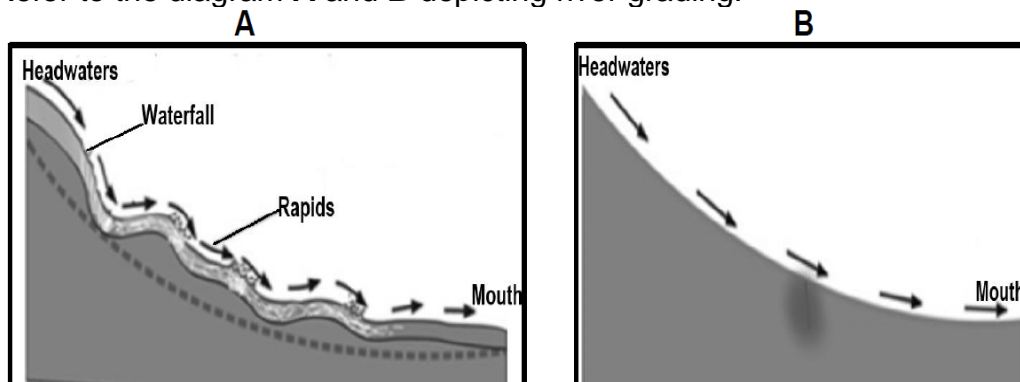
Difficult decisions need to be made about development priorities between countries upstream of deltas and those including the deltas themselves. There will be trade-offs to be made between hydropower, agricultural practices and delta sustainability.

[Source: <https://www.asiatimes.com/2019/11/article/river-delta-changes-threaten-hundreds-of-millions/>]

- 5.4.1 Where do deltas form? (1x1) (1)
- 5.4.2 What evidence in the extract indicates that deltas are densely populated? (1x1) (1)
- 5.4.3 According to the extract, how are cities disturbing the natural formation of deltas? (1x1) (1)
- 5.4.4 Discuss the importance of protecting deltas. (2x2) (4)
- 5.4.5 A recent environmental impact assessment has highlighted concerns about the future sustainability of deltas. In a paragraph of approximately EIGHT lines, suggest strategies to protect areas like deltas from the negative impact of human activities. (4x2) (8)

5.5

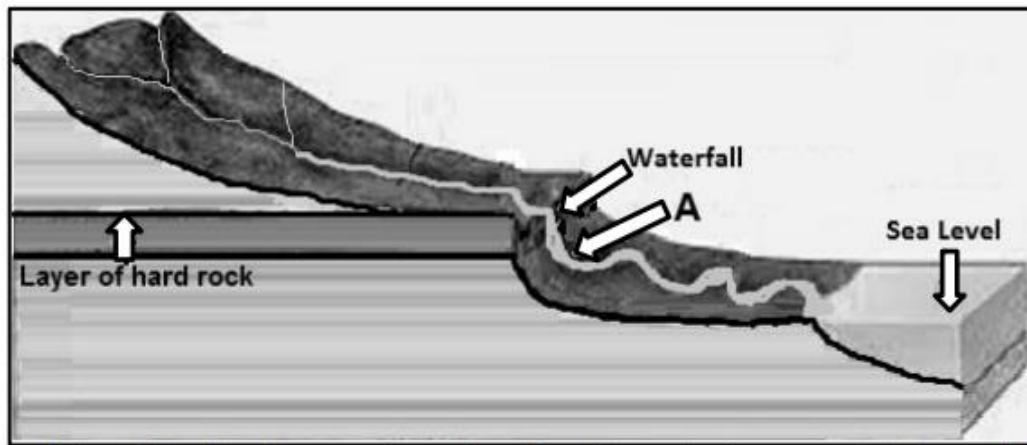
Refer to the diagram **A** and **B** depicting river grading.



- 5.5.1 Define the term river grading. (1x2) (2)
- 5.5.2 What is the difference between the grading of the rivers A and B? (2x1) (2)
- 5.5.3 Discuss ONE characteristic of a graded river. (1x2) (2)
- 5.5.4 The river in sketch **A** experiences river rejuvenation. Explain how river rejuvenation takes place in sketch **A**. (2x2) (4)

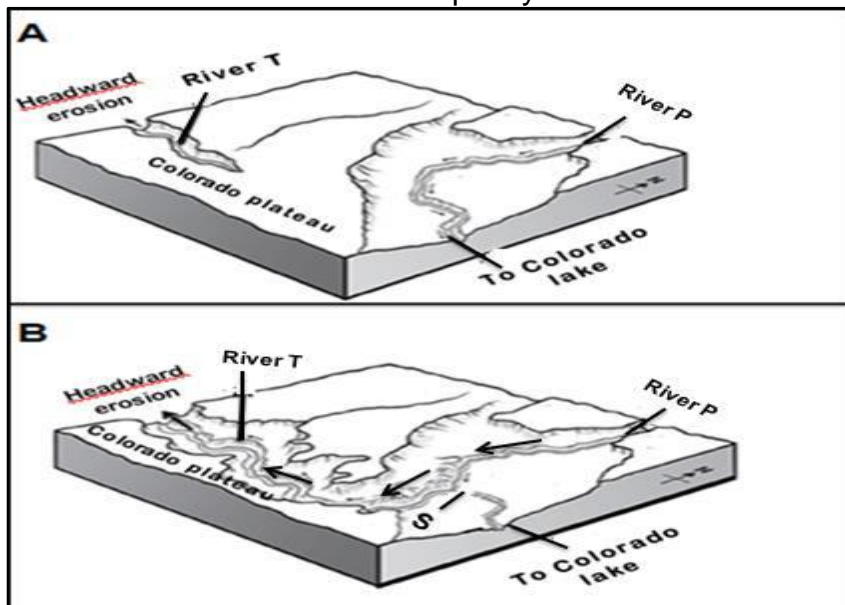
- 5.5.5 Explain how river rejuvenation could impact on fluvial features along the course of a river. (3x2) (6)

5.6



- 5.6.1 Is the river profile above graded or ungraded? (1x1) (1)
- 5.6.2 Give evidence for your answer to QUESTION 5.6.1. (1x2) (2)
- 5.6.3 Why will there be more erosion than deposition at **A**? (2x2) (4)
- 5.6.4 In a paragraph of approximately EIGHT lines, explain the fluvial processes that a river undergoes to reach a graded profile. (4x2) (8)

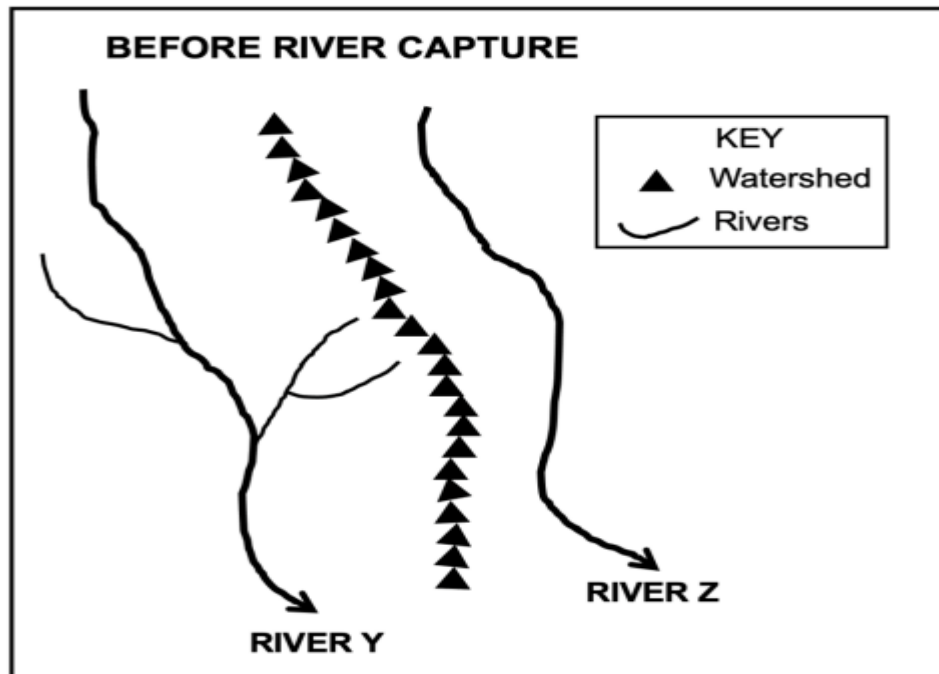
- 5.7 Refer to sketches **A** and **B** on stream piracy.



- 5.7.1 Define the concept river capture. (1x2) (2)
- 5.7.2 Identify S in sketch B. (1x1) (1)
- 5.7.3 Explain how the process of headward erosion contributes to river capture. (2x2) (4)

- 5.7.4 In a paragraph of approximately EIGHT lines, explain the physical changes that will occur in river T as a result of river capture. (4x2) (8)

5.8 Refer to the sketch map of rivers Y and Z before river capture has taken place.



- 5.8.1 State ONE condition needed for river capture to take place. (1x2) (2)

- 5.8.2 Draw a sketch to illustrate the area after river capture has taken place. (1+3) (4)

Marks will be awarded for the accuracy of the sketch and indicating the following labels:

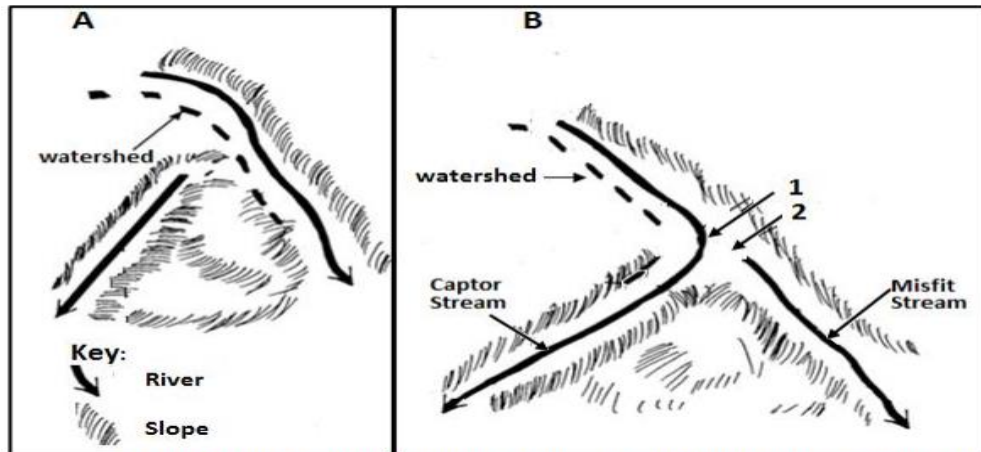
- Elbow of capture
- Misfit stream
- Wind gap

- 5.8.3 Will river Y or Z experience rejuvenation after river capture? (1x1) (1)

- 5.8.4 Give a reason for your answer to QUESTION 5.8.3. (1x2) (2)

- 5.8.5 Refer to your answer to QUESTION 2.5.5 and explain the impact of the change on the captor stream. (2x2) (4)

5.9




[Adapted from <https://revision.co.ke/marking-schemes/kcse-cluster-tests-3/geography/>]

- 5.9.1 Define the concept river capture as shown in sketch B. (1x2) (2)
- 5.9.2 Identify features 1 and 2 of river capture in sketch B. (1x2) (2)
- 5.9.3 What could have caused the captor stream to erode through the watershed? (2x1) (2)
- 5.9.4 Explain the process that resulted in the formation of the misfit stream. (2x2) (4)
- 5.9.5 Describe the change in the flow characteristics of the captor stream (3x2) (6)

6.1

THE KOMATI BASIN WATER AUTHORITY



Kopwa is a binational company formed in 1992 through the Treaty of the Development and Utilisation of the Water Resources of the Komati River Basin. The treaty was signed by the Government of the Kingdom of Eswatini and the Government of the Republic of South Africa. The authority was tasked with designing, constructing, operating and maintaining two dams and associated infrastructure. This resulted in the construction of Driekoppies Dam in Schoemansdal South Africa (1993 to 1998) and Maguga Dam in eSwatini (1998 to 2003). The two dams were constructed mainly to provide assurance of water supply to the irrigators in both member states. To provide a long-term reliable water supply the dam capacity must be increased by raising the dam wall by 20m. To date, a water treatment plant because of the unsafe level of bacteria is complete.

	Driekoppies dam
Total capacity	251 000 000 m ³
Surface area	1870 ha

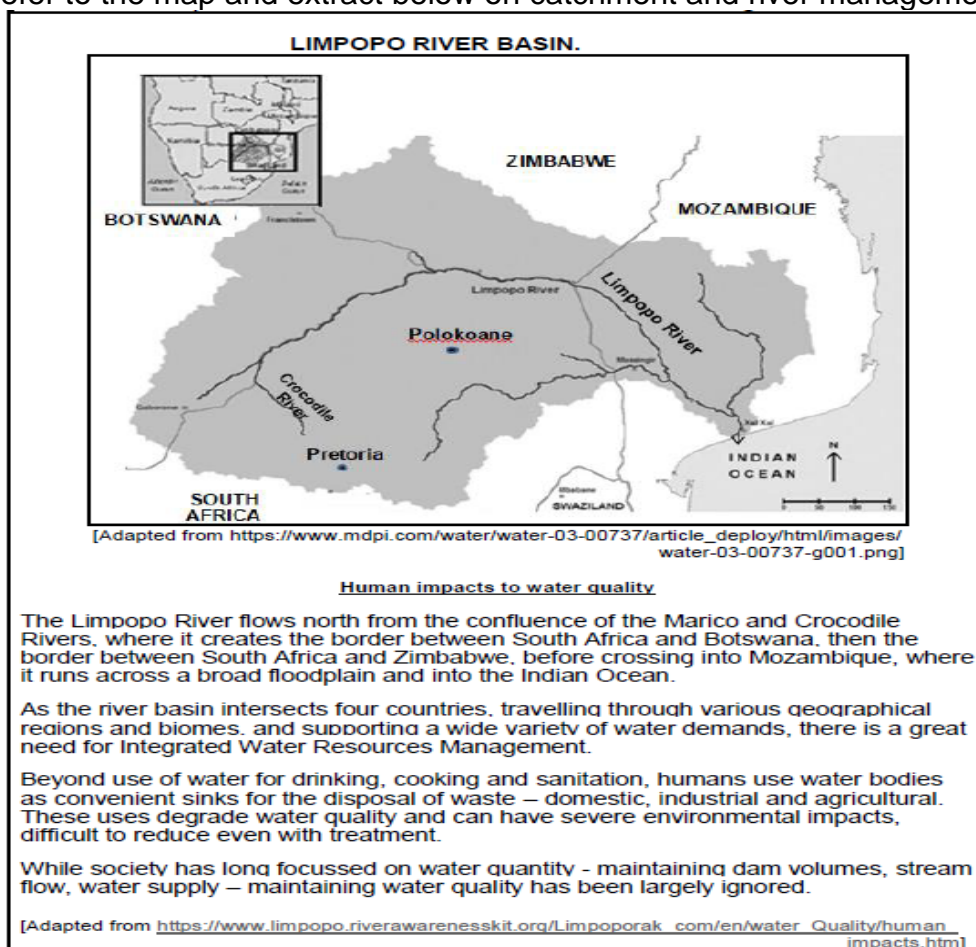
[Source: KOBWA, 24 February 2023\Volume1]

- 6.1.1 How much water does the Driekoppies Dam hold? (1x1) (1)
- 6.1.2 With which neighbouring country does South Africa share fresh water? (1x1) (1)
- 6.1.3 What was the main aim of construction of the two dams mentioned in the infographics? (1x1) (1)
- 6.1.4 Why has it become necessary to treat the water in the dam as indicated on the article? (1x2) (2)

6.1.5 Explain the consequences of unsafe levels of bacteria for people that drink the river water. (1x2) (2)

6.1.6 In a paragraph of approximately EIGHT lines suggest sustainable strategies that the government could implement (put in place) to solve the problem of water pollution in the Driekoppies Dam. (4x2) (8)

6.2 Refer to the map and extract below on catchment and river management.



6.2.1 Identify the mouth of the Limpopo River Basin. (1x1) (1)

6.2.2 State TWO neighbouring countries that depend on the water of the Limpopo River basin. (2x1) (2)

6.2.3 Quote a statement from the extract that states that humans dump (dispose of) their waste in the river. (1x1) (1)

6.2.4 Explain how human activities taking place along the Limpopo River catchment area could negatively impact on the water quality. (1x2) (2)

6.2.5 Suggest THREE measures that could be implemented by the Department of Water Affairs and Forestry to manage the Limpopo River Basin to ensure improved water quality. (3x2) (6)



Coordinates: 25°27'57"S 30°59'07"E

City of Mbombela is situated in the eastern part of South Africa and is the capital of Mpumalanga Province. The city is built on the fertile, flat valley floor of the Umgwenya (Crocodile) River where there is ample water supply from the river. The city serves as a gateway to some of the best eco- and adventure activities in Southern Africa with its moderate climate.

MAP SKILLS AND CALCULATIONS

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 numbers (3.1.1 to 3.1.2) in your ANSWER BOOK, for example 3.1.3 C.

7.1.1 The height along the National road (N4) 671.9 in block C1 is represented by ...

- A contour lines.
- B spot height.
- C benchmark.
- D trigonometrical station.

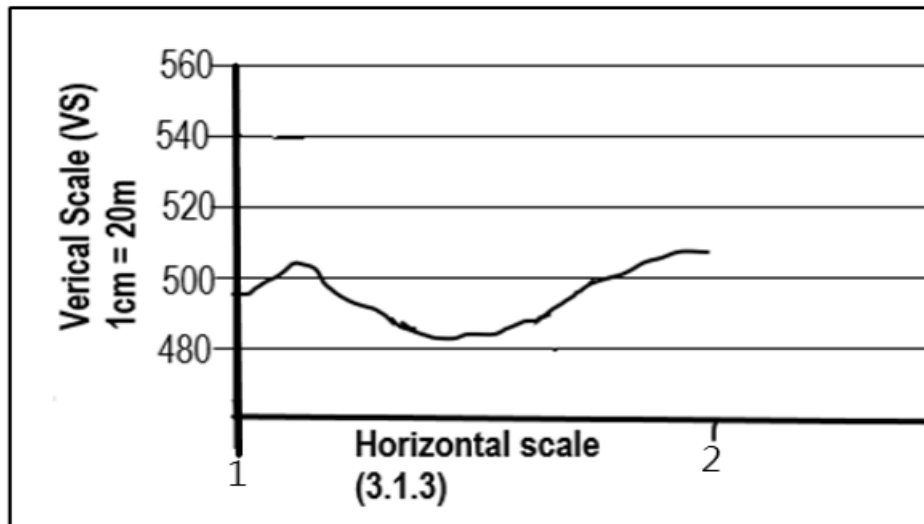
(1x1) (1)

7.1.2 The breadth of the area demarcated in red and black on the topographic map is

- A 2.1km.
- B 1.9km.
- C 190m.
- D 210m.

(1x1) (1)

7.1.3 Refer to the cross section depicted from line 1 to 2 on the orthophoto map.



- (a) The vertical scale of the cross-section expressed as a ratio scale is (1:20/1:2000). (1x1) (1)
- (b) Give the horizontal scale of the cross-section. (1x1) (1)
- (c) Use your answers in QUESTION 3.1.3 (a) and 3.1.3 (b) to calculate the vertical exaggeration. **Formula: $VE = \frac{\text{Vertical Scale (VS)}}{\text{Horizontal Scale (HS)}}$** (1x2) (2)
- (d) Which ONE of the two scales is exaggerated the cross-section? (1x2) (2)
- 7.1.4 Will the magnetic declination for 2023 be greater or smaller than that of 2014? (1x1) (1)
- 7.1.5 Give a reason for your answer to QUESTION 7.1.4. (x2) (2)

MAP INTERPRETATION

- 7.2.1 The area at 2 on the orthophoto map has higher temperatures than area 1 on the orthophoto map due to the ...
 A aspect of slope.
 B artificial surfaces.
 C thermal belt.
 D river's influence. (1x1) (1)
- 7.2.2 The Umgwenya River in block C5, is an example of a ... river.
 A permanent
 B exotic
 C periodic
 D Episodic (1x1) (1)

- 7.2.3 The fluvial landform in block B2 on the topographic map is a ...
 A braided stream.
 B ox-bow lake.
 C delta.
 D meander. (1x1) (1)
- 7.2.4 Identify the stream order marked **I** in block **B2** on the topographic map. (1x1) (1)
- 7.2.5 Give a reason for your answer in QUESTION 7.2.4. (1x2) (2)
- 7.2.6 Is river rejuvenation taking place in block B4.? (1x1) (1)
- 7.2.7 Give a reason for your answer to QUESTION 7.2.6 (1x2) (2)
- 7.2.8 In which direction does this river at **H** flow? (1x1) (1)
- 7.2.9 Give a reason for your answer to QUESTION 7.2.8. (1x2) (2)

7.3 GEOGRAPHICAL INFORMATION SYSTEMS (GIS)

- 7.3.1 Define the term attribute data. (1x2) (2)
- 7.3.2 The N4 road into Mbombela is a national road. Would you consider this information to be spatial or attribute data? (1x1) (1)
- 7.3.3 Give a reason for your answer to QUESTION 3.3.2 (1x2) (2)
- 7.3.4 Refer to the encircled area in block **B5** and **C5** on the topographical map, where buffering is taking place
- a. Give evidence from the topographic map that shows that buffering is taking place in the encircled area in block **B5** and **C5**. (1x2) (2)
- b. Give ONE positive impact of buffering on the river. (1x2) (2)

