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Department of Education

**North West Province
REPUBLIC OF SOUTH AFRICA**

PROVINCIAL ASSESSMENT

GRADE 12

GEOGRAPHY TEST 1

MARCH 2023

MARKS : 60

TIME : 1 HOUR

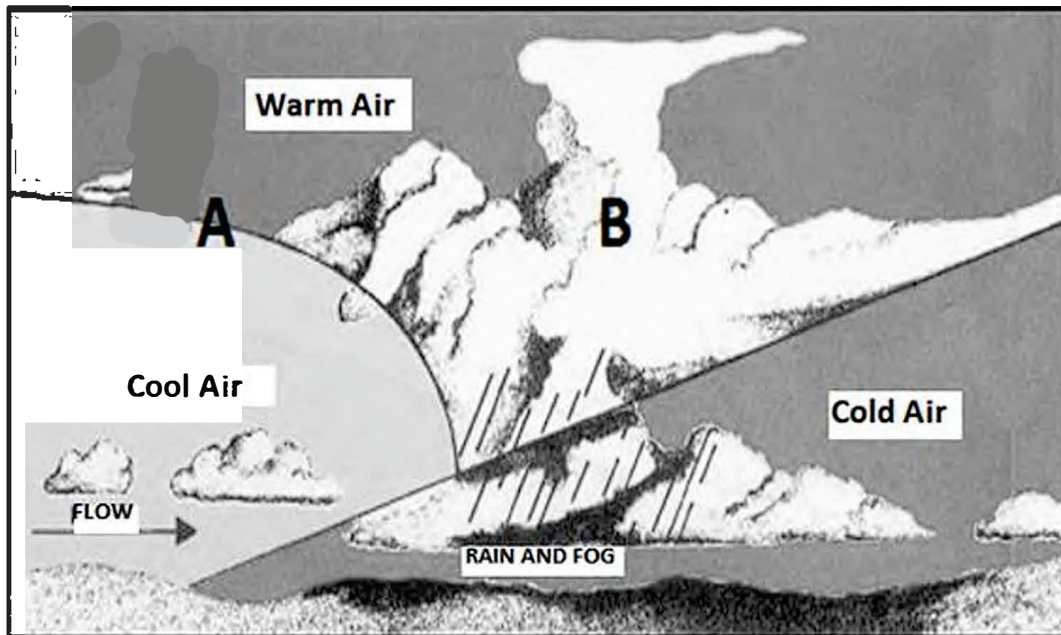
This question paper consist of 08 pages

INSTRUCTIONS AND INFORMATION

1. This question paper consists of ONE question.
2. Answer ALL the sub -questions.
3. All diagrams are included in the QUESTION PAPER
4. Leave a line between subsections of questions answered.
5. Number the answers correctly according to the numbering system used in this question paper. Number the answers in the centre of the line.
6. Do NOT write in the margins of the ANSWER BOOK.
7. Draw fully labelled diagrams when instructed to do so.
8. Answer in FULL SENTENCES, except when you have to state, name, identify or list.
9. Write neatly and legibly.

QUESTION 1

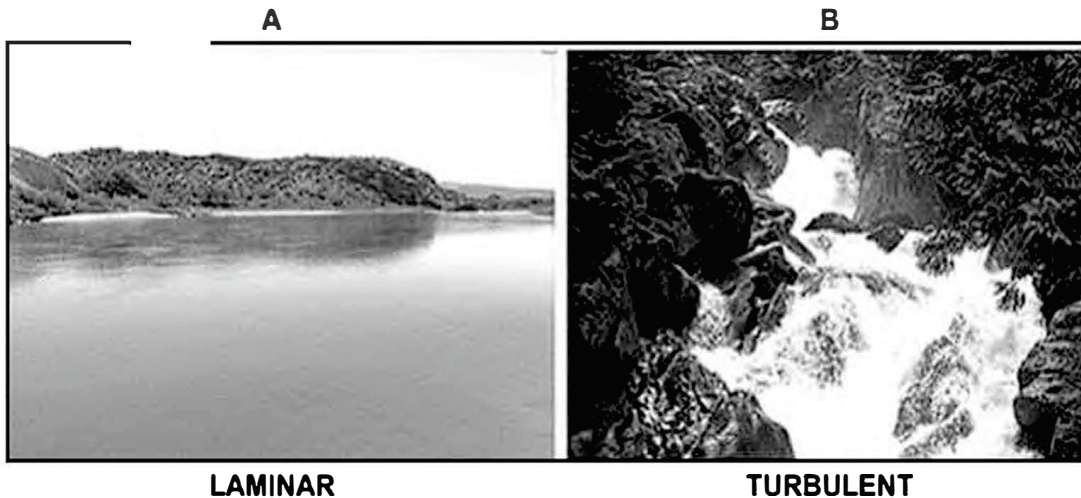
1.1 Refer to the cross-section of a weather system.



[Bron Oos-Kaap POD 2016/Source; Eastern Cape PED 2016]

- 1.1.1 Name the weather system illustrated in the sketch.
 - 1.1.2 Identify the front labelled A.
 - 1.1.3 Identify the cloud type labelled B.
 - 1.1.4 State the stage of development of the weather system identified in QUESTION 1.1.1.
 - 1.1.5 State the circulation of the air rotates around this weather system in the Southern Hemisphere.
 - 1.1.6 Give the general movement of this weather system.
 - 1.1.7 During which season does the illustrated weather system usually affect the weather of the South-Western Cape?
 - 1.1.8 State the average life span of the illustrated weather system.
- (8 x 1) (8)

1.2 Match the descriptions below with either A or B. Write only the letter A or B next to the question numbers (1.2.1 to 1.2.7) in the ANSWER BOOK, e.g. 1.2.8 B.

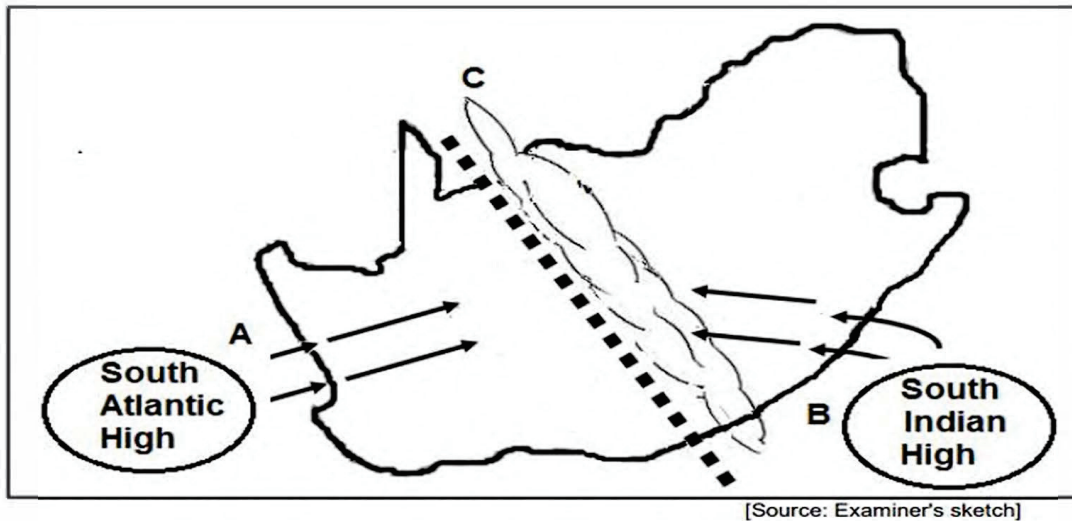


[Source: bing.com]

- 1.2.1 Rapids are characteristic of this type of flow
- 1.2.2 Is associated with an increased volume of water in the lower course
- 1.2.3 Associated with a higher rate of erosion
- 1.2.4 Occurs mostly in the upper course of the river
- 1.2.5 Promotes the formation of flood plains and levees
- 1.2.6 A level river bed causes water to move in layers
- 1.2.7 Surface friction causes water to form eddies (swirls)

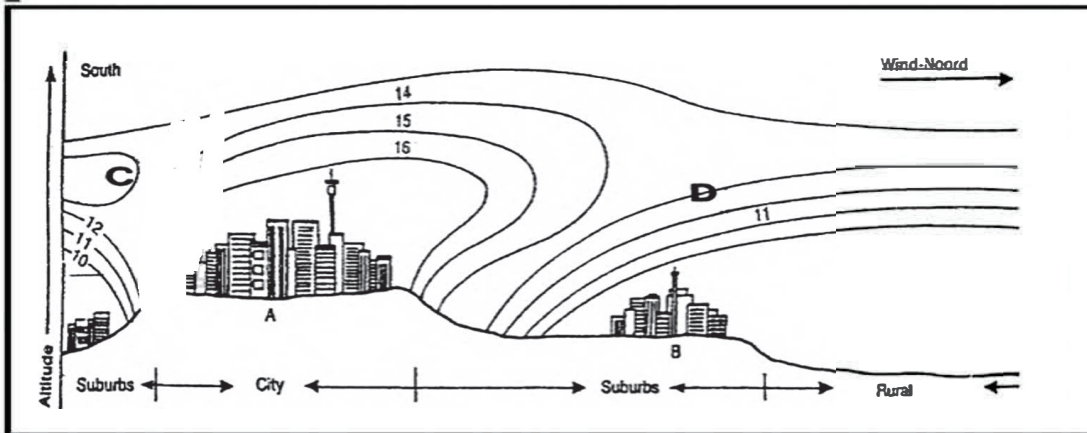
(7x1) (7)

1.3 Refer to the sketch below on moisture front.



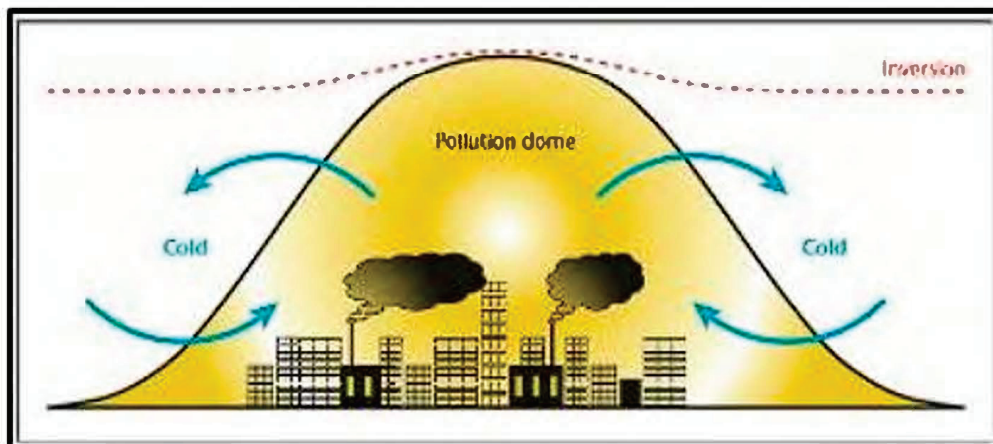
- 1.3.1 Does the line thunderstorm obtain its source of moisture from ocean **A** or **B**? (1 x1) (1)
- 1.3.2 Why is cold, dry air fed in from the South Atlantic High-Pressure cell? (1 x2) (2)
- 1.3.3 Explain how the formation of the moisture front at **C** results in line thunderstorms. (2 x2) (4)
- 1.3.4 In a paragraph of approximately EIGHT lines, explain the destructive (harmful) nature of line thunderstorms on the environment (physical) (4 x2) (8)

1.4 Refer to the sketch below on dimensions of an urban heat island.



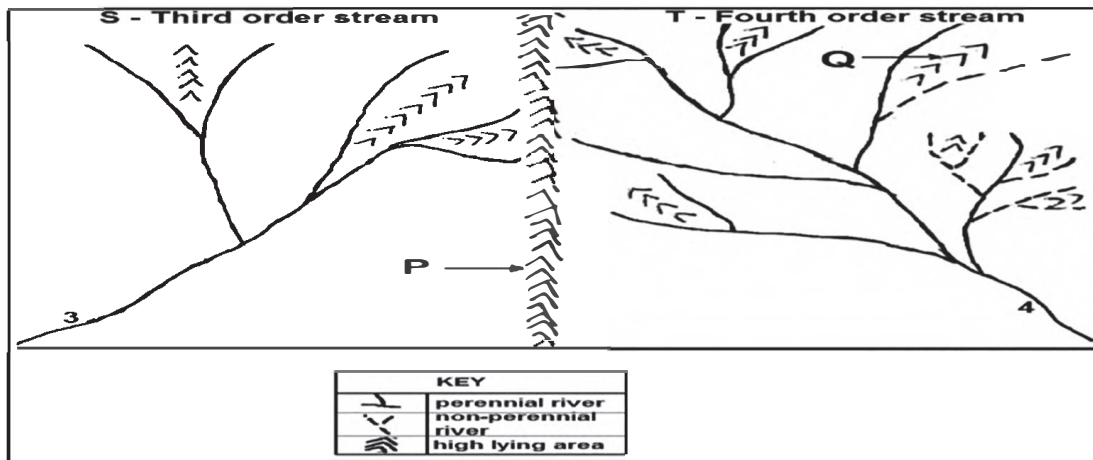
[Source: Exploring Geography]

- 1.4.1 What aspect of microclimate is shown in this diagram? (1x1) (1)
- 1.4.2 Give the difference in the temperature between the isotherms labelled C and D in the diagram. (2x1) (2)
- 1.4.3 Describe the reason for the shape of the isotherms above the city. (1x2) (2)
- 1.4.4 Briefly discuss the impact that will the high temperatures have on the health of the people living in the city (2x2) (4)
- 1.4.5 Refer to a pollution dome over a South African city.



- (a) What is a pollution dome? (1x2) (2)
- (b) Explain how pollution domes increase the maintenance costs of the built-up environment in the city. (2x2) (4)

1.5 Refer to the sketch below on Drainage Density



1.5.1 Give the geographical term used to describe the following high lying areas

(a) P between two different drainage basins (1 x 1) (1)

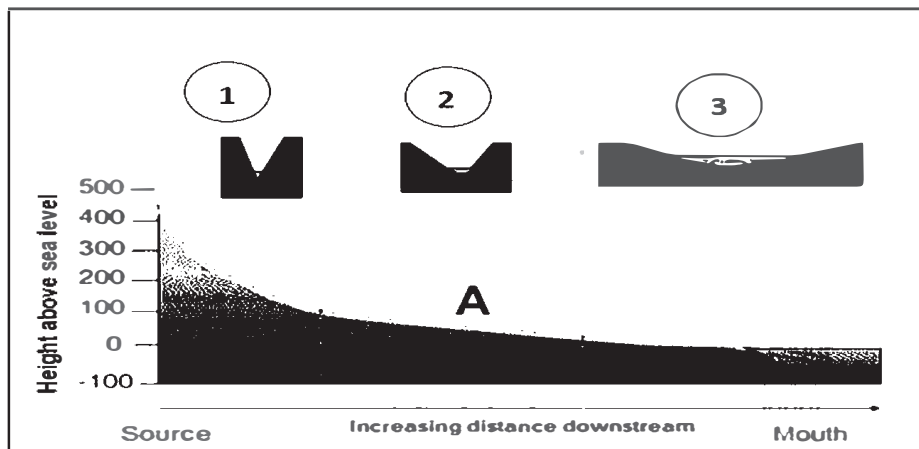
(b) Q between two tributaries in the same drainage basin (1 x 1) (1)

1.5.2 What type of drainage pattern is illustrated by both drainage basins? (1 x 1) (1)

1.5.3 Why can one say that drainage basin T has a higher drainage density than drainage basin S? (1 x 2) (2)

1.5.4 With reference to sketch describe the relationship between drainage density and the highest stream order in a drainage basin. (1 x 2) (2)

1.5.5 Refer to sketch below on drainage basin



SOURCE: <http://www.images.earthscience.profiles.org>

- (a) Identify the stage of the river marked 1 and 2. (2 x1) (2)
- (b) Describe the valley shape illustrated by 2 and 3. (1x 2) (2)
- (c) Account for the difference in the valley shapes at 2 and 3. (2 x 2) (4)

[60]