KWAZULU-NATAL PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 12

GEOGRAPHY

COMMON ASSESSMENT TASK

MARCH 2025 TEST

MARKS: 60

TIME: 1 hour

N.B. This question paper consists of 8 pages.

INSTRUCTIONS

1. The paper consists of **TWO** QUESTIONS:

   QUESTION 1: CLIMATE AND WEATHER

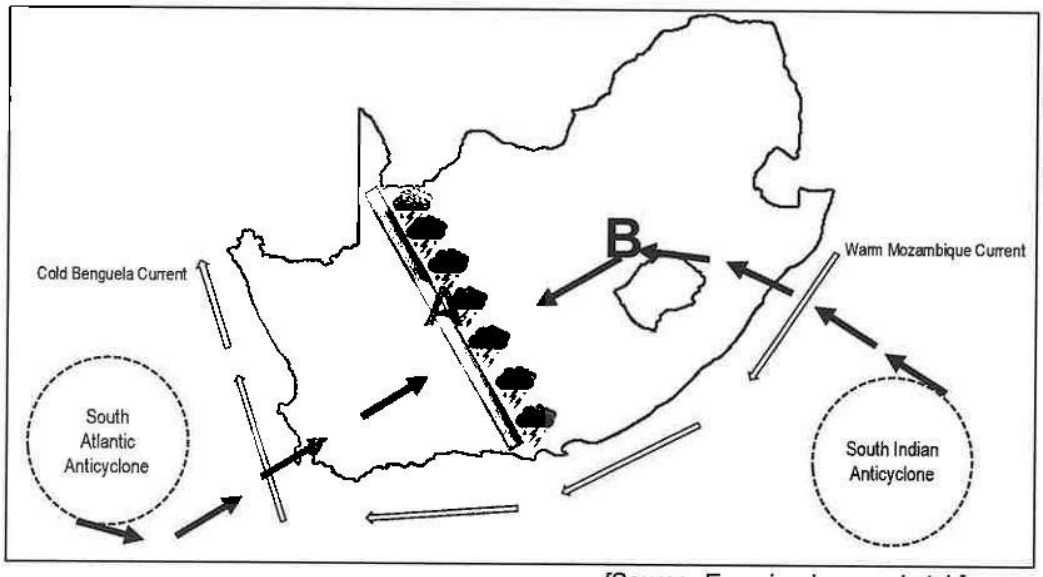
   QUESTION 2: GEOMORPHOLOGY

2. Answer **ALL** questions.

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QUESTION 1: CLIMATE AND WEATHER

1.1 Refer to the sketch below showing line thunderstorms over South Africa. 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 (1.1.1 to 1.1.6) in the ANSWER BOOK, e.g. 1.1.7 D.



[Source: Examiner's own sketch]

1.1.1 What does the line labelled **A** on the diagram represent?

A. A cold front.
B. A moisture front.
C. A mountain range.
D. A ridge of high pressure.

1.1.2 What causes the thunderstorms shown in the diagram?

A. The interaction of cold, dry air with warm moist air.
B. The effect of the cold Benguela Current cooling the land.
C. The South Indian Anticyclone bringing cold winds.
D. The lack of oceanic influence on the region.

1.1.3 What type of weather is associated with the moisture front in the diagram?

A. Intense thunderstorms and rainfall.
B. Clear skies and subsiding air.
C. Strong, dry winds.
D. Low humidity and cold temperatures.

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1.1.4 Thunderstorms are concentrated along the eastern side of the moisture front due to ...

A. the cold Benguela Current creating upliftment.
B. warm moist air from the Mozambique Current is forced to rise along the escarpment.
C. the South Atlantic Anticyclone pushes air up the escarpment.
D. the region is closer to the equator, increasing rainfall.

1.1.5 Which statement best describes wind **B**?

A. Cold dry air.
B. Cold moist air.
C. Warm moist air.
D. Warm dry air.

1.1.6 What conditions must exist for the moisture front to shift further westward?

A. Strengthening of the South Atlantic Anticyclone.
B. Weakening of the South Indian Anticyclone.
C. Increased heat over the western interior.
D. Stronger inflow of warm moist air from the east. (6 x 1) (6)

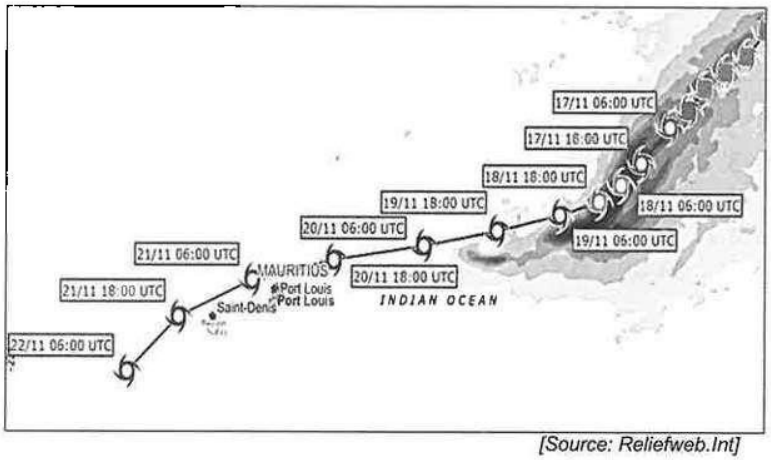
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1.2 Refer to the infographic below based on Tropical Cyclone Bheki.

The Mauritius Meteorological Service has issued a class one (out of four) cyclone warning for Rodrigues Island. Winds are expected to gradually increase and seas will become increasingly rough as the storm system approaches the island.

Sustained heavy rainfall could trigger flooding in low-lying areas and those with easily overwhelmed drainage systems. Localized evacuations, flash flooding, and landslides are possible. The inclement weather could trigger localized business, transport, and utility disruptions, rendering some bridges or roadways impassable. Flight disruptions at regional airports and temporary closures of ports are also possible. Stagnant pools of water during and after flooding increase insect- and waterborne diseases, such as dengue fever, cholera, and malaria. Raw sewage and other hazardous materials mixed with floodwaters pose a serious health threat.

Date	Wind Speed
16/11	110 – 185 km/h
17/11	185 – 240 km/h
18/11	110 – 185 km/h
19/11	<110 km/h



[Source: Reliefweb.Int]

1.2.1 What is the general direction of movement of tropical cyclones? (1 x 1) (1)

1.2.2 State TWO conditions necessary for the formation of Tropical Cyclones. (2 x 1) (2)

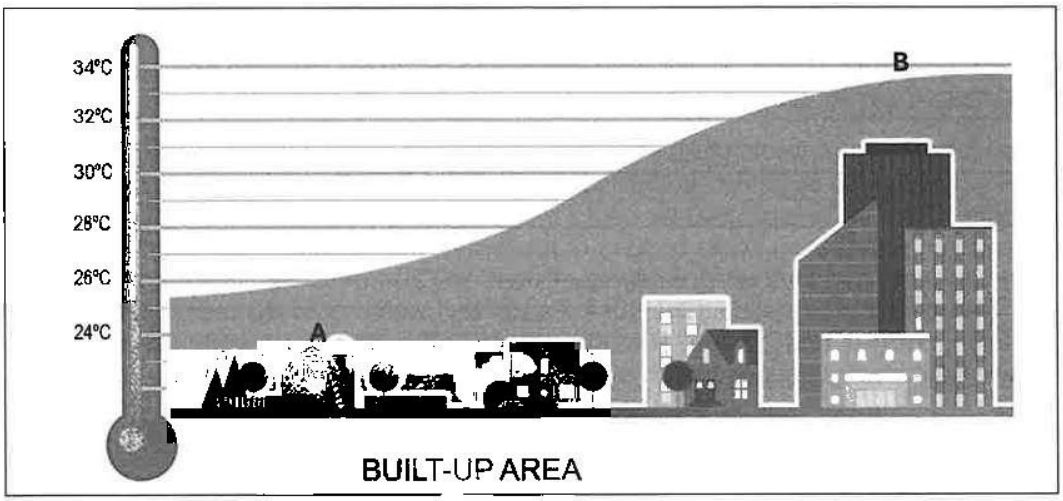
1.2.3 Give ONE reason why Tropical Cyclone Bheki weakened from the 18th of November. (1 x 1) (1)

1.2.4 Discuss the social and environmental impacts associated with tropical cyclone Bheki. (2 x 2) (4)

1.2.5 Suggest TWO strategies that the local government could implement to minimize the impact of Tropical Cyclone Bheki. (2 x 2) (4)

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1.3 Refer to the figure below which shows the urban heat island.



[Source: https://www.greatlakesnow.org/2024/06/heat-islands-in-the-great-lakes-the-human-health-cost/

1.3.1 Define the concept *urban heat island.* (1 x 2) (2)

1.3.2 What is the difference in temperature between area labelled **A** and **B**? (1 x 2) (2)

1.3.3 Evaluate the impact that vegetation have on the temperatures of areas labelled **A** and **B**. (2 x 2) (4)

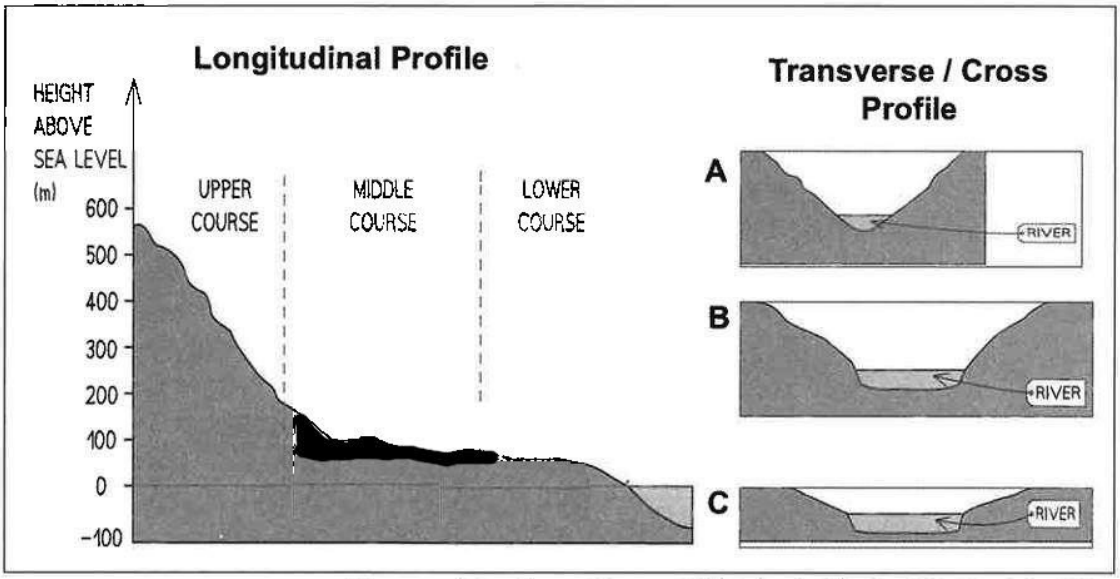
1.3.4 Suggest TWO strategies that can be implemented to reduce the effects of the urban heat island. (2 x 2) (4)

[30]

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QUESTION 2: GEORMOPHOLOGY

2.1 Refer to the figure below showing river profiles. Match the statements in COLUMN A with the options in COLUMN B. Write only the letter Y or Z next to the question numbers (2.1.1 to 2.1.6) in the ANSWER BOOK, e.g. 2.1.7 Y



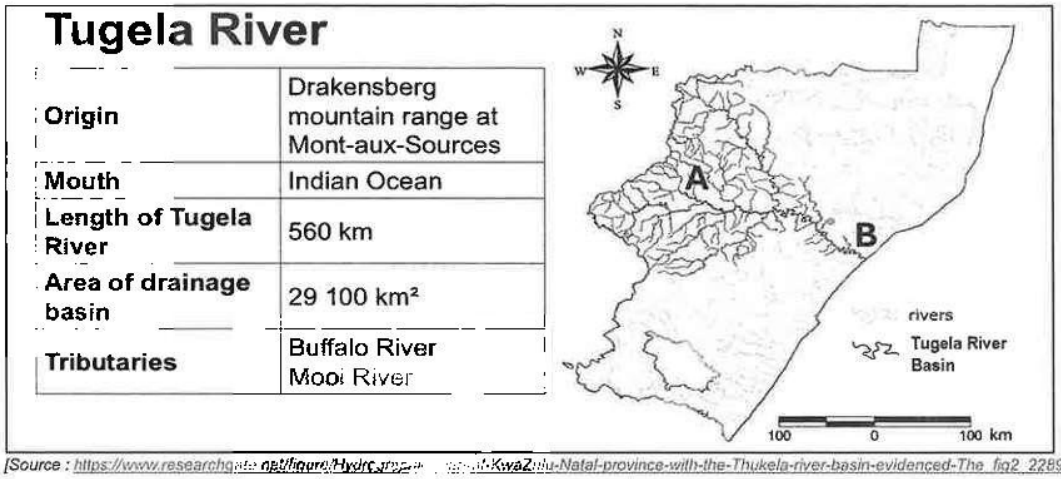
[Source : https://www.bbc.co.uk/bitesize/guides/zq2b9qt/revision/5]

	COLUMN A		COLUMN B
2.1.1	This course of the river is characterized by steep gradient and a V-shaped valley.	Y Z	upper course lower course
2.1.2	The volume of water in the upper course is …	Y Z	high low
2.1.3	Fluvial landform in the lower course, that encourages farming is …	Y Z	flood plain braided channel
2.1.4	The area drained by a river and its tributaries is known as the …	Y Z	drainage basin river system
2.1.5	The dominant stream discharge associated with transverse profile **C** is …	Y Z	turbulent laminar
2.1.6	Temporary base levels of erosion are evident (shown) in …	Y Z	longitudinal profile cross profile

(6 x 1) (6)

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2.2 Refer to the infographic below on the Tugela River's drainage density.



[Source : https://www.researchgate.net/figure/Hydrc... ...l-KwaZulu-Natal-province-with-the-Thukela-river-basin-evidenced-The_fig2_228915852]

2.2.1 Define the concept *drainage density*. (1 x 2) (2)

2.2.2 Compare the drainage density of Tugela River basin area **A** and area **B**. (2 x 1) (2)

2.2.3 In a paragraph of approximately EIGHT lines, discuss the factors that affect the drainage density of the Tugela River at area **B**. (4 x 2) (8)

2.3 Refer to the figure below showing a fluvial landform.



[Source: https://images.app.goo.gl/RJQcccfqoVasBXpQ9]

2.3.1 Identify the fluvial landform shown by the figure above. (1 x 1) (1)

2.3.2 In which course (upper course / lower course) of the river will the above fluvial landform form? (1 x 1) (1)

2.3.3 What is the dominant process taking place at the outer bank **B**. (1 x 1) (1)

2.3.4 Draw a labelled cross section of line **A** – **B** of the fluvial landform. (3 x 1) (3)

2.3.5 Discuss the influence of the fluvial landform above on human activities. (3 x 2) (6)

TOTAL: (30)
GRAND TOTAL: 60

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