

**KZN DEPARTMENT OF EDUCATION
GREENBURY SECONDARY SCHOOL
DEPARTMENT OF SOCIAL SCIENCE**

NOVEMBER – 2018

GEOGRAPHY P1

GRADE 11

EXAMINER: F.PARUK/ S.CHAMPAMONI

MARKS: 225

MODERATOR: D.RAMASAMI

DURATION: 3 HOUR

DATE: 31 /10/18

NAME OF LEARNER: _____ GRADE/DIV: _____

INSTRUCTIONS AND INFORMATION

1. This paper consists of 4 Questions of **13** pages and an addendum of **10** pages.
2. Answer any 3 Questions of 75 marks each.
3. Leave a line between subsections answered.
4. Start each question on a new page.
5. Number your answers correctly according to the numbering system used in this paper.
6. Where possible, illustrate your answer with diagrams.
7. Write neatly and legibly.

P.T.O TO PAGE: 2 SECTION A

SECTION A- THE ATMOSPHERE AND GEOMORPHOLOGY

QUESTION ONE

1.1 Complete each of the following statements by choosing a word/ term from the list below. Write only the word/term next to the question number.

Jetstream	Current	Thermal equator	Trade winds
Geostrophic flow	Front	Pressure gradient force	Coriolis force
Tri- cellular circulation	Atmospheric pressure	Frictional force	Air mass

1.1.1 _____ refers to a boundary separating 2 air masses of different densities.

1.1.2 The _____ causes air to be deflected from its original path.

1.1.3 Winds that blow in the tropic are called _____.

1.1.4 The force exerted against a surface by the weight of a column of air above that surface is known as _____.

1.1.5 _____ is a wind that blows parallel to isobars.

1.1.6 _____ refers to a very fast flowing current of air located near the tropopause, moving in a westerly direction.

1.1.7 Force that causes wind to change direction _____.

1.1.8 Force that forms when air is in contact with obstacles _____.

(8x1=8)

1.2 State whether the following statements are True or False.

1.2.1 Exfoliation and sand blasting are examples of chemical weathering.

1.2.2 Canyons form deep, steep sided valleys with narrow valley floors.

1.2.3 The escarpment of the Drakensberg is an example of scarp retreat.

1.2.4 Weathered basaltic rocks produce infertile soils.

1.2.5 Fissures refer to cracks in the surface of the earth where lava can flow out from.

1.2.6 Karoo landscapes are characterised by flat- topped hills separated by wide flat plains.

1.2.7 Landforms in humid climates are more rounded.

(7x1=7)

P.T.O TO PAGE THREE.....QUESTION 1.3

1.3 Refer to Figure 1.3 and answer the questions.

- 1.3.1 Explain the term intrusive volcanism. 1
- 1.3.2 Provide labels for the features labelled: **A, B, C, D** and **E** (5x1=5)
- 1.3.3 Compare the shapes **A** and **D** shown on the diagram and explain the reason for each shape. (2+4=6)
- 1.3.4 Name the landform that develops when feature **A** is exposed to the surface. 1
- 1.3.5 Explain why the surface of this feature is smooth and rounded. 2
- (15)**

1.4 Refer to Figure 1.4 showing Monsoon winds in India and answer the following questions.

- 1.4.1 What is a monsoon wind? 2
- 1.4.2 Is this a Summer or Winter monsoon? Give a reason for your answer (1+2=3)
- 1.4.3 Briefly explain the formation of this particular type of monsoon. 2
- 1.4.4 Assess the impact of this monsoon on the people of India. (2x2=4)
- (11)**

1.5 Refer Figure 1.5, the cartoon on Drought and answer the questions.

- 1.5.1 What do you understand by the term drought? 1
- 1.5.2 State 2 causes of drought. (2x1=2)
- 1.5.3 Discuss the impact of drought on the economy. 3 answers (3x2=6)
- 1.5.4 In a paragraph, (6-8 lines), discuss three measures that can be implemented by farmers to manage droughts effectively. (3x2=6)
- (15)**

1.6 Refer to Figure 1.6 and answer the following questions.

- 1.6.1 Identify the landforms labelled **A, B,** and **C.** 3
- 1.6.2 State one difference between landforms **B** and **C.** (2x1=2)
- 1.6.3 Name the slope elements labelled **1, 2, 3** and **4.** (4x1=4)
- 1.6.4 Identify the slope element that is suitable for crop cultivation. Give a reason for your answer. (1+1=2)
- 1.6.5 In a paragraph, (6-8 lines), Explain how human activity influences the development of a slope. (4x2=8)
- (19)**

QUESTION TWO: ATMOSPHERE AND GEOMORPHOLOGY

2.1 Match the terms in Column B with the statements in Column A. Write down the number and next to it, the correct letter from column B.

COLUMN A	COLUMN B
2.1.1 Time of the year when the midday sun is directly overhead at one of the tropics.	A. Equinox
2.1.2 Upward movement of air caused by heating of the earth's surface.	B. Revolution
2.1.3. Sinking or downward movement of air.	C. Albedo
2.1.4 Large ecosystem that is characterised by similar climate, soil factors, vegetation and animals.	D. Convection
2.1.5 The coming together of air masses.	E. Solstice
2.1.6 Time of the year when day and night are of equal length throughout the world.	F. Biome
2.1.7 Is the amount of incoming solar radiation reflected by the earth's surface.	G. Subsidence
2.1.8 Movement of the earth around the sun.	H. Convergence
	I. Divergence
	(8x1=8)

2.2 Study Figure 2.2 showing Global Pressure Belts and answer the questions.

2.2.1 Name the pressure belts at:

- (a) 0°
 - (b) 30° N
 - (c) 60° N
 - (d) 90° N
- (4x1=4)

2.2.2 Identify the following

- 2.2.2.1 Air circulation cell 2 1
- 2.2.2.2 Air circulation cell 3 1
- 2.2.3 Explain how cell 1 is formed. 4X1=4
- 2.2.4 Name the wind that blows between 0° and 30° N. 2

P.T.O TO PAGE FIVE.....2.2.5

- 2.2.5 In which pressure belt is the ITCZ formed? 2
- 2.2.6 Why is the ITCZ known by sailors as the 'Doldrums'? (1x2=2)
- (16)**

2.3 Refer to Figure 2.3 showing the Igneous landform feature and answer the following questions.

- 2.3.1 Identify the landform. Give a description of this landform. (1+2=3)
- 2.3.2 Provide a label for **A**. 1
- 2.3.3 Name the igneous intrusion from which the landform identified in 2.3.1 has formed. 1
- 2.3.4 State the rock type associated with the landform mentioned in 2.3.1. 1
- 2.3.5 Explain how the landform identified in 2.3.1 was formed. (4x2=8)
- (14)**

2.4 Refer to Figure 2.4 showing Mass movement and answer the questions.

- 2.4.1 Explain your understanding of mass movement. 1
- 2.4.2 Name the slowest type of mass movement. 1
- 2.4.3 Give 2 other examples of mass movement except the one mentioned in 2.4.2. 2
- 2.4.4 Briefly discuss 3 strategies that can be implemented to prevent or minimise the effects of mass movement. 6
- 2.4.5 In a paragraph, (6-8 lines), explain how humans are responsible for causing mass movement. 4 points (4x2=8)
- (18)**

2.5 Refer to Figure 2.5, a diagram illustrating Föhn wind and answer the questions.

- 2.5.1 Explain your understanding of the term Föhn wind. 2
- 2.5.2 By how many degrees did the air cool as shown on the diagram, when rising on the windward side of the mountain? 1
- 2.5.3 Briefly explain the processes that takes place as the air moves from **A** to **B** (3x2=6)
- 2.5.4 What type of weather is experienced on the leeward side of the mountain? 1
- 2.5.5 Name 1 natural disaster that Föhn winds can cause. 1
- (11)**

P.T.O TO PAGE 5.....2.6 Refer to Figure

2.6 Refer to Figure 2.6 (a) showing a photograph of a Cuesta and (b) sketch illustrating scarp and dip slopes and answer the questions.

2.6.1 What is a homoclinal ridge? 1

2.6.2 Which type of rock is usually found in homoclinal ridges? 1

2.6.3 Differentiate between cuestas and hogbacks. (3x2=6)

(8)

TOTAL: 75

**P.T.O TO PAGE 7..... SECTION B- DEVELOPMENT GEOGRAPHY AND
RESOURCES AND SUSTAINABILITY**

SECTION B – DEVELOPMENT RESOURCES AND SUSTAINABILITY**QUESTION 3**

- 3.1.1 When resources are overused, resulting in a rapid decrease in the amount of the resource.
- A. Resource utilisation
 - B. Resource depletion
 - C. Resource conservation
 - D. Resource sustainability
- 3.1.2 Machines, tool, computers are examples of Resources.
- A. Human
 - B. Manufactured
 - C. Financial
 - D. Renewable
- 3.1.3 _____ is not an example of a fossil fuel.
- A. Coal
 - B. Oil
 - C. Uranium
 - D. Natural gas
- 3.1.4 Which of the following is a non-conventional resource.
- A. Biofuel
 - B. Natural gas
 - C. Crude oil
 - D. Cooking oil
- 3.1.5 Koeberg is a power station.
- A. Hydro-electric
 - B. Coal
 - C. Nuclear
 - D. Wind driven

- 3.1.6 The improvement of the quality of life of people while ensuring enough resources for future generations is called :
- A. Resource Development
 - B. Wealth Creation
 - C. Sustainable Development
 - D. Conservation
- 3.1.7 These activities are concerned with the provision of services to consumers.
- A. Primary
 - B. Secondary
 - C. Quaternary
 - D. Tertiary
- 3.1.8 Is a characteristic of a MEDC country.
- A. Low income
 - B. High birth rate
 - C. Industrialised
 - D. Food insecurity

[8]

3.2 Give the correct term for each of the statements below.

3.2.1 Measures the standard of living of people in a particular country.

3.2.2 The value of imports is higher than the value of exports.

3.2.3 Financial assistance given by the government of a country to local businesses.

3.2.4 Goods that are transported out of a country.

3.2.5 Development model showing 5 stages of economic growth in a country.

3.2.6 Measures the level of inequality in or between countries

3.2.7 Restrictions placed on the quantity of goods imported into a country.

[7]

3.3 Study the table of statistics, figure 3.3 and answer the questions that follow.

3.3.1 Identify the country that is located above the Brandt line.

Give a reason to support your answer.

[1+2]

3.3.2 Name the country that reflects an ageing population.

[2]

3.3.3 Explain how Ethiopia's literacy level influences its birth rate.

[2X2]

3.3.4 Give one reason for the low infant mortality rate in the UK.

[2]

3.3.5 With reference to the table, give reasons to support the fact that Ethiopia face a greater risk of the spreading of diseases and poor health.

[2X2]

[15]

3.4 Refer to the Newspaper Article, figure 3.4 and answer the questions that follow.

3.4.1 Give the meaning of the following terms :

3.4.1.1 Free trade

3.4.1.2 Trade barriers

3.4.1.3 Regional trade

[3]

3.4.2 Explain how establishing trade within the SADC region would benefit Africa.

[2X2]

3.4.3 Give an example of a trade barrier mentioned in the article.

[2]

3.4.4 Identify 3 barriers that the former Deputy President listed as preventing trade within the SADC region.

[3X2]

[15]

3.5 Study the diagram of a soil profile, figure 3.5 and answer the questions.

3.5.1 Name the horizon that has the following characteristic :

3.5.1.1 Has un-weathered parent material called bedrock.

3.5.1.2 Is rich in humus (dead plant and animal matter).

3.5.1.3 Nutrients accumulate in this layer. [3]

3.5.2 Give 2 factors that lead to the formation of soil. [2]

3.5.3 Explain how excessive soil erosion can negatively impact a countries economy and its people. [2X2]

3.5.4 Discuss the strategies that can be implemented to prevent and control soil erosion. [3X2]

[15]

3.6 Read the Newspaper Article, figure 3.6 and answer the questions.

3.6.1 With reference to the article, identify the following :

3.6.1.1 One example of non-renewable energy.

3.6.1.2 One example of renewable energy. [2]

3.6.2 Name the resource used to produce :

3.6.2.1 Nuclear power

3.6.2.2 Solar power

3.6.2.3 Thermal power [3]

3.6.3 Although nuclear power is a 'cleaner' and effective source of energy supply, give 2 reasons why its use is often avoided. [2X2]

3.6.4 In a paragraph (about 6-8 lines), write a proposal outlining why the South African government urgently needs to consider the greater use of non-conventional sources of energy. [3X2]

[15]

SUB TOTAL : [75]

QUESTION 4

- 4.1 Match the term / concept in Column B with the descriptions in Column A.
Write only the letter next to the question number.

COLUMN A	COLUMN B
4.1.1 Resources that can be replenished.	A. Secondary activities
4.1.2 Money earned by a country through trade.	B. LEDC
4.1.3 An area comprising of natural vegetation.	C. Deforestation
4.1.4 The average number of years a person can expect to live.	D. Infrastructure
4.1.5 A country with a low standard of living.	E. Renewable
4.1.6 Road, rail, air-links, services and communication.	F. MEDC
4.1.7 Removing of trees without replacing them.	G. Greenhouse gases
4.1.8 Carbon dioxide and other gases released from industries.	H. Life expectancy
	I. Non-renewable
	J. Foreign income
	K. Green belt

[8]

- 4.2 State whether the following statements are True or False.

- 4.2.1 Unleaded fuel produces more greenhouse gases.
 4.2.2 Coal fired power stations are environmentally friendly.
 4.2.3 SASOL produces electricity from coal in South Africa.
 4.2.4 Greenpeace is an international organisation involved in environmental issues.
 4.2.5 Biomass energy is produced by burning agricultural waste.
 4.2.6 More economically developed countries produce more greenhouse gases than Less economically developed countries
 4.2.7 Less economically developed countries have a high HDI

[7]

4.3 Refer to the World Map, figure 4.3 showing the Gross National Product per person.

4.3.1 Define the term Gross National Product. [1]

4.3.2 Mention 2 other economic indicators of development (excluding G.D.P and G.N.P). [2]

4.3.3 This map reflects the idea of the North-South divide presented by the Brandt Report (1980). Explain this idea with reference to the map. [2]

4.3.4 Identify the continent with the lowest Gross National Product. [1]

4.3.5 Discuss in a paragraph of between 6 – 8 lines, some of the socio-economic and environmental issues experienced in this continent (answer 4.3.4) that have contributed to a low G.N.P. [4X2]

[14]

4.4 Read the Case Study, figure 4.4 and answer the questions.

4.4.1 Explain what community-based development is. [1]

4.4.2 Is this a top-down or bottom-up model of development?
Give a reason for your answer. [1+2]

4.4.3 List 2 skills farmers gain from the project. [2]

4.4.4 Evaluate the socio-economic benefits of this community-based development project for the rural communities of Shanxi province. [2X2]

4.4.5 In a paragraph of between 6-8 lines, discuss ways in which government intervention can support farmers in ensuring further success of this project. [3X2]

[16]

4.5 Refer to figure 4.5, Cartoon about Acid Rain.

4.5.1 What is Acid Rain? [1]

4.5.2 Give 2 effects of Acid Rain depicted in the cartoon. [2X1]

4.5.3 What type of pollution causes the formation of Acid Rain? [1]

4.5.4 South Africa produces energy mainly from coal driven power plants.

Name 2 Greenhouse gases released from these coal driven power plants. [2]

4.5.5 Discuss the impact of the production of electricity from coal on:
(2 points each).

A. Climate change

B. Natural landscape [4X2]

[14]

4.6 Read the Article, figure 4.6 and answer the questions.

4.6.1 Explain the following :

4.6.1.1 Renewable energy

4.6.1.2 Electricity grid [2]

4.6.2 Explain why this is an example of Non-Conventional energy. [2]

4.6.3 Explain the following statement "S.A. to enter clean green energy era." [2]

4.6.4 Give 2 possible complaints made by residents against the wind turbines. [2X2]

4.6.5 Discuss 3 suitable conditions necessary for the location of wind farms in South Africa. [3X2]

[16]

SUB TOTAL : [75]

GREENBURY SECONDARY SCHOOL



DEPARTMENT OF HSS

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Ramasami
29/10/18

ADDENDUM

GEOGRAPHY

P1

GRADE 11

NOVEMBER EXAM 2018

**THIS ADDENDUM CONSISTS OF 10 PAGES INCLUDING THE
COVER.**

1.

FIGURE 1.5

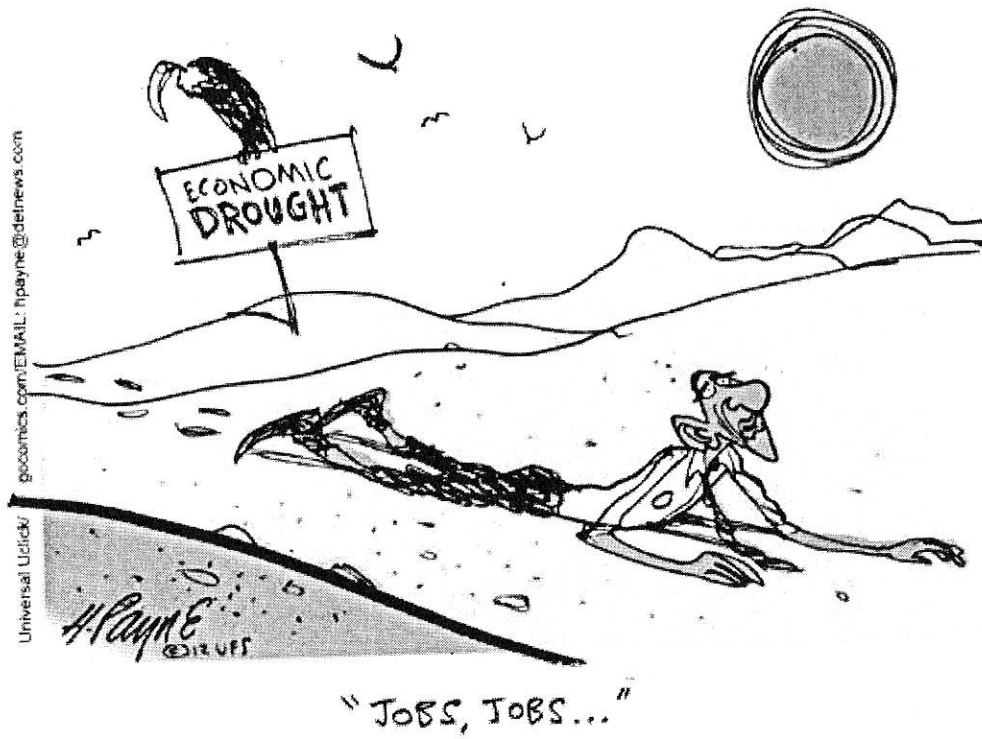


FIGURE 1.6

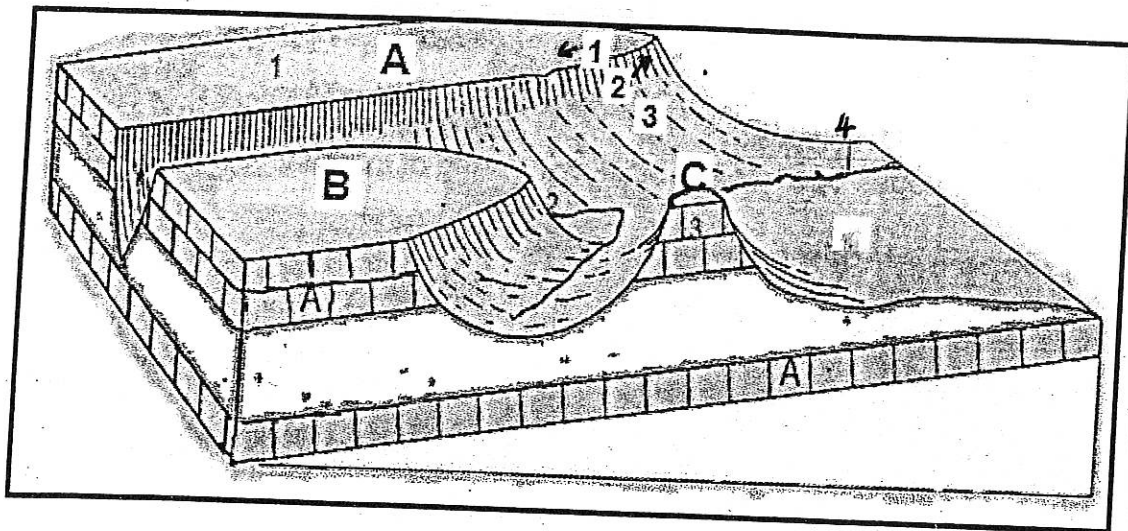


FIGURE 2.2

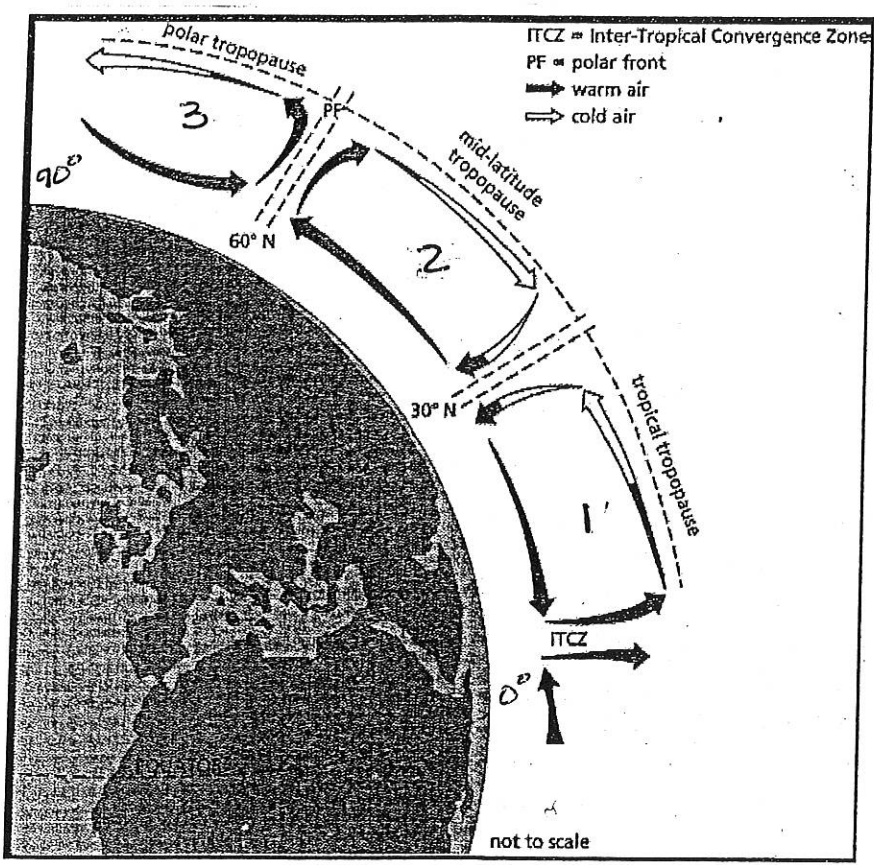


Figure 2.3

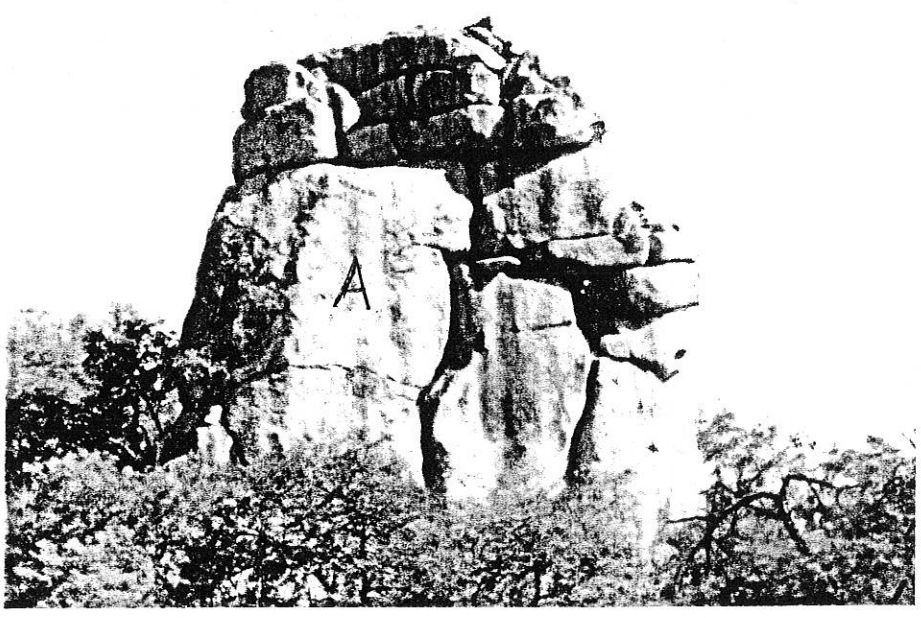


FIGURE 2.4



Mudflow at Nova Friburgo, Brazil (13 January, 2011). Nova Friburgo is 130 km north of Rio de Janeiro.

FIGURE 2.5

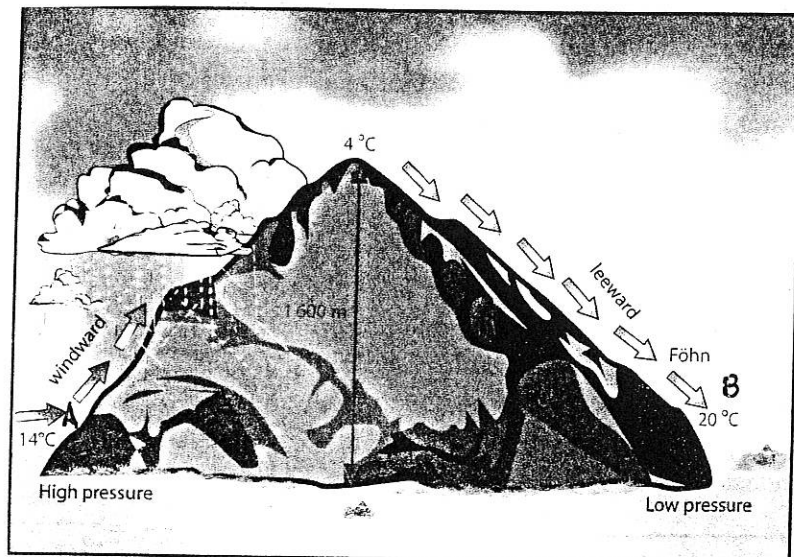


FIGURE 2.6

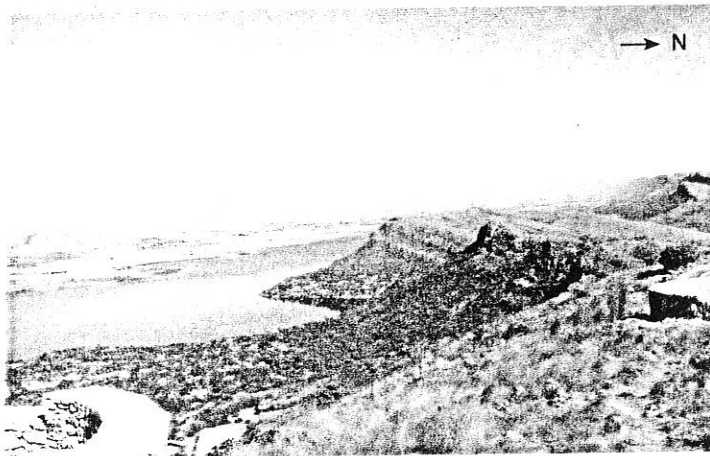


Figure 2.6(a) Cuesta above Hartbeespoort Dam (North West Province).

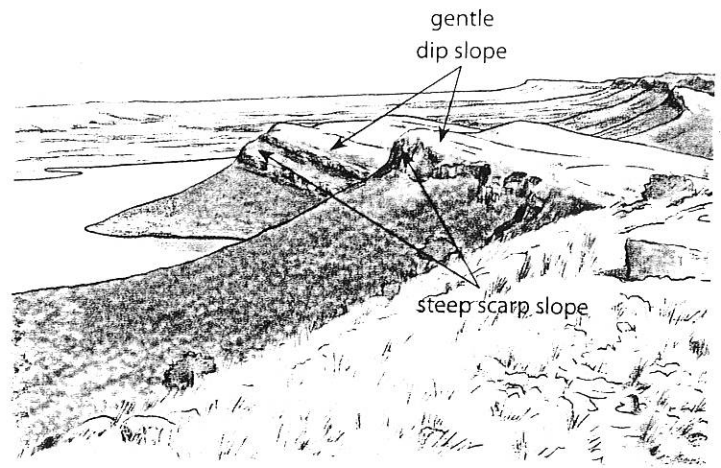


Figure 2.6(b)

FIGURE 3.3

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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	5 per 1 000	110 per 1 000
Natural increase	0,3%	2,5%

FIGURE 3.4

REGIONAL trade is a key stimulus for local economic growth, Deputy President Kgalema Motlanthe said yesterday.

"We in South Africa are not resting on our laurels, being fully aware that African growth has to be driven forward," he told delegates at the Ernst and Young Strategic Growth Forum in Cape Town.

"On its part, South Africa clearly understands its growth and development can only happen in the context of an economically flourishing African continent."

A free-trade agreement with the Southern African Development Community (SADC) in

Regional trade key to SA growth

2008 had been the first building block for open regional trade.

The second achievement had been a tripartite agreement between the SADC, the East African Community and the Common Market for Eastern and Southern Africa.

"It is our ambition that by June 2014 these 26 countries, with a combined population of nearly 600 million people and a total gross domestic product of approximately \$1 trillion (R7.47 trillion), will be united in

a single free trade area."

Motlanthe said removing trade tariffs alone was not a solution. He identified three non-trade tariff barriers which needed to be remedied.

The first was to improve operation of borders.

There were unnecessary delays due to different certification systems, a lack of co-ordination between various countries' officials, and weak border infrastructure.

The second was poor infra-

structure within countries.

"Road, rail or power facilities are sometimes substandard, slowing down transport and, worse still, making it cheaper for coastal countries to import items from far across the oceans than purchase them from their neighbours."

The third was a lack of industrial diversification among countries.

Motlanthe said many African neighbours produced largely similar products with little reason to trade with each other.

He envisioned a regional value chain where each country mastered a stage in the production process to create a final product.

p. 70... Pg 7

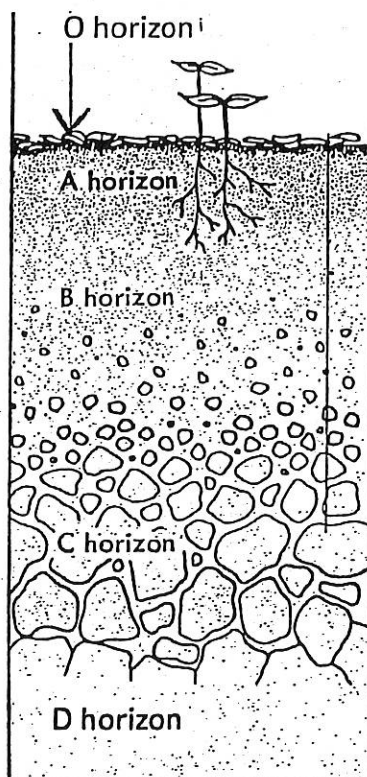


FIGURE 3.6

Sun, wind and dung roped in to ease power crisis

WIND, tides, waves, pebble-beds, even cow manure ... electricity is making way for *elec-trickery* as power-starved South Africans discover innovative ways of keeping their beer cool.

Fuelled by the country's dwindling power supplies, top researchers, including nuclear scientists, engineers and Eskom's own experts, are working flat out to develop and improve new sources of cheap electricity.

Steve Lennon, Eskom head of corporate services, said the embattled parastatal was pushing ahead with several innovations, including a massive 100MW wind farm outside Cape Town and a 100MW solar-thermal plant that uses SA mirror technology to reflect sunshine and generate power.

Eskom was also "progressing very nicely" with a plan to gasify coal underground and feed it into its Majuba plant — hopefully by the end of the year, Lennon said.

South African-led research into solar technology at the University of Cape Town has helped advance the efficiency of solar systems to the point where some experts say that, in the long term, it is cheaper than conventional power — particularly in the light of recent Eskom tariff increases.

Eskom had also launched a new solar heating project — to promote solar water heaters — and was working on an "intelligent metering system" to reduce the impact of widespread power blackouts.

Similar developments are moving ahead in the field of wind-generated power, according to Herman Oelsner, who runs a government-backed pilot wind farm in Darling near Cape Town. It aims to sell its power to the Cape Town Metro.

South Africa's nuclear energy sector is also back under the spotlight, in particular the multibillion-rand Pebble Bed Modular Reactor company which aims to produce nuclear power using a kind of "fuel pebble" made up of thousands of uranium powder kernels pressed together inside a graphite and ceramic shell.

Rolling countrywide blackouts have prompted farmers to come up with their own power supply ideas, including a plan to use cow manure to generate power.

The chairman of the Milk Producers' Organisation, Koos Coetzee, said the organisation had recently held talks with an Australian company that specialises in biogas.

FIGURE 4.3

Pg 8

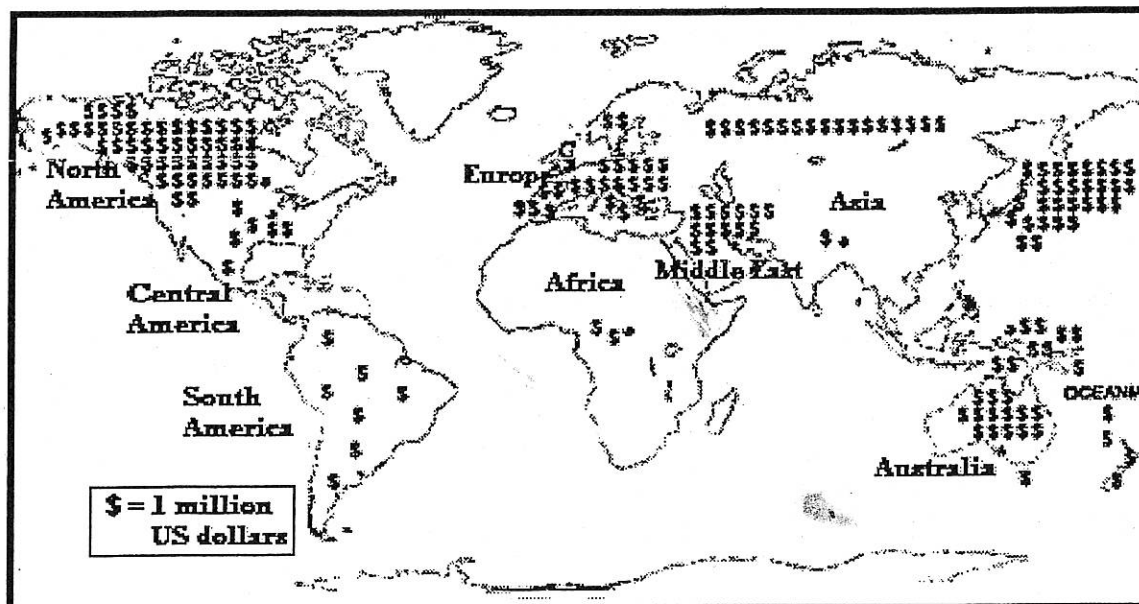


FIGURE 4.4

AGRINAS is a community-based organization that works principally in rural farming communities in China, Bosnia, Morocco, Kazakhstan, Indonesia and Albania. AGRINAS is an acronym for Agricultural International Assistance. Its purpose is to assist at community level, with better agricultural practice that is appropriate and sustainable. In this way, communities can create surpluses and break out of their cycle of poverty, by initiating trade.

Almost 60% of the Chinese population is rural. Although the economic growth of China has been strong, this growth is almost completely confined to the urban areas. There is very little sign of progress that has happened in Chinese rural areas.

AGRINAS has facilitated farm industries in the rural communities of Yangqu county, Shanxi province. Farmers bring their products to a central point where people with skills have joined together into co-operatives to create factories to produce for example tomato paste, jam and juice. There is a cheese factory that requires up to 2 000 litres of milk each day. It not only provides jobs, but also teaches people new skills, such as commercial and management skills for farmers. Packaging and marketing centres create job opportunities and add value to the agricultural products made by the community. In this way, from grassroots beginnings economic and social development begins.

[Source: Adapted from the AGRINAS WEBSITE, "Projects"]

J

P.T.O. ... Pg 9

FIGURE 4.5

pg 9.



FIGURE 4.6

FIGURE 3.6: NEWSPAPER ARTICLE

Van Stadens wind turbines set for Eskom grid hook-up

SA to enter clean energy era

Clean green electricity will become a reality later this week when South Africa's first utility-scale, privately owned wind farm connects to the electricity grid.

All eyes will be on the nine Metro's and turbines at Van Stadens near Port Elizabeth as the developers test the R500 million state-of-the-art renewable energy equipment in the build-up to the official 27MW facility to the Eskom grid in just over two months' time.

Afri-Coast Engineers director Donald McGillivray – who has spent 10 years pioneering renewable wind energy in South Africa – said after a year of construction on the outskirts of Blue Horizon Bay, they were now counting the days until they started supplying much needed power to the Nelson Mandela Metro from February next year. "It is exciting to see everything coming together so quickly," he said.

McGillivray said the hot commissioning of the project – which will start one turbine at a time was critical to ensuring the success of the project.

Erected using the biggest crane on the African continent, the Van Stadens project has, however, not all been a breeze for the developers after a handful of local residents complained about the towering wind turbines on a hill above the seaside village.

The objections from a few wealthy landowners have come despite the development obtaining all environmental approvals and permits required and guaranteeing impoverished local township residents a substantial portion of the project equity and revenue over the next 20 years.

Several costly legal challenges have fallen flat. "The fourth-generation wind turbines are quieter than older wind turbines and all wind farms have to comply with strict environmental authorization requirements, which include noise emissions," said McGillivray. "The wind farms will improve both the quality and reliability of the electricity supply to Blue Horizon Bay and surrounding areas.

[Source: David MacGregor (Senior Reporter – Daily Dispatch)]

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Ramasami
29/10/18

SECTION A

1.1.1 Front

1.1.2 Coriolis force

1.1.3 Trade winds

1.1.4 Atmospheric pressure

1.1.5 Geostrophic flow

1.1.6 ^{??} * Jet stream

[$8 \times 1 = 8$]

1.1.7 Pressure gradient force

1.1.8 Frictional force

1.2.1 False

1.2.2 True

1.2.3 True

1.2.4 False

1.2.5 True

1.2.6 True

[$1 \times 1 = 1$]

1.2.7 True

1.3.1 Intrusive volcanism : when molten rock does not reach [✓] the surface (1)
of the earth. Magma intrudes into sedimentary layers, forming different features

1.3.2 A Laccolith

B Dyke

C Sill

D Lopolith

E Batholith

($5 \times 1 = 5$)

1.3.3 A - mushroom shaped

in intrusions close to the [✓] surface bend the sedimentary rock upwards

D - saucer shaped - the weight of the overlying sedimentary rock strata collapses into the space earlier taken up by the liquid magma (2+4)

(1)

1.3.4 Dome ✓

1.3.5 Exposed to surface of the earth - weathering takes place ⁽²⁾
→ exfoliation. water seeps into cracks and joints and weathering takes place along joints resulting in a rounded dome

seasonal

OR

1.4.1 Monsoon wind — refers to winds in a particular region that blow from one direction during Summer and from the opposite direction during winter.

1.4.2 Summer ✓ Low pressure cell forms over the hot, land surface ✓. H.P over the ocean ✓ (1+2=3)
Low pressure cells → Land → due to ascending warm air.

1.4.3 ocean temperatures are not as hot as land temperatures

* Warm, moist winds move onshore → land ✓

Winds blow from S.W → resulting in wet weather

owing to moisture being brought onto the land from the Indian ocean.

✓

(2)

1.4.4 Heavy rains → flooding

Damage to infrastructure

OR Brings relief to farmers ✓

(2x2=4)

1.5.1 Droughts — lengthy periods of time with little or rain ✓

1.5.2 Causes of drought : (2x1=2)

• uneven distribution of rainfall

• high evaporation rates in relation to the amount of rainfall.

• periodic changes in ocean temperatures and local winds that blow moist maritime air onto adjacent land masses.

• the strength of the prevailing winds carrying moisture into the interior.

• El Nino and La Nina conditions

• variability of the rainfall

(2x1=2)

Any 2

→ 2

1.5.3 Impact of drought on the economy;

p.t.o

1.5.3 Impact on the economy

deterioration of livestock quality / Livestock sold at lower prices /
 Food shortages results in an increase in food prices / Food may have to
 be imported / loss of jobs increases unemployment and poverty
 Farmers need to borrow more money which increases debt.
 Industries processing farm products suffer.

(3x2=6)

1.5.4 collection of rainfall and other climatic data to provide
 early warnings to farmers and affected people.

Control of livestock numbers to prevent overgrazing.

Planting drought - resistant crops.

Maintenance of a healthy vegetation cover to promote the
 infiltration of water to replenish ground water supplies.

Building dams and reservoirs to store water in times of
 drought.

Building water transfer schemes so that fresh water can
 be transferred from areas of high rainfall to areas where
 there is a water scarcity.

Desalination of sea water

Imposition of water restrictions

Fog collection with large sheets of mesh.

(3x2=6)

1.6.1. A Plateau ✓

B Mesa ✓

C Butte ✓

3

1.6.2 Mesa - area of the top of the hill is wider [larger] than
 it is high.

Butte - width of the top is smaller than the height.

(2x1=2)

1.6.3 1 - crest ; 2 - cliff ; 3 - talus and 4 - pediment.

- 1.6.3
- | | |
|--------------|---|
| 1 - Crest | ✓ |
| 2 - Cliff | ✓ |
| 3 - talus | ✓ |
| 4 - pediment | ✓ |

$$(4 \times 1 = 4)$$

- 1.6.4 Talus ✓ - fertile soil = (1 + 1 = 2)
Gentle slope / no run off

- 1.6.5 Deforestation increases the rate of slope movement. //

Road construction compromises the slope stability, causes a steeper slope and increases slope movement. //

quarries at the foot of slopes compromise the slope building on steep slopes

vibration of heavy traffic can destabilise a slope =
over grazing and bad ploughing methods help loosen the soil and remove the protective covering of =
vegetation (4 x 2 = 8)

total 15

Question two

2.1.1 E - Solstice

2.1.2 D - Convection

2.1.3 G - Subsidence

2.1.4 F - Biome

2.1.5 H - Convergence

2.1.6 A - Equinox

2.1.7 C - Albedo

2.1.8 B - Revolution

(8x1=8)

2.2.1 0° - equatorial Low ✓ 30°N - sub-tropical High ✓ 60°N - sub-polar Low ✓ 90°N - Polar High ✓ (4)

2.2.2.1 Cell 2 - Ferrel (1)

2.2.2.2 Cell 3 - Polar cell (1)

2.2.3 Maximum heating takes place at the equator → High temperature ✓ air is hot causing it to rise (convection). This leaves a Low pressure area at the surface ✓ (4)

2.2.4 Tropical easterlies ✓

2.2.5 Equatorial = / latitude?

2.2.6 At times there can be very little or no wind at the equator, resulting in sailing ships being stranded for days or weeks at a time. ✓ (2)

2.3.1 Tor ✓ - isolated, exposed pile of jointed igneous rock. Rocks are stacked on top of one another and are well rounded in appearance

2.3.2 Core stones ✓

2.3.3 Batholith ✓

2.3.4 Dolerite / Granite / Igneous ✓

2.3.5 • Igneous rock cools below the surface of the earth ✓

Joints and cracks form when cooling of the granite takes place ✓

• Ground water seeps into joints and cracks → weathering takes place. Ground water also dissolves minerals

in the granite - chemical weathering at joints leads to the breaking down of rocks ✓

• Overlying layer of rocks has been removed exposing the core stones on the surface of the earth. ✓

• Piles of rectangular core stones are now visible on the surface of the earth, [4x2=8]

2.4.1 Mass movement - downward movement of weathered material such as soil, loose stones, rocks and boulders under the influence of gravity. ✓ (1)

2.4.2 3-Solifluction ✓, mud flow, Land slides, slumps, rock falls, ✓ (2)

2.4.2 Soil creep ✓

2.4.5 Urbanisation - development on steep slopes - slopes are destabilised. ✓ vegetation is removed

traffic - vibration of heavy traffic - destabilise slopes. ✓

Road construction = cutting slopes for roads alters the angle of a slope. ✓

Farming methods: overgrazing on slopes remove vegetation poor ploughing methods on slopes.

Mining - blasting - triggers off slope failure

Dam construction - trigger off mass wasting = (4x2=8)

2.4.4. Improve drainage and prevent slope saturation by using hydrauger holes. \checkmark

use wire nets and metal stakes to hold slope together.

use rock bolts to reinforce cliff and slopes.

spread layer of concrete to cover the slope called shotcrete.

Build gabions to stabilise weak slopes.

Build retaining walls to hold slopes in place.

Cut berms out of the slope to reduce slope angle

Enforce building codes

($3 \times 2 = 6$)

Limit building on steep slopes

(refer to pg 183 of text)

2.5.1. hot dry wind that blows down the leeward side of a mountain. or

Local name for warm dry winds that blow across countries to the north of the European Alps. \checkmark

2.5.2. 10° \checkmark

2.5.3. Moist air blowing towards the mountain - forced to rise.

It expands - cools at dry adiabatic lapse rate \checkmark until condensation level - then cools at slower wet adiabatic

lapse rate \checkmark

loss of moisture - when air descends on leeward side

, it warms at D.A.R. Descending air will reach higher temperatures than the temperature at which it started

on windward side. \checkmark

$3 \times 2 = 6$

2.5.4. dry, hot conditions \checkmark

2.5.5. snow melts \rightarrow possibility of Avalanches \checkmark

Hot dry wind \rightarrow increases chances of fires.

P.T.O.

2.6.1. Collected name given to slopes formed when rocks are tilted. ✓

2.6.2 Sedimentary ✓

2.6.3

Cuesta

- asymmetrical in shape
- dip slope forms gentler slope
- angle of dip slope 25°

Hogsback

- symmetrical ✓
- dip slope — very steep ✓
- angle of dip slope greater than 40°
($3 \times 2 = 6$)

8

Total 75

Memo

①

- 3.1.1 B
- 3.1.2 B
- 3.1.3 C
- 3.1.4 A
- 3.1.5 C
- 3.1.6 C
- 3.1.7 D
- 3.1.8 C

- 3.2.1 HDI
- 3.2.2 Trade Deficit
- 3.2.3 Subsidy
- 3.2.4 Export
- 3.2.5 Rostow's Development model
- 3.2.6 Quotas
- 3.2.7 Gini-co-efficient.

3.3.1 U.K
MEDC / High GDP per Capita

3.3.2 U.K
3.3.3 low literacy Rate (41%) → poor education →
lack of knowledge of Birth control → High BR.

3.3.4 Low IMR → shows country has excellent
Health Care / Access to Health Care
Facilities

3.3.5 - poor nutrition (1800 calories) → leads to illnesses
and diseases
- shortage of healthcare / medical assistance → high
ratio of doctor to people

(2)

- poor access to clean water (27%) → lead to spread of waterborne diseases eg cholera
- Low literacy rate (41%) → lack of knowledge of health care issues → diseases spread quickly.

3.4.1.1. Removal of tariffs & trade barriers for easy flow of products across borders

3.4.1.2. Imposing tariffs and quotas to restrict & regulate trade with foreign countries

3.4.1.3. Trade within an a specific area or part of the continent.

3.4.2 - Result in economic growth.

- Improve relations with neighbouring countries
- Trade and Transport costs are lower → shorter distance
- prevents exploitation from countries from outside the region.
- Protection of intra-regional trade from other Trade Blocs.
- Promote regional economic security.
- Demand for similar products - Increased Foreign Income
- protects local business, industry, & jobs from foreign competition.

3.5.1.1 D. Horizon

3.5.1.2. O Horizon

3.5.1.3 B Horizon

3.5.2. Parent material / Time / Climate / Topography / Organisms.

- 3.5.3. → Results in loss of Soil Fert. l. l. ty. / Desertification
 → Drop in crop production
 → Loss of jobs → Farms and Factories
 → Decrease in exports → Decrease Foreign Income
 → Food price increase → shortage.
 → shortage of Food / Food Insecurity
 → large scale poverty and famine.

- 3.5.4. - Maintain vegetation cover.
 - Avoid deforestation
 - Practice Sustainable Farming methods eg
 Crop Rotation, Contour farming.
 - Avoid overstocking / overgrazing.
 - plant windbreaks.

3.6.1.1 wind farm / Solar / cow manure.

3.6.1.2 nuclear, coal

3.6.2.1 Uranium

3.6.2.2 Sun

3.6.2.3 coal

- 3.6.3. - Radio-Active waste produced - storage
 - threat of Radio Activity leaks
 - Very expensive to build & dismantle power plants

- 3.6.4 - It is renewable
 - cheaper or Free eg solar power.
 - 'cleaner' → produce less pollution.

4.1.1 E

4.1.2 J

4.1.3 K

4.1.4 H

4.1.5 B

4.1.6 D

4.1.7 C

4.1.8 G

4.2.1 False

4.2.6 True

4.2.2 False

4.2.7 False

4.2.3 False

4.2.4 True

4.2.5 True

4.3.1 Total Value of all goods and services produced within a country for a particular year excluded income earned by foreigners.

4.3.2 GNP per capita / Poverty / Balance of Trade / Gini coefficient.

4.3.3 Brandt line is an imaginary line that

divides the rich and poor countries → Richer countries located north of the Brandt division and poorer countries south of the Brandt

4.3.4 Africa.

- 4.3.5 - Low Rainfall → Droughts - Low production.
- Colonisation → exploitation of Resources → Dependency theory.
 - lack of access to water, electricity, and sanitation → development stagnates
 - low literacy levels → low development.
 - Desertification → poor soil → poor farming practices.
 - Multinational Control - Money leaves country
 - Negative Trade Balance - Import more than export.

4.4.1

4.4.1 Improving the quality of lives of the people in a community by involving Locals

4.4.2. Bottom-up. Development projects initiated by communities / Grassroot economic & social development.

4.4.3 commercial and management skills

- 4.4.4
- job Creation.
 - Improvement in Standard of living
 - Earn Income.
 - skills development.
 - empowerment of locals.
 - Development of infrastructure.
 - Add value to Agricultural products

- subsidise Farmers \rightarrow Capital input.
- offer low interest loans
- offer education, training and skills development.
- Develop infrastructure eg Roads, Water Schemes, communication networks to ensure easier and efficient development.

4.5.1 When water combines with pollutants (greenhouse gases / CO_2 & other gases) to form a weak Acid that is deposited as Rain, snow or Fog

4.5.2 - Corrosion of metals (Caravan roof)

- kills Aquatic life₁ (fish) in Rivers.

4.5.3 Air pollution.

4.5.4 Carbon dioxide, Sulphur dioxide, Methane

4.5.5 Climate:

- ^{ozone Depletion} increase in Greenhouse gases \rightarrow destroys the ozone layer.
- Global Warming \rightarrow Increase in the earth's Average temperature.

Natural landscape

- Coal mining scars the landscape.
- Removal of Natural Vegetation.
- Soil Erosion - loss of top soil.

4.6.1.1 energy produced from resources that can be replenished

4.6.1.2 network of electricity cables, pylons & wiring that provide electricity from power stations to homes, industries etc.

4.6.2 not commonly used

4.6.3 S.A. beginning to produce electricity from resources that produce less pollution

4.6.4 - noise pollution / noisy → ('turbines are quieter')
 - spoils the natural scenery ('towering turbines')
 - affect bird life.

4.6.5 - Flat land - Construction of turbine
 - Coastal Area → winds / Sea Breeze.
 - Away from obstacles eg mountain → easy flow of winds

