

Grade 11

Hillcrest High School

Marks: 200

Geography

Paper 1

Time: 2 ½ hrs

Examiner: CR Madeley

November 2019

Instructions:

1. This paper consists of FOUR questions. You are required to answer THREE.
 2. **Question One** from **Section A** is compulsory
 3. You must then choose **TWO** other questions **from section B** to answer
 4. Read carefully through the questions before starting to answer
 5. Write neatly and pay attention to the mark allocations given for each question.
 6. Number your answers according to the question paper.
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Question One Climate and Geomorphology (Compulsory question)**Multiple Choice questions.**

Choose the correct answer from the choices given in each case. Write only the number of the question and the letter of the answer you choose.

1.1 The two main methods by which heat is transferred around the earth are:

- a. Seasons and Coriolis force
- b. Ocean currents and Winds
- c. Latent and Sensible heat
- d. Rotation of the earth and seasons

1.2 The condition that occurs when the noon sun is directly overhead the equator is called:

- a. solstice
- b. equinox
- c. winter
- d. summer

1.8 The slope element that is most suitable for settlement and agriculture is:

- a. talus
- b. pediment
- c. crest
- d. free face

1.9 Cuestas and hogbacks can be differentiated by:

- a. their shape
- b. the steepness/ angle of the dip slope
- c. the type of rock that occurs
- d. the landscape they occur in

1.10 The slowest form of mass movement is:

- a. soil creep
- b. Slumping
- c. Mudflow
- d. Debris avalanche

(20)

1.2.6 Explain the development of the westerly wind belt. (4)

1.2.7 Name the winds that blow between the sub-polar low and the polar high pressure zones. (1)

1.2.8 How do the planetary winds shown in the diagram affect people? State two effects. (2x2=4)

[22]

1.3 Match the climatic terms with the correct descriptions from the table below.

A. El Niño event	1. Occurs on the leeward side of mountain ranges
B. Monsoon	2. Reversal of air circulation between the seasons
C. Föhn winds	3. Zone where cold air meets with warmer air
D. Maritime air mass	4. Upward flow of cooler sea water along coastlines
E. La Niña event	5. Cell in the sub-tropical high pressure belt that affects south Africa's weather
F. Cold front	6. Dry air mass that occurs over land
G. Geostrophic wind	7. Air mass that contains moisture
H. Upwelling	8. Occurs when easterlies in the Pacific ocean weaken and cause lower rainfall in Southern Africa
I. South Atlantic High	9. Stronger than normal easterlies in the Pacific Ocean causing higher rainfall in Southern Africa
J. Continental air mass	10. Theoretical wind that blows parallel to isobars when Pressure gradient and Coriolis force are in balance.

(10)

1.4.1 Describe the role played by rivers in the formation of the canyon landscape shown above (2)

1.4.2 Explain with the aid of a diagram how the pointed butte has formed from the mesa in this landscape. (4)

1.4.3 Choose the correct word from the underlined options. Write only the correct word.

An igneous Sill/ Dyke may form a horizontal layer of resistant rock. This sill is likely to be Sandstone/Dolerite. (2)

1.5 Environmental Problems Soil Erosion.

Read the following extract from the farmer's weekly magazine and answer the questions that follow.

Prof Heinz Beckedahl at the University of KZN's School of Environmental Science warns that the problem remains dire and more must be done to prevent erosion.

What is South Africa's current soil erosion status?

Since Lindeque's article in 2010, South Africa's erosion problem hasn't significantly worsened, but it has also not improved. Annually, we're still losing an estimated 500 million tons of sediment, composed of mainly soil and topsoil.

South Africa's soil erosion is [thus] too high, and may have a [negative] impact on future food security, as it decreases soil fertility, thereby reducing productivity.

Currently, although soil loss has decreased during the drought, ground cover loss has significantly increased, as has the potential loss of soil structure due to trampling. This is of great concern, as many areas have now become especially susceptible to soil erosion.

When the expected heavy spring rain arrives, erosion is likely to be particularly severe. Therefore, it's extremely important that as many conservation measures as possible are established before the rain, to prevent further hardships for farmers.

To what extent have poor farming practices contributed to these problems, and can the sector somehow lessen its contribution to soil erosion?

Of course poor farming practices contribute to the erosion problem, but they are not the root cause of South Africa's high soil loss. Most farmers are well aware that the soil is their capital, and they wouldn't willingly endanger their livelihoods. We need to recognise that South Africa has some highly erodible soils, coupled with very erosive rainfall characteristics. It's therefore critical that sound conservation measures are encouraged through further government-driven initiatives.

1.5.1 Define "topsoil." (2)

1.5.2 Suggest how soil erosion leads to "soil infertility" (2)

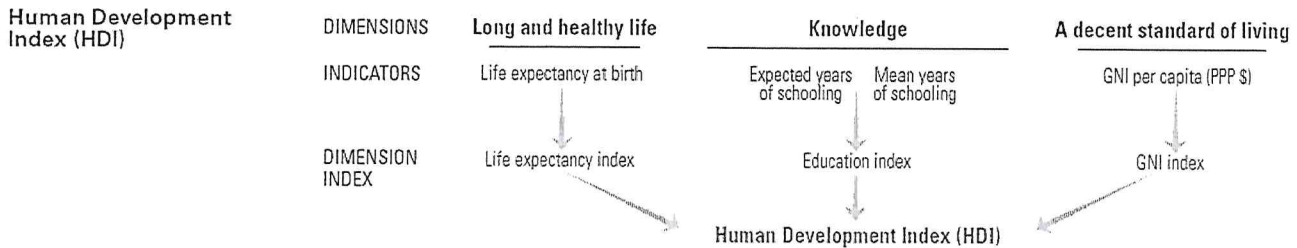
SECTION B DEVELOPMENT AND ENERGY

Answer TWO from the questions from the THREE questions in this section.

Question One

1.1 Measuring development

Study the graphic below showing how the Human development index is arrived at.



1.1.1 The HDI measures development in three key areas. Explain why life expectancy was chosen as one of these areas. (2x2=4)

1.1.2 Describe two factors which affect life expectancy in LEDC (less developed countries) (2x2=4)

1.1.3 What does GNI stand for? (1)

1.1.4 Suggest one reason why GNI affects standard of living. (2)

1.1.5 There are a number of development indicators which are not shown here.

a. Name one economic AND

b. One social indicator that is not used to calculate HDI. (2)

1.1.6 Outline two possible reasons why the education index in South Africa may not be as high as it should be. (2x2=4)

1.1.7 South Africa has a relatively High GINI Index (which shows inequality and income distribution) this is shown in the data below.

Country	Gini index
Brazil	55 (2009)
China	42 (2009)
India	34 (2010)
Russia	40 (2009)
South Africa	63 (2009)
Nigeria	48.8 (2010)
Uganda	44.3 (2009)

Adapted from Distribution of Income data World Bank (2014)

1.3 The logo below belonging to the Fair Trade organization. The aim of Fair trade is to guarantee to customers that products have not been produced under conditions where exploitation of people has taken place.



Source: FAIRTRADE WINDS

- 1.3.1 State two different types of exploitation that can occur in the production of cotton products. (2)
- 1.3.2 Describe two benefits of Fair Trade to the country producing the cotton. (2)
- 1.3.3 Suggest one disadvantage of the fair trade system. (1)

Total: [50]

Question Two

2.1 Refer to the image below showing the FREE trade agreements that Australia has signed.

technological developments came a range of institutional changes that served to integrate trade even further: the founding of the United Nations, in 1945, aimed to bridge the gaps between countries, with economic development a core tenet of the organisation.

After World War II new technologies and liberalised trade allowed corporations to grow far larger than ever seen in history – in a 2017 comparison of the 100 largest economic entities in the world, only 31 spots were claimed by governments. The other 69 entities were multinational corporations.

Source: getsmarter.com

2.2.1 Describe two ways in which technology has contributed to the process of globalisation. (2x2=4)

2.2.2 State two ways in which globalisation has led to economic development. (2)

2.2.3 What is a multinational? (1)

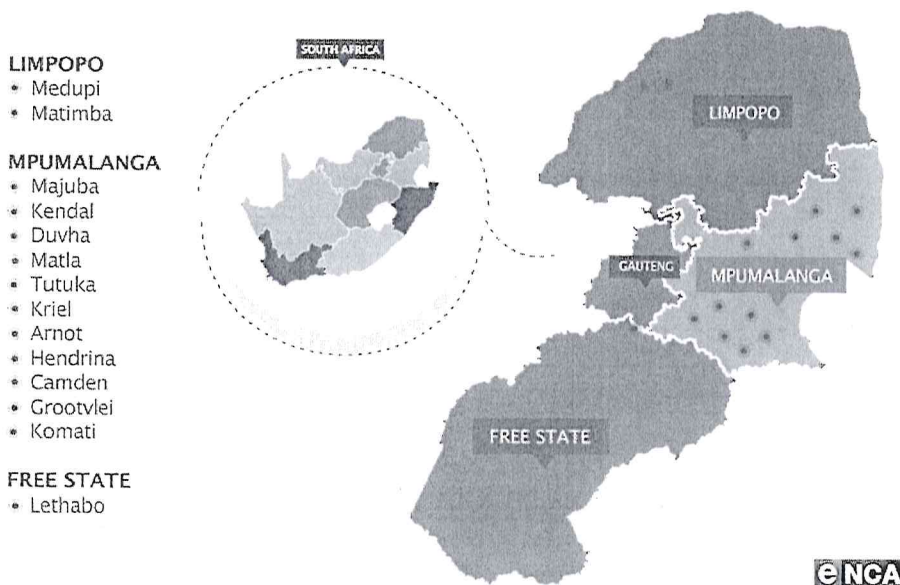
2.2.4 Suggest three positive effects that multinationals can have on the countries in which they operate. (3x2=6)

2.2.5 Describe one negative impact that globalisation may have on society (2)

2.3 Energy in South Africa

⁽³⁾
Study the source below and answer the questions that follow.

NON-COMPLIANT ESKOM COAL-FIRED POWER STATIONS



Source: ENCA NEWS.

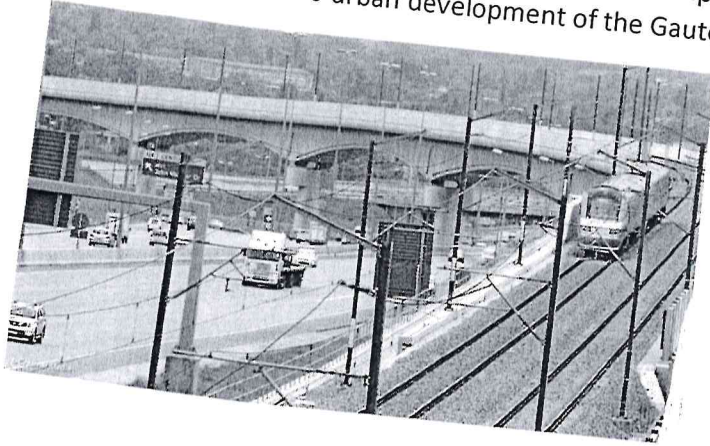
to innovative financing structures. One such finance mechanism is the use of PPPs, which sees government joining forces with the private sector to achieve certain development goals.

3.2.1 Describe three advantages of using PPP's to achieve development

(3x2=6)

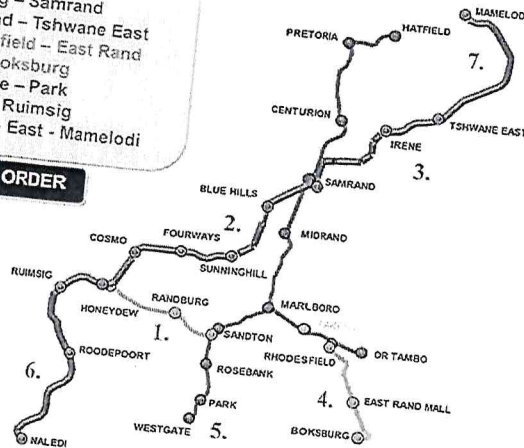
3.2.2 The Gautrain project depicted below is an example of such a project. Suggest how the Gautrain project contributed to urban development of the Gauteng area.

(2x2=4)



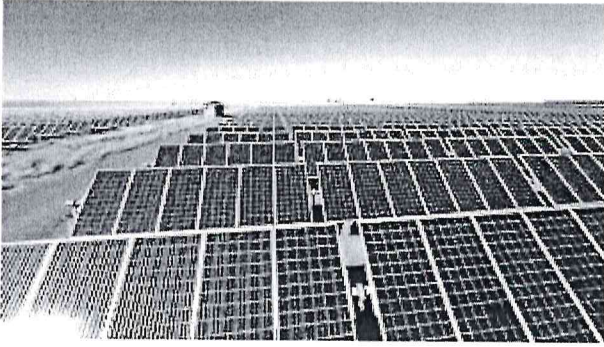
1. Sandton – Honeydew
2. Ruimsig – Samrand
3. Samrand – Tshwane East
4. Rhodesfield – East Rand Mall – Boksburg
5. Westgate – Park
6. Naledi – Ruimsig
7. Tshwane East - Mamelodi

PRIORITY ORDER



3.3 Rural development

Read the extract below and answer the questions that follow.



Source: *environment.co.za*

- 3.4.1 Suggest two reasons why central South Africa, (De Aar is in the Northern Cape) was selected for this development. (2)
- 3.4.2 Outline two challenges related to solar energy production (2)
- 3.4.3 Suggest three reasons why renewable energy is cheaper than coal fired energy as stated in this article. (2x3=6)
- 3.4.4 Explain how rapid development of renewable energy could benefit South Africa's economy. (2x2=4)

Total: [50]