Province of the
EASTERN CAPE
EDUCATION

NATIONAL SENIOR CERTIFICATE

GRADE 12

JUNE 2017

GEOGRAPHY P1 MEMORANDUM

MARKS: 225

This memorandum consists of 14 pages.

Marking Guidelines

The following marking guidelines have been developed to standardise marking.

Marking

- ALL selected questions MUST be marked, irrespective of whether it is correct or incorrect
- Candidates are expected to make a choice of THREE questions to answer. If all questions are answered, ONLY the first three questions are marked.
- A clear, neat tick must be used: ✓ If ONE mark is allocated, ONE tick must be used: ✓
  - If TWO marks are allocated, TWO ticks must be used: ✓✓
  - The tick must be placed at the FACT that a mark is being allocated for
  - Ticks must be kept SMALL, as various layers of moderation may take place
- Incorrect answers must be marked with a clear, neat cross: ✓ Use MORE than one cross across a paragraph/discussion style questions to indicate that all facts have been considered
  - Do NOT draw a line through an incorrect answer
  - Do NOT underline the incorrect facts
- Where the maximum marks have been allocated in the first few sentences of a paragraph, place an (M) over the remainder of the text to indicate the maximum marks have been achieved**.**

For the following action words, ONE word answers are acceptable: **give**, **list**, **name**, **state**, **identify**
For the following action words, a FULL sentence must be written: **describe**, **explain**, **evaluate**, **analyse**, **suggest**, **differentiate**, **distinguish**, **define**, **discuss**, **why**, **how**
The following action words need to be read within its context to determine whether a ONE word answer or FULL sentence is required: **provide**, **what**, **tabulate**

Totalling and transferring of marks

- Each sub-question must be totalled
  - Each question has six sub-sections, therefore six sub-totals per question required
  - Sub-section totals to be written in right-hand margin at the end of the sub-section and underlined.
  - Sub-total must be written legibly.
  - Leave room to write in moderated marks on different levels.
- Total sub-totals and transfer total to top left hand margin next to question number.
- Transfer total to cover of answer book.

Moderation

Marking on each level of moderation is done in the same way as the initial marking. All guidelines for marking must be adhered to.
If a mark for a sub-question is changed after moderation, the moderator must strike through the marker's mark and write down the new mark. ~~14~~ 16

SECTION A: CLIMATE, WEATHER AND GEOMORPHOLOGY

QUESTION 1

1.1	1.1.1	shadow zone (1)		
	1.1.2	terrestrial radiation (1)		
	1.1.3	front (1)		
	1.1.4	south facing (1)		
	1.1.5	mountain (1)		
	1.1.6	thermal belt (1)		
	1.1.7	north facing (1)		
	1.1.8	regional (1)	(8 x 1)	(8)
1.2	1.2.1	E (1)		
	1.2.2	F (1)		
	1.2.3	D (1)		
	1.2.4	A (1)		
	1.2.5	B (1)		
	1.2.6	E (1)		
	1.2.7	D (1)	(7 x 1)	(7)
1.3	1.3.1	A low pressure system that travel within the mid-latitudes (1) [CONCEPT]	(1 x 1)	(1)
	1.3.2	Well defined cold and warm sectors (1) Air is separated by cold and warm fronts (1) Pressure below 1 000 hPa (1) [Any TWO]	(2 x 1)	(2)
	1.3.3	Warm tropical air that contains warm, moist maritime air (2) Polar air that consists of cold, dry air mass (2) Disturbance at the polar front (2) Changes in the sub polar jet stream (2) Acceleration in the movement of one of the two air masses (2) Disturbance in the westerly wind belt (2) Differences between land and sea temperatures (2) [Any TWO]	(2 x 2)	(4)

1.3.4 (a) This shows the difference in temperature and air movement of the two air masses. (2) (1 x 2) (2)

(b) It is steered by the westerly winds. (2) (1 x 2) (2)

(c) The cold front moves faster than the warm front. (2)
The cold front starts to overtake the warm front. (2)
Cold air wedges in under the warm air, lifts it up and isolates the warm air from the Earth's surface. (2)
[Any TWO] (2 x 2) (4)

1.4 1.4.1 South Atlantic High / St. Helena High (1) (1 x 1) (1)

1.4.2 Produces cold and stable weather conditions along the west coast. (1) (1 x 1) (1)

1.4.3 The Benguela current lowers temperature along the west coast. (1)
The Agulhas/Mozambique current raises temperature along the east coast. (1) (2 x 1) (2)

1.4.4 (a) Part of the sub-tropical high pressure zone at 30° latitude where South Africa is located. (1)
Global descending of air at the 30° latitude. (1)
[Any ONE] (1 x 1) (1)

(b) This anticyclone may lie in the direct path of a mid-latitude cyclone, causing the mid-latitude cyclone to move southwards. (2) (1 x 2) (2)

(c) The Kalahari High is well developed in winter since temperatures are low. (2)
Strong subsidence occurs over the interior and an inversion layer develops below the escarpment. (2)
The inversion layer prevents moist air from the Indian Ocean High from penetrating into the plateau. (2)
It leads to little or no rainfall in winter. (2)
Thus clear and stable conditions prevail over the interior during winter. (2)
[Any FOUR] (4 x 2) (8)

1.5 1.5.1 It refers to flat land that is found adjacent to a river that is formed mainly of river sediments and is subjected to frequent flooding. (1)
[CONCEPT] (1 x 1) (1)

1.5.2 Alluvium (1) (1 x 1) (1)

1.5.3 Banks of rivers have to be subjected to repeated flooding, for the coarsest material to be frequently deposited. (2) (1 x 2) (2)

1.5.4 Coarse, silt and clay particles build up over many years on the levee bank. (2)
The roots of plants that grow on the levee stabilise it over time. (2)
(2 x 2) (4)

1.5.5 Crops would be damaged or washed away. (2)
Farmers would suffer from a loss of income. (2)
There would be food shortages for people relying on subsistence crops. (2)
Fertile soil would be washed away (2)
The floodplain would be oversaturated (2)
Swamp conditions would occur (2)
Floodplain would no longer be suitable for growing of crops (2)
Farmers would not be able to use machinery (2)
People can lose their lives (2)
Any infrastructure on the floodplain would be destroyed or damaged (2)
[Any FOUR] (4 x 2) (8)

1.6 1.6.1 A catchment area is the entire drainage basin of a river from where it receives water. (1)
[CONCEPT] (1 x 1) (1)

1.6.2 570 000 (1) (1 x 1) (1)

1.6.3 Untreated sewerage landing in the river will create a health hazard. (2)
Poor water quality as a result of the river being used for cultural purposes. (2)
Waste disposal in the river would pollute the river (2)
Waste disposal would change the equilibrium of the river and reduce river habitats (2)
Deposits of harmful substances such as pesticides and salts in the river would increase the growth of algae. (2)
Artificial surfaces result in greater surface run off, increasing river discharge (2)
Encourages flash floods and flood peaks (2)
The removal of vegetation in catchment areas reduces infiltration and thus the amount of groundwater available (2)
[Any TWO] (2 x 2) (4)

1.6.4 Affects the flow of the river disturbing natural processes (2)
Holds back sediment which affects alluvium deposition (2)
Reduces fertile silt from moving further downstream (2)
Disturbs the river ecology (2)
Disrupts the life cycle of species (2)
[Any TWO] (2 x 2) (4)

1.6.5 Construction and settlement on the catchment area must be avoided / limited. (2)
Farmers need to be educated about environmentally sustainable farming practices. (2)
The public must be made aware of the need to conserve water resources. (2)
Greater investigation is necessary before new dams are built. (2)
Vegetation must be maintained in the riparian zone. (2)
Legislation is necessary to control what is discharged into rivers (2)
Legislation is needed to control the use of the underground sources of water and the pollution of the groundwater. (2)
Upgrade sewerage works to ensure a functional sewerage network. (2)
Control and maintain indigenous forests (2)
[Any TWO] (2 x 2) (4)

[75]

QUESTION 2

2.1	2.1.1	Urban (1)		
	2.1.2	Rural (1)		
	2.1.3	Urban (1)		
	2.1.4	Urban (1)		
	2.1.5	Rural (1)		
	2.1.6	Urban (1)		
	2.1.7	Urban (1)	(7 x 1)	(7)
2.2	2.2.1	D / Base level of erosion (1)		
	2.2.2	E / Rejuvenation (1)		
	2.2.3	I / Knickpoint (1)		
	2.2.4	G / Entrenched (1)		
	2.2.5	B / Paired terraces (1)		
	2.2.6	F / Graded (1)		
	2.2.7	A / River capture (1)		
	2.2.8	C / Isostasy (1)	(8 x 1)	(8)
2.3	2.3.1	3 (1)	(1 x 1)	(1)
	2.3.2	120 km/h winds (1) Gusts of 167 km/h (1) A low pressure of 979 hpa (1) Well defined eye over Madagascar (1) [Any TWO]	(2 x 1)	(2)
	2.3.3	The cyclone only exists as long as it occurs over a warm ocean which provides rising moist air. (2) Condensation point is reached and latent heat is released. (2) Air becomes oversaturated and rain occurs. (2) As long as the low pressure exists over the ocean rain will fall. (2) [Any TWO]	(2 x 2)	(4)

2.3.4 Mozambique has a lack of money and heavy national debt means that little money is available to spend on flood protection methods. (2)
Lack of technology and effective warning systems/rely on MEDC's for information. (2)
Lack of media coverage to warn people, e.g. TV, radio and the internet. (2)
Inhabitants are not educated enough to understand the dangers associated with tropical cyclones. (2)
Disaster management policies and techniques are not as sophisticated as those of developed countries (2)
Poor housing cannot withstand flood waters and wind (2)
Collapsing of poorly built houses cause more damage and loss of lives. (2)
Damage is often not repaired or takes a very long time. (2)
Many do not evacuate or leave their homes in time (2)
People are too poor to stock up on necessities for an emergency (2)
Subsistence farmers lose everything. (2)
The environment takes a long time to recover. (2)
Lack of emergency evacuation services. (2)
Poorly developed infrastructure makes it difficult for emergency services to reach people. (2)
Poorly equipped health services cannot provide medication to prevent outbreak of diseases. (2)
They have to rely on international aid and volunteers to assist. (2)
[Any FOUR] (4 x 2) (8)

2.4 2.4.1 Moist air from the ocean is drawn onto the land in a cut-off low. (1)
Warm, dry air is drawn from the land to the coastal low. (1) (2 x 1) (2)

2.4.2 Ridging of the high pressure behind the cold front. (1)
Cold and warm fronts are not connected. (1)
No family of mid latitude cyclones visible. (1)
[Any ONE] (1 x 1) (1)

2.4.3 Western parts (1)
Southern parts (1) (2 x 1) (2)

2.4.4 The ridging of the South Atlantic High and the South Indian High prevents a mid-latitude cyclone from moving eastwards. (2)
A cut-off low forms when the cold front arm of a mid-latitude cyclone is cut-off from the rest of the cyclone. (2) (2 x 2) (4)

2.4.5 Heavy rainfall will destroy crops. (2)
Heavy rainfall will wash fertile soil away/soil erosion. (2)
Strong winds will harm crops. (2)
Snow can destroy farmland. (2)
Heavy rainfall, snow and strong winds will hamper work on the farm. (2)
Heavy rainfall and snow can destroy infrastructure essential for farmers. (2)
[Any THREE] (3 x 2) (6)

2.5 2.5.1 The way in which streams are arranged within a drainage basin / The surface pattern formed by a river and its tributaries. (1)
[CONCEPT] (1 x 1) (1)

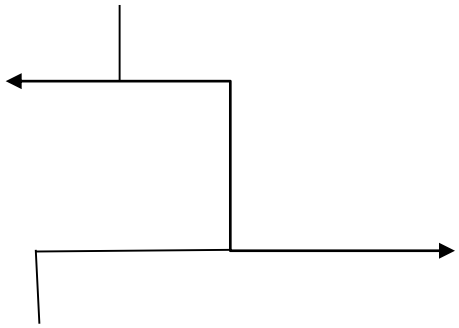
2.5.2 A – Radial (1)
B – Dendritic (1) (2 x 1) (2)

2.5.3 A dome or cone shaped feature such as a volcano, isolated hill or mountain peak will cause the rivers to flow outwards from the high central point. (2) (1 x 2) (2)

2.5.4 It resembles the branches of a tree. (1)
The tributaries join the main stream at acute/small angles. (1) (2 x 1) (2)

2.5.5 The underlying rock structure are uniform to resistance all streams can erode at the same rate. (2)
Horizontally layered rocks is causing the streams to flow evenly over the strata. (2) (2 x 2) (4)

2.5.6



(2) marks for showing angular pattern

(2) marks for overall sketch
(2 x 2) (4)

2.6 2.6.1 Longitudinal profile shows the side view of a river from source to mouth.
[CONCEPT] (1 x 1) (1)

2.6.2 Upper Valley – Turbulent (1)
Lower Reaches – Laminar (1) (2 x 1) (2)

2.6.3 Flow is slower and more laminar and the gradient is gentle in the middle reaches. (2)
The winding pattern of s-shaped bends is the result of lateral erosion of the river. (2) (2 x 2) (4)

2.6.4 The valley is v-shaped (narrow, deep and steep sided) in the upper course. (2)
Vertical erosion is dominant in the upper course because of down cutting. (2)
Valley is U-shaped with more gentle slopes in the middle course (2)
Vertical erosion slows down and lateral erosion begins to dominate in the middle course. (2)
The valley is very wide and gently sloping in the lower course. (2)
Deposition dominates in the lower course. (2)
[Any FOUR] (4 x 2) (8)

[75]

SECTION B: RURAL AND URBAN SETTLEMENTS

QUESTION 3

3.1	3.1.1	Wet point (1)		
	3.1.2	Extensive (1)		
	3.1.3	Primary (1)		
	3.1.4	Cross road (1)		
	3.1.5	Dispersed (1)		
	3.1.6	Commercial (1)		
	3.1.7	high (1)	(7 x 1)	(7)
3.2	3.2.1	C / Urban sprawl (1)		
	3.2.2	C / The surrounding area will take the shape of a hexagon (1)		
	3.2.3	B / Range (1)		
	3.2.4	D / Junction (1)		
	3.2.5	C / Gentrification (1)		
	3.2.6	A / functional magnetism (1)		
	3.2.7	B / Counter urbanisation (1)		
	3.2.8	D / The roads intersect at right angles (1)	(8 x 1)	(8)
3.3	3.3.1	2005–2010 (1)	(1 x 1)	(1)
	3.3.2	Decreases (2)	(1 x 2)	(2)
	3.3.3	Degradation of the environment due to over-cropping and drought. (2) Overpopulation and over-utilisation of land leads to soil erosion. (2) Natural disasters like droughts, floods and severe floods. (2) [Any TWO]	(2 x 2)	(4)
	3.3.4	Less population in agriculture as people move to urban areas. (2) Less demand for services in rural towns as there are fewer people (2) Older people left behind to take care of the young. (2) Older people are less productive. (2) [Any TWO]	(2 x 2)	(4)

3.3.5 Create more job opportunities through the decentralisation of industries from urban areas (2)
Improve working conditions and salaries (2)
Improve roads and transport facilities (2)
Land reform should be accelerated to enable the poor and landless to obtain land for farming. (2)
Use of farming practices that can withstand climate variability, e.g. use of drought resistant crops, efficient use of water. (2)
Use of scientific technology to monitor environmental conditions, establish early warning systems for plant and animal diseases, etc. (2)
Provision of basic services such as water, housing, health, etc. will result in counter-urbanisation. (2)
Improve access to capital for farmers (2)
Provide training courses to improve skills in farming (2)
[Any TWO] (2 x 2) (4)

3.4 3.4.1 Aimed at providing previously disadvantaged people with land for farming purposes. (1)
[CONCEPT] (1 x 1) (1)

3.4.2 The philosophy of "willing seller/willing buyer" applies (2)
Land owners want a price above market value for their land (2)
[Any ONE – Accept other reasonable responses.] (1 x 2) (2)

3.4.3 To help previously disadvantaged people to become effective farmers on their own land (2)
To help black and poverty stricken people in rural areas to improve their standard of living by enabling them to access and use land productively. (2)
To decongest crowded former homeland areas. (2)
To expand opportunities to women and growth in rural areas. (2)
[Any TWO] (2 x 2) (4)

3.4.4 "Willing seller-willing buyer" has resulted in a long drawn out process to negotiate land price with the current owners. (2)
There has been no incentives for previous commercial farmers to support and mentor the "new" farmers. (2)
There has been a lack of common census among political parties on the land reform debate. (2)
Many of the redistributed farms are in a poor state of repair at the point of acquisition (2)
There are gaps in the current policies which compromise effective implementation of the land reform programme (2)
There is a lack of reliable monitoring system and evaluation thereof (2)
It requires enough resources and time to effectively facilitate post-resettlement support to new land owners. (2)
It is a lengthy and time consuming process to select the rightful beneficiaries for land redistribution. (2)
[Any FOUR] (4 x 2) (4)

3.5 3.5.1 Mall (1) (1 x 1) (1)

3.5.2 Close to main roads (1)
Enough space (1)
Cheap land (1)
[Any ONE] (1 x 1) (1)

3.5.3 Massive parking space (2)
A large variety of shops (2)
They have become lifestyle centres offering grooming, dining, medical and office suites and entertainment functions (2)
They are highly accessible/close to main roads (2)
Pollution free environment (2)
Attractive surroundings (2)
Safe and relatively crime free (2)
Offers a combination of high and low order goods (2)
[Any TWO] (2 x 2) (4)

3.5.4 (a) Shops/services are moving away from the CBD (1)
[CONCEPT] (1 x 1) (1)

(b) Decreased accessibility of the CBD (2)
Crime (2)
Traffic congestion (2)
High rentals and taxes (2)
Lack of parking space (2)
Overcrowding (2)
Pollution-noise and land (2)
The need for a special site (2)
Decay of the city centre (2)
CBD seen as old and regulated (2)
Competition from informal traders (2)
[Any TWO] (2 x 2) (4)

(c) The status of the CBD is lowered (2)
The CBD is no longer accessible (2)
Buildings are abandoned (2)
Businesses are occupied by foreigners (2)
The CBD is dominated by low quality/inferior goods (2)
Buildings are dilapidated and not maintained (2)
Illegal occupation of vacant buildings (2)
CBD no longer attractive/loses aesthetic appeal (2)
[Any TWO] (2 x 2) (4)

3.6 3.6.1 It is the process by which an increasing percentage of the world's population lives in urban areas rather than rural areas. (1)
[CONCEPT] (1 x 1) (1)

3.6.2 Shortage of housing/"Affordable housing" (1)
Overcrowding (1) (2 x 1) (2)

3.6.3 Building RDP houses (2)
Hostels and inner city buildings have been converted to low income housing units. (2)
The government has entered into many public/private partnerships to create additional integrated settlements like Cosmo City. (2)
The government has entered into partnerships with overseas countries to facilitate the building of social housing units. (2)
[Any TWO] (2 x 2) (4)

3.6.4 Crime rates will increase (2)
Overcrowding will result in the spread of diseases (2)
Social evils will increase (2)
Littering will promote unhygienic conditions (2)
Unemployment (2)
The area will be susceptible to fire (2)
Young children are left unattended (2)
No basic services will result in the spread of diseases (2)
No access to facilities like schools will promote illiteracy and a lack of skills. (2)
[Any FOUR] (4 x 2) (8)
[75]

TOTAL: 225