



## **Education and Sport Development**

Department of Education and Sport Development

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**NORTH WEST PROVINCE**

**MARKING GUIDELINES  
GEOGRAPHY  
GRADE 10  
JUNE 2018**

**This marking guide consist of 8 pages (including cover page)**

Question 1

1.1

1.1.1 Lava plateau ✓

1.1.2 Cape Fold Mountains ✓

1.1.3 Tension ✓

1.1.4 Mid-Atlantic Ridge ✓

1.1.5 Caldera ✓

1.1.6 Isotherm ✓

1.1.7, rain gauge ✓

1.1.8 Dew ✓

1.1.9 Inversion ✓

1.1.10 Large seasonal temperature range ✓ 1x10(10)

[10]

1.2 Composition and structure of the atmosphere ✓

1.2.1 Troposphere ✓ 1x2(2)

1.2.2 Tropopause ✓ 1x2(2)

1.2.3 At the tropo-pause the temperature stays the same ✓✓ 1x2(2)

1.2.4 Stratosphere / Thermosphere ✓ 1 x 2(2)

[8]

1.3 Refer to Figure 1.3 and answer the following questions:

1.3.1 1: Warm Mozambique ✓ / 2: Cold Benguela / Cold Aghullas ✓ 2 x1(2)

1.3.2 Current 1 (Warm Mozambique current):

Warm – high temperatures; ✓✓

High evaporation rate – moist unstable air ✓✓

More precipitation along this current ✓✓ Any two 2 x 2 (4)

1.3.3 Current 2 (Cold Benguela current)

Cold-low temperatures ✓✓

Lower rate of evaporation – air is stable ✓✓

Less precipitation along this current ✓✓ Any two 2x2(4)

[10]

1.4.1

1.4.1.1 In the lower stratosphere between 10 and 50 km above the earth's surface /15 and 60 km above the earth's surface✓ 1x1(1)

1.4.1.2 it blocks most harmful UV rays from reaching the earth✓ 1x1(1)

1.4.2 Nitrous oxide/chlorofluorocarbon (CFCs) ✓ and bromofluorocarbons✓

These substances reach the stratosphere where they attack the ozone splitting it up✓✓ Any two + explanation 2x1+2(4)

1.4.3 Skin cancer✓ and cataract✓ 1x2(2)

[8]

1.5

1.5.1 The ice cap on Mount Kilimanjaro is melting ✓ 1x1(1)

1.5.2 The air temperatures are hotter now than ever before✓ 1x1(1)

1.5.3 Yes, this has also happened on Mount Kenya✓ 1x1(1)

1.5.4 You can climb the mountain more easily wearing ordinary shoes ✓ 1x1(1)

[4]

1.6

1.6.1 A=mantle✓

C=inner core✓ (2x1) (2)

1.6.2.

1.6.2.1 Magma is molten rock underneath the earth surface✓✓ (1x2) (2)

1.6.2.2 Igneous rock✓ (1x1) (1)

1.6.3

1.6.3.1 Continental crust ✓ (1x1) (1)

1.6.3.2 SIAL ✓ (1x1) (1)

[7]

## 1.7 The Structure of the Earth-The Rock Cycle

1.7.1. Name the type of rock that forms:

1.7.1.1 sedimentary ✓ 1x1(1)

1.7.1.2 intrusive igneous ✓ 1x1(1)

1.7.1.3 extrusive igneous 1x1(1)

1.7.1.4 metamorphic✓ 1x1(1)

1.7.2

1.7.2.1 Magma ✓ 1x1(1)

1.7.2.2 All three types ✓ 1x1(1) 1.8

**[6]**

1.8.1

1.8.1 A divergent 1x1(1)

B Convergent / collision 1x1(1)

1.8.2 Fold Mountains / Inter – cratonic 1x1(1)

1.8.3 The ocean crust drags the continental plate along as mantle currents move due to convection – a deep trough will develop. ✓✓ 1x1(1)

**[4]**

1.9

1.9.1 Theory of Continental Drift ✓✓ 1x1(1)

1.9.2 Pangea✓✓ 1x1(1)

1.9.3 Divergent plate boundary = tectonic plates are moving away from each other✓✓

Convergent plate boundary = tectonic plates are moving towards each other✓✓

2x2 (4)

1.9.4 Paragraph: Evidence to prove Theory of Continental Drift:

- Continents seem to fit together like a jigsaw puzzle✓✓
- Similar plant species are found on adjacent continents✓✓

- Dinosaur fossils of the same species have been found on adjacent continents ✓✓
- Rock strata and fold mountains match when continents are aligned ✓✓
- Striations caused by ancient glaciers are the same on different continents in the southern hemisphere ✓✓
- Antarctica has the same coal formations as in South America, Africa, India and Australia ✓✓ **(ANY 4)(ACCEPT OTHER ANSWERS)** 4x2(8)  
**[14]**

2.1.1 K ✓

2.1.2 C ✓

2.1.3 B ✓

2.1.4 G ✓

2.1.5 F ✓

2.1.6 A ✓

2.1.7 D ✓

2.1.8 E ✓

2.1.9 J or L ✓

2.1.10 H ✓ 1x10(10)

**[10]**

## 2.2

2.2.1 Side B = Windward Side ✓✓

1x1(1)

Side A = Leeward Side ✓✓

1x1(1)

2.2.2. A rain shadow forms on the side of a mountain that is not facing the moist winds from oceans where very little rain occur due to adiabatic heating of subsiding winds. ✓✓

1x2(2)

2.2.3.

- Relief rain forms when warm, moist wind blows from the ocean to a mountain which then forces the wind to rise. (HP over land and LP over Sea – push winds over mountain) ✓✓
- The rising air cools and condensation takes place to form clouds on the windward side of the mountain. ✓✓
- This results in rain falling on the windward side. ✓✓

3 x 2(6)

**[10]**

2.3	
2.3.1 Ocean / Sea ✓	
2.3.2 Evaporation ✓	
2.3.3 Condensation ✓	
2.3.4 Precipitation ✓	
2.3.5 Run-off ✓	
2.3.6 Evapotranspiration ✓	
2.3.7 Infiltration ✓	1x7(7)
	<b>[7]</b>
2.4.1. Isobars ✓✓	1x1(1)
2.4.2. Circles represent manned weather stations ✓; triangles represent unmanned weather ✓	1x2(2)
2.4.3.	
2.4.3.1 2007-08-03 (i.e. 3 August 2007 ✓	1x1(1)
2.4.3.2 14:00 (i.e. 2 pm) ✓	1x1(1)
2.4.3.3 12:00 (i.e. midday) ✓	1x1(1)
2.4.4.	
2.4.4.1 1 028 hPa ✓	1x1(1)
2.4.4.2 980 hPa ✓	1x1(1)
2.4.5	
2.4.5.1 Western Cape and western Northern Cape ✓ OR south western part of the country ✓	1x1(1)
2.4.5.2 Eastern part of the country and the interior ✓	1x1(1)
2.4.6. Port Elizabeth: 25 knots. ✓	(2)(12)
	<b>[13]</b>

2.5

2.5.1 A-Block mountain	1x1(1)
2.5.2. B-Rift valley	1x1(1)
2.5.3 Norma fault-because of vertical movement	1x1+2 (3)
2.5.4 Name the fault element labelled:	
2.5.4.1 Fault line	1x1(1)
2.5.4.2 Fault scarp	1x1(1)
2.5.5 Sedimentary rock-because the rock has layers	1x1+2(3)
2.5.6      A –Compression force B-Tensional force	1x2(2) [12]

2.6

2.6.1. 6.3✓	1x1(1)
2.6.2. Epicentre is the place on the earth's surface directly above the focus of the earthquake where the most damage is done	1x2(2)
2.6.3. The Richter scale was 6.3✓✓ and many people died (75)✓✓	2x2(4)

2.6.4.

- Find survivors ✓
- Put survivors in a safe place✓
- Put up hospital tents for treatment✓
- Treat injured people ✓      Any      3x1(3)
- Put up tents for shelter✓
- Take measures to prevent disease from spreading✓
- Establish communication from outside world✓
- Distribute donations as they arrive (water, food, clothing, medicine etc.) ✓
- Arrange for the identification of bodies✓
- Arrange for the transportation, burial or cremation of bodies✓

2.6.5.

- Stations can be built where seismologists observe earthquake waves and the movement of the earth. This enables them to detect the earthquakes beforehand allowing for precautionary measures to be put in place ✓✓
- Areas that are threatened by major earthquakes or tsunamis (caused by earthquakes) can be evacuated in order to minimise injury and loss of life. ✓✓
- Houses need to be built with material that can withstand the effects of earthquakes. ✓✓
- Put personnel in place who deal with disaster management in the area so that they can be deployed when an earthquake does occur ✓✓ Any 2x3(6)

**[18]**

**TOTAL=140**