

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 ✓

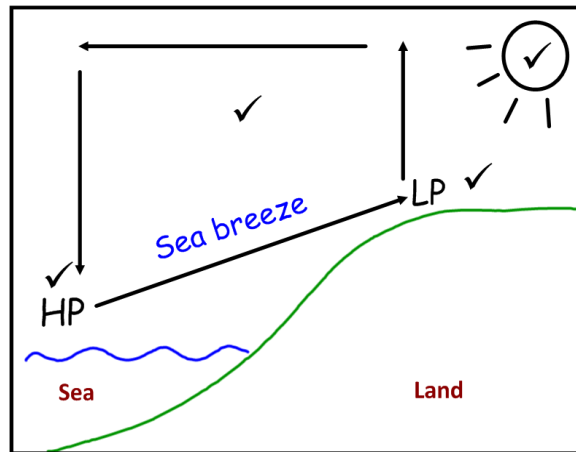
1x1=1

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