PHOENIX NORTH CLUSTER
NOVEMBER EXAMINATION – 2019
GEOGRAPHY PAPER 1

GRADE: 11
DURATION: 3 HOURS
MARKS: 225

INSTRUCTIONS TO CANDIDATES:

1. This question paper consists of TWO sections (A and B) with FOUR questions. You are required to answer THREE questions of 75 marks each.
2. Number your answers exactly as the questions are numbered.
3. Write neatly and legibly.
4. All diagrams appear in an annexure with the corresponding number of the question next to it.
5. This question paper consists of __10__ pages with an annexure of __9__pages.

SECTION A
QUESTION ONE: THE ATMOSPHERE AND GEOMORPHOLOGY

1.1. Refer to figure 1.1 in the annexure and choose the answer from those within the brackets. Write the answer only.

1.1.1. Letter A represents (high pressure, low pressure).
1.1.2. The Coriolis force is shown by the letter (X, Y).
1.1.3. The 980mb line refers to an (isohyet, isobar).
1.1.4. At point Z, where there is a balance between the pressure gradient force and coriolis force it is referred to as (Geostrophic flow, polar easterlies).
1.1.5. This diagram represents air flow in the (northern hemisphere, southern hemisphere) because the deflection of wind is to the (left , right) in terms of direction.
1.1.6. Low pressure area is indicated by the letter (A, B).

(7 × 1=7)

1.2. **Match the terms in Column B with the statements in Column A. Write the numbers 1.2.1 to 1.2.8 one below the other and next to each only the letter of the correct answer.**

COLUMN A	COLUMN B
1.2.1. Molten material found within the earth's surface.	A. Dyke
1.2.2. Magma contained within the earth's crust.	B. Sill
1.2.3. The largest of the dome – shaped igneous intrusive forms.	C. Magma
1.2.4. Intrusive mass that are large saucer shaped formed by the collapse of the supporting magma chamber.	D. Lopolith
1.2.5. Feature formed from the solidification of magma vertically.	E. Intrusive
1.2.6. A series of rock layers.	F. Strata
1.2.7. Rocks that allow water to move through them.	G. Batholith
1.2.8. Igneous intrusion of magma injected and are laid down horizontally.	H. Permeable
	I. Laccolith

(8×1=8)

1.3. **Refer to the synoptic weather map labelled 1.3 in the annexure and answer the questions set.**

1.3.1. Apart from the date, give a piece of evidence from the synoptic chart to state that this is a summer synoptic situation. (1)

1.3.2. Identify the isobaric interval used on the synoptic map. (1)

1.3.3. Identify high pressure systems labelled:
a) X
b) Y (2)

(2)

1.3.4. Refer to weather phenomenon L

1.3.4.1. Identify this weather feature.

1.3.4.2. It is expected that this weather feature would reach Cape Town in the next 24 hours. Explain two weather changes that are likely to occur with its passage. (1) (4)

1.3.5. Refer to the weather station at Harare and state the following:-

1.3.5.1. Air temperature

1.3.5.2. Dew point temperature

1.3.5.3. Wind speed

1.3.5.4. Wind direction

(4)

[15]

1.4.Refer to the isobar map for January in Africa labelled 1.4 in the annexure and answer the questions.

1.4.1. Area B shows a low pressure area over Equatorial Africa. Will this area be associated with convergence or divergence? (1)

1.4.2. Will wind C or D be stronger? Give a reason for your answer. (2)

1.4.3. Refer to ocean current labelled X.

1.4.3.1.Name this ocean current? (1)

1.4.3.2. Explain the influence that this ocean current (answer to 1.4.3.1.) will have on rainfall along the area it flows. (2)

1.4.4. Area B, according to Africa's climatic regions is the Tropical Rain forest.

1.4.4.1. List one of its biome characteristic. (1)

1.4.5. In a paragraph of approximately 8 lines, explain the effects of El Nino on Africa's climate. (8)

[15]

1.5.Refer to the diagram labelled 1.5 in the annexure based on slope / slope elements.

15.1. Explain the following terms:-

1.5.1.1. Slope (2)

1.5.1.2. Topography (2)

1.5.2. Slopes are classified according to Lester King's Four elements model. Name/Identify slope element:

1.5.2.1. A

1.5.2.2. C

1.5.2.3. B

1.5.2.4. D (4)

1.5.3. Differentiate between slope A and D in terms of shape. (2)

1.5.4. How can slope B be used for recreation? (2 answers) (2)

1.5.5. Identify the slope that would be suitable for farming. (1)

1.5.6. Give one reason for your answer above. (2)

[15]

1.6. Refer to the diagrams labelled 1.6 on topography associated with inclined rock strata in the annexure and answer the questions.

1.6.1. Explain the following terms:

1.6.1.1. Inclined rock strata

1.6.1.2. Scarp slope

1.6.1.3. Dip slope (3)

1.6.2. Match the following topographical features with diagrams A, B and C.

-Cuesta

-Hogsback

-Homoclinal ridge (3)

1.6.3. Briefly explain how feature A forms. (3)

1.6.4. Differentiate between feature A and C in terms of structure. (2)

1.6.5. Explain 2 ways in which feature A will benefit humans. (4)

[15]

{75}

QUESTION TWO
THE ATMOSPHERE AND GEOMORPHOLOGY

2.1. Refer to the diagram labelled 2.1 in the annexure on the effect of latitude and answer the questions.

2.1.1. The tropic of Cancer is represented by letter (M, O).
2.1.2. The latitudinal position of the tropic of Capricorn is (23.5°S, 23.5°N).
2.1.3. The angle of the sun's rays is 90° at (A, B).
2.1.4. Area B is (intensely, less intensely) heated because there is a (larger, smaller) surface area to be heated.
2.1.5. The angle of the sun's rays at B can be described as (acute, oblique).
2.1.6. One of the ways in which heat is lost in the atmosphere in through (condensation, scattering).

(7×1=7)

2.2. State the term/concept referred to in each of the following statements.

2.2.1. The movement of loose material down a slope due to the influence of gravity.
2.2.2. The very slow movement of topsoil down a slope.
2.2.3. Rapid downward movements of slope material resulting from fairly sudden slope failure.
2.2.4. A saturated layer of material moves slowly over frozen ground.
2.2.5. Cap rock that has broken off, slides a short distance down the slope.
2.2.6. When material becomes saturated with water causing it to become like plastic and flow downhill.
2.2.7. Fragments of rock slide topple or fall of a free face slope to collect at the talus below.
2.2.8. Stone walls built at the base of a slope to prevent rock falls.

(8×1=8)

2.3. Refer to figure labelled 2.3 in the annexure on Monsoons and answer the following:-

2.3.1. What does the term "monsoon" mean? (2)
2.3.2. Match diagram A and B with:
I. Summer monsoon (1)
II. Winter monsoon (1)
III. Give a reason for your answer in each case. (2)
2.3.3. Explain how the monsoon condition in diagram A develops. (3)
2.3.4. "The people living in India rely on the arrival of the South West monsoon…however, they are saddened at times". Evaluate this statement. (6)

[15]

2.4. Refer to figure 2.4 which is a case study on drought and answer the questions.

2.4.1. Define the term drought. (1)
2.4.2. What was the main cause of this drought? (1)

2.4.3. State two measures adapted by the Department of Water Affairs to address the issue of drought. (2)

2.4.4. Discuss the impact of drought on:-

2.4.4.1. People (3)

2.4.4.2. Environment (3)

2.4.4.3. Economy (3)

2.4.5. State 2 ways how "consumer behaviour in addressing the issue of water provision to the community". (2)

[15]

2.5. Refer to figure 2.5 in the annexure on the formation of landforms in a landscape with horizontal layers and answer the questions.

2.5.1. What is canyon? (1)

2.5.2. Briefly explain how a canyon forms. (2)

2.5.3. Complete the table below. Write only the roman-numeral and next to it the answer.

	A	B
Name of landform	(i)	(ii)
Description	(iii)	(iv)

(4)

2.5.4. "Landscapes associated with horizontal rock strata can be both a problem for people living in the area as well as an advantage". In a paragraph of approximately 8 lines discuss this statement with reference to canyon landscapes with the aid of examples. (8)

[15]

2.6. Refer to figure 2.6 in the annexure on Chapmans Peak Drive and answer the questions.

2.6.1. Explain the following terms:

2.6.1.1. Mass movement (2)

2.6.1.2. Upgrading (2)

2.6.2. What do you think is the main cause of rockfalls at Chapman's Peak? (2)

2.6.3. Identify a word from the case study that tells us that Chapman's Peak rockfalls can be highly dangerous. (1)

2.6.4. What precautions have engineers put in place to secure rocks from falling? (2 answers) (4)

2.6.5. Discuss the negative impact of the periodic closures of Champan's Peak Drive, on the economy of Western Cape. (4)

[15]

{75}

SECTION B
QUESTION 3
DEVELOPMENT GEOGRAPHY AND RESOURCES AND SUSTAINABILITY

3.1. Read the statements below and determine if the statement refers to a MEDC (More economically developed country) or a LEDC (less economically developed country. Write only your choice (MEDC or LEDC) next to the question number (3.1.1. -3.1.8) E.g. 3.1.9. LEDC

3.1.1. Very few individuals die before the age of 5 years.
3.1.2. Death rate is high due to poor health care.
3.1.3. The majority of people have access to medical care.
3.1.4. Service delivery is often poor.
3.1.5. Literacy rates are high because the majority of children have access to free education.
3.1.6. Life expectancy is high.
3.1.7. The rate of unemployment is low.
3.1.8. 200-500 babies per 1000 people are born per year.

(8×1=8)

3.2. Choose a term from Column B that matches the description in Column A. Write only the letter (A to H) next to the question number (3.2.1. – 3.2.7.) e.g. 3.2.8. J

COLUMN A	COLUMN B
3.2.1. The amount of carbon a person contributes to polluting the atmosphere through his/her daily lifestyle.	A. Thermal Energy
3.2.2. A substance that releases atomic radiation.	B. Kinetic Energy
3.2.3. Conference of the United Nations regarding climate change in Durban.	C. Carbon Footprint
3.2.4. Energy which is released when heat is transferred from one source to another.	D. Conventional energy sources
3.2.5. Stored energy which is released due to movement.	E. Radioactive
3.2.6. The measures taken to regulate the type and amount of energy being used.	F. COP 17
3.2.7. Consists of fossil fuels and other non-renewable resources.	G. Energy management
	H. Kyoto Protocol

(7×1=7)

3.3. Refer to figure 3.3 in the annexure and answer the questions that follow:-

3.3.1. List any TWO challenges faced by Africans that is evident in the cartoon. (2)

3.3.2. According to the cartoon how do the challenges mentioned in question 3.3.1 affect African development. (3)

3.3.3. Explain the positive and negative impact of development aid on the African continent. (4)

3.3.4. "The Ebola outbreak in West Africa 2014 claimed the lives of more than 5000 people". Analyse how humanitarian aid could prevent the spread of the disease. (3×2) (6)

[15]

3.4. Refer to the Graph labelled 3.4 in the annexure an answer the questions that follow:-

3.4.1. Define the term fossil fuel. (2)

3.4.2. What is another word for "coal" power? (2)

3.4.3. How long will coal last? (2)

3.4.4. What does the abbreviation Eskom stand for? (1)

3.4.5. According to GREENPEACE, the use of coal to produce electricity has a number of drawbacks. In a paragraph of about 8 lines, evaluate the use of coal in the production of electricity. (4×2) (8)

[15]

3.5. Refer to the table labelled 3.5. in the annexure and answer the question below:-

3.5.1. Is this table showing a regional, local or global difference in development? (1)

3.5.2. Does the table focus on economic or human indicators of development? Give a reason for your answer. (2)

3.5.3. Give TWO reasons for the difference in IMR between the United Kingdom and Ethiopia. (2×2) (4)

3.5.4. "The economic, social, political and cultural activities across the world are interconnected. In the light of the above statement, explain the advantages and disadvantages of Globalisation. (4×2) (8)

[15]

3.6. Refer to the Newspaper article labelled 3.6 and answer the questions that follow:-

3.6.1. State what you understand by alternative energy. (1)

3.6.2. Suggest a possible reason why Eskom had no immediate plans to electrify the village. (2)

3.6.3. Explain how electricity will help reduce poverty for the villagers. (2×2)(4)

3.6.4. State TWO advantages and TWO disadvantages of solar power. (2×4)(8)

[15]

{75}

QUESTION 4
DEVELOPMENT GEOGRAPHY AND RESOURCES AND SUSTAINABILITY

4.1. Select from the list below a suitable term that matches the definition provided in Question 4.1.1. – 4.1.7. Write down the question number and correct answer next to the number.

Protectionism, Trade bloc, Terms of trade, Liberalisation of trade, Capitalism, Balance of trade, Balance of Payments, Tariff, Economic development.

4.1.1. The relationship between the prices a country sells its exports for and the prices it pays for its imports.
4.1.2. The relationship between the value of a country's exports and its imports.
4.1.3. A financial summary of all the payments made by a country to the rest of the world.
4.1.4. A group of countries that have agreed to trade with one another.
4.1.5. Tax collected by government on goods coming into a country.
4.1.6. A control that restricts restraints or supports trade to look after the interests of a country.
4.1.7. Allowing more freedom of trade.

(7×1)(7)

4.2. Choose the correct answer from the alternatives given.

4.2.1. Which of the sources is not a renewable resource?
A. Biomass
B. Water
C. Natural gas
D. Wind

4.2.2. Which type of electricity is produced in volcanic areas where the heat of the rock is used to create enough energy?
A. Petroleum
B. Coal
C. Geothermal
D. Hydroelectricity

4.2.3. Provide the name of the energy which produces ethanol fuel through the use of sugar and maize.
A. Biomass
B. Geothermal
C. Nuclear power
D. Thermal power

4.2.4. Which of the following sources is not a fossil fuel?
A. Oil
B. Natural Gas
C. Uranium
D. Coal

4.2.5. Where panels are used to produce electrical energy.
A. Coal
B. Solar
C. Geothermal
D. Wind

4.2.6. The source which produces nuclear energy.
A. Uranium
B. Coal
C. Petroleum
D. Natural gas

4.2.7. Which of the following sources has high potential, but is currently underutilised in South Africa?
A. Uranium
B. Coal
C. Water
D. Geothermal

4.2.8. Which of the sources causes more acid rain in urban areas?
A. Natural Gas
B. Biomass
C. Uranium
D. Coal

(8×1)(8)

4.3. Refer to figure 4.3 in the annexure and answer the questions that follow:-

4.3.1. What is community development? (1)

4.3.2. What is the aim of the community development project organised by Umsizi. (2)

4.3.3. Mention why crop production training is sustainable within Umsizi framework? (2)

4.3.4. How does agricultural crop production training benefit the community and community development? (2×2)(4)

4.3.5. Explain the meaning of the following terms:
a) Impoverished community
b) Sustainable
c) Rural development

(3×2) (6)

[15]

4.4. Study figure 4.4 showing graphs about South Africa's energy usage and needs and answer the questions.

4.4.1. Which household unit consumes the mot energy in South Africa? (1)

4.4.2. What other alternatives can the people of South Africa use to reduce the consumption of energy. (2)

4.4.3. Explain how the information in graph 1 negatively impact the economy of South Africa. (2×2)(4)

4.4.4. List four ways how South Africa's can use electricity more sustainably (4×2)(8)

[15]

4.5. Study Figure 4.5 in the annexure, which illustrates the effects of aid on the development of Third World countries, and answer the questions:-

4.5.1. Define the term multilateral aid? (2)

4.5.2. Explain why the aid provided is unsustainable as depicted in the illustration. (2)

4.5.3. Three types of aid, technical, conditional or humanitarian may be provided to recipient countries.

a) Name the type of aid depicted in the illustration. (1)

b) Substantiate your answer to Question 4.5.3 (a) (2)

4.5.4. In a paragraph of approximately 8 lines, assess the impact of aid in the Third World countries. (4×2)(8)

[15]

4.6. Study Figure 4.6 in the annexure and answer the questions below:-

4.6.1. What is a resource? (1)

4.6.2. Differentiate between recycle and reuse. (2)

4.6.3. Discuss how recycling can cause economic development. (4)

4.6.4. In our school environment list two ways how learners can reduce waste. (4)

4.6.5. Explain two procedures associated with recycling. (4)

[15]

{75}

ANNEXURE

FIGURE 1.1

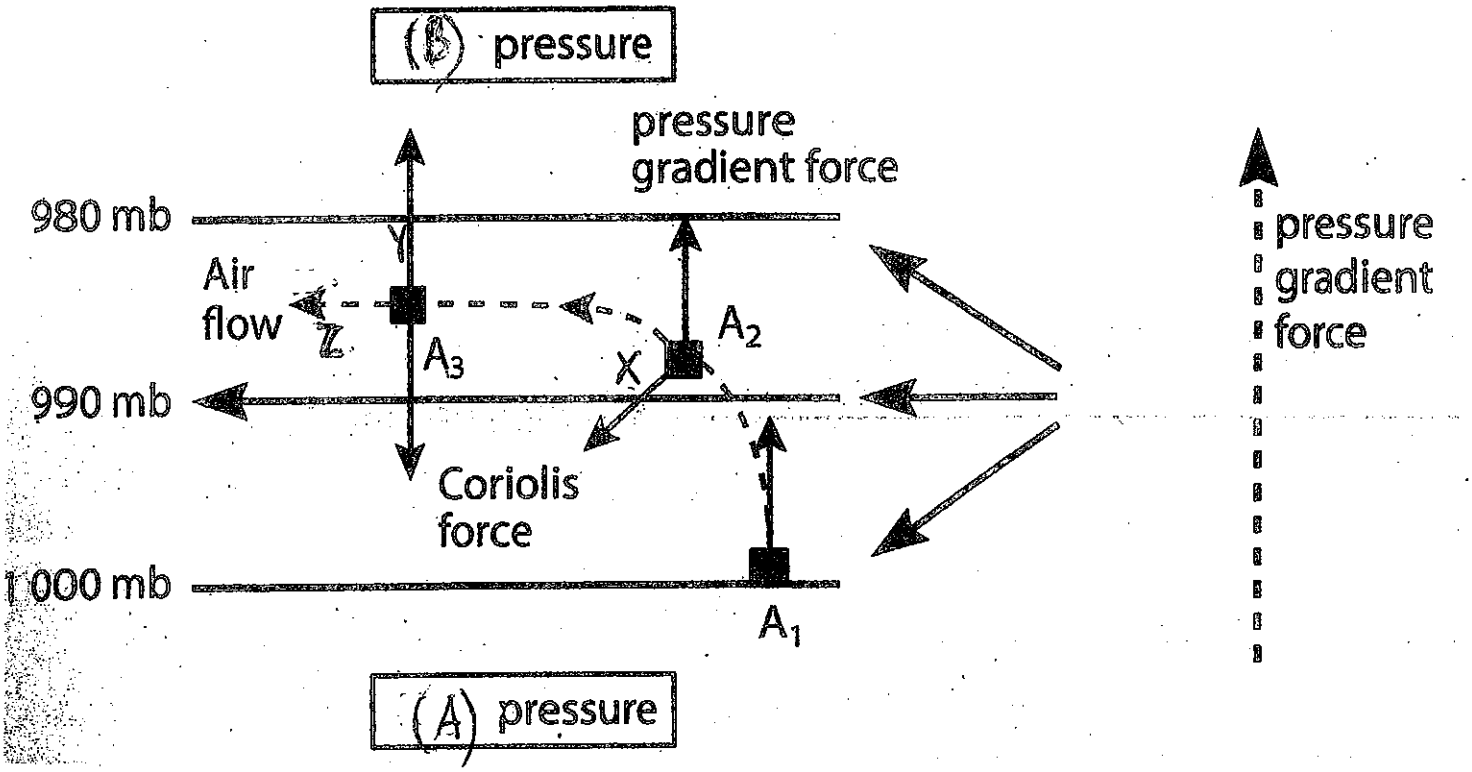


FIGURE 1.3 – SYNOPTIC WEATHER MAP

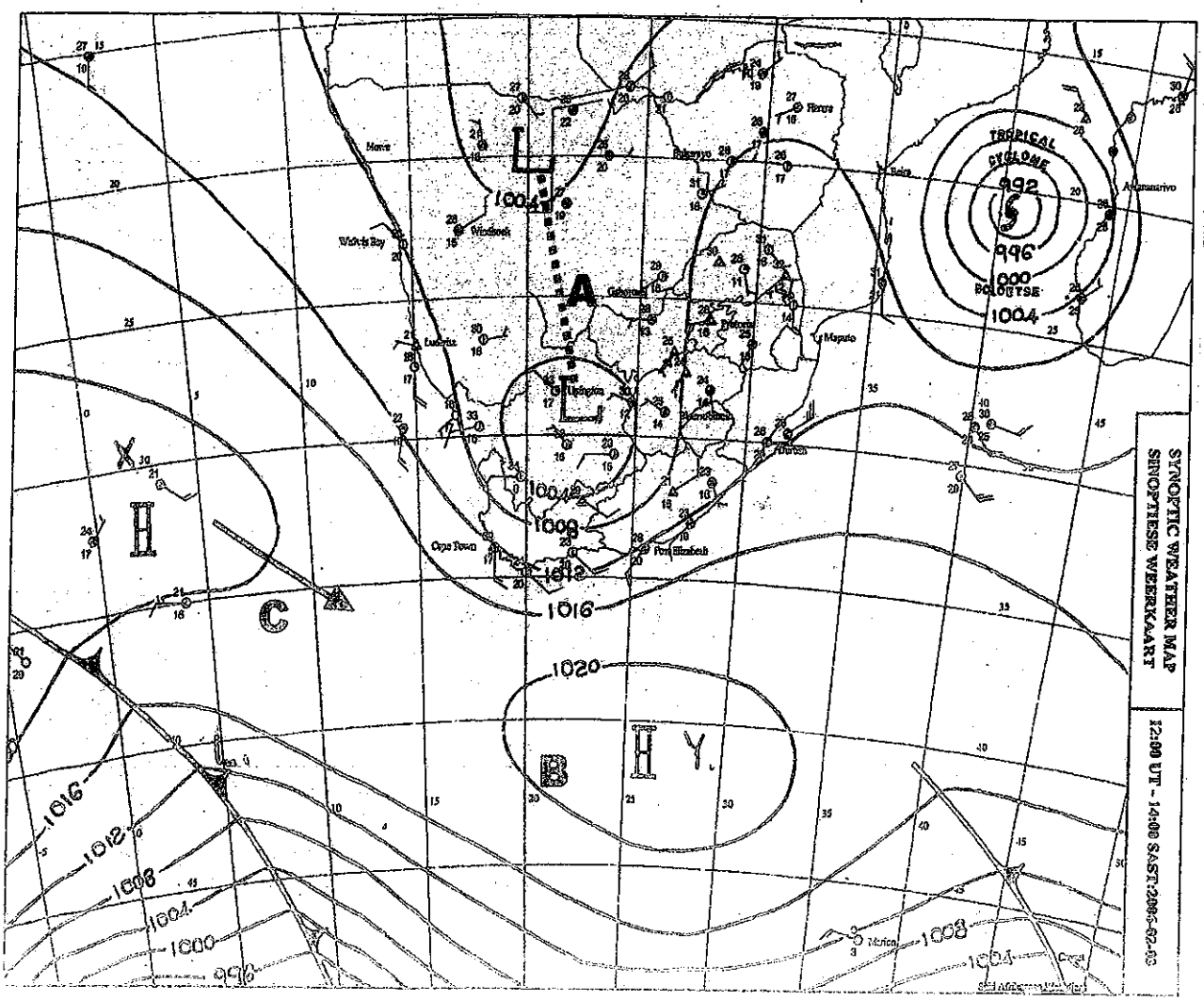


FIGURE 1.4 – ISOBAR MAP

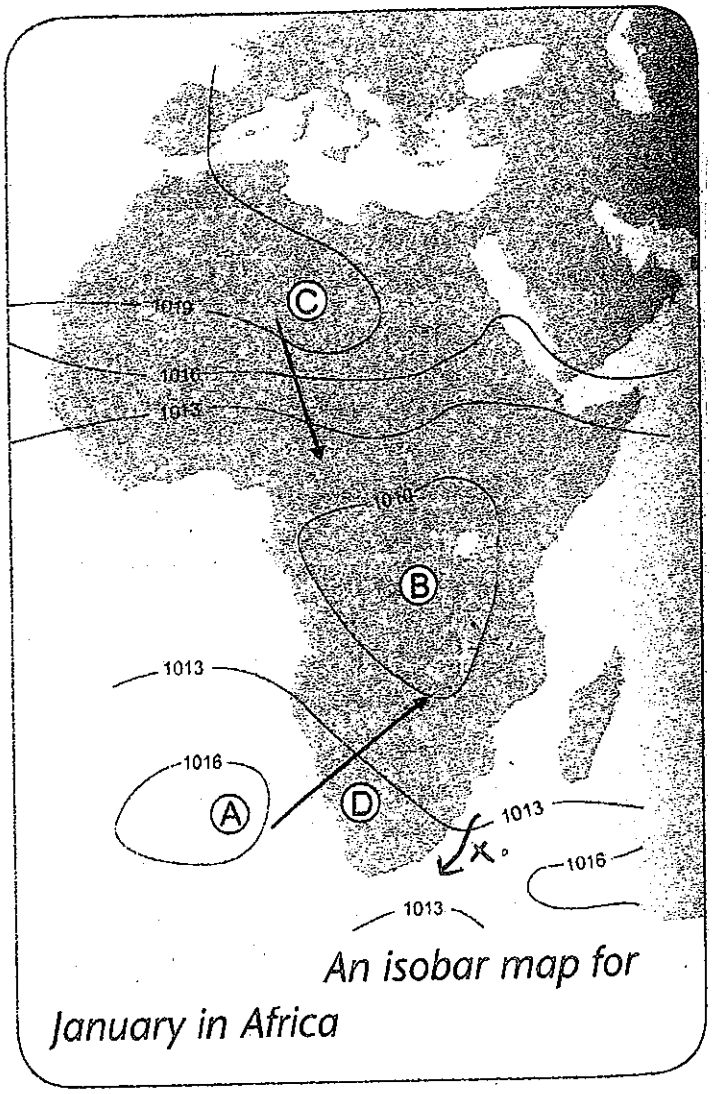
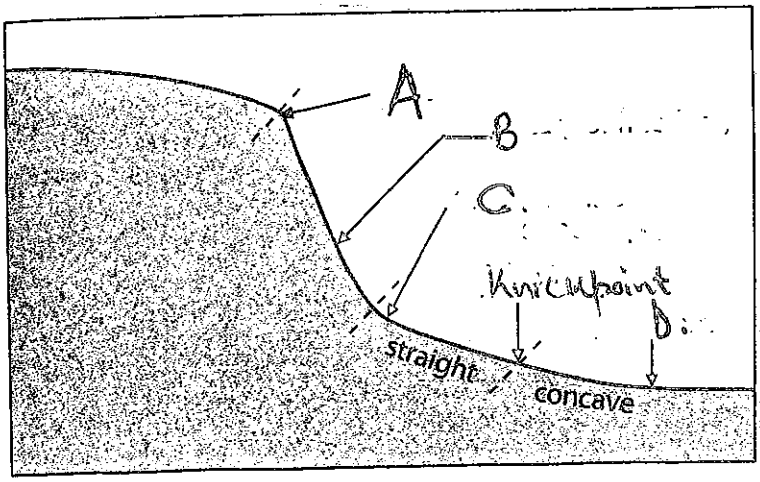


FIGURE 1.5 – SLOPE ELEMENTS



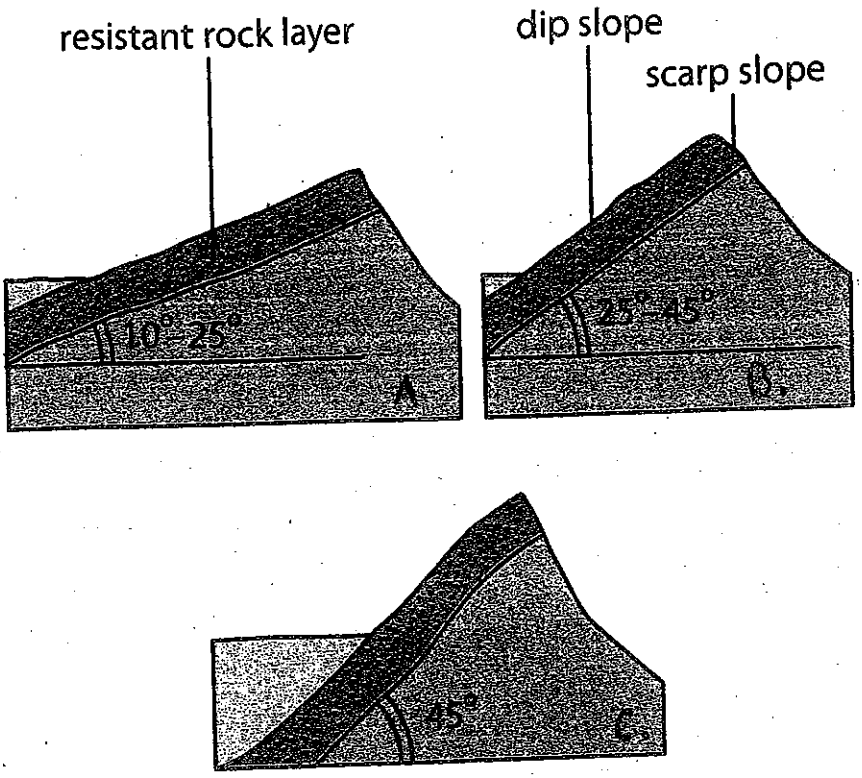


FIGURE 1.6 – INCLINED ROCK STRATA

FIGURE 2.1 – EFFECT OF LATITUDE ON TEMPERATURE

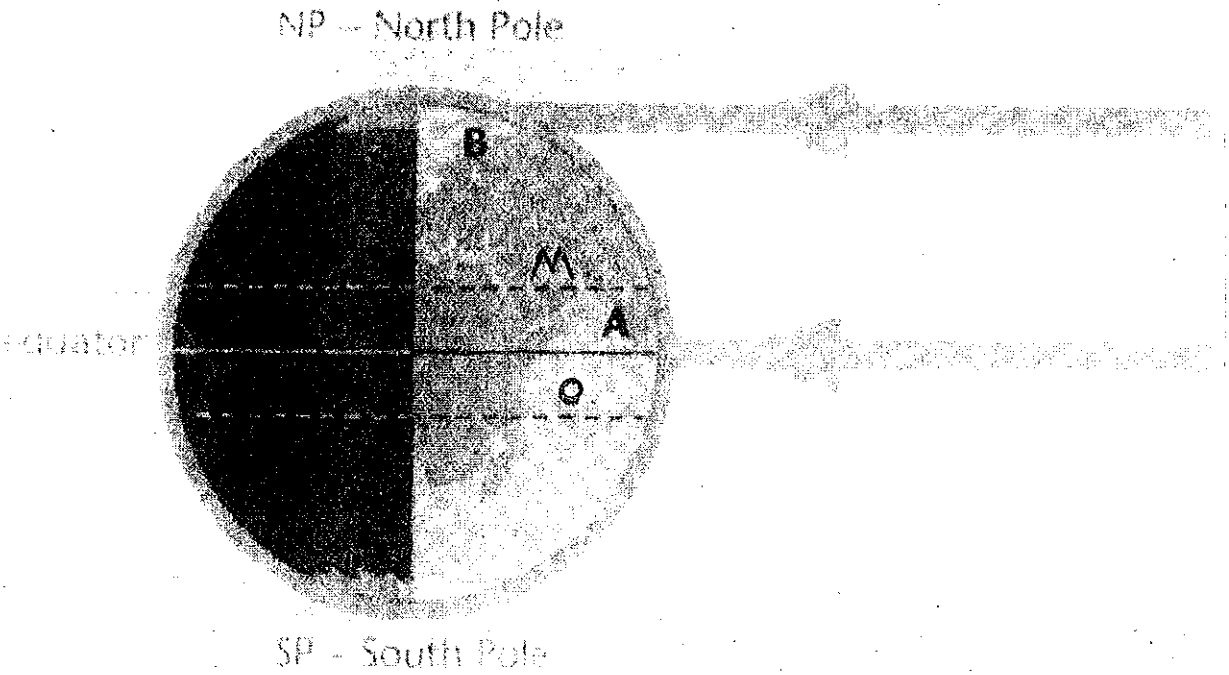


FIGURE 2.3 – MONSOONS

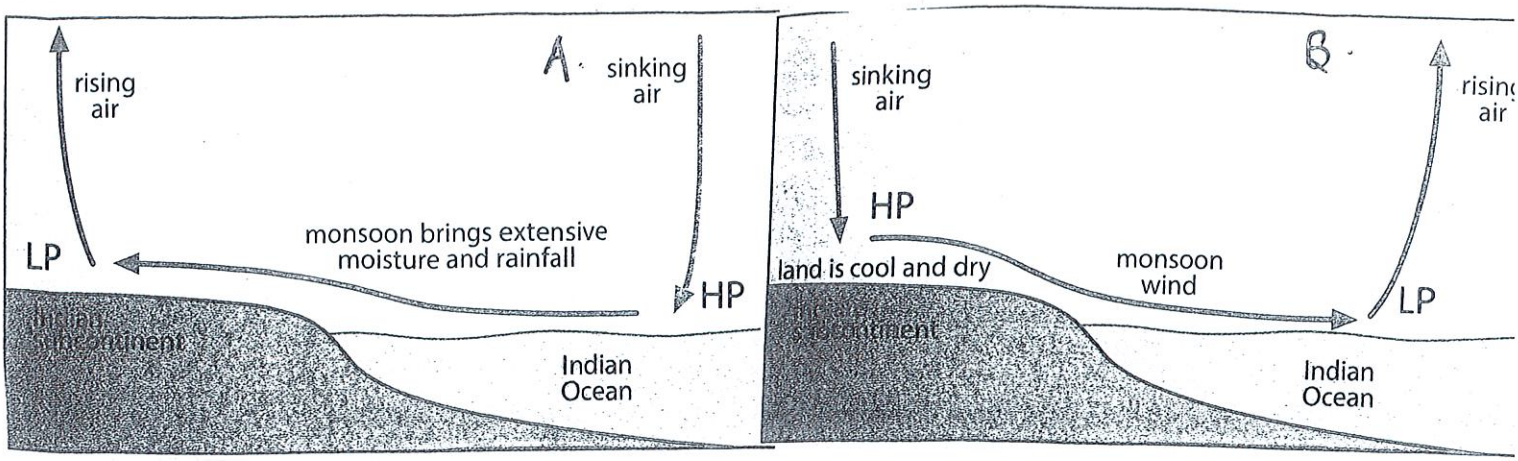


FIGURE 2.4 – CASE STUDY –DROUGHT

Drought report for South Africa: Drought conditions persist

20 January 2010

The Department of Water Affairs has prioritised support for parts of the country affected by the prevailing drought conditions due to low rainfall during 2009. The conditions started around March 2008. Having received an annual rainfall of 477 mm in the last year, which accounts for only 63 per cent of the areas' mean annual precipitation, urgent measures had to be put in place to deal with the water shortages: severe water restrictions were introduced, sewage water is being redirected to the purification plants, and seawater is being desalinated to increase supply.

In addition, the water storage levels for this area are well below average and are declining further. The Garden Route Dam: Storage is 30%, which is 70% below the median storage. The Wolwedans Dam: Storage is 37,1%, which is 60% below the median storage and also gradually declining.

Water conservation and demand management, especially in these drought-stricken areas, is to be focused on as a means to sustaining supply. Consumer behaviour in the use of water can go a long way in addressing the issue of water provision to the communities. Water conservation and demand management initiatives have been ongoing and these will be intensified.

FIGURE 2.5

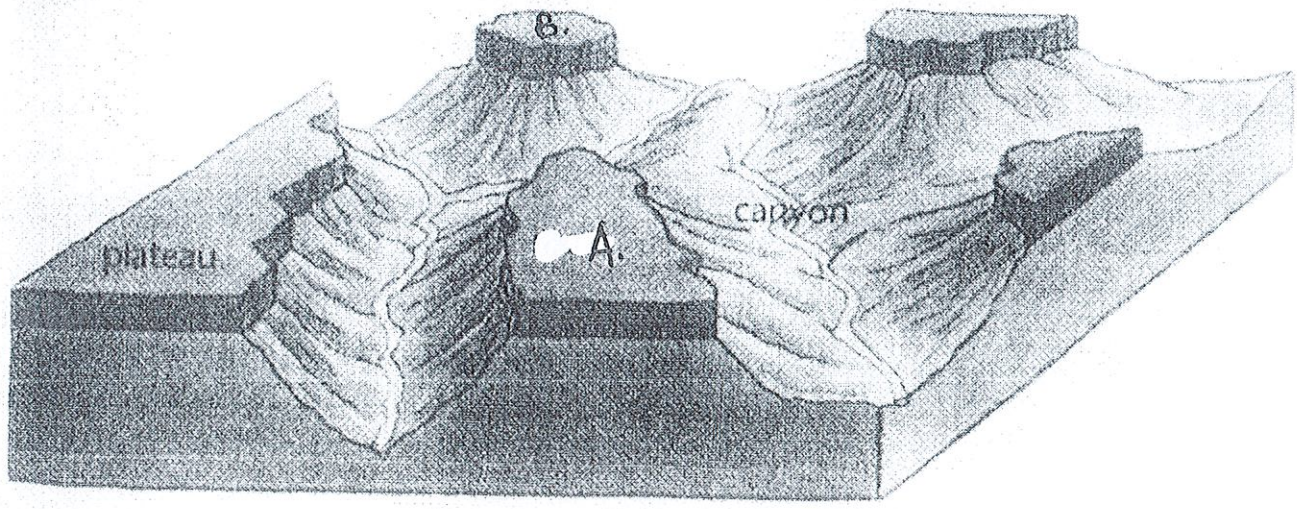


FIGURE 2.6 – CHAPMANS PEAK

Chapman's Peak Drive

Chapman's Peak Drive is described by many tourist books as one of the most scenic drives in the world. It was built between 1915 and 1922. It connects Hout Bay and Noordhoek and is cut into the side of the mountain range on the Atlantic coastline. It is 9 km in length with 114 curves along the picturesque road. Because of the spectacular views, it is a popular tourist attraction.

Chapman's Peak Drive was closed in late 1999 due to a fatal rockfall. Engineers set about building rockfall protection measures which included catch fences, building half tunnels, slope stabilisation and canopy structures. The long term project of upgrading Chapman's Peak Drive resulted in the engineering company involved receiving an international excellence award for rockfall protection in 2004. The road was re-opened as a toll road, but it was closed again in 2008 for a number of months as a result of the identification of risk areas on the mountain slopes.

There are a number of safety nets along the road to catch the falling rocks. These heavy duty safety nets are the most powerful in the world and are designed to catch a 30-ton boulder. The closure of the road at various times impacts on the economy of both the tourism sector and the local residents.

URE 3.3 – CARTOON ON DEVELOPMENT

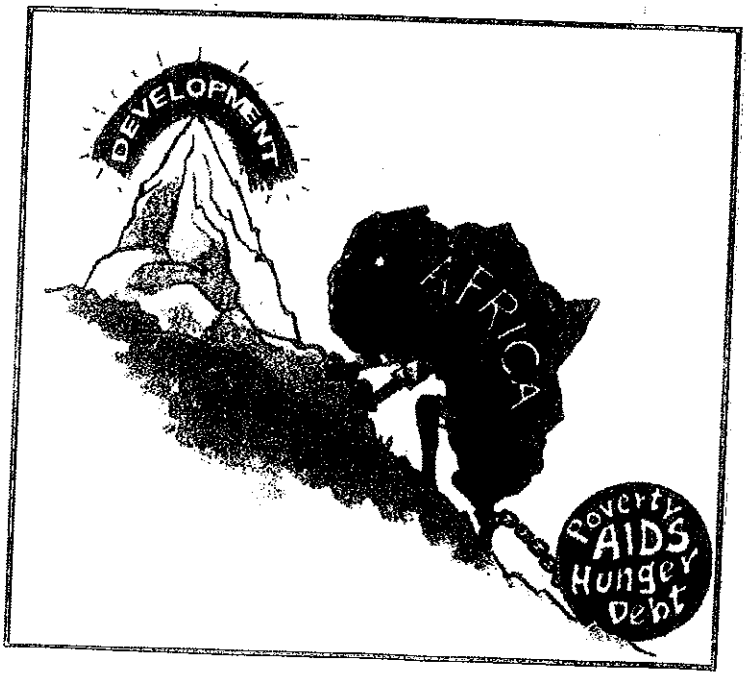
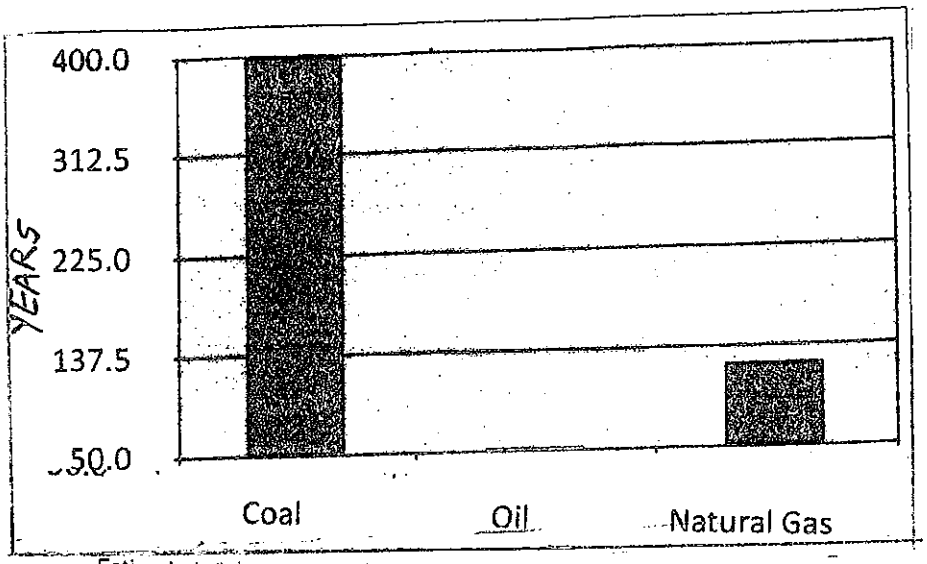


FIGURE 3.4 – FOSSIL FUEL RESERVES

Study the graph below which shows the world's estimated fossil fuel reserves.



Estimated global fossil fuel reserves

FIGURE 3.5 – TABLE DEVELOPMENT INDICATORS

Comparison of development indicators		
Development indicator	**United Kingdom**	**Ethiopia**
Life expectancy	79 years	42 years
Ratio of doctors to people	1:455	1:32 000
Literacy rate	99%	41%
Nutrition	3 100 calories per person per day	1 800 calories per person per day
Access to clean water	100%	27%
GNP per capita	US$21 410	US$100
Birth rate	12 per 1 000	40 per 1 000
Death rate	10 per 1 000	19 per 1 000
Infant mortality rate (IMR)	5 per 1 000	110 per 1 000
Natural increase	0,3%	2,5%

Table 5.13 Differences in development between the UK and Ethiopia

FIGURE 3.6 – NEWSPAPER ARTICLE SOLAR POWER CHANGES VILLAGES

SOLAR POWER CHANGES VILLAGES

The days of cutting firewood for cooking and heating water are over for about 80 Xholobeni villagers in Mbizana who received solar panels and geysers from the Eastern Cape rural development and agrarian reform department.

The project was started earlier this year by former MEC Zoleka Capa as a means providing alternative energy to villagers after it was become known that power utility Eskom had no immediate plans to electrify the village.

The one-kilowatt solar panels provide the 80 households with enough energy for lights and to connect other household appliances and the 100-litre solar geyser ensure warm bath water daily.

(Source: Daily Dispatch (28/07/2014) - Lulamile Feni)

FIGURE 4.3 – COMMUNITY BASED DEVELOPMENT

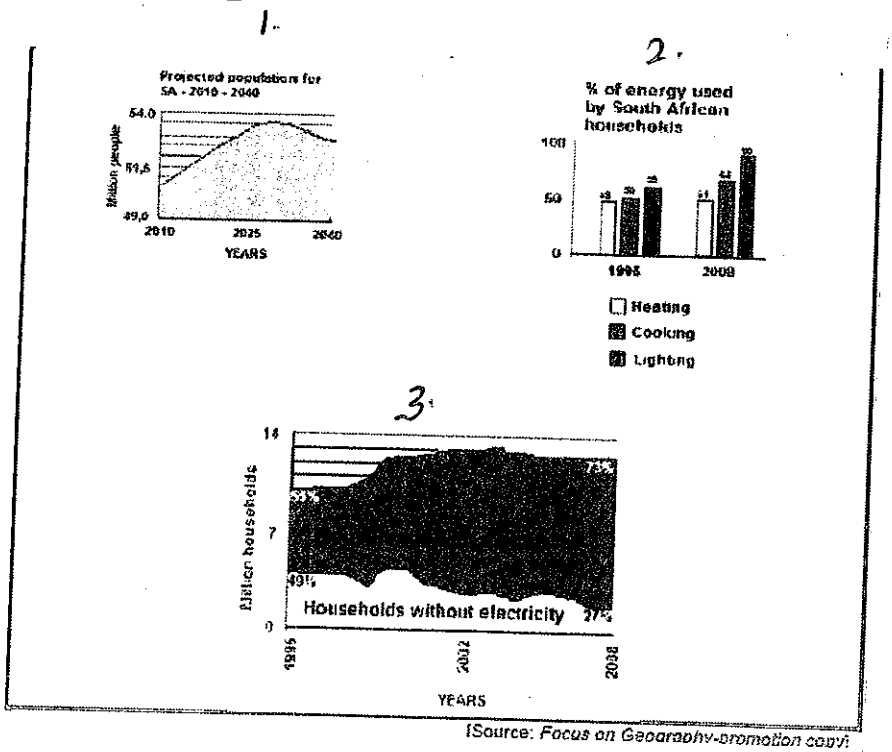
Umsizi has established, together with Northpoint City Church, a Non-Profit Organisation called Impophomo, which focuses on the socio-economic development of impoverished communities.

Community development is at the heart of Umsizi, and as a result, we have long standing partnerships with the leading experts in the field of rural development. Within community development projects the aim is to significantly improve the well-being of households within rural communities. Projects are designed to be community specific so that upon implementation the positive impacts on the ground can be sustainable and widespread.

Agricultural crop production training is key to community development, and has been presented to many households in villages throughout Southern Africa, with an open invitation for any and all interested community members to attend. The training covers several modules on homestead agriculture and food security, including nutrition, soil fertility, crop rotation, rainwater harvesting and produce, marketing, etc.

[Source: http://umsizi.co.za/community-development]

FIGURE 4.4 – GRAPHS ABOUT SOUTH AFRICA'S ENERGY CONSUMPTION



[Source: *Focus on Geography-promotion copy*]

FIGURE 4.5 – EFFECTS OF AID ON THE DEVELOPMENT OF THIRD WORLD COUNTRIES

FIGURE 4.6 – REFUSE, RESPECT AND REPLENISH