



# education

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Department:  
Education  
**REPUBLIC OF SOUTH AFRICA**

**NATIONAL  
SENIOR CERTIFICATE**

**GRADE 12**

**GEOGRAPHY P1  
PREPARATORY EXAMINATION 2008  
MEMORANDUM**

**MARKS: 300**

**TIME: 3 hours**

**This memorandum consists of 14 pages.**

**QUESTION 1**

- 1.1.1 C (2)  
 1.1.2 B (2)  
 1.1.3 B (2)  
 1.1.4 B (2)  
 1.1.5 A (2) 5x2=(10)
- 1.2.1 A – Permeability (2)  
 1.2.2 B – Abstraction (2)  
 1.2.3 C – Watershed (2)  
 1.2.4 D – River system (2)  
 1.2.5 E – Rejuvenation (2) 5x2=(10)
- 1.3.1 (a) 6 (2) 1x2=(2)  
 (b) Tropical cyclones are named alphabetically, the tropical cyclone before Gamede would start with the letter F (2) 1x2=(2)  
 (c) Westerly direction then a southwesterly direction and then southerly direction (2) 1x2=(2)  
 (d) No (2) 1x2=(2)  
 (e) It is not easy to predict which areas it will effect (2)  
 It makes it difficult to issue warning signals (2)  
 It causes more damage/loss of life (2)  
 [Any ONE] 1x2=(2)
- 1.3.2 (a) Port of Durban was closed for two days (2)  
 The lower Marine Parade was flooded (2)  
 The beaches had to be closed (2)  
 [Any ONE] 1x2=(2)  
 (b) Residents must take warnings seriously (2)  
 Must stock up with food especially canned food (2)  
 Must stock up with water (2)  
 Have battery operated torch and radio (2)  
 Don't use telephone unnecessarily (2)  
 Keep a well-stocked first aid kit (2)  
 [Any ONE – accept any other logical answer] 1x2=(2)  
 (c) The local economy will be damaged (2)  
 Business and industry will come to a virtual standstill (2)  
 A lot of money will be spent to sort out the damages (2)  
 Infrastructure will be damaged which will effect economy (2)  
 Costly insurance claims (2)  
 Negative impact on tourism (2)  
 [Any TWO – accept other logical answers] 2x2=(4)

- 1.4.1 (a) An increase in the average temperature of the Earth's atmosphere (2)  
[Concept] 1x2=(2)
- (b) Gases, such as carbon dioxide, remain in the upper regions of the atmosphere trapping heat given off by the Earth (2)  
[Concept] 1x2=(2)
- 1.4.2 Temperature increases (2)  
Precipitation decreases/increases (2)  
Increase in evaporation rate (2)  
[Any ONE] 1x2=(2)
- 1.4.3 They would experience more illnesses (2)  
More floods may occur (2)  
More droughts may occur (2)  
Their food supply would be affected – famine (2)  
Human comfort conditions would be negatively affected (2)  
Drowning of low-lying coastal areas (2)  
[Any TWO – accept other logical answers] 2x2=(4)
- 1.4.4 Trees / plants absorb carbon dioxide during photosynthesis (2)  
Greenbelt development will increase number of trees / plants that will absorb carbon dioxide (2) 2x2=(4)
- 1.4.5 Trees / Plants will restrict uncontrolled urban expansion (2)  
To reduce / slowdown climatic change (2)  
To reduce carbon emissions (2) 1x2=(2)
- 1.4.6 • It would impact negatively on the United States of America's industrial growth (2)  
• United States of America is a highly industrialised country. It therefore gives off a lot of pollution contributing significantly to global warming / climatic change. (2)  
[Any ONE – accept any other logical answer.] 1x2=(2)
- 1.5.1 (a) A – laminar flow (2) 1x2=(2)  
(b) B – turbulent flow (2) 1x2=(2)
- 1.5.2 At A there are obstructions, such as rapids, and it is shallow this creates turbulent flow – water churned around (2)  
At B the channel is deeper and smoother and water flows in layers on top of one another which creates laminar flow (2) 2x2=(4)
- 1.5.3 (a) Dendritic pattern (2) 1x2=(2)  
(b) Waterfall (2) / rapid (2) 2x2=(4)  
(c) The lowest level (sea level) to which a river can erode (2) 1x2=(2)
- 1.5.4 (a) Heavy intensive rainfall of 250 mm in 12 hours (2) 1x2=(2)  
(b) Narrow steep sided valleys (2)  
Small catchment area (2)  
Ground already reached saturation level (2)  
[Any TWO] 2x2=(4)

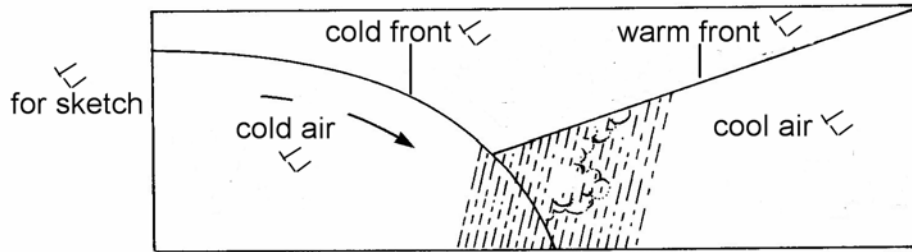
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- (c) Narrow steep-sided valleys result in water levels rising high very quickly (2) / accelerated run-off along steep slopes (2)  
 Small catchment area cannot handle large volumes of precipitation and water levels will rise quickly (2) / water from tributaries reaches main river quickly (2)  
 Soil that is saturated cannot absorb more water and water runs off on the surface and rises quickly (2) / increased run-off (2)  
 [Any TWO – must refer to reasons given in QUESTION 1.5.4 (b)] 2x2=(4)
- (d) 60 people dead (2)  
 600 homeless (2)  
 80 cars lost (2) 3x2=(6)
- (e) Building bridges (2)  
 Making river channel narrow (2)  
 Making arch of bridge narrow (2)  
 Settlements located too close to river (2)  
 [Any TWO] 2x2=(4)
- (f) People can be evacuated in advance (2)  
 Valuable personal belongings can be taken of premises (2)  
 Emergency services can be deployed sooner (2)  
 [Any TWO – Accept other logical answers] 2x2=(4)
- (g) Reduction of run-off and increasing infiltration (2)  
 Protection of soils (2)  
 Maintain water in its purest form possible (2)  
 Protection of river ecosystems (2)  
 Limit unnatural causes and thus number of floods (2)  
 [Any TWO – Accept other logical answers] 2x2=(4)

**[100]****QUESTION 2**

- 2.1 A – Pressure gradient force (2)  
 B – Coriolis force (2)  
 C – High-pressure area (2)  
 D – Low-pressure area (2)  
 E – Geostrophic flow (wind) (2) 5X2=(10)
- 2.2.1 (ii) (2)  
 2.2.2 (iv) (2)  
 2.2.3 (vii) (2)  
 2.2.4 (v) (2)  
 2.2.5 (i) (2) 5X2=(10)

- 2.3.1 (a) Mid-latitude Cyclone (2) Temperate cyclone. 1x2=(2)  
(b)



[Any TWO labels + ✓✓ for correct sketch] 3x2=(6)

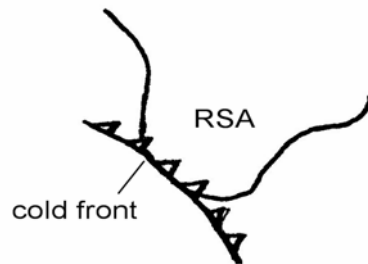
- 2.3.2 (a) B – South Atlantic / St. Helena High Pressure Cell (2) 2x2=(4)  
C – South Indian / Mauritius High Pressure System (2)

(b) B is ridging in south of South Africa and blocking the cold fronts from affecting the Western Cape (2)  
This will reduce the amount of precipitation, wind, cloud cover and cold conditions over the Western Cape (2) 2x2=(4)

- 2.3.3 (a) Kalahari High Pressure (2) / Continental High Pressure 1x2=(2)  
(b)

During winter the inversion layer associated with the Kalahari high pressure is below the level of the Escarpment, resulting in little or no rainfall (2)  
During summer the inversion layer associated with the Kalahari high pressure is above the level of the Escarpment, resulting in rainfall (2) 2x2=(4)

2.4.1



✓✓ 1x2=(2)

- 2.4.2 Precipitation (2)  
Lower temperatures (2)  
Windy conditions (2)  
Overcast conditions (2)  
Higher pressure (2)  
Drop in humidity (2)  
[Any TWO] 2x2=(4)

- 2.4.3 The people in the suburbs have buildings that are well built (2)  
Well developed infrastructure in suburbs (2)  
Suburbs better equipped to transport excess water away (2)  
Electricity in suburbs to use heating systems (2)  
People in suburbs are insured against damage (2)  
[Any TWO – could refer to opposite for informal settlements] 2x2=(4)
- 2.5.1 During the night the air is cooler (2)  
Cooler air heavier and denser thus more subsidence (2)  
Pollution dome pushed lower down (2)  
During the day the air is warmer (2)  
Warmer air lighter and less dense and rises (2)  
Pollution dome lifts higher up (2)  
[Any TWO] 2x2=(4)
- 2.5.2 Global warming/greenhouse effect (2) 1x2=(2)
- 2.5.3 Cut down the amount of pollution given off in the city (2)  
Taller chimneys/stacks to release pollutants above inversion (2)  
Limit industrial activities at night time (2)  
Use cleaner fuels in engines (2)  
Legislation and fines to reduce pollution (2)  
Greenbelt development (2)  
[Any ONE – Accept any other logical answer] 1x2=(2)
- 2.6.1 (a) A – 2 (2)  
B - 1 (2) 2x2=(4)  
(b) A – run-off in tributaries reaches main stream and point of outflow  
at the same time resulting in high flood peak (2)  
B – run-off in two circular basins reaches main stream and point of  
outflow with intervals resulting in two flood peaks 2x2=(4)
- 2.6.2 (a) Basin A (2) 1x2=(2)  
(b) Most of Basin A's water reaches the main stream at the same  
time (2) 1x2=(2)
- 2.7.1 (a) Cuesta/Homoclinal ridge (2) 1x2=(2)  
(b) Was used during war to protect settlements (2)  
Fertile plains are found between these ridges which are used for  
agriculture (2)  
Water traps which act as artesian basins (2)  
[Any ONE] 1x2=(2)  
(c) It forms in an area which has inclined strata/layers (2)  
Alternate hard and soft strata (2)  
The soft rock gets eroded forming valleys (2)  
Hard rock protrudes above the surface as a cuesta/homoclinal  
ridge (2)  
[Any THREE] 3x2=(6)
- 2.7.2 B – dip slope (2)  
C – scarp slope (2) 2x2=(4)
- 2.7.3 Mesas form in horizontal strata (2) / Mesas do not form in inclined  
strata (2) 1x2=(2)

- 2.8.1 Mass movement is a process by which weathered material is transported down-slope under the influence of gravity (2)  
[Concept] 1x2=(2)
- 2.8.2 Soil creep (2) 1x2=(2)
- 2.8.3 Retaining walls crack or break (2)  
Poles lean over (2)  
Trees lean over (2)  
Trees' roots grow upslope (2)  
Terracettes develop on slope (2)  
Soil piles up at bottom of slope (2)  
[Any ONE] 1x2=(2)
- 2.8.4 Extraction of raw materials (2)  
Deforestation (2)  
Urbanisation (2)  
Recreation (2)  
[Any ONE – Accept any other logical answer.] 1x2=(2)
- 2.8.5 It increases soil erosion (2)  
Damages the natural fauna and flora (2)  
Removes the minerals from the soil resulting in infertile soil (2)  
Destroys natural habitat of creatures (2)  
Ecosystems thrown into imbalance (2)  
[Any TWO – Accept other logical answers.] 2x2=(4)

**[100]****QUESTION 3**

- 3.1.1 False (2)
- 3.1.2 True (2)
- 3.1.3 True (2)
- 3.1.4 False (2)
- 3.1.5 True (2) 5x2=(10)
- 3.2.1 (iii) (2)
- 3.2.2 (i) (2)
- 3.2.3 (vi) (2)
- 3.2.4 (v) (2)
- 3.2.5 (ii) (2) 5x2=(10)
- 3.3.1 Dispersed (2) 1x2=(2)

- 3.3.2 Single farmstead (2)  
No other house in sight – isolated (2)  
Large farm  
[Any TWO – Accept other logical answers] 2x2=(4)
- 3.3.3 Availability of water (2)  
Availability of building materials (2)  
Closeness to arable land (2)  
Level land for farming (2)  
Sheltered site  
[Any TWO – Accept other logical answers] 2x2=(4)
- 3.3.4 Commercial farming (2) 1x2=(2)
- 3.3.5 Evidence of mechanisation – tractor (2)  
Large sections of land cultivated (2)  
[Any ONE] 1x2=(2)
- 3.3.6 Erosion – steep gradient (2)  
Pollution – in river system (2)  
Land degradation (2)  
[Any TWO] 2x2=(4)
- 3.3.7 • Redistribution of land to address the inequalities of the past (2)  
• Restitution to make the agricultural sector more productive and commercial (2)  
[Any TWO – Accept other logical answers] 2x2=(4)
- 3.4.1 Agricultural sector (2) 1x2=(2)
- 3.4.2 Growing population needs more food (2)  
Needs water to grow crops (2)  
No control over irrigation system – wasteful methods (2)  
Poor farming methods of subsistence farmers (2)  
High evaporation rates (2)  
[Any ONE] 1x2=(2)
- 3.4.3 Storage – build small dams (2) / narrow deep dams (2)  
Water transfer schemes (2)  
Store water underground in unused mines (2)  
Build large storage dams where evaporation rates are low – east (2)  
Recycle sewage and industrial water (2)  
Educate public to conserve water (2)  
Desalination – costly process though (2)  
Increase cost of water to prevent waste (2)  
[Any THREE – Accept other logical answers] 3x2=(6)

- 3.4.4 Low rainfall in South Africa – must preserve water (2)  
 High rainfall variability – availability of water varies (2)  
 High evaporation rate – preserve water by reducing evaporation (2)  
 High population figures – needs water – important everyday use (2)  
 Primary and secondary industry need water – important for economic growth (2)  
 Save water for drier years – El Niño years (2)  
 [Any FOUR – Accept other logical answers] 4x2=(8)
- 3.5.1 Using natural resources at a steady level that is not likely to damage the environment nor use up the resource (2)  
 Development that meets the demands of the present population without compromising the needs of future generations (2)  
 [Concept] 1x2=(2)
- 3.5.2 (a) A decline in the population of a rural area (2)  
 [Concept] 1x2=(2)
- (b) Lack of services (2)  
 Poor infrastructure (2)  
 Poverty (2)  
 Low standard of living (2)  
 Droughts / Floods (2)  
 Fewer jobs / unemployment (2)  
 Rising production costs on farms (2)  
 Unsafe / farm killings (2)  
 [Any TWO – Accept other logical answers] 2x2=(4)
- 3.5.3 People must implement the programmes (2) / programme must meet specific requirements of local people (2) 1x2=(2)
- 3.5.4 Build more schools (2)  
 Train more educators (2)  
 Supply more learning / support material / infrastructure (2)  
 Provide free education (2)  
 Provide adult education (2)  
 Provide vocational education  
 [Any THREE – Accept other logical answers] 3x2=(6)
- 3.6.1 Family planning clinics and contraceptives are not easily available (2)  
 Men are working in urban areas and some of them have various sleeping partners (2)  
 Tradition / Religion limits the use of condoms (2)  
 Rural area is generally male dominated which allows them to have sex with various women (2)  
 High illiteracy levels regarding HIV/Aids (2)  
 [Any TWO] 2x2=(4)

- 3.6.2 (a) A person coming from a neighbouring country/region to find work for short periods of time to earn money to send back home (2)  
[Concept] 1x2=(2)
- (b) Labourers move freely across borders (2)  
Basic social structure of the family is broken (2)  
Practicing unsafe sex with temporary partners (2)  
Living in crowded places (2)  
Lack of awareness (2)  
[Any TWO] 2x2=(4)
- 3.7.1 Increased (2) 1x2=(2)
- 3.7.2 43% (2) 1x2=(2)
- 3.7.3 Expensive (2)  
It is not readily available (2)  
[ANY ONE] 1x2=(2)
- 3.7.4 Different areas subjected to blackouts at different times to save electricity (2)  
[Concept] 1x2=(2)
- 3.7.5 Wet coal (2)  
Rainy (gloomy) conditions (2)  
Power station maintenance is poor (2)  
Lack of planning (2)  
[Any ONE accept other logical answers] 1x2=(2)
- 3.7.6 Switch off unused geysers (2)  
Switch off lights in unoccupied rooms (2)  
[Any ONE] 1x2=(2)
- 3.7.7 Production comes to a halt – no income for companies (2)  
People get laid off – no income (2)  
Spending reduces – businesses earn less (2)  
Export reduces – lower income for South African government (2)  
Mines and most production companies shut down (2)  
Fewer tourists due to uncertainties (2)  
[Any TWO – Accept other logical answers] 2x2=(4)

**[100]****QUESTION 4**

- 4.1.1 concentric zone (2)
- 4.1.2 Multiple nuclei (2)
- 4.1.3 Burgess (2)
- 4.1.4 1 (2)

- 4.1.5 light (2) 5x2=(10)
- 4.2.1 primary (2)
- 4.2.2 water (2)
- 4.2.3 thermal power stations in Mpumalanga (2)
- 4.2.4 increases (2)
- 4.2.5 positive (2) 5x2=(10)
- 4.3.1 (a) The process in which an increasing proportion of a country's population is concentrated in urban areas (2)  
[Concept] 1x2=(2)
- (b) The rate at which the number of people living in cities, expressed as a percentage, is increasing from year to year (2)  
[Concept] 1x2=(2)
- 4.3.2 Better employment (2)  
Higher wages (2)  
Better services e.g. health, education (2)  
Social life (2)  
Higher standard of living (2)  
Better infrastructure (2)  
[Any TWO – Accept other logical answers] 2x2=(4)
- 4.3.3 Ghost towns (2)  
Fewer people to use services (2)  
Services decline / slow down (2)  
Ageing population (2)  
No natural growth (2)  
Unused resources (2)  
Abandoned farmhouses (2)  
Farming activities decline (2)  
Easier for hostile infiltration (2)  
[Any TWO – Accept other logical answers] 2x2=(4)
- 4.3.4 Develop tourism (2)  
Attract retired people and commuters (2)  
Industrial decentralisation / provide incentives (2)  
Train young people as farmers (2)  
Programmes to establish young farmers on farm land (2)  
Introduce irrigation schemes (2)  
Improve services (2)  
Improve infrastructure in rural areas (2)  
Implement principles of agenda 21 (2)  
[Any TWO – Accept other logical answers] 2x2=(4)
- 4.4.1 A situation in which large numbers of road vehicles are prevented from moving freely (2)  
[Concept] 1x2=(2)

- 4.4.2 Most accessible part of the city (2)  
Convergence of all forms of transport (2)  
Poor public transport and use of private vehicles (2)  
Many people work in the CBD (2)  
Outdated / gridiron street pattern (2)  
[Any TWO – Accept other logical answers] 2x2=(4)
- 4.4.3 Pollution levels are high – not good for health – unhygienic conditions (2)  
Use short term solutions to problems – not sustainable solution (2)  
People keep on modifying the city to suit them – not keeping in touch with nature (2)  
Traffic congestion results in high levels of aggression / road rage (2)  
Increasingly difficult to provide cities with their needs as it becomes difficult to access (2)  
[Any TWO – Accept other logical answers] 2x2=(4)
- 4.4.4 Build shopping malls / centres (2)  
Build more freeways – circle roads around the city (2)  
Encourage people to make use of safer public transport (2)  
Encourage people to make use of lift clubs (2)  
Fines for one person in a car – restrict to certain lanes (2)  
Park-and-ride schemes (2)  
Synchronised traffic lights (2)  
[Any TWO – Accept other logical answers] 2x2=(4)
- 4.4.5 Pollution levels are high (2)  
Noise levels are increasing (2)  
Crime / violence (2)  
Unhygienic conditions / litter (2)  
Hijacks (2)  
Taxi violence (2)  
High cost of living (2)  
Social problems, e.g. prostitution and drug abuse (2)  
Lack of green areas / parks (2)  
[Any TWO – Accept other logical answers] 2x2=(4)
- 4.4.6 Dirty / ugly environment is depressing (2)  
Many people seldom move beyond the urban environment (2)  
Plants absorb carbon dioxide – release oxygen (2)  
[Any TWO – Accept other logical answers] 2x2=(4)
- 4.4.7 Relaxation for people – release stress (2)  
Playgrounds for children (2)  
Biodiversity – habitat for animals and plants (2)  
Sporting facilities (2)  
Beautification of the city (2)  
Provide infrastructure for future demands (2)  
Proper zoning of land use (2)  
[Any TWO – Accept other logical answers] 2x2=(4)

- 4.5.1 Globalization is a process by which people, ideas and economic activities in previously relatively separated parts of the world become interconnected (2)  
[Concept] 1x2=(2)
- 4.5.2 Goods change from one mode of transport to another (2)  
Goods change from rail/road to sea transport (2) 2x2=(4)
- 4.5.3 Cheaper production (2)  
Complementary companies (2)  
Cheaper to export goods (2)  
International markets – more income (2)  
Shared services (2)  
Shared infrastructure (2)  
[Any TWO – Accept any other logical answers] 2x2=(4)
- 4.5.4 A resource that can reproduce itself (2)  
OR explain with example, e.g.  
Trees are chopped down for use and other trees are planted to replace them (2) 1x2=(2)
- 4.5.5 Aforestation / Plant more trees (2)  
Use alternative sources of fuel (2)  
No VAT on supplies obtained locally (2)  
Use alternative raw material to make products traditionally made of wood (2)  
[Any TWO – Accept any other logical answers] 2x2=(4)
- 4.5.6 Most of the goods produced requires specialized skills – people of Eastern Cape mainly unskilled (2)  
Products to be sold on global markets – no direct benefits to people (2)  
Local community will not gain financially (2)  
Local community not directly involved in development (2)  
[Any TWO] 2x2=(4)
- 4.5.7 Active and growing economy will provide jobs (2)  
Raise standard of living (2)  
Generate taxes to government – spend more on public services and infrastructure (2)  
Must put structures in place to support such growth (2)  
Provide education and training – develop skills (2)  
Competitive products / markets (2)  
[Any TWO] 2x2=(4)

- 4.5.8 According to the Bill of Rights we all have the right to these services – people start to rely on these services and do not develop themselves (2)  
Expensive for government to provide services – people pay more tax (2)  
Government cannot provide adequate services – demand too big / high (2)  
[Any TWO] 2x2=(4)
- 4.6.1 The informal sector includes informal work such as petty trade, casual employment, spaza shops and street traders – traders not registered (2)  
[Concept] 1x2=(2)
- 4.6.2 (a) Dangerous (2)  
Exposed to elements (2)  
Not regular income (2)  
Competition (2)  
[Any ONE – Accept any other logical answer] 1x2=(2)
- (b) Lack of formal employment opportunities (2)  
No formal training (2)  
Lack of skills (2)  
Need in the market place (2)  
[Any ONE – Accept any other logical answers] 1x2=(2)
- (c) Not registered as taxpayers (2)  
No income for the government (2)  
Sell counterfeit products – government loses money (2)  
[Any TWO – Accept any other logical answers] 2x2=(4)
- [100]**