



Province of the
EASTERN CAPE
EDUCATION

NATIONAL SENIOR CERTIFICATE

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 Effect on farming activities
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)
- Measures
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]
				1

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 Why women have been uplifted
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)
- How programmes aim to improve the situation for women
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 Importance of natural parks
 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)
- Opportunities
 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) The core-periphery model
 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) The dependency model
 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 Yes ✓✓
 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**
- No ✓✓
 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 Advantages
 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)
- Disadvantages
 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**