Education and Sport Development

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NORTH WEST PROVINCE

PROVINCIAL ASSESSMENT

GRADE 10

GEOGRAPHY P1

NOVEMBER 2019

MARKING GUIDELINE

MARKS: 225

This marking guideline consists of 13 pages.

QUESTION 1:

1.1.1 B✓
1.1.2 D✓
1.1.3 C✓
1.1.4 C✓
1.1.5 A✓
1.1.6 D✓
1.1.7 A✓
1.1.8 C✓ (8 x 1) (8)

1.2.1 Conduction✓
1.2.2 Dew point temperature ✓
1.2.3 Leeward side ✓
1.2.4 Magma ✓
1.2.5 Exosphere/Thermosphere ✓
1.2.6 Sedimentary✓
1.2.7 Syncline ✓ (7 x 1) (7)

1.3.1 2,5 km ✓ (1 x 1) (1)
1.3.2 The more humid the air the higher the condensation level ✓ (1 x 1) (1)
1.3.3 8°C ✓ (1 x 1) (1)
1.3.4 Cirrus ✓ (1 x 1) (1)
1.3.5 Convectional rain ✓✓ (1 x 2) (2)
1.3.6 Climate conditions: Areas with high temperatures and moist air ✓✓
Area: Interior of South Africa /
Summer rainfall regions in South Africa ✓✓ (2 x 2) (4)
1.3.7 A – Cirrus ✓
B – Cumulus ✓
C – Stratus ✓
D – Stratocumulus ✓
E - Altocumulus ✓ (5 x 1) (5)

1.4.1 The area on the surface of the earth immediately above the focus is called the epicenter.✓ (1 x 1) (1)

1.4.2 7.1 magnitude ✓ (1 x 1) (1)

1.4.3 Richter scale ✓ (1 x 1) (1)

1.4.4 Locate active fault zones ✓✓
Identify high risk areas ✓✓
Predict where earthquakes might strike ✓✓
Make sure emergency services are in place ✓✓
Build dams along fault lines to absorb the shocks ✓✓
Strengthen existing infrastructure and houses ✓✓
Build strong breakwaters to protect coastal areas ✓✓
Built earthquake resistant buildings ✓✓
Early warning systems for tsunami's ✓✓ (any two) (2 x 2) (4)

1.4.5 A lot of people died ✓✓
Buildings collapsed ✓✓
Debris injured people and landed in the streets ✓✓
Fires could have broken out ✓✓
People are homeless ✓✓
Water pipes and infrastructure broken ✓✓
Broken gas and fuel lines cause danger ✓✓
Collapsed bridges and highways made emergency services difficult ✓✓
Windows shattered and injured people ✓✓ (any four) (4 x 2) (8)

1.5.1 Insolation is incoming short-wave radiation from the sun. ✓ (1 x 1) (1)

1.5.2 Reflection ✓ (1 x 1) (1)

1.5.3 Upward ✓ (1 x 1) (1)

1.5.4 Absorption ✓ Scattering ✓ Reflection ✓ (3 x 1) (3)

1.5.5 Carbon dioxide; ✓✓
methane; ✓✓
CFCs; ✓✓
nitrous oxide; ✓✓
water vapour ✓✓ (Any two) (2 x 2) (4)

1.5.6 Increasing occurrence of skin cancer ✓✓
Leather-like skin ✓✓
Eye diseases such as cataracts ✓✓
Weakened immune systems ✓✓ (Any two) (2 x 2) (4)

1.6.1 South Atlantic High Pressure cell ✓ (1 x 1) (1)

1.6.2 1032 hPa ✓ (1 x 1) (1)

1.6.3 Cold front ✓ (1 x 1) (1)

1.6.4 Winter ✓ ✓ (1 x 2) (2)

1.6.5 a) 16 ° C ✓✓
b) South West ✓✓
c) Fully overcast/ 8/8 ✓✓
d) 20 knots (kt) ✓✓
e) none ✓✓ (5 x 2) (10)

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QUESTION 2:

2.1.1 Troposphere ✓
2.1.2 Stratosphere ✓
2.1.3 Mesosphere ✓
2.1.4 Water vapour ✓
2.1.5 Ultra violet ✓
2.1.6 Stratosphere ✓
2.1.7 Temperature inversion ✓
2.1.8 Albedo ✓ (8 x 1) (8)

2.2.1 Mantle ✓
2.2.2 Iron ✓
2.2.3 Humans live on the surface of the earth and grow food in the soil. ✓
2.2.4 Mohorovicic discontinuity/Moho-level ✓
2.2.5 Plates ✓
2.2.6 5 000 ° C ✓
2.2.7 Mantle ✓ (7 x 1) (7)

2.3.1 The gradual warming of the earth's atmosphere by the addition of greenhouse gasses. ✓ (1 x 1) (1)
2.3.2 Livestock/cattle ✓✓ (1 x 2) (2)
2.3.3 "warms the world 20 times faster than carbon dioxide" ✓✓ (1 x 2) (2)
2.3.4 They indirectly cause acid rain, ✓✓
alien species, ✓✓
desertification, ✓✓
dead zones in oceans ✓✓
poisonous water. ✓✓ (any one) (1 x 2) (2)

2.3.5 Save electricity ✓✓

Use higher standard of electrical appliences ✓✓

Carbon tax ✓✓

Energy tax ✓✓

Expand transport system ✓✓

Set carbon emission limits ✓✓

Set speed limits on roads ✓✓

Use electric vehicles ✓✓

Reduce the use of fertilisers ✓✓

Expand methane extraction ✓✓

Reduce CFC production (Any four) ✓✓ (4 x 2) (8)

2.4.1 Alfred Wegener ✓ (1 x 1) (1)

2.4.2 A move away ✓ from one another

B move toward ✓ one another (2 x 1) (2)

2.4.3 A Divergent boundary ✓✓

B Convergent boundary ✓✓ (2 x 2) (4)

2.4.4 The plates float on the molten mantle ✓✓

The crust of the earth is broken in several large pieces that constantly move in different directions. ✓✓

The crust of the earth had broken into seven plates which move around on the molten outer mantle. ✓✓

The different plates can move away and towards one another on the molten mantle of the earth. ✓✓

The plates are not fixed and can move because it slides around on the liquid and molten outer mantle of the earth. ✓✓ (Any two) (2 x 2) (4)

2.4.5 Plant and animal life are similar ✓✓

Glacial deposits in Brazil and West Africa match ✓✓

Fossil remains are the same ✓✓

Rock formations line up on the two continents ✓✓ (any two) (2 x 2) (4)

2.5.1 When changes in the earth's climate system result in new weather patterns that last for a few decades. ✓ (1 x 1) (1)

2.5.2 Global warming ✓✓ (1 x 2) (2)

2.5.3 Fish species might die because of the temperature change in the water. ✓✓
Marine life might become extinct when their habitat changes and they do not have enough food. ✓✓
The fish will not be able to live in warmer water. ✓✓
The change of temperature in the marine ecosystem will lead to species to become extinct. ✓✓ (Any one) (1 x 2) (2)

2.5.4 3 000 years ✓✓ (1 x 2) (2)

2.5.5 Expanding oceans lead to the rising of sea level which may lead to flooding of coastlines. ✓✓
Changing of precipitation patterns✓✓
Change in weather patterns leads to an increase of extreme weather✓✓
Changes in soil quality and vegetation ✓✓
Changes in ecosystems and loss in biodiversity. ✓✓ (any four) (4 x 2) (8)

2.6.1 3 500 people ✓ (1 x 1) (1)

2.6.2 The blanket of ash left thousands of animals without pasture and water. ✓ (1 x 2) (2)

2.6.3 Composite ✓✓ (1 x 2) (2)

2.6.4 Active – still erupts constantly ✓
Dormant – shows no sign of activity, but can still erupt again. ✓ (1 x 2) (2)

2.6.5 South America✓✓ and Australia✓✓ (2 x 2) (4)

2.6.6 A Pipe/central vent ✓
C Dyke ✓
D Sill ✓
E Magma chamber/Batholith ✓ (4 x 1) (4)

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QUESTION 3:

3.1.1 Life expectancy ✓

3.1.2 Emigration ✓

3.1.3 Marti culture ✓

3.1.4 Pull factors ✓

3.1.5 Population density ✓

3.1.6 Literacy rate ✓

3.1.7 Depopulation ✓

3.1.8 Population distribution ✓ (8 x 1) (8)

3.2.1 I ✓

3.2.2 J ✓

3.2.3 E ✓

3.2.4 D ✓

3.2.5 C ✓

3.2.6 G ✓

3.2.7 F ✓ (7 x 1) (7)

3.3.1 A bar chart, arranged vertically, that shows the distribution of a population by a category such as age/sex. ✓ (1 x 1) (1)

3.3.2 5 years ✓ (1 x 1) (1)

3.3.3 Concave profile ✓ (1 x 1) (1)

3.3.4 wide ✓✓ (1 x 2) (2)

3.3.5 Very large young population/
high birth rate ✓✓
Very few elderly/
High death rate ✓✓ (2 x 2) (4)

3.3.6 A – Dependents/youth ✓✓

B – Economically active/ adult ✓✓

C – Dependents/elderly ✓✓ (3 x 2) (6)

3.4.1 Water demand is outstripping supply. ✓ (1 x 1) (1)

3.4.2 Tugela-Vaal ✓

Orange river project ✓

Berg river scheme ✓

Lesotho highlands water project ✓

uThukela-uMahlatuze Scheme ✓

Mooi-Umgeni scheme ✓ (any two) (2 x 1) (2)

3.4.3 It reduces water for downstream users. ✓✓

Rotting vegetation in the dams releases greenhouse gasses. ✓✓

Dam wall blocks fish migration ✓✓

Disturbs ecosystems ✓✓ (any two) (2 x 2) (4)

3.4.4 Make sure that research is conducted into alternative water supplies ✓✓

Encourage recycling of water ✓✓

Enforce laws that prevent pollution of water sources ✓✓

Restore wetlands ✓✓

Remove alien vegetation ✓✓

Educate people about conservation of water ✓✓ (any four) (4 x 2) (8)

3.5.1 Decreasing birth rates. ✓ (1 x 1) (1)

3.5.2 The population becomes less. ✓✓ (1 x 2) (2)

3.5.3 The foreigners immigrating into Norway make up for the low birth rate. ✓✓ (1 x 2) (2)

3.5.4 A low to negative birth rate✓✓

A low death rate✓✓ (any one) (1 x 2) (2)

3.5.5 There will be less people in the economically active age group ✓✓

The economy might suffer as a result of fewer people in the work force. ✓✓ (2 x 2) (4)

3.5.6 Negative Cultural differences might cause strain. ✓✓

Xenophobia might be a problem. ✓✓

Positive Foreigners bring new knowledge with them. ✓✓

Foreigners might have new skills ✓✓

(one positive and one negative) (2 x 2) (4)

3.6.1 57 percent ✓ (1 x 1) (1)

3.6.2 57 percent ✓✓ (1 x 2) (2)

3.6.3 Piped water is safe to drink ✓✓

Piped water is easy to come by. ✓✓

Piped water is available most of the time. ✓✓

People could contract water borne diseases if they drink unimproved water ✓✓ (2 x 2) (4)

3.6.4 People cloud contract diarrhea ✓✓

People could get other water borne diseases and could die as a result. ✓✓ (2 x 2) (4)

3.6.5 Strict regulations and fines for industries that pollute the rivers. ✓✓

Restricting access to the dams ✓✓

Making sure that people do not dump rubbish in the water. ✓✓

Make more money available for research ✓✓ (any two) (2 x 2) (4)

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QUESTION 4:

4.1.1 A ✓

4.1.2 C ✓

4.1.3 B ✓

4.1.4 A ✓

4.1.5 D ✓

4.1.6 C ✓

4.1.7 B ✓

4.1.8 C ✓ (8 x 1) (8)

4.2.1 Evapotranspiration ✓

4.2.2 Condensation✓

4.2.3 Precipitation✓

4.2.4 Infiltration✓

4.2.5 Run off/sheet wash✓

4.2.6 Groundwater ✓

4.2.7 Evaporation✓ (7 x 1) (7)

4.3.1 A person who moves from one place to another, especially to find work and better living conditions.✓ (1 x 1) (1)

4.3.2 Brain drain is when skilled and educated people leave a country to live elsewhere. ✓ (1 x 1) (1)

4.3.3 When skilled people leave the country, they leave the job market or close their businesses down leading to their unskilled workers being unemployed. ✓ (1 x 1) (1)

4.3.4 Lack of skilled people to educate others; job losses as result of companies closing down. ✓✓ (1 x 2) (2)

4.3.5 The drop in standard of living ✓✓

Drop in standard of education ✓✓

Drop in standard of health services, ✓✓

The high crime rate ✓✓

The falling value of the rand. ✓✓ (any two) (2 x 2) (4)

4.3.6 (a) The seasonal movement ✓✓ of people with their livestock over a short distance to higher pastures in Summer and lower valleys in winter. ✓✓ (2 x 2) (4)

(b) India ✓✓

Scotland ✓✓

Switzerland ✓✓

Greece ✓✓

Lesotho ✓✓ (any one) (1 x 2) (2)

4.4.1 Seawater can be processed to remove the salt from it and turn it into fresh water that humans can drink and use. ✓ (1 x 1) (1)

4.4.2 Israel ✓ (1 x 1) (1)

4.4.3 It is very expensive ✓

Uses a lot of electricity ✓ (any one) (1 x 1) (1)

4.4.4 The extreme drought in the Western Cape ✓✓ (1 x 2) (2)

4.4.5 Reverse osmosis ✓✓ (1 x 2) (2)

4.4.6 Orange river ✓✓ (1 x 2) (2)

4.4.7 The demand in Gauteng exceeds the availability. ✓✓ (1 x 2) (2)

4.4.8 South Africa is a dry country with little rainfall. ✓✓

South Africa has few perennial rivers ✓✓

People do not use water sparingly in South Africa ✓✓ (any two) (2 x 2) (4)

4.5.1 a) Human Immunodeficiency Virus ✓

b) Acquired Immune Deficiency Syndrome ✓ (2 x 1) (2)

4.5.2 Negatively ✓ (1 x 1) (1)

4.5.3 3,2 ✓✓ (1 x 2) (2)

4.5.4 Swaziland ✓✓ (1 x 2) (2)

4.5.5 Destabilisation of families ✓✓
Health facilities struggle to cope with the volume of patients ✓✓
Insurance companies suffer ✓✓
Production and labour supply are less ✓✓
People are more often absent from work. ✓✓
Economy suffers as result of people being sick/die. ✓✓ (any four) (4 x 2) (8)

4.6.1 The amount of fish people are allowed to catch by law. ✓ (1 x 1) (1)

4.6.2 24 percent ✓ (1 x 1) (1)

4.6.3 Fish stocks in the ocean are very low and people who depend on income from fishing will have no income. ✓✓ (1 x 2) (2)

4.6.4 a) South African Sustainable Seafood Initiative ✓✓ (1 x 2) (2)

b) They have made a pocket size card telling people which fish species have good stock levels. ✓✓

They educate people about stock levels of fish. ✓✓ (2 x 2) (4)

4.6.5 a) 15 mm ✓

b) 15h30 to 16h00 ✓

c) 100 cumegs ✓

d) 18h00 to 18h30 ✓

e) 15h30 to 18h00 = 2 and a half hours ✓ (5 x 1) (5)

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GRAND TOTAL: 225