

KZN DEPARTMENT OF EDUCATION  
GREENBURY SECONDARY SCHOOL  
FIRST QUARTERLY TEST - 2018  
GEOGRAPHY - GRADE 11

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DATE : 20/03/18  
DURATION : 1 HOUR  
MARKS : 100

NAME : \_\_\_\_\_

GRADE/DIV : \_\_\_\_\_

**INSTRUCTIONS**

1. This paper consists of 2 Sections.  
SECTION A - THEORY  
SECTION B - MAPWORK
2. The question paper consists of 8 pages.
3. Use the mark scheme as a guide for the length of your answers.
4. Write neatly and legibly.
5. Use a black or blue pen. No neon colours to be used.
6. Number your answers correctly according to the numbering system used in this paper.

## SECTION A

### QUESTION 1

1. Give the correct term for the following statements.
  - 1.1 Seasonal wind that causes heavy summer rainfall.
  - 1.2 Force that cause deflection of air movement.
  - 1.3 Force that causes air to move.
  - 1.4 Land that is no longer productive as it was previously.
  - 1.5 A biome in Africa found at the 30°N and 30°S latitude.

[5X2=10]

### QUESTION 2

2. Refer to Fig. 1 showing the tri-cellular circulation of the Atmosphere.  
Choose the correct answer. Write only the answer next to the number.
  - 2.1 The formation of the cell labelled A is due to [ascending / descending] of cold air mass.
  - 2.2 The planetary wind belt in cell labelled C in which tropical cyclones develop is the [easterly / westerly] wind belt.
  - 2.3 [Hadley / Ferrel] cell circulates air in the tropics between 30° - 60° latitude.
  - 2.4 The surface winds in cell labelled B that blow to the 60° latitudes are called the [tropical Easterlies / Westerlies].
  - 2.5 In area labelled D [frontal / convectional] thunderstorms are common.

[5]

### QUESTION 3

3. Refer to the Synoptic Map (Fig. 2) and answer the following questions.
- 3.1 Identify the pressure cells labelled A and B on the map. [2X2]
- 3.2 Describe the surface air circulation around the pressure cell A. [2]
- 3.3 State the value of the Isobar at C. [2]
- 3.4 Which season does this map represent. Give 2 reasons to support your answer. [1+4]
- 3.5 Are wind speeds at X gentle or strong. Give a reason for your answer. [1+2]
- 3.6 Refer to weather system E.
- 3.6.1 What is the name given to the centre of this system? [2]
- 3.6 Describe the conditions of the atmosphere as shown by the weather station D. [5X2]
- [28]**

### QUESTION 4

- 4 Read the Article Fig. 3 and answer the questions.
- 4.1 Define the term Drought. [2]
- 4.2 With reference to the article, what are the effects of the drought on the following :
- 4.2.1 Environment
- 4.2.2 Economy [2X2]
- 4.3 Explain why food prices are likely to increase during the drought. [2]
- 4.4 Explain what the Minister meant when he stated "the drought has hit the poorest the hardest". [2]
- 4.5 Improved farming methods will result in better drought management. Suggest 3 strategies that farmers can implement to reduce the effects of droughts [3X3]
- [19]**

### **QUESTION 5**

- 5 Refer to Fig.4 which shows 2 seasonal positions of the Earth.
- 5.1 Give one word to describe the path of the earth around the sun. [2]
- 5.2 Does X represent an Equinox or Solstice? Give a reason for your answer. [2X2]
- 5.3 Refer to position Y and give the season South Africa is experiencing. [2]
- 5.4 Explain how ocean currents play a role in restoring the energy balance between the Poles and Equator. [2X3]
- [14]**

**SECTION A - TOTAL [75]**

## SECTION B – MAPSKILLS

### QUESTION 6

6. Refer to the aerial photograph Fig.5 and answer the questions.
- 6.1 Identify the type of aerial photograph shown.  
Give a reason for your answer. [1+2=3]
- 6.2 State 2 advantages of using this type of aerial photo –  
(answer to 6.1). [2X2=4]
- 6.3 Aerial photographs are best taken between :  
A – 03:00 to 09:00  
B – 10:00 to 14:00  
C – 14:00 to 16:00 [2]
- 6.4 Area A is an Industrial area. Give a reason why you would agree. [2]
- 6.5 Feature B is river (water body). What does the darker tone of the river suggest? [2]
- 6.6 Why do Railways have a more winding route than roads? [2]
- 6.7 Explain the following terms :  
6.7.1 Raster data [3]  
6.7.2 Vector data [3]
- 6.8 Explain how local authorities can use satellite images to manage the effects of drought in Cape Town. [2X2=4]

**SECTION B – TOTAL [25]**

**GRAND TOTAL : [100]**

  
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Fig. 1

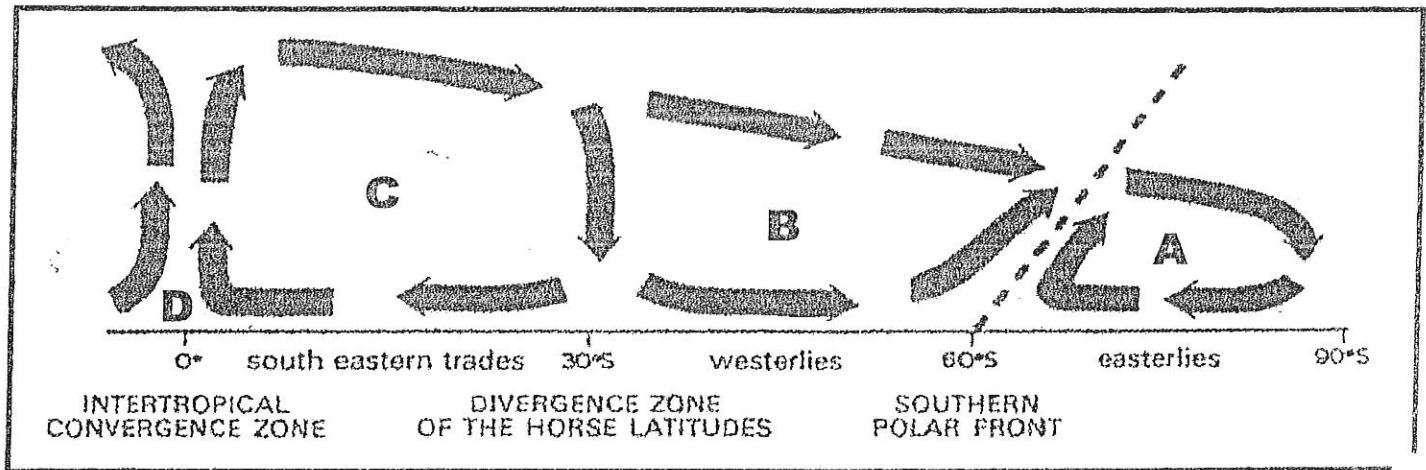


Fig. 3

## Agriculture minister has renewed hope SA will survive drought

**Johannesburg** – Agriculture Minister Senzeni Zokwana says he has renewed hope that the country will survive the current drought due to recent significant rainfall. The department says it's being estimated that the latest harvest will produce 7,4 million tons of maize - that's a shortage of 3,8 million tons of the staple food. The minister says he is extremely concerned about the food price increases linked to the drought.

Zokwana says the recent heavy rain fall in much needed provinces have changed the country's bleak picture of maize supply. "Initially around November/December we may be compelled to import five and six million tons, but that has gone down because of the rains". He says the drought has hit the poor the hardest - something they tried to avoid.

Zokwana says government and stakeholders in the agriculture industry need to come up with new ideas how to change the current farming methods to avoid soil erosion and other drought-related issues.

[Source: News24]

Fig. 2

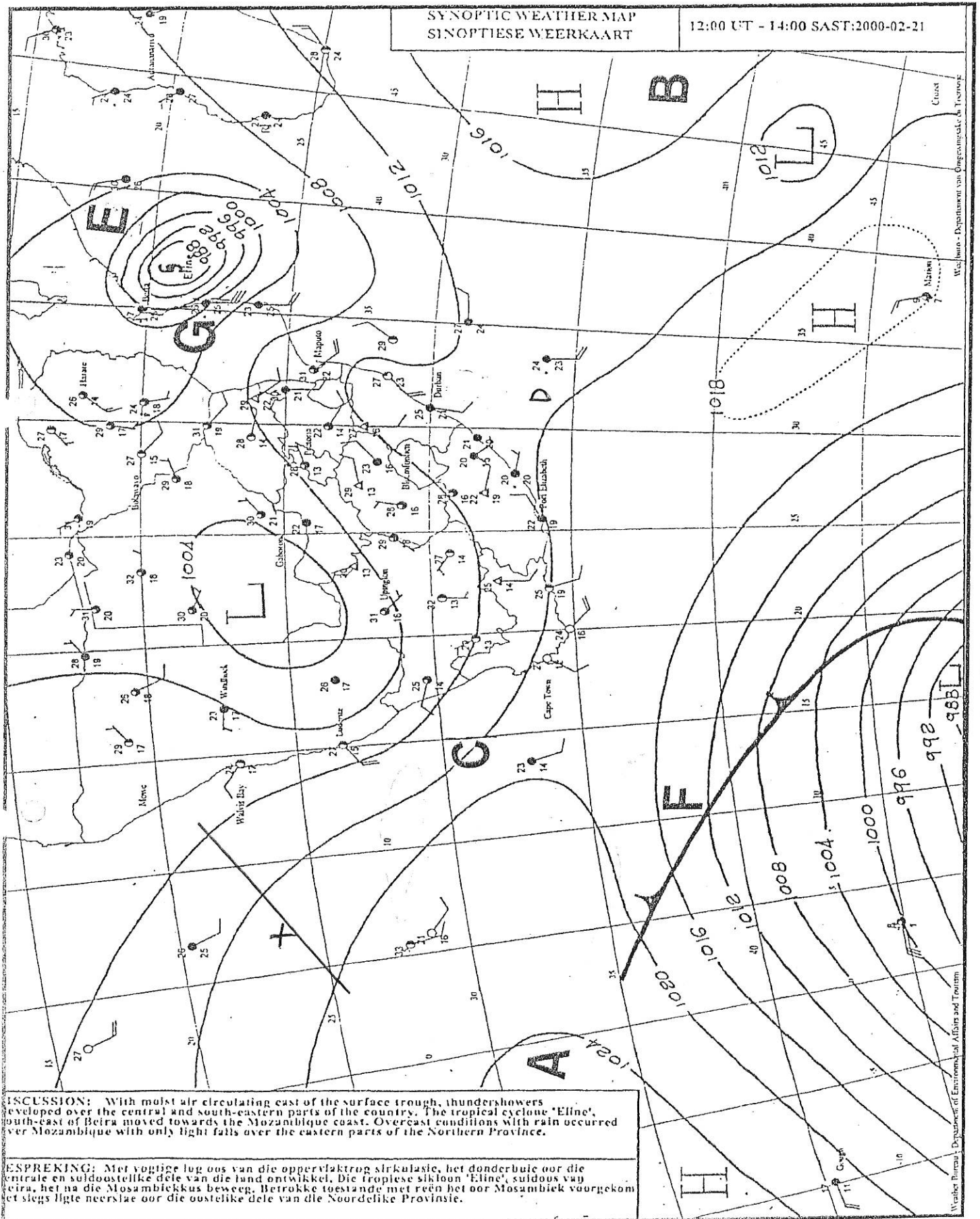


Fig. 4

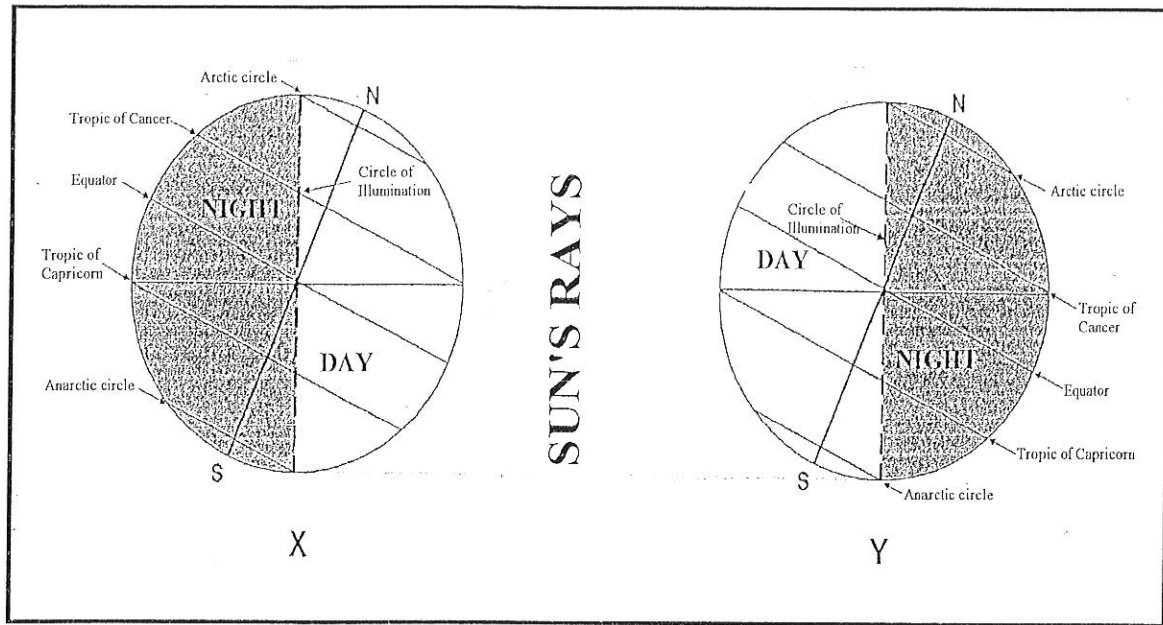


Fig. 5



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1.1 Maritime

1.2 El Nino

1.3 Subsidence

1.4 Jet stream

1.5 Monsoons

1.6 Coriolis Force

1.7 Pressure gradient Force

1.8 Berg Winds

1.9 Desertification

1.10 Deserts.

2.1 Ascending

2.2 Easterly

2.3 Ferrel

2.4 Westerlies

2.5 convectional.

3.1 A - S A H

B - S I H

3.2. Anticlockwise.

3.3. 1016 mb

3.4. Summer - Date. 21/02/2000

- L.P over continent (Thermal low)

- High temp over S.A.

- Tropical cyclone present.

- C.F located Far South.

- S A H away from coast.

(2)

3.5 gentle - Isobars far apart / gentle pressure gradient

3.6.1 Eye.

3.6.2 Calm / clear conditions

3.7

Air Temp.	-	24°C
D P Temp.	-	23°C
C / Cover	-	Overcast.
W / Direction	-	Southerly.
W / speed	-	20 knots
precipitation	-	Rain

4.1 prolonged period of little or no Rainfall.

4.2.1 - Soil Erosion.

4.2.2 - Food price increase / Importing Maize /  
hit the poor hardest.

4.3. - shortage of food and increased in  
demand. → high food prices

4.4

- plant drought resistant crops
- store water for the drier seasons
- Use drip irrigation system.

S.1 Revolution

\* S.2. Solstices. - When the sun is overhead the tropics.

S.3. Summer.

Southern Hemisphere tilted towards the sun.  $\Rightarrow$  more sun's rays.

S.4 Receives direct sun's rays than poles

S.5 - Warm currents move warm water from  
- the equator toward the cold poles  
- Cold currents take colder water from the poles towards the equator.

(4)

6.1. Vertical aerial photograph : taken from above.

Birds' eye view.

6.2. Has a uniform scale ; Gives accurate measurement of distance, position and relief.

\* No objects obscure features.

6.3. C

6.4. Industrial area : Large buildings : Industrial areas show large roof spaces, usually rectangular in shape.

6.5. Water bodies have a darker tone in photographs - reflects less amount of light.

6.6. Railway lines are more winding - avoid obstacles  
Roads are straighter routes - flat land

6.7. Raster data : consists of a matrix of cells (or pixels) organised into rows and columns to form a grid.

Vector data consist of 2 points (x and y) used to store information of geographic space.

6.8. The areas affected should firstly be identified.

View the effects of drought on the environment - Vegetation

Aid agencies can use the information to assist people with food and water.

Identify water transfer schemes.