education

Department:
Education
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 12

GEOGRAPHY P1

MEMORANDUM

NOVEMBER 2008

MARKS: 300

This memorandum consists of 17 pages.

QUESTION 1

1.1

1.1.1 A Hadley (2)
1.1.2 C doldrums(2) **OR**
B inter-tropical convergence zone (ITCZ) 2
1.1.3 B southeast and northeast trades (2)
1.1.4 A pressure gradient force (2)
1.1.5 C surplus heat at the equator and a deficit at the poles (2) 5x2=(10)

1.2

1.2.1 catchment area (2)
1.2.2 drainage basin (2)
1.2.3 confluence (2)
1.2.4 cross profile (2)
1.2.5 watershed (2) 5x2=(10)

1.3

1.3.1 Tropical cyclones – or mention Eline/Favio (2) 1x2 = (2)

1.3.2 Surface wind strength between 110 – 210 km/h (2)
Very low pressure/±930 hPa (2)
Temperature above 27 °C (2)
[Any TWO] 2x2 = (4)

1.3.3 - Warm ocean - above 27 ˚C (2)
Needed to provide heat energy and moisture (2)
- High evaporation rate (2)
For condensation and latent heat to be released (2)
- Located between 5° - 30° north / south of the equator (2)
As the coriolis force is ineffective at the equator (0° - 5°) (2)
- Unstable air (2)
Air caused to rise (2)
[Any TWO factors + an explanation] 4x2 = (8)

1.3.4 Cyclones dissipate before reaching the coast of South Africa because the conditions necessary to sustain cyclones such as a warm ocean (27 °C) are not there (2)
When cyclones reach Madagascar the intensity is reduced by friction (2) and lack of moisture (2)
South Africa is located around the 30° latitude which puts it just beyond / too far south of latitudinal range for cyclones (2)
[Any TWO or other reasonable answer] 2x2 = (4)

1.3.5 Radio detection and ranging (2) 1x2 = (2)

1.3.6 (a) It locates rain or hail (2)
Identifies severe storms (2)
[Any ONE] 1x2 = (2)

(b) Gives people warning to vacate dangerous areas / floods (2) 1x2 = (2)

1.4

1.4.1 An urban area that records higher temperatures than the surrounding rural areas (2)
[Concept] 1x2 = (2)

1.4.2 Downtown/CBD/area 4 (2) 1x2 = (2)

1.4.3 Trapped pollutants could result in respiratory problems (2)
Use of air-conditioners because of higher temperatures (2)
Deterioration of buildings (2)
More renovation of buildings such as frequent painting (2)
Unpredictable rainfall (2)
Increase in health problems/examples related to heat island (2)
Increase in stress/discomfort (2)
Movement to suburbs/counter-urbanisation (2)
[Any TWO. Accept reasonable alternatives] 2x2 = (4)

1.4.4 Modern buildings are made of a lot of glass/steel which results in the Multiple reflection of heat (2)
Buildings create a greater surface area which absorbs/reflects heat (2)
Buildings are made of concrete which absorbs/reflects more heat (2)
Tall buildings trap heat as wind cannot disperse the heat (2)
More air conditioners/heaters (2)
More buildings therefore less vegetation to play cooling role (2)
[Any TWO] 2x2 = (4)

1.4.5 Industrial decentralisation (2)
Laws to control/restrict air pollution (2)
Reduce building density (2)
Introduce open spaces / green belts / parks to absorb carbon dioxide (2)
Measures to reduce pollutants / greenhouse gases as they trap heat (2)
Public transport to reduce emissions (2)
Cleaner fuels (2)
Flexi-time (2)
Erect green buildings (2)
Law enforcement to ensure suistainable units / local agenda 21 (2)
[Any TWO. Accept reasonable alternatives] 2x2 = (4)

1.5

1.5.1 Graded profile/concave/smooth (2) 1x2 = (2)

1.5.2 (a) K (2) 1x2 = (2)

(b) Vertical/downward erosion (2)
Because of fast-flowing water (2)
Debris that acts as a cutting tool (2)
Bed load rolls over river bed (2)
K is in upper course (2)
OR
Lateral erosion (2)
Rounded slopes of valley (2)
Valley is widening (2)
Symetrical profile (2)
Mass wasting along slopes (2)
Middle course (2)
[Any ONE] 2x2 = (4)

(c) Width of a river (2)
Depth of a river (2)
Fluvial stage of river (2)
Rock type/resistance (2)
Shape of the valley (2)
Gradient of river (2)
Could indicate rejuvenation (2)
[Any TWO] 2x2 = (4)

1.5.3 A meander is a bend along the course of a river (2)
After heavy rainfall the water is fast flowing and cuts/erodes into the outer bank (undercut slope) of a river (2)
Meander neck is reduced (2)
Water is slow moving on the inner bank (slip-off) resulting in deposition (2)
After a period of time when the river cannot negotiate the bend, it will cut through the meander neck (cut off the loop), forming an ox-bow lake (2)
Stream will now follow a straight path (2)
River will start to meander again (2)
The meandering river migrates (2)
[Any FOUR] 4x2 = (8)

1.5.4 Contamination of water – cannot be used for domestic purposes (2)
Cholera (2)
Affects the health of people (2)
Reduces food supply from the river (2)
Loses scenic beauty (2)
Limits recreational activities (2)
Reduce income (2)
[Any TWO. Accept reasonable answer] 2x2 = (4)

1.6

1.6.1 A – crest/waxing slope/ridge (2)
D – pediment (2) 2x2 = (4)

1.6.2 Soil creep (2) 1x2 = (2)

1.6.3 It is a vertical (very steep) section of rock (2)
Erosion is the main activity (2)
No deposition of material (2)
Rockfalls/mass wasting occurs (2)
Rock layers visible (2)
Resistant strata (2)
[Any TWO] 2x2 = (4)

1.6.4 No (2)
Amount of rainfall will determine slope forms (2)
Type of underlying rock (2)
Rate and type of weathering and erosion varies in different areas (2)
Talus can bury the scarp slope (2)
Vegetation density differs (2)
Mass movement covers certain slope forms (2)
Some slopes destroyed by human activities (2)
[Any TWO reasons] 3x2 = (6)

[100]

QUESTION 2

2.1
2.1.1 True (2)
2.1.2 True (2)
2.1.3 False (2)
2.1.4 False (2)
2.1.5 False (2) 5x2 = (10)

2.2
2.2.1 S (2)
2.2.2 Headward (2)
2.2.3 Misfit (2)
2.2.4 T (2)
2.2.5 Windgap (2) 5x2 = (10)

2.3
2.3.1 (a) X - South Atlantic (St. Helena) HP (2)
Y - Kalahari (Continental) HP (2)
Z - South Indian (Mauritius) HP (2) 3x2 = (6)

(b) Y / Kalahari (Continental) HP (2) 1x2 = (2)

(c) **Difference**

Summer	Winter
Moist air	Dry air (2)
Cloudy	No clouds (2)
Rainfall	Little/no rain (2)
No frost	Frost at night (2)
Small temp range	Large temp range

[Any ONE difference]

Explanation
Inversion above escarpment in summer and lower in winter (2)
Moist air can reach interior in summer not in winter (2)
Condensation and cloud cover in summer but limited in winter (2)
Increased terrestrial radiation during winter night results in very low temperatures at night (2)
[Any TWO for explanation] 3x2 = (6)

2.3.2 (a) Late autumn / winter (2) 1x2 = (2)

(b) Clear sky / no clouds / cloud cover $^0/_8$ (2)
High temperatures (2) 2x2 = (4)

(c) Air subsides down escarpment / adiabatic heating (2)
Subsiding air heats up (2)
Subsiding air does not allow for condensation (2)
Subsiding air gets drier (2)
[Any TWO] 2x2 = (4)

(d) Veld fires (2) 1x2 = (2)

(e) Mid-latitude cyclone (2) 1x2 = (2)

2.4

2.4.1 Prepare for possible damage (2)
Evacuation procedures can be put in place (2)
Save lives (2)
[Any TWO. Accept other logical reasons] 2x2 = (4)

2.4.2 Flooding (2)
Soil erosion (2)
Destruction of natural ecosystems (2)
Loss of natural habitat for animals (2)
Veld fires destroy vegetation (2)
Destruction of coastline (2)
Damage to coastal dunes (2)
Loss of agricultyural land (2)
Snow / low temperatures result in loss of live stock (2)
Destruction of infrastructure (2)
Destruction of homes (2)
[Any TWO] 2x2 = (4)

2.4.3 Co-ordinate rescue attempts (2)
Organise air-lifts (2)
Set up emergency services (2)
Provide food and water (2)
Provide health care (2)
Set up shelters (2)
[Any TWO. Accept other logical measures] 2x2 = (4)

2.5

2.5.1 (a) Total length of streams is small in relation to the size of the drainage basin (2)
[Concept] 1x2 = (2)

(b) Low rainfall (2)
Soft soaking rain (2)
Dry soils (2)
Dense vegetation (2)
Permeable rock (2)
High infiltration rate (2)
Gentle gradient (2)
Resistant rock (2)
High evaporation rate (2)
[Any TWO] 2x2 = (4)

(c) Low rainfall: little surface water to form run-off (2)
Soft soaking rain: water infiltrates thus little surface water (2)
Dry soils: absorbs water thus little surface water (2)
Dense vegetation: retards flow of water resulting in infiltration thus little surface water (2)
Permeable rock: allows infiltration thus little surface water (2)
High infitration rate: reduces surface run-off (2)
Gentle gradient: slows down flow resulting in infiltration thus little surface water (2)
Rock resistance: the more resistant the rock the fewer streams will be carved (2)
High evaporation: less water available to form run-off (2)
[Any TWO. Must refer to answer in QUESTION 2.5.1(b)] 2x2 = (4)

2.5.2 (a) R - Upper/torrent/youthful course (2)
S - Middle/valley/mature course (2)
T - Lower/plain/old age course (2) 3x2 = (6)

(b) T/lower or plain course (2) 1x2 = (2)

(c) Gentle gradient slows down velocity and water spills over banks (2)
Wide, gentle flood plain allows water to spread easily (2)
Large volume of water from tributaries upstream (2)
Deposition of sediments make river shallower (2)
Meander necks are breached to cause floods (2)
[Any TWO] 2x2 = (4)

(d) Flooding can cause damage (2)
Flooding provides fertile silt that is deposited on the flood plain (2)
[Any ONE positive and any ONE negative effect] 2x2 = (4)

(e) Small catchment dams in upper course to release water at intervals into the main stream (2)
Large flood control dams in lower reaches (2)
Raise river banks (leveés) artificially (2)
Line rivers with cement to reduce friction and increase velocity (2)
Increase gradient by cutting through meander necks to increase velocity (2)
Increase vegetation/prevent deforestation (2)
[Any ONE] 1x2 = (2)

2.6

2.6.1 The movement of soil down a slope under the influence of gravity (2)
[Concept] 1x2 = (2)

2.6.2 Rockfall (2) 1x2 = (2)

2.6.3 Construction loosens rocks and aggravates rockfalls (2)
Increases accidents along the road (2)
Traffic flow slowed down (2)
Damage to motor cars and personal belongings (2)
Expensive to maintain preventative measures implemented (2)
[Any TWO. Accept other logical answers] 2x2 = (4)

2.6.4 Cement barriers along the slope / retaining walls (2)
Slopes covered by nets (2)
Build protective roof over road / tunnel roof (2)
Plant pillars into the soil to stabilise soil (2)
Remove loose rocks regularly (2)
Create controlled rockfalls to remove loose rocks (2)
Regular inspections (2)
Road signs (2)
Restriction of human activities (2)
Plant natural vegetation (2)
Reduce deforestation (2)
Cut and fill of slopes (2)
Drainage and run-off channeling structures (2)
Reinforce rock strucrures with bolts (2)
Temporary closing of roads (2)
Cementation of slopes (2)
[Any TWO. Accept other logical measures] 2x2 = (4)
[100]

QUESTION 3

3.1
3.1.1 Transition zone/Zone of decay / CBD (2)
3.1.2 Central Business District/CBD (2)
3.1.3 Residential (2)
3.1.4 Central Business District/CBD (2)
3.1.5 Transition zone/Zone of decay (2) 5x2 = (10)

3.2
3.2.1 B (2)
3.2.2 B (2)
3.2.3 A (2)
3.2.4 A (2)
3.2.5 B (2) 5x2 = (10)

3.3
3.3.1 Rural-urban migration (2) 1x2 = (2)

3.3.2 Older people and children are generally left behind on farms and they are not as productive (2)
Farming land unutilised (2)
Decreased food production (2)
[Any ONE] 1x2 = (2)

3.3.3 Higher paying jobs (2)
Better housing and services (2)
Higher standard of living (2)
Better social life (2)
Better education (2)
Availability of jobs (2)
Natural disasters such as floods and droughts in rural areas (2)
Lack of services in rural areas (2)
Poor infrastructure in rural areas (2)
Lack of jobs and low salary on farms (2)
Lack of entertainment in rural areas (2)
Crime in rural areas (2)
[Any THREE factors. Push or pull factors. Accept other reasonable answers] 3x2 = (6)

3.3.4 Not able to get a job (2)
Not able to get decent home (2)
Standard of living was lower (2)
Experience hunger (2)
Experience poverty / low wages (2)
Could not afford to send children to school (2)
High crime rate (2)
[Any TWO. Accept reasonable answers] 2x2 = (4)

3.3.5 A settlement that is built on an open plot of land, of various materials and does not have basic services / informal settlement (2)
[Concept] 1x2 = (2)

3.3.6 His quality of life has decreased (2)
Being on the streets means that he is not getting a formal education (2)
Possibly involved in criminal activities – joined a gang (2)
Possibly started using substances/drugs (2)
[Any TWO] 2x2 = (4)

3.4

3.4.1 For fuel wood (2)
Growth of urban areas / urban expansion (2) 2x2 = (4)

3.4.2 It is reducing the amount of land available for farming (2)
Create increased demand for agricultural production (2)
Move towards cash crop production / change in farming patterns (2)
[Any ONE] 1x2 = (2)

3.4.3 Topsoil will be more easily eroded (2)
Loss of soil moisture (2)
Higher levels of carbon-dioxide (2)
Higher temperatures (2)
Loss of organic matter in the soil (2)
Decrease in soil fertility (2)
Desertification (2)
Contribute to ozone depletion (2)
Reduce oxygen production (2)
Disrupt food chains / food webs / ecosystems (2)
[Any THREE. Accept other logical answers] 3x2 = (6)

3.4.4 Community education programme (2)
Provide alternate sources of fuel (2)
Afforestation (2)
Declare protected areas, making it illegal to chop down trees / fines (2)
Allowing individuals to own trees (2)
[Any TWO] 2x2 = (4)

3.5

3.5.1 Refers to economic, social, political and cultural relations/partnerships across international borders (2)
[Concept] 1x2 = (2)

3.5.2 It has companies all over the world (2)
[Concept] 1x2 = (2)

3.5.3 In China, Indonesia, Vietnam and Thailand (2)
[Must measure all four] 1x2 = (2)

3.5.4 Cheap labour (2)
Large labour pool (2)
Cheap raw material (2)
Labour laws are not strict (2)
[Any TWO] 2x2 = (4)

3.5.5 Nike products are generally expensive and people in Europe have a higher earning power and can afford to buy the products (2)
Involvement in sport in Europe (2)
[Any ONE] 1x2 = (2)

3.5.6 A factory where people work under poor conditions and are exploited (2)
[Concept] 1x2 = (2)

3.5.7 No jobs available in her village (2)
In order to earn income for her family (2)
[Any ONE] 1x2 = (2)

3.5.8 She earns a very low wage (2)
She is not able to send money home (2)
She has no leisure time (2)
Accommodation is very poor (2)
She is tired all the time (2)
Work long hours (2)
She is exploited (2)
No laws to protect her against exploitation (2)
No access to labour unions (2)
[Any THREE] 3x2 = (6)

3.6

3.6.1 Africa (2) 1x2 = (2)

3.6.2 Floods – crops are washed away or damaged (2)
Droughts – low and unreliable rainfall is not suitable for farming (2)
Decreasing soil fertility – poor farming methods such as monoculture (2)
Large deserts – land not suitable for farming (2)
Pests and diseases – reduce production (2)
[Any TWO or other reasonable answer] 2x2 = (4)

3.6.3 High cost of production – cannot afford new technologies (2)
Rural-urban migration – younger generation doesn't want to work on farms (2)
HIV/Aids – shortage of labour in rural areas (2)
Many subsistence farmers – low agricultural output (2)
Poor farming methods e.g. monoculture leads to low agricultural output (2)
Low per capita income – no money to buy food (2)
Limited capital to invest in large-scale commercial farming (2)
High level of illiteracy impacts negatively on farming practices (2)
Political instability / war – impacts negatively on farming practices (2)
[Any TWO or other reasonable answer] 2x2 = (4)

3.6.4 Food security occurs in countries where people have access to food at all times for a healthy life (2)
[Concept]
Food insecurity occurs in countries that have limited access to food which results in malnutrition and starvation (2)
[Concept] 2x2 = (4)

3.6.5 Developed countries produce large amounts of food, which the less economically developed countries cannot afford to import (2)
Not eating a balanced diet (2)
Food aid does not always reach the people it is intended for (2)
Increased demand of agricultural products for bio-fuel (2)
Resources do not reach people because of war and conflicts (2)
[Any TWO. Accept other logical reasons] 2x2 = (4)

3.6.6 Refers to the modification of crops to make them more resistant to drought and pests, and to have a higher output / high quality seeds developed in laboratories (2)
[Concept] 1x2 = (2)

3.6.7 Food Aid (2)
UNESCO (2)
Red-Cross (2)
World Food programme (2)
Food and Agricultural Organisation (2)
Unicef / United Nations Children Fund (2)
Oxfam / Oxford Organisation for Famine Relief (2)
US Aid for Africa (2)
World Health Organisation (2)
United Nations (2)
[Any ONE. Accept other reasonable alternatives] 1x2 = (2)

[100]

QUESTION 4

4.1
4.1.1 low income (2)
4.1.2 poor housing (2)
4.1.3 poor environment (2)
4.1.4 lack of recreation space (2)
4.1.5 lack of qualifications (2) 5x2 = (10)

4.2
4.2.1 agricultural (2)
4.2.2 domestic (2)
4.2.3 population (2)
4.2.4 maintenance of ecosystems (2)
4.2.5 2020 (2) 5x2 = (10)

4.3
4.3.1 (a) Shona – F/D/G (2)
Rosa – D (2)
Violet – E (2) 3x2 = (6)

(b) Shona: In high-rise flat / high density - F (2)
Lowest cost - F (2)
Close to primary school - F (2)
Close to CBD - F (2)
Close to employment - F (2)
Good condition of apartment – D (2)
Urban renewal result in upgrading of buildings - G (2)
Rosa: Medium-sized house (2)
House has basic amenities (2)
Intermediate-cost house (2)
Violet: Large house (2)
Large plot / ground (2)
House has many luxury amenities (2)
Highest cost house (2)
[ONE reason for each choice. Accept other logical reasons] 3x2 = (6)

(c) Low density - high income as people can afford large stands (2)
High density - low income as people can only afford small stands or afford housing in high-rise flats (2) 2x2 = (4)

4.3.2 (a) Close to coal mine (2)
Close to river (2)
Open space (2)
Direction of prevailing winds (2)
Away from CBD (2)
Away from residential areas (2)
[Any TWO] 2x2 = (4)

(b) Sinkholes/subsidence of earth (2)
Air pollution (2)
Destruction of natural vegetation (2)
Accelerated soil erosion (2)
Loss of valuable agricultural land (2)
Creation of mine dumps (2)
Land and water pollution (2)
[Any ONE] 1x2 = (2)

(c) Air pollution (2) 1x2 = (2)

(d) Taller stacks/chimneys to release smoke (2)
Filters in stacks/chimneys to trap pollutants (2)
Restrict industrial activities to day time (2)
Laws regulating amount of pollutants that may be released (2)
Heavy fines (2)
Increase vegetation to absorb carbon dioxide (2)
Relocation of power station (2)
[Any TWO. Accept other logical solutions] 2x2 = (4)

(e) Air pollution (2)
Noise pollution (2)
Bad odours/smells (2)
Dangerous activities (2)
Cheaper land / large space (2)
Bulk transport facilities (2)
[Any ONE] 1x2 = (2)

4.3.3 (a) Commercial / functional decentralisation (2) 1x2 = (2)

(b) Traffic congestion in CBD (2)
Inaccessibility (2)
High levels of pollution in CBD (2)
High crime rate in CBD (2)
Office space expensive in CBD (2)
Lack of open spaces (2)
Poor state of buildings (2)
Lack of parking for customers (2)
[Any TWO. Accept other] 2x2 = (4)

(c) Less traffic / accessibility (2)
More peaceful environment (2)
Less pollution (2)
Modern buildings (2)
Less crime (2)
Aesthetic appeal / beauty (2)
[Any TWO. Accept other] 2x2 = (4)

(d) Suburbs on outskirts / rural-urban fringe (2)
Outlying/Regional shopping centres (2)
Outlying malls/walkways (2)
Office parks (2)
[Any ONE] 1x2 = (2)

(e) Modernise/upgrade buildings to meet needs of occupants (2)
Facadism – retaining the front and build behind (2)
Gentrification – modernise old houses close to CBD (2)
Develop obsolete spaces into loft apartments (2)
Develop entertainment opportunities in the CBD (2)
Demolish buildings to reduce high density (2)
Provide open spaces in CBD (2)
Develop walkways in the CBD (2)
Slum clearance (2)
[Any TWO. Accept other] 2x2 = (4)

4.4

4.4.1 PWV industrial region/Gauteng (2) 1x2 = (2)

4.4.2 Wide variety of minerals provided raw materials (2)
Wide variety of agricultural products provided raw materials (2)
Availability of flat land (2)
Large labour pool to supply workers (2)
Large market to sell products (2)
Well-developed infrastructure to transport goods (2)
Availability of water needed in industrial processes (2)
Availability of energy resources to provide much-needed electricity (2)
Government support ensures industrial growth (2)
[Any TWO. Accept other] 2x2 = (4)

4.4.3 Distance to markets increases the cost of the product (2)
Labour costs and strikes slow down industrial development (2)
Water shortages mean water must be imported at high cost (2)
Pollution puts more strain on the environment (2)
Larger industrial output places greater strain on infrastructure (2)
Less land available for expansion of industries (2)
HIV/Aids aggravates skill shortages (2)
Value of the rand increases costs to import and transport goods (2)
Power outages (load shedding) – Eskom's inability to provide reliable power (2)
[Any TWO. Accept other] 2x2 = (4)

4.4.4 Finished goods are exported and earn foreign income (2)
Results in positive balance of trade (2)
Provides employment to many people (2)
Development of settlements (2)
Development of infrastructure (2)
Foreign investment (2)
Increases GDP (2)
[Any TWO. Accept other] 2x2 = (4)

4.4.5 Government can carry cost of the move (2)
Tax rebates (2)
Provide land and buildings cheaply (2)
Provide transport of goods at reduced cost (2)
Provide electricity and water cheaply (2)
Provide housing for labourers at a reduced rate (2)
Free skills training / development (2)
Encourage partnership between private and public enterprises (2)
[Any TWO. Accept other] 2x2 = (4)

4.5
4.5.1 Alleviate poverty (2)
Alleviate unemployment (2)
Encourage local and international investment (2)
Economic sustainability (2)
[Any TWO] 2x2 = (4)

4.5.2 The area is undeveloped (2)
Huge potential for sustainable development (2)
Create job opportunities for local population (2)
Promote agri-tourism / eco-tourism (2)
Good climate – reliable rainfall (2)
[Any ONE] 1x2 = (2)

4.5.3 Agriculture/farming(2)
Forestry (2)
[Any ONE] 1x2 = (2)

4.5.4 Situated along a coastline (2)
Many unspoilt areas are scenic / aesthetic (2)
Huge potential for tourism along the Wild Coast (2)
Coastal holidays are sought-after (2)
Variety of activities can be developed (2)
Utilisation of local human resource (2)
[Any TWO. Accept other] 2x2 = (4)

4.5.5 Be inclusive of indigenous knowledge systems (2)
Consult with local inhabitants (2)
Employ local inhabitants in construction phase (2)
Employ local inhabitants in newly-developed projects (2)
Provide opportunity for entrepreneurship e.g. selling curios (2)
Investment opportunities for local inhabitants in businesses (2)
[Any TWO. Accept other] 2x2 = (4)
[100]

GRAND TOTAL: 300