



# education

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Department:  
Education  
**REPUBLIC OF SOUTH AFRICA**

**NATIONAL  
SENIOR CERTIFICATE**

**GRADE 12**

**GEOGRAPHY P1  
MEMORANDUM  
EXEMPLAR 2008**

**MARKS: 300**

**TIME: 3 hours**

**This memorandum consists of 15 pages including the cover page.**

**QUESTION 1**

- 1.1.1 K  
 1.1.2 L  
 1.1.3 J  
 1.1.4 H  
 1.1.5 B  
 1.1.6 A  
 1.1.7 D  
 1.1.8 G  
 1.1.9 E  
 1.1.10 C (10x2)(20)
- 1.2.1 (a) Low pressure (2) (1x2) (2)  
 (b) Reference to clockwise rotation of air (2)  
 Satellite image shows clockwise spiralling cloud band (2)  
 Reference made to a depression (2)  
 [Any ONE] (1x2) (2)
- 1.2.2 (a) East to west / westwards (2) (1x2) (2)  
 (b) On 20/02/2007 it was south of Madagascar and on 22/02/2007 it was just off the east coast of Africa/Mozambique. (1x2) (2)  
 (c) It is located in the easterly wind belt (2)  
 Driven westwards by easterly winds (2) (2x2) (4)
- 1.2.3 (a) The eye (2) (1x2) (2)  
 (b) Cloudless (2)  
 Wind-still (2)  
 No rain (2)  
 Low pressure (2)  
 [Any ONE] (1x2) (2)  
 (c) Descending column of air in centre heats up (2)  
 No condensation therefore cloudless (2)  
 No rain because there is no condensation (2)  
 Wind-still as air rotates clockwise to isobars around the eye (2)  
 Convergence and rising air results in low pressure (2)  
 [Any TWO] (2x2) (4)
- 1.2.4 (a) Dissipating/Decaying stage (1x2) (2)  
 (b) It has reached the land (2)  
 Cut off from source of moisture (2)  
 Evaporation reduced (2)  
 Less condensation and release of latent heat (2)  
 Friction over land slows system down (2)  
 [Any THREE] (3x2) (6)

- 1.2.5 (a) Destruction of buildings and infrastructure (2)  
Soil washed away (2)  
Natural vegetation destroyed (2)  
Destruction of farmland (2)  
Destruction of life/people will be killed (2)  
[Any TWO] (2x2) (4)
- (b) To detect the development of a tropical cyclone in its early stages  
development (2)  
To warn people in time of the approaching tropical cyclone (2)  
Evacuation procedures can be put into place (2)  
Limit loss of life (2)  
To put in place measures that will minimise the impact of a tropical  
cyclone e.g. rescue operations can be planned (2)  
[Any TWO - Accept other] (2x2) (4)
- 1.3.1 (a) When an equilibrium/balance has been reached between erosion  
and deposition in the stream (2) (1x2) (2)
- (b) Smooth, concave longitudinal profile (2)  
Longitudinal profile steep in upper reaches and gradual in lower  
reaches (2)  
[Any ONE] (1x2) (2)
- (c) Needs more energy to overcome high friction index in upper  
reaches and to transport large stream load particles (2)  
Needs less energy to overcome low friction index in lower reaches  
and to transport small stream load particles (2) (2x2) (4)
- 1.3.2 (a) Stream gains energy and starts to erode downwards into the  
landscape (2)  
[Concept] (1x2) (2)
- (b) Knick-point waterfall (2) 1x2 = (2)
- (c) Increased precipitation (2)  
Increase in volume of water (2)  
Stream capture (2)  
Reduction in vegetation increases run-off (2)  
Drop in sea-level (2)  
Isostatic uplift of land (2)  
[Any TWO] (2x2) (4)
- (d) Temporary (2) (1x2) (2)
- (e) In time the waterfall will be eroded away (2) (1x2) (2)
- 1.4.1 (a) Cuesta/Homoclinal ridge (1x2) (2)
- (b) Sedimentary rock layers tilted (2)  
Rock layers vary in resistance (2)  
Rock layers exposed to the Earth's surface (2)  
Soft rock erodes away to form valleys (2)  
Hard rock protrudes above surface to form ridges (2)  
[Any THREE] (3x2) (6)

- 1.4.2 (a) Soil creep (2) (1x2) (2)
- (b) Tilted telephone pole (2)  
Gashes in the road (2)  
Tree turned down slope (2)  
Terracettes formed on slope (2)  
[Any ONE] (1x2) (2)
- (c) Scarp slope (1x2) (2)
- (d) Steeper slope (2)  
Stronger influence of gravity (2)  
Material more easily moved down the slope (2)  
[Any TWO] (2x2) (4)
- (e) Buildings can be destroyed (2)  
Roads can be destroyed (2)  
Damage to buildings and roads could be costly (2)  
To take proper precautions before building (2)  
[Any TWO – Accept other] (2x2) (4)
- (f) Cover slopes with dense vegetation to stabilise the soil (2)  
Safety nets to catch falling materials (2)  
Lay down mesh wire to stabilise the soil (2)  
Create rock embankments to prevent movement down the slopes (2)  
Build "undercover" roads (tunnels) to protect vehicles (2)  
Do proper environmental impact assessment (2)  
[Any ONE] (1x2) (2)
- [100]**

**QUESTION 2**

- 2.1.1 True
- 2.1.2 True
- 2.1.3 False
- 2.1.4 False
- 2.1.5 True
- 2.1.6 False
- 2.1.7 True
- 2.1.8 True
- 2.1.9 False
- 2.1.10 True (10x2)(20)
- 2.2.1 (a) Because circulation occurs in three cells in each hemisphere (2) (1x2) (2)
- (b) P – Ferrel (2)
- Q – Hadley (2)
- R – Polar (2) (3x2) (6)
- 2.2.2 (a) Inter-Tropical Convergence Zone (2) (1x2) (2)
- (b) X (2) (1x2) (2)
- (c) High temperatures/Hot (2)
- Cumulonimbus cloud/Heavy cloud cover (2)
- Thundershowers/Heavy downpours (2)
- [Any TWO] (2x2) (4)
- d) (Along the equator where it is warm (2)
- Rapidly rising air condenses and form clouds (2)
- Large scale condensation results in heavy rain (2)
- [Any TWO. Must refer to weather conditions mentioned above] (2x2) (4)
- 2.3.1 Temperature rises with altitude (2)
- [Concept] (1x2) (2)
- 2.3.2 Kalahari High Pressure (2) (1x2) (2)
- 2.3.3 Descending air heats up (2)
- Warm layer of air at bottom of Kalahari High Pressure cell (2)
- Warm air meets cooling air that rises from Earth's surface (2)
- [Any TWO] (2x2) (4)
- 2.3.4 Inversion lower than the escarpment (2)
- Warm moist air cannot reach the interior (2)
- Little moisture over interior will reduce condensation (2)
- No cloud formation to block out the sun (2)
- [Any THREE] (3x2) (6)
- 2.3.5 Higher (2) (1x2) (2)
- 2.3.6 During summer moist air reaches the interior (2)
- Precipitation over the interior (2)
- Rivers filled with water (2)
- Farming can take place (2)
- [Any TWO] (2x2) (4)

- 2.4.1 (a) Dendritic (2) (1x2) (2)  
 (b) It looks like the branches of a tree (2)  
 Tributaries join the main stream at acute/small angles (2)  
 [Any ONE] (1x2) (2)
- 2.4.2 (a) Situation that develops when a river overflows its banks and covers areas with water that is usually not covered by water (2)  
 [Concept] (1x2) (2)  
 (b) Shortage of space for development (2)  
 Attachment that they have developed with the area over time (2)  
 [Any ONE] (1x2) (2)  
 (c) The land is covered by artificial surfaces (2)  
 Water does not infiltrate the surface (2)  
 More water reaches the stream therefore flood peak is higher (2)  
 Water flows faster on artificial surfaces thus lag time shortened (2)  
 [Any THREE] (3x2) (6)  
 (d) Destruction of infrastructure (2)  
 Loss of life (2)  
 Houses washed away/damaged (2)  
 Personal belongings washed away/damaged (2)  
 Costs involved to rebuild (2)  
 [Any TWO] (2x2) (4)
- 2.4.3 (a) Sewerage works are located on river banks (2) (1x2) (2)  
 (b) Contamination of water (2)  
 Eutrophication (2)  
 Permanent stench (2)  
 Diseases (2)  
 Dam becomes unsightly (2)  
 Drop in land value next to the dam (2)  
 [Any TWO] (2x2) (4)  
 (c) Building purification dams (2)  
 Relocate the sewerage works (2)  
 Legislation preventing raw sewerage being dumped into rivers (2)  
 [Any TWO] (2x2) (4)
- 2.5.1 Crest: Convex slope  
 Top of slope (2)  
 Free face: Perpendicular/vertical (2)  
 No material can collect here (2)  
 Retreats parallel to itself (2)  
 Talus: Deposition of eroded material (2)  
 Remain at a constant angle (2)  
 Pediment: Low angle (2)  
 Slightly concave (2)  
 Consists of evenly eroded surface of rock (2)  
 Covered by thin layer of soil (2)  
 Area increases as slope is driven back (2)  
 [Any ONE characteristic for each of the slopes] (4x2) (8)

- 2.5.2 In high rainfall areas sheet flow occurs (2)  
Sheet flow results in rounded slopes (2)  
Where temperature extremes occur, exfoliation occurs (2)  
Outer layers of exposed rock will flake off (2)  
This process results in rounded slopes (2)  
[Any TWO]

(2x2) (4)

**[100]**

**QUESTION 3**

3.1.1 H

3.1.2 E

3.1.3 F

3.1.4 G

3.1.5 A

3.1.6 L

3.1.7 C

3.1.8 I

3.1.9 J

3.1.10 B

(10x2)(20)

- 3.2.1 (a) A grouping of people, buildings, communication networks and activities that function as a single, integrated system on a regular, daily basis (2)  
[Concept] (1x2) (2)
- (b) Urban (2) (1x2) (2)
- (c) Multi-functional (2)  
Secondary and tertiary functions visible (2)  
[Any ONE] (1x2) (2)
- 3.2.2 (a) Low order: Needed on a daily basis and has a small sphere of influence, range and threshold population (2)  
[Concept]
- High order: Needed with greater intervals and has a large sphere of influence, range and threshold population (2)  
[Concept] (2x2) (4)
- (b) Low order: Bakery (2)  
Café (2)  
Flour mill (2)  
[Any ONE]
- High order: SABC (2)  
Hospital (2)  
Bank (2)  
Chem Lab Research (2)  
[Any ONE] (2x2) (4)
- (c) The area surrounding a central place and that is served by the central place (2)  
[Concept] (1x2) (2)
- (d) Hospital (2) (1x2) (2)
- (e) High order function and people are prepared to travel great distances to use this service (2)  
Need large threshold population and therefore a large sphere is needed (2) (2x2) (4)



- 3.2.3 (a) An industry that uses small quantities of raw material and causes little pollution (2)  
[Concept] (1x2) (2)
- (b) Little air pollution (2)  
Little noise pollution (2)  
No bad smells/odours (2)  
No dangerous activities (2)  
Only need small tracts of land (2)  
[Any TWO] (2x2) (4)
- (c) Products are perishable (2)  
Must be close to customers (2)  
More accessible (2)  
[Any TWO] (2x2) (4)
- 3.2.4 (a) Variety of services – could mention examples (2)  
Job opportunities in various economic activities (2)  
Higher paid jobs in secondary and tertiary sector (2)  
High standard of living (2)  
Good infrastructure (2)  
Entertainment (2)  
[Any TWO - Accept other] (2x2) (4)
- (b) Avoid overcrowding (2)  
Minimise traffic congestion (2)  
Pressure on resources (2)  
Avoid pollution (2)  
Unemployment in the city (2)  
Lowering living standards (2)  
Informal settlements could develop (2)  
Prevent increase in crime (2)  
Prevent development of social problems (2)  
To prevent urban decay (2)  
[Any TWO - Accept other] (2x2) (4)
- 3.3.1 (a) Bank/economic services (2)  
Hospital/medical services (2)  
SABC/broadcasting (2)  
Restaurant (2)  
Provision of water (2)  
Provision of electricity (2)  
Transport (2)  
[Any ONE] (1x2) (2)
- b) Chem Lab Research (2) (1x2) (2)
- 3.3.2 (a) High, reliable rainfall in eastern half of country (2)  
Fertile soil in eastern half of the country (2)  
Level gradient of plateau (2)  
Availability of water in eastern half of country (2)  
Large markets (2)  
Well developed transport network (2)  
Well developed structures (2)  
Labour resources (2)  
[Any ONE - Accept other] (1x2) (2)

- (b) Droughts will decrease yields/harvests and income (2)  
Floods will decrease yields/harvests and income (2)  
Soil erosion and drop in fertility will decrease yields/harvests and income (2)  
Poor/incorrect farming methods will have a negative effect (2)  
Insects/pests can destroy crops (2)  
Diseases among livestock can destroy animals (2)  
Fire can destroy crops and livestock (2)  
Reduced demands / competition for a product can have negative effect (2)  
[Any TWO - Accept other] (2x2) (4)
- (c) Exporting of products (2)  
Earn foreign income (2)  
Provide food (2)  
Employment (2)  
Raw material for secondary activities (2)  
[Any TWO - Accept other] (2x2) (4)
- (d) Importance of other secondary and tertiary industries is growing (2)  
Greater earnings/income from these industries (2) (2x2) (4)
- 3.3.3 (a) Anything that can be used by humans to improve their standard of living (2)  
[Concept] (1x2) (2)
- (b) Can replenish itself/can be used over and over again (2)  
[Concept] (1x2) (2)
- (c) Needed for plant growth (2)  
Needed for growing crops (2)  
People cannot survive without water resources (2)  
South Africa considered a dry country - water shortages (2)  
[Any TWO - Concept] (2x2) (4)
- (d) Increase in population numbers (2)  
Rapid urbanisation (2)  
Rapid industrial growth (2)  
[Any TWO] (2x2) (4)
- (e) Hydro-electricity (2) (1x2) (2)
- (f) South Africa is a dry country (2)  
Many non-perennial rivers (2)  
Initial costs are high to build hydro-electric power stations (2)  
Availability of high quality coal at low costs (2)  
[Any ONE] (1x2) (2)

- (g) Protect wetlands as important water sources (2)  
Wetlands purify water (2)  
Build dams with small water surfaces to reduce evaporation (2)  
Build dams in eastern half of country where evaporation is lower (2)  
Less wasteful irrigation methods (2)  
Do not irrigate in dry areas (2)  
Prevent deforestation to reduce run-off (2)  
Above reduces soil erosion and prevents silting up of dams (2)  
Use less artificial fertilisers to maintain quality of water (2)  
Purification of industrial waste water before being released into streams (2)  
Treatment of sewerage effluents before being released into streams (2)  
Education / awareness programmes (2)  
Legislation to protect water sources (2)  
Recycling of water (2)  
[Any THREE – Accept other]

(3x2) (6)  
**[100]**

**QUESTION 4**

- 4.1.1 True
- 4.1.2 False
- 4.1.3 False
- 4.1.4 True
- 4.1.5 True
- 4.1.6 True
- 4.1.7 True
- 4.1.8 False
- 4.1.9 False
- 4.1.10 True (10x2)(20)
- 4.2.1 In rural areas a process of degeneration is taking place on an ongoing basis (2)  
[Concept] (1x2) (2)
- 4.2.2 Poor service delivery (2)  
Poor infrastructure (2)  
Poor employment opportunities (2)  
Employment opportunities pay poorly in rural areas (2)  
Mechanisation of farming (2)  
Uneconomical farming units (2)  
Farming costs are increasing (2)  
Low standard of living (2)  
Droughts (2)  
Declining soil fertility (2)  
Few entertainment facilities (2)  
[Any THREE - Accept other] (3x2) (6)
- 4.2.3 Rural-urban migration (2) (1x2) (2)
- 4.2.4 Services close down (2)  
Infrastructure deteriorate (2)  
Fewer job opportunities (2)  
Towns become economically stagnant (2)  
Develop into ghost towns (2)  
[Any THREE - Accept other] (3x2) (6)
- 4.2.5 (a) Lack of social services e.g. medical and education (2)  
Cultural bias to using condoms (2)  
Women in rural areas have inferior status to men (2)  
Increased domestic responsibilities (2)  
Must farm the land (2)  
Becomes only breadwinner (2)  
Must take care of sick and orphans (2)  
Women lack decision-making power (2)  
They cannot secure land rights (2)  
[Any TWO – Accept other] (2x2) (4)

- (b) More orphans (2)  
Loss of primary care-givers and family breadwinners (2)  
Exposed to illness and death on a regular basis (2)  
Increased adult responsibilities (2)  
Child-headed homes (2)  
Deprived of childhood (2)  
Deprived of education (2)  
[Any TWO – Accept other] (2x2) (4)
- (c) Community-based gardens (2)  
Food banks (2)  
Day care centres (2)  
Youth groups (2)  
Provide transport (2)  
School feeding programmes (2)  
Food aid (2)  
Access to primary health care (2)  
Access to antiretroviral treatment (2)  
[Any TWO] (2x2) (4)
- (d) Provision of condoms (2)  
Educational programmes (2)  
Awareness campaigns (2)  
Empowering of women (2)  
Antiretroviral treatment to reduce mother to child transmission (2)  
Making Aids a notifiable disease (2)  
Promote monogamy (2)  
[Any TWO - Accept other] (2x2) (4)
- 4.2.6 (a) Quality of life must be improved (2)  
Equity must be promoted within and between generations (2)  
A healthy environment must be maintained (2)  
Environment and development must not be separated (2)  
[Any TWO] (2x2) (4)
- (b) Consultation with local communities to identify their needs (2)  
Strategies to ensure sustainable use of resources (2)  
Indigenous knowledge to be incorporated into all development strategies (2)  
Local development must be placed alongside conservation strategies (2)  
Local governments (municipalities) are accountable (2)  
[Any TWO] (2x2) (4)
- 4.3.1 Spatial Development Initiative (2) 1x2 = (2)
- 4.3.2 Transport essential in economic development (2)  
Good transport network assists transporting raw materials (2)  
Good transport network assists transporting finished goods (2)  
Well developed harbours facilitates importing and exporting (trade) (2)  
[Any TWO] (2x2) (4)
- 4.3.3 Lack of government funds to upgrade roads (2)  
Regular income from toll plazas ensure ongoing maintenance (2)

- [Any ONE] (1x2) (2)
- 4.3.4 Shortest link to an export harbour (2)  
Save on transport costs (2)  
Avoid congestion at other harbours (2)  
Upgraded roads facilitates safer transport (2)  
Create investment opportunities (2)  
[Any TWO - Accept other] (2x2) (4)
- 4.3.5 Pretoria (2) Industrial activities (2)  
Administrative capital (2)  
Witbank (2) Coal mining (2)  
Power station – generate electricity (2)  
Middelburg (2) Iron and steel industry (2)  
Power stations – generate electricity (2)  
Nelspruit (2) Farming activities (2)  
Tourism (2)  
Maputo (2) Trade (2)  
[Any TWO nodes and its contribution to the economy] (4x2) (8)
- 4.3.6 More goods can be exported (2)  
Greater income from exporting (2)  
Costs to transport goods are cut and save money (2)  
[Any TWO] (2x2) (4)
- 4.4.1 PWV (2)  
Durban-Pinetown/eThekweni Metropolitan Region(2)  
Port Elizabeth-Uitenhage/Nelson Mandela Metropolitan Region (2)  
South-western Cape (2)  
[Any ONE] (1x2) (2)
- 4.4.2 Industries cluster/group together in a centralised location (2)  
[Concept] (1x2) (2)
- 4.4.3 There are many skilled and unskilled labourers (2)  
Many and wide variety of minerals (2)  
Wide variety of agricultural products (2)  
Availability of water (2)  
Sufficient power supplies (2)  
Flat land for industrial development (2)  
Moderate climate suitable for working conditions (2)  
Transport network is excellent and goods can be easily transported (2)  
Large population provide ready markets for all manufactured goods (2)  
Government assistance (2)  
Personal initiative of business people (2)  
[Any TWO – Accept other] (2x2) (4)

- 4.4.4 Far away from major markets (2)  
Pollution caused by industries (2)  
Running out of suitable flat land (2)  
Overconcentration of people (2)  
Infrastructure can no longer cope with increased outputs (2)  
High labour costs and strikes (2)  
Fluctuation in market prices (2)  
HIV/Aids has negative effect on labour and labour costs (2)  
[Any TWO – Accept other] (2x2) (4)
- 4.4.5 Goods exported (2)  
Foreign currency earned (2)  
Create employment (2)  
Provide people with income (2)  
Development of towns/cities (2)  
Development of infrastructure (2)  
Create trade relationships (2)  
Industries also provide raw material for other industries (2)  
[Any TWO - Accept other] (2x2) (4)
- [100]**
- GRAND TOTAL: 300**