Province of the
EASTERN CAPE
EDUCATION

NATIONAL SENIOR CERTIFICATE

GRADE 11

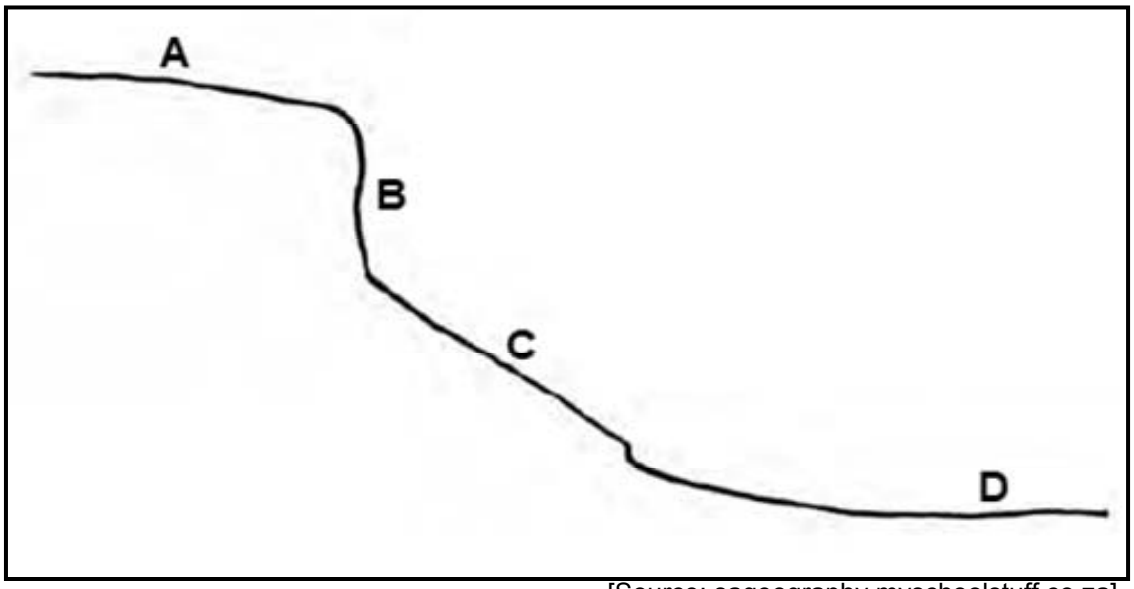
NOVEMBER 2019

GEOGRAPHY P1 ANNEXURE

IGEOGE3

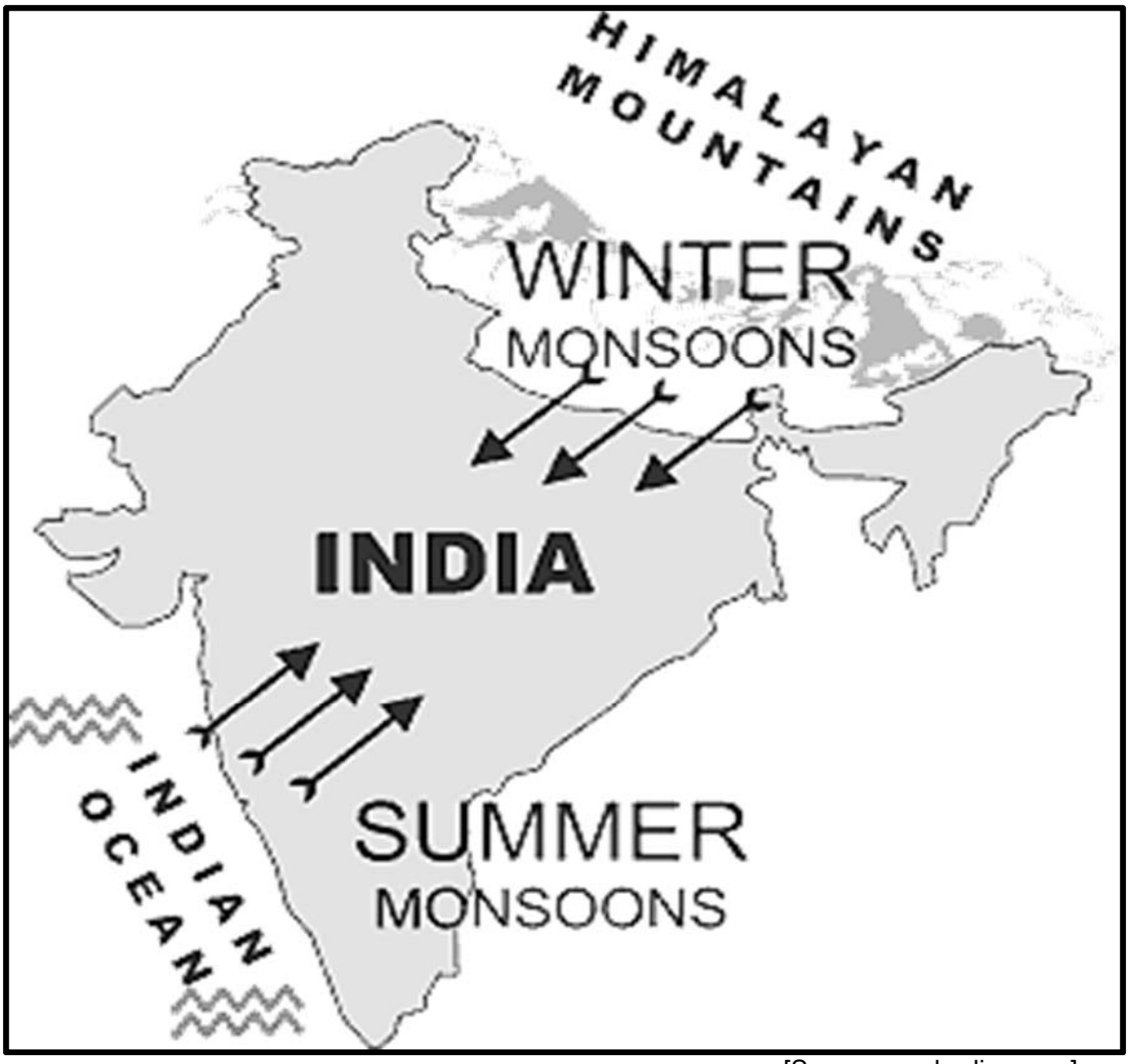
This annexure consists of 11 pages.

FIGURE 1.2: SLOPE ELEMENTS



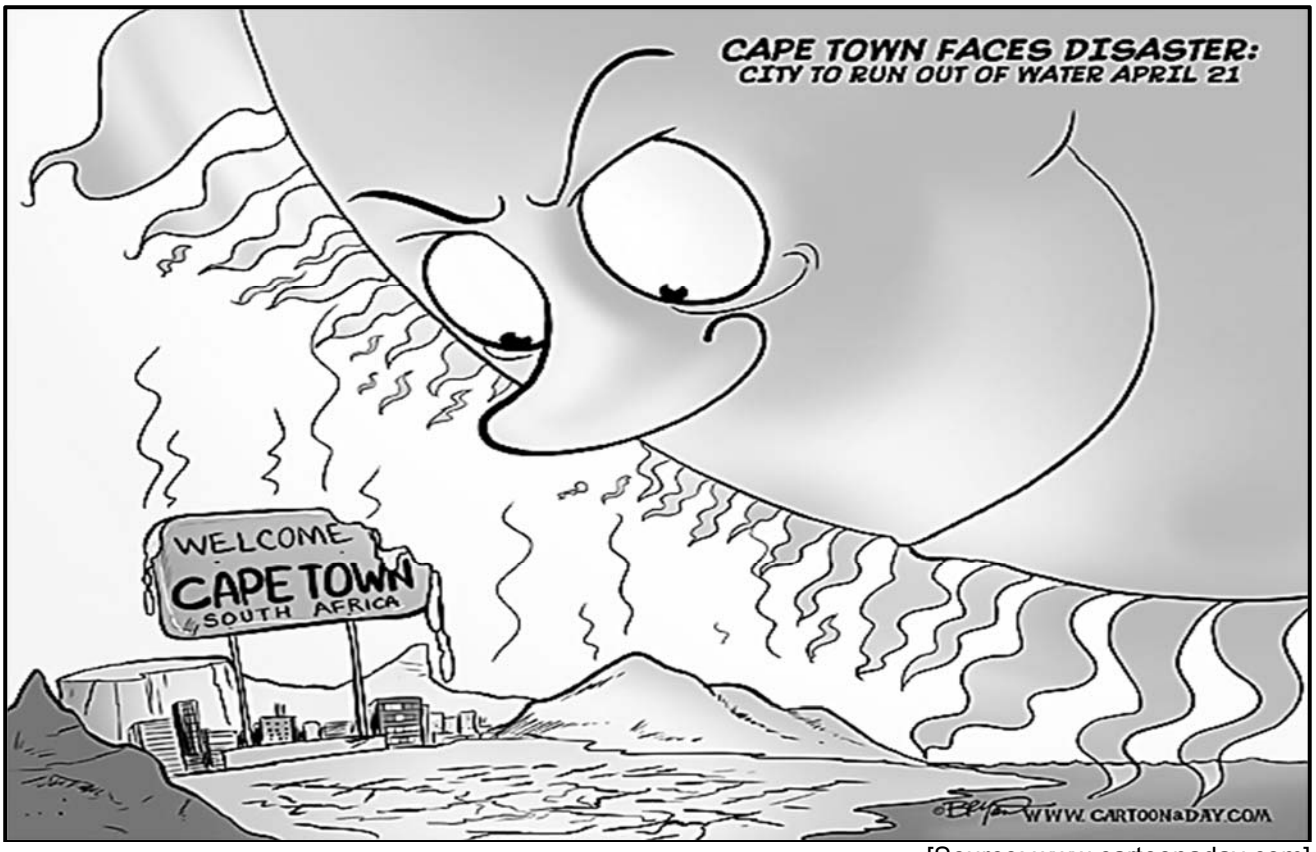
[Source: sageography.myschoolstuff.co.za]

FIGURE 1.3: MONSOON WIND



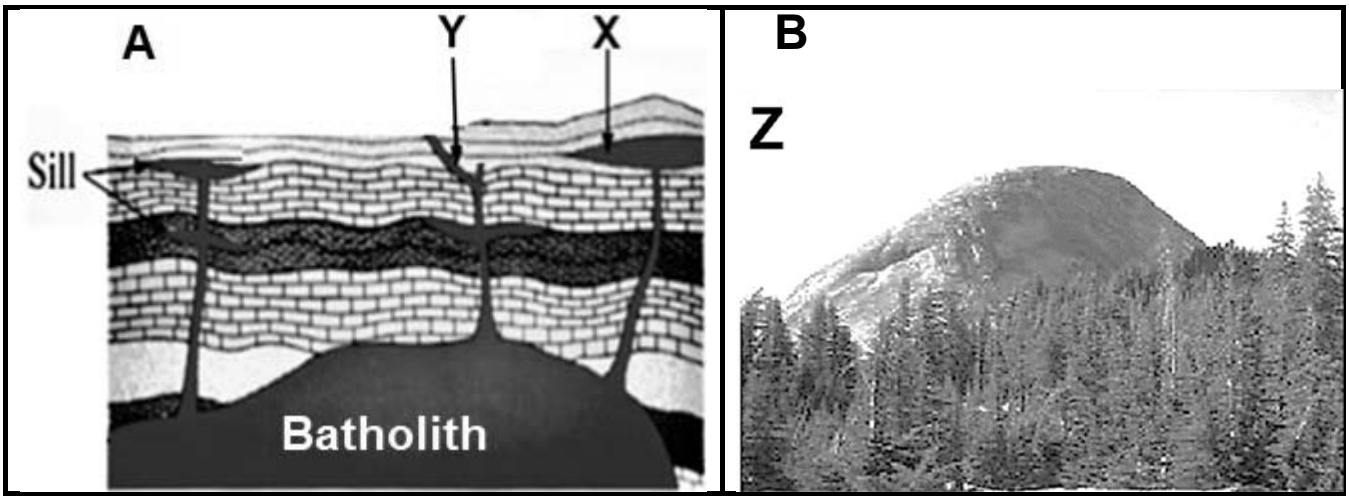
[Source: mr dowling.com]

FIGURE 1.4: DROUGHT IN CAPE TOWN



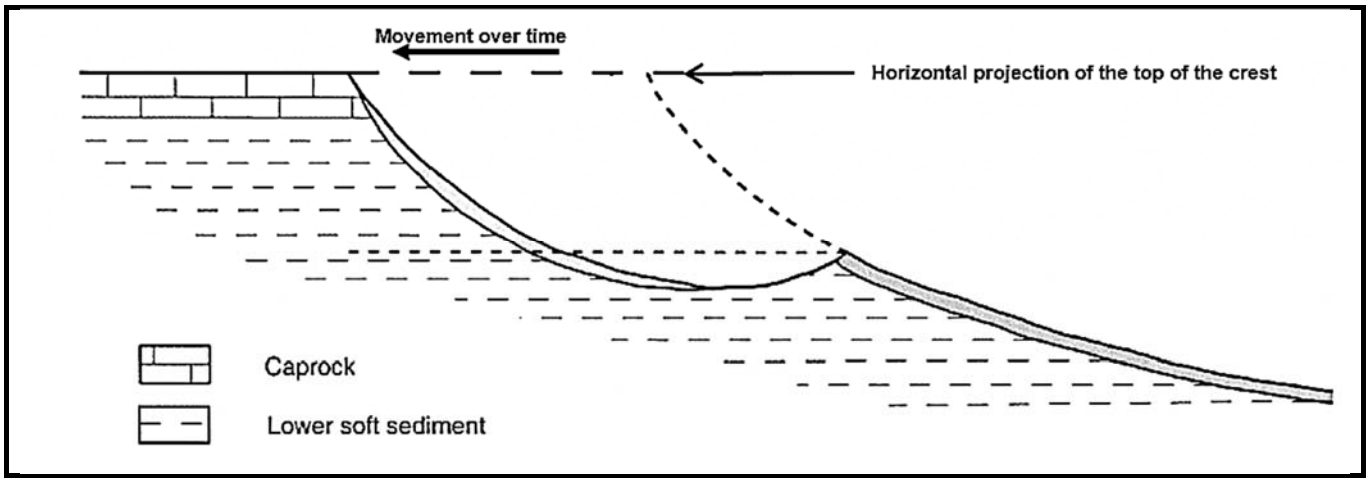
[Source: www.cartoonaday.com]

FIGURE 1.5: TOPOGRAPHY ASSOCIATED WITH MASSIVE IGNEOUS ROCKS



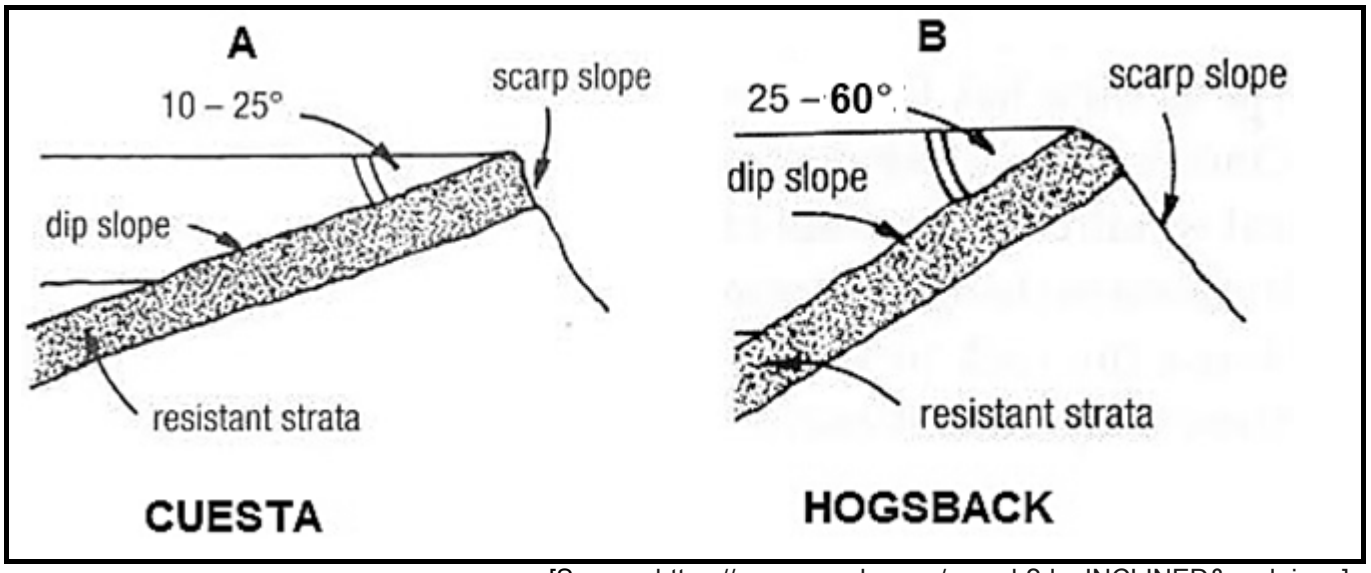
[Source: Indiana.edu] [Source: https://www.google.com/search?q=DOME+SHAPED+LANDFORMS&rlz=1C1SQJL]

FIGURE 1.6: THEORY OF SLOPE RETREAT



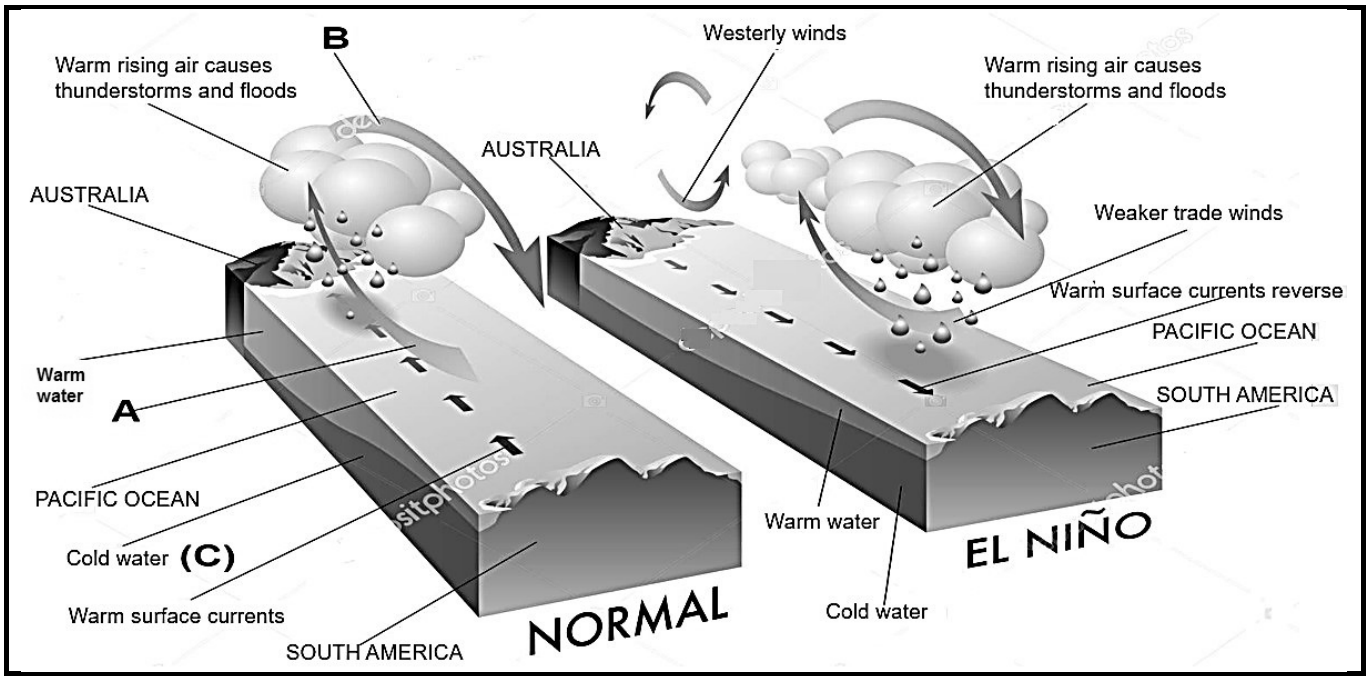
[Source: https://www.google.com/search?q=scarp+retreat]

FIGURE 2.2: INCLINED STRATA



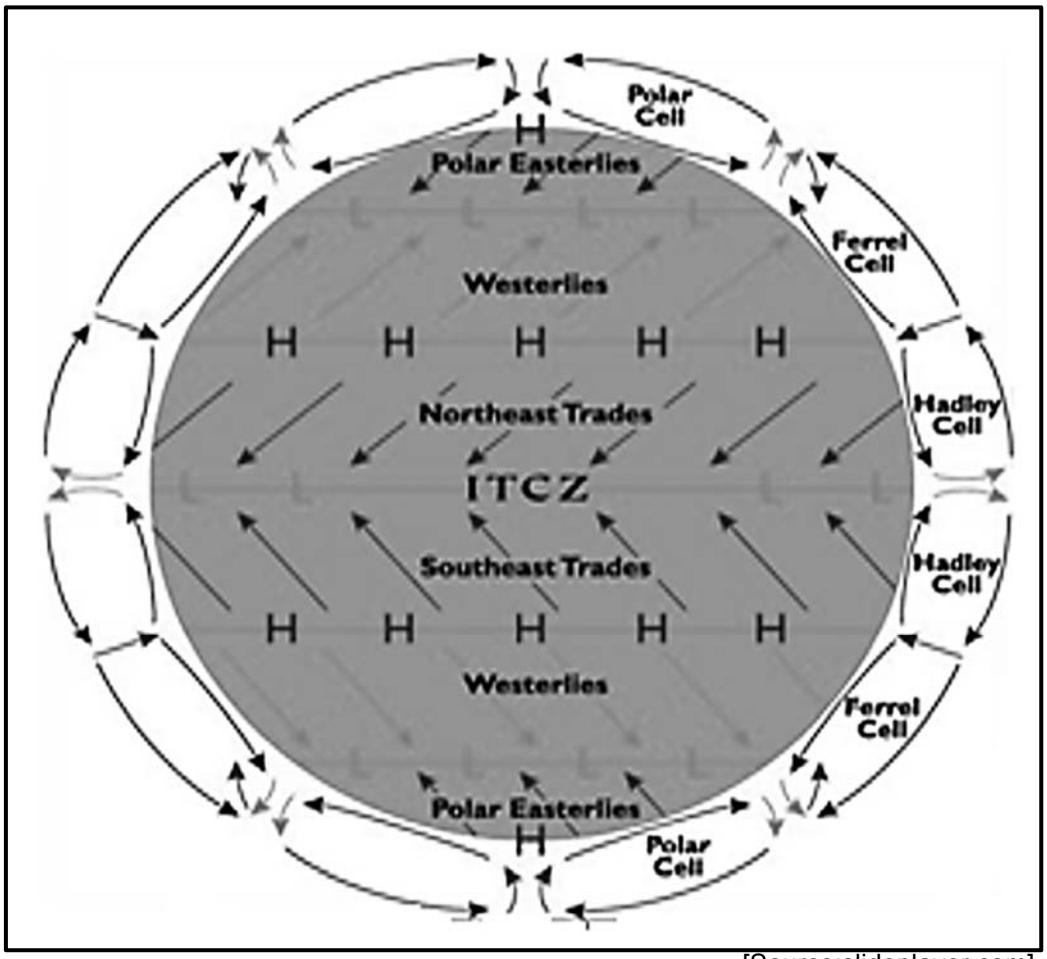
[Source: https://www.google.com/search?rlz=INCLINED&gs_l=img.]

FIGURE 2.3: EL NIÑO



[Source: wordpress.com]

FIGURE 2.4: TRICELLULAR ARRANGEMENT



[Source:slideplayer.com]

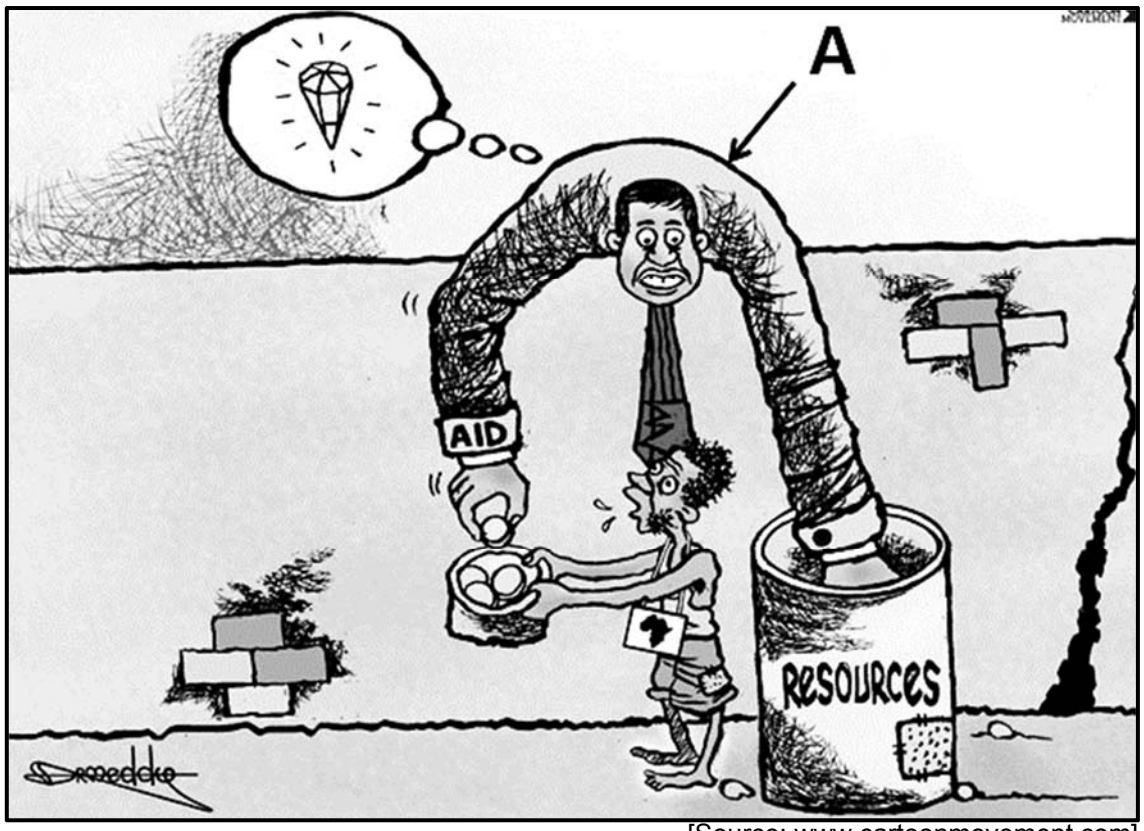
FIGURE 2.5: ROCKFALLS

[Source: newstj]

FIGURE 2.6: KAROO LANDSCAPE

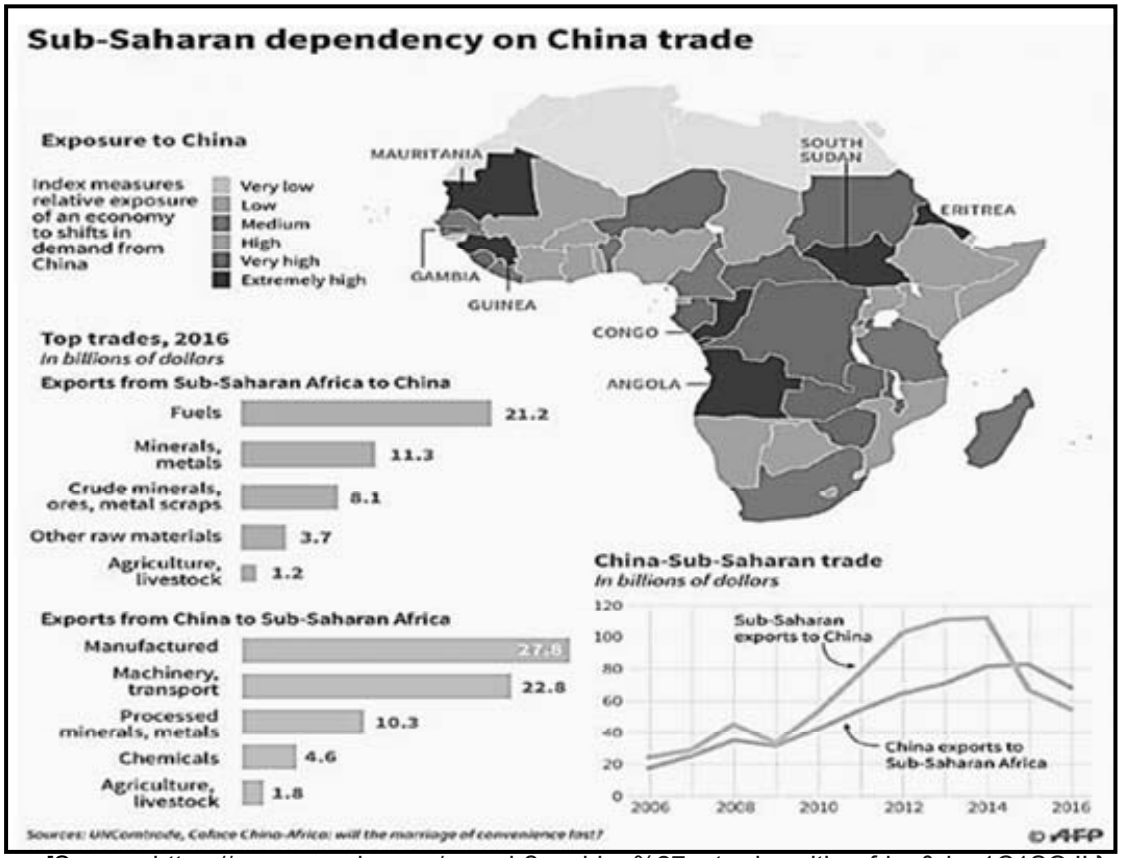
[Source: jpeg;base64]

FIGURE 3.3: DEVELOPMENT AID



[Source: www.cartoonmovement.com]

FIGURE 3.4: CHINA'S TRADE WITH SUB-SAHARA AFRICA



[Source: https://www.google.com/search?q=china%27s+trade+with+africa&rlz=1C1SQJL}

FIGURE 3.5: ESKOM AND LOADSHEDDING

Eskom says coal stocks have improved, but load shedding risk remains

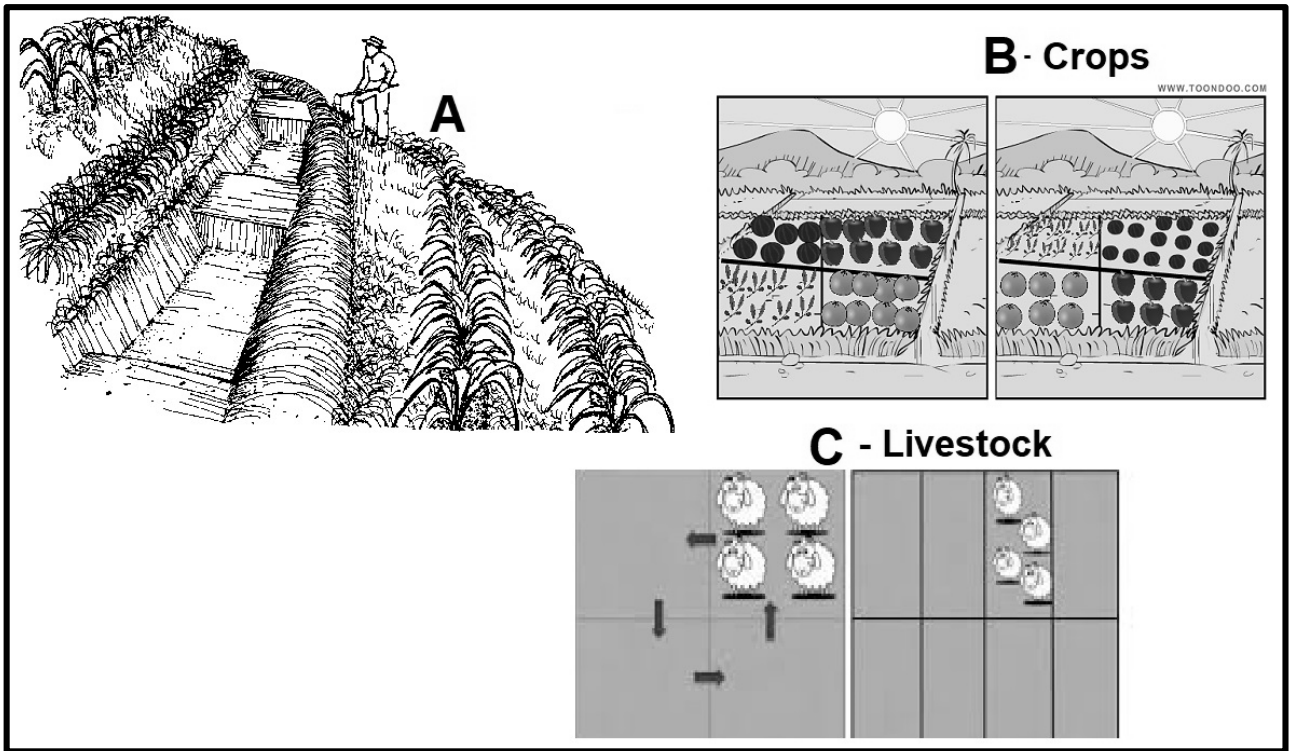
[Source: Adapted from *fin24* article by Kumalo and Omarjee]

Power utility Eskom says its coal stocks improved over the festive season as it also carried out maintenance at power stations, but the country's power system is still constrained and load shedding remains a risk when businesses and industrial customers return to work next week.

In December, Eskom CEO Phakamani Hadebe said in an interview with Johannesburg-based Radio 702 that there were chances the debt-laden power utility might institute stage-one load shedding from January 15, as businesses which are large users of electricity get back due to re-opening after the year end break.

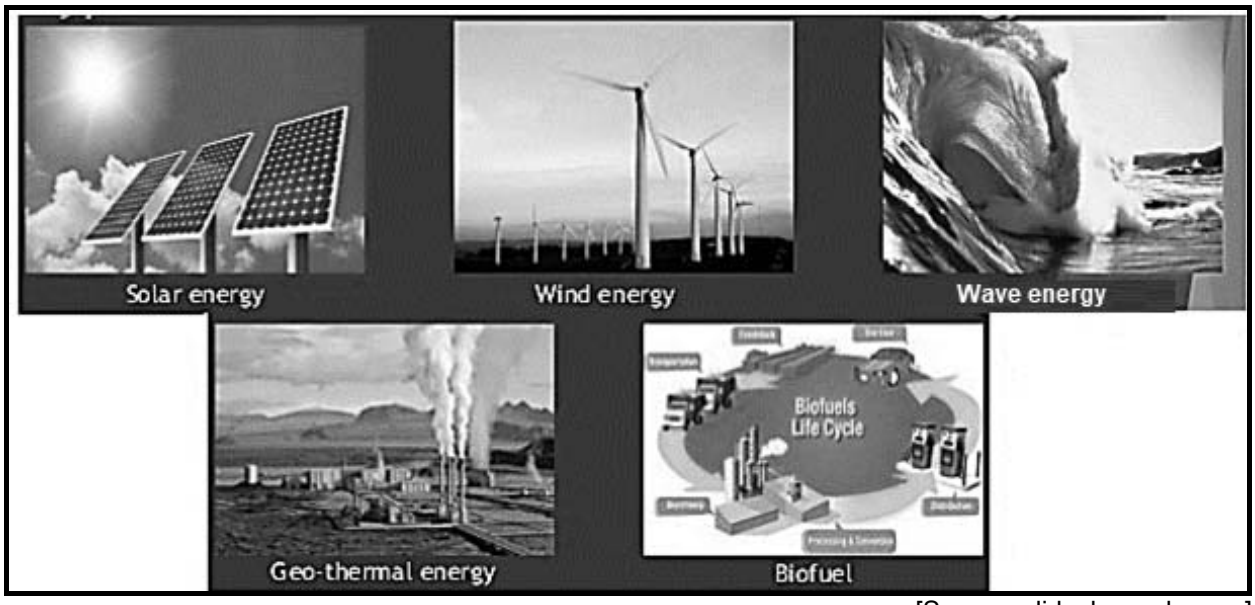
In late November and early December 2018 the power utility repeatedly instituted nationwide electricity rationing due to difficulties in completing scheduled and unscheduled maintenance at power plants, as well as damage to the power transmission lines linking South Africa to the Cahora Bassa hydroelectric dam in Mozambique.

FIGURE 3.6: IMAGES OF SOIL CONSERVATION



[Source:slideplayer.com]

FIGURE 4.2: NON-CONVENTIONAL SOURCES OF ENERGY

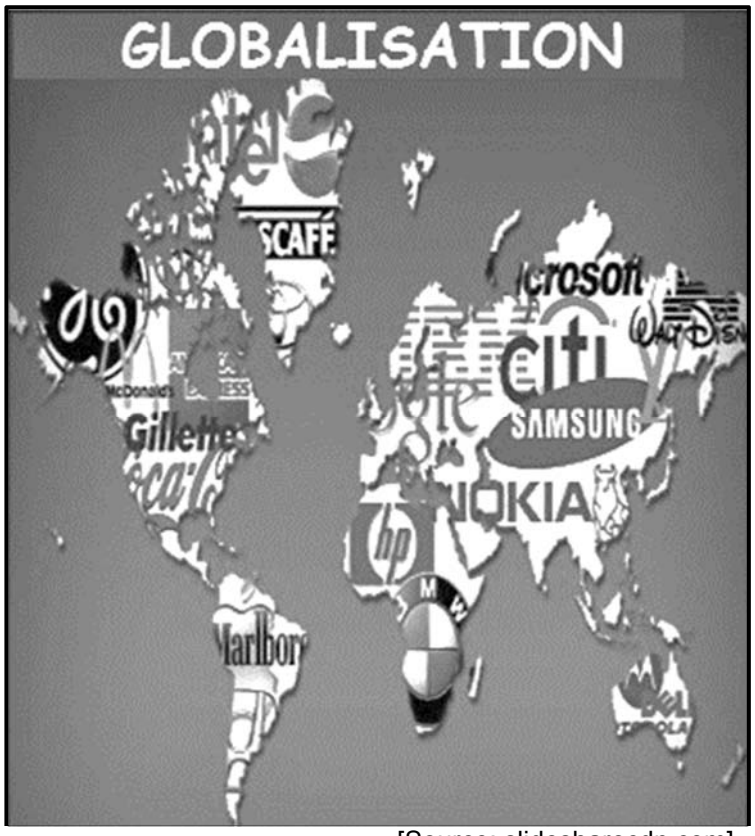


[Source: slidesharecdn.com]

FIGURE 4.3: TRADING RELATIONSHIPS

[Source: economicfiles.wordpress.com]

FIGURE 4.4: GLOBALISATION AND MNCs



[Source: slidesharecdn.com]

FIGURE 4.5: TOWARDS A GREEN ECONOMY

[Source: urbanafrica.net]

FIGURE 4.6: ENERGY SOURCES

[Source: https://www.google.com/search?q=cartoons+on+non+conventional+energy]

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GRADE 11

NOVEMBER 2019

GEOGRAPHY P1

MARKS: **225**

TIME: **3 hours**

IGEOGE1

This question paper consists of 14 pages.

INSTRUCTIONS AND INFORMATION

1. This question paper consists of FOUR questions.
2. Answer any THREE questions of 75 marks each.
3. All diagrams are included in the ANNEXURE.
4. Number the questions correctly according to the numbering system used in this question paper.
5. Leave a line between subsections of questions answered.
6. Start EACH question on a NEW page.
7. Do NOT write in the margins of the ANSWER BOOK.
8. The mark allocation is as follows: (2 x 1) (2) means that TWO facts are required for ONE mark each.
   (2 x 2) (4) means that TWO facts are required for TWO marks each.
9. If words/action verbs like **Name**, **Identify**, **Provide**, **Classify**, are used in a question, ONE word answers are acceptable.
   If words/action verbs like **Discuss**, **Define**, **Explain**, **Comment**, **Evaluate**, **Justify**, **Suggest** and **Substantiate** are used in a question, FULL sentences or phrases are required.
   All paragraph questions must be answered in FULL sentences.
10. Write neatly and legibly.

SECTION A: CLIMATOLOGY AND GEOMORPHOLOGY

QUESTION 1

1.1 Choose a term in COLUMN B that matches the description in COLUMN A. Write only the letter (A–I) next to the question numbers (1.1.1–1.1.8) in the ANSWER BOOK, for example 1.1.9 J.

COLUMN A		COLUMN B	
1.1.1	The angle of the earth's axis as the earth revolves	A	revolution
1.1.2	Movement of the earth around the sun	B	orbit
1.1.3	Incoming solar radiation	C	equinox
1.1.4	The path that the earth travels around the sun	D	insolation
1.1.5	Radiation from the earth	E	terrestrial radiation
1.1.6	When one hemisphere is tilted towards the sun on 21 December	F	latitude
1.1.7	When neither hemisphere is tilted towards or away from the sun	G	parallelism
1.1.8	Line between the light and dark halves of the earth	H	circle of illumination
		I	solstice

(8 x 1) (8)

1.2 Refer to FIGURE 1.2 which shows slope elements. Match the descriptions below with slope elements **A**, **B**, **C** or **D**. Choose the answer and write only the letter **A**, **B**, **C** or **D** next to the question numbers (1.2.1–1.2.7) in the ANSWER BOOK, for example 1.2.8 A. You may choose the same letter more than once.

1.2.1 This slope element is usually convex in shape

1.2.2 The steepest slope element

1.2.3 Knickpoints form at the base of this slope element

1.2.4 Angle is 40° and little vegetation occurs on it

1.2.5 The shape of this slope element is concave

1.2.6 Gentle gradient of this slope element is suitable for farming and settlements

1.2.7 This slope element is commonly referred to as the talus, scree or debris slope

(7 x 1) (7)

1.3 FIGURE 1.3 shows a monsoon wind.

1.3.1 Why is a monsoon wind an example of a regional wind? (1 x 1) (1)

1.3.2 Why are monsoon winds referred to as seasonal winds? (1 x 2) (2)

1.3.3 Discuss the role that the Himalayan mountains play in the winter monsoon. (2 x 2) (4)

1.3.4 How does the summer monsoon develop? (2 x 2) (4)

1.3.5 Explain the negative impact that the summer monsoon has on the people of India. (2 x 2) (4)

1.4 Refer to the cartoon in FIGURE 1.4 depicting drought in Cape Town.

1.4.1 What is a *drought*? (1 x 1) (1)

1.4.2 What evidence in the cartoon suggests that Cape Town experiences a hydrological and a meteorological drought? (2 x 1) (2)

1.4.3 Explain how a hydrological drought could cause agricultural shortages. (2 x 2) (4)

1.4.4 In a paragraph of approximately EIGHT lines, suggest possible management strategies that the municipality of Cape Town could implement to prevent future water shortages in Cape Town. (4 x 2) (8)

1.5 Study FIGURE 1.5 **A** and **B** which shows topography associated with massive igneous rocks.

1.5.1 What is the difference between *intrusive* and *extrusive igneous rocks*? (2 x 1) (2)

1.5.2 Identify igneous landforms **X** and **Y**. (2 x 1) (2)

1.5.3 How does landform **X** form? (2 x 1) (2)

1.5.4 Name TWO characteristics evident in sketch **A** that is typical of a batholith. (2 x 1) (2)

1.5.5 Refer to photo **B,** a dome-shaped landform.

(a) What type of igneous rock is this dome-shaped landform characteristic of? (1 x 1) (1)

(b) Is this dome-shaped landform an example of intrusive or extrusive igneous rocks? (1 x 1) (1)

(c) Name the type of weathering that occurs on this dome-shaped land form. (1 x 1) (1)

(d) Explain how this dome-shaped landform has formed. (2 x 2) (4)

1.6 FIGURE 1.6 shows slope retreat which is a theory of slope development.

1.6.1 Name the South African that formulated the theory of slope/parallel retreat. (1 x 1) (1)

1.6.2 Give evidence to suggest that the theory of slope/parallel retreat is shown in the sketch. (2 x 1) (2)

1.6.3 Discuss the role that a difference in climate can play in determining the different theories of slope development. (2 x 2) (4)

1.6.4 Write a paragraph of approximately EIGHT lines to explain how the theory of slope decline differs from the theory of slope retreat. (4 x 2) (8)

[75]

QUESTION 2

2.1 Choose a term in COLUMN B that matches the climatological description in COLUMN A. Write only the letter (A–H) next to the question number (2.1.1 –2.1.7) in the ANSWER BOOK, for example 2.1.8 J.

COLUMN A		COLUMN B	
2.1.1	This force deflects winds to the left in the southern hemisphere	A	desertification
2.1.2	It is a theoretical wind that would result in an exact balance between two forces	B	Mediterranean
2.1.3	A warm dry wind that descends the Rocky Mountains in America	C	desert
2.1.4	Hot, dry summers and cool, wet winters describe this climatic region	D	coriolis
2.1.5	Caused by human activities and climate change	E	pressure gradient
2.1.6	The force that causes air to move from a high pressure to a low pressure	F	Chinook
2.1.7	High daily temperature range, with very little rainfall describes this climatic region	G	savannah
		H	geostrophic

(7 x 1) (7)

2.2 Refer to FIGURE 2.2 which indicates a cuesta and a hogsback. Match each of the descriptions below with sketches **A** or **B**.

2.2.1 Can form in a dome or basin

2.2.2 Has a steep scarp slope and a gentle dip slope

2.2.3 Scarp slope is more than 45°

2.2.4 It is a suitable location for dams

2.2.5 An example of this ridge is found in Alice in the Eastern Cape

2.2.6 The gentle dip slope can be used for farming

2.2.7 Composed of steeply tilted strata of rock

2.2.8 Formed by gently tilted rock strata (8 x 1) (8)

2.3 Study FIGURE 2.3 which is related to the El Niño event.

2.3.1 What is the *El Niño event*? (1 x 1) (1)

2.3.2 Name the following from the sketches:

(a) The global winds at **A**. (1 x 1) (1)

(b) The air circulating cell at **B**. (1 x 1) (1)

2.3.3 Explain how the El Niño event develops. (2 x 2) (4)

2.3.4 Discuss the influence of the cold waters at **C** on the fishing industry of the west coast of South America. (2 x 2) (4)

2.3.5 Describe how the El Niño event influences the crop farming on the eastern parts of Australia. (2 x 2) (4)

2.4 FIGURE 2.4 shows a diagram of the tri-cellular arrangement.

2.4.1 What are *planetary winds*? (1 x 1) (1)

2.4.2 State the relationship between planetary winds and the tri-cellular arrangement. (1 x 2) (2)

2.4.3 Discuss how Coriolis force affects the horizontal flow of air in the sketch. (2 x 2) (4)

2.4.4 In a paragraph of EIGHT lines, describe how the circulating cells between the equator and the poles develop. (4 x 2) (8)

2.5 Study FIGURE 2.5, a photograph of rockfalls which is a type of mass movement.

2.5.1 What is *mass movement*? (1 x 1) (1)

2.5.2 Name any ONE factor evident on the photo that promotes mass movement. (1 x 1) (1)

2.5.3 What evidence in the photograph suggests that rockfalls have occurred? (1 x 1) (1)

2.5.4 How do rockfalls differ from landslides with respect to speed of movement? (1 x 2) (2)

2.5.5 Suggest TWO reasons why rockfalls are considered a hazard (dangerous) to human activity. (2 x 2) (4)

2.5.6 Discuss strategies that could be implemented to reduce the effects of rockfalls. (3 x 2) (6)

2.6 FIGURE 2.6 shows TWO features of the Karoo landscape that is associated with horizontally layered rock.

2.6.1 Match the types of Karoo landscape (butte and mesa) with the statements below:

(a) Flat crest has a greater width than height (1 x 1) (1)

(b) Flat crest has a greater height than width (1 x 1) (1)

2.6.2 Why do both these landforms have steep concave slopes? (1 x 1) (1)

2.6.3 Describe the cap rock on these landscapes. (1 x 2) (2)

2.6.4 Explain the significance of cap rock on these landscapes. (1 x 2) (2)

2.6.5 In a paragraph of approximately EIGHT lines, explain how topography associated with horizontally layered rocks can be of benefit and an obstacle to human activity. (4 x 2) (8)

[75]

SECTION B: DEVELOPMENT GEOGRAPHY AND RESOURCES AND SUSTAINABILITY

QUESTION 3

3.1 Match the development models listed below with ONE of the descriptions that follows. Choose the answer and write only the name of the correct model next to the question number (3.1.1–3.1.8) in the ANSWER BOOK.

CORE-PERIPHERY	FREE MARKET	SUSTAINABILITY

3.1.1 This model involves the economy, society and environment

3.1.2 Friedman developed this model and it can be applied at different scales

3.1.3 Countries have to pass through five stages of development in this model

3.1.4 High mass consumption is seen as the ultimate goal of this model

3.1.5 This model is perhaps the most inclusive of all three models today

3.1.6 A capital city with a port and industries is central to this model

3.1.7 Modernisation and capitalism are characteristic of this model

3.1.8 One of the supposed strengths of this model is that economic development will spread (8 x 1) (8)

3.2 Choose a term in COLUMN B that matches the description in COLUMN A Write only the letter (A–H) next to the question number (3.2.1–3.2.7) in the ANSWER BOOK, for example 3.2.8 J.

COLUMN A		COLUMN B	
3.2.1	Cannot be replaced after they have been depleted	A	Kyoto protocol
3.2.2	A form of pollution that can weaken or kill plant life	B	resource
3.2.3	A mineral used to generate nuclear energy	C	non-renewable
3.2.4	Water, air and solar energy are examples of this type of resource	D	renewable
3.2.5	Amount of carbon dioxide emitted into the atmosphere by a person	E	radioactive waste
3.2.6	An agreement to reduce the amount of greenhouse gases	F	carbon footprint
3.2.7	Material or a product that people find useful	G	uranium
		H	acid rain

(7 x 1) (7)

3.3 Study FIGURE 3.3 showing a cartoon on development aid.

3.3.1 What is *development aid*? (1 x 1) (1)

3.3.2 Name any form of development aid that can be exchanged between countries. (1 x 1) (1)

3.3.3 Does the man at **A** represent a developed (MDC) or a developing (LDC) country? (1 x 1) (1)

3.3.4 Suggest possible reasons for your answer to QUESTION 3.3.3. (2 x 1) (2)

3.3.5 Discuss why this cartoon is an example of conditional development aid. (1 x 2) (2)

3.3.6 In a paragraph of approximately EIGHT lines, explain why technical development aid has more benefits for a developing (LDC) country. (4 x 2) (8)

3.4 FIGURE 3.4 is an infographic showing the dependency of Sub-Saharan countries on Chinese trade.

3.4.1 Define the term *export-led development*. (1 x 1) (1)

3.4.2 What do China mostly …

(a) import from sub-Saharan Africa? (1 x 1) (1)

(b) export to sub-Saharan Africa? (1 x 1) (1)

3.4.3 Comment on the relationship between South Sudan and Angola regarding their trade exposure to China. (1 x 2) (2)

3.4.4 Describe the trade relationship between sub-Saharan Africa and China in 2010 and 2016 respectively. (2 x 2) (4)

3.4.5 Explain how development of manufacturing industries will benefit the Sub-Saharan countries' local economy. (3 x 2) (6)

3.5 Read the extract in FIGURE 3.5 referring to Eskom and load shedding.

3.5.1 What is *load shedding*? (1 x 1) (1)

3.5.2 From the extract, suggest TWO possible causes of load shedding. (2 x 1) (2)

3.5.3 How do the power stations (picture) harm the environment? (2 x 2) (4)

3.5.4 Why is South Africa so dependent on coal as a form of electricity? (2 x 2) (4)

3.5.5 Explain why reducing the country's dependency on coal would have a negative impact on the economy. (2 x 2) (4)

3.6 FIGURE 3.6 shows images of soil conservation.

3.6.1 What is *soil erosion*? (1 x 1) (1)

3.6.2 Name the strategies used to reduce soil erosion in **A** and **B**. (2 x 1) (2)

3.6.3 Explain how the rotating strategy at **C** helps in reducing soil erosion. (2 x 2) (4)

3.6.4 In a paragraph of approximately EIGHT lines, discuss reasons why soil management is important for farmers. (4 x 2) (8)

[75]

QUESTION 4

4.1 Choose a term in COLUMN B that matches the description in COLUMN A Write only the letter (A–H) next to the question number (4.1.1–4.1.7) in the ANSWER BOOK, for example 4.1.8 J.

COLUMN A		COLUMN B	
4.1.1	An economic indicator that combines life expectancy and level of education	A	gross domestic product
4.1.2	Total value of goods and services produced by a country in a year including foreign earnings	B	balance of payment
4.1.3	Index indicating degree of inequality between men and women in a country	C	balance of trade
4.1.4	The relationship between the value of a country's exports and imports	D	Gini co-efficient
4.1.5	Financial summary of all payments made by a country	E	gross national product
4.1.6	Total value of goods and services produced within the boundaries of a country in a year	F	gender inequality index
4.1.7	An economic indicator where a score of 1 shows complete inequality in a country	G	demographic indicator
		H	human development index

(7 x 1) (7)

4.2 Refer to FIGURE 4.2 on different sources of non-conventional energy. Match the descriptions below with one of the sources of energy. You may use a source of energy more than once. Choose the answer and write only the correct source of energy next to the question number (4.2.1–4.2.8) in the ANSWER BOOK.

4.2.1 Energy that is formed from natural organic matter

4.2.2 This source of energy is unreliable on calm days

4.2.3 Photovoltaic panels convert the sun's light into electricity

4.2.4 Energy sourced from beneath the earth's surface

4.2.5 This source of energy can cause food shortages

4.2.6 The Northern Cape in South Africa is one of the best places for this source of power

4.2.7 This source of energy can harm aquatic ecosystems

4.2.8 A disadvantage of this source of energy is that it threatens bird life in the countryside (8 x 1) (8)

4.3 Study FIGURE 4.3 showing a cartoon on trading relationships.

4.3.1 Define a *trade barrier*. (1 x 1) (1)

4.3.2 Name TWO examples of trade barriers. (2 x 1) (2)

4.3.3 Why do you think the man at **A** wants to do 'away with barriers to trade'? (2 x 1) (2)

4.3.4 Why is the group of people at **B** protesting against removing barriers to trade? (2 x 1) (2)

4.3.5 In a paragraph of EIGHT lines, discuss the positive impact that fair trade will have on a developing country. (4 x 2) (8)

4.4 FIGURE 4.4 shows globalisation.

4.4.1 Define the term *globalisation*. (1 x 1) (1)

4.4.2 Name ONE advantage that globalisation offers migrants. (1 x 1) (1)

4.4.3 (a) What does the abbreviation MNC stand for? (1 x 1) (1)

(b) Name TWO examples of MNCs depicted in FIGURE 4.4 (2 x 1) (2)

(c) Comment on the relationship between globalisation and MNCs. (1 x 2) (2)

(d) Explain how developing countries benefit from MNCs which are established in their country. (2 x 2) (4)

4.4.4 How do the economic effects of globalisation harm the environment? (2 x 2) (4)

4.5 Read the information on the Green Economy in FIGURE 4.5.

4.5.1 Define the term *Green Economy.* (1 x 1) (1)

4.5.2 Comment on the relationship between the Green Economy and sustainable development. (1 x 2) (2)

4.5.3 Discuss TWO changes that could be implemented in our current use of energy sources to make our economy greener. (2 x 2) (4)

4.5.4 In a paragraph of approximately EIGHT lines, explain how the Department of Environmental Affairs could encourage industries to become part of the Green Economy. (4 x 2) (8)

4.6 Refer to FIGURE 4.6, illustrating nuclear power as an energy source.

4.6.1 Is nuclear power an example of a *conventional* or *non-conventional* energy source? (1 x 1) (1)

4.6.2 Provide a reason for your answer in QUESTION 4.6.1. (1 x 1) (1)

4.6.3 Quote evidence from the cartoon which indicates that the man is against the demolishing (breaking down) of the nuclear power plant. (1 x 1) (1)

4.6.4 Differentiate between *fossil fuels* and *nuclear energy* regarding their greenhouse gas emissions. (1 x 2) (2)

4.6.5 Discuss TWO reasons why fossil fuel prices are high. (2 x 2) (4)

4.6.6 Explain THREE advantages for the economy of a country that uses nuclear energy. (3 x 2) (6)

[75]

TOTAL: 225