



Province of the
EASTERN CAPE
EDUCATION

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

SEPTEMBER 2015

**GEOGRAPHY P1
MEMORANDUM**

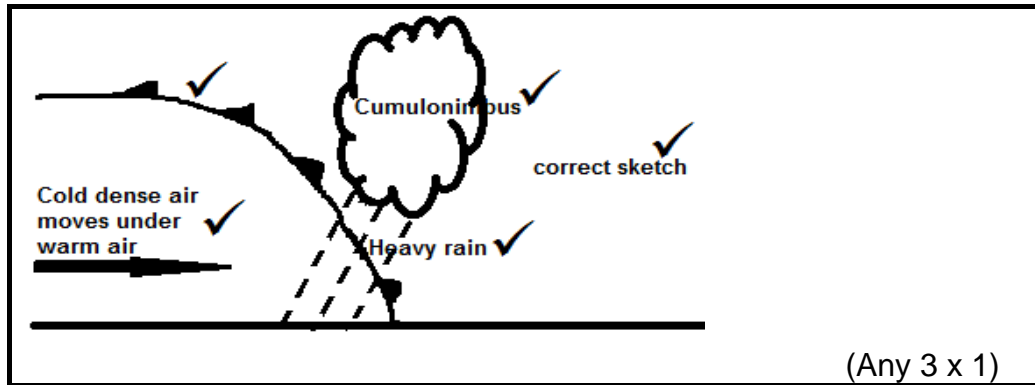
MARKS: 225

This memorandum consists of 15 pages.

SECTION A: CLIMATE, WEATHER AND GEOMORPHOLOGY**QUESTION 1**

- 1.1 1.1.1 B (urban climate) ✓
- 1.1.2 A (1 800 m) ✓
- 1.1.3 A (6 °C) ✓
- 1.1.4 C (isotherms) ✓
- 1.1.5 D (decreases) ✓
- 1.1.6 B (more pollution and lower relative humidity) ✓
- 1.1.7 C (a greater vertical dimension and pollutants are dispersed) ✓
- 1.1.8 C (less hygroscopic nuclei and less clouds) ✓ (8 x 1) (8)
- 1.2 1.2.1 Catchment area ✓
- 1.2.2 Laminar flow ✓
- 1.2.3 Groundwater ✓
- 1.2.4 River mouth ✓
- 1.2.5 Water table ✓
- 1.2.6 Alluvium ✓
- 1.2.7 Discharge ✓ (7 x 1) (7)
- 1.3 1.3.1 Boundary between cold air and warm air where the cold air forced the warm air to rise. ✓
[CONCEPT] (1 x 1) (1)
- 1.3.2 They generally move over the land (SA) in winter. ✓
They are associated with cold weather. ✓
Due to northward movement of anticyclones. ✓ (Any 1 x 1) (1)

1.3.3



(3)

1.3.4 The polar front boundary shifts southward in conjunction with the shift of the pressure belts. The cold front is now too far south to affect South Africa's weather. ✓✓
 ITCZ moved southwards, forcing all pressure belts further south. ✓✓
 South Atlantic high further south, blocking incoming cold fronts. ✓✓

(Any 1 x 2) (2)

1.3.6 Strong winds will make it difficult for boats to go out to sea. ✓✓
 Heavy rain will decrease visibility. ✓✓
 High waves will make it difficult at sea. ✓✓
 There will be monetary losses for commercial fishermen. ✓✓
 There will be less food available for subsistence fishermen and their families. ✓✓
 Fishing vessels have to be secured in harbours, which leads to extra costs. ✓✓
 Upwelling will bring nutrients which will increase fishing stock. ✓✓
 (Any 4 – Accept other reasonable answers). ✓✓

(4 x 2) (8)

1.4 1.4.1 C – South Atlantic ✓
 D – South Indian ✓

(2 x 1) (2)

1.4.2 4 hPa/mb ✓

(1 x 1) (1)

1.4.3 Air circulates anticlockwise around the South Indian High. ✓✓
 Warm moist air will flow as south-easterly winds/on shore winds from the Indian Ocean over the escarpment into the interior. ✓✓

(Any 1 x 2) (2)

1.4.4 Moisture front ✓

(1 x 1) (1)

1.4.5 Convectional ✓

(1 x 1) (1)

- 1.4.6 Line thunderstorms are caused by large-scale convergence along the trough line or moisture front on the boundary between the cooler dry air from the Atlantic Ocean and the warmer moist air from the Indian Ocean. ✓✓
The colder and denser air from the Atlantic ocean moves in beneath the warmer less dense air from the Indian ocean forcing it upwards. ✓✓
This causes condensation, cumulonimbus cloud formation and possible rain and thunder. ✓✓ (3 x 2) (6)
- 1.4.7 Main source of irrigation ✓/store water for farms and domestic use. ✓ (2 x 1) (2)
- 1.5 1.5.1 It is a measure of the total length of streams per unit area ✓ [CONCEPT] (1 x 1) (1)
- 1.5.2 It has many streams ✓
Has the highest stream order ✓ (Any 1 x 1) (1)
- 1.5.3 Less infiltration ✓✓
Higher rainfall ✓✓
Dense vegetation ✓✓
Gentle gradient ✓✓
Low evaporation rate ✓✓ (Any 2 x 2) (4)
- 1.5.4 **A** is typical of a dendritic pattern with its treelike description ✓✓
B is typical of a trellis pattern with its tributaries joining the mainstream at right angles ✓✓ (2 x 2) (4)
- 1.5.5 Sedimentary rocks which underwent folding ✓✓
Rocks with alternating resistance to erosion ✓✓ (2 x 2) (4)
- 1.6 1.6.1 Headward erosion ✓ (1 x 1) (1)
- 1.6.2 **Y** – Captor ✓ (1 x 1) (1)
- 1.6.3 The river that flows down the steeper side of the watershed will erode faster because it has more energy ✓✓ (1 x 2) (2)
- 1.6.4 The volume of water in the river increases ✓✓
The erosive power of the river will be renewed ✓✓ (2 x 2) (4)
- 1.6.5 **X** – Will have less water and this will impact on vegetation that relies on water from the river channel ✓✓
The vegetation will become hardier and this will impact on the type of wildlife that will be found in the river ✓✓
Biodiversity will be destroyed ✓✓
Ecosystems and food chains will be disturbed ✓✓
(Accept other reasonable answers.) (4 x 2) (8)

[75]

QUESTION 2

- | | | | | |
|-----|-------|---|---------|-----|
| 2.1 | 2.1.1 | E (Cold front occlusion) ✓ | | |
| | 2.1.2 | C (Trough) ✓ | | |
| | 2.1.3 | G (Berg wind) ✓ | | |
| | 2.1.4 | A (Cut-off low) ✓ | | |
| | 2.1.5 | I (coastal low) ✓ | | |
| | 2.1.6 | H (heat low) ✓ | | |
| | 2.1.7 | B (saddle) ✓ | (7 x 1) | (7) |
| 2.2 | 2.2.1 | D ✓ | | |
| | 2.2.2 | C ✓ | | |
| | 2.2.3 | B ✓ | | |
| | 2.2.4 | B ✓ | | |
| | 2.2.5 | A ✓ | | |
| | 2.2.6 | C ✓ | | |
| | 2.2.7 | D ✓ | | |
| | 2.2.8 | D ✓ | (8 x 1) | (8) |
| 2.3 | 2.3.1 | It is a small, intense low pressure cell that forms over warmer oceans on the eastern coastal areas of Asia. ✓
[CONCEPT] | (1 x 1) | (1) |
| | 2.3.2 | 7 ✓ | (1 x 1) | (1) |
| | 2.3.3 | (a) There is a steep pressure gradient. ✓ | (1 x 1) | (1) |
| | | (b) Near the leading edge in front of the vortex of the storm/Leading left quadrant ✓ | (1 x 1) | (1) |
| | 2.3.4 | Huge waves or swells ✓
Winds of between 313 km/hour and 378 km/hour ✓ | (2 x 1) | (2) |

- 2.3.5 Small islands are surrounded by oceans and has limited capacity to weaken the storm. ✓✓
Friction with large land surface will disrupt the low pressure from forming as friction weakens the Coriolus force. ✓✓
In mainland interior areas the moisture supply circulates over large land surfaces therefor there is less latent heat. ✓✓ (Any 2 x 2) (4)
- 2.3.6 They are poor and lack technology and may not have effective early warning systems. ✓✓
They often rely on MEDCs to relay information. ✓✓
The lack of money and heavy national debt means that little money is available to spend on flood protection methods. ✓✓
Infrastructure is in poor condition and usually totally destroyed. ✓✓
Poor housing cannot withstand the floodwaters. ✓✓
Damage is often not repaired. ✓✓
Limited medical services leads to fatalities/outbreak of diseases. ✓✓
[NOTE: ACCEPT RESPONSES WHERE THE CANDIDATE EXPLAINS WHY MEDC'S ARE LESS IMPACTED BY TYPHOONS]
(Accept any relevant answers) (Any 4 x 2) (8)
- 2.4 2.4.1 A – katabatic/mountain/downslope ✓
B – anabatic/valley/upslope ✓ (2 x 1) (2)
- 2.4.2 The circulation of the air is modified by solar heating and changes its direction depending on whether it is day time or night time. ✓✓
During the night at A, the slopes are cooled off and air in contact with it also cools off and descends under the influence of gravity. ✓✓
During the day at B, the slopes are heated and air in contact with it also heats up, rises subsequently up the slope. ✓✓ (Any 1 x 2) (2)
- 2.4.3 Windless, cloudless evenings ✓✓
Cold air accumulates on the valley floor. ✓✓
The warmer air from the valley floor is displaced by cold air and a temperature inversion forms. ✓✓
A temperature inversion may lead to the formation of frost if the temperature drops to below 0°C. ✓✓ (Any 3 x 2) (6)
- 2.4.4 They avoid planting fruit trees and frost sensitive crops in frost pockets. ✓
Install electric fans which automatically switch on when the temperature drops to below freezing point. ✓
Fuel lamps to increase temperatures. ✓
Plant tubers ✓ (Any 2 x 1) (2)

2.5	2.5.1	Lower/Old stage ✓	(1 x 1)	(1)
	2.5.2	Slip off slope/inner bank ✓	(1 x 1)	(1)
	2.5.3	Faster flowing water with lots of energy is directed at the outer bank/P ✓✓	(1 x 2)	(2)
	2.5.4	Erosion on the outer bank and deposition on the inner bank of the meander results in the meander neck becoming narrower. ✓ During times of flood water cannot negotiate the meander loop and flows straight through the meander neck. ✓ This results in the meander loop being cut off from the main river to form an ox-bow lake. ✓	(3 x 1)	(3)
	2.5.5	Farmland and homes prone to flooding. ✓✓ Instability of housing foundations. ✓✓ There is a need to bridge rivers/extra costs. ✓✓ Cost of road construction is expensive. ✓✓ (Accept other reasonable answers.)	(Any 4 x 2)	(8)
2.6	2.6.1	Area drained by a river and its tributaries. ✓ [CONCEPT]	(1 x 1)	(1)
	2.6.2	Quality of water ✓ Demand for water ✓	(2 x 1)	(2)
	2.6.3	Mining activities drain acidic water into rivers. ✓✓ High sulphate content in water caused by mines cause eutrophic conditions in dams along rivers. ✓✓ Mining activities pollute ground water of the Olifants River drainage basin. ✓✓	(Any 2 x 2)	(4)
	2.6.4	<ul style="list-style-type: none"> • Fines to be imposed for dumping into rivers. ✓✓ • Create a buffer zone close to rivers to prevent industrial development being too close. ✓✓ • Encourage the growth of vegetation and trees to trap surface run-off and decrease erosion. ✓✓ • Frequent testing of water quality to prevent disruption of ecosystems ✓✓ • Encourage the recycling of waste rather than dumping into rivers. ✓✓ • Awareness campaigns and legislation to prevent dumping in rivers. ✓✓ • To educate farmers on sustainable practices. ✓✓ • Wetlands must be conserved. (Accept any reasonable answer.)	(Any 4 x 2)	(8)

[75]

QUESTION 3

- 3.1 3.1.1 Central place ✓
- 3.1.2 Megalopolis ✓
- 3.1.3 Break of bulk point ✓
- 3.1.4 Specialised cities ✓
- 3.1.5 Junction towns ✓
- 3.1.6 Gateway towns ✓
- 3.1.7 Conurbation
- 3.1.8 Metropolis ✓ (8 x 1) (8)
- 3.2 3.2.1 D (Heavy industry) ✓
- 3.2.2 F (Footloose) ✓
- 3.2.3 A (Ubiquitous) ✓
- 3.2.4 E (Bridge) ✓
- 3.2.5 G (Transnational) ✓
- 3.2.6 B (Market orientated) ✓
- 3.2.7 C (Raw material orientated) ✓ (7 x 1) (7)
- 3.3 3.3.1 It is the movement of people from rural areas to urban areas ✓
[CONCEPT] (1 x 1) (1)
- 3.3.2 'Bright' lights and the excitement of the city attract the young and talented. ✓
Services and facilities offered by urban areas are more than those in rural areas. ✓
Employment opportunities ✓ (Any 2 x 1) (2)
- 3.3.3 Money is sent back to family members in rural areas, which can act as an incentive for development. ✓✓
Abandoned/less economic/small fields and farms can be merged into larger, more economic, commercial enterprises that increase agricultural output. ✓✓
Less people reduces pressure on physical and natural resources. ✓✓.. (Any 2 x 2) (4)

- 3.3.4 Create employment opportunities in rural areas by attracting industries. ✓✓
 Develop infrastructure to attract commercial activities ✓✓
 Provide basic needs for rural people ✓✓
 Attract industries by providing incentives like transport and tax rebates ✓✓
 Improve service delivery ✓✓
 Improve working conditions and salaries ✓✓
 Provide entertainment for the youth in rural areas ✓✓
 Land reform policies/examples ✓✓
 Communal ownership should be changed to individual ownership ✓✓
 Communal ownership is not productive ✓✓
 Provide interest free loans to potential farmers ✓✓
 Improve access to capital for farmers ✓✓
 Use scientific methods to monitor environmental conditions ✓✓
 Use of farming practices that can withstand climate variability, e.g. use of drought resistant crops ✓✓
 Reduced use of nitrogenous fertilisers which is harmful to the environment ✓✓
 Choose livestock breeds that are efficient converters of feed into meat and milk, thus reducing methane emissions ✓✓
 Change to commercial farming/producing export orientated products ✓✓
 Aggressive marketing strategies to attract tourism ✓✓
 Increase the level of farming skills ✓✓
 (Accept other reasonable answers) (Any 4 x 2) (8)
- 3.4 3.4.1 **Level** refers to the percentage of the total population in urban settlements ✓
 [CONCEPT]
Rate measures the amount by which this percentage increases from year to year ✓
 [CONCEPT] (2 x 1) (2)
- 3.4.2 Europe ✓ (1 x 1) (1)
- 3.4.3 Europe ✓ (1 x 1) (1)
- 3.4.4 Availability and efficiency of transport means people no longer have to live where they work ✓✓
 Growth of information technology means that people can work from home ✓✓
 Pollution, crime and traffic congestion encourage people to live outside the city centre ✓✓
 Housing is cheaper on the outskirts ✓✓
 Scenic and aesthetic beauty attract people to the outskirts
 (Accept any other reasonable answer) (Any 2 x 2) (4)

- 3.4.5 Apartheid laws like group areas act, influx control, pass laws, etc. lifted. ✓✓
 Rural/Urban migration. ✓✓
 Immigrants and refugees from other countries. ✓✓
 Natural growth ✓✓ (Any 2 x 2) (4)
- 3.4.6 Apartheid has made problems of urbanisation more complex ✓✓
 The lifting of racial restrictions has resulted in a mass movement of people to cities in search of jobs ✓✓
 Squatter settlements have mushroomed to accommodate the influx of people ✓✓
 Industrial expansion is not in keeping with the levels of urbanisation as there are more people than jobs available ✓✓
 Unequal pace between provision of services and urbanisation ✓✓
 Deepening poverty and unemployment ✓✓
 Increase in crime and violence ✓✓
 Urbanisation brings with it many urban conflicts associated with demands being placed on land, water, housing, transport and employment ✓✓
 Social unrest and environmental pollution ✓✓
 (Accept any other relevant answer) (Any 2 x 2) (4)
- 3.5 3.5.1 Deregulation of the transport industry ✓ (1 x 1) (1)
- 3.5.2 Lack of government regulation ✓ (1 x 1) (1)
- 3.5.3 Drivers will not have appropriate licences ✓✓
 Minibus owners are not liable for any accidents ✓✓
 Unsafe vehicles ✓✓
 Conflict between regulated and unregulated taxi's will result in taxi violence and compromise the safety of passengers ✓✓
 Overloading will affect the safety of passengers ✓✓
 (Accept any other reasonable answers) (Any 2 x 2) (4)
- 3.5.4 It provides efficient transport ✓
 Stops on demand ✓
 Cuts down on walking time for passengers ✓
 Fares are shared to reduce transport costs ✓
 Cars are too expensive to own ✓
 No registration ✓
 No tax ✓
 No labour laws ✓
 Plentiful supply of labour ✓ (Any 2 x 1) (2)

- 3.5.5 They have no employee benefits ✓
Trapped in low-paying jobs ✓
They are targeted by traffic and police officers ✓
(Accept any other reasonable answer) (Any 2 x 1) (2)
- 3.5.6 Introduce licensing requirements to regulate sector ✓✓
Specific routes to be allocated to certain minibus taxi owners ✓✓
Partnerships between the private sector and minibus taxi owners
can be made to transport employees ✓✓
(Accept any other reasonable answer) (Any 2 x 2) (4)
- 3.6 3.6.1 2010 ✓ (1 x 1) (1)
- 3.6.2 It is a commonly established international unit of currency used by
the World Bank ✓✓ (1 x 2) (2)
- 3.6.3 Least minerals were mined ✓
Cost of mining was highest ✓
The price received per ounce was lower than 2011 ✓
The mine had fewer workers ✓ (Any 2 x 1) (2)
- 3.6.4
- Strike action for better wages ✓✓
 - Demand for health care, pensions, housing, food etc. ✓✓
 - Faction fighting due to tribal differences ✓✓
 - HIV/Aids result in skilled workers being lost ✓✓
 - Absenteeism of mine workers ✓✓
- (Accept any other reasonable answers) (Any 2 x 2) (4)
- 3.6.5 Minerals are non-renewable ✓✓
- Flooding and fires force mines to close down thus decreasing
production ✓✓
 - The formation of sinkholes impacts negatively on production ✓✓
 - Hot and dry environments make conditions harsh and
inhospitable ✓✓
 - Absence of water resources ✓✓
 - Rock bursts are responsible for deaths ✓✓
- (Accept any other reasonable answers) (Any 4 x 2) (8)
- [75]**

QUESTION 4

- | | | | | |
|-----|-------|--|---------|-----|
| 4.1 | 4.1.1 | E ✓ | | |
| | 4.1.2 | D ✓ | | |
| | 4.1.3 | G ✓ | | |
| | 4.1.4 | B ✓ | | |
| | 4.1.5 | F ✓ | | |
| | 4.1.6 | A ✓ | | |
| | 4.1.7 | C ✓ | (7 x 1) | (7) |
| 4.2 | 4.2.1 | Agglomeration ✓ | | |
| | 4.2.2 | Food security ✓ | | |
| | 4.2.3 | Free trade ✓ | | |
| | 4.2.4 | Nationalisation ✓ | | |
| | 4.2.5 | Protectionism ✓ | | |
| | 4.2.6 | Trading Blocs ✓ | | |
| | 4.2.7 | Multiplier effect ✓ | | |
| | 4.2.8 | Quaternary activities ✓ | (8 x 1) | (8) |
| 4.3 | 4.3.1 | To bring about equitable distribution and access to land ✓
[CONCEPT] | (1 x 1) | (1) |
| | 4.3.2 | To restore land and compensate individuals and communities who
lost land as a result of apartheid policies ✓
[CONCEPT] | (1 x 1) | (1) |
| | 4.3.3 | He has not been compensated for land taken away from his
community ✓ | (1 x 1) | (1) |

- 4.3.4 The willing seller/buyer clause causes delays in the negotiating process ✓✓
 It is a very costly process ✓✓
 It takes time to resolve land claim disputes ✓✓
 There are grey areas (gaps) in the land reform policies ✓✓
 Lack of training and support for new owners ✓✓
 Disagreement between government and traditional leaders in terms of restoring land to communities ✓✓
 Land has been redistributed to some who have no interest or knowledge of agriculture ✓✓
 The anticipated move from subsistence to commercial farming has not taken place ✓✓
 Land reform has not stimulated the economic growth of rural areas and reduced poverty ✓✓ (Any 3 x 2) (6)
- 4.3.5 Ensure documents are in order ✓✓
 Provide legal assistance ✓✓
 Making the “willing buyer, willing seller” policy more attractive ✓✓ (Any 2 x 2) (4)
- 4.4 4.4.1 Offices/shops/apartments ✓ (1 x 1) (1)
- 4.4.2 Water supplies ✓
 Electricity ✓
 Sanitation ✓
 Security ✓
 Drainage ✓ (Any 2 x 1) (2)
- 4.4.3 Many people migrate from rural areas ✓
 People are unable to obtain jobs/work for low pay/work in informal sector ✓
 Cannot afford housing/it is a cheaper area to live ✓
 They can build themselves/cheap to build ✓
 Not enough houses/inadequate government investment in housing ✓
 Rate of natural increase is high ✓
 Easy access/close to work ✓ (Any 2 x 1) (2)
- 4.4.4 Found on the outskirts of a city/town ✓✓
 Mixture of rural and urban functions ✓✓
 Land is cheaper ✓✓
 Evidence of green belts ✓✓
 Decentralisation from the CBD has seen mass development there ✓✓ (Any 2 x 2) (4)

- 4.4.5 More green parks/belts ✓✓
 Promote recycling of wastes ✓✓
 Use of renewable energy sources such as wind, solar power and bio-gas ✓✓
 Protection of indigenous plants ✓✓
 Reduce waste production ✓✓
 Promote use of eco-friendly products ✓✓
 Reduce traffic by promoting the use of lift clubs, public transport etc. ✓✓
 Recycle water and use of tankers to collect rainwater ✓✓
 Environmental impact studies ✓✓
 Promote high density developments (cluster developments) ✓✓
 (Accept other reasonable answers) (Any 4 x 2) (8)
- 4.5 4.5.1 A – Gauteng/PWV ✓
 B – Durban-Pinetown/eThekweni ✓ (NOT only Durban)
 C – PE-Uitenhage/Nelson Mandela metropole ✓ (NOT only PE)
 D – Southwestern Cape ✓ (NOT only Cape Town or Western Cape)
 (4 x 1) (4)
- 4.5.2 Growth of informal settlements ✓
 Traffic congestion ✓
 Shortages of services like water, electricity, sewerage, housing, etc. ✓
 Regional imbalances/declining rural areas ✓
 Air pollution/Environmental degradation ✓
 Labour problems ✓
 Overconcentration of people and activities ✓ (Any 2 x 1) (2)
- 4.5.3 Electricity is expensive ✓
 No suitable minerals in the area ✓ (2 x 1) (2)
- 4.5.4 Service industries grew up around the mining industry ✓✓
 The JSE resulted from trade sparked by the gold mining industry ✓✓
 It became the most densely populated region in country creating a pool of labour ✓✓
 The large population provided a large domestic market for industrial goods ✓✓
 The proximity of other minerals/raw materials created a variety of supportive industries ✓✓
 It is the headquarters of a large number of overseas companies that require a commercial base as a gateway to the rest of Africa ✓✓
 It contributes about 40 percent of the national total GDP ✓✓
 Huge resources of coal in close proximity provided electricity for industries ✓✓
 The discovery of gold facilitated the building of infrastructure for the region ✓✓
 The Vaal river, Tugela-Vaal water project and the Lesotho Highlands Project provided enough water ✓✓ (Any 4 x 2) (8)

4.6	4.6.1	Good Hope Plan ✓	(1 x 1)	(1)
	4.6.2	Growth Employment and Redistribution ✓	(1 x 1)	(1)
	4.6.3	RDP ✓	(1 x 1)	(1)
	4.6.4	Agriculture ✓ Manufacturing ✓ Tourism ✓	(Any 2 x 1)	(2)
	4.6.5	<ul style="list-style-type: none"> • Must have good roads for marketing ✓ • A good harbour and airport for transport ✓ • Break of bulk points ✓ • Sufficient power supply ✓ 	(Any 2 x 1)	(2)
	4.6.6	Fish River ✓ Wild Coast ✓	(Any 1 x 1)	(1)
	4.6.7	IDZ's are specialised industrial areas found within an SDI ✓✓	(1 x 2)	(2)
	4.6.8	Aimed to attract direct foreign investment by lowering taxes, inflation and trade tariffs ✓✓	(1 x 2)	(2)
	4.6.9	lack of provision of quality of education ✓✓ Lack of improvement of skills of people ✓✓	(Any 1 x 2)	(2)
				[75]
TOTAL:				225

