

TEACHERS WITHOUT BORDERS PROGRAMME

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basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

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In Bill Gates words, at the Mandela Day 'Living Together' address: "Maintaining the quality of this country's higher education system while expanding access to more students will not be easy. But it's critical to South Africa's future" – working together, we can help achieve this."

Contributing schools to date:

Clifton School	Milnerton High	Rustenburg Girls' High	St Peter's
Durban Girls'	Northwood High	St Anne's DC	St Stithians
Fairmont High	Roedean	St John's DSG	Wynberg Boys' High
Herzlia High	Rondebosch Boys'	St Mary's DSG Kloof	Wynberg Secondary

Section A: Climate**[90]****Question 1: Multiple choice**

- 1.1 A ✓
 1.2 A ✓
 1.3 D ✓
 1.4 B ✓
 1.5 A ✓
 1.6 D ✓
 1.7 B ✓
 1.8 A ✓
 1.9 B ✓
 1.10 A ✓

[10x1=10]**Question 2:**

- 2.1 Insolation ✓✓ 1x2=2
 2.2 Terrestrial radiation ✓✓ 1x2=2
 2.3 Nitrogen ✓ plant growth ✓
 Oxygen ✓ respiration ✓ 2x2=4
 2.4 Water vapour ✓ evaporation / transpiration ✓
 Carbon dioxide ✓ deforestation / industry / increase in population / burning of fossil fuels ✓ 2x2=4

[12]**Question 3:**

- 3.1.1 wind speed ✓
 3.1.2 wet and dry bulb thermometer / hygrometer ✓
 3.1.3 air pressure ✓
 3.1.4 hectopascals / hPa ✓
 3.1.5 rain gauge ✓
 3.1.6 hours ✓ 6x1=6

- 3.2 Weather refers to the atmospheric conditions ✓ at a particular place ✓ and at a particular time ✓
 These conditions change daily, even hourly ✓ 4x1=4
- 3.3 **Any three of:**
- Satellites ✓
 - Ships at sea ✓
 - Weather balloons ✓
 - Weather stations 3x1=3
- 3.4.1 B = cirrocumulus ✓
 D = altocumulus ✓
 G = stratus ✓
 H = cumulus ✓
 J = nimbostratus ✓ 5x1=5
- 3.4.2 Convectonal ✓✓ 1x2=2
- 3.4.3 **Any one of:**
- Cirrus ✓✓
 - Cirrostratus
 - Altostratus 1x2=2

[22]

Question 4:

- 4.1 Carbon Dioxide ✓ 1x1=1
- 4.2 CFC's ✓ 1x1=1
- 4.3 100 years ✓ 1x1=1
- 4.4.1 Fertiliser / Vehicle exhausts ✓
- 4.4.2 decaying vegetation / dung / cows / rice paddies ✓ 2x1=2
- 4.5 water vapour ✓ 1x1=1
- 4.6 Global warming is the increase ✓ in the average temperatures ✓ of the Earth's atmosphere ✓ 3x1=3
- 4.7 **Any two:**
- Sea levels rising ✓✓
 - Coastal areas flood ✓✓
 - Ice caps melting

- Changing weather patterns
- Increase in TCs

2x2=4

[13]

Question 5:

5.1 June ✓

1x1=1

5.2 Durban ✓

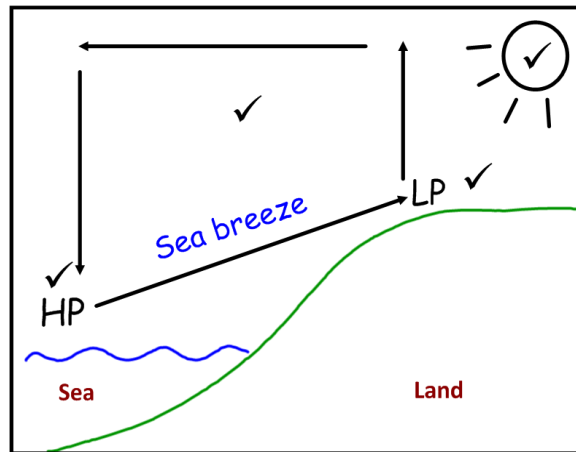
1x1=1

5.3 Port Nolloth – Cold ✓ Benguela current ✓ - colder
Durban – Warm ✓ Mozambique current ✓ - warmer

2+2=4

5.4 Sea breeze

4x1=4



5.5 Frontal rain ✓

- Cold air moves toward warm air ✓
- Cold air forces / wedges under warm air ✓
- Warm air forced to rise ✓
- Cools, condenses, forms clouds and rains ✓

1+4=5

[15]

Question 6:

6.1 South Indian ✓ HP ✓

1x2=2

6.2 anticlockwise ✓ outwards ✓ descending ✓

3x1=3

6.3 Cold front ✓✓

1x2=2

6.4 summer ✓

Any 2 reasons:

- Pressure cells shifted south ✓✓
- Cold front South of CT ✓✓
- LP over interior

1+(2+2)=5

6.5 Bloemfontein is inland ✓ Port Nolloth is near the sea ✓ Port Nolloth's temperatures are moderated by the sea ✓✓

2+2=4

6.6 Convectional ✓✓

1x2=2

[18]

Question 7:

- 7.1 a transport system is a network ✓ of transport routes ✓ that link ✓ different places ✓ 4
- 7.2 D ✓ only 1 transport route is linked at this point ✓ 1x1=1
- 7.3 Affordability is the ability ✓ and willingness ✓ of a person to pay for goods and services ✓ 3x1=3
- 7.4 accessibility ✓ density ✓ 2x1=2
- 7.5 Settlement X ✓ More roads in the same size area (length of roads is greater than in Y and the area is the same in both blocks) ✓✓ 1+2=3
- [14]**

Question 8:

- 8.1 department of trade and industry ✓✓ 1x2=2
- 8.2 trade is the action ✓ of buying ✓ and selling ✓ goods ✓ and services ✓ 2x2=4
- 8.3 goods that are sold ✓ by one country to another country ✓ 1x2=2
- 8.4 Either:
- Air ✓ small product so not too expensive ✓
 - Boat ✓ not perishable so doesn't matter how long it takes ✓ 2x2=4
- 8.5 Globalisation = the exchange of capital (money) ✓ information, people, ideas ✓ goods and services ✓ around the world. ✓ 4x1=4
- [16]**

TOTAL 120