LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
EDUCATION

SEKHUKHUNE

SOUTH DISTRICT

GRADE 10

GEOGRAPHY

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Marking Guideline

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Marks : 60

This marking guideline consist of 4 pages including the cover page.

Question 1

1.1. Match columns.

1.1.1. F.
1.1.2. C
1.1.3. G
1.1.4. A
1.1.5. B
1.1.6. H
1.1.7. E
1.1.8. D (8x1) (8)



1.2. Weather station model.

1.2.1. C
1.2.2. E
1.2.3. D
1.2.4. A
1.2.5. B
1.2.6. F
1.2.7. C (7X1) (7)

1.3. Heating of the atmosphere

1.3.1. X-latitude Y-altitude. (2x1) (2)
1.3.2. Equator- direct rays ; Polar region- oblique rays (2x1) (2)
1.3.3. B. (1x1) (1)
1.3.4. The equator has a smaller surface area to heat in comparison to a larger area at the poles.

The equator receives direct rays while the poles receive oblique rays.(2x2) (4)

1.3.5. The sun heats up the surface of the earth and then heat is radiated back into the atmosphere. (1x2) (2)
1.3.6. The air in the higher atmosphere is less dense and cannot hold heat as easily.

Higher altitudes mean the air is thinner with fewer greenhouse gases therefore less heat is absorbed, resulting in cooler air. (2x2) (4)

1.4. Global warming

1.4.1. Global warming (1x1) (1)

1.4.2. Refer to the increase in average temperature on earth (concept). (1x2) (2)

1.4.3. Cutting down of trees and removal of natural vegetation.

Increase in carbon dioxide from burning fossil fuels in factories, coal-fired power stations, carbon dioxide from the burning of fuels in transport.

Methane from rice paddles, cattle and clathrates.

When the waste in landfills begins to decompose/break down it releases harmful gases into the atmosphere which contribute to global warming. (2x2) (4)

1.4.4. Renewable energies

- The first way to prevent climate change is to move away from fossil fuels, and start using renewable energies such as sola, wind biomass and geothermal.

Sustainable transportation

- Promoting public transportation, carpooling, but also electric and hydrogen mobility, can help reduce carbon dioxide emissions and thus fight global warming.

Sustainable infrastructure

- In order to reduce the carbon dioxide emissions from buildings- caused by heating, air conditioning, hot water or lighting- it is necessary both to build new low energy buildings, and to renovate the existing constructions.

Sustainable agriculture & forest management

- Encouraging better use of natural resources, stopping massive deforestation as well making agriculture greener and more efficient should also be a priority.
- Reforestation is the most cost-effective way to prevent global warming, trees absorb carbon dioxide so planting more trees can help reduce the amount of carbon in our atmosphere.

Ensuring sustainable development

- A successful global compact on climate change must include financial assistance from richer countries to poorer countries to help make the transition to low-carbon development pathways and to help adapt to the impacts of climate change. (4x2) (8)

1.5. Layers of the atmosphere

1.5.1. A-troposphere B-stratosphere C-mesosphere D-thermosphere. (4x1) (4)

1.5.2. Nitrogen. (1x1) (1)

1.5.3. B or stratosphere and D or thermosphere. (2x1) (2)

1.5.4. Layer B contains the ozone layer which absorbs rays therefore increase in temperatures. (1x2) (2)

1.5.5. No weather interference/no wind/ calm/no rain/ no turbulence. (1x2) (2)

1.5.6. Contains gases needed for life e.g oxygen and carbon dioxide

Has oxygen needed for respiration and combustion

Clouds found in this layer protects earth from unkind sun rays

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Weather occurs in this layer providing rainfall

Water vapour cools off atmosphere

Water vapour provides earth with moisture e.g. rainfall

Protects earth from harmful sun rays

Protects earth from meteorites

Allows for change in weather to take place as air is able to distribute heat.

(2x2) (4)

End.