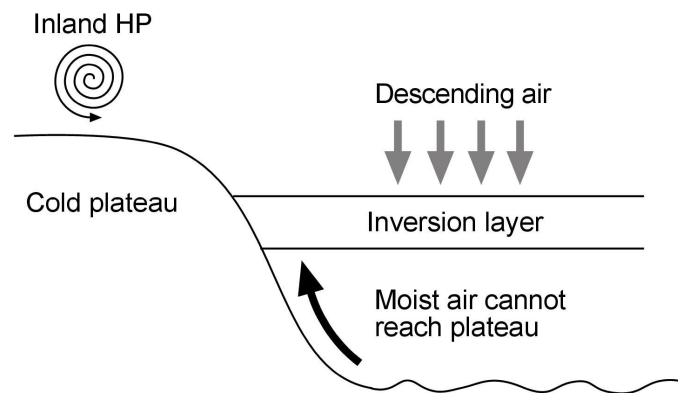


Memorandum

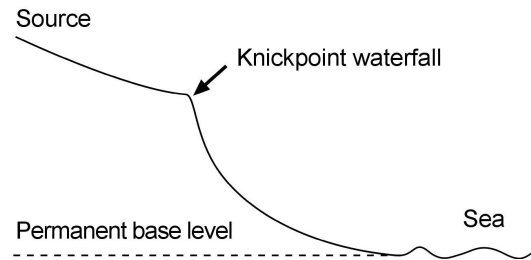
QUESTION 1

- 1.1
 - 1.1.1 Katabatic, cold
 - 1.1.2 warmer, north-facing
 - 1.1.3 warmer
- 1.2
 - 1.2.1 true
 - 1.2.2 false
 - 1.2.3 true
 - 1.2.4 true
 - 1.2.5 false
- 1.3
 - 1.3.1 Inter-tropical convergence zone
 - 1.3.2 Tropic of Capricorn/ $23\frac{1}{2}^{\circ}\text{S}$
 - 1.3.3 Summer – sun overhead Tropic of Capricorn/ITCZ in Southern Hemisphere.
 - 1.3.4 Tropical easterlies
 - 1.3.5 Air is hot air therefore light and rises, convergence of winds leads to air rising, rising air cools and condenses.
- 1.4
 - 1.4.1 A – South Indian HP B – South Atlantic HP C – Inland/Kalahari HP
 - 1.4.2 Family of depressions
 - 1.4.3 Winter – cold fronts further north and crossing land/high pressure over the land/South Atlantic high pressure more north.
 - 1.4.4 Plateau cold, no rising air, strong high pressure over the land, descending air from high pressure warms, inversion lies below height of escarpment, moist air from Indian Ocean cannot reach plateau.



- 1.4.5 Cold temperatures as air behind cold front is cold, heavy cloud as cold air forces warm air to rise and cool and condense, rain due to air condensing etc.
- 1.4.6 Berg winds are hot and dry winds, could cause fires as it is winter and vegetation is dry.
- 1.5
 - 1.5.1 A – dendritic B – trellis
 - 1.5.2 Tributaries join main stream at acute angle/looks like branches of a tree.
 - 1.5.3 Rock is inclined, rock strata has different resistance to erosion.

1.5.4 Longitudinal profile



1.5.5 Not a graded river as there is a sharp change in gradient at the waterfall, profile is not a smooth concave shape.

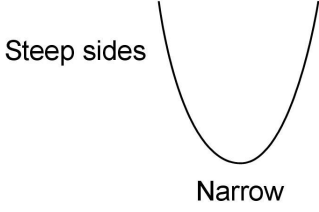
1.5.6 a) Temporary base level is where downward erosion of the river is slowed. b) Headward erosion. c) River has excess energy, begins to erode vertically.

- 1.6 1.6.1 A – Crest B talus/scree/debris slope C – Cliff/scarp/free-face
1.6.2 Resistant, lies horizontally
1.6.3 Convex
1.6.4 Soil particles slowly move downslope under the influence of gravity, evidence - bent trees and poles/broken retaining walls etc.
1.6.5 Remove vegetation/ build on slopes etc - must discuss

QUESTION 2

- 2.1 2.1.1 Westerlies
2.1.2 Tropical easterlies
2.1.3 From east to west
2.1.4 From the interior to the coast
2.1.5 Upslope
- 2.2 2.2.1 Scarp
2.2.2 More gentle
2.2.3 Inclined
2.2.4 Trellis
2.2.5 Granite
- 2.3 2.3.1 Cloud pattern over the land stretching from NW to SE; tropical cyclone evident; no cloud over SW Cape.
2.3.2 a) Eye
b) Lowest pressure; clear skies; no rain; calm.
c) Clockwise – it is in the Southern hemisphere.
d) Towards the SW
e) Will bring strong winds; will bring very heavy rain; damage to houses, power lines, could lead to flooding; crops damaged etc.
2.3.3 a) P – S Atlantic HP Q – S Indian HP
b) S – SW winds – cool and dry T – NE winds – warm and moist
c) SW winds and NE winds converge at the trough of low pressure; warm NE winds rise cool and condense.

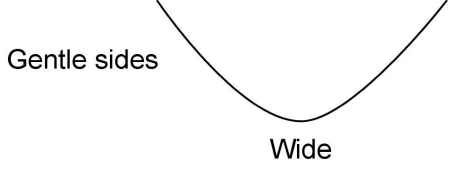
- 2.4 2.4.1 Temperature – hotter in the city as industry, people, cars generate heat/ concrete and tar absorb heat etc.
- 2.4.2 Cloud cover – more cloud in the city as the hotter air rises and condenses, there are many dust particles on which water vapour condenses (condensation nuclei).
- 2.5 2.5.1 Graskop River has more energy as it flows down the steep slopes of the escarpment; erodes through watershed by headward erosion and intercepts the other river.
- 2.5.2 W – misfit/beheaded stream X – elbow of capture Y – capture Z – captor
- 2.5.3 Graskop River gets more water, then has more energy and erodes vertically.
- 2.6 2.6.1 a) Catchment area – area from which a river system gets its water
b) River system – main river and the tributaries that flow into it.
- 2.6.2 a) D – watershed C – confluence
- 2.6.3
- Cross profile at A



Steep sides

Narrow

Cross profile at B



Gentle sides

Wide
- 2.6.4 More water and silt in the dam as there will be more runoff and water will pick up sand from the bare ground.
- 2.6.5 Grazing land – could be over grazing therefore less vegetation to bind the soil and more silt will reach the river; factory – could pollute the water as effluent from industries could reach the water; agricultural land – fertilisers could reach the water and cause a build-up of nutrients in the water (eutrophication).
- 2.7 2.7.1 X – mesa Y - butte
- 2.7.2 Horizontal rock with different resistance to erosion.
- 2.7.3 Canyon
- 2.7.4 Canyon – tourism – spectacular scenery, river rafting etc; little value for agriculture – dry and water from river difficult to access.

QUESTION 3

- 3.1 3.1.1 C
- 3.1.2 B
- 3.1.3 D
- 3.1.4 B
- 3.1.5 A
- 3.2 3.2.1 fruit
- 3.2.2 platinum
- 3.2.3 Richards Bay
- 3.2.4 maize

- 3.2.5 Mpumalanga
- 3.3 3.3.1 It is a place where people live and contains buildings and an infrastructure.
- 3.3.2 Rural – primary activity – farming
- 3.3.3 Dry point settlement – people have settled away from the river on higher ground.
- 3.3.4 Nucleated – a number of homes are grouped together.
- 3.3.5 On the terrace as this is flat ground; on the warmer north-facing slope; in the warm thermal belt half-way up the slope.
- 3.3.6 Prevent overgrazing by not keeping too many cattle; contour ploughing when they plant crops; avoid the development of footpaths.
- 3.4 3.4.1 An urban place which provides services to the surrounding rural population.
- 3.4.2 a) The area served by a central place
- b) The minimum amount of people required to support a central place/function/service.
- c) The maximum distance a person will travel to the central place or to get a function/service.
- 3.4.3 Sphere of influence of the town would be larger as it will have more functions and higher-order functions, needs a greater threshold population.
- 3.4.4 Shop selling bread etc.
- 3.4.5 Largest – theatre; smallest – chemist
- 3.4.6 a) Farmers leave the farms therefore services or shops in the town don't meet their threshold population and have to close down and so people leave the town to go to the city.
- b) Must discuss – can choose to discuss some kind of tourist activity, encouraging retired people to move there, government can introduce incentives to encourage business people to move there etc.
- 3.5 3.5.1 Gauteng
- 3.5.2 Mining – gold
- 3.5.3 Roads and railways
- 3.5.4 Raw materials – for industry i.e. coal, iron ore not too far away – lead to development of iron and steel industry and manufacture of machinery; labour – dense population therefore skilled and unskilled labour supply; markets – gold mines, people need manufactured goods; power – coal and electricity from Mpumalanga, not far away etc.
- 3.5.5 B – eThekweni Metropolitan region (Durban-Pinetown) C – Nelson Mandela Metropolitan region (Port Elizabeth-Uitenhage); Southwestern Cape
- 3.5.6 Overcrowding, not enough houses, job shortages, strain on infrastructure and resources, excessive pollution etc.
- 3.5.7 a) Corridors of development along which tourism, transport links, industry, farming will be developed. This will lead to more jobs and economic development.
- b) Tax rebates, low interest loans, a developed infrastructure, cheap land etc.
- c) Maputo Development Corridor/Saldanha/Fish River/Wild Coast etc.
- 3.6 3.6.1 In the times of Apartheid there were many rural areas, especially in the old “homelands” which the government did not develop or supply with services.

- 3.6.2 The population is growing; growth of industry which needs water; people's standards of living are increasing etc.
- 3.6.3 Agriculture
- 3.6.4 Use underground drip irrigation rather than overhead sprays, plant more drought-resistant crops, bushes between rows of crops to catch runoff etc.
- 3.6.5 Water is transferred from the drainage basin of the Tugela River into the drainage basin of the Vaal River.

QUESTION 4

- 4.1
 - 4.1.1 Multifunctional
 - 4.1.2 Higher
 - 4.1.3 Site
 - 4.1.4 Economic
 - 4.1.5 Grassroot
- 4.2
 - 4.2.1 False
 - 4.2.2 True
 - 4.2.3 False
 - 4.2.4 True
 - 4.2.5 True
- 4.3
 - 4.3.1 Break-of-bulk settlement as it is a harbour so goods are loaded off a ship onto another form of transport.
 - 4.3.2 CBD is closer to the harbour/ocean.
 - 4.3.3 Commercial or retail/offices/theatres/professional services/financial/transport etc.
 - 4.3.4 Near harbour; near railway line; close to low-income housing for labour; flat land close to sea.
 - 4.3.5 Open land on edge of the city.
 - 4.3.6 Built low-cost housing, supplied homes with electricity and water, developed clinics and schools.
 - 4.3.7 Area of urban and rural functions i.e. urban – airport, rural – market gardens, land has lower value, open space, not many people.
 - 4.3.8 1 – near industry; 2 – good view (Walmer Heights); 3 – at road intersection etc, must explain.
 - 4.3.9 Can choose giving a good reason e.g. to the NW of Area 2 where the roads intersect and so it will be accessible etc.
- 4.4
 - 4.4.1 a) Goods manufactured that will be exported to other countries.
b) Raw minerals are converted into manufactured goods.
c) Containers are large steel boxes into which goods are placed for export by ships etc.
 - 4.4.2 Is on the sea at the new harbour, is on the sea route to the east as well as the west.
 - 4.4.3 No import/export duties so raw materials/manufactured goods can be shipped in/out cheaply; minimal transport costs as it is so close to the new harbour.
 - 4.4.4 Industry – secondary activity; trade – tertiary activity.

- 4.4.5 Better infrastructure e.g. power supply; better transport facilities; many more jobs; people will have more money; people will have a higher standard of living etc must expand on these points.
- 4.4.6 Gateway – Coega and new harbour will provide access to rest of Africa; African Renaissance – revival of Africa, greater economic activities etc.
- 4.4.7 a) Main tenant/industry that will attract other industry and economic activity.
b) Improve economy – these people will need homes, food etc – can be provided by the people of the E Cape – will bring more money into the area etc.
- 4.5 4.5.1 Coal-fired power stations.
- 4.5.2 Coal is a non-renewable resource and will run out; the burning of coal contributes to global warming.
- 4.5.3 It would make maize less available and more expensive. Maize is the staple food of many South Africans and poor people might not be able to afford it. This could lead to many people starving.
- 4.5.4 Maize – on the Highveld – parts of Gauteng and the Free State; sugar – coastal areas of KwaZulu-Natal.