basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 12

GEOGRAPHY P1

FEBRUARY/MARCH 2011

MEMORANDUM

MARKS: 300

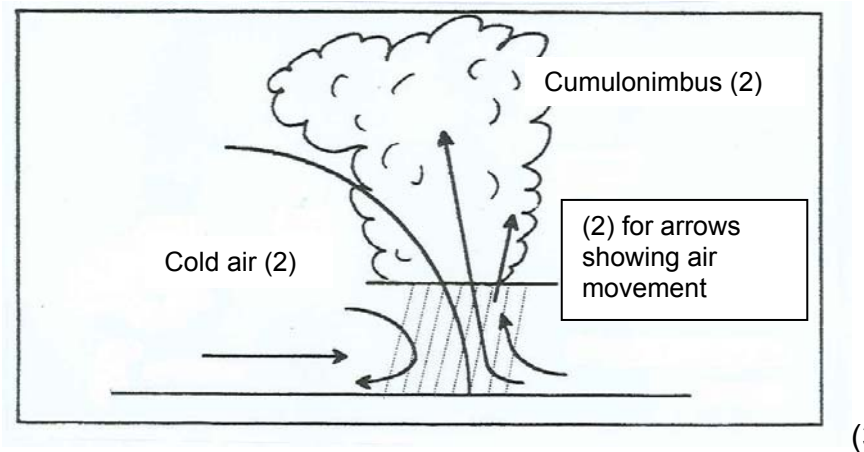
This memorandum consists of 16 pages.

SECTION A

QUESTION 1

1.1	1.1.1	polar (2)		
	1.1.2	mid-latitude (2)		
	1.1.3	high (2)		
	1.1.4	tropical easterly (2)		
	1.1.5	convergence (2)	(5 x 2)	(10)
1.2	1.2.1	true (2)		
	1.2.2	false (2)		
	1.2.3	false (2)		
	1.2.4	true (2)		
	1.2.5	true (2)	(5 x 2)	(10)
1.3	1.3.1	night-time (2)	(1 x 2)	(2)
	1.3.2	Because cold air is moving down the slope (2) Temperature on valley floor is 5 ˚C lower than on the valley slopes (2) [Any ONE]	(1 x 2)	(2)
	1.3.3	In the evening/at night mountain slopes cool and cold air rolls into the valley resulting in warm air being displaced from the valley (2) A thermal belt forms trapping the smog (2)	(2 x 2)	(4)
	1.3.4	Smog is made up from pollutants from the industries and fog (2) Pollutants trap heat (2) Pollution dome forms (2) [Any TWO]	(2 x 2)	(4)
	1.3.5	Decentralise industries/move them out of valley floor (2) Build higher chimneys that go beyond the thermal belt (2) Put filters on chimneys to trap the pollutants (2) [Any TWO]	(2 x 2)	(4)
1.4	1.4.1	Very little cloud cover over the land/clear skies (2)	(1 x 2)	(2)
	1.4.2	All pressure systems move north with the apparent movement of the sun (2) Northward movement of the ITCZ (2) Mid-latitude cyclone migrate northward with pressure belts (2) [Any TWO]	(2 x 2)	(4)

1.4.3



(3 x 2) (6)

1.4.4 Drop in temperature (2) because of cold front (2)
Increase in pressure (2) because cold air is heavy (2)
Thunderstorms (2) because of massive cumulonimbus clouds (2)
Decrease in humidity (2) because cold air does not have much moisture (2)
Winds are strong and gusty and they back (2) because of the clockwise movement of the cyclone (2)
[Any THREE plus its accompanying explanation] (6 x 2) (12)

1.5 1.5.1 A = 900 m OR higher up and B = 100 m OR lower/River A is higher than river B (2) (1 x 2) (2)

1.5.2 Steeper slope creates a difference in the speed of the rivers (2)
The rate of erosion will also be different (2)
Stream will erode headwards (2)
Makes it possible for river at lower level to capture headwaters of river at higher level (2)
[Any TWO] (2 x 2) (4)

1.5.3 Elbow of capture (2) (1 x 2) (2)

1.5.4 Increased velocity (2)
Volume of water increases (2)
Rate of erosion increases (2)
Rejuvenation may occur (2)
Vertical erosion will increase (2)
Deposition will decrease (2)
[Any TWO] (2 x 2) (4)

1.5.4 More water and energy to form the following features (2):
Incised/entrenched meanders (2)
Valleys within valleys (2)
Paired terraces/terraces (2)
Knickpoint waterfalls (2)
[Any TWO] (2 x 2) (4)

1.6	1.6.1	Deforestation (2) Farming (2) Developing a settlement (2) Any urban activities mentioned (2) [Any ONE]	(1 x 2)	(2)
	1.6.2	Natural vegetation removed and replaced with agriculture (2) Agricultural land replaced with urbanisation (2) Development of dongas (2) Road built over river channel (2) [Any TWO]	(2 x 2)	(4)
	1.6.3	The ecosystem will remain in equillibrium/balance (2) To avoid the disruption of the drainage basin (2) To avoid problems of flooding (2) To avoid problems of silting (2) To avoid damage to the plant and animal life in the river (2) [Any THREE]	(3 x 2)	(6)
	1.6.4	Agriculture would have the following effect: The soil will be ploughed thus loosening the soil (2) which encourages infiltration (2) The crops will trap and slow down the flow of surface water (2) thus encouraging infiltration (2) Agriculture thus increases infiltration and slows down surface run-off (2) Urbanisation will have the following effect: Urban settlements have artificial surfaces such as tar and concrete (2) which do not absorb water (2) Less infiltration (2) will increase sheet flow (2) Less infiltration (2) and more channel flow (2) More run-off (2) increases flood peak (2) and decreases lag time (2) Urban areas also have more rain because of more hygroscopic nuclei (2) which contributes to greater surface run-off (2) [Any SIX]	(6 x 2)	(12)
				[100]

QUESTION 2

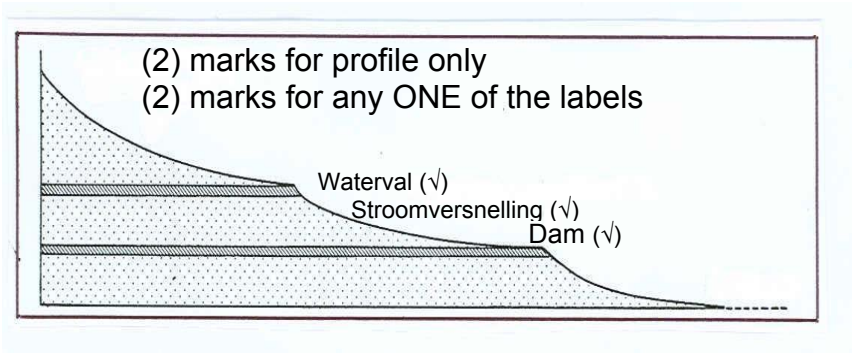
2.1	2.1.1	tropical cyclone (2)		
	2.1.2	cumulonimbus (2)		
	2.1.3	eye (2)		
	2.1.4	thunderstorms (2)		
	2.1.5	hurricane-strength winds (2)	(5 x 2)	(10)
2.2	2.2.1	C (2)		
	2.2.2	B (2)		
	2.2.3	A (2)		
	2.2.4	D (2)		
	2.2.5	A (2)	(5 x 2)	(10)
2.3	2.3.1	An increase in temperature with height (2)	(1 x 2)	(2)
	2.3.2	Kalahari/Continental (2)	(1 x 2)	(2)
	2.3.3	It originates in the subtropical high pressure zone (2) It is therefore associated with subsiding air (2) Land is cool in winter resulting in subsiding air (2) Upper air convergence results in subsidence (2) Subsidence resulting from the Hadley and Ferrel cells of circulation (2) [Any TWO]	(2 x 2)	(4)
	2.3.4	In summer the inversion layer is high above the escarpment which allows the moist air from over the Indian Ocean to be carried over the interior to result in high rainfall (2) In winter the inversion layer is below the escarpment because of strong subsidence and moist air is prevented from reaching the land resulting in stable conditions with no rain (2) [Any TWO]	(2 x 2)	(4)
	2.3.5	In summer due to the high rains a variety of crops can be grown because water is readily available (2) In winter drought resistent crops are planted and the farmer is restricted in his/her choice (2) Stock graze freely during high rainfall in summer (2) Stock to be fed during lower rainfall in winter (2) [Any TWO]	(2 x 2)	(4)
2.4	2.4.1	Refers to higher than normal temperatures that the earth is experiencing (2) [Concept]	(1 x 2)	(2)
	2.4.2	The reference to the global warming poster/person as a nut (2)	(1 x 2)	(2)
	2.4.3	To reduce emission of greenhouse gasses (2)	(1 x 2)	(2)

	2.4.4	No it did not achieve its objective (2) Carbon dioxide levels in the atmosphere are rising at a frightening rate (2) Global temperatures are continuing to rise (2) Developing countries e.g. China and India accelerated their emmissions (2) [Any TWO]	(2 x 2)	(4)
	2.4.5	It would affect their production levels and negatively affect the economy (2)	(1 x 2)	(2)
	2.4.6	Melting of icebergs which has resulted in the rise of sea levels (2) Extremes in weather conditions, e.g. floods and droughts (2) Long time change in temperatures which may lead to wild fires (2) Increase in droughts and desertification leads to shortages of food (2) Destruction of sensitive ecosystems such as coral reefs (2) Increase in climatic hazards such as tropical cyclones, tornadoes, thunderstorms, etc. (2) Increased soil erosion results in land deterioration (2) Increased pests (mosquitoes) and diseases (malaria) (2) High humidity levels (2) Water shortages (2) [Any SIX. Accept any other reasonable answers.]	(6 x 2)	(12)
2.5	2.5.1	Convex (2)	(1 x 2)	(2)
	2.5.2	It is made up of resistant rock (2) Resistant rock does not round easily (2) Eroded from the sides (2) [Any ONE]	(1 x 2)	(2)
	2.5.3	Crest (2) or cliff/scarp slope (2)	(1 x 2)	(2)
	2.5.4	Uniform/constant slope (2) Retreats parallel to the original slope (2) Forms at an angle of between 20 and 35 degrees (2) A zone of accummulated weathered material (2) Predominant activity is deposition (2) [Any TWO]	(2 x 2)	(4)
	2.5.5	Pediment (2)	(1 x 2)	(2)
	2.5.6	It has mature soil (2) It has more soil accummulated from erosion of other slopes (2) It is gentle so water infiltrates (2) [Any TWO]	(2 x 2)	(4)

2.6 2.6.1 The lowest point to which a river can erode (2)
[Concept] (1 x 2) (2)

2.6.2 Rapid (2)
Waterfall (2)
Dam (2)
[Any ONE] (1 x 2) (2)

2.6.3



(2 x 2) (4)

2.6.4 Ungraded (2) (1 x 2) (2)

2.6.5 The valley sides get gentler/the valley sides are lowered (2)
The width of the river increases (2)
The valley changes from v-shaped to more open valley (2)
[Any ONE] (1 x 2) (2)

2.6.6 In the upper course vertical erosion is dominant (2)
Therefore the river has steep slopes in the upper course (2)
The valley is v-shaped (2)
Features such as waterfalls and rapids occur (2)
In the middle course vertical erosion is slowed down and lateral erosion becomes dominant (2)
Therefore the valley assumes an open v-shape (2)
In the lower course lateral erosion is dominant (2)
The slopes of the valley become wide and gentler (2)
The valley becomes more open/the valley becomes a flood plain (2)
The lower course might have features such as meanders, oxbow lakes, braided streams, etc. (2)
[Any SIX, but explaining all three courses] (6 x 2) (12)
[100]

SECTION B

QUESTION 3

3.1	3.1.1	C (2)		
	3.1.2	A (2)		
	3.1.3	B (2)		
	3.1.4	D (2)		
	3.1.5	E (2)	(5 x 2)	(10)
3.2	3.2.1	C (2)		
	3.2.2	A (2)		
	3.2.3	E (2)		
	3.2.4	F (2)		
	3.2.5	B (2)	(5 x 2)	(10)
3.3	3.3.1	Urban growth refers to an increase in the number of people in urban area (2) Urban expansion refers to physical growth of an urban area (2) (Concepts)	(2 x 2)	(4)
	3.3.2	The urban profile has a double peak (2) The tallest buildings are found at the centre (CBD) (2) A second group of tall buildings found outside the CBD (2) The height of the buildings generally decreases as you move towards the outskirts (2) [Any TWO]	(2 x 2)	(4)
	3.3.3	<u>Highest peak</u> High land values in the CBD (2) Accessibility (2) Building plots are smaller in the CBD (2) <u>Lower peak</u> Secondary commercial zone (2) High rise accommodation zone (2) Land values relatively high (2) <u>General</u> On the outskirts the land is cheaper (2) Building plots are larger on the outskirts (2) Buildings reduce in height to outskirts (2) [Any TWO]	(2 x 2)	(4)
	3.3.4	CBD (2)	(1 x 2)	(2)
	3.3.5	It is a zone of high accessibility, therefore there is a high demand for the land thus tall buildings are constructed to make maximum use of the land (2)	(1 x 2)	(2)

3.4 3.4.1 It is centrally located (2) (1 x 2) (2)

3.4.2 (a) Light industries (2) (1 x 2) (2)

(b) Land values are high in the transition zone and that will not be suitable for heavy industries (2)
Light industries require small plots of land therefore the transition zone is affordable (2)
Light industries can locate in high rise buildings found in the transition zone (2)
Light industries locate close to the market place (2)
Light industries are not associated with pollution (2)
[Any ONE] (1 x 2) (2)

(c) Because the buildings are in a delapidated state (2)
Area has many social problems such as unemployment, crime and prostitution (2)
Waiting for expansion of the CBD (2)
[Any ONE] (1 x 2) (2)

3.4.3 Sector model (2)
Various land-use zones occupy sectors (2) (2 x 2) (4)

3.4.4 <u>PROBLEMS SHANTY TOWNS POSE TO CITY AUTHORITIES</u>:
Lack of facilities and services (2)
Houses constructed from plastic, tin, cardboard etc.(2)
Land is illegally occupied (2)
Crime (2)
Unemployment (2)
Overcrowding (2)
Unhygienic conditions (2)
They are vulnerable in times of floods and heavy rains which puts added pressure on autorities (2)
It is not easily accessible (2)
Fire hazards (2)
<u>SOLUTIONS</u>:
Formalising the settlements (2)
Improve the infrastructure (roads, buildings, facilities) (2)
Provide jobs (2)
Build away from the flood line (2)
Provide services such as water, sewerage and electricity (2)
[Any SIX. Accept other reasonable answers.] (6 x 2) (12)

3.5 3.5.1 To make a living (2)
Unemployment in Malawi (2)
High level of poverty in Malawi (2)
[Any ONE] (1 x 2) (2)

3.5.2 They don't pay taxes (2)
Businesses are not registered (2)
[Any ONE] (1 x 2) (2)

3.5.3 Low level of skills and productivity (2)
Workers are self-employed (2)
Reliance on locally available resources (2)
Little capital investment (2)
Employment status of workers not clear (2)
Competitive and unrelated markets (2)
Women and children mainly involved in this sector (2)
Associated with casual labour (2)
No job security and benefits for the workers (2)
Low or irregular incomes and long working hours (2)
Unhealthy and unsafe working conditions (2)
Unauthorised use of vacant or private land (2)
Small and undefined work places (2)
Little or no social protection (2)
No opportunity for education, skill building or health care (2)
Not protected by the law (2)
[Any TWO] (2 x 2) (4)

3.5.4 Harassment by public authorities(2)
Unnecessary and unregulated checks (2)
Authorities taking advantage of traders that are not literate (2)
[Any TWO] (2 x 2) (4)

3.5.5 <u>Advantage</u>:
It provides job opportunities for Malawians (2)
It grows the Malawian economy (2)
South Africans get cheap goods from Malawi (2)
South Africans are exposed to a greater variety of goods (2)
[Any ONE] (1 x 2) (2)
<u>Disadvantage</u>:
It negatively affects our economy (2)
It is not generating job opportunities in our economy (2)
Xenophobia (2)
Putting pressure on the South African resources (2)
Adds to the problem of shanty towns (2)
Aids and other diseases (2)
[Any ONE] (1 x 2) (2)

3.6	3.6.1	The total value of goods and services produced in a country in one year (2) (Concept)	(1 x 2)	(2)
	3.6.2	Electricity, gas and water (2) Transport, communication and storage (2) Financial, insurance, real estate and business services (2) Community, social and personal services (2) Wholesale and retail trade, catering and accommodation (2) [Any TWO]	(2 x 2)	(4)
	3.6.3	10,58% (2)	(1 x 2)	(2)
	3.6.4	Preparations for the 2010 FIFA World Cup (2) Poor state of South African roads (2) Upgrading the public transport system (Gautrain, Re a vaya, dedicated bus lanes)(2) To improve communication networks so that we are in line with the rest of the world technologically (2) [Any TWO]	(2 x 2)	(4)
	3.6.5	Provides employment (2) Produces food to meet the demands of a rapidly growing population (2) Contributes to the GDP (2) Exporting (2) Foreign capital (2) Industrial development (2) Development of towns (2) Development of infrastructure (2) Development of trade (2) [Any SIX]	(6 x 2)	(12)
				[100]

QUESTION 4

4.1	4.1.1	Range (2)		
	4.1.2	Low order/convenience goods (2)		
	4.1.3	Sphere of influence/market area (2)		
	4.1.4	Threshold population (2)		
	4.1.5	Central place (2)	(5 x 2)	(10)
4.2	4.2.1	E (2)		
	4.2.2	A (2)		
	4.2.3	B (2)		
	4.2.4	F (2)		
	4.2.5	D (2)	(5 x 2)	(10)
4.3	4.3.1	Zimbabwe (2) Mozambique (2) Lesotho (2) Swaziland (2) [Any ONE]	(1 x 2)	(2)
	4.3.2	People that move voluntarily from one country to another (2) [Concept]	(1 x 2)	(2)
	4.3.3	Infertile land (2) Natural disasters (2) Consolidation of farmland (2) Lack of services (2) Poverty (2) Fewer jobs (2) Low salaries (2) Crime in rural areas (2) More jobs (2) Better housing (2) Good infrastructure (2) High standard of living (2) Better facilities in the cities (2) Better salaries (2) [Any TWO]	(2 x 2)	(4)
	4.3.4	Growth of informal settlements (2) Backlog in housing (2) Backlog in infrastructural development (2) Backlog in services (2) Crime (2) Overcrowding (2) Traffic congestion and pollution (2) Breakdown of values, traditions and customs (2) [Any TWO]	(2 x 2)	(4)

4.3.5 Xenophobia (2)
Taking the jobs of locals (2)
Taking women from locals (2)
Have strange customs and traditions that the locals don't understand (2)
Associated with crime and drugs (2)
Sell goods at a cheaper rate therefore taking business from the local entrepreneurs (2)
They speak a different language that is strange to the locals (2)
[Any TWO] (2 x 2) (4)

4.4 4.4.1 It is a zone that has a mixture of rural and urban functions and marks the point where urban land merges with rural (2)
[Concept] (1 x 2) (2)

4.4.2 Land is cheaper (2)
Golf course requires large tracks of land and it is much more feasible to locate on the rural urban fringe (2)
[Any ONE] (1 x 2) (2)

4.4.3 Commercial decentralisation (2) (1 x 2) (2)

4.4.4 Close to road (2)
Close to railway (2)
Vacant land for expansion (2)
Away from built-up area (2)
Accessibility to CBD (2)
Close to motorway (2)
[Any TWO] (2 x 2) (4)

4.4.5 Sector model (2) (1 x 2) (2)

4.4.6 <u>WHY INNER CITY IS LOSING PROMINENCE</u>:
Crime (2)
Pollution (2)
Unhygienic conditions/litter (2)
Traffic congestion (2)
Decrease in accessibility (2)
Overcrowding (2)
Illegal trading on pavements (2)

DISADVANTAGES OF THE DECLINE:
Buildings left vacant (2)
Attract vagrants/homeless people (2)
Loss of business (2)
Loss of income (2)
Buildings become delapidated (2)
Loss of employment (2)
Ghost cities (2)
Mixed income (2)
Sphere of influence of CBD will become smaller (2)
It attracts a lot of foreign businesses (2)
Xenophobia (2)
Social ills eg. drugs and prostitution (2)
Ghettos form in the city centre (2)
[Any SIX] (6 x 2) (12)

4.5 4.5.1 A registered business (2)
[Concept] (1 x 2) (2)

4.5.2 Accept ANY example given (2) (1 x 2) (2)

4.5.3 Provide services (2) (1 x 2) (2)

4.5.4 They don't pay taxes (2)
Businesses are not registered, so they can't be tracked (2)
They have a low profit margin (2)
Many are foreigners who take the money out of the country (2)
They trade illegally on pavements which they do not pay for (2)
[Any TWO] (2 x 2) (4)

4.5.5 Local government should provide infrastructure and zone areas for informal trading (2)
Regulate the informal sector by licencing so that taxes can be paid (2)
Partnership between formal and informal sector (2)
Provide places for informal trading close to high traffic areas such as bus, taxi and train stations (2)
Providing them with skills to run their businesses (2)
[Any THREE] (3 x 2) (6)

4.6 4.6.1 There will be a shortage of water (2) (1 x 2) (2)

4.6.2 The larger part of the country receives very low rainfall (2)
Rainfall is unreliable with frequent droughts (2)
Global warming (2)
South Africa lies in the high pressure belt (2)
There are few natural lakes (2)
Many non-perennial rivers (2)
Dams are silted so it reduces its storage capacity for water (2)
Alien trees using up a lot of ground water (2)
Overgrazing (2)
Deforestation (2)
Overpopulation (2)
Overconcentration of people in one area (2)
[Any TWO] (2 x 2) (4)

4.6.3 Lesotho Highlands (2)
Orange Fish (2)
Tugela Vaal (2)
Boland/Bergriver (2)
Orange/Gariep (2)
[Any ONE. Accept any other example.] (1 x 2) (2)

4.6.4 Economic growth (2)
Growth of industries (2)
Domestic use (2)
Food production/irrigation (2)
Generation of electricity/hydro-electric power (2)
Recreational activities (2)
Source of food (fish) (2)
Source of water for atmosphere (2)
[Any TWO] (2 x 2) (4)

4.6.5 Planting trees to reduce the rate of evaporation (2)
Plant indigenous trees (2)
Industries should use recycled water (2)
Use a drip irrigation rather than overhead irrigation (2)
Plant crops that are more drought resistant (2)
Maintaining water pipe lines and irrigation equipment to prevent leaks (2)
Increase the price of water to prevent wastage (2)
Purification of sewerage water for irrigation purposes (2)
Building dams in areas with low evaporation, eg. eastern half of country (2)
Build dams in deep valleys (2)
Clear vegetation in catchment areas (2)
Public awareness programmes (2)
[Any SIX] (6 x 2) (12)
[100]

RUBRIC FOR PARAGRAPH-STYLE QUESTIONS

To be used for all paragraph-style questions in this question paper.

	Poor (0 – 4)	**Satisfactory (6 – 8)**	**Good (10)**	**Excellent (12)**
Criteria	Poorly answered. No/little attempt to answer the question. Action word ignored.	Attempted to answer the question. Only facts stated. Attempt to follow action words superficial.	Question answered. Shows understanding of topic. Action words followed but answer lacks insight and depth.	Shows clear understanding of topic. Action word followed. Accurate and insightful response.

GRAND TOTAL: 300