Education and Sport Development
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NORTH WEST PROVINCE

PROVINCIAL ASSESSMENT

GRADE 11

GEOGRAPHY P1

MARKING GUIDE

JUNE 2019

This marking guide consists of 10 pages

SECTION A: ATMOSPHERE AND GEOMORPHOLOGY

QUESTION 1

1.1

1.1.1 I✓ (Energy travelling through space)

1.1.2 C✓ (It has a smaller temperature range experienced by places next to the sea)

1.1.3 B✓ (Associated with ascending air)

1.1.4 E✓ (It is associated with descending air)

1.1.5 G✓ (Moving apart)

1.1.6 F✓ (Fast moving radiation emitted from sun and travelling towards the earth)

1.1.7 A✓ (It has a bigger temperature range experienced by places inland)

1.1.8 D✓ (Transferring of heat from one object to another by direct contact (8 x 1) (8)

1.2

1.2.1 True✓

1.2.2 True✓

1.2.3 False✓

1.2.4 True✓

1.2.5 True✓

1.2.6 False✓✓

1.2.7 True✓ (7 x 1) (7)

1.3

1.3.1

(a) Geostrophic flow- Conditions of the atmosphere where there is balance between Coriolis force and the pressure gradient. ✓ (Concept) (1 x 1) (1)

(b) Coriolis force- The force which deflects winds due to the earth's rotation. ✓✓ (Concept) (1 x 1) (1)

(c) Pressure gradient force- Force that causes the air to move from a high pressure area towards a low pressure area along the pressure gradient. ✓✓ (Concept) (1 x 1) (1)

1.3.2 It is caused by the rotation of the earth. ✓✓The earth rotates faster at equator than at the poles because is wider at the equator than at poles.✓✓ As a result of the difference in rotation sped, air rotates anti-clock wise in the Northern hemisphere and clockwise in the Southern hemisphere✓✓
ANY TWO (2 x 2) (4)

1.3.3 Coriolis force✓
Pressure gradient force✓ ANY ONE (1 x 1) (1)

1.3.4 Wind is deflected to the left in the Southern hemisphere and to the right in the✓✓ Northern hemisphere✓✓ (2 x 2) (4)

1.4

1.4.1 Map showing summary weather patterns over a large area.✓ (Concept) (1 x 1) (1)

1.4.2 Cloud cover- Clear✓
Air temperature– 21º✓ (2 x 1) (2)

1.4.3 Dew point temperature– -13º✓
Wind speed– 5 knots✓ (2 x 1) (2)

1.4.4 Contour interval-It is the difference between two successive contour lines✓
Contour lines- Lines joining places of the same height above sea level✓ (2 x 1) (2)

1.4.5 Westerly ✓ (1 x 1) (1)

1.4.6 Cold front✓✓ (1 x 2) (2)

1.4.7 Heavy rain or thunderstorm✓✓ (1 x 2) (2)

1.5

1.5.1 Inclined/Tilted ✓✓ (1 x 2) (2)

1.5.2 Cuestas ✓✓
Homoclinal ridges✓✓
Hogsback ridges ✓✓ ANY THREE (3 x 2) (6)

1.5.3 Shale ✓✓ (1 x 2) (2)

1.5.4 Hartebeespoort near Rustenburg/Magalies ✓✓ (1 x 2) (2)

1.6

1.6.1 1- Laccolith✓✓
3- Batholith✓✓
4- Dyke/Dike✓✓
7- Lapolith ✓✓ (4 x 2) (8)

1.6.2 **5** is horizontal in shape✓✓and **4** is vertical✓✓ (2 x 2) (4)

1.6.3 (a) It is a hot molten state substance beneath the earth's surface. ✓ (Concept) (1 x 1) (1)

(b) Explosive eruption products✓ (Concept) (1 x 1) (1)

1.6.4 Massive igneous rocks✓✓ 1 x 2) (2)

1.6.4 Impact on human health-Respiratory problems, irritation, coughing, bronchitis and other illness. ✓✓
Impact on agriculture-animals and grazing land can be affected✓✓
Can cause air pollution and water pollution✓✓ ANY TWO (2 x 2) (4)

1.7
1.7.1 A- Polar cell ✓✓
B- Ferrel cell✓✓
C- Hadley cell✓✓ (3 x 2) (6)

1.7.2 (a) Tri-cellular circulation - The global circulation of air in three cells. ✓✓ (Concept) (1 x 1) (1)

(b) Polar front- The front between the cold and warm air masses which meet at 60º north and south. ✓✓(Concept) (1 x 1) (1)

1.7.3 Inter-Tropical Convergence Zone✓✓ (1 x 2) (2)

1.7.4 Cell A- Circulation of air in the polar region.(30º-60ºlatitudes) ✓✓
Air rises from 60º latitudes, flows towards the poles, descends at the poles✓✓ (2 x 2) (2)
Cell C-Found between 0º-30º ✓✓
Air rises near equator ✓✓ ANY ONE (1 x 2) (2)

1.8
1.8.1 El niño- Climate change brought about warmer conditions in the pacific ocean✓ (Concept) (1 x 1) (1)

La Niña- Climate change brought by the cooler conditions in the Pacific Ocean✓ (Concept) (1 x 1) (1)

1.8.2 Droughts lead to veld fires and smoke can affect heath mainly children.✓✓
Dust storm can cause diseases✓✓
Affects fishing-decrease in world supply of fish meal increases poultry prices.✓✓
Drought lead to crop failure that leads to poverty ✓✓
Flooding can damage infrastructure and loss of life. ✓✓
Shortage of water supply ✓✓
Extreme heat can cause diseases✓✓
Drier conditions can cause famine. ✓✓ ANY FOUR (4 x 2) (8)

1.8.3 Drought ✓ (1 x 1) (1)

1.8.4 Pacific ocean✓ (1 x 1) (1)

1.9
1.9.1 A- Mesa✓large flat topped hills or ridges✓
B- Butte ✓ smaller flat topped hill that have eroded from mesa✓

C- Conical hill ✓buttes that have lost their resistant cap of dolorite✓
D- Tors✓a stack of rocks that have weathered from an exposed jointed batholith✓ (4 x 2) (8)

1.9.2 Hilly landscapes-In humid areas are suitable for agricultural activities✓✓
Hilly landscapes in arid areas are suitable for grazing✓✓
Basaltic Plateaus-Weathered basaltic rocks produce fertile soils rich in iron which can be suitable for farming. ✓✓
Canyons have a tourist value because of their beauty. ✓✓
Karoo landscapes are flat therefore easy for farming and the building of Urban and transport routes✓ ANY FOUR (4 x 2) (8)

1.9.3 The Karoo✓✓ (1 x 2) (2)
[115]

QUESTION 2

2.1
2.1.1 D ✓ (Hogsback)

2.1.2 B ✓ (Impermeable)

2.1.3 A✓ (Sheet flow)

2.1.4 B ✓ (Deposition)

2.1.5 C✓ (Cuesta basin) (5 x 1) (5)

2.2
2.2.1 D ✓ (Amount of water vapour in the air)

2.2.2 E ✓ (Lines joining places of the same pressure)

2.2.3 A ✓ (Moving air)

2.2.4 F✓ (Sinking or downward movement of air)

2.2.5 C ✓ (Low pressure extending outwards to higher pressure) (5 x 1) (5)

2.3
2.3.1 A- Crest/Summit ✓✓
B- Cliff/Escarpment/Free face ✓✓
C- Talus/Debris/Scree ✓✓
D- Pediment ✓✓ (4 x 2) (8)

2.3.2 People build homes on slopes when space is limited or for the view that they will have from their homes. ✓✓
People use steep slopes for forestry. ✓✓ Orchards and vineyards are found on slopes with a gentler gradient. ✓✓
Mountainous areas with steep slopes are popular for activities such as hiking trails, climbing, skiing, mountain biking and horse trails. ✓✓

Mountainous areas with steep slopes are barriers to communication and expensive mountain passes need to be constructed ✓✓ ANY FOUR (4 x 2) (8)

2.3.3 Convex in shape ✓✓
Found on top of the hill✓✓
Also called Waxing slope✓✓
Thin layer of soil ✓✓ ANY TWO (2 x 2) (4)

2.4

2.4.1 Mass movement-The movement of material down slopes under the influence of gravity.✓e.g soil creep✓ (Concept) (2 x 1) (2)

2.4.2 Rockfall ✓✓ (1 x 2) (2)

2.4.3 Destroy vegetation✓✓
Damage ecosystem and natural habitats✓✓
Block streams and dam up lakes✓✓
Remove top soil and cause erosion✓✓
Change nature of slopes✓✓ ANY THREE (3 x 2) (6)

2.4.4 Building walls✓✓
Planting trees to hold the rocks✓✓
Using nets/catch fences✓✓
Cementing and use of rock bolts✓✓
Building canopy structures ✓✓ ANY TWO (2 x 2) (4)

2.5

2.5.1 Seasonal winds that blows in tropical regions/ Seasonal reversal of atmospheric pressure and winds and their accompanying drought and rainfall. ✓(Concept) (1 x 1) (1)

2.5.2 strong high pressure over the continental interior✓✓
Water takes longer to cool down than land the winter temperatures are much warmer than the central regions of the adjacent continent a low pressure therefore forms over ocean✓✓.Cool,dry winds blow off-shore from the continental high towards the low pressure region over the ocean resulting in no, or little rainfall during winter months. ✓✓The wind blows from the north east. ✓✓ ANY TWO (2 x 2) (4)

2.5.3 Moist air from the warm oceans to the south is drawn into the Interior by the low pressure. Convergence and high mountains cause the warm moist air to rise, cool and produce heavy rain✓✓ (1 x 2) (2)

2.5.4 There will be rain for their crops and water for domestic and industrial purposes and for animals. ✓✓ (1 x 2) (2)

2.5.5 The direction of the surface wind reverse in winter and summer✓ (1 x 1) (1)

2.6

2.6.1 A- Westerlies✓✓
B- Tropical easterlies/Trade wind belt ✓✓ (2 x 2) (4)

2.6.2 Inter-Tropical Convergence Zone (ITCZ) ✓✓ (1 x 2) (2)

2.6.3 They are name according to the direction they are coming from. ✓✓ (1 x 2) (2)

2.7

2.7.1 Fohn wind- A warm, dry wind that descends the leeward side of a mountain✓✓ (Concept) (1 x 1) (1)

2.7.2 Chinook ✓✓ (1 x 2) (2)

2.7.3 Results from moist air rising up the windward slopes. ✓✓as this air rises it cools. ✓✓ The rate of cooling is the lapse rate. While the air is still unsaturated, air cools at the dry adiabatic lapse rate(DALR) of 1ºc per 100 metres. ✓✓But once condensation begins, the rising air cools at the saturated lapse rate(SALR) of about 0,5º per 100 metres. ✓✓Such cooling causes water vapour to condense to form clouds, rain or snow on the windward side. ✓✓As the air descend on the leeward side of the mountain, it warms up rapidly at the DALR because there is now very little moisture in the air✓✓This descending warm air is called Fohn wind. ANY THREE (3 x 2) (6)

2.7.4 Dry out forest areas✓✓
Veld fires ✓✓
Melting snow ✓✓
Snow falls ✓✓
Floods ✓✓ ANY TWO (2 x 2) (4)

2.8

2.8.1 Tors✓✓ (1 x 2) (2)

2.8.2 (a) Weathering- the breaking down of rocks, soil and minerals✓(Concept) (1 x 1) (1)

(b) Deposition-accumulation of materials✓ (1 x 1) (1)

2.8.3 Tors are caused by chemical and mechanical weathering below the surface✓✓Vertical and horizontal joints in rock are formed as magma cools✓✓When water passes through the joints, they are widened by chemical weathering✓✓As joints widen, separates boulders are formed✓✓ On exposure, weathering makes them more rounded✓✓ The core stones appear as a loose pile after weathered material has been removed✓✓ ANY TWO (2 x 2) (4)

2.9

2.9.1 Scarp retreat✓✓ (1 x 2) (2)

2.9.2 Slopes eroding back parallel to their original position. ✓ ✓ (Concept) (1 x 2) (2)

2.9.3 L.C King✓✓ (1 x 2) (2)

2.9.4 Backwasting ✓ (1 x 1) (1)
Scarp recession/Parallel retreat ✓ (1 x 1) (1)

2.10

2.10.1 (a) Drought - A period of time with less rain than usual that leads to Water shortages.✓ (Concept) (1 x 1) (1)

(b) Desertification -The process in which soil quality and vegetation cover decreases, and productive land changes into desert. ✓(Concept) (1 x 1) (1)

2.10.2 **Environmental Effects**
Reduction in river flow and ground water. ✓✓
Formation of dunes✓✓
Destruction of habitat and loss of biodiversity ✓✓
Soil erosion✓✓

Socio-economic Effects
Food in-security✓✓
Decline in cash crop for exports✓✓
Migration✓✓
Poverty✓✓
Completion for resource cause conflicts✓✓
(Accept any other reasonable answer. Refer to environmental and socio-Economic at least once) (4 x 2) (8)

2.10.3 Bush burning✓✓
Poor irrigation practice✓✓
Unbridled use of ground water ✓✓
Overgrazing and over exploitation ✓✓
Poor land use practice✓✓
Deforestation✓✓ (4 x 2) (8)
[110]

GRAND TOTAL: 225

Marking guide – Grade 11

TYPE OF ASSESSMENT/SOORT ASSESERING: JUNE EXAMINATION

QUESTIONS	TOPICS		TAXONOMY LEVELS			
	Atmosphere	Geomorphology	Knowledge/ Remembering 30%	Understanding/ Applying 50%	Analysis, Evaluating and Creating 20%	Total 225
Expected Marks per question	**113**	**112**	**35**	**58**	**22**	
1.1	8		8			8
1.2		7	7			7
1.3.1(a)	1		1			1
(b)	1		1			1
(c)	1		1			1
1.3.2	4			4		4
1.3.3	1		1			1
1.3.4	4			4		4
1.4.1	1			1		1
1.4.2	2			2		2
1.4.3	2			2		2
1.4.4	2			2		2
1.4.5	1			1		2
1.4.6	2			2		2
1.4.7	2			2		2
1.5.1		2		2		2
1.5.2		6	6			6
1.5.3		2		2		2
1.5.4		2		2		2
1.6.1		8		8		8
1.6.2		4		4		4
1.6.3 (a)		1	1			1
1.6.3 (b)		1	1			1
1.6.4		2		2		2
1.6.5		4			4	4
1.7.1	6		6			6
1.7.2(a)	1		1			2
1.7.2(b)	1		1			2
1.7.2(c)	1		1			1
1.7.3	2			2		2
1.7.4	4			4		4
1.8.1	2			2		2
1.8.2	8				8	8
1.8.3	1		1			1
1.8.4	1		1			1
1.9.1		8		8		8
1.9.2		8			8	8
1.9.3		2		2		2
Total	**58**	**57**	**38**	**56**	**20**	**115**

2.1		5	5			5
2.2	5		5			5
2.3.1		8	8			8
2.3.2		8			8	8
2.3.3		4		4		4
2.4.1		2		2		2
2.4.2		2		2		2
2.4.3		6		6		6
2.4.4		4			4	4
2.5.1	1		1			1
2.5.2	6			6		6
2.5.3	2			2		2
2.5.4	2				2	2
2.5.5	1			1		1
2.6.1	4		4			4
2.6.2	2			2		2
2.6.3	2			2		2
2.7.1	1		1			1
2.7.2	1		1			1
2.7.3	6			6		6
2.7.4	4			4		4
2.8.1		2		2		2
2.8.2(a)		1	1			1
2.8.2(b)		1	1			1
2.8.3		4		4		4
2.9.1		2		2		2
2.9.2		2		2		2
2.9.3		2	2			
2.9.4		2	2			2
2.10.1(a)	2		2			2
2.10.2	8				8	8
2.10.3	8			8		8
Total	**55**	**55**	**33**	**55**	**22**	**110**