

**POSSIBLE ANSWERS FOR:**

**GEOGRAPHY 2002**

**PAPER G**  
**HIGHER GRADE**

## **QUESTION 1**

- 1.1.1 a) P – South Atlantic / St. Helena (1)  
Q – Kalahari (1)  
R – South Indian / Mauritius (1) (3)

b) Anticyclonic (1) (1)

c) anticyclonic cyclonic

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air subsides (1) air rises (1)  
air diverges (1) air converges (1)  
air rotates anti-clockwise (1) air rotates clockwise (1) in S hemisphere  
**OR**  
air rotates clockwise (1) air rotates anti-clockwise (1) in N hemisphere  
[ANY 2] (4)

1.1.2 a) Summer (1) (1)  
b) Winter (1) (1)

1.1.3 1.1A: High pressure cells further south (2)  
Low pressure over land (2)  
Moisture front over land (2)  
[ANY 1]

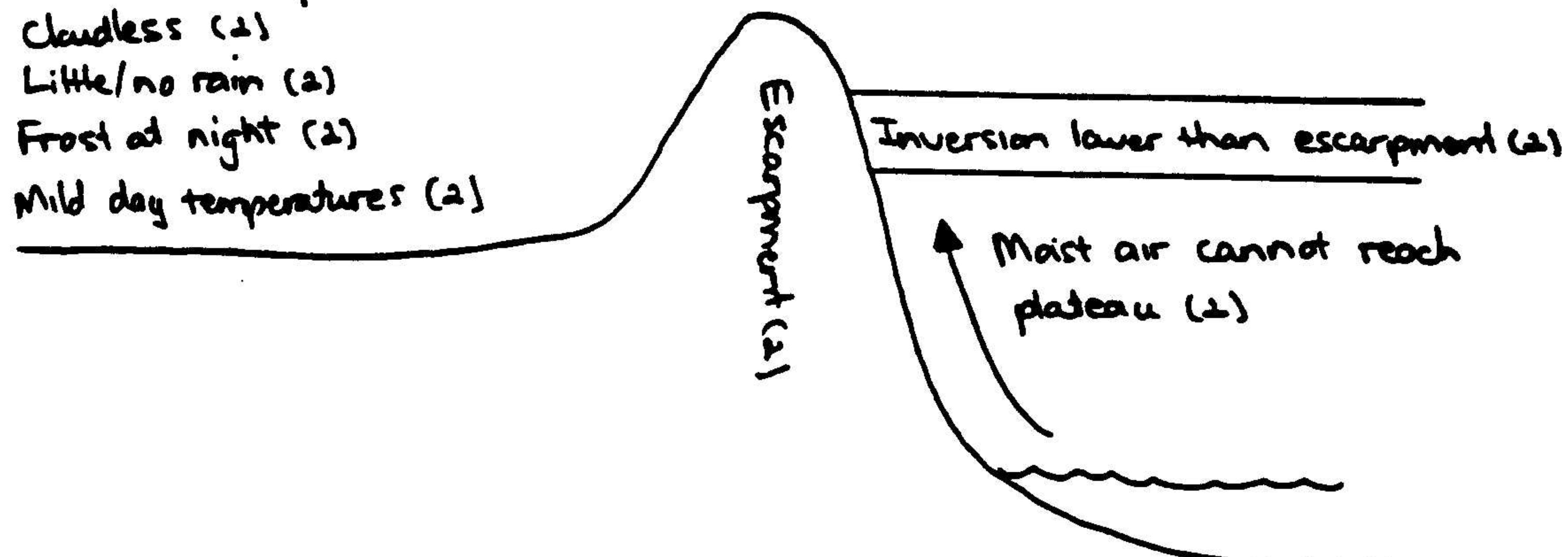
1.1.B: High pressures further north (2)  
High pressure over land (2)  
[ANY 1] 2x2 = (4)

1.1.4 Inversion layer will be closer to Earth's surface / lower than escarpment (2)  
Moist air from Indian Ocean cannot reach the interior (2)  
Limited convection (rising air) over plateau (2)

Interior will experience: cloudless skies (2)  
no / little rain (2)  
frost at night (2)  
mild day time temperatures (2)

**OR**

- Insufficient uplift (2)
  - Cloudless (2)
  - Little/no rain (2)
  - Frost at night (2)
  - Mild day temperatures (2)



- [ANY 4 – sketch and explanation can be combined]  $4 \times 2 = (8)$

1.1.5 a) Warm moist air (from the NE) meets cool dry air (from the SW) (2)  
[CONCEPT]  $1 \times 2 = (2)$

b) Warm moist northeasterlies are forced to rise by cool dry south-westerlies (2)

Large scale condensation takes place (2)

Cumulonimbus clouds develop resulting in thundershowers (2)  $3 \times 2 = (6)$

- 1.2 Sugar cane is grown along the east coast (2) where high temperatures and precipitation prevails (2) throughout the year (2)  
 [ANY 2]

Maize is grown on the eastern plateau (2) where summer rainfall (2) exceeds 500mm per year (2) and cold winters prevail to kill off diseases (2) and mild, dry winters allow the cobs to dry on the stalks (2)

[ANY 2]

Grapes, apples pears and wheat are grown in the SW Cape (2) which will experience a Mediterranean climate (2) Cold, moist winters (2) and warm, dry summers are suitable for the cultivation of these products (2) Apples and pears are frost resistant and can be grown on the valley floors of the Cape fold mountains (2)

[ANY 2]

[Candidates MUST refer to all types of agriculture]

6x2=(12)

- 1.3.1 A – mesa / table topped mountain (1)

B – butte / table topped hill (1)

C – koppie / rounded hill / spitskop (1)

D – homoclinal ridge / cuesta (1)

J – lacolith (1)

(5)

- 1.3.2 Landform A developed from horizontally layered strata (1)

Landform B developed from inclined / tilted strata (1)

(2)

- 1.3.3 a) Cuesta / homoclinal ridge (1) Hogsback (1)

(2)

b) Cuesta – tilted between 10° and 25° (1)

Homoclinal ridge – tilted between 25° and 45° (1)

Hogsback – tilted by 45° or more (1)

(3)

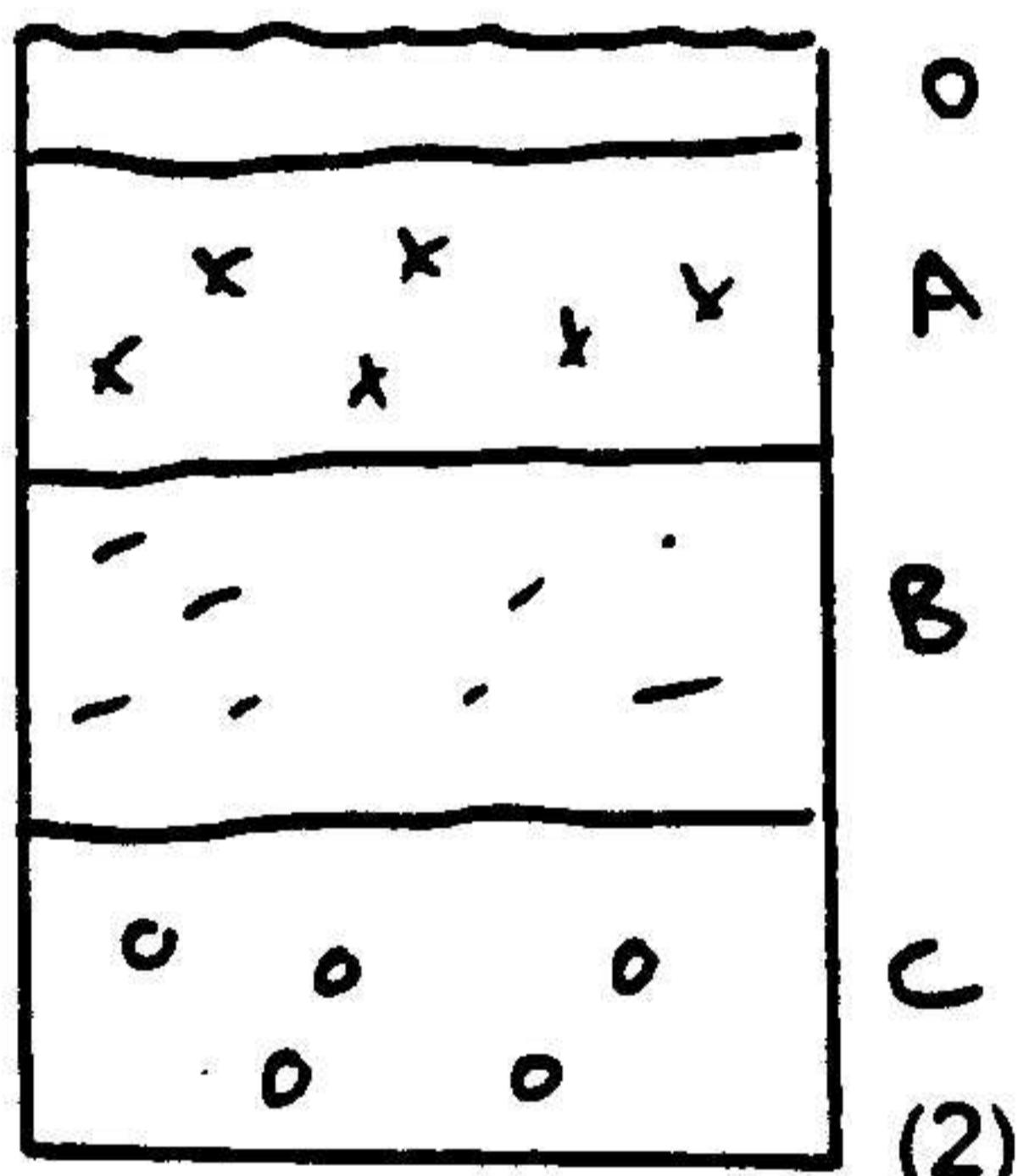
c) F – dip slope (1)

G – scarp slope (1)

(2)

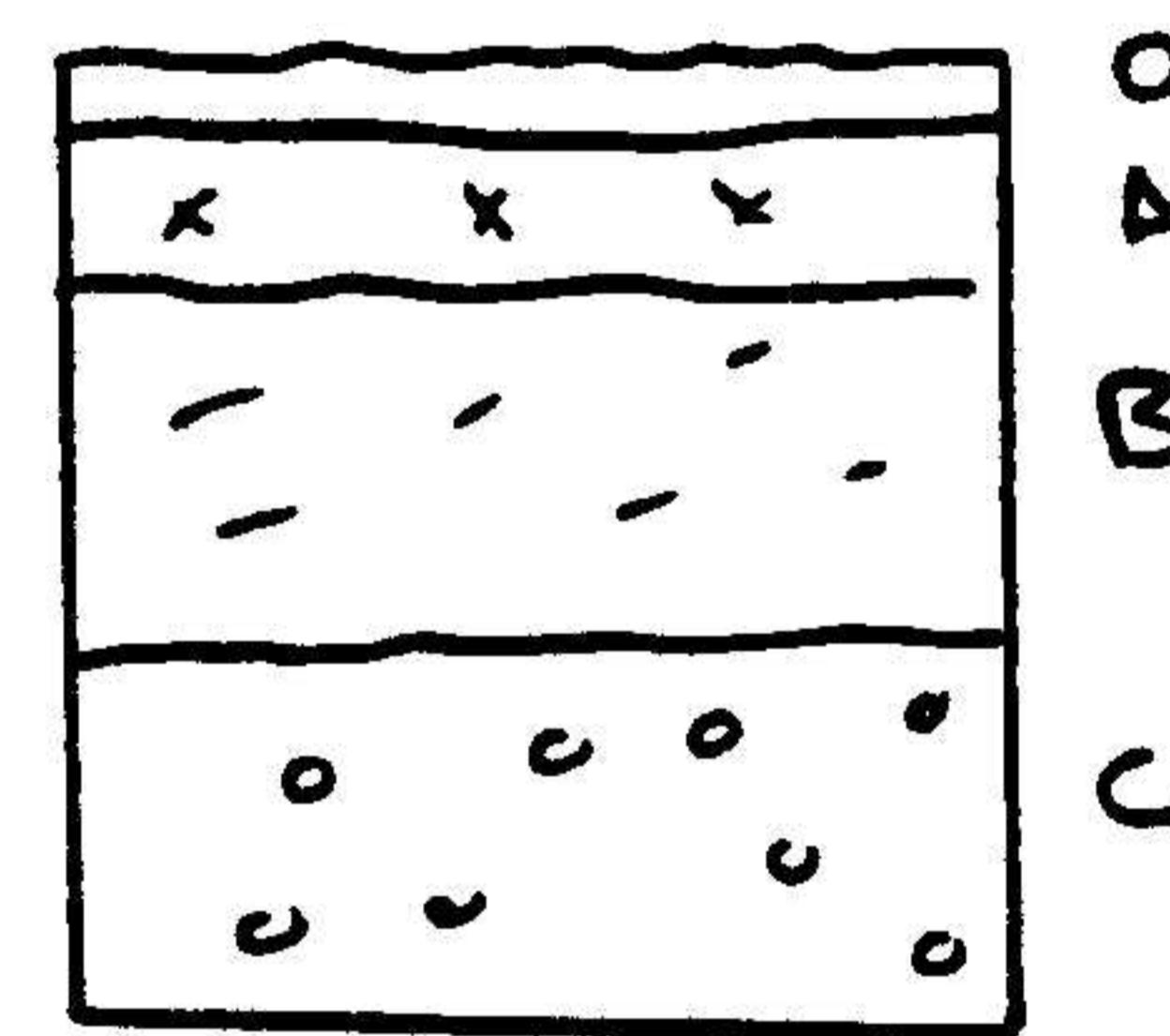
d) F

Show deeper soil



G

Show shallow soil  
or no A & O



(2) 2x2 = (4)

- e) F is situated on a gradual slope (2)

Less soil creep / mass wasting allows a deeper soil profile to develop (2)

G is situated on a steep slope (2)

Soil is removed from the slope easily / washed down the slope resulting in a shallow soil profile (2)

4x2 = (8)

- 1.3.4 a) An enormous mass of magmatic / granite rock (2)

Magma solidifies before it reaches the Earth's surface (2)

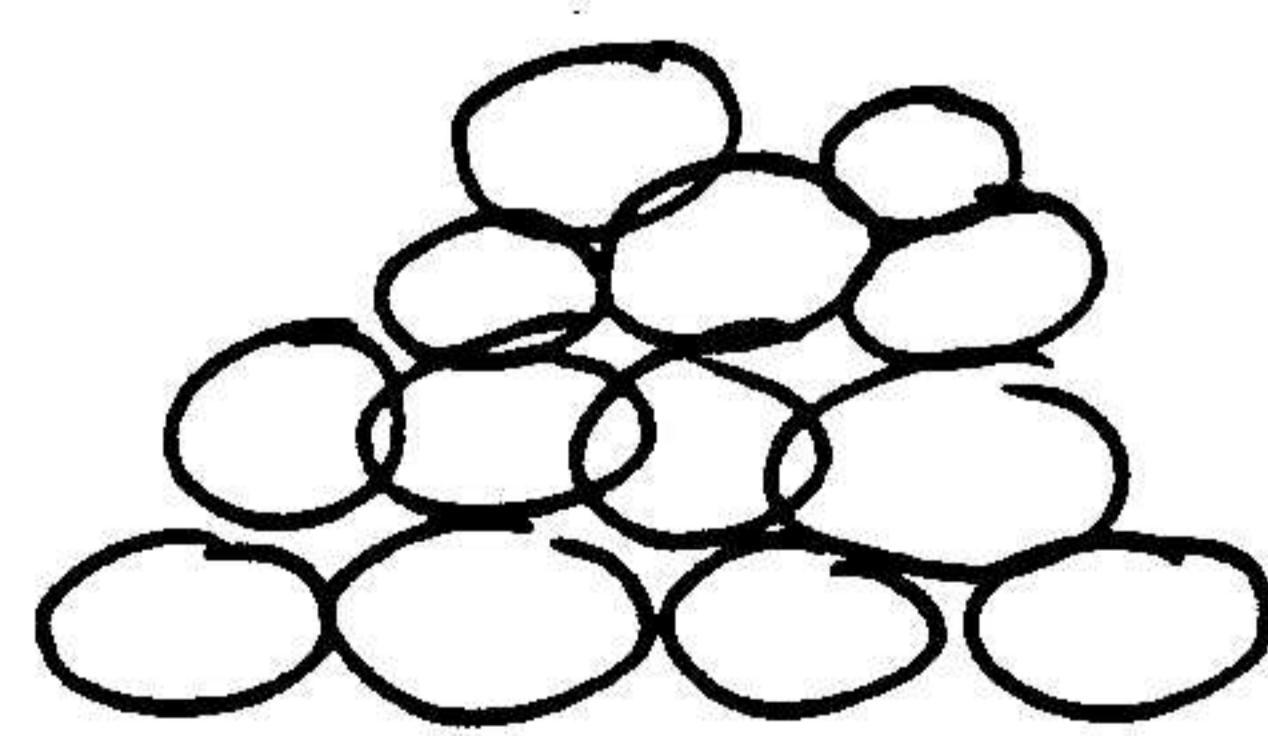
Solidifies deep below the Earth's surface (2)

Intrusion occurred (2)

[ANY 2]

2x2 = (4)

b)



(2)

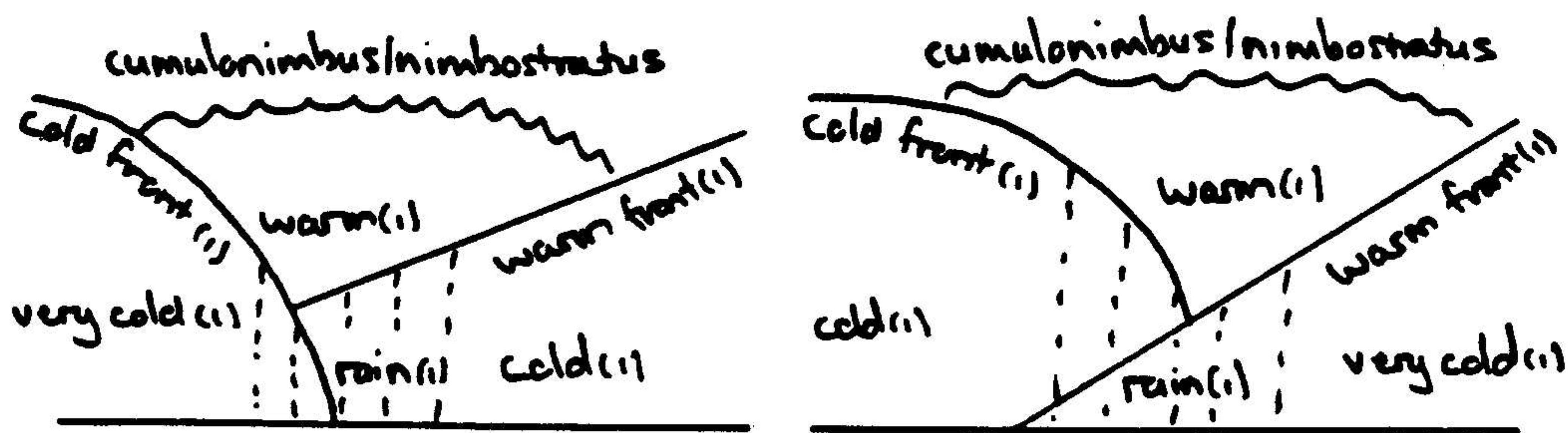
1x2 = (2)

- c) Chemical weathering takes place (2) along joint system of batholiths (2)  
 Core stones remain behind as heap of rocks (2)

3x2 = (6)

## QUESTION 2

- 2.1.1 a) Mid-latitude / extra-tropical / temperate cyclone / frontal depression (1) (1)  
 b) Presence of fronts (1) (1)  
 c) Two mid-latitudes are linked together / joined up (1) (1)
- 2.1.2 a) Occlusion / dissipating stage (1) (1)  
 b) An occlusion front is shown / cold and warm fronts merged (1) (1)  
 c)



- 2.1.3 a) [Accept cold or warm front occlusion] (7)  
 b) No (2) 1x2 = (2)  
 b) Situated far south of the country (2)  
 The fronts will not pass over Cape Town (2)  
 Blocking high pressure cells 2x2 = (4)
- 2.2.1 a) Northeast / east (2) 1x2 = (2)  
 b) Tropical cyclones develop in the Easterly wind belt (2)  
 therefore tropical cyclones will approach a land mass from the NE / E (2)  
 Always occur on the eastern seaboard / coastline of a continent (2)  
 Developed closer to equator over Indian Ocean  
 Over a warm ocean (2)  
 [ANY 2] 2x2 = (4)
- 2.2.2 Temperature over ocean higher than 27°C (2) 1x2 = (2)
- 2.2.3 a) Tropical cyclones are named alphabetically (2)  
 E is the fifth letter of the alphabet (2)  
 [ANY 1] 1x2 = (2)  
 b) South Africa protected by Madagascar (2)  
 Not well developed and dissipated as it moved further south (2)  
 [ANY 1] 1x2 = (2)
- 2.2.4 SA has a greater economic power than Mozambique (2)  
 SA has a well developed emergency / rescue operation system (2)  
 SA has better trained emergency / rescue teams (2)  
 SA has better communication systems (2)  
 SA has more emergency vehicles e.g. helicopters that can reach remote areas (2)  
 SA has better infrastructure e.g. tarred roads and solid bridge structures that will not wash away assisting in reaching people (2)  
 Better forecasting in SA (2)  
 Satellites (2)  
 Access to TV weather reports in SA (2)  
 [ANY 3 – Accept other] 3x2 = (6)
- 2.3.1 The stream's carrying capacity exceeds its stream load and the stream will carve deeper into the landscape (2)  
 Increased downward / vertical erosion (2)  
 [CONCEPT] (2)
- 2.3.2 A meandering stream is rejuvenated (2) due to uplift or an increase in stream volume (2)  
 The river carves deeper into the landscape (erodes downwards) along the meanders (2)  
 The meandering stream will now flow along a deep meandering gorge (2) 3x2 = (6)

2.3.3	The meander neck is being reduced (2) During times of flooding the stream will break through the meander neck and follow a shorter route (2) The meander remains behind as a cut-off meander (2) [ANY 2]	2x2 = (4)
2.3.4	At the cut-off point the stream flows on two different levels (2) Where the stream breaks through the meander the water will plunge from a higher flow level to a lower flow level (2)	2x2 = (4)
2.3.5	a) Temporary (2) b) Within time the waterfall will disappear (2) Headward erosion will take place (2) The waterfall migrates upstream (2)	1x2 = (2)
2.3.6	a) Flat land available (2) Fertile river deposits were left behind on the floodplain (2) Water available in cut-off meander (2) [ANY 2]	2x2 = (4)
	b) River in cut-off meander could dry up (2) Soil becomes infertile as there would be no more flooding to deposit minerals (2)	2x2 = (4)
2.4.1	The removal of natural vegetation by humans in a specific area (2) [CONCEPT]	(2)
2.4.2	Gathering wood for fuel / building material / curios (2) Expanding cultivated fields (2) Overgrazing (2) Urban expansion (2) [ANY 2]	2x2 = (4)
2.4.3	Less infiltration therefore greater run-off (2) Less vegetation increases sheet flow which washes away the soil (2) No more roots to anchor / stabilise the soil (2)	2x2 = (4)
2.4.4	Replanting indigenous vegetation (2) Power supply to rural areas (2) Rotational grazing / cropping (2)	1x2 = (2)
2.4.5	Conserving biodiversity (2) Conserving habitats of animals (2) Protecting the ecosystem (2) Scenic beauty (2) Removal of forests will increase soil erosion (2) Medicinal value of certain plants (2) Protection of catchment area (2) Maintaining microclimate of the area (2) [ANY 2 – Accept other]	2x2 = (4)

### QUESTION 3

- 3.1.1 a) A – urban (1)  
           B – rural (1) (2)
- b) A – secondary activities occur (1)  
           B – primary activities dominate (1) (2)
- 3.1.2 a) Exact piece of land occupied by the settlement (2)  
           [CONCEPT] (2)
- b) River / water (1)  
      Fertile soil / arable land (1)  
      Forest (1) provide fuel / building material (1)  
      Grazing (1)  
      Spring (1)  
      Minerals (1)  
      [ANY 5] (5)
- 3.1.3 Close to navigable river (2)  
      River is source of water (2)  
      Minerals close by that can be quarried (2)  
      Close to forests that can provide raw material / fuel (2)  
      Surrounded by area ideal for farming to provide food (2)  
      [ANY 2] 2x2 = (4)
- 3.1.4 a) Pollution of river (2)  
      Destruction of forests / deforestation (2)  
      Landscape defaced by quarries (2)  
      Depletion of soil fertility (2)  
      Soil erosion (2)  
      Springs could run dry (2)  
      Water table drops (2)  
      Air pollution and acid rain (2)  
      [ANY 2 – Accept other] 2x2 = (4)
- b) Law prohibiting dumping of waste materials in the river (2)  
      Replanting trees that are cut down / protecting indigenous trees (2)  
      Quarries filled with water and trees planted to create recreation areas (2)  
      Improved farming methods / examples of improved farming methods (2)  
      Limiting volume of ground water used (2)  
      Laws limiting pollution released into the atmosphere (2)  
      [ANY 2 – solution must refer to problem mentioned above] 2x2 = (4)
- 3.1.5 Industrial city (2)  
      Port city (2)  
      Trade and transport city (2)  
      Break-of-bulk-point (2)  
      [ANY 1] 1x2 = (2)
- 3.2.1 a) Murrayville provides:  
      better services (2)  
      more functions (2)  
      more employment (2)  
      better paid jobs (2)  
      higher standard of living (2)  
      more entertainment (2)  
      [ANY 2 – Accept other. Could also refer to negative aspects in A] 2x2 = (4)
- b) Negative effect (2)  
      Labour force decreases (2)  
      Industrial output decreases (2)  
      Industries close down (2)  
      Fewer people to use services (2)  
      Services deteriorate / close down (2)  
      Schools close down (2)  
      Hospitals close down / down graded to clinics (2)  
      [ANY 4 – Accept other] 4x2 = (8)

- c) Create recreation facilities to provide jobs (2)  
 Incentives for existing industries e.g. cheaper rates (2)  
 Improve quality of services (2)  
 Improve infrastructure (2)  
 Promoting the town of Murrayville (2)  
 [ANY 2 – Accept other]

2x2 = (4)

3.2.2 a & b)

ADVERT	LOCATION	REASON
1 Boutique	Neighbourhood shopping centre (1) Residential area (1) CBD (1) [ANY 1]	Lower rental than regional shopping centre (2) These shopping centres also occur in mentioned land use zones (2) [ANY 1]
2 Toys	Regional shopping centre (1) Residential area (1)  [ANY 1]	Regional shopping centres tend to be upmarket as they are close to high income suburbs (2) Upmarket malls found in high income residential areas (2) [ANY 1]
3 Panel-beater	Transition zone (1)  [ANY 1]	Sone of mixed functions (2) To noisy for suburbs or shopping centres (2) [ANY 1]
4 Furniture	Industrial estate (1)  [ANY 1]	Manufacturing business (2) Close to roads for dispatch (2) [ANY 1]

[Consult candidates answer – look at reason for choice of land use zone]

[Use initiative and give credit to learners]

- a)  
b)

(4)  
4x2 = (8)

- 3.3.1 a) Inner city corner shop (1)  
 Isolated store cluster (1)  
 [ANY 1] (1)  
 b) Small range (2) 1x2 = (2)  
 c) Needed on a daily basis (2)  
 People not prepared to travel far to purchase these goods (2) 2x2 = (2)
- 3.3.2 a) Following problems exist in CBD:  
 air pollution (2)  
 noise pollution (2)  
 congestion (2)  
 crime (2)  
 lack of parking (2)  
 no room for development (2)  
 high rentals (2)  
 no open spaces / parks (2)  
 [ANY 2 – Accept other] 2x2 = (4)
- b) R – along main roads to attract passing customers (2)  
 S – close to intersection of main roads (2)  
 H – close to intersection of motorway and main roads (2) 3x2 = (6)
- c) H (2)  
 Close to motorway which meets need of higher threshold population (2)  
 Usually situated closer to high income (affluent) suburbs (2) 3x2 = (6)

#### QUESTION 4

4.1.1	a)	Nucleated (1)	(1)
	b)	Buildings close to one another (1)	(1)
	c)	Socialising (1)	
		Security (1)	
		[ANY 1]	(1)
4.1.2	a)	Elongated / rectangular / narrow and long (1)	(1)
	b)	Access to roads (1)	
		Access to canals (1)	
4.1.3	a)	Intensively (1)	(2)
	b)	Small farms (2)	(1)
		Canals suggest irrigation (2)	
		[ANY 1]	
4.1.4	Social:	Close to one another (2)	1x2 = (2)
		Safe (2)	
		Regular social contact / visits (2)	
	Economic:	Live on own farm (2)	
		Live at place of work (2)	
		Own single stretch of land (2)	
		Mechanisation possible (2)	
		Can use own initiative (2)	
		[ANY 5 – Must refer to at least TWO of either social or economic]	5x2=(10)
4.2.1	Urban profile (1)		(1)
4.2.2	a)	CBD (1)	(1)
	b)	Most accessible (2)	
		Competition / demand for land (2)	
		Land value high (2)	
		Can only afford small piece of land (2)	
		Build upwards (2)	
		[ANY 3]	3x2 = (6)
	c)	(i) Wind speed effected (2)	
		Temperature increases (2)	
		Cloud cover increases (2)	
		Rainfall increases (2)	
		[ANY 2]	2x2 = (4)
		(ii) Wind slowed down (2)	
		Buildings block air flow (2)	
		OR	
		Stronger and gusty (2)	
		Buildings channel wind (2)	
		<u>Temperature</u>	
		Buildings provide larger surface area to heat (2)	
		Heat trapped between buildings (2)	
		Heat reflected between high glass constructions (2)	
		Concrete absorbs more heat (2)	
		Sun rays hit sides of buildings at vertical angles early morning and late afternoon (2)	
		<u>Rainfall / Cloud cover</u>	
		Heat trapped between buildings causes greater thermal convection (2)	
		Larger heated surface areas cause greater thermal convection (2)	
		Warmer air rises higher and condenses (2)	
		[2x2 per explanation. <u>Do not accept references to pollution</u> ]	4x2 = (8)

4.2.3	a)	<b>East (2)</b>	<b>1x2 = (2)</b>
	b)	<b>West: In zone of decay (2)</b> <b>Close to industries (2)</b> <b>Older developments (2)</b>	
	c)	<b>East: Far from Industries (2)</b> <b>Close to parks / green belts (2)</b> <b>More recent developments (2)</b>	
	d)	<b>[ANY 4 – Must refer to both east and west – examples from diagram]</b>	<b>4x2 = (8)</b>
	e)	<b>West (2)</b>	<b>1x2 = (8)</b>
		<b>Lower income suburbs (2)</b> <b>Cannot afford large stands (2)</b> <b>Limited space for large stands (2)</b> <b>People want to live close to place of work (2)</b>	
		<b>[ANY 2]</b>	<b>2x2 = (4)</b>
4.2.4	a)	<b>Person that works and lives in different places and travels daily between between these two places (2)</b>	
		<b>[CONCEPT]</b>	<b>(2)</b>
	b)	<b>Rural-urban fringe (1)</b>	<b>(1)</b>
	c)	<b>Rural atmosphere (2)</b> <b>Less polluted (2)</b> <b>Not as noisy (2)</b> <b>Little traffic (2)</b> <b>Less crime (2)</b> <b>Cheaper accommodation / stands / houses (2)</b> <b>More scenic (2)</b> <b>Less stress (2)</b>	
	d)	<b>[ANY 3 – Accept other]</b>	<b>3x2 = (6)</b>
	e)	<b>High income group (2)</b> <b>Further distance to travel to work / city (2)</b> <b>Must be able to afford increased travelling costs (2)</b>	
4.2.5	a)	<b>Were on outskirts (2)</b> <b>City encroached on industries (2)</b> <b>City developed around industries (2)</b> <b>Private motor vehicle caused city to expand around industries (2)</b>	<b>2x2 = (4)</b>
		<b>[ANY 2]</b>	<b>2x2 = (4)</b>
	b)	<b>Taller stacks (2)</b> <b>Filters in chimneys (2)</b> <b>Restrict operating to between sunrise and sunset (2)</b> <b>Implement laws restricting output of pollutants (2)</b> <b>Plant vegetation (2)</b> <b>Industrial decentralisation (2)</b>	
		<b>[ANY 3 – Accept other]</b>	<b>3x2 = (6)</b>

## QUESTION 5

- |       |  |            |
|-------|--|------------|
| 5.1.1 | a) North-eastern interior / Mpumalanga (1)   | (1)        |
|       | b) Most coal deposits / reserves are found here (1)<br>Saving on transport costs (1)   | (2)        |
| 5.1.2 | Non-renewable (1)<br>Once mined it cannot be replaced (1)  | (2)        |
| 5.1.3 | Abundance of coal in SA (1)<br>Other resources / water scarce (1)<br>Cheap to produce (1)<br>Cheap low grade coal used (1)<br>[ANY 2]  | (2)        |
| 5.1.4 | a) Running water is used to turn turbines to generate electricity (2)<br>[CONCEPT]   | (2)        |
|       | b) Orange River (1)  | (1)        |
|       | c) Gariep / Hendrik Verwoerd Dam (1)<br>Van der Kloof / PK le Roux Dam (1)   | (2)        |
|       | d) The flow of water is used to turn the turbines (1)<br>Vertical / steep drop of dam wall   | (1)        |
| 5.1.5 | a) Koeberg / near Cape Town / near Blouberg Strand / Duinefontein (1)<br>b) Sea water for cooling (2)<br>No coal reserves near Cape Town (2)<br>Expensive to transport coal to Cape Town (2)<br>Expensive to transmit electricity to Cape Town (2)<br>Stable geology (2)<br>Safe choice for radio active accidents (2)<br>Little urban development along west coast (2)<br>[ANY 2]   | (1)        |
| 5.1.6 | a) Gas (1)<br>Solar (1)<br>[ANY 1]   | 2x2 = (4)  |
|       | b) East London (1)      Cape Town (1)  | (1)<br>(2) |
| 5.2.1 | Cooking (1)    Heating (1)    Lighting (1)   | (3)        |
| 5.2.2 | Many people living in rural areas do not have access to electricity (2)<br>Can't afford electricity (2)<br>Wood is an accessible and cheap source of energy (2)<br>[ANY 2]   |            |
| 5.2.3 | Wood: Deforestation (2)<br>Soil exposed to soil erosion (2)<br>Releasing carbon dioxide into atmosphere which increases global warming (2)<br>Deforestation reduces source of oxygen (2)<br>Deforestation destroys animal habitats (2)<br>Biodiversity decreases (2)<br>Ecosystems thrown into imbalance (2)<br>Coal: Open cast mining to reach coal destroys ecosystems (2)<br>Removal of vegetation results in soil erosion (2)<br>Removal of soil destroys soil (2)<br>Atmospheric pollution (2)<br>Global warming as carbon dioxide is released into the atmosphere (2)<br>[MUST refer to wood and coal] | 2x2 = (4)  |
| 5.3.1 | Population increase (2)<br>More water needed for domestic purposes (2)<br>More water needed as result of industrial growth (2)<br>More water needed for agricultural purposes / irrigation (2)<br>More water needed for mining (2)<br>Development of the PWV (2)<br>[ANY 2]  | 4x2 = (8)  |
|       |  | 2x2 = (4)  |

5.3.2	Tugela is a permanent river (2) Receives sufficient rainfall throughout the year (2) Tugela has a large volume of water (2) Low demand in KZN on Tugela (2) [ANY 2]	2x2 = (4)
5.3.3	Smaller surface area therefore less evaporation (2) Situated in area with higher humidity therefore less evaporation (2) Cooler at high altitude therefore less evaporation (2) [ANY 1]	1x2 = (2)
5.3.4	a) Produces hydro-electricity (2) b) Cheaper electricity supply (2) Can use electricity for heating, cooking etc. and they don't have to collect wood any more (2) Living conditions are improved (2) Employment (2) [ANY 2]	1x2 = (2) 2x2 = (4)
5.4.1	a) Along the coast (1) The eastern interior / PWV / Gauteng (1) b) Early settlements established along the coast / historical advantage (2) Coastal / harbour settlements encourage trading (2) Many minerals in the eastern interior (2) Favourable climate in the eastern interior (2) Dense populations along coast and in eastern interior (2) [ANY 2]	(2) 2x2 = (4)
	c) i) The development of industries on outskirts of cities or in rural areas to promote economic development in these areas (2) [CONCEPT] ii) Rail and road transport rebates (2) Subsidized electricity (2) Subsidised water (2) Subsidised housing for management (2) Lower rental costs (2) Loans at low interest rates (2) Allowances for training (2) Removal costs could be reimbursed (2) Tax benefits (2) [ANY 2 – Accept other]	1x2 = (2) 2x2 = (4)
5.4.2	a) Natural population growth increased (2) b) Rate of rural-urban migration increased (2)	1x2 = (2) 1x2 = (2)
5.4.3	a) The gold mining industry in this region (2) Availability of other raw materials e.g. iron ore (2) Large market (2) Great buying power (2) Large labour force (2) Efficient transport network (2) Sufficient energy supply (2) Good water supply (2) Agriculture provide food supplies (2) [ANY 3]	3x2 = (6)
	b) Close to the Vaal River for water supply (2) Room for expansion (2) Flat land available for expansion (2) Away from Witwatersrand which is already heavily polluted (2) Close to coal reserves (2) [ANY 2]	2x2 = (4)
	c) ISCOR (2)	1x2 = (2)

## QUESTION 6

6.1.1	Vaal Dam (1) Van der Kloof Dam (1) Sterkfontein Dam (1)	Gariep Dam (1) Bloemhof Dam (1) Pongolapoort Dam (1)	(6)
6.1.2	Eastern half of the country (1)		(1)
6.1.3	Summer (1)		(1)
6.1.4	As water is flowing all year round (1) the dams will have a constant supply of water (1)		(2)
6.1.5	Water flowing across the Earth's surface as sheet flow or as stream flow (2) [CONCEPT]		(2)
6.1.6	Cultivated area will increase (2) Water becomes available for irrigation in drier areas (2)		2x2 = (4)
6.1.7	a) The growth of secondary industries are promoted (2) b) Promotes economic development as surpluses could be exported (2)		1x2 = (2) 1x2 = (2)
6.1.8	a) Soil erosion increases (2) b) No more trees to reduce sheet flow (2) No more roots to anchor / stabilise soil (2) Raindrop splash increases and soil particles are loosened (2) Ploughed soil is loose and easily eroded (2) Ploughing up and down the slope increases sheet flow (2) Intensive farming reduces the fertility of the soil (2) [ANY 3 – Accept other]		1x2 = (2) 1x2 = (2) 1x2 = (2) 1x2 = (2) 1x2 = (2) 3x2 = (6)
c)	Dams will silt up (2) Storage capacity of dams will decrease (2) Flooding will increase (2) Evaporation increases (2) [ANY 2]		2x2 = (4)
6.2.1	a) It is the lowest level up to which the stream can erode at that point (2) b) Longitudinal profile becomes uneven (2) Multitudinal long profile is created (2) Ungraded profile (2) [ANY 1]		1x2 = (2) 1x2 = (2)
	c) Ungraded (2)		1x2 = (2)
	d) Erosion and deposition are not in balance / equilibrium (2)		1x2 = (2)
6.2.2	a) Dams control the volume of water entering the river system further downstream (2) Water released slowly into stream during times of heavy rainfall preventing the stream from overflowing (2) Water from different tributaries released into the main stream at different times thereby reducing the flood peak in the main stream (2) [ANY 2]		2x2 = (4)
b)	Building up the levees / river banks (2) Straightening the meanders (2) Lining the river channel with concrete to reduce friction (2) Increase vegetation along the river banks to reduce sheet flow (2) [ANY 2]		2x2 = (4)
6.2.3	a) Via (Orange-Fish River) tunnel (1) b) To irrigate cultivated land (1) To generate hydro-electricity (1) Provision of water for settlements in the Karoo (1) Provision of water for drought stricken areas (1) To slow down rural depopulation (1) [ANY 2]		2x2 = (4) (1) (2)

6.3.1	a)	Community and personal services (1)	(1)
	b)	Tertiary services (1)	(2)
	c)	Services are provided (1)	(1)
	d)	97 035 (1)	(1)
6.3.2	a)	Not many minerals / raw materials in the Eastern Cape (2)	1x2 = (2)
	b)	Historical advantage (2)	
		Harbour location (2)	
		Large labour pool (2)	
		Large market (2)	
		Railway link to the interior (2)	
		Situated halfway between other coastal industrial areas (2)	
	[ANY 2]		2x2 = (4)
	b)	Motor cars / vehicles (2)	1x2 = (2)
	c)	Tyres (2) Glass (2)	
		Batteries (2) Exhaust pipes (2)	
		Springs (2) Bulbs (2)	
		Electrical equipment (2) Upholstery (2)	
	[ANY 1]		1x2 = (2)
	d)	Lack of minerals (2)	
		Lack of energy resources (2)	
		Water shortages (2)	
		Little agricultural variety (2)	
		Distance from inland markets (2)	
		Costly to transport raw materials / finished products inland (2)	
		Labour unrest / strikes (2)	
		[ANY 1 – Accept other]	1x2 = (2)
6.4.1	a)	Provision of: housing (2) education (2) services such as water and electricity (2) improving communication e.g. better roads (2) [ANY 1 – Accept other]	1x2 = (2)
	b)	Not enough money / capital (2)	
		Large number of rural population in Eastern Cape (2)	
	[ANY 1 – Accept other]		1x2 = (2)
6.4.2	a)	Growth Employment and Redistribution (1)	(1)
	b)	To develop economic growth through job creation, increasing exports attracting investment (2)	
		[CONCEPT of economic growth important]	1x2 = (2)
6.4.3	a)	Traditional dwelling / hut (1)	(1)
	b)	Dam / river / stream / spring (1)	(1)
	c)	Money should be set aside / budget drawn up (2) for the provision of basic needs such as permanent shelters (2) and piping of water to homes (2) [Accept ANY logical suggestions involving the allocation of funds and resources for the provision of basic needs such as permanent shelter and water]	2x2 = (4)

[80]

**TOTAL:** 320



**MOONTLIKE ANTWOORDE VIR:**

**AARDRYKSKUNDE 2002**

**VRAESTEL G  
HoëR GRAAD**

## **VRAAG 1**

- 1.1.1 a) P – Suid Atlantiese / St. Helena (1)  
 Q – Kalahari (1)  
 R – Suid Indiese / Mauritius (1) (3)

b) Antisiklonies (1) (1)

c) 

<u>antisiklonies</u>	<u>siklonies</u>
lug daal (1)	lug styg (1)
lug divergeer (1)	lug konvergeer (1)
lug roteer antikloksgewys (1)	lug roteer kloksgewys (1) in S halfronde OF
lug roteer koksgewys (1) [ENIGE 2]	lug roteer antikloksgewys (1) in N halfronde

1.1.2 a) Somer (1) (4)  
 b) Winter (1) (1)

1.1.3 1.1A: Hoogdrukselle verder suid (2)  
 Laagdruksel oor land (2)  
 Vogfront oor land (2)  
 [ENIGE 1]  
 1.1B: Hoogdrukselle verder noord (2)  
 Hoogdruksel oor land (2)  
 [ENIGE 1] (1)

1.1.4 Inversielaag is nader aan aardoppervlak / laer as die randhelling (2)  
 Vogtige lug vanaf die Indiese Oseaan kan nie die binneland bereik nie (2)  
 Beperkte lugstyging oor plato (2)  
 Binneland ervaar: wolkloosheid (2)  
 geen / min reënval (2)  
 ryg gedurende die nag (2)  
 matige dagtemperature (2) 2x2 = (4)

## Geringe konveksie (2)

## Wolffloos (2)

## Min|geen reg (2)

## Ryp smage (2)

Matige dagtemperatuur (2)

Inverse ber as platorand (2)

Vogtige lug kan nie die  
plate bereik nie (2)

**[ENIGE 4 – skets en bverduideliking kan gekombineer word]  $4 \times 2 = (8)$**

1.5 a) Warm vogtige lug (uit die NO) ontmoet koel droë lug (uit die SW) (2)  
b) Warm vogtige noordoostelike lug word opwaarts gedwing deur koel droë  
suidwestelike lug (2)  
Grootskaalse kondensasie vind plaas (2)  
Cumulonimbuswolke vorm wat tot donderstorms aanleiding gee (2)  $3 \times 2 = (6)$

- 1.2 Suikerriet word langs die ooskus gekweek (2) waar hoë temperature en reënval (2) regdeur die jaar voorkom (2)  
 [ENIGE 2]

Mielies word op die oostelike plato gekweek (2) waar somer reënval (2) meer as 500mm per jaar is (2) en koue winters heers wat siektes uitroei (2) en matige, droë winters geleentheid skep vir mielies om aan die plant uit te droog (2)  
 [ENIGE 2]

Druwe, appels, pere en koring word in die SW Kaap gekweek (2) waar 'n Mediterrense klimaat heers (2) Koue, vogtige winters (2) en warm, droë somers is ideaal vir die kweek van hierdie produkte (2) Appels en pere is rybestedend en kan op die valleibodem van die Kaapse plooiberge gekweek word (2)  
 [ENIGE 2]

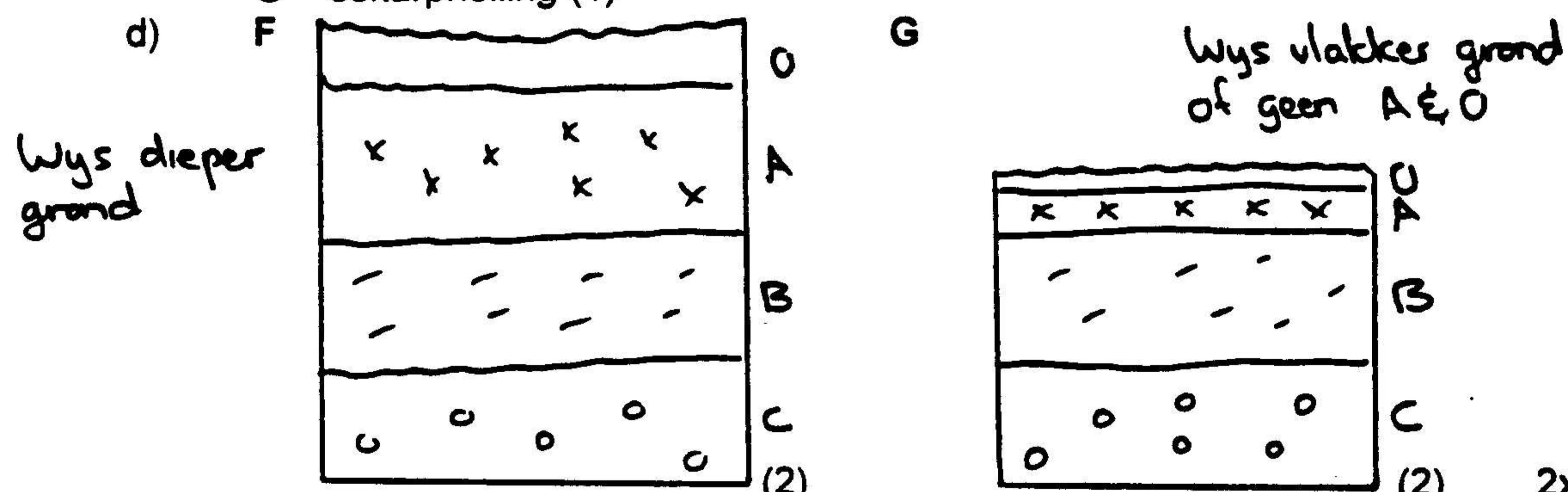
[Kandidate MOET na al die gewasse verwys]

6x2=(12)

- 1.3.1 a) A – Mesa / tafelberg (1)  
 B – Butte / tafelkoppie (1)  
 C – Koppie (1)  
 D – Homoklinale rug / Cuesta (1)  
 J – Lakkoliet (1) (5)

- 1.3.2 Landvorm A ontwikkel uit horisontaal gelaagde strata (1)  
 Landvorm D ontwikkel uit hellende strata (1) (2)

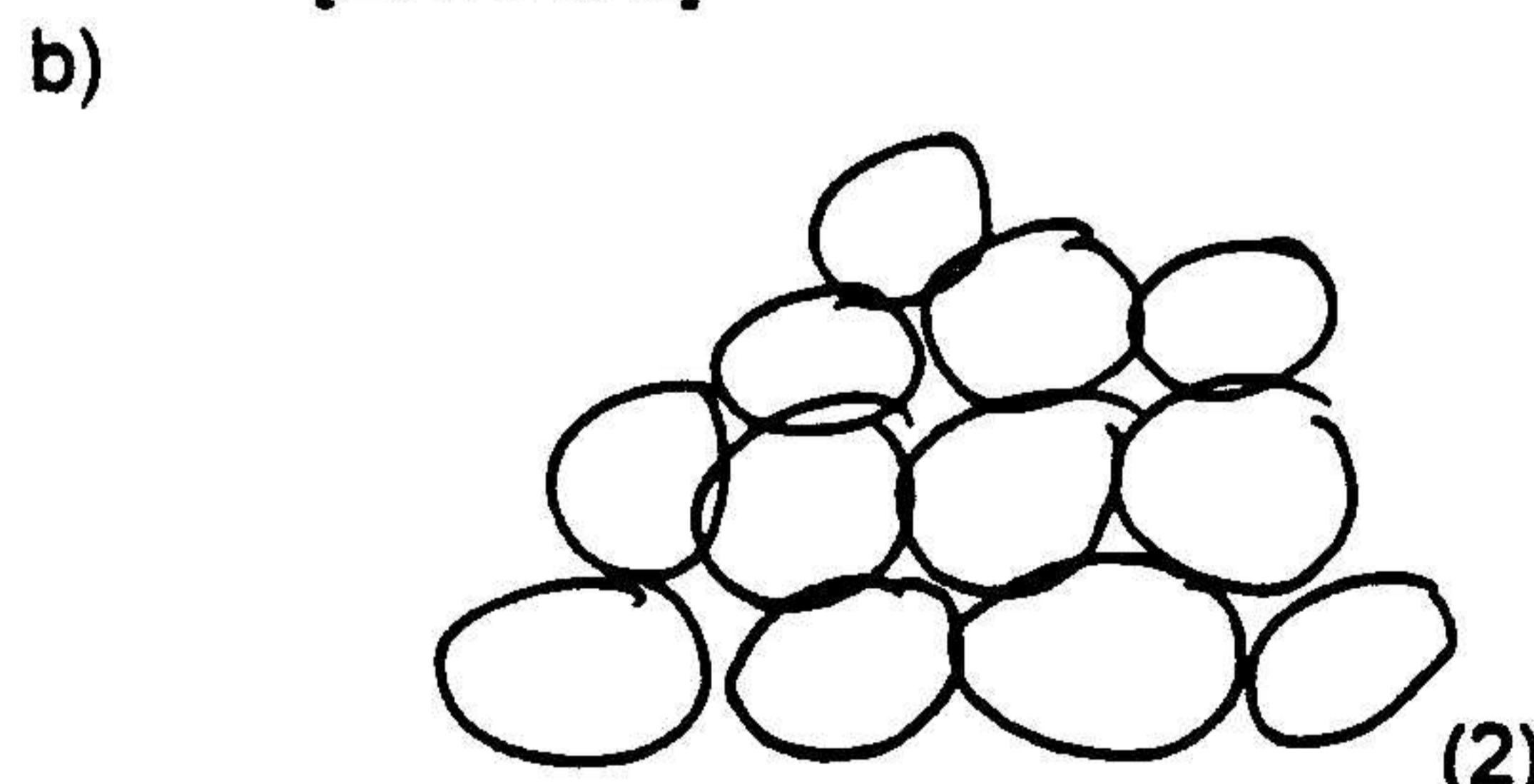
- 1.3.3 a) Cuesta / homoklinale rug (1) Skerprugbilt / hogsback (1) (2)  
 b) Cuesta – hel tussen 10° en 25° (1)  
 Homoklinale rug – hel tussen 25° en 45° (1)  
 Skerprugbilt – hel meer as 45° (1) (3)  
 c) F – duikhelling / laagvlakhelling (1)  
 G – eskarphelling (1) (2)



2x2 = (4)

- e) F is op 'n geleidelike helling (2)  
 Minder grondkruip / massa-afvoer lei tot 'n dieper grondprofiel (2)  
 G is op 'n steil helling (2)  
 Grond word maklik verwijder verspoel en lei tot 'n vlak grondprofiel (2) 4x2 = (8)

- 1.3.4 a) 'n Reuse rotスマass van magmatiese / graniet oorsprong (2)  
 Magma stol voordat dit die aardoppervlak bereik (2)  
 Stolling kom diep onder die aardoppervlak voor (2)  
 Intrusie wat plaasgevind het (2)  
 [ENIGE 2] 2x2 = (4)



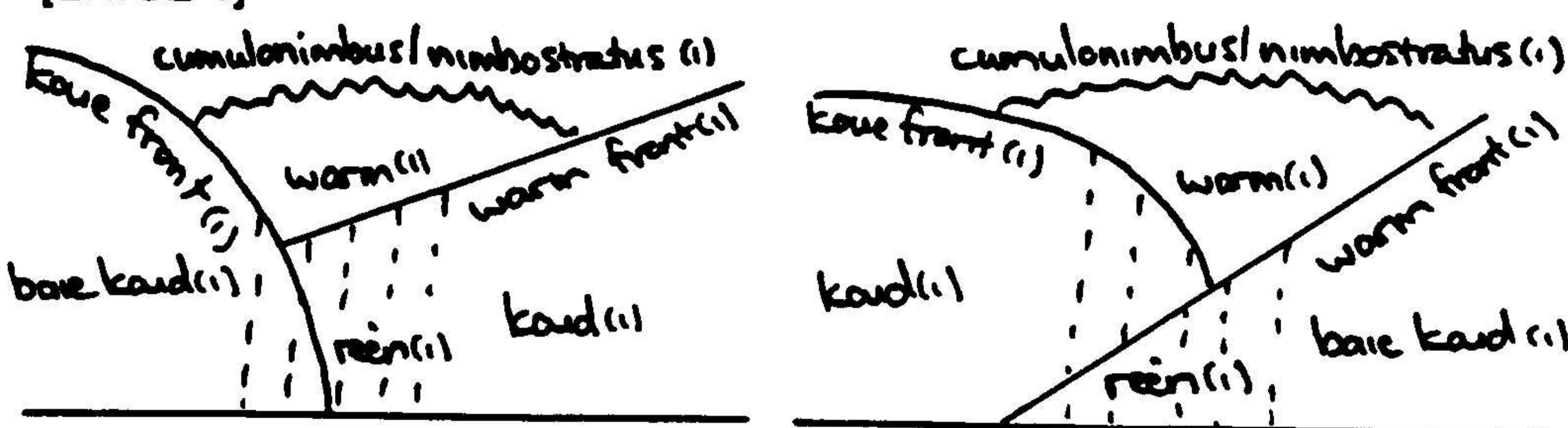
1x2 = (2)

- d) Chemiese verowering vind plaas (2) langs die rotsnate van batoliete (2)  
 Kernstene bly agter as 'n hoop rotse (2)

3x2 = (6)

## VRAAG 2

- 2.1.1 a) Middelbreedte / buite-tropiese / gematigde sikloon / frontale depressie (1) (1)  
 b) Teenwoordigheid van fronte (1) (1)  
 c) Twee middelbreedte siklone is / verbind vas aan mekaar (1) (1)
- 2.1.2 a) Okklusie / ontbinding dissipasie stadium (1) (1)  
 b) 'n Okklusiefront kan waargeneem word  
 Koue front en warm front het saamgesmelt (1)  
 [ENIGE 1] (1)
- c)



- 2.1.3 [Aanvaar koue of warm front okklusie] (7)  
 a) Nee (2) 1x2 = (2)  
 b) Ver suid van die land geleë (2)  
 Die fronte sal nie oor Kaapstad beweeg nie (2)  
 Blokkende hoogdrukke (2)  
 [ENIGE 2] 2x2 = (4)

- 2.2.1 a) Noordoos / oos (2) 1x2 = (2)  
 b) Tropiese siklone ontwikkel in die oostelike windgordel (2)  
 Tropiese siklone nader die land vanaf NO / O (2)  
 Kom altyd aan die ooskus van kontinente voor (2)  
 Naby aan die ewenaar oor die Indiese Oseaan (2)  
 Oor 'n warm oseaan (2)  
 [ENIGE 2] 2x2 = (4)

- 2.2.2 Temperatuur oor die oseaan hoër as 27°C (2) 1x2 = (2)

- 2.2.3 a) Tropiese siklone word alfabeties benoem (2)  
 E is die vyfde letter van die alfabet (2) 1x2 = (2)  
 [ENIGE 1]  
 b) Suid-Afrika word deur Madagaskar beskerm (2)  
 Swak ontwikkel en het ontbind soos dit verder suid beweeg het (2) [ENIGE 1]

- 2.2.4 SA is ekonomies sterker as Mosambiek (2) 1x2 = (2)

SA het 'n goed ontwikkelde noodeenheid (2)  
 SA het beter opgeleide noodeenheid personeel (2)  
 SA het beter kommunikasienetwerke (2)  
 SA het beter noodvoertuie bv. helikopters wat afgeleë gebiede kan bereik (2)  
 SA het beter infrastruktuur bv. beter paaie en sterker brûe wat nie sal wegspoel nie en mense kan bereik word (2)  
 SA het beter weervoorspellings (2)

Satelliete (2)

Toegang tot TV en weervoorspellings in SA (2)

[ENIGE 3 – Aanvaar ander] 3x2 = (6)

- 2.3.1 Die stroom se stroomvragvermoë is groter as die stroomvrag en die stroom sal dieper in die landskap inkerf (2)  
 Verdere afwaartse erosie / inkerwing vind plaas (2)  
 [KONSEP] (2)

- 2.3.2 'n Kronkelende stroom ondergaan verjonging (2) a.g.v. opheffing of 'n toename in stroomvolume (2)  
 Die rivier kerf dieper in die landskap in (erodeer afwaarts) langs die kronkels (2)  
 Die kronkelstroom vloei nou in 'n diep kronkelende kloof (2) 3x2 = (6)

2.3.3	Die nek tussen die kronkels word kleiner (2) Tydens oorstromings sal die rivier deur die nek breek en 'n korter roete volg (2) Die kronkel bly agter as 'n afgesnyde rivierkronkel (2) [ENIGE 2]	2x2 = (4)
2.3.4	By die afsnypunt vloei die rivier op twee verskillende hoogtes (2) Waar die rivier deur die kronkel breek sal die water van 'n hoër vloeivlak na 'n laer vloeivlak plons (2)	2x2 = (4)
2.3.5	a) Tydelik (2) b) Oor tyd sal die waterval verdwyn (2) Die waterval sal terugwaarts erodeer (2) Die waterval sal stroomop beweeg (2) [ENIGE 1]	1x2 = (2)
2.3.6	a) Gelyk grond beskikbaar (2) Vrugbare rivieraftettings het op die vloedvlakte agtergebleef (2) Water beskikbaar in die afgesnyde rivierkronkel (2) [ENIGE 2]	2x2 = (4)
	b) Die rivier in die afgesnyde kronkel kan opdroog (2) Grond verloor vrugbaarheid omdat daar geen meer oorstromings is om afsetting van vrugbare materiaal te verseker nie (2)	2x2 = (4)
2.4.1	Die verwijdering van natuurlike plantegroei deur mense in 'n spesifieke gebied (2) [KONSEP]	(2)
2.4.2	Bymekaarmaak van hout vir vuurmaak / aandenkingsbeeldjies / boumateriaal (2) Uitbreiding van bewerkte landerye (2) Oorbeweiding (2) Stedelike uitbreiding (2) [ENIGE 2]	2x2 = (4)
2.4.3	Minder plantegroei verhoog plaatvloei wat grond verspoel (2) Minder infiltrasie dus verhoogde afloop (2) Geen wortels om grond te anker / stabiliseer nie (2)	2x2 = (4)
2.4.4	Beplant die gebied met inheemse plantegroei (2) Elektrifisering (2) Wisselweiding / -verbouwing (2) [ENIGE 1]	1x2 = (2)
2.4.5	Om biodiversiteit te verseker (2) Bewaring van habitat vir ander organismes (2) Bewaring van die ekosisteem (2) Natuurskoon (2) Verwydering van Fynbos sal gronderosie verhoog (2) Medisinale waarde van sekere plante (2) Bewaring van opvangsgebiede (2) Behoud van mikroklimatologie (2) [ENIGE 2 – Aanvaar ander]	2x2 = (4)

### VRAAG 3

- 3.1.1 a) A – stedelik (1)  
B – landelik (1) (2)
- b) A – Sekondêre aktiwiteite kom voor (1)  
B – Primêre aktiwiteite domineer (1) (2)
- 3.1.2 a) Presiese stuk grond waarop die nedersetting geleë is (2)  
[KONSEP] (2)
- b) Rivier / water (1)  
Vrugbare / bewerkbare grond (1)  
Woud (1) verskaf boumateriaal / brandstof (1)  
Weiding (1)  
Fontein (1)  
Minerale (1)  
[ENIGE 5] (5)
- 3.1.3 Naby aan bevaarbare rivier (2)  
Rivier is 'n bron van water (2)  
Minerale naby kan uitgegrawe word (2)  
Naby aan woude wat 'n grondstof / brandstof kan verskaf (2)  
Omring deur 'n gebied wat ideaal is om te boer om kos te voorsien (2)  
[ENIGE 2] 2x2 = (4)
- 3.1.4 a) Besoedeling van die rivier (2)  
Vernietiging van die woude (2)  
Landskap ontsier deur uitgravings (2)  
Grondvrugbaarheid word vernietig (2)  
Gronderosie (2)  
Fonteine kan opdroog (2)  
Watertafel daal (2)  
Lugbesoedeling en suurreën (2)  
[ENIGE 2 – Aanvaar ander] 2x2 = (4)
- b) Wetgewing om te verhoed dat afvalmateriaal in die rivier gestort word (2)  
Herbeplant waar bome afgekap word / beskerm inheemse bome (2)  
Vul uitgraving met water en plant bome om ontspanningsarea te skep (2)  
Verbeterde boerderymetodes of voorbeeld daarvan (2)  
Beperk die hoeveelheid grondwater wat gebruik mag word (2)  
Wetgewing wat hoeveelheid besoedelingsdeeltjies vrygestel te beperk (2)  
[ENIGE 2 – oplossing moet verwys na probleem wat hierbo genoem is] 2x2 = (4)
- 3.1.5 Nywerheidstad (2)  
Hawe (2)  
Handel en vervoerstad (2)  
Vragverbrekingspunt (2)  
[ENIGE 1] 1x2 = (2)
- 3.2.1 a) Murrayville verskaf:  
beter dienste (2)  
meer funksies (2)  
meer werkgeleenthede (2)  
hoër lewenstandaard (2)  
beter lonende werkgeleenthede (2)  
meer vermaak (2)  
[ENIGE 2 – Aanvaar ander. Kan ook na negatiewe aspekte in A verwys] 2x2 = (4)
- b) Negatiewe effek (2)  
Werksmag neem af (2)  
Nywerheidsuitsette neem af (2)  
Nywerhede sluit (2)  
Minder mense om dienste te gebruik (2)  
Dienste gaan agteruit / sluit (2)  
Hospitale sluit / afgegradeer tot klinieke (2)  
Skole sluit (2)  
[ENIGE 4 – Aanvaar ander] 4x2 = (8)

- c) Skep ontspanningsfasiliteite om werk te skep (2)  
 Aansporingmaatreëls vir bestaande nywerhede bv. laer huur (2)  
 Verbeter die kwaliteit van dienste (2)  
 Verbeter die infrastruktuur (2)  
 Reklame om Murrayville te bevorder (2)  
 [ENIGE 2 – Aanvaar ander] 2x2 = (4)

3.2.2 a & b)

ADVERT	LIGGING	REDE
1 Klere	Voorstedelike winkel-sentrum (1) Residensiële gebied (1) SSK (1) [ENIGE 1]	Laer huur as streekswinkelsentrum (2) Word in genoemde grondgebruik-Sones aangetref (2)  [ENIGE 1]
2 Speel-goed	Streekswinkelsentrum (1) Hoë inkomste residensiële gebied (1)  [ENIGE 1]	Streekswinkel neig om van hoër gehalte te wees en is naby aan hoë inkomste woonbuurte (2) Hoë gehalte winkelsentrums kom in hoë inkomste residensiële gebied voor (2) [ENIGE 1]
3 Paneel-klopper	Oorgangsone (1)	Sone van gemengde funksies (2) Te raserig vir woonbuurte of Winkelsentrums (2) [ENIGE 1]
4 Meubels	Nywerheidslandgoed (1)	Vervaardigingsbedryf (2) Naby aan paaie vir versending (2) [ENIGE 1]

[Kyk na kandidaat se antwoord – kyk na rede vir keuse van grondgebruiksone]

[Gebruik inisiatief en gee nodige krediet aan kandidate]

- a) (4)  
 b) 4x2 = (8)

- 3.3.1 a) Hoekwinkel in middestad (1)  
 Geïsoleerde winkelgroep (1)  
 [ENIGE 1] (1)  
 b) Klein reikwydte (2) 1x2 = (2)  
 c) Word op 'n daaglikske basis benodig (2)  
 Mense nie bereid om ver te reis vir hierdie goedere nie (2) 2x2 = (4)
- 3.3.2 a) Volgende probleme kom voor in die SSK:  
 lugbesoedeling (2)  
 geraasbesoedeling (2)  
 opeenhoping (2)  
 misdaad (2)  
 gebrek aan parkering (2)  
 geen spasie vir uitbreiding (2)  
 hoë huurkoste (2)  
 geen oop ruimtes / parke (2)  
 [ENIGE 2 – Aanvaar ander] 2x2 = (4)  
 b) R – langs hoofpaaie om verbygaande klandisie te lok (2)  
 S – naby aan die kruising van hoofpaaie (2)  
 H – Naby aan die kruising van die snelweg en hoofpaaie (2) 3x2 = (6)  
 c) H (2)  
 Naby aan snelweg wat vir 'n hoër drempelbevolking sorg (2)  
 Gewoonlik nader aan hoë inkomste woonbuurte (2) 3x2 = (6)

#### VRAAG 4

4.1.1	a)	Kern (1)	(1)
	b)	Geboue naby aan mekaar (1)	(1)
	c)	Sosiale kontak (1)	
		Veiligheid (1)	
		[ENIGE 1]	(1)
4.1.2	a)	Langwerpig / reghoekig / lank en smal (1)	(1)
	b)	Toegang tot paaie (1)	
		Toegang tot kanale (1)	(2)
4.1.3	a)	Intensief (1)	(1)
	b)	Klein plasies (2)	
		Kanale dui op moontlike besproeiing (2)	
		[ENIGE 1]	
4.1.4	Sosiaal:	Naby aan mekaar (2)	
		Veilig (2)	
		Gereelde kontak met mekaar / besoekte (2)	
Ekonomies:	Bly op eie plaas (2)		
	Bly by werkplek (2)		
	Besit enkel stuk aaneenlopende grond (2)		
	Meganisering is moontlik (2)		
	Kan eie inisiatief gebruik (2)		
	[ENIGE 5 – moet na ten minste TWEE verwys wat of sosiaal of ekonomies is]		5x2=(10)
4.2.1	Stedelike profiel (1)		(1)
4.2.2	a)	SSK / SSG (1)	(1)
	b)	Mees toeganklikste (2)	
		Kompetisie vir grond (2)	
		Hoë grondwaardes (2)	
		Kan slegs klein perseel bekostig (2)	
		Bou opwaarts (2)	
		[ENIGE 3]	
	c)	(i) Windsnelheid word beïnvloed (2)	
		Temperatuur neem toe (2)	
		Wolkbedekking neem toe (2)	
		Reënval neem toe (2)	
		[ENIGE 2]	
	(ii)	<u>Windsnelheid neem af (2)</u>	
		Geboue belemmer lugbeweging (2)	
		OF	
		Winde waai sterker en rukkerig (2)	
		Geboue kanaliseer lugbeweging (2)	
		<u>Temperatuur</u>	
		Geboue bied groter oppervlak wat verhit kan word (2)	
		Hitte word tussen geboue vasgekeer (2)	
		Hitte word tussen glaskonstruksies gereflekteer (2)	
		Beton absorbeer meer hitte (2)	
		Sonstrale tref kante van hoë geboue vroegoggend en laat-middag vertikaal (2)	
		<u>Reënval / wolkbedekking</u>	
		Hitte wat tussen geboue vasgekeer word verhoog termiese konveksie (2)	
		Groter areas van verhitting verhoog termiese konveksie (2)	
		Warm lug styg hoër en kondenseer (2)	
		[2x2 per verduideliking. <u>Moet nie</u> verwysings na besoedeling aanvaar nie]	
			4x2 = (8)

4.2.3	a)	Oos (2)	1x2 = (2)
	b)	Wes: In vervalsone (2) Naby nywerhede (2) Ouer ontwikkeling (2)	
		Oos: Ver van nywerhede (2) Naby parke / groengordels (2) Meer onlangse ontwikkelings (2)	
		[ENIGE 4 – moet na oos en wes verwys – voorbeeld vanaf diagram]	4x2 = (8)
	c)	Wes (2)	1x2 = (2)
	d)	Laer inkomste woonbuurt (2) Kan nie groot persele bekostig nie (2) Beperkte ruimte vir groter persele (2) Mense wil nader aan werksplek woon (2)	
		[ENIGE 2]	2x2 = (4)
4.2.4	a)	'n Persoon wat in verskillende plekke woon en werk en daagliks tussen die twee plekke reis (2)	
		[KONSEP]	(2)
	b)	Landelik-stedelike oorgangsone (1)	(1)
	c)	Landelike atmosfeer (2) Minder besoedeling (2) Minder geraas (2) Minder verkeer (2) Minder misdaad (2) Goedkoper verblyf / erwe / huise (2) Mooier natuurskoon (2) Minder spanning / "stress"	
		[ENIGE 3 – Aanvaar ander]	3x2 = (6)
	d)	Hoë inkomstegroep (2)	1x2 = (2)
	e)	Groter afstand om na stad / werksplek te reis (2) Moet verhoogde reiskoste kan bekostig (2)	
		[ENIGE 2]	2x2 = (4)
4.2.5	a)	Was voorheen aan buitewyke (2) Stad het nader aan nywerhede gegroei (2) Stad het rondom die nywerhede ontwikkel (2) Privaat motorbesit het die stad laat groei (2)	
		[ENIGE 2]	2x2 = (4)
	b)	Hoër skoorstene (2) Filters in die skoorstene (2) Beperk nywerheidsaktiwiteite van sonop tot sonsondergang (2) Stel wetgewing in wat die hoeveelheid besoedelingsdeeltjies wat mag vrygestel word beperk (2) Plant meer natuurlike plantegroeи / bome (2) Nywerheidsdesentralisasie (2)	
		[ENIGE 3 – Aanvaar ander]	3x2 = (6)

## VRAAG 5

- 5.1.1 a) Noordoostelike binneland / Mpumalanga (1) (1)  
 b) Meeste steenkool neerslae / reserwes kom hier voor (1)  
 Bespaar op vervoerkoste (1) (1)
- 5.1.2 Nie-hernieubaar (1)  
 Kan nie vervang word as dit klaar ontgin is nie (1) (2)
- 5.1.3 Groot hoeveelheid steenkool in Suid-Afrika (1)  
 Ander hulpbronne / water skaars (1)  
 Goedkoop om te ontgin (1)  
 Goedkoop laegraadse steenkool word gebruik (1)  
 [ENIGE 2] (2)
- 5.1.4 a) Lopende water word gebruik om turbines te draai om krag op te wek (2)  
 [KONSEP] (2)  
 b) Oranjerivier (1) (1)  
 c) Gariep- / Hendrik Verwoerddam (1) Van der Kloof- / PK le Rouxdam (1) (2)  
 d) Die vloeiende water word gebruik om die turbines te draai (1) (1)
- 5.1.5 a) Koeberg / naby Kaapstad / naby Bloubergstrand / Duinefontein (1) (1)  
 b) Seewater vir afkoelingsdoeleindes (2)  
 Geen steenkoolreserwes in die Weskaap nie (2)  
 Duur om steenkool na die Weskaap te vervoer (2)  
 Duur om elektrisiteit na die Weskaap te herlei (2)  
 Geologies stabiel (2)  
 Veilige keuse vir radio-aktiewe ongelukke (2)  
 Min stededlike ontwikkeling langs die weskus (2)  
 [ENIGE 2] 2x2 = (4)
- 5.1.6 a) Gas (1)  
 Sonkrag (1)  
 [ENIGE 1] (1)  
 b) Oos Londen (1) Kaapstad (1) (2)
- 5.2.1 Kookdoeleindes (1) Verhitting (1) Beligting (1) (3)  
 5.2.2 Baie mense in landelike gebiede het nie toegang tot elektrisiteit nie (2)  
 Mense kan nie elektrisiteit bekostig nie (2)  
 Hout is toeganklik en 'n goedkoop bron van energie (2) 2x2 = (4)
- 5.2.3 Hout: Ontbossing (2)  
 Grond blootgestel aan erosie (2)  
 Koolstofdioksied in atmosfeer vrygestel wat globale verhitting aanhelp (2)  
 Ontbossing verminder bron van suurstof (2)  
 Ontbossing vernietig die habitat van diere (2)  
 Biodiversiteit verminder (2)  
 Ekosisteme word uit balans gegooi (2)  
 Steenkool: Opgroefmyne vernietig ekosisteme (2)  
 Vernietiging van plantegroei verhoog gronderosie (2)  
 Grond word verwijder en vernietig (2)  
 Lugbesoedeling (2)  
 Globale verhitting omdat koolstofdioksied in die atmosfeer vrygestel word (2) 4x2 = (8)
- 5.3.1 Bevolking neem toe (2)  
 Meer water benodig vir huishoudelike doeles (2)  
 Meer water benodig vir nywerheidsontwikkeling (2)  
 Meer water benodig vir landbou / besproeiing (2)  
 Toename in mynbou aktiwiteite (2)  
 Ontwikkeling van die PWV gebied (2)  
 [ENIGE 2] 2x2 = (4)

5.3.2	Tugela is 'n permanente rivier (2) Ontvang voldoende reënval regdeur die jaar (2) Tugela het 'n groot volume water (2) Beperkte aanvraag na water in KZN vanuit die Tugela (2) [ENIGE 2]	2x2 = (4)
5.3.3	Kleiner oppervlak daarom minder verdamping (2) Hoë lugvogtigheid daarom minder verdamping in die gebied (2) Hoër bo seevlak dus koeler en minder verdamping (2) [ENIGE 1]	1x2 = (2)
5.3.4	a) Wek hidro-elektrisiteit op (2) b) Goedkoper elektrisiteitsvoorsiening (2) Kan elektrisiteit gebruik vir verhitting, kookdoeleindes ens. en hout hoef nie meer bymekaar gemaak te word nie (2) Lewensomstandighede sal verbeter (2) Werksverskaffing (2) [ENIGE 2]	1x2 = (2)
5.4.1	a) Langs die kus (1) Oostelike binneland / Gauteng / PWV (1) b) Vroeë nedersettings het langs die kus voorgekom / historiese voordeel (2) Nedersettings aan die kus / by 'n hawe vergemaklik handel (2) Baie grondstowwe in die oostelike binneland (2) Gunstige klimaat in die oostelike binneland (2) Digte bevolkings langs die kus en oostelike binneland (2) [ENIGE 2]	(2)
	c) i) Die ontwikkeling van nywerhede aan die buitewyke van stede of in landelike gebiede om ekonomiese ontwikkeling in hierdie gebiede aan te moedig (2) [KONSEP] ii) Korting op pad- en spoorvervoer (2) Subsidieer kragvoorsiening (2) Subsidieer watervoorsiening (2) Subsidieer behuising vir bestuur (2) Lae verhuringskostes (2) Lenings teen lae rentekoerse (2) Voorsien geld vir opleiding (2) Betaal verhuisingskoste (2) Belastingstoegewings (2) [ENIGE 2 – Aanvaar ander]	2x2 = (4)
5.4.2	a) Natuurlike bevolkingsaanwas het toegeneem (2) b) Die tempo van landelik-stedelike migrasie het toegeneem (2)	1x2 = (2)
5.4.3	a) Die goudmynbedryf in hierdie gebied (2) Die beskikbaarheid van ander grondstowwe bv. ystererts (2) Groot afsetgebied / mark (2) Groter koopkrag (2) Groot arbeidsmag (2) Goeie vervoernetwerk (2) Voldoende kragbronne (2) Voldoende watervoorraad (2) Landbou voldoen in voedselbehoeftes (2) [ENIGE 3]	1x2 = (2)
	b) Naby aan Vaalrivier vir watervoorsiening (2) Ruimte vir uitbreiding (2) Gelyk grond beskikbaar vir uitbreiding (2) Weg van die Witwatersrand wat reeds erg besoedel is (2) Naby aan steenkoolvelde (2) [ENIGE 2]	3x2 = (6)
	c) YSKOR (2)	2x2 = (4)
		1x2 = (2)

## VRAAG 6

6.1.1	Vaaldam (1)	Gariepdam (1)	Van der Kloofdam (1)	
	Bloemhofdam (1)	Sterkfonteindam (1)	Pongolapoortdam (1)	(6)
6.1.2	Oostelike helfte van die land (1)			(1)
6.1.3	Somer (1)			(1)
6.1.4	Water vloei regdeur die jaar (1) dus het damme 'n konstante watervoorraad (1)			(2)
6.1.5	Water wat oor die aardoppervlakte vloei as plaatvloei of stroomvloei (2) [KONSEP]			(2)
6.1.6	Bewerkte gebied sal vergroot (2)			
	Water is beskikbaar vir beproeiing (2)			2x2 = (4)
6.1.7	a) Die groei van sekondêre nyerhede word aangemoedig (2)			1x2 = (2)
	b) Ekonomiese ontwikkeling word aangemoedig - surplus word uitgevoer (2)			1x2 = (2)
6.1.8	a) Gronderosie neem toe (2)			1x2 = (2)
	b) Geen bome om afloop te vertraag nie (2)			
	Geen wortels om grond te bind / stabiliseer nie (2)			
	Reëndruppelplons neem toe en maak gronddeeltjies los (2)			
	Omgeploegde grond is los en makliker erodeerbaar (2)			
	Deur saam met die helling te ploeg neem plaatvloei toe (2)			
	Intensiewe boerdery verminder grondvrugbaarheid (2)			
	[ENIGE 3 – Aanvaar ander]			3x2 = (6)
c)	Damme slik toe (2)			
	Opgaarkapasiteit van damme neem af (2)			
	Oorstromings kom meer voor (2)			
	Verdamping verhoog (2)			
	[ENIGE 2]			2x2 = (4)
6.2.1	a) Die laagstevlak waartoe 'n stroom op daardie plek kan erodeer (2)			1x2 = (2)
	b) Lengteprofiel word oneweredig (2)			
	'n Multikonkawe profiel word geskep (2)			
	Ongegradeerde profiel ontwikkel (2)			
	[ENIGE 1]			1x2 = (2)
c)	Ongegradeer (2)			1x2 = (2)
d)	Erosie en afsetting is nie in balans / ekwilibrium nie (2)			1x2 = (2)
6.2.2	a) Damme beheer volume water wat verder stroomaf riviersisteem bereik (2)			
	Tydens swaar reënval word die hoeveelheid water wat die stroom binnewloei beperk en verhoed dat die stroom oorstroom (2)			
	Water vanaf verskillende sytakke bereik die hoofstroom op verskillende tye en die vloedpiek word verlaag (2)			
	[ENIGE 2]			2x2 = (4)
b)	Bou die oewerwalle hoër op (2)			
	Maak rivierkronkels reguit (2)			
	Voer die vloeikanaal met beton uit om wrywing te verminder (2)			
	Vermeerder plantegroei langs oewerwalle om plaatvloei te verminder (2)			
	[ENIGE 2]			2x2 = (4)
6.2.3	a) Met die (Oranje-Visrivier) -tonnel (1)			(1)
	b) Om landerye te besproei (1)			
	Om hidro-elektrisiteit op te wek (1)			
	Om water aan Karoogemeenskappe te voorsien (1)			
	Waterverskaffing aan droogtegeteisterde gebiede (1)			
	Om landelike ontvolking te voorkom (1)			
	[ENIGE 2]			(2)

6.3.1	a)	Gemeenskaps- en persoonlike dienste (1)	(1)
	b)	Tertiêre aktiwiteite (1)	
		Dienste word gelewer (1)	(2)
	c)	97 035 (1)	(1)
	d)	Nie baie minerale / grondstowwe in die Ooskaap nie (2)	1x2 = (2)
6.3.2	a)	Historiese voordeel (2)	
		Haweliggig (2)	
		Groot arbeidsmag (2)	
		Groot afsetgebied / mark (2)	
		Spoorverbinding mat die binneland (2)	
		Halfpad geleë tussen die ander twee kusnywerheidsgebiede (2)	
		[ENIGE 2]	2x2 = (4)
	b)	Motorvoertuie (2)	1x2 = (2)
	c)	Motorbande (2)	
		Batterye (2)	Glas (2)
		Vere (2)	Uitlaatstelsels (2)
		Elektriese apparaat (2)	Gloeilampies (2)
		[ENIGE 1]	Bekleedsel (2)
	d)	Gebrek aan grondstowwe (2)	1x2 = (2)
		Gebrek aan energiebronne (2)	
		Watertekorte (2)	
		Klein landbouverskeidenheid (2)	
		Ver van binnelandse markte geleë (2)	
		Duur om grondstowwe / verwerkte produkte na binneland te vervoer (2)	
		Arbeidsonrus / stakings (2)	
		[ENIGE 1 – Aanvaar ander]	1x2 = (2)
6.4.1	a)	Voorsiening van: behuising (2)	
		opvoeding (2)	
		dienste soos water en elektrisiteit (2)	
		verbeterde kommunikasienetwerke bv. paaie (2)	
		[ENIGE 1 – Aanvaar ander]	1x2 = (2)
	b)	Nie genoeg geld / kapitaal (2)	
		Groot landelike bevolking in die Ooskaap (2)	
		[ENIGE 1 – Aanvaar ander]	1x2 = (2)
6.4.2	a)	Groei Werksverskaffing en Herverdeling /	
		Growth Employment and Redistribution (1)	(1)
	b)	Om ekonomiese groei aan te moedig deur werksverskaffing, uitvoere te verhoog en beleggers te lok (2)	
		[KONSEP]	1x2 = (2)
6.4.3	a)	Tradisionele woning / hut (1)	(1)
	b)	Dam / rivier / stroom / fontein (1)	(1)
	c)	Sit geld opsy / stel begroting op (2)	
		vir die voorsiening van basiese behoeftes soos permanente wonings (2)	
		en die aanlē van waterpipe na huise (2)	
		[Aanvaar enige logiese voorstelle wat die toewysing van fondse en hulpbronne in ag neem om in basiese behoeftes soos permanente wonings en water te verskaf]	2x2 = (4)

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