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**NATIONAL
SENIOR CERTIFICATE**

GRADE 11

NOVEMBER 2017

**GEOGRAPHY P1
MARKING GUIDELINE**

This marking guideline consists of 13 pages.

SECTION A: PHYSICAL GEOGRAPHY – THE ATMOSPHERE AND GEOMORPHOLOGY

QUESTION 1

1.1 1.1.1 B ✓

1.1.2 G ✓

1.1.3 D ✓

1.1.4 A ✓

1.1.5 C ✓

1.1.6 F ✓

1.1.7 E ✓

(7 x 1) (7)

1.2 1.2.1 Crest ✓

1.2.2 Talus ✓

1.2.3 Pediment ✓

1.2.4 Knickpoint ✓

1.2.5 Escarp ✓

1.2.6 Escarp ✓

1.2.7 Crest ✓

1.2.8 Escarp ✓

(8 x 1) (8)



- 1.3 1.3.1 A – Ferrell / Mid-Latitude cell ✓
B – Hadley / Tropical cell ✓ (2 x 1) (2)
- 1.3.2 Occurs within the mid-latitudes, between 30° and 60° north and south ✓
Air sinks at 30° and rises at 60° in this cell ✓
(Any ONE) (1 x 1) (1)
- 1.3.3 The ITCZ is situated over the Tropic of Cancer. ✓✓ (1 x 2) (2)
- 1.3.4 (a) Tropical easterlies / Trade winds ✓ (1 x 1) (1)
- (b) In the southern hemisphere, deviation of winds is to your left as air moves from a high pressure to a low pressure ✓✓
OR
In the northern hemisphere, deviation of winds is to your right as air moves from a high pressure to a low pressure ✓✓
(Any ONE) (1 x 2) (2)
- 1.3.5 The wind originates in the southern hemisphere, with deviation to the left, as it crosses the equator it deviates to the right ✓✓ (1 x 2) (2)
- 1.3.6 (a) ITCZ ✓ (1 x 1) (1)
- (b) Heavy moisture laden tropical easterlies converge at the ITCZ/equatorial low. ✓✓
Intensive heating causes rapid rising of air and subsequent condensation and the formation of clouds with a large vertical extent. ✓✓ (2 x 2) (4)
- 1.4 1.4.1 Isobars ✓ (1 x 1) (1)
- 1.4.2 1020 hPa ✓ (1 x 1) (1)
- 1.4.3 C – Saddle ✓
D – Low pressure ✓ (2 x 1) (2)
- 1.4.4 ITCZ has moved southwards, because the south Atlantic and south Indian high pressure systems are close to the land ✓
Interior of the country experience high temperatures ✓ (2 x 1) (2)
- 1.4.5 (a) South ✓ (1 x 1) (1)
- (b) Pressure gradient established ✓✓, because of the high pressure over the ocean and low pressure over the land ✓✓
As air starts to move from high to low, ✓✓ Coriolis force starts to influence the direction. ✓✓ The wind starts to deflect to the left ✓✓ according to Ferrell's law ✓✓ and thus causes southerly winds instead of westerly winds at the weather stations ✓✓
(Any FOUR – Explanation is important) (4 x 2) (8)

- 1.5 1.5.1 Horizontally layered sedimentary rock ✓ (1 x 1) (1)
- 1.5.2 It is steep and terraced. ✓✓ (1 x 2) (2)
- 1.5.3 The slopes consists of alternating soft and hard layered rock ✓✓
The harder layers are difficult to erode and cause steep cliffs ✓✓
The softer layers are easier to erode and cause more gentler slopes. ✓✓
(Any TWO) (2 x 2) (4)
- 1.5.4 (a) Headward erosion ✓ (1 x 1) (1)
- (b) The layers under the top layer are less resistant ✓✓
Repeated undercutting into the softer layers will eventually cause the harder upper layer to tumble in ✓✓
Repetitive undercutting and tumbling in, will eventually form a gorge ✓✓
(Any TWO) (2 x 2) (4)
- 1.5.5 The river is too deep for any use in agriculture ✓✓
The steep slopes make the construction of dams possible if the water can be directed to other areas ✓✓
(Any ONE) (1 x 2) (2)
- 1.6 1.6.1 Laccolith ✓ (1 x 1) (1)
- 1.6.2 It consists of massive igneous rocks ✓
It has a mushroom shape ✓
It is connected to the magma chamber through a pipe ✓ (2 x 1) (2)
- (a) Exfoliation ✓ (1 x 1) (1)
- (b) Expansion during the day and contraction during the night ✓✓
Repeating of this process, will later cause the top layers of the rock to slide off ✓✓ (2 x 2) (4)
- 1.6.4 **In stage 1**, a massive amount of magma moves to the surface, and the pressure of this movement is causes the layered rocks to bend upwards. ✓✓
In stage 2, the molten magma solidifies and causes a laccolite ✓✓
During **stage 3**, the upper softer layers are being removed through weathering and erosion. ✓✓
In **stage 4**, the upper softer layers have been eroded away and exposes this hard resistant dome to the earth's surface. ✓✓ (4 x 2) (8)
- [75]**

QUESTION 2

- 2.1 2.1.1 low ✓
- 2.1.2 Indian ✓
- 2.1.3 Tropic of cancer ✓
- 2.1.4 June to September ✓
- 2.1.5 southwest ✓
- 2.1.6 tropical ✓
- 2.1.7 macro ✓
- 2.1.8 floods ✓ (8 x 1) (8)
- 2.2 2.2.1 tectonic activity ✓
- 2.2.2 bad lands ✓
- 2.2.3 conical hill ✓
- 2.2.4 basalt plateau ✓
- 2.2.5 butte ✓
- 2.2.6 mesa ✓
- 2.2.7 cap rock ✓ (7 x 1) (7)
- 

- 2.3 2.3.1 A – Chinook ✓
B – Föhn ✓ (2 x 1) (2)
- 2.3.2 windward ✓ (1 x 1) (1)
- 2.3.3 On the windward side of the mountains, condensation occurs and moisture is released in the form of precipitation ✓✓
As the wind rises and moves over the mountain, more moisture is released and eventually becomes drier ✓✓
On the leeward side, descending air causes the last available moisture to evaporate as it heats up ✓✓
With descending air on the leeward side, there is no condensation ✓✓
(Any TWO) (2 x 2) (4)
- 2.3.4 **Chinook**
The warm air melts the snow during winter ✓✓
This allows for agricultural activities to proceed as water is available ✓✓
It also causes more pleasant working conditions during the colder months ✓✓
Melting snow may also cause floods ✓✓
Föhn
The intense heat over central Europe makes people lazy and sick ✓✓
The physical dehydration of people influences production negatively ✓✓
Droughts / dry up agricultural land ✓✓
Fires on agricultural land ✓✓
(Any FOUR – Conditions on both continents must be discussed) (4 x 2) (8)
- 2.4 2.4.1 Maritime tropical air ✓ (1 x 1) (1)
- 2.4.2 The mT air of Port Nolloth is influenced by cold waters ✓
The mT air of Durban is influenced by warm waters ✓ (2 x 1) (2)
- 2.4.3 Cold currents reduce temperatures and rainfall ✓✓
Warm currents cause higher temperatures and rainfall ✓✓ (2 x 2) (4)
- 2.4.4 During July the ITCZ moves northwards and the apparent direct sunrays are in the northern hemisphere, therefore temperatures are lower ✓✓
During January the ITCZ moves southwards and the direct sunrays are over tropic of Capricorn, hence the higher temperatures ✓✓ (2 x 2) (4)
- 2.4.5 Bloemfontein is situated inland, with the land influencing the temperature ✓✓
Land heats up quicker than water and also releases heat faster ✓✓
Land's albedo effect is very low, and therefore absorbs most of the heat ✓✓
(Any TWO) (2 x 2) (4)

- 2.5 2.5.1 A – Cuesta ✓
B – Homoclinal ridge / Hogsback ✓ (1 + 1) (2)
- 2.5.2 (a) Retreat of the scarp slope without the height decreasing (1 x 1) (1)
(b) Westerly/westwards ✓ (1 x 1) (1)
(c) Undercutting will occur at the less resistant rocks, which is on the eastern side of the landforms ✓✓ (1 x 2) (2)
- 2.5.3 **Cuestas**
Cuestas have a gentler dip slope ✓✓
Agricultural activities are possible if contour ploughing is practiced ✓✓
Settlements can develop, because infrastructure, like roads, railway lines, power lines, etc. can be constructed ✓✓
Homoclinal ridge/Hogback
Homoclinal ridges have a very steep dip slope ✓✓
Normal human activities are either impossible or very difficult and expensive ✓✓
Dip slopes of homoclinal ridges are sometimes used for forestry purposes ✓✓
(Any FOUR) (4 x 2) (8)
- 2.6 2.6.1 Soil creep ✓ (1 x 1) (1)
- 2.6.2 Leaning poles / fences ✓
Curved growth pattern of trees ✓
Broken retaining wall ✓
Terraced slope ✓
(Any TWO) (2x 1) (2)
- 2.6.3 (a) 1cm per year ✓ (1 x 1) (1)
(b) Wetting and drying of the sand grains ✓✓
Heating and cooling of the sand grain ✓✓ (2 x 2) (4)
(c) Higher rainfall will increase movement, as extensive expanding and contracting will take place ✓✓
The steeper the slope, the faster soil will move down the slope ✓✓ (2 x 2) (4)
- 2.6.4 Steeper slopes can be sprayed or covered with cement ✓✓
Retaining walls can be built to stabilise a slope ✓✓
Highly fractured rocks can be solidified by emplacing rock bolts on to it ✓✓
Drainage pipes could be inserted into the slope to allow for quicker draining of the water out of the soil ✓✓
(Any TWO) (2 x 2) (4)

[75]

SECTION B: DEVELOPMENT AND NATURAL RESOURCES**QUESTION 3**

- 3.1 3.1.1 E ✓
- 3.1.2 G ✓
- 3.1.3 A ✓
- 3.1.4 H ✓
- 3.1.5 C ✓
- 3.1.6 I ✓
- 3.1.7 B ✓
- 3.1.8 D ✓ (8 x 1) (8)
- 3.2 3.2.1 Parent rock ✓
- 3.2.2 R-horizon ✓
- 3.2.3 C-horizon ✓
- 3.2.4 O-horizon ✓
- 3.2.5 A-horizon ✓
- 3.2.6 R-horizon ✓
- 3.2.7 Rainfall ✓ (7 x 1) (7)
- 3.3 3.3.1 Human Development Index ✓ (1 x 1) (1)
- 3.3.2 GDP/Capita ✓
Literacy (Education) ✓
Life Expectancy ✓
(Any ONE) (1 x 1) (1)
- 3.3.3 (a) Developed countries – Y ✓✓
Developing countries – X ✓✓ (2 x 2) (4)
- (b) The Gini-coefficient refers to the unequal distribution of wealth in countries, therefore only concentrates on economic development. ✓✓
The HDI combines social and economic indicators to differentiate between developed and developing countries ✓✓
Both indicators provide a number out of 1, but the HDI indicates a number nearest to 1 as more developed, whereas the Gini's nearest to 1, indicates very poor and unequal distribution of wealth ✓✓
(Any TWO) (2 x 2) (4)

- 3.3.4 The population is still young and is an economic burden to the country ✓✓
 Youth cannot enter into work sectors ✓✓
 High population growth will put more pressure on human and natural resources ✓✓
 Overcrowded schools leads to poor education and low skills levels, which have a negative influence on productivity in the future ✓✓
(Any TWO) (2 x 2) (4)
- 3.4 3.4.1 The balance between a country's imports and exports ✓
(Concept) (1 x 1) (1)
- 3.4.2 (a) The box of the imports is bigger ✓
 The person is struggling to hold on to exports, implying that less exports occur ✓
(Any ONE) (1 x 1) (1)
- (b) Quotas ✓
 Embargoes ✓
 Subsidies for farmers to produce more products ✓
 Tariffs on goods ✓
(Any TWO) (2 x 1) (2)
- 3.4.3 Better trade relationships will be established ✓✓
 No restrictions on certain goods ✓✓
 Products will be exported at a fair price to other countries ✓✓
 More production of agreed products to the world market ✓✓
(Any TWO) (2 x 2) (4)
- 3.4.4 It will build stronger international relationships ✓✓
 Countries will earn foreign exchange ✓✓
 Improved employment opportunities ✓✓
 Better industrialisation and import replacement ✓✓
 It will reduce poverty ✓✓
 Trade helps with capacity building ✓✓
 Infrastructure will be developed and upgraded ✓✓
 Multiplier effect will take effect, where one development will lead to the development of other sectors ✓✓
(Any FOUR) (4 x 2) (8)
- 3.5 3.5.1 Lighting ✓ (1 x 1) (1)
- 3.5.2 Population increase will increase energy consumption ✓ (1 x 1) (1)
- 3.5.3 More households use electricity ✓✓
 Bigger percentage of South Africa's households are connected to the electrical grid ✓✓
(Any ONE) (1 x 2) (2)

3.5.4 More financial expenses on the expansion of the energy grid and the building of power stations ✓✓

Pressure on current energy supply causes load shedding, which retards economic growth ✓✓

Extraction of more coal will exhaust the resource much quicker, with job losses and decrease in exports ✓✓

(Any TWO)

(2 x 2) (4)

3.5.5 Switch off lights in rooms where nobody is around ✓✓

Shower rather than bath ✓✓

Decrease the hot water cylinder setting by 5°C ✓✓

Use heaters only when necessary, instead wear warm cloths ✓✓

Use solar power panels ✓✓

Change the bulbs to higher efficiency, lower watt bulbs ✓✓

Don't make the water kettle too full, only boil the amount needed ✓✓

Wash clothes in cold water rather than hot water ✓✓

Use the washing line rather than the tumble dryer ✓✓

Use few ornamental lights ✓✓

Open the fridge door less ✓✓

(Any FOUR)

(4 x 2) (8)

3.6 3.6.1 Thermal energy/ Use of coal ✓

(1 x 1) (1)

3.6.2 The resource being used by the industries is a non-renewable resource. ✓✓

(1 x 2) (2)

3.6.3 (a) Carbon dioxide ✓
Carbon monoxide ✓
Nitrogen oxide ✓

(Any ONE)

(1 x 1) (1)

(b) Global warming ✓

Acid rain ✓

(2 x 1) (2)

3.6.4 People continually use a non-renewable resource ✓✓

Extracting the resource causes environmental harm ✓✓

Ecosystems and habitat are destroyed ✓✓

The gasses being emitted cause climate change ✓✓

Biodiversity is destroyed ✓✓

(Any TWO)

(2 x 2) (4)

3.6.5 It is a huge provider of employment ✓✓

South Africa has a lot of coal reserves and it earns foreign exchange ✓✓

Coal forms the basis of other industries like soap manufacturing, Sasol, etc. ✓✓

It is relatively cheap to extract and cheap to generate power, therefore industries pay lower prices for energy compared to other parts of the world. ✓✓

(Any TWO)

(2 x 2) (4)

[75]

QUESTION 4

- 4.1 4.1.1 Core-periphery model ✓
- 4.1.2 Sustainable development model ✓
- 4.1.3 Rostow's model ✓
- 4.1.4 Core-periphery model ✓
- 4.1.5 Rostow's model ✓
- 4.1.6 Sustainable development model ✓
- 4.1.7 Core-periphery model ✓ (7 x 1) (7)
- 4.2 4.2.1 Renewable ✓
- 4.2.2 Non-renewable ✓
- 4.2.3 Renewable ✓
- 4.2.4 Renewable ✓
- 4.2.5 Renewable ✓
- 4.2.6 Non-renewable ✓
- 4.2.7 Non-renewable ✓
- 4.2.8 Non-renewable ✓ (8 x 1) (8)
- 4.3 4.3.1 Process where community members come together to take collective action to enhance development ✓
(Concept) (1 x 1) (1)
- 4.3.2 Socio-economic development of impoverished communities ✓
Significantly improves the well-being of households in rural communities ✓ (2 x 1) (2)
- 4.3.3 It is presented to many households throughout Southern Africa ✓✓
All community members are invited to attend ✓✓
Training covers several modules on homestead agriculture and food security ✓✓
(Any ONE) (1 x 2) (2)
- 4.3.4 Monitoring makes sure that the skills acquired are correctly implemented ✓✓
It makes sure that participants in the programmes can confront any challenge ✓✓ (2 x 2) (4)

- 4.3.5 It helps with agricultural expansion ✓✓
 It centres around the development of human resources ✓✓
 It enhances organising and develops administrative skills ✓✓
 Helps with the understanding of health care and health services ✓✓
 Helps with nation building ✓✓
 It improves infrastructure and modern technology usage ✓✓
 It increases the standard of living and empowers women ✓✓
(Any THREE) (3 x 2) (6)
- 4.4 4.4.1 Multilateral ✓ (1 x 1) (1)
- 4.4.2 More than one organisation (different people) are providing aid ✓
 (1 x 1) (1)
- 4.4.3 The aid only provides a temporary solution to the problem, but does not have a long-term benefit for the community ✓✓ (1 x 2) (2)
- 4.4.4 (a) Humanitarian aid ✓ (1 x 1) (1)
- (b) The picture depicts a very dry environment, therefore aid during drought-stricken times ✓✓ (1 x 2) (2)
- 4.4.5 It can increase the rate of economic growth ✓✓
 Helps with the development of resources and provision of energy ✓✓
 Encourages and helps to implement appropriate technical systems ✓✓
 Provides employment in new industries ✓✓
 Reduces the need for certain imported goods ✓✓
 Helps with agricultural production through the use of modern technology ✓✓
 Provides primary health care like the provision of injection programs and the training of nurses ✓✓
 Helps with family planning ✓✓
 Provides students with bursaries to study abroad ✓✓
 Provides technical assistance to governments that implement development programs ✓✓
 Can also help to protect human rights and dignity ✓✓
(Any FOUR) (4 x 2) (8)
- 4.5 4.5.1 Wind energy ✓ (1 x 1) (1)
- 4.5.2 It kills birds ✓
 It's not always available ✓ (2 x 1) (2)
- 4.5.3 No coal or water is being used ✓✓
 No emissions of greenhouse gasses, thus it does not contribute to global warming ✓✓
 There are no poisonous or dangerous waste products ✓✓
 The area beneath the windmills can be used for the cultivation of crops ✓✓
 Farmers can get rental money from the wind power utility company ✓✓
(Any TWO) (2 x 2) (4)

4.5.4	(a)	When more environmentally friendly energy sources is used to generate electricity ✓✓	(1 x 2)	(2)
	(b)	New machinery has to be manufactured, which leads to increased job opportunities ✓✓ Non-conventional energy can be generated in smaller areas and regions, uplifting the economy of remote areas ✓✓ Increased usage of non-conventional energy will lower the price of fossil fuel, which might benefit South Africa ✓✓	(3 x 2)	(6)
4.6	4.6.1	When we use the resource in such a way that future generations can also benefit from the same resource ✓ (Concept)	(1 x 1)	(1)
	4.6.2	Recycle is when a resource is used to make other products, whereas Reuse refers to the use of a resource more than once without destroying it ✓✓	(1 x 2)	(2)
	4.6.3	Creates job opportunities and self-employed opportunities ✓✓ New machines and facilities broaden the skills and knowledge levels of workers ✓✓ Less use of products, save a lot of money for individuals, which can be used somewhere else. ✓✓ (Any TWO)	(2 x 2)	(4)
	4.6.4	It reduces landfill waste ✓✓ Conserves natural resources ✓✓ Saves forests and other natural habitats ✓✓ Reduces energy consumption ✓✓ Decreases pollution and global warming ✓✓ (Any FOUR)	(4 x 2)	(8)
				[75]
GRAND TOTAL:				225