Province of the
EASTERN CAPE
EDUCATION

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GRADE 11

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GEOGRAPHY P1 MEMORANDUM

MARKS: **300**

This memorandum consists of 15 pages.

SECTION A: PHYSICAL GEOGRAPHY: THE SIGNIFICANCE OF WATER AND ECOSYSTEMS

Answer at least ONE question from this section.

QUESTION 1 [LO 1.2 – LO 1.5] [LO 2.1 – LO 2.4] [LO 3.1 – LO 3.2]

1.1	1.1.1	run-off √√	(2)
	1.1.2	hydroelectric power √√	(2)
	1.1.3	ria √√	(2)
	1.1.4	abrasion √√	(2)
	1.1.5	sandbar √√	(2)
1.2	1.2.1	C/Habitat√√	(2)
	1.2.2	D/Biodiversity √√	(2)
	1.2.3	F/Predation √√	(2)
	1.2.4	H/Competition √√	(2)
	1.2.5	I/Foodweb √√	(2)
1.3	1.3.1	The farming of fish, shellfish or seaweed in an enclosed area of the sea √√ (1x2)	(2)
	1.3.2	Mussels, abalone etc. depend on cold nutrient-rich water Pollutants raise the temperature of the water √√ Pollutants deplete nutrients that affect their growth √√ (Any 1x2)	(2)
	1.3.3	The mill makes Saldanha Bay an industrial area and spoils its natural beauty √√ Makes it less appealing to tourists √√ (Any 1x2)	(2)
	1.3.4	Strong tides and seepage of fresh water from the swamp areas around the bay and lagoon √√ (1x2)	(2)
	1.3.5	Yes √√ The northern bay and the ore-loading quay together almost enclose the bay √√ (2x2)	(4)
1.4	1.4.1	Lake Nasser √ (1x1)	(1)
	1.4.2	Crops were irrigated by the annual flooding √√ Fertile alluvial soil was deposited in the river valley √√ (2x2)	(4)
	1.4.3	Crops are no longer dependant on annual flooding √√ A range of different crops can be grown throughout the year √√ Crops are not washed away and destroyed √√ (Any 2x1)	(2)

1.4.4 Negative impact

Many people living in the area now surrounded by the water of Lake Nasser were displaced from their homes √√

The dam traps the nutrient-rich alluvial soil that used to be deposited in the river valley – more fertilisers are now used which pollutes the river √√

The growth of water plants in the still water of the lake supports the water snails and lead to an increase in the disease bilharzia √√

The dam has reduced the strength of the flow of the Nile River downstream √√

Sea water now seeps into the groundwater of the Nile, spoiling the soil for agriculture √√

The stock of fish in the Mediterranean Sea has diminished because the marine ecosystem depended on the nutrient-rich deposits from the Nile √√

Flooding of the area upstream results in a loss of plants, animals and insects √√

Fertile silt is deposited in the dam which reduces the capacity of the dam √√

The loss of sand deposits at the river mouth can erode the coastline √√

ACCEPT OTHERS (Any 3x2)(6)

Control flooding

A dam can store flood water if water is released from the dam before heavy rains to drop the water level √√

Control the outflow of floodwater to reduce flooding downstream √√

Changes the flow pattern of the river which affects the intensity and duration of floods √√

It changes the seasonal flow of the river making it easier to control flooding of the river √√

ACCEPT OTHERS (Any 3x2)(6) (12)

1.5 1.5.1 Is the process through which sand and other beach material is moved along the length of the beach or shore √√

When waves break at an oblique angle and the back wash is perpendicular/at right-hand angle to the beach resulting in beach migration √√ (2x2) (4)

1.5.2 (a) It is threatening the buildings along the shoreline because there is hardly any beach left in some places √√ (1x2) (2)

(b) It affects tourism activities negatively as the beach is being eroded and moving towards the south √√ (1x2) (2)

1.5.3 To build a groyne/pier/sea wall to block the movement of sand along the beach √ (1x1) (1)

1.6 1.6.1 Biotic: plants/animals/mushroom/fish/insects √
Abiotic: sunlight/soil/water/oil √ (2)

1.6.2 fungi √ (1x2) (2)

1.6.3 Decomposers are important as nature's recyclers because they break down dead plant and animal matter, releasing nutrients back into the soil √√
They are at the top of the food chain √√ (2x2) (4)

1.6.4 warmth √√
moisture √√ (2x2) (4)

1.6.5 Pollination of the flower by the bee √√ (1x2) (2)

1.7 1.7.1 Disrupting the food chain
By adding a link e.g. foreign plant or animal into the ecosystem, there are less resources for the indigenous plants and animals √√
Removing a link in the ecosystem e.g. plants or animals killed or permanently removed, leads to an increase in certain species that disrupt the food chain √√ (2x2) (4)

1.7.2 Poisoning the food chain
Human activities put toxic substances (poisons) into the food chain e.g. spraying pesticides to kill crop pests and insects √√
Release of industrial waste water that contain heavy metals which contaminate rivers, lakes and the sea √√
Toxic substances contaminate plants and insects which are often eaten by other animals √√
These toxic substances concentrate at each level up the food chain eventually destroying the food chain and disrupts the ecosystem √√ (Any 2x2) (4)

1.7.3 Causing loss of habitat and biodiversity
Farming and development results in plants and animals losing their habitats √√
Many plants and animals die out when new settlements are built and become extinct √√
Loss of habitats for plants and animals means loss of biodiversity √√ (Any 2x2) (4)

1.8	1.8.1	Food energy/nutrients √√	(1x2)	(2)
	1.8.2	Food production through photosynthesis √√ Nutrient cycling √√ Decomposition of plant and animal matter √√	(Any 1x2)	(2)
	1.8.3	Competition between living organisms for resources √√ Predation where one animal feeds on another √√ Symbiosis between two organisms where at least one of them benefits √√	(Any 2x2)	(4)
	1.8.4	The living organism will adjust themselves accordingly √√ The ecosystem will collapse/be disrupted √√ A new ecosystem can develop √√ Ecosystem can control the numbers (biomass at each trophic level) √√	(Any 2x2)	(4)
	1.8.5	deforestation √ pollution √ hunting √ development √ climate change – influence of humans on the climate √	(Any 2x1)	(2)

[100]

QUESTION 2 [LO 1.2 – LO 1.5] [LO 2.1 – LO 2.4] [LO 3.1 – LO 3.2]

2.1 2.1.1 True √√ (2)
2.1.2 False √√ (2)
2.1.3 True √√ (2)
2.1.4 False √√ (2)
2.1.5 True √√ (2)

2.2 2.2.1 Indigenous√√ (2)
2.2.2 Logging√√ (2)
2.2.3 Organic√√ (2)
2.2.4 Salination √√ (2)
2.2.5 Poaching√√ (2)

2.3 2.3.1 B/El Nino √ (1x1) (1)
2.3.2 A/La Nina √ (1x1) (1)
2.3.3 There is a larger upwelling of cold-water from below √√
Coldwater is nutrient-rich and supports large fish populations √√
(Any 1x2) (2)
2.3.4 B/El Nino √√
Trade winds which carry moisture in the direction of South Africa blow less strongly √√
Low sea temperatures cause high pressure regions towards the east and lower rainfall √√ (Any 2x2) (4)
2.3.5 <u>Effect on farming activities</u>
Reduced crop production/yields/livestock/grazing animals causes higher food prices √√
Agricultural products become more expensive √√
Decrease in agricultural exports √√
Food shortages and import of food supplies at high prices √√
Job losses in agriculture and loss of income √√
Famine and malnutrition due to unemployment and poverty √√
(Any 3x2)(6)

<u>Measures</u>
Advise farmers to grow drought-resistant crops √√
Reduce livestock √√
Make plans to store food and import alternative food supplies √√
Build water storage dams and transfer schemes √√
Implement water restrictions √√
Implement food preservation methods to maintain a reliable, nutritious food base e.g. sun-drying, salting and fermenting of foodstuffs √√
Mulching the soil to prevent evaporation of water √√
Use irrigation methods that involve less water loss and evaporation √√ (Any 3x2)(6) (12)

2.4	2.4.1	Pietermaritzburg √	(1x1)	(1)
	2.4.2	Pietermaritzburg √	(1x1)	(1)
	2.4.3	(a) <u>Durban</u> 12 °C (23 °C – 11 °C) √√	(1x2)	(2)
		(b) <u>Pietermaritzburg</u> 19 °C (22 °C – 3 °C) √√	(1x2)	(2)
	2.4.4	The difference between daily minimum and maximum temperature and summer and winter are less extreme in Durban than Pietermaritzburg √ Durban lies on the coast = maritime climate √ Pietermaritzburg is inland = continental climate √ The sea has a moderate effect on Durban's climate √	(Any 1x2)	(2)
2.5	2.5.1	Destructive waves √	(1x1)	(1)
	2.5.2	Erosion √	(1x1)	(1)
	2.5.3	Arch √√	(1x2)	(2)
	2.5.4	The roof of the arch will erode further by the action of the splashing water and eventually collapse to form a stack √√	(1x2)	(2)
	2.5.5	Provide income for local communities who sell handcrafts and other services √√ Provide job opportunities to the local people at hotels and other places of accommodation √√ Is a source of foreign income that boost the economy √√	(Any 2x2)	(4)
2.6	2.6.1	R-horizon √√	(1x2)	(2)
	2.6.2	A-horizon √√	(1x2)	(2)
	2.6.3	A-horizon √√	(1x2)	(2)
	2.6.4	B-horizon √√	(1x2)	(2)
	2.6.5	A = leaching √ B = desalination/calcification √	(2x1)	(2)
	2.6.6	A = leaching √√	(1x2)	(2)
	2.6.7	The salts/minerals form a hard crust on the surface of the soil which make it difficult for water to infiltrate √√	(1x2)	(2)
	2.6.8	Fertilisation can be a form of pollution and causes eutrophication √√ The nutrients wash from the soil into water bodies such as ponds, rivers or seas, where they cause an explosion in the growth of algae √√ The algae block out sunlight for the water plants and animals √√ When algae die, the decomposition process uses up oxygen thus suffocating fish and other water animals √√	(Any 3x2)	(6)

2.7 2.7.1 Highveld √√
Inland regions of KZN √√
Eastern Cape √√ (Any 1x2) (2)

2.7.2 South America – Pampas √
North America – Prairies √ (2x1) (2)

2.7.3 Frost √√
Fire √√
Grazing/stop trees from establishing themselves √√ (Any 1x2) (2)

2.7.4 The soil is fertile √√ (1x2) (2)

2.7.5 Agriculture √
Deforestation/Cutting of trees √
Urbanisation √
Fires √ (Any 2x1) (2)

2.7.6 <u>Advantages</u>
Fires clear the vegetation for the growth of new plants/seedlings √√
The ash increases the nutrient-content of the soil √√
Some seeds need the smoke of the fire to germinate √√
A fire is a way of renewing the biome by releasing minerals and seeds √√
ACCEPT OTHER (Any 3x2)(6)

<u>Ways to address</u>
Build fire-breaks along sensitive areas √√
Do not throw burning cigarettes into the field √√
Carry out development in such a way that it does as little damage to the environment as possible √√
Create protected areas and parks √√
Promote environmental awareness √√
Obey the rules of areas that are at risk of fires √√
Build outdoor fires in a sandy area √√ (Any 3x2)(6) (12)

[100]

HUMAN GEOGRAPHY: PEOPLE AND THEIR NEEDS

SECTION B: DEVELOPMENT, SUSTAINABILITY, PEOPLE AND THEIR NEEDS

Answer at least ONE question from this section.

QUESTION 3 [LO 1.2 – LO 1.5] [LO 2.1 – LO 2.4] [LO 3.1 – LO 3.2]

3.1	3.1.1	Natural resources √√	(2)
	3.1.2	Raw materials √√	(2)
	3.1.3	Human resources √√	(2)
	3.1.4	Financial √√	(2)
	3.1.5	Non-renewable √√	(2)
3.2	3.2.1	The tertiary activities make use of quaternary activities like information technology, research, etc.	(2)
	3.2.2	The UN is in all of the developed countries assisting the developing countries with aid	(2)
	3.2.3	Millennium development goal is to reduce extreme poverty and hunger	(2)
	3.2.4	Providing a better life for people living in urban areas	(2)
	3.2.5	Gender equality is when men and women have equal conditions for realising their potential	(2)
3.3	3.3.1	<u>Brandt Line</u> The dividing link between northern (rich/developed) and southern (poor/developing) countries √√ (1x2)	(2)
	3.3.2	<u>Developed countries</u> = rich, industrialised, economically more developed countries in the world √√ <u>Developing countries</u> = poor, agricultural, less developed countries in the world √√ (2x2)	(4)
	3.3.3	<u>Developed countries</u> Global corporations √√ Stock exchanges √√ Currencies of the developed countries √√ (Any 1x2)(2) <u>Developing countries</u> Poor beggars √√ Third world √√ (Any 1x2)(2)	(4)
	3.3.4	<u>Economic indicators</u> Employment data √√ Trade √√ GNP √√ GDP √√ Tertiary and secondary economic activities √√ (Any 2x2)	(4)

3.3.5 Third world countries are poor beggars who are excluded from the global economy √√
First world countries enjoy all of the wealth and treats of a global economy such as casinos √√ (Any 1x2) (2)

3.3.6 Developed countries make most of the world's manufacturing goods √√
Income per capita is high √√ (Any 1x2) (2)

3.4 3.4.1 The economic growth and development of rural areas √√ (1x2) (2)

3.4.2 North-east of Mthatha in the Eastern Cape √ (1x1) (1)

3.4.3 Primary activity √
Agriculture √ (Any 1x1) (1)

3.4.4 The area is poor √√
The low capacity of government involvement √√
The low involvement of community-based organisations √√
(Any 2x2) (4)

3.4.5 Bottom-up approach means working with the people at grass-roots level √√ (1x2) (2)

3.4.6 <u>Why women have been uplifted</u>
Women in the rural areas have been marginalised and excluded from taking part in economic activities √√
Women generally play the role of domesticated housewives √√
Women seldom contribute to the financial income of households √√
Women are poor and lacking in basic skills √√
Women lack education and low levels of literacy √√
Women are influenced by traditional culture and religion √√
(Any 3x2)(6)

<u>How programmes aim to improve the situation for women</u>
Setting up food-gardening projects √√
Training and support programmes √√
To reduce household food costs √√
To better levels of family nutrition √√
To enhance self-worth and personal confidence √√
More opportunities to turn surplus into income √√
Working with and consulting local government √√ (Any 3x2)(6) (12)

3.5 3.5.1 Competition for living space because of the increase in the world population √√
People are poor and depend on natural resources to survive e.g. wood for fuel √√
Competition for food and water e.g. kill animals for food, sharing of water, a scarce resource √√
Crop damage by grazing wildlife √√
Wild life are dangerous and cause injury and death of locals √√
(Any 2x2) (4)

3.5.2 Increased visitors and traffic can damage the environment/environment degradation √√
Destroy the natural vegetation for the development of roads and accommodation √√
Loss of natural habitat and biodiversity as a result of establishment of tourist facilities √√
They contribute to higher levels of littering and pollution which decreases the value of the resources √√
Noise pollution disturb the breeding habitats of animals, birds and insects √√ (Any 2x2) (4)

3.5.3 <u>Importance of natural parks</u>
Environmental resources to protect animals and biodiversity √√
Economic reasons – plants for its medical purposes √√
Ethical reasons – the rights of plants and animals √√
Aesthetical reasons – to enjoy the beauty of nature √√
Scientific reasons – for research purposes √√
To maintain a high quality of life to combat pollution √√(Any 3x2)(6)

<u>Opportunities</u>
Job opportunities e.g. conservationists, tour guides, etc. √√
Food supply when surplus animals are culled as part of the conservation programmes √√
Harvesting of thatching grass and fuel wood in natural parks √√
Tourist attractions that earn foreign capital √√
Increase income leads to a higher standard of living √√(Any 3x2)(6) (12)

3.6 3.6.1 Open-cast mining √√ (1x2) (2)

3.6.2 Non-renewable √
Cannot be replaced and will become depleted √ (2x1) (2)

3.6.3 (a) infiltration √√ (1x2) (2)

(b) run-off √√ (1x2) (2)

3.6.4 It leaves scars where plants, soil and rocks are removed √√
Form useless mine dumps √√
Wind and water erodes the soil and it ends up in nearby streams and lakes √√
Silt, acids and toxic materials may mix with water and run into ground water sources √√
Rainwater seeping through the coal mines mix with sulphur in the ground to form sulphuric acid that land in lakes and rivers – is poisonous to humans and aquatic life √√ (Any 2x2) (4)

3.6.5 Filling the mined area with sand √√
And plant grass √√
Set aside areas of the mine as parks or game reserves √√
(Any 2x2) (4)

3.6.6 Restoring the land is very expensive √√
Restoring the land takes a long time √√
Many companies do not go through the trouble or expense to rehabilitate the land √√ (Any 2x2) (4)

[100]

QUESTION 4 [LO 1.2 – LO 1.5] [LO 2.1 – LO 2.4] [LO 3.1 – LO 3.2]

4.1 4.1.1 Resource depletion √√ (2)
4.1.2 Resource exploitation √√ (2)
4.1.3 Sustainability √√ (2)
4.1.4 Preservation √√ (2)
4.1.5 Recycling √√ (2)

4.2 4.2.1 Development √√ (2)
4.2.2 Indicators √√ (2)
4.2.3 Human Development Index √√ (2)
4.2.4 Quality of Life Index √√ (2)
4.2.5 Environmental Indicators √√ (2)

4.3 4.3.1 (a) <u>The core-periphery model</u>
The G8 countries, represented by the people who are over-eating, are core in the core-periphery model √√
The developing countries, represented by the agenda on the food shortage, are the periphery √√ (2x2) (4)

(b) <u>The dependency model</u>
The G8 countries are the people over-eating and exploiting the developing countries for their scarce natural resources √√
The G8 countries become richer and the developing countries, represented by the agenda on the world food shortage, become poorer √√ (2x2) (4)

4.3.2 <u>Yes</u> √√
The G8 continue to exploit developing countries for their scarce natural resources √√
The G8 countries get richer, while the developing countries become poorer, resulting in world food shortages √√ (3x2)

OR

<u>No</u> √√
G8 countries are fulfilling their role of managing global political and economic development √√
Economic development will increase in developing countries if the G8 countries manage global economic development properly √√ (3x2) (6)

4.3.3 When: 2008 √
Where: Hokkaido in Japan √ (2x1) (2)

4.3.4 World food shortage √√ (1x2) (2)

4.4 4.4.1 The increasing interaction between and integration of national economies and organisations in the world through trade investment, financial flows, migration and spread of technology √√
(1x2) (2)

4.4.2 By removing all barriers to trade and the flow of money √√ (1x2) (2)

4.4.3 There are no guarantees that economic benefits from globalisation will be distributed equally between developed and developing countries √√ (1x2) (2)

4.4.4 No √√
Depletion of natural resources √√
Increased pollution √√
Habitat distribution √√ (Any 2x2) (4)

4.4.5 Positive impacts
Cheaper products available to consumers √√
People generally have more choices √√
Products become standardised and quality improves √√
More wealth distributed across the world √√
Led to a significant increase in manufacturing output in the countries of the south √√
Promotes free trade between national markets and producers √√
Greater opportunities for economic growth in developing countries √√
Created new possibilities for immediate communication and exchange of ideas between people √√
ACCEPT OTHERS ANY THREE(3x2) (6)

Negative impacts
Intenses competition between producers √√
Unequal distribution of wealth √√
Gap between developed and developing countries widens √√
Fails to recognise and minimise local indigenous cultures – culture globalisation √√
Increase in the spread of diseases e.g. Aids, EARS √√
Exploitation of labour – low wages and poor working conditions for people in developing countries √√ ANY THREE (3x2) (6)
2x (3x2) (12)

4.5 4.5.1 4% √√
Why – rich industrialised countries generate energy from non-renewable resources √√ (2x2) (4)

4.5.2 Asia √√ (1x2) (2)

4.5.3 Demand for living space due to the growing population √√
Cutting for firewood and charcoal √√
Wild fires √√
Overgrazing √√
Shift from subsistence farming to cash cropping √√
Urbanisation √√ (Any 3x2) (6)

4.5.4 Soil erosion √√
Degradation of the quality of soil √√ (Any 1x2) (2)

4.5.5 Planting of trees/afforestation √√
Conservation √√
Preservation √√ (Any 2x2) (4)

4.6 4.6.1 Wind can be replaced √ (1x1) (1)

4.6.2 The generation and use of wind energy does not produce any pollutants √√ (1x2) (2)

4.6.3 Darling, north west of Cape Town √ (1x1) (1)

4.6.4 Four giant turbines will be used to generate wind energy √√
The "clean" energy will be fed into a national power grid and "wheeled" through the grid to the consumer √√ (2x2) (4)

4.6.5 It is sustainable and environmentally friendly √√ (1x2) (2)

4.6.6 <u>Advantages</u>
Wind is an unlimited renewable natural resource available globally √√
There is little air or water pollution/clean √√
Production costs will be low as a result of technological developments √√
No fossil fuels needed/burnt during generation √√
ACCEPT OTHERS (Any 3x2)(6)

<u>Disadvantages</u>
Can only be produced in areas with steady winds √√
Wind turbines cause noise pollution √√
Interferes with migration of birds and kills birds √√
Insufficient if wind does not blow/calm conditions √√
Wind farm occupies a large area of space √√ (Any 3x2)(6) (12)
[100]

GRAND TOTAL: 300