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SECONDARY SCHOOL IMPROVEMENT PROGRAMME (SSIP) 2023

Geography

Grade 12

Term 2

Learner's Guide

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SECTION 1 – GEOMORPHOLOGY - LEARNER NOTES

Session 1.1 – 10 min

Concepts	Definition
Base Level	The level where erosion either stops permanently or temporary
Erosion	The movement/transportation of material by wind and water
Knickpoint	Change in the gradient of a slope
Longitudinal Profile	Side view of a river from source to mouth
Cross-Profile (Transverse)	View of a river from bank to bank
River Grading	Is the state of balance/equilibrium between rate of erosion and rate of deposition.
Graded Profile	Smooth Concave – Showing the balance between rate of erosion and rate of deposition
Ungraded Profile	Is a river profile that has irregularities/obstruction/temporary base levels along its path (It is not smooth)
Abstraction	The process whereby the watershed becomes lower and its position shifts.
Headward erosion	The stream erodes away at the rock and soil at its headwaters (source) in the opposite direction that it flows. This lengthens the stream channel and enlarge the drainage basin
River management	River Management is defined as the management of water resources of a basin in relation to their socio-economic setting.
Catchment area	The area from which rainfall flows into a river, lake, or reservoir.
Overgrazing	Excessive grazing which causes damage to vegetation.
Afforestation	Planting more trees to reduce stream discharge and surface runoff
Deforestation	Deforestation, clearing or thinning of forests by humans to make the land available for other uses
Environmental injustice	It is the poor treatment/use of the natural resources/environment by humans

BASE LEVELS OF EROSION AND RIVER GRADING – 1h30min

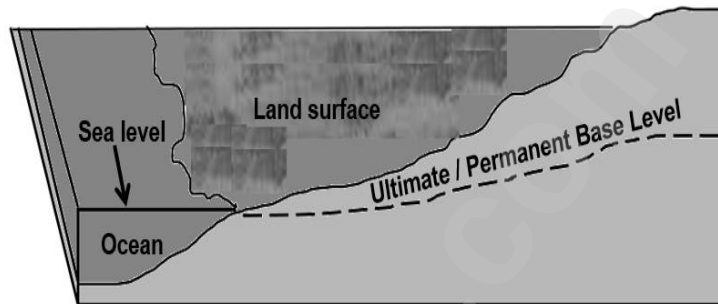
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Session 1.2 - Base levels of erosion – 25min

Timeframes	
Activity	Time
Revision	10min

1. Ultimate/Permanent Base level

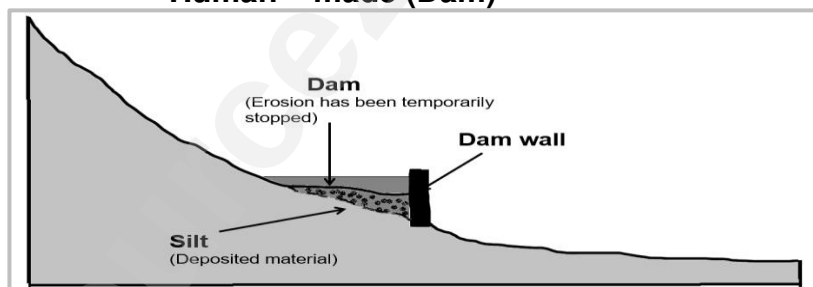
Lowest level to which a river can erode. Rivers cannot erode lower than **sea level**



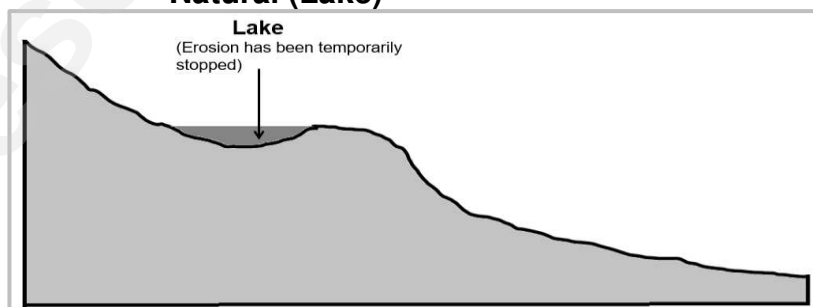
2. Temporary / Local Base Levels

When land becomes difficult to erode. Usually when hard resistant layers take longer to erode OR water is dammed up in lakes and dams. The erosion process is delayed

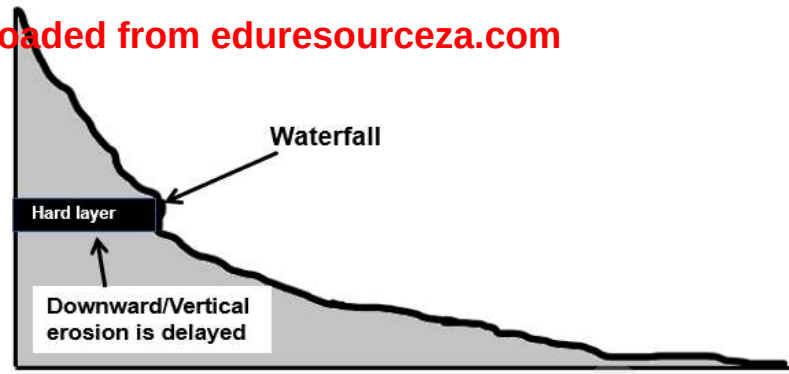
Human – made (Dam)



Natural (Lake)



Natural (Waterfall)



Session 1.3 - River grading

Timeframes	
Activity	Time
Revision	10min
Activity 1.1	10 min
Corrections	05 min
Activity 1.2	20 min
Corrections	10 min

Graded rivers

These are rivers that is in a state of balance/equilibrium between the rates of erosion and deposition

Over graded

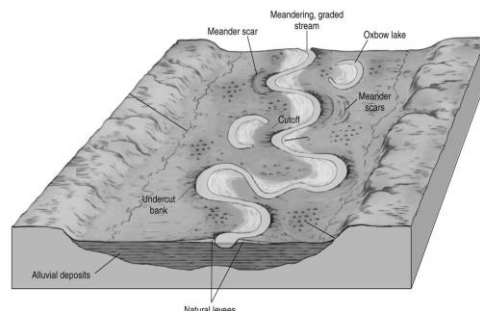
There is more erosion than deposition
Usually in the upper and middle course

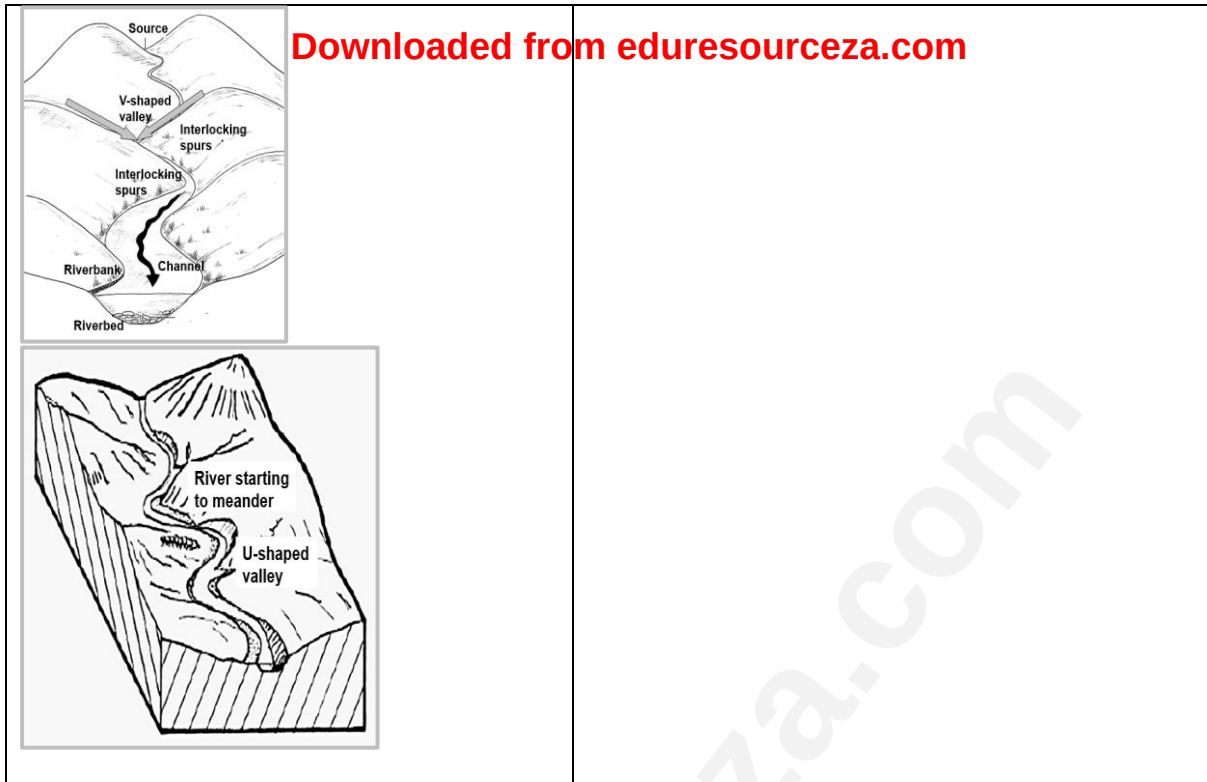
Remember Upper and Middle Courses!?

Under graded

There is more deposition than erosion
Usually in the lower course

Remember Lower Course!?



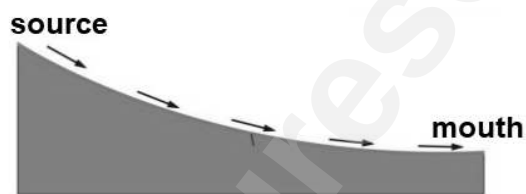


Graded Profiles

This refers to the state of the slope, even or uneven

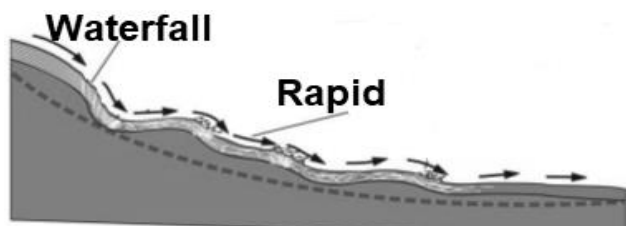
Graded

- This is longitudinal profile where the slope is smooth concave
- Steep in the upper course and gentle in the lower course



Ungraded

- Obstacles in the slope, causing the profile not to be smooth concave
- Obstacles are causing knickpoints in the longitudinal profile



From an ungraded to a graded stream

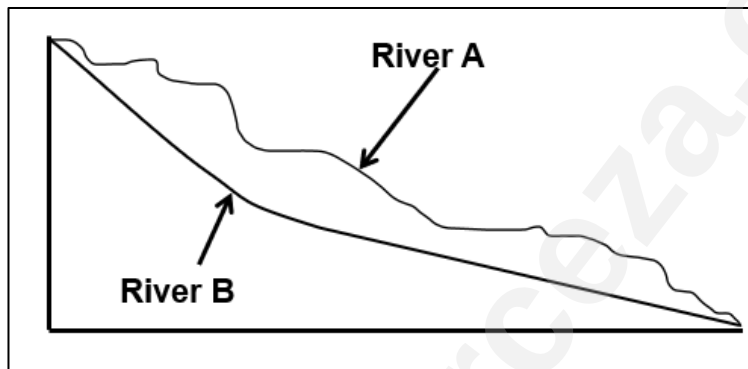


- Dncutcutting / Vertical erosion to make the channel deeper
- Lateral erosion to widen the channel
- Knickpoint like waterfall must be removed through headward erosion
- Rapids must be eroded away to smoothen the slope
- Deposition of material to build up the slope and gradient
- When there is a balance between rate of erosion and rate of deposition the stream is in equilibrium and therefor graded.
- The longitudinal profile will also have a smooth, concave slope

Activity 1.1 – Class Work

1.1.1 Define the concepts *river grading* and *river rejuvenation*. (2 x 2) (4)

1.1.2 Refer to the sketch below.

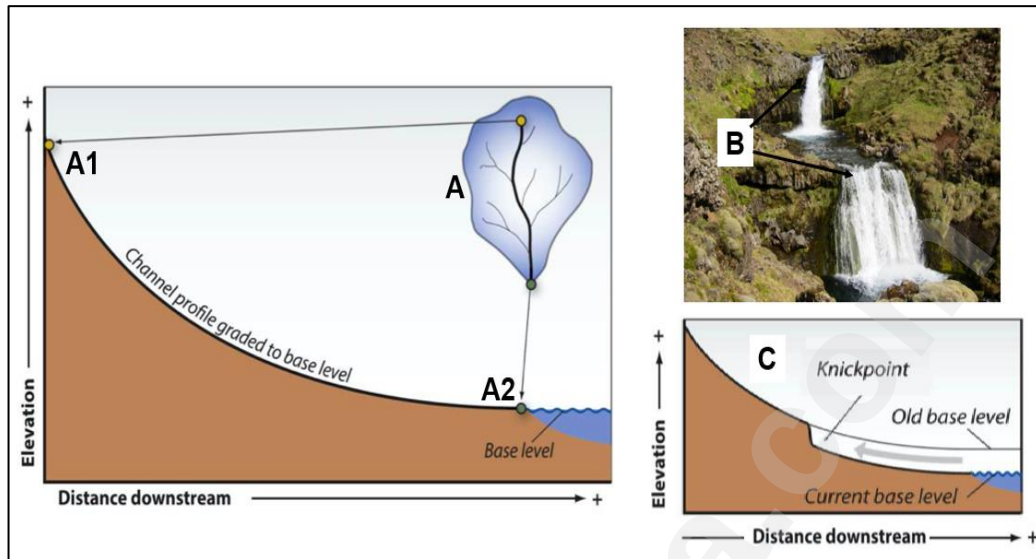


- Which river is ungraded? Provide a reason for your choice. (1 + 2) (3)
- Name ONE potential natural and ONE potential human-made knickpoint at river **A**. (2 x 1) (2)
- In a paragraph of approximately EIGHT lines, explain the processes that must happen for river **A** to become in a state of balance like river **B**. (4 x 2) (8)

Activity 1.2 – Class work

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1.2 Refer to the sketches below.



[Source: <https://earthsurface.readthedocs.io/en/latest/landform.html>]

1.2.1 Define the following concepts:

- (a) Graded Profile
- (b) Base level
- (c) Knickpoint (3 x 2) (6)

1.2.2 Refer to the drainage basin at **A**

- (a) Identify the drainage basin. (1 x 1) (1)
- (b) Determine the stream order of the drainage basin. (1 x 2) (2)
- (c) What does the drainage pattern reveal regarding the underlying rock structure at **A1** and **A2**? (2 x 2) (4)

1.2.3 Refer to the fluvial landform at **B**

- (a) Name the fluvial landform at **B** on the photograph. (1 x 1) (1)
- (b) In which stage of a river will this landform (your answer to QUESTION 1.2.3 (a) be found? (1 x 1) (1)
- (c) Why is this landform (your answer to QUESTION 1.2.3 (a)) regarded as a temporary base of erosion? (1 x 2) (2)
- (d) Explain the reason for the occurrence (existence) of the landform at **B**. (2 x 2) (4)

1.2.4 Refer to the longitudinal profile at C.

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- (a) Why is the profile ungraded? (1 x 1) (1)
- (b) Discuss ONE factor on the sketch that might have caused the ungraded profile. (2 x 2) (4)
- (c) In a paragraph of approximately EIGHT lines, explain the processes that will cause the river to become graded. (4x 2) (8)

Session 2 - RIVER REJUVENATION AND RIVER CAPTURE – 1h30min

Session 2.1 – River Rejuvenation

Timeframes	
Activity	Time
Revision	10min
Activity 2.1	10 min
Corrections	05 min
Activity 2.2 – Map work integration – Home work	

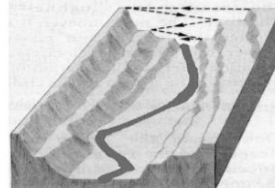
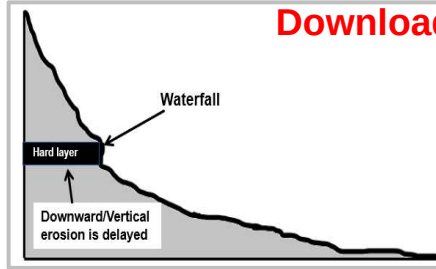
Definitions/Description

- Rivers become more energetic and starts to erode vertically again (therefore, returns to a state of youth)
- The river gains more energy, with increased speed and erosive power

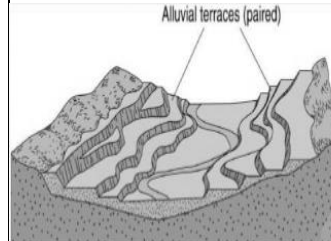
Reasons for increased energy

- Long term increase in rainfall
- The breaking of a dam wall will increase the speed and volume
- Rapid flowing tributaries join the mainstream
- River capture increase the volume of water and encourages more erosion
- Worldwide lowering of sea level
- Uplift of the land through tectonic forces

<u>Resultant features of rejuvenation</u>	
<u>Knickpoints will develop</u> (Break in the smooth, concave shape) • The river will go from graded/under graded too over graded • The profile will not be a smooth, concave slope any more • Usually, waterfalls develop	<u>Valleys within valley</u> • Downcutting cause more valleys to form on the riverbed • This leads to <u>paired terraces</u> on the slopes of the old valley



Valleys within valley



Valleys within valley, showing paired

Incised meanders – Renewed energy causes downcutting on the meandering river.
NOTE: The river is in its lower course, where deposition originally dominated!!!



Interlocking spurs



Importance of rejuvenated landscapes

Advantages:

- Landforms are good for tourist attractions.
- People can visit areas with terraces for recreation.
- Old flood plain suitable for crop farming
- Water at the knickpoint waterfalls can be used for power generation.

Disadvantages

- Difficult to construct infrastructure, like roads, railway lines and powerlines
- Expensive to build bridges over incised meanders
- Terraces are very steep, therefore having challenges for agricultural activities
- Mass movements like landslides is a constant threat
- River becomes too deep to utilize for agricultural activities

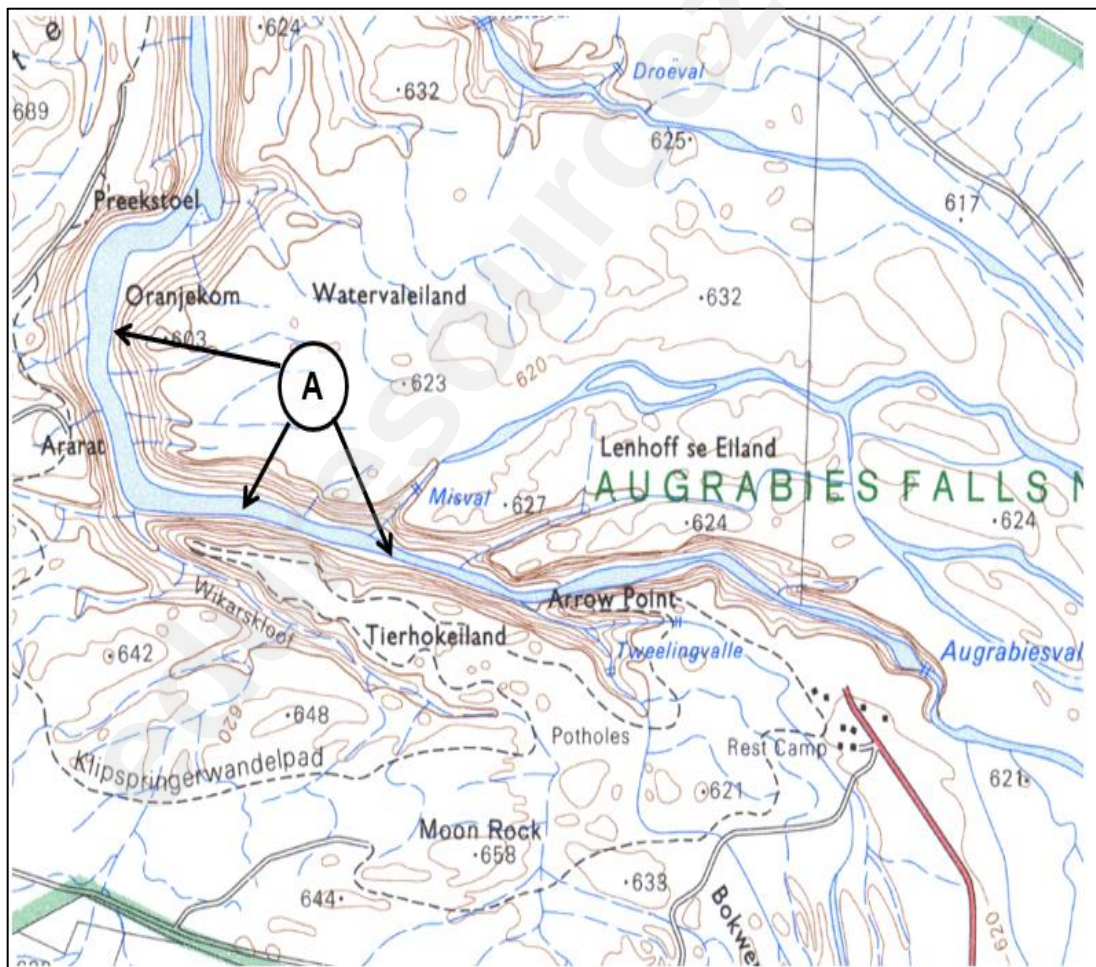
Activity 2.1 – Class work

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- 2.1.1 Name FOUR reasons why a river might rejuvenate. (4 x 1) (4)
- 2.1.2 What is the difference between an incised meander and a valley within a valley, when river rejuvenation took place? (2 x 2) (4)
- 2.1.3 Name the fluvial feature that will develop on the slopes of valleys within valley after rejuvenation. (1 x 1) (1)
- 2.1.4 Why is the fluvial feature (your answer to QUESTION 2.1.3) an economic disadvantage? (2 x 2) (4)
- 2.1.5 Draw an annotated longitudinal profile of a river that has rejuvenated after its graded state. (4 x 1) (4)

Activity 2.2 – Home work – Mapwork integration

Refer to an extract of topographical map 2820CB AUGRABIES.



- 2.2.1 In which general direction does the river at **A** flow? (1 x 1) (1)

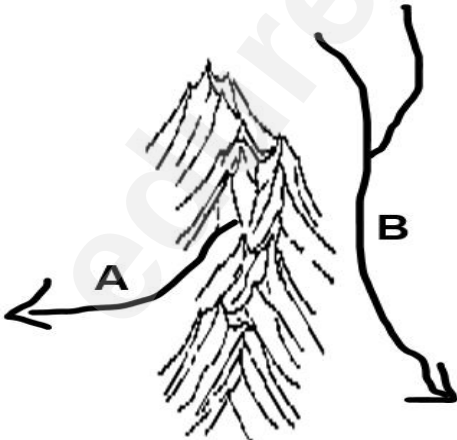
- 2.2.2 Provide TWO map evidence to support your answer to QUESTION 2.2.1. **Downloaded from eduresourceza.com** (2 x 1) (2)
- 2.2.3 Name ONE temporary base level of erosion on the topographical map. (1 x 1) (1)
- 2.2.4 Explain why the Augrabies waterfall can be seen as a knickpoint in the longitudinal profile of the river. (1 x 2) (2)
- 2.2.5 The river at **A** underwent rejuvenation. Provide map evidence to substantiate the statement. (1 x 2) (2)
- 2.2.6 What challenges does rejuvenation of the river poses for agricultural and road development in the area. (2 x 2) (4)

Session 2.2 - PROCESS OF RIVER CAPTURE / STREAM PIRACY

Timeframes	
Activity	Time
Revision	15 min
Activity 2.3	07 min
Corrections	05 min
Activity 2.4	15 min
Corrections	10 min

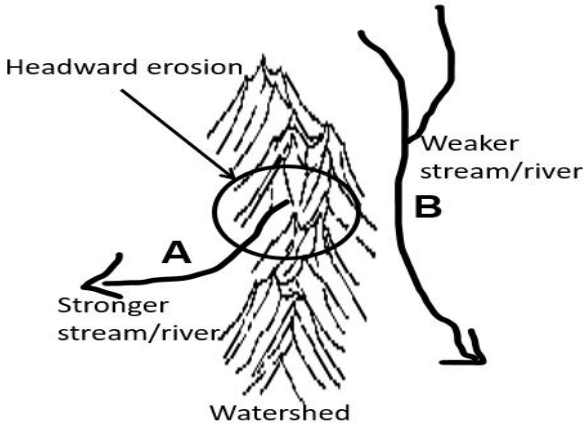
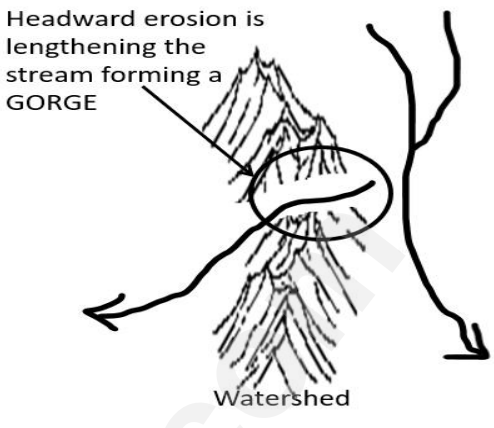
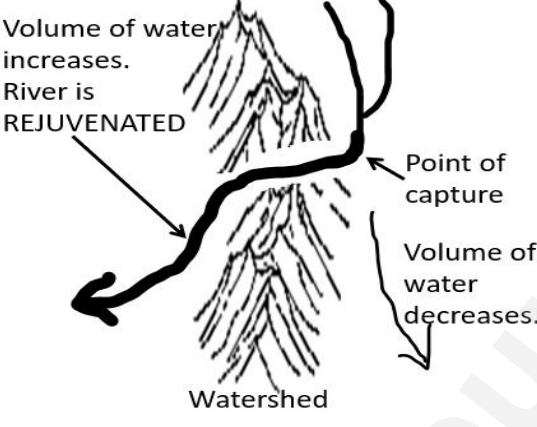
Definition

When a more energetic river captures ("steals") the water of a less energetic river.

What are we saying?	
	River A will eventually capture ('steal') the water of river B. <u>Where does the energy of RIVER A comes from:</u> • River flow over steeper slope • Volume of water increase through prolonged rainfall • River flow over less resistant rock therefor erode faster • Flows at a lower angle • There are cracks and joints in the rock, that makes it easier to erode

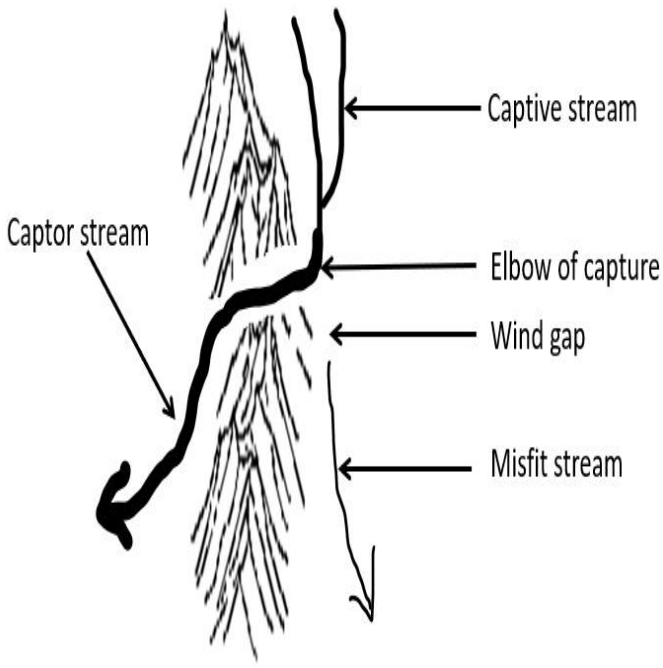
PROCESS OF RIVER CAPTURE

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<u>Before river capture</u> 	<u>Cutting back of the river</u> 
<u>After river capture</u> 	• Headward erosion takes place at the source of the more energetic river • The river channel is lengthened and a GORGE form • The more energetic river captures the water of the less energetic river. • The volume of water increases of the energetic river • Less energetic river is cut into 'half' – ➢ one-part flows with the energetic river ➢ The other part flows with the original channel, but has less water

Landform features caused by river capture

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 The diagram illustrates river capture. A 'Captor stream' (labeled with an arrow) flows from the left and joins a main river. At the point of capture, an 'Elbow of capture' is marked. Above this point, a 'Wind gap' is shown as a dry valley. Below the elbow, a 'Misfit stream' is shown flowing in a different direction. The main river is labeled 'Captive stream'.	Characteristics of the landform features <table> <tr> <td>Captor stream</td><td> • Volume of water increases • Rejuvenation occurs </td></tr> <tr> <td>Captive Stream</td><td> • Flows in a different direction than previously </td></tr> <tr> <td>Misfit Stream</td><td> • Channel is too small for the valley it flows in • Volume of water decreases </td></tr> <tr> <td>Elbow of capture</td><td> • Place where capture took place • Usually, a knickpoint waterfall develop </td></tr> <tr> <td>Wind gab</td><td> • Dry river valley • River gravel occurs </td></tr> </table>	Captor stream	• Volume of water increases • Rejuvenation occurs	Captive Stream	• Flows in a different direction than previously	Misfit Stream	• Channel is too small for the valley it flows in • Volume of water decreases	Elbow of capture	• Place where capture took place • Usually, a knickpoint waterfall develop	Wind gab	• Dry river valley • River gravel occurs
Captor stream	• Volume of water increases • Rejuvenation occurs										
Captive Stream	• Flows in a different direction than previously										
Misfit Stream	• Channel is too small for the valley it flows in • Volume of water decreases										
Elbow of capture	• Place where capture took place • Usually, a knickpoint waterfall develop										
Wind gab	• Dry river valley • River gravel occurs										

Implications of river capture

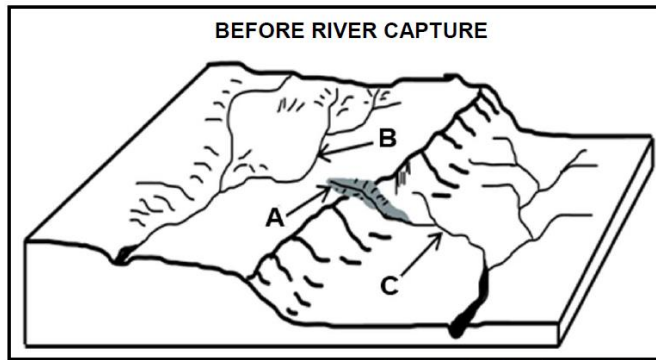
Captor stream	Misfit stream
• More agricultural production • Less irrigation • Increase in production might lead to manufacturing. • Increase in water might cause flooding and people must relocate. • More water might have damaged the recreational facilities on the banks of the river. • Habitat will be disturbed. • Increase in water will cause an increase in fish. • Diversity of ecosystems will develop because of the increase in vegetation.	• People will relocate due to job losses in agriculture. • Decrease in agricultural production. • Financial implication due to irrigation • Less of recreational facilities due to less income • Factories close due to lack of water • Decrease in fishing for source of food • Marine/water ecosystem disturbed. • Less fish • Land degradation due to soil erosion • Decrease in biodiversity

Activity 2.3 – Class work

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- 2.3 Various options are provided as possible answers to the following questions. Choose the answer and write only the letter (A–D) next to the question numbers (2.3.1 to 2.3.7) in the ANSWER BOOK, e.g. 2.3.8. D.

Refer to the sketch below to answer QUESTIONS 2.3.1 to 2.3.3.



[Source: Examiner's own sketch]

- 2.3.1 erosion at **A** is responsible for the lengthening of the river.

- A Vertical
- B Lateral
- C Sheet
- D Headward

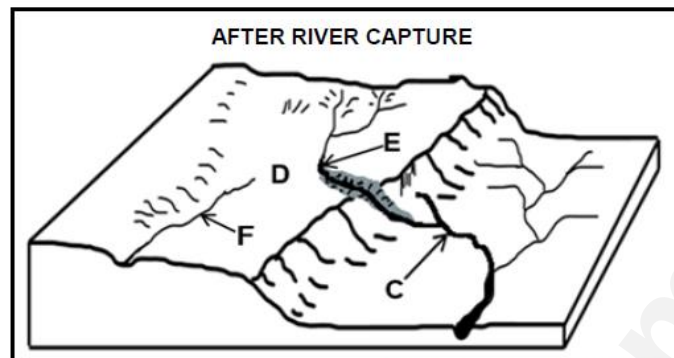
- 2.3.2 The landform caused by the type of erosion in QUESTION 2.3.1 is a

- A spur.
- B rapid.
- C gorge.
- D meander.

- 2.3.3 River **C** will eventually capture river **B** because it flows on a gradient and over rock.

- (i) gentler
 - (ii) steeper
 - (iii) softer
 - (iv) harder
- A (i) and (iii)
 - B (i) and (iv)
 - C (ii) and (iii)
 - D (ii) and (iv)

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Refer to the sketch below to answer QUESTIONS 2.3.4 to 2.3.7.



[Source: Examiner's own sketch]

2.3.4 River **C** is known as the stream.

- A captive
- B captor
- C captured
- D misfit

2.3.5 Feature **D** is referred to as

- A a waterfall.
- B river gravel.
- C a wind gap.
- D an elbow of capture.

2.3.6 The resultant fluvial landform of river capture at **E** is a/an ...

- A meander.
- B waterfall.
- C misfit stream.
- D oxbow lake.

2.3.7 The characteristics of river **F** are that it flows in a ... valley and the volume of water ...

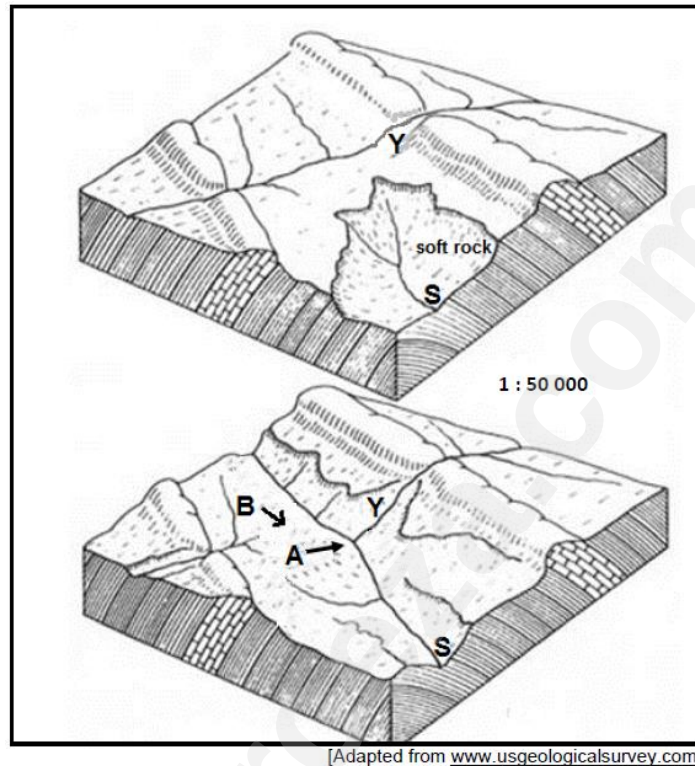
- (i) wide
- (ii) narrow
- (iii) increases
- (iv) decreases

- A (i) and (iii)
- B (ii) and (iv)
- C (i) and (iv)
- D (ii) and (iii)

(7 x 1) (7)

Activity 2.4 – Class work

2.4 The sketches below indicate river capture (stream piracy).



- 2.4.1 Label **S** and **Y** with the terms 'captor stream' and 'captured stream' respectively. (2 x 1) (2)
- 2.4.2 Name the features of river capture at **A** and **B** respectively. (2 x 1) (2)
- 2.4.3 Give TWO reasons for river **S** eroding at a faster rate. (2 x 2) (4)
- 2.4.4 In a paragraph of approximately EIGHT lines, explain the impact of river capture on the volume of water and the erosive ability of rivers **B** and **S** respectively. (4 x 2) (8)

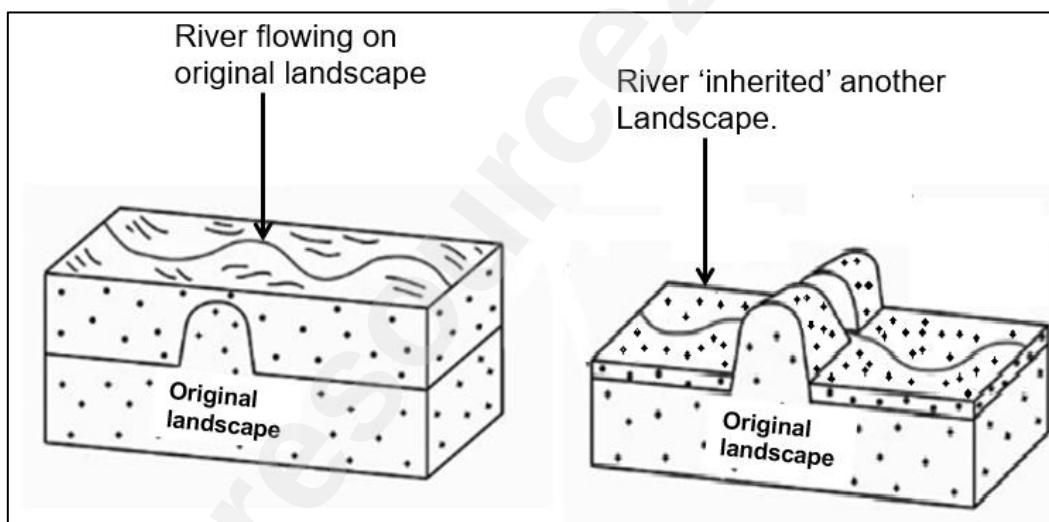
SESSION 3 - SUPERIMPOSED AND ANTECEDENT DRAINAGE AND MANAGEMENT OF DRAINAGE BASINS – 1h30min

Session 3.1 - Superimposed and Antecedent drainage

Timeframes	
Activity	Time
Corrections – Activity 2.2	10 min
Revision	10 min
Activity 3.1	05 min
Corrections	03 min
Activity 3.2	08 min
Corrections	07 min

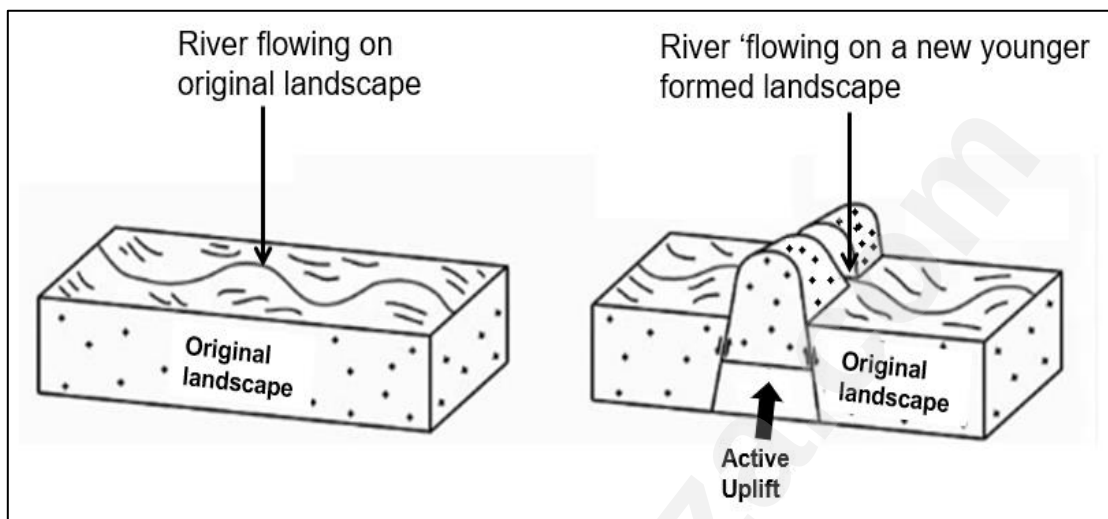
Superimposed drainage

- When a younger river place itself on top of a landscape that is geologically older
- The river keeps its original course
- The rate of downcutting is faster than the rate at which the rock can be exposed to the surface



Antecedent drainage

- Rivers are older than the landscape they flow over
- Tectonic activity causes folding and faulting
- The landscape is raised
- The river continues to cut down although the landscape is uplifted around it
- The rate of downcutting is faster than the uplift



Activity 3.1 – Class work

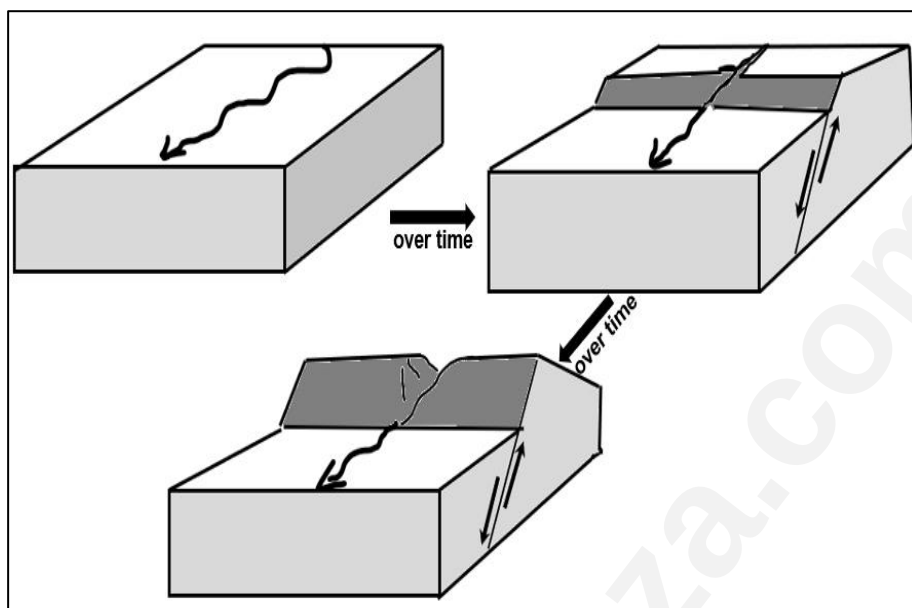
- 3.1 Complete the statements in COLUMN A with the options in COLUMN B. Write down only **Y** or **Z** next to the question numbers 3.1.1 to 3.1.5) in the ANSWER BOOK, e.g. 3.1.6 Y.

COLUMN A		COLUMN B
3.1.1	The reduction of vegetation by humans that increases silt deposition	Y: Afforestation Z: Deforestation
3.1.2	The stream is younger than the rock structure it flows on	Y: Superimposed drainage Z: Antecedent drainage
3.1.3	A stream that is too small to have eroded the valley in which it flows	Y: Captor stream Z: Misfit stream
3.1.4	When the stream is lengthening its course steam up	Y: Headward erosion Z: Abstraction
3.1.5	The point where river capture takes place	Y: Wind gap Z: Elbow of capture

Activity 3.2 – Class work

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3.2 Refer to the sketches below regarding the development of a drainage pattern.



- 3.2.1 Does the process in the sketches illustrate super imposed or antecedent drainage. (1 x 1) (1)
- 3.2.2 Give a reason for your answer to QUESTION 3.2.1. (1 x 2) (2)
- 3.2.3 Describe how the process unfolded over time. (2 x 2) (4)
- 3.2.4 What made it possible for the river to maintain its original course despite the changes in the landscape? (2 x 2) (4)

Session 3.2 - River and drainage basin management

Timeframes	
Activity	Time
Revision	10 min
Activity 3.3	10 min
Corrections	05 min
Activity 3.4	10 min
Corrections	05 min

Definition

River Management is defined as the management of water resources of a basin in relation to their socio-economic setting.

Causes of poor river management

- Inadequate sewage collection and treatment are sources of water pollution.
- Cutting down trees and concreting over large areas generates an acceleration of flows which does not give enough time for water to infiltrate and be purified by the ground.
- Agriculture has an impact on water pollution due to the use of chemicals such as fertilizers, pesticides or insecticides running off in the water, as well as livestock excrement, manure and methane (greenhouse effect).
- Industries produce a lot of waste containing toxic chemicals and pollutants.
- A huge amount of the industrial waste is drained in the fresh water which then flows into canals, rivers and eventually in the sea.
- Garbage such as plastic, paper, aluminium, food, glass, or rubber are deposited into the sea.

Importance of managing drainage basins

- Store water and protecting for future use.
- Reduce discharge and recycle harmful agricultural run-off.
- Agricultural purposes e.g., crop farming
- Industrial purposes e.g., to cool the machines in factories and is also a vital part of production.
- Control the flow of water to reduce the chances of flooding.
- Domestic purposes
- Recreation e.g., water sports
- Generation of Hydroelectricity
- Preserve natural vegetation.
- Preserve biodiversity.

Strategies to protect and preserve drainage basins

- Create a buffer zone to prevent development too close to the river
- Implement legislation to discourage pollution of the river
- Issue fines for illegal dumping/polluting of the river
- Monitoring/testing the quality of the water to ensure it is suitable for domestic and industrial use
- Educate farmers on sustainable farming methods
- Educating people about the importance of river management
- Awareness campaigns to prevent dumping and pollution of river
- Encourage or promote the planting of trees to reduce surface run-off or soil erosion
- Protect natural vegetation to reduce surface run-off or soil erosion
- Promote recycling of wastewater before releasing back into river
- Conserve wetlands to preserve the quality of the water

Activity 3.3 – Class work

Downloaded from eduresourceza.com

3.3 Refer to the photograph showing the impact of people on rivers.



[Source: <http://www.groundup.org.za>]

- 3.3.1 What does the term river management mean? (1 x 1) (1)
- 3.3.2 Which government department is responsible for the health and sustainable use of rivers? (1 x 1) (1)
- 3.3.3 What evidence in the photograph indicates poor river management? (2) (2 x 1)
- 3.3.4 Recommend TWO ways in which the municipality can reduce the impact of informal settlements on rivers. (2 x 2) (4)
- 3.3.5 Write a paragraph of approximately EIGHT lines in which you give reasons why it is crucial (very important) to maintain the health (or quality) of rivers in South Africa. (4 x 2) (8)

Activity 3.4 – Class work

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- 3.4 Read the newspaper article below on the 'Human impact on water quality along the Orange-Senqu River Basin'

HUMAN IMPACTS ON WATER QUALITY IN THE ORANGE-SENQU RIVER BASIN

With an availability of less than 1 000 cubic metres of water per person per year, all countries of the basin (except Lesotho) are water-scarce countries according to UN standards. As the population and economy (mining and industry around Johannesburg, commercial agriculture along the Caledon, Vaal, middle and lower Orange) grow, water is reused more often; and pollution can less and less be alleviated by dilution. This challenge, which mainly affects South Africa, grows more acute by the day.

The water quality in the Orange-Senqu River Basin is highly variable due to a combination of natural and human factors. The Senqu River system generally provides high quality water, thanks to a relatively undeveloped mountain catchment, and the natural filtering effects of the wetlands of the Lesotho highlands.

[Source: www.orangesenquzak.org/river.aspx]

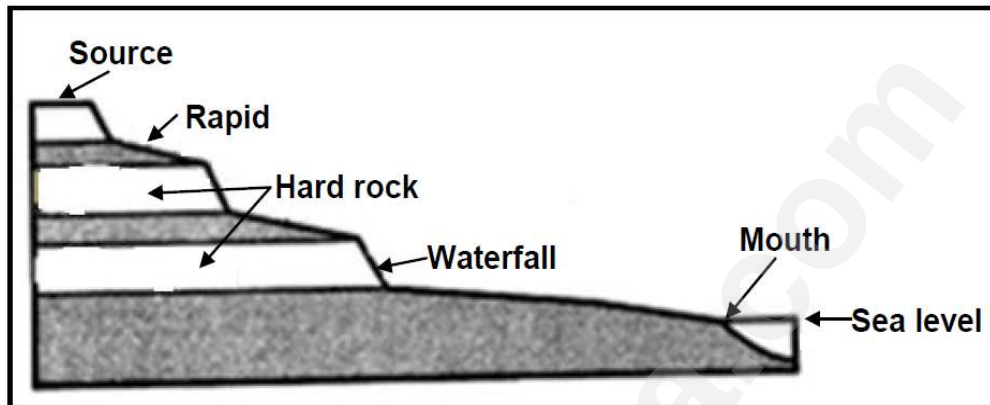
- 3.4.1 What is a *water scarce country*? (1 x 1) (1)
- 3.4.2 Quote TWO reasons from the newspaper article, why water has to be reused more often in the Orange Senqu River Basin. (2)
(2 x 1)
- 3.4.3 Give TWO reasons why the Senqu River system provides high quality fresh water to the Orange-Senqu River Basin. (2 x 1) (2)
- 3.4.4 Discuss the negative impact of commercial farming on the quality of water in the Orange River drainage basin. (2 x 2) (4)
- 3.4.5 In a paragraph of approximately EIGHT lines, outline sustainable strategies that the South African government can implement to ensure the provision of high-quality water in the Orange-Senqu River Basin. (4 x 2) (8)

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SESSION 4 – TYPICAL EXAMINATION QUESTIONS – 1h30min

Activity 4.1 – Class work – Base levels of erosion and grading

4.1 The sketch below shows a longitudinal river profile.



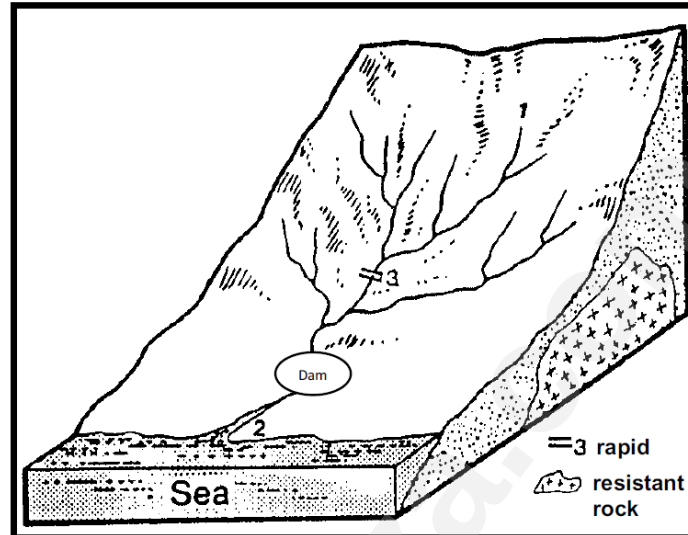
[Source: www.cliffsnotes.com]

- 4.1.1 Define the term *longitudinal profile*. (1 x 2) (2)
- 4.1.2 Name a temporary base level of erosion evident on the sketch. (1 x 1) (1)
- 4.1.3 Draw a labelled free-hand sketch of a graded longitudinal profile. (2 x 1) (2)
- 4.1.4 State ONE characteristic of the riverbed of a graded river. (1 x 2) (2)
- 4.1.5 In a paragraph of approximately EIGHT lines, explain the processes that the profile in sketch must undergo to change from an ungraded to a graded profile. (4 x 2) (8)

Activity 4.2 – Enrichment/Home work -Self study

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- 4.2 The sketch below illustrates the stream profiles of a typical South African river from its source to its river mouth. Various base levels of erosion are indicated along the stream profile.



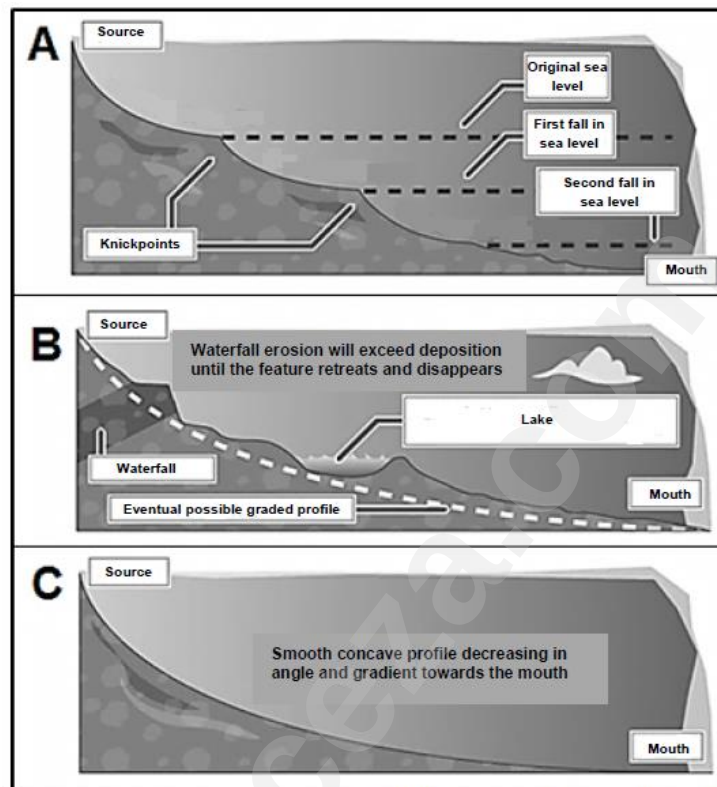
Adapted: Hydrology and Landforms

- 4.2.1 Define the term *base level of erosion*. (1 x 2) (2)
- 4.2.2 Identify ONE temporary base level of erosion in the sketch. (1 x 1) (1)
- 4.2.3 Draw a labelled longitudinal profile of the river illustrated in the sketch, clearly showing how the temporary base levels of erosion could have influenced the shape of the profile. (4 x 1) (4)
- 4.2.4 How would you describe the longitudinal profile that you have drawn in QUESTION 12.2.3? (1 x 1) (1)
- 4.2.5 Give a reason for your description in QUESTION 12.2.4. (1 x 1) (1)
- 4.2.6 Suggest THREE reasons why the cross-section profiles of the river change, from its source (1) to its river mouth (2). (3 x 2) (6)

Activity 4.3 – Enrichment/Home work -Self study

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4.3 Refer to sketch below showing river grading and the longitudinal profiles of a river.



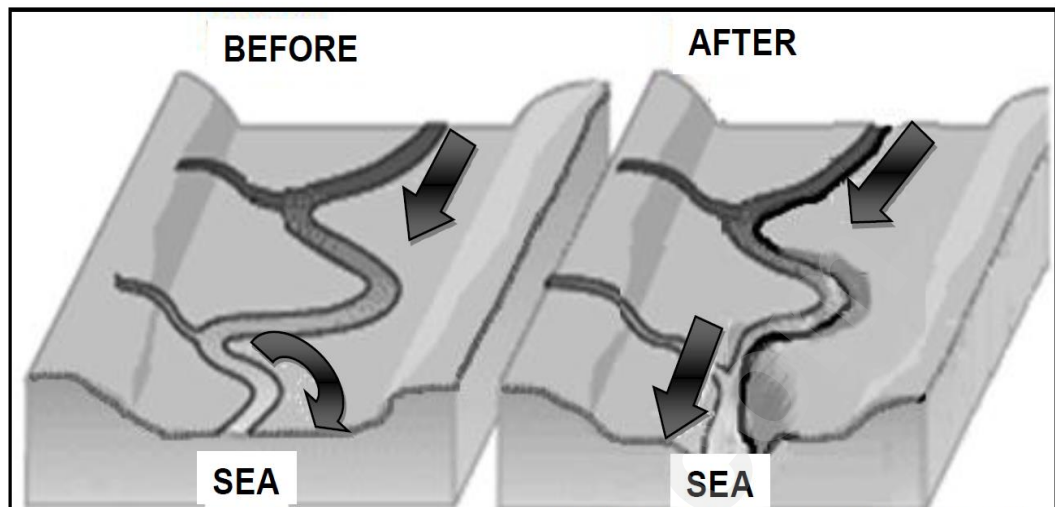
[Adapted from alevelgeography.com]

- 4.3.1 Give a geographical term to describe the irregular shape of longitudinal profile **B**. (1 x 1) (1)
- 4.3.2 Name a temporary base level evident in longitudinal profile **B**. (1 x 1) (1)
- 4.3.3 What evidence suggests that rejuvenation has taken place in longitudinal profile **A**? (1 x 2) (2)
- 4.3.4 Describe, with reasons, the changes a river meander will undergo after rejuvenation. (2 x 2) (4)
- 4.3.5 In a paragraph of approximately EIGHT lines, explain the processes that assisted the graded river in profile **C** to have a steep gradient in the upper course and a gradual gradient in the lower course. (4 x 2) (8)

Activity 4.4 – Class work – River Rejuvenation

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4.4 Refer to the sketches showing river rejuvenation.



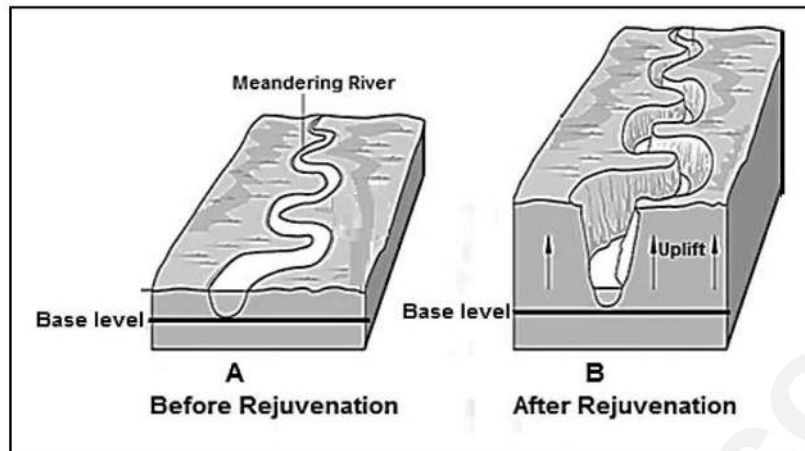
[Adapted from <http://navneetsingh00215.blogspot.in>]

- 4.4.1 What is river *rejuvenation*? (1 x 1) (1)
- 4.4.2 Which stage (course) of the river is illustrated in the sketches? (1 x 1)
- 4.4.3 Give evidence from sketches to support your answer to QUESTION 4.4.2. (1 x 1) (1)
- 4.4.4 Why is there an increase in the rate of erosion in the river after rejuvenation? (2 x 2) (4)
- 4.4.5 Identify the changes to the following features after river rejuvenation took place:
- (a) River channel (1 x 2) (2)
 - (b) Meander (1 x 2) (2)
- 4.4.6 Discuss the possible negative impact of river rejuvenation on storage dams in the lower course after the point of rejuvenation (knickpoint). (2 x 2) (4)

Activity 4.5 – Enrichment or Home work – Self study

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4.5 The sketch below shows river rejuvenation.



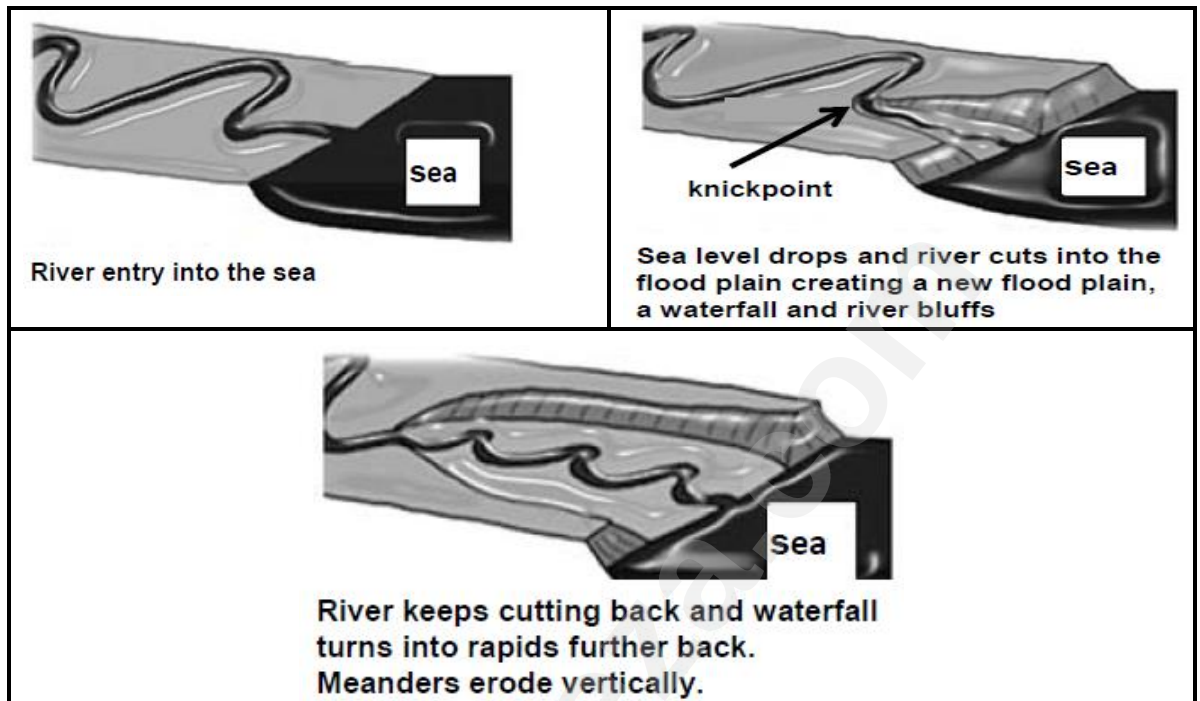
[Adapted from <https://www.google.com/search?q=rejuvenation+of+rivers>.]

- 4.5.1 What type of erosion is associated with river rejuvenation? (1 x 1) (1)
- 4.5.2 What evidence indicates that river rejuvenation has taken place? (1 x 1) (1)
- 4.5.3 Identify the force of upliftment associated with rejuvenation. (1 x 1) (1)
- 4.5.4 Why is rejuvenated land not suitable for human activity? (2 x 2) (4)
- 4.5.5 In a paragraph of approximately EIGHT lines, explain how rejuvenation could change the fluvial features downstream of the point of rejuvenation. (4 x 2) (8)

Activity 4.6 – Enrichment or Home work – Self study

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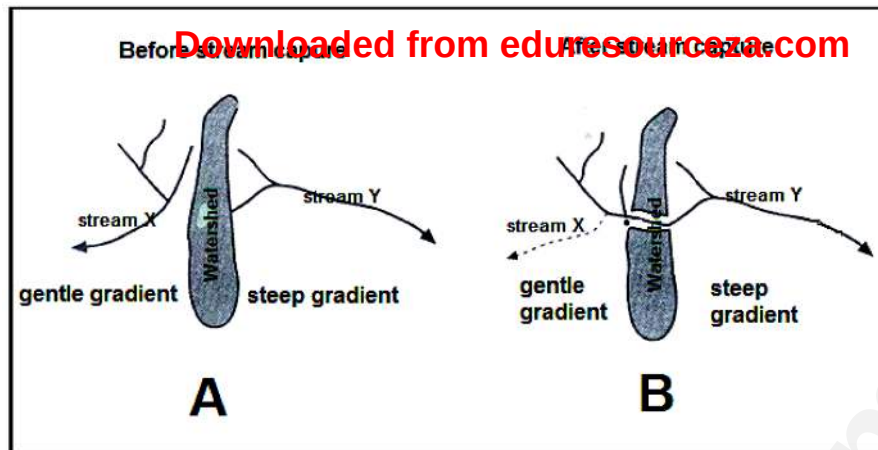
4.6 Study the figure below which illustrates river rejuvenation.



- 4.6.1 Define the term *river rejuvenation*. (1 x 2) (2)
- 4.6.2 Identify the condition that resulted in river rejuvenation. (1 x 1) (1)
- 4.6.3 Name ONE likely fluvial feature that can form at the knickpoint along the river profile. (1 x 1) (1)
- 4.6.4 Explain the impact of river rejuvenation on the grading of a river. (2 x 2) (4)
- 4.6.5 Write a paragraph of approximately EIGHT lines elaborating on the changes that will occur in the fluvial features found in the illustrated course of the river as a result of river rejuvenation. (4 x 2) (8)

Activity 4.7 – Class work – River Capture

4.7 Study the figures below which illustrates the concept of river capture (stream piracy).



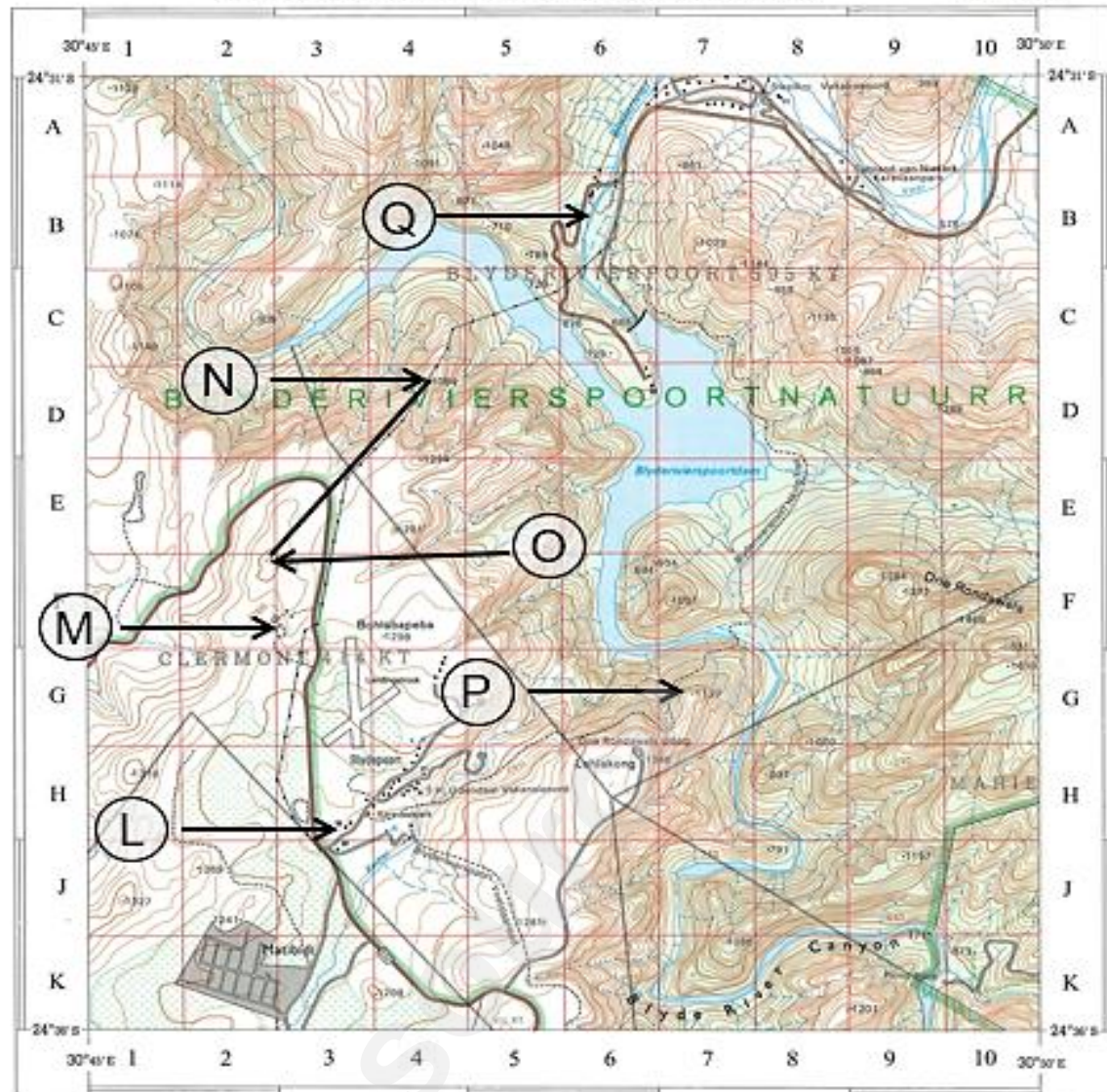
- 4.7.1 Name the type of erosion that gives rise to river capture. (1 x 1) (1)
- 4.7.2 Name the resultant stream **Y** after stream capture has taken place. (1 x 1) (1)
- 4.7.3 Discuss the role that gradient would have played in promoting river capture. (1 x 2) (2)
- 4.7.4 Why does river rejuvenation generally occur after river capture? (2 x 2) (4)
- 4.7.5 In a paragraph of approximately EIGHT lines, evaluate the impact that river capture will have on the ecology of the area at **X**. (4 x 2) (8)

Activity 4.8 - Map work integration

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EXTRACT FROM BOURKE'S LUCK 2430 DB

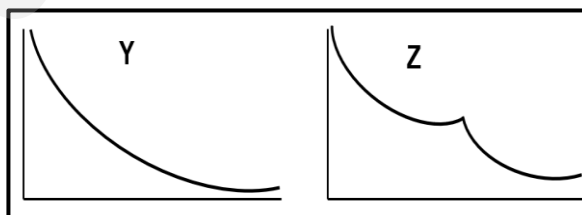
1:50 000



REFERENCE		
- National Freeway; National Route - Arterial Route - Main Road - Secondary Road; Bench Mark - Other Road; Bridge - Track and Hiking Trail - Railway; Station or Siding - Other Railway; Tunnel - Embankment; Cutting - Power Line - Built-up Area - Buildings; Ruin - Post Office; Police Station; Store - Place of Worship; School; Hotel	- International Boundary and Beacon - Provincial Boundary - Game, Nature Reserve & State Forest Boundary - Perennial River - Non-perennial River - Non-Perennial Water - Dry Water Course - Dry Pan - Marsh and Vlei - Pipeline (above ground) - Water Tower; Reservoir; Water Point - Coastal Rocks - Prominent Rock Outcrop	- Fence; Wall - Windpump; Monument - Communication Tower - Mine Dump; Excavation - Trigonometrical Station; Marine Beacon - Lighthouse and Marine Light - Cemetery; Grave - Erosion; Sand - Woodland - Cultivated Land - Orchard or Vineyard - Recreation Ground - Row of Trees - Original Farms

4. The questions below refer to the extract from the topographical map 2430
- 8 DB BOURKE'S LUCK

- 4.8.1 Identify the human-made feature at grid location 24°32'20"S; 30°47'55" E. (1 x 1) (1)
- 4.8.2 What is the purpose of the human feature identified in QUESTION 4.8.1. (1 x 2) (2)
- 4.8.3 Determine the true bearing of the shop at **L**, in block **H3** from the excavations at **M** in block **F3**. (1 x 2) (2)
- 4.8.4 Draw a rough cross profile from **N** (block **D4**) to **O** (block **F2**). Indicate the heights at the beginning and the end of your cross profile. (3 x 1) (3)
- 4.8.5 Name the slope from **N** to **O**. (1 x 1) (1)
- Refer to the Blyderivierpoortdam
- 4.8.6 Why is the drainage pattern around the dam centripetal? (1 x 1) (1)
- 4.8.7 Explain why the location of the dam is ideal. (2 x 2) (4)
- Refer to the Blyderiver between spot height 791 at **P** (block **J8**) and **Q** (block **A6**).
- 4.8.8 In which direction does the Blyderiver flow between **P** and **Q**? (1 x 1) (1)
- 4.8.9 Provide a reason for your answer to QUESTION 4.8.8. (1 x 2) (2)
- 4.8.10 Describe the reason for the difference in the volume of water at **P** and **Q**. (1 x 2) (2)
- 4.8.11 Which of the following longitudinal profiles (**Y** or **Z**) represent the river from **P** to **Q**?



- (1 x 1) (1)
- 4.8.12 Give a reason for your choice at QUESTION 4.8.11. (1 x 2) (2)

SECTION 2 - SETTLEMENT GEOGRAPHY

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SESSION 5 – Classification of settlements, Rural settlements (Site and situation, Pattern and shapes) – 1h30min

5.1 – Concepts 10 min

Concepts	Definition
Settlement	A grouping of people, buildings, communication networks, activities that function as a single unit on a daily basis. Simply said – A settlement is a place where people stay and work.
Site	The exact physical location of a settlement
Situation	The situation is the location of a settlement in relation to the things that are around it
Rural Settlement	Place where primary activities dominate. It is therefore uni-functional.
Urban Settlement	Place where secondary and tertiary activities dominate. It is therefore multi-functional
Pattern	The arrangement of buildings in relation to one-another.
Location	The specific point where something exists on earth
Primary activities	Economic activity where the extraction of raw materials take place
Secondary activities	Economic activity where the manufacturing of the raw materials take place. In other words, they make something here.
Tertiary activities	Economic activities that concentrate on services and trade
Waterpoint settlement	Settlements cluster around a water source in dry areas.
Dry point settlement	Settlements that are located away from the danger of water.
Rural-Urban migration	Movement of people from rural to urban areas
Depopulation	Reduction in the total amount of people
Pull Factors	Physical, economic, or social factors that attract people
Pull Factors	Physical, economic, or social factors that forces people away from a settlement
Social Justice	Every person deserves equal economic, political, social rights and opportunities
Land reform	To redress the unequal distribution of land in South Africa
Land restitution	Claiming back land which was unfairly taken away from citizens
Land redistribution	State owned land distributed to previously disadvantaged citizens
Land tenure	This law ensures that people who could not own land previously can do so after 1994.

Session 5.1 - Classification of settlements

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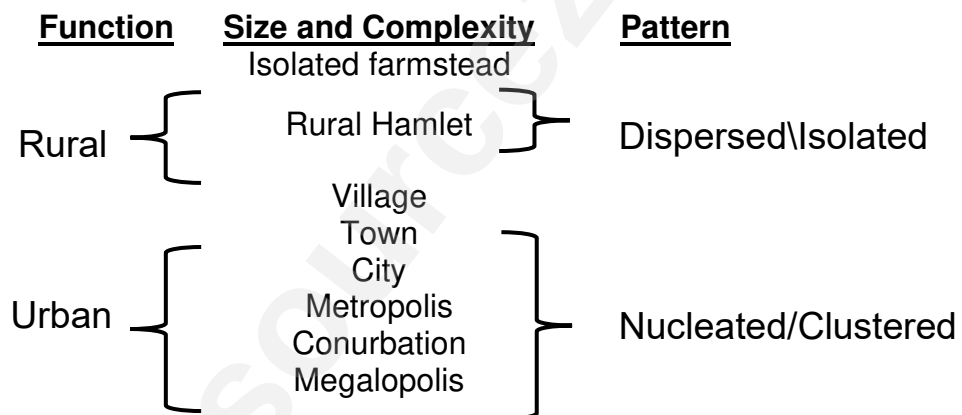
Timeframes	
Activity	Time
Revision	15 min
Activity 5.1	10 min
Corrections	08 min

Size and complexity: settlements range from small single farmsteads to large megacities in the form of a megalopolis and conurbations.

Settlement patterns refer to either **dispersed** settlements where people settle in isolated farmsteads far from each other or clusters of people settling in a **nucleated** settlement with a concentration of people and activities.

Function in settlement can either be Uni-functional where most of the inhabitants are involved in just one economic sector or multi-functional where inhabitants are involved in all 4 economic sectors.

Urban/rural – settlements where the main economic activity falls in the primary economic sector are usually classified as rural with mining as the exception. Urban settlements host a variety of economic activities in different economic sectors.



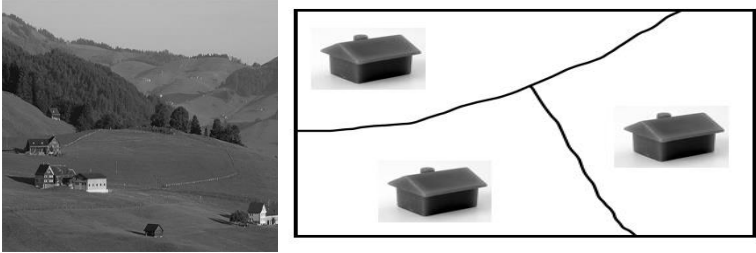


FUNCTION

Rural Settlements	 Primary activities dominate. -Unifunctional • Agriculture • Mining • Forestry • Fishing
Urban Settlements	 Secondary and Tertiary Activities dominate. -Multifunctional Secondary Activities • Factories Tertiary activities • Services e.g., Education, Health, Transport, Tourism, e • Trade e.g., shops, businesses, imports, exports etc.

PATTERN

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Dispersed/Isolated Buildings are away from one-another	
Nucleated/Clustered Buildings near to one-another	

Activity 5.1 – Class work

5.1.1 What is a settlement? (1 x 2) (2)

5.1.2 Differentiate between rural and urban settlements according to function.

(2 x 2) (4)

5.1.3 Refer to the photo below



- Name settlement patterns **A** and **B**. (2 x 1) (2)
- Explain the difference between settlement patterns **A** and **B**. (2 x 2) (4)
- How do settlement **A** and **B** differ in their size and complexity. (2 x 2) (4)
- What factor evident in the photo influenced the pattern of settlement **A**. (1 x 2) (2)

Session 5.2- RURAL SETTLEMENTS (Site and situation, Pattern and shapes)

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Timeframes	
Activity	Time
Revision	15 min
Activity 5.2	05 min
Corrections	03 min
Activity 5.3	15
Corrections	10

NOTE the following:

Three types of Rural settlements according to size and function	Rural settlements according to pattern	
	Dispersed	Nucleated
Isolated farmstead	Isolated farmstead	Village
Rural Hamlet	Rural Hamlet	
Village		

How site and situation affect the location of rural settlements

Site of settlements are determined by the following:

Fresh drinking water for domestic and agricultural use

Availability of **building material** e.g., wood, rocks, grass

Flat land to build on

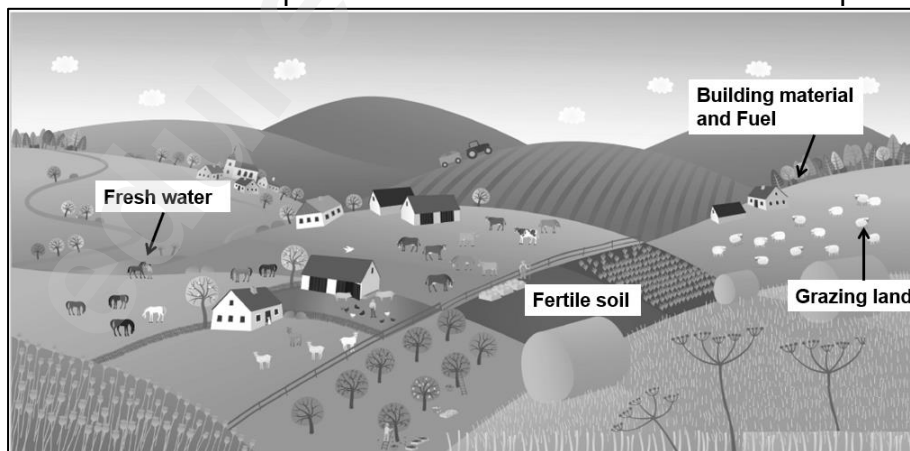
Grazing land

Fertile soil for crop farming

Fuel for energy e.g., wood.

Micro climate – Aspect determines where the warmest slope is

All these factors collectively influences where the specific place of the settlement will be



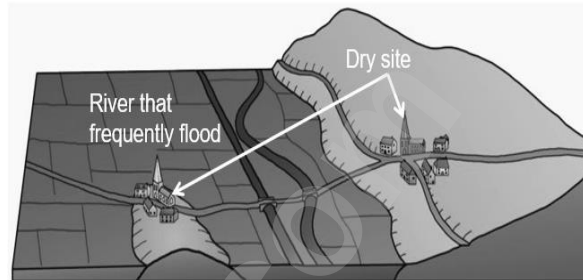
Some factors like the availability of water plays a more important role in the choice of a site. [Downloaded from eduresourceza.com](http://eduresourceza.com)

In **dry areas**, people are looking for water and gather around this. This is called a **wet-point settlement**.

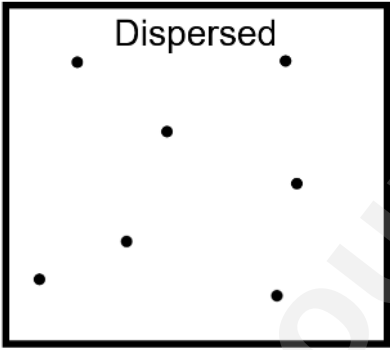
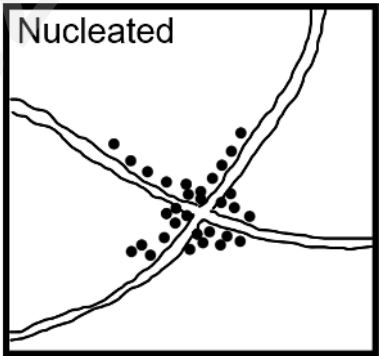


In areas where **flooding is a threat**, people are seeking dry areas. They still near the water but avoid the risk of flooding.

This is called a **dry-point settlement**

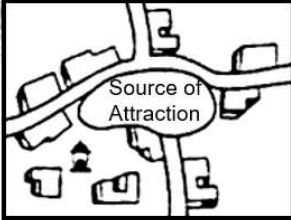
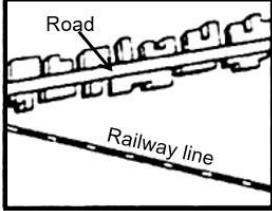
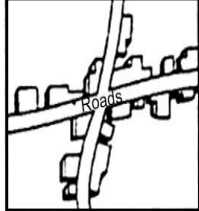
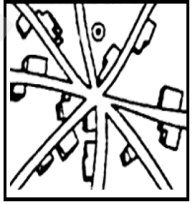


PATTERNS OF RURAL SETTLEMENTS

Dispersed Settlements		Nucleated Settlements	
			
Advantages	Disadvantages	Advantages	Disadvantages
• Have privacy • Make your own decisions • Own all the profits • More accessibility to tools and machinery • Land is not fragmented, therefore saving money on travelling	• No interaction with other people • It is not safe to be alone (Vulnerable to farm murders) • Have to pay all costs yourself • Difficult to share ideas when there are problems	• Interaction with people • Safety (People can protect one another) • Sharing of ideas to solve problems • Sharing of tools and machinery	• No privacy • Arguments and conflict arise • Cannot use tools and machinery when you want to • Sharing of profits • Costly travelling because farming land are fragmented

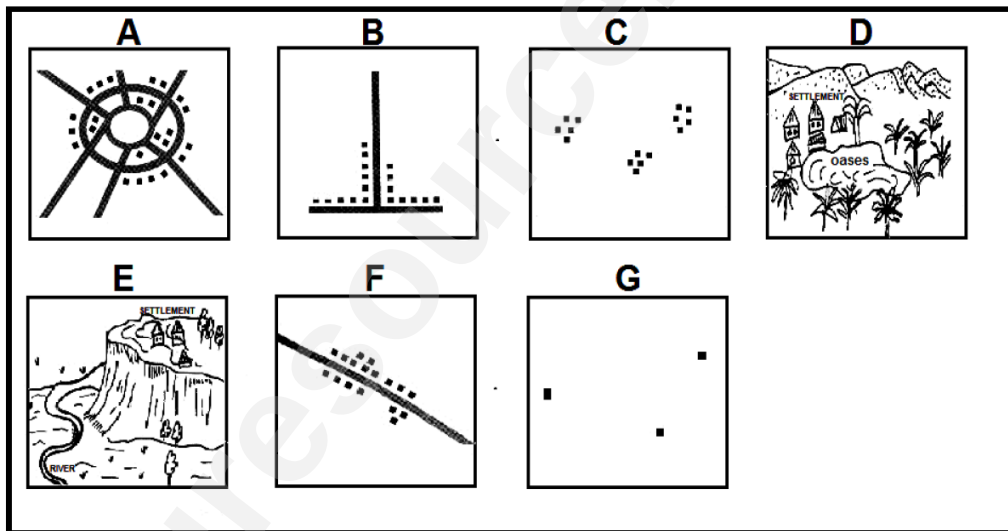
SHAPES OF RURAL SETTLEMENTS

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Round	Linear	Cross Roads: Three types develop		
		Cross road	T-Shaped	Star-shaped
These settlements are influenced by people with a common factor or interest. E.g., Church, Water source, Market place, etc.	These settlements develop along roads, railway lines, rivers or between mountains.	Develops where roads cross	Develop where there is a T-junction of the roads	Road converges from all directions
				

Activity 5.2 – Class work

5.2 Match the statements with the sketches below. Write only the correct letter (A to G) next to the question number (5.2.1–5.2.7), for example 5.2.8 H.



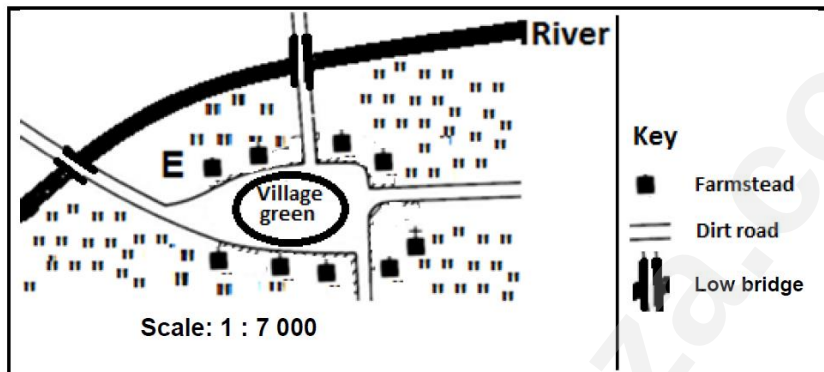
[Source: Adapted by Examiner]

- 5.2.1 A settlement that is located away from water because of the danger of flooding
- 5.2.2 A settlement that is located near the water source
- 5.2.3 A settlement where farmers most likely can experiment and use modern equipment extensively
- 5.2.4 An example of a cross road settlement
- 5.2.5 A settlement that follows a road or river in a linear shape

- 5.2.6 A cultural feature is usually the focal point of these types of rural shapes
 Downloaded from eduresourceza.com
- 5.2.7 A settlement where fertile or flatland has caused the nucleated pattern to be irregular (7 x 1) (7)

Activity 5.3 - Class work

5.3 Refer to the sketch below showing a nucleated village.



[Adapted from GCSE Handbook]

- 5.3.1 Describe the shape of the village. (1 x 1) (1)
- 5.3.2 Discuss TWO disadvantages for farmers living in this village. (4)
 (2 x 2)
- 5.3.3 Discuss ONE advantage for farmers living in this village. (1 x 2) (2)
- 5.3.4 Write a paragraph of approximately EIGHT lines in which you suggest sustainable measures to prevent people from leaving this village to live in cities. (4 x 2) (8)

SESSION 6 RURAL SETTLEMENT ISSUES – 1h30min

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Session 6.1. Rural Urban migration

Session 6.2 Social Justice issues including land reform

Rural Urban migration

Timeframes	
Activity	Time
Revision	15 min
Activity 6.1	10 min
Corrections	10 min
Activity 6.2	10 min
Corrections	10 min
Activity 6.3 – Home work	

Definition

The movement of people from rural areas to urban areas.

Usually, the main reason is related to the availability of job opportunities

Reasons

Push factors – People are forced to move

Pull Factors – People are attracted to the better conditions in another area usually cities

Push and Pull factors are due to:			
Physical reasons: (Push factors)	(Natural)	Economic reasons: (Push and Pull factors)	Social reasons: (Pull factors)
Nature causes raw material to be destroyed, leaving people without income		People are left without income and there are not a lot of opportunities to better their lives	Other places have more social opportunities. This is driven by the idea of a better standard of living
<u>Examples:</u> Natural disaster like drought, flooding, earthquakes, etc.		<u>Examples:</u> • Mechanization – Machinery doing the work of people • Poor salaries • No investment • Decrease in production • Better infrastructure • Industrialization	<u>Examples:</u> Better services like education, health, professional services like lawyers, transport, housing, etc.

Consequences of Rural Urban Migration

- Decrease in investment
- Ageing of the population – Elderly left behind in rural areas
- Imbalance in the age-sex structure of the population

- Infrastructure neglected
- Half empty schools
- Closing of businesses
- Depopulation of rural areas – The biggest problem in rural areas. Without people the settlement stagnate and decline

Reasons why farming production did not decrease:

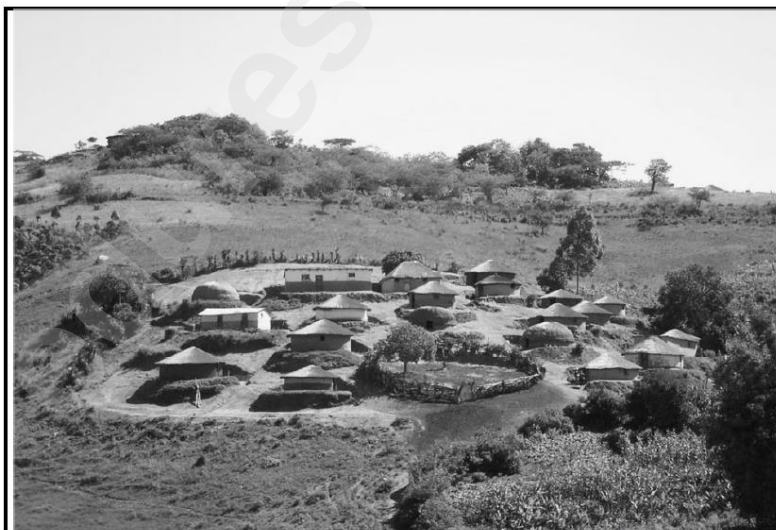
- Mechanization – The use of modern techniques and machinery
- Commercial farming – Farming to make money, therefore a profit
- Specialization - Farmers only produce one product based on the physical conditions
- Better infrastructure – Communication and transport facilities improved

What can be done to keep people in rural areas or bring them back?

- Job creation projects in rural areas
- Decentralization of industries
- Development corridors
- Improved basic services in rural areas
- Skills development in rural areas
- Farming related industries in rural areas
- Improved transport, health, education services
- Retirement villages in rural towns to attract people there
- Incentives for professionals and employers to settle in rural areas
- Development of eco-tourism through conservation of natural habitats and thus creating income opportunities for the local population

Activity 6.1 – Class work

6.1 Refer to the photograph below showing a settlement in KwaZulu-Natal.



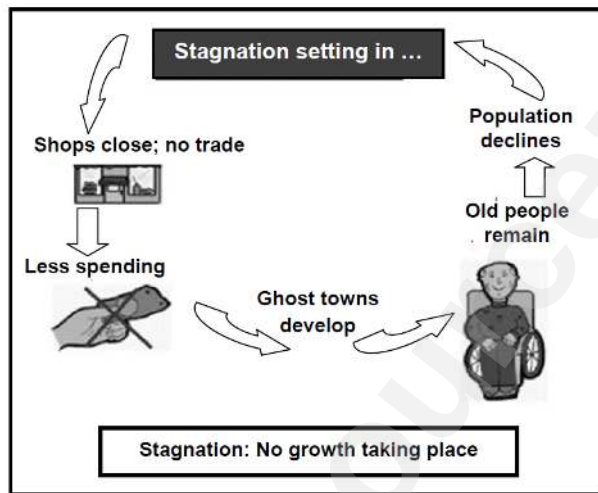
[Source: jpg. Traditional settlement in KZN]

6.1.1 Is the settlement in the photograph a *rural* or *urban* settlement?
(1 x 1) (1)

- 6.1.2 State the pattern evident in this settlement. (1 x 1) (1)
 6.1.3 Classify the settlement identified in QUESTION 4.1.1 according to its size/complexity. (1 x 2) (2)
 6.1.4 Name and explain ONE physical factor that influenced the site of this settlement. (1 x 2) (2)
 6.1.5 How has culture and tradition influenced the farming practices of this settlement? (2 x 2) (4)
 6.1.6 Explain how the reduction of cultivated land would impact on the rate of rural depopulation in the depicted settlement. (2 x 2) (4)

Activity 6.2 – Class work

- 6.2 Refer to figure below, which shows characteristics of rural depopulation



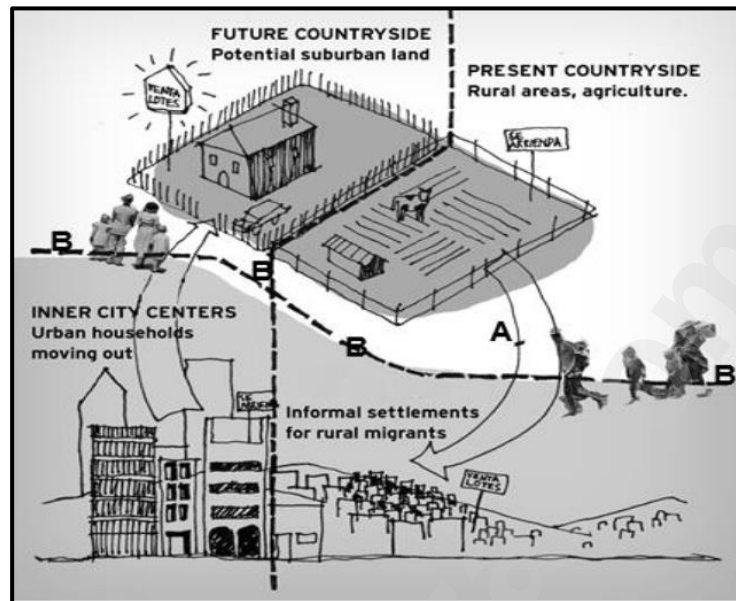
[Source: omega7geog.com]

- 6.2.1 Define the term *rural depopulation*. (1 x 2) (2)
 6.2.2 Which age group is the first to migrate to cities? (1 x 1) (1)
 6.2.3 State ONE characteristic of a ghost town. (1 x 2) (2)
 6.2.4 Give TWO reasons why stagnation (no growth) occurs in rural towns. (2 x 2) (4)
 6.2.5 Write a paragraph of approximately EIGHT lines in which you make suggestions on how this cycle of stagnation can be broken. (4 x 2) (8)

Activity 6.3 - Home work

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6.3 Refer to the figure below, about a rural settlement issue.



- 6.3.1 Name the process being illustrated by the arrows at **A**. (1 x 1) (1)
- 6.3.2 List ONE physical push factor that encouraged the process mentioned in QUESTION 4.3.1. (1 x 1) (1)
- 6.3.3 One of the consequences of the process mentioned in QUESTION 6.3.1 is rural depopulation. Discuss the negative impact rural depopulation will have on rural areas. (2 x 2) (4)
- 6.3.4 The city border is indicated by **B** on the sketch. Explain why this border line differs during the PRESENT and FUTURE COUNTRYSIDE. (2 x 2) (4)
- 6.3.5 Discuss TWO strategies that the local municipalities of the COUNTRYSIDE may have implemented to attract urban households to the rural areas. (2 x 2) (4)

Session 6.2 - SOCIAL JUSTICE ISSUES

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Timeframes	
Activity	Time
Revision	15 min
Activity 6.4	10 min
Corrections	10 min
Activity 6.5	10 min
Corrections	10 min

NOTE: Usually case studies are given in the examination regarding social justice issues.

Learners must be able to understand the background of South Africa under Apartheid laws to be able understand the reason for social justice.

- Differences in service delivery, like health, education, public services, etc.
- Unequal distribution of resources and the availability of resources
- Land reform

Important points to note on land reform:

- It is based on THREE pillars (laws or ACTS) namely – Land restitution, Land redistribution and land tenure
- These laws or ACTS seeks to correct the injustice of the past and unequal distribution of land due to Apartheid laws of the past
- Implementation is difficult and time consuming, because people are occupying the land
- Court cases are still on-going (land restitution)
- Willing buyer; Willing seller policy is not successful due to prices of land
- People that were given the land are mostly unsuccessful

Why people are unsuccessful – Few examples

- People do not have the required skills and knowledge to make a success of the business
- Government support is limited – Lack of technical and financial support
- Conflict amongst traditional leaders
- Profits are not being used to invest in the business rather for other socio-economic activities

What can be done to improve the success of land reform in South Africa – Few examples

- Provide technical and financial support to new land owners
- Lower the tax bracket so that more money can be used to grow the businesses
- Skills training so that new owners understand how to do business
- Provide the necessary support and equipment to make the business a success

Some positives if land reform in successfully implemented – Few examples

- It will reduce poverty and increase quality of life
- It encourages sustainable growth
- Increases efficiency of people, especially farmers
- Increases production and therefore more exports

Activity 6.4 – Class work

6.4 The figure below shows various stakeholders discussing the issue of land.



[Source: Adapted from Google images]

- 6.4.1 Define the term *land redistribution*. (1 x 2) (2)
- 6.4.2 Suggest a reason why the discussion is so intense in the sketch. (1 x 2) (2)
- 6.4.3 Discuss TWO goals/purposes that land redistribution hopes to achieve in post-apartheid South Africa. (2 x 2) (4)
- 6.4.4 In paragraph of approximately EIGHT lines evaluate the challenges that authorities and stakeholders have been encountered in achieving these goals/purposes. (4 x 2) (8)

Activity 6.5 – Class / Home work

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6.5 The case study below refers to land restitution in Macleantown.

The Macleantown case study on land restitution

The benefits of land restitution appear to be more symbolic than material. Our study showed that beneficiaries remain poor 17 years after being given their land back. Most are unable to generate a livelihood from agriculture and depend on state social grants for survival. Beneficiaries were able to rejoice at having their land back, but they have been unable to escape poverty. This is particularly worrying since one of the main motives for pursuing land reform was to create self-sufficient farmers able to generate a decent livelihood from their land. Our findings show that land beneficiaries have been virtually neglected by the government. They have a strong desire to grow crops but lack the support needed to start ploughing. One respondent said she could not farm because she did not have money to fence her yard or keep livestock. Farming would therefore be a waste of time as cattle would walk onto her land and eat her crops.

[Source: Mzingaye Brilliant Xaba and Monty J. Roodt / 9 December 2016 00:05]

- 6.5.1 Define the term *land restitution*. (1 x 1) (1)
- 6.5.2 State TWO purposes of land reform in South Africa. (2 x 1) (2)
- 6.5.3 Provide THREE reasons why the people in the case study are unable to generate a 'livelihood from agriculture'. (3 x 1) (3)
- 6.5.4 Explain what the author means by the statement, 'The benefits of land restitution appear to be more symbolic than material'. (1 x 2) (2)
- 6.5.5 In a paragraph of approximately EIGHT lines, discuss how the government could empower the beneficiaries of land restitution to help alleviate poverty in South Africa. (4 x 2) (8)

SECTION 3 - URBAN SETTLEMENTS

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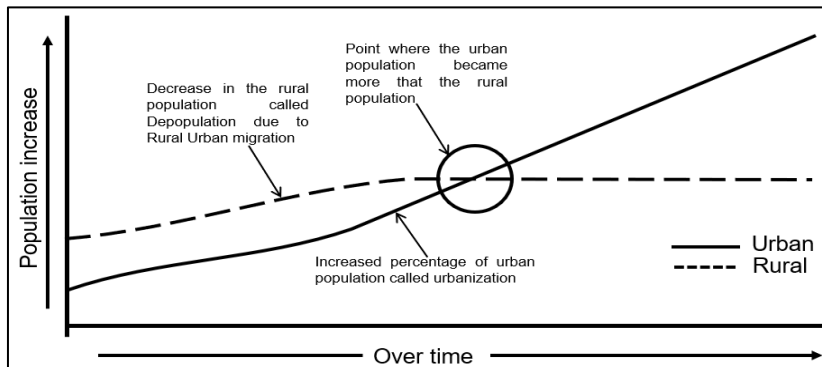
Session 7 – Urbanization, Concepts, Site and Situation and Classification – 1h30min

Timeframes	
Activity	Time
Revision	25 min
Activity 7.1	10 min
Corrections	10 min
Activity 7.2	10 min
Corrections	10 min
Activity 7.3	10 min
Corrections	10 min

Concepts	Definition
Urbanization	An ever-increasing percentage of the total population living in urban areas.
Urban Growth	The number of people living in an urban area increases by natural increase (births minus deaths) as well as rural–urban migration.
Urban Expansion	The area that an urban area uses (physical area) increases over time, e.g. new buildings and infrastructure.
Break of bulk town	Develop where one type of transport are replaced by another type e.g., From railway to road OR from road to sea
Junction towns	Develop where there is a joining of transport routes. NOTE: the same type of transport
Gap towns	Develop is a gap of a mountain.

WHAT IS URBANIZATION?

It implies that there are increasingly more urban settlements than rural settlements over time.



READING AND UNDERSTANDING GRAPHS AND DATA IS IMPORTANT IN THE INTERPRETATION OF URBANIZATION

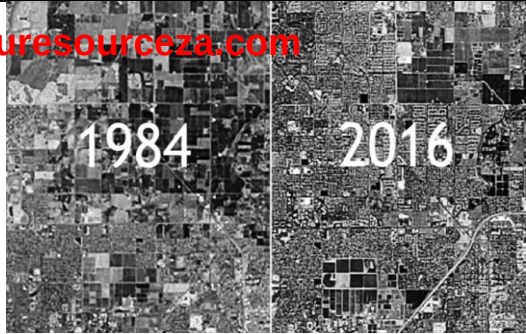
The urban population increases, and the rural population decreases

Reasons:

- Push and Pull factors of rural urban migration
- Industrialization and more job opportunities urban areas
- In South Africa after 1994 urbanization increased due to the abolishment of laws that restricted non-white people in moving to urban areas e.g., Pass laws and Influx control restrictions
- Birth rate is higher than the death rate due to improve medical facilities and equipment

Concepts related to urbanization

Urban Growth	Refers to the increases in the total population of urban areas. This happens because of natural growth and rural urban migration	NOTE: These TWO concepts are often confused.
Urban Expansion	Refers to the physical growth of urban areas. This means the actual area that is covered by the urban area increases. Therefore, more buildings, infrastructure, and activities.	
Rate of urbanization	This refers to speed urbanization occurred over time – Fast or Slow	
Level of urbanization	This is the percentage of people living in urban areas compared to rural areas	

Urban Sprawl	Defined as the spreading of urban developments (such as houses and shopping centres) on undeveloped land near a city. OR The unrestricted growth in many urban areas of housing, commercial development, and roads over large expanses of land, with little concern for urban planning.	
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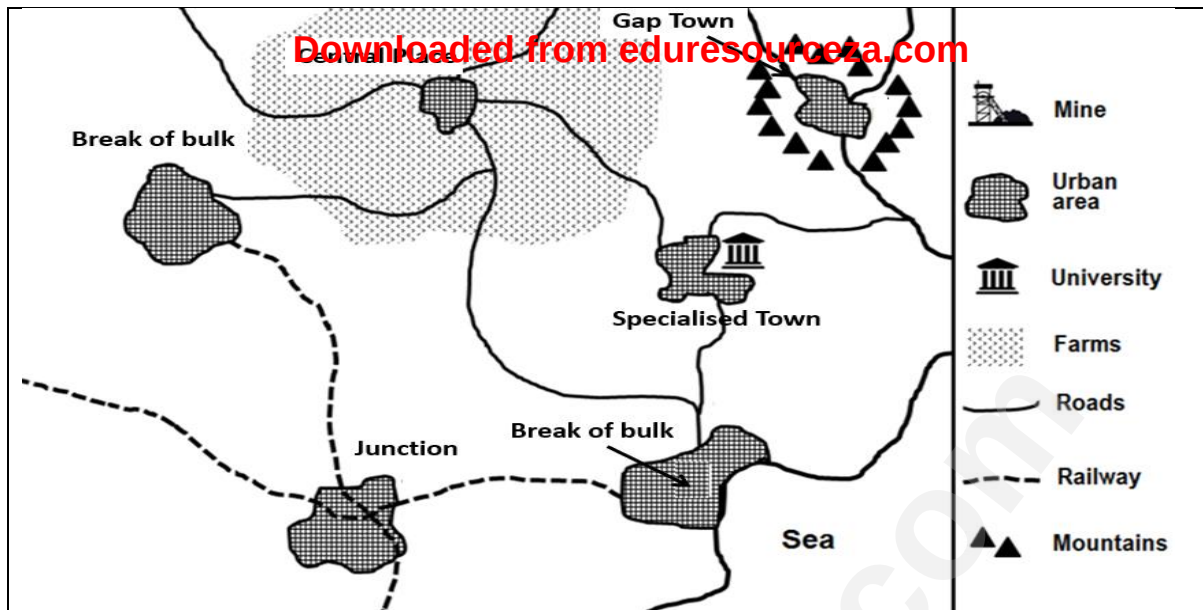
HOW SITE AND SITUATION INFLUENCES THE LOCATION OF URBAN SETTLEMENTS

Site	Situation
Actual physical area of the urban settlement • Geology – Rock structure and soil condition • Minerals/ Raw material • Protected harbours • Topography – How steep or gentle is the space • Including – Drinking water, Fertile soil, Building material (see site of rural settlements)	Location relative to its surroundings • Accessibility to other places • Connection to other settlements • Availability of raw materials • Distances from nearby bigger settlements • Infrastructure development

CLASSIFICATION OF URBAN SETTLEMENTS ACCORDING TO FUNCTION

3 Types are identified

Central Places	Trade and Transport Towns	Specialised Towns
The main purpose is the provision of goods and services for the surrounding market area, usually rural areas	These are towns or cities which develop at a point where transport routes meet. <u>Types:</u> • Break of bulk towns • Junctions • Gap towns	A town or city with one main dominant function, e.g., mining towns, recreation towns, administrative towns, education towns, etc.



Activity 7.1 – Class work

- 7.1 The data below compares South Africa's recent and predicted urbanisation levels with global trends.

Region	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040
South Africa	54,5	56,9	59,3	61,5	63,8	65,9	67,9	69,8	71,7	73,5
Africa	33,9	35,6	37,3	39,2	41,1	43,2	45,3	47,7	50,1	52,6
Europe	70,3	70,8	71,6	72,7	73,8	74,9	74,9	77,4	78,6	79,9
World	44,8	46,7	49,1	51,6	53,9	56,0	56,0	59,9	61,7	63,5

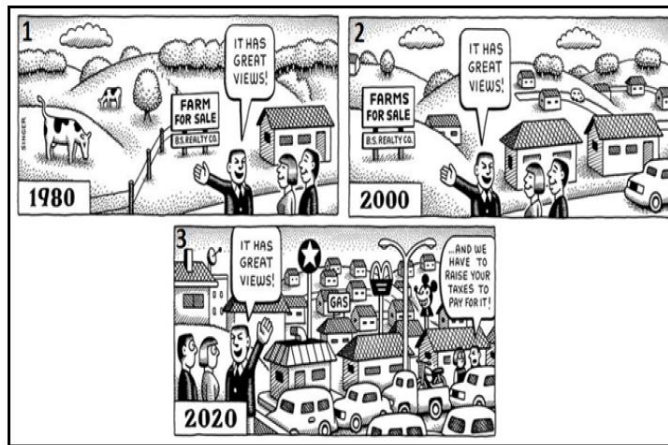
[Source: Adapted by Examiner]

- 7.1.1 Differentiate between the terms '*level*' and '*rate*' of urbanisation. (2 x 2) (4)
- 7.1.2 Name the region (shown in the TABLE) depicting the highest urbanisation level. (1 x 1) (1)
- 7.1.3 Determine the region (Africa or Europe) that demonstrates the lowest rate of urbanisation over the entire period depicted on the table. (1 x 1) (1)
- 7.1.4 Suggest reasons for the increase in counter urbanisation, especially in developed countries (2 x 2) (4)
- 7.1.5 Account for the rapid rate of urbanisation in South Africa between 1995 and 2000. (2 x 2) (4)
- 7.1.6 Explain some of the challenges that have resulted from an increasing level of urbanisation in South Africa. (2 x 2) (4)

Activity 7.2 – Class work

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7.2 Refer to the cartoon below on urban expansion.

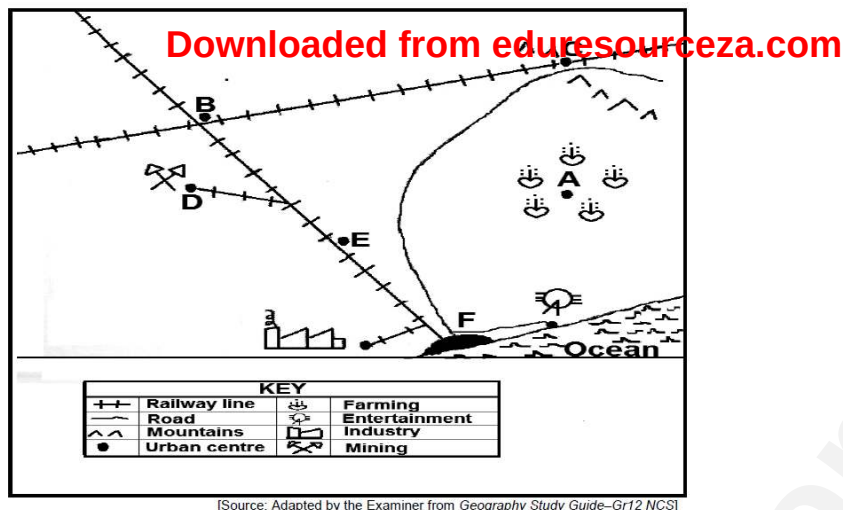


- 7.2.1 Define the term *urban expansion*. (1 x 2) (2)
- 7.2.2 State how urban expansion will change the settlement pattern from 1980 to 2020. (1 x 1) (1)
- 7.2.3 Give ONE reason for urban expansion. (1 x 2) (2)
- 7.2.4 Discuss TWO problems that arise from urban expansion. (2 x 2) (4)
- 7.2.5 Suggest TWO possible solutions for the problems associated with urban expansion. (2 x 2) (4)
- 7.2.6 The estate agent advertises the land by saying, 'It has great views.' Why has the expression on the prospective buyers' faces changed from 1980 to 2020? (1 x 2) (2)

Activity 7.3 – Class work

7.3 The sketch below represents different urban settlements. Provide a letter from the sketch that best matches the descriptions below. Write ONLY the letter of your choice next to the question number (7.3.1 – 7.3.7).

NOTE: One letter may refer to more than ONE description.



- 7.3.1 A settlement which is an example of a typical gateway town
- 7.3.2 The settlement that provides services to a predominant farming community
- 7.3.3 The settlement where one type of transport is replaced by another
- 7.3.4 The settlement which represents a specialised town
- 7.3.5 The settlement where a junction town can be found
- 7.3.6 The settlement that will never develop into a circular shape
- 7.3.7 East London and Port Elizabeth are typical examples of this settlement (7 x 1) (7)

SESSION 8 - URBAN HIERARCHY AND URBAN SHAPES – 1h30min

Session 8.1 Urban Hierarchy

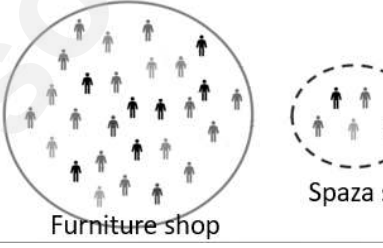
Timeframes	
Activity	Time
Revision	15 min
Activity 8.1	10 min
Corrections	10 min
Activity 8.2	10 min
Corrections	10 min
Activity 8.3	10 min
Corrections	10 min

Description - The ranking of urban areas according to the criteria of size, number of functions and the degree of specialization of the functions.
The more people and functions a town/city have the higher in the hierarchy it will be.

Type of functions

Lower Order Functions	Goods/Services required regularly by most of the population E.g., Daily necessities, food stuff sold at a shop like bread, milk, etc.	
Higher Order Functions	Goods/Services that are only required occasionally and is usually high-priced goods/services	

Concepts based on lower and higher order functions (Central place theory)

Sphere of Influence	Threshold Population	Range
The ability of an urban centre to provide a variety of urban services to its surrounding urban and rural environments 	Is the minimum number of people necessary before a particular good or service can be profitable 	The maximum distance from which a good or service can draw its customers 

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	Low order functions and services	High order functions and services
Definition	A function or goods you need to buy often	A function/goods not needed regularly
Functions/services	Less specialised	Highly specialised
Threshold population	Smaller number of people	Larger number of people
Range	Small	Large
Sphere of influence	Small	Large
Distance travelled	Near	Far
Number of shops or services	Many – needed on a regular basis	Few – not needed very often
Examples	Bread, milk, petrol station, bottle store, doctors, mechanics	Lounge suites, cars, computer hardware, health spas, specialist doctors

Lower and higher order centres (Centres refers to settlements)

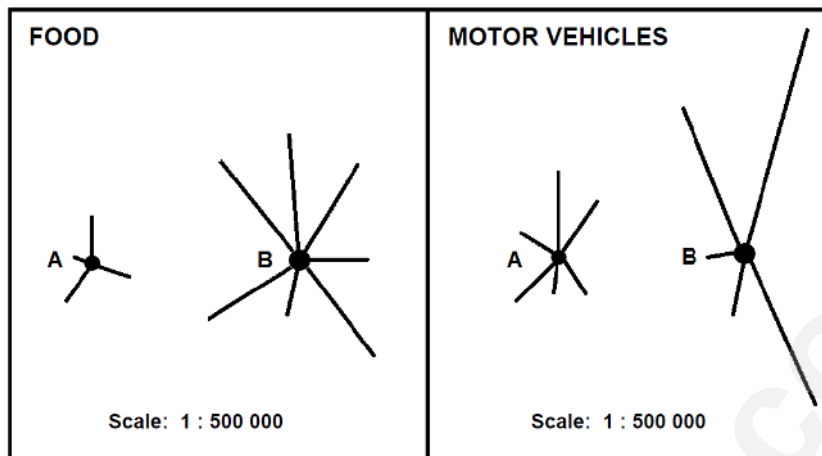
Low-order Centre	High-order Centre
Central places with a small threshold population, few services, and mainly low-order services	Central places with a large threshold population offering many services and mainly high-order services

CATEGORY OF SETTLEMENT	EXAMPLE IN SOUTH AFRICA
PRIMATE METROPOLITAN AREA	GREATER JOHANNESBURG AND SURROUNDING AREAS (PWV Region)
MAJOR METROPOLITAN AREA	PRETORIA, DURBAN, CAPE TOWN
METROPOLITAN AREA	BLOEMFONTEIN, PORT ELIZABETH
MAJOR COUNTRY TOWNS	NELSPRUIT, NEWCASTLE
COUNTRY TOWNS	HARRISMITH, BEAUFORT WEST
MINOR COUNTRY TOWNS	MUSINA
LOCAL SERVICE CENTRES	FRANSCHOEK
LOW-ORDER SERVICE CENTRE	VAN REENAN, CLARENS

Activity 8.1 – Class work

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- 8.1 The figure shows the sphere of influence and range of food stores and motor vehicle retailers in settlements **A** and **B**.



[Source: Examiner's own sketch]

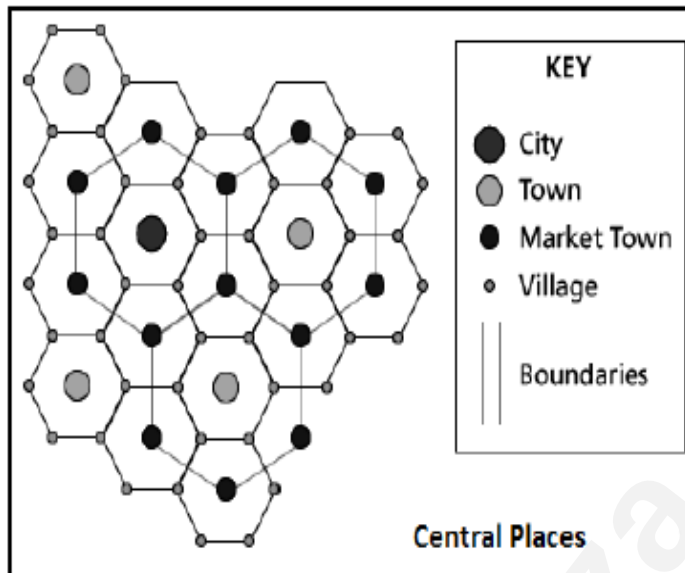
- 8.1.1 Define the terms *sphere of influence* and *range*. (2 x 2) (4)
- 8.1.2 Which product, food or cars, has a larger range? (1 x 1) (1)
- 8.1.3 Give a reason for your answer to QUESTION 8.1.2. (1 x 2) (2)
- 8.1.4 Comment on the threshold population required for motor vehicle sales. (1 x 2) (2)
- 8.1.5 Describe TWO characteristics of settlement **A**, which is a low-order centre. (2 x 2) (4)
- 8.1.6 Explain what influences the sphere of influence of a settlement such as **B**. (2 x 2) (4)

Activity 8.2 – Home work

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8.2 Refer to the diagram below showing the central place theory

CENTRAL PLACES



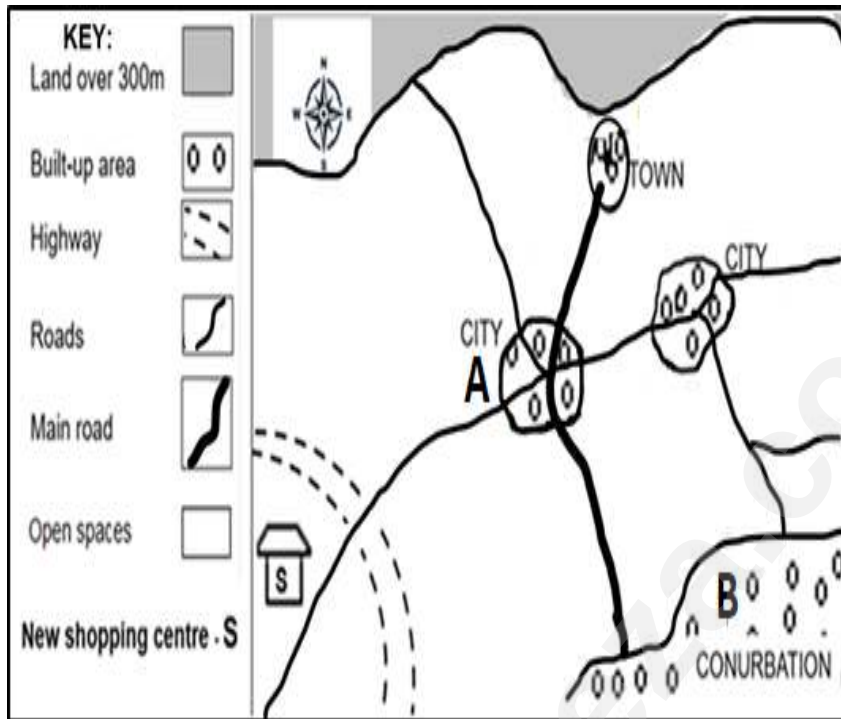
[Source: <http://www.watd.wuthering-heights.co.uk>]

- 8.2.1 What is a *central place*? (1 x 1) (1)
- 8.2.2 What is the main function of a market town? (1 x 1) (1)
- 8.2.3 What is the relationship between the size of central places and the number of central places? (1 x 2) (2)
- 8.2.4 State TWO differences between a high-order service and a low-order service. (2 x 2) (4)
- 8.2.5 A threshold population is the minimum number of customers required to support a service or a function.
- Determine the relationship between the threshold population and the order service. (1 x 2) (2)
 - Explain the impact of locating a high-order service in an area with a low threshold population (2 x 2) (4)

Activity 8.3 – Class work

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8.3 Refer to the sketch below illustrating urban centres.



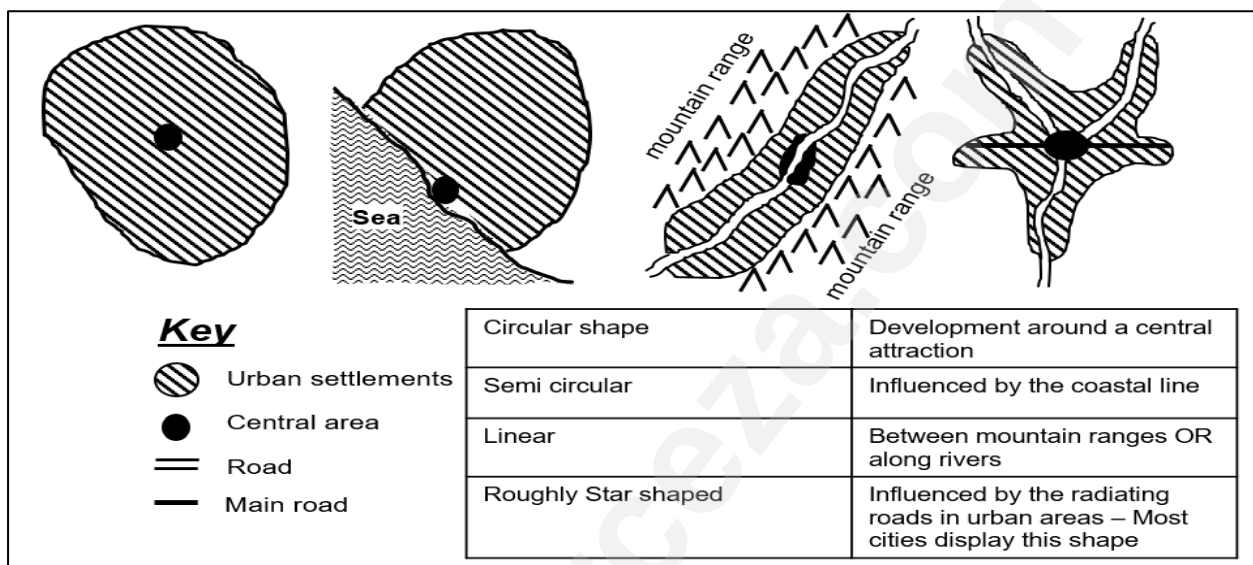
- 8.3.1 Define the concept *urban hierarchy*. (1 x 2) (2)
- 8.3.2 Why is it unlikely for the town to expand in a northerly direction? (1 x 1) (1)
- 8.3.3 Where can more specialised goods be found, at **A** or **B**? (1 x 1) (1)
- 8.3.4 Explain your answer to QUESTION 8.3.3. (1 x 2) (2)
- 8.3.5 Refer to the shopping centre.
- Name the type of shopping centre at S in the sketch. (1 x 1) (1)
 - Comment on the suitability of the location of the shopping centre. (2 x 2) (4)
 - Explain the impact of the shopping centre on the threshold population of CITY A. (2 x 2) (4)

Session 8.2 - Urban patterns

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Timeframes	
Activity	Time
Revision	10 min
Activity 8.4	10 min
Corrections	05 min

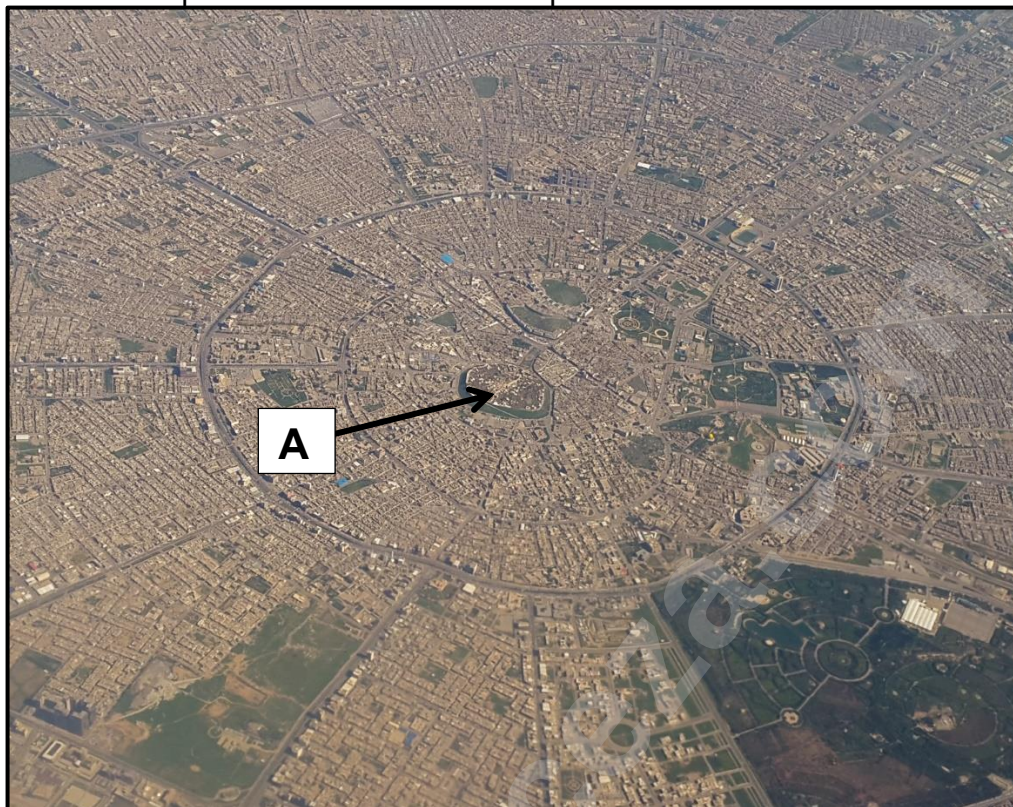
Shape of urban settlements – This is the urban area seen from above – Aerial View



Activity 8.4 – Class work

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8.4 Refer to the photo below on urban shapes



[Source:

<https://www.google.com/search?q=images+of+urban+structure+and+patterns>]

- 8.4.1 Name TWO shapes that can be identified in the picture. (2 x 1) (2)
- 8.4.2 Give reasons for your answers to QUESTION 8.4.1. (2 x 2) (4)
- 8.4.3 Discuss how the range of the businesses at **A** will be influenced by the shapes identified in QUESTION 8.4.1. (2 x 2) (4)

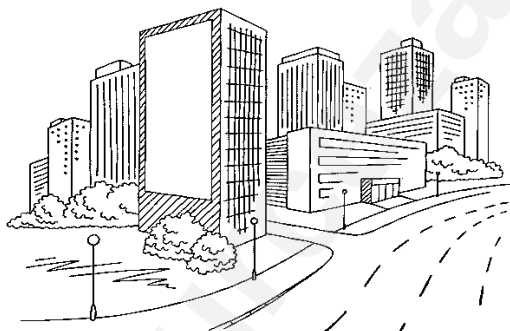
SESSION 9 – URBAN STRUCTURES AND PATTERNS – 1h30min

Session 9.1 – Land-use zones

Timeframes	
Activity	Time
Revision	20 min
Activity 9.1	10 min
Corrections	10 min
Activity 9.2	10 min
Corrections	10 min
Activity 9.3	10 min
Corrections	10 min

<u>Difference between land use and zoning</u>	
<u>Land use</u> Simply refers to what the land is currently being used for. E.g. • Transport • Buildings • Greenbelt • Business • Recreation • Factories	<u>Zoning</u> Regulate what kind of users are permitted on specific parcels of land. NOTE: The area is characterized by a specific activity that dominate. Within the zone space might be taken for other land use also. <u>Five land-use zones are identified</u> • Central Business District (CBD) • Zone of Decay • Industrial Zone • Residential Zone • Rural0Urban Fringe

CENTRAL BUSINESS DISTRICT (CBD)



<u>Characteristics</u>	<u>Types of Functions</u>	<u>Problems of the CBD</u>
• Most Accessible –Most roads converge/diverge here • Highest land values • Most intensive land use • Highest buildings called SKYCRAPERS	• High order functions dominate the area ➢ Retail shops ➢ Financial institutions ➢ Professional services ➢ Administrative services • Low order functions ➢ Café ➢ Salons ➢ Chemists ➢ Dry cleaners	• Transport problems ➢ Congestion ➢ Parking space limited • Business decentralisation – because of high land values • Noise pollution • Safety issues – Crime increase

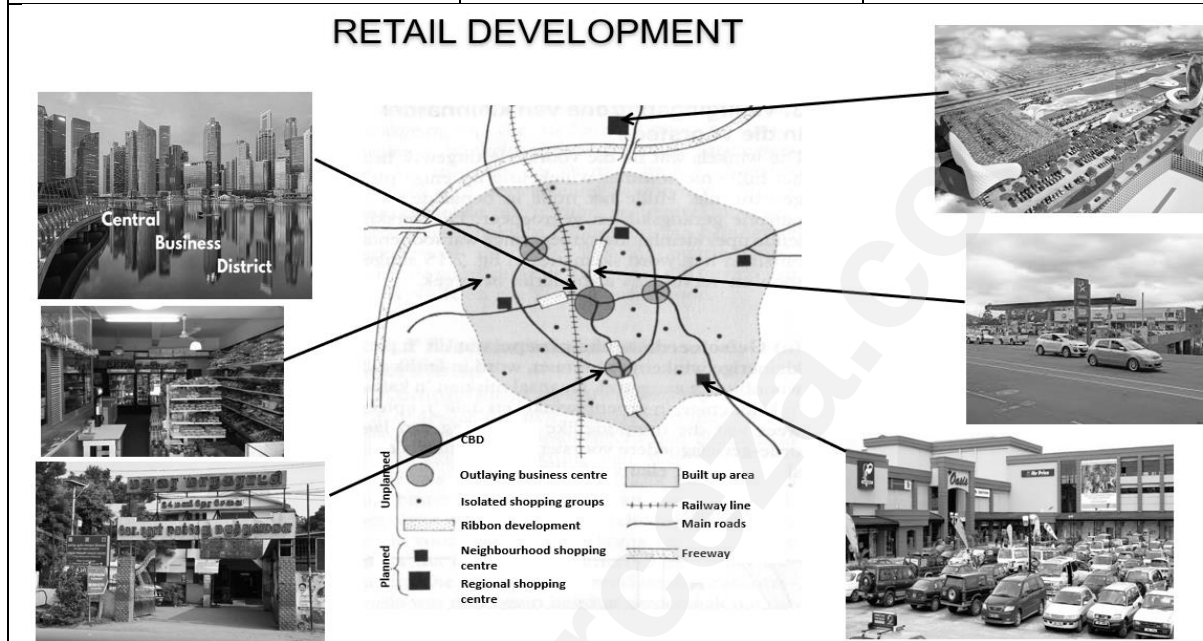
RETAIL DEVELOPMENT

The CBD experience commercial decentralisation -
When retail shops move away from the CBD to suburban/residential areas

Reasons:

- Greater distance between residents and CBD
- Traffic problems in the CBD
- High land values in the CBD
- Less space in the CBD

<u>Isolated shopping groups</u> They provide low order convenience goods and is found in all residential places	<u>Ribbon development</u> Shops that development along the main roads towards the CBD and provide low order convenience goods – Examples (Petrol stations, Motor dealers, Dry cleaners)	<u>Outlying business district (OBD)</u> Occur at important road intersections or areas with a high population concentration High order and Low order goods can be found in these areas
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ZONE OF DECAY (TRANSITION ZONE)
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It is found on the edge of the CBD and is usually dilapidated and neglected but land value is still high because it is located next to the CBD.

Reasons for delapidated buildings

- Municipality have no jurisdiction over buildings as it is privately owned
- Landowners don't maintain the buildings because they waiting to sell the property at very high prices
- People that stay in the buildings cannot maintain it, because it is too expensive, and they don't own the property

Functions in the area

- Light industries like bakeries and jewellery shops
- Warehouses
- Decentralised shops from the CBD

Problems in the zone of decay

- Decrease in investment
- Tourism decline due to poor state of infrastructure
- Business move out leaving people unemployed
- Pollution increases (Air/Water/Environmental)
- Municipal services are not provided because the residents don't pay municipal bill
- Crime, including prostitution increase
- Buildings are overcrowded and are causing slum conditions

INDUSTRIAL ZONE



Areas where manufacturing or other industrial. activities can occur inside urban boundaries

Light industries

Where?

- Often near CBD or residential areas
- In planned industrial estates
- Near road transport

Characteristics

- Little noise and air pollution

Heavy industries

Where?

- On outskirts of the city on cheap land and space for expansion
- Near major road and rail networks
- On flat land
- Near water source

• No heavy machinery	Downloaded from eduresourceza.com <u>Characteristics</u> • Lots of air and noise pollution • Dangerous • Uses heavy and expensive machinery
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RESIDENTIAL ZONE

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This zone occupies the largest space in urban areas

Middle to High Income residential areas

- These areas tend to contain areas of better-quality housing.
- Gardens and houses are larger due to lower land values and more open space.
- The houses may be detached (standalone) have double garages and a pool too.
- There is usually a mixture of private and council-owned housing.
- Usually located near scenic areas – Aesthetically pleasing views

Low-income residential areas

- Houses close together
- Fewer facilities
- Poor services
- Smaller properties
- Near to heavy industries – Reduces travelling expenses
- People are usually staying in unhealthy and unhygienic conditions
- Some residential areas are located in the zone of decay

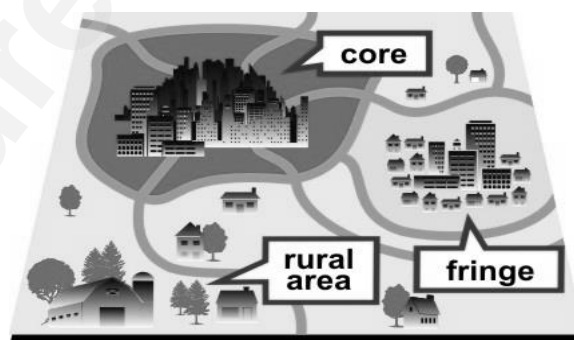
Informal settlements

- Houses built out of plastic, wood, zinc
- Unhealthy conditions
- No service delivery
- Poverty
- Crime

Reasons for development

- Housing shortages
- Lack of job opportunities in urban areas
- Rapid increase in the urban population including rural urban migration
- Poor municipal planning

RURAL URBAN FRINGE

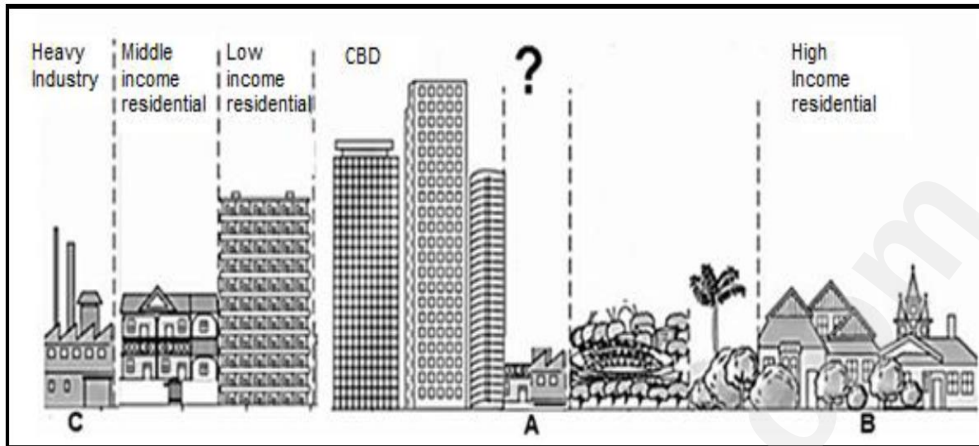


- Urban functions invade rural area
- Both Urban and rural functions
- Large properties because of cheaper land
- Plots and small holdings
- Airports, cemeteries, power stations, golf courses, sewage works
- The greenbelt are usually found in this zone

Activity 9.1 – Class work

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9. The figure below is an urban profile showing the relationship between land-use zones and building density.



[Adapted from [search?q=urban+land+use+zones&tbm=isch&tbs=rimq](https://www.eduresourceza.com/search?q=urban+land+use+zones&tbm=isch&tbs=rimq)]

9.1.1 Refer to land-use zone **A**.

- Name the land-use zone. (1 x 1) (1)
- State TWO characteristics of land-use zone **A**. (2 x 1) (2)
- Why is this land-use zone ideal for the location of light industries? (1 x 2) (2)
- Suggest ONE reason for land-use zone **A** having high land values. (1 x 2) (2)

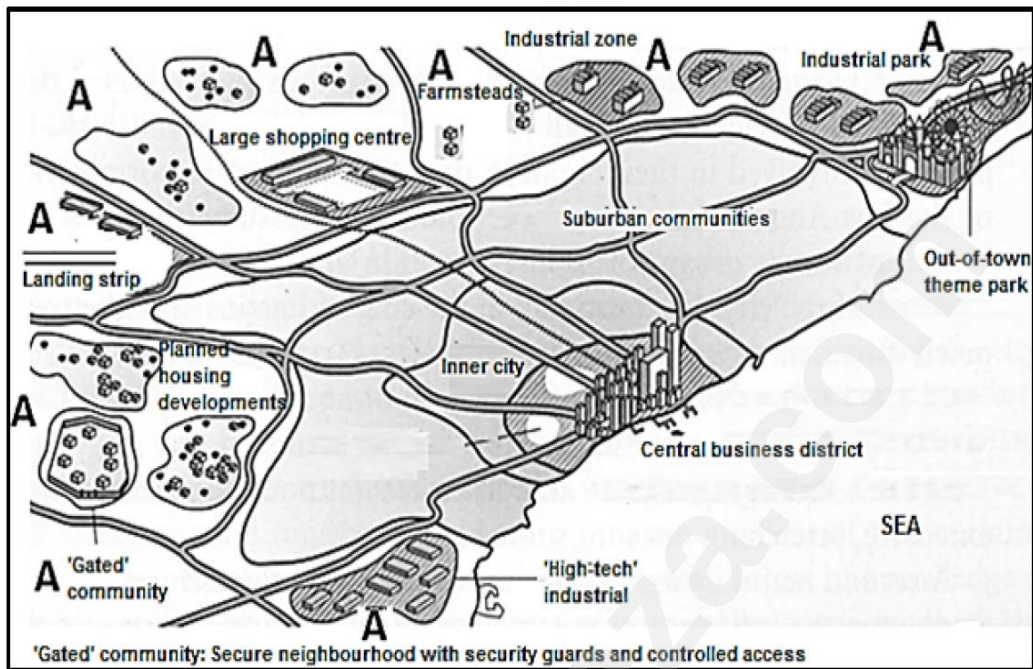
9.1.2 Give TWO pieces of evidence that suggest that land-use zone **B** is a residential zone of high income. (2 x 2) (4)

9.1.3 Explain why land-use zone **B** and land-use zone **C** are not compatible. (2 x 2) (4)

Activity 9.2 – Class work

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9.2 Refer to sketch that shows the rural-urban fringe as A.

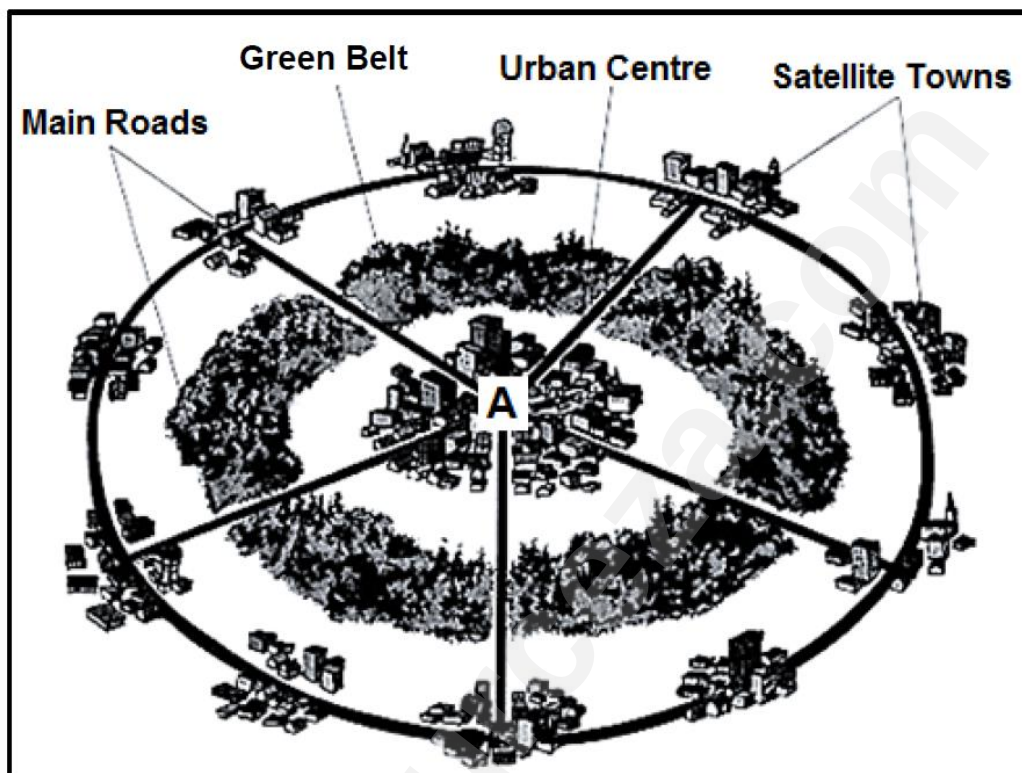


[Adapted from <https://newellta.weebly.com/urban-models.html>]

- 9.2.1 What is the *rural-urban fringe*? (1 x 1) (1)
- 9.2.2 State TWO urban land uses that are evident in the rural-urban fringe (A). (2 x 1) (2)
- 9.2.3 Give TWO reasons why the rural-urban fringe is becoming more urban in nature. (2 x 2) (4)
- 9.2.4 Why is the rural-urban fringe an attractive location for the gated community (secure neighbourhood with security guards and controlled access)? (2 x 2) (4)
- 9.2.5 The demand for housing is growing rapidly and developers are looking at the rural-urban fringe as a solution for the shortage of building space. Suggest TWO possible objections to planned housing developments in the rural-urban fringe. (2 x 2) (4)

Activity 9.3 – Class work

9.3 Study the sketch showing urban land-use.



[Source: <http://www2.mcdaniel.edu/Biology/ESP/cities/urbanquestions.html>]

- 9.3.1 Define the term urban land-use. (1 x 1) (1)
- 9.3.2 Name land-use zone A. (1 x 1) (1)
- 9.3.3 What evidence indicates that land-use zone A has a high degree of accessibility? (1 x 2) (2)
- 9.3.4 Discuss TWO problems that land-use zone A experiences due to its high accessibility. (2 x 2) (4)
- 9.3.5 In a paragraph of approximately EIGHT lines, analyse the role that green belts play in reducing the environmental problems that land-use zone A experiences as a result of its accessibility. (4 x 2) (8)

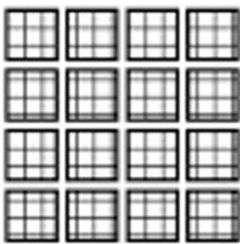
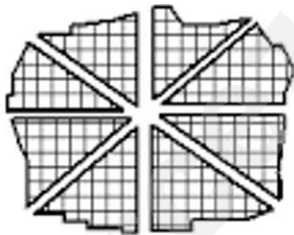
SESSION 10 - MORPHOLOGICAL STRUCTURE AND MODELS OF URBAN STRUCTURE

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Session 10.1 – Morphological structure of cities (street plans (patterns) and urban profiles)

Timeframes	
Activity	Time
Revision	15 min
Activity 10.1	08 min
Corrections	07 min
Activity 10.2	08 min
Corrections	07 min

Street plan (pattern)

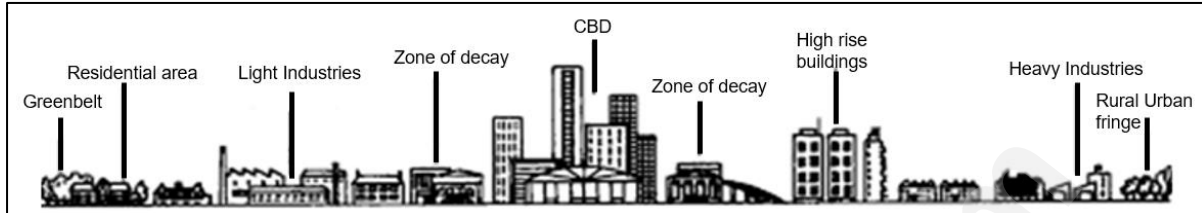
<u>THREE types:</u>		
<u>Grid-Iron or Rectangular</u>  <u>Description</u> The type of plan in which streets run at right angles to each other, forming a grid. It is found in the oldest parts of the city <u>Advantages</u> • Make designing easy • Clear distinction between properties • Easy to find something • Easy to lay-out therefore low financial expenses <u>Disadvantages</u> • Causes traffic congestions • Many intersections occur • It is a monotonous plan • Cause steep up and down hills • Does not consider topography of the areas	<u>Radial</u>  <u>Description</u> It is formed by streets that extend outward from a defined centre and reach the outer edge of the city, together with concentrically arranged roads that connect the radial streets. There are two common appearances namely: Concentric and Cobweb <u>Advantages</u> • Improves traffic flow • Major roads come from a central point • Attractive pattern <u>Disadvantages</u> • Very Expensive to layout and design • Can cause traffic congestion	<u>Irregular</u>  <u>Description</u> Street does not have a clear arrangement. It can be planned or unplanned. Unplanned usually occur in informal settlements <u>Advantages</u> • Roads don't look the same • Fewer intersections • Avoid steep up and down hills as it consider the topography of the area • Less traffic congestion <u>Disadvantages</u> • Easy to get lost • Traffic appear chaotic • Planned irregular patterns are very expensive to plan and lay out

URBAN PROFILE

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The side view of the shape of a city.

The tallest buildings are in the city centre (CBD) and the height decrease towards the edge of the city



Reasons for shape of urban profile

- Highest buildings in the centre of the town, as the competition for land and high land values lead to skyscrapers being built.
- As land values decline towards the outskirts so does the height of buildings and the density as well.

10.1 – Class work – Class work

- 10.1 Refer to the sketch on street patterns. Match the descriptions that follows with street pattern A or B. Choose the answer and write only the letter A or B next to the question number (10.1.1–10.1.8) in the ANSWER BOOK, for example 10.1.9 A.



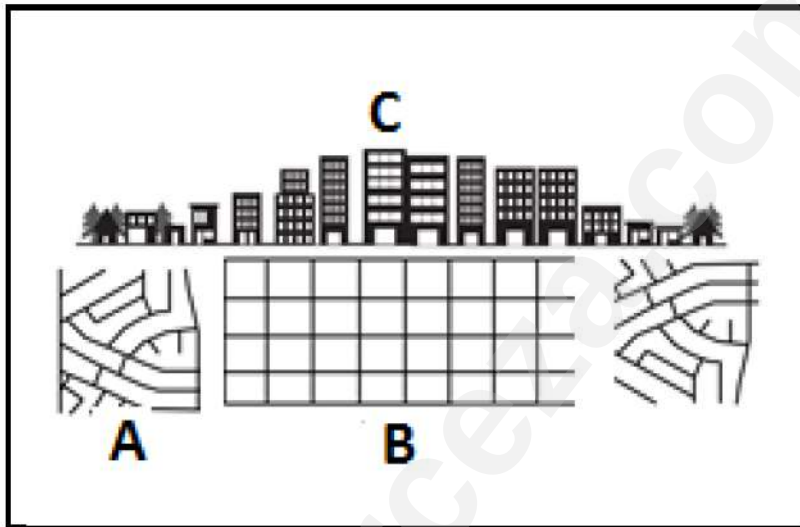
[Source: www.planetizen.com]

- 10.1.1 Longer streets with fewer intersections
- 10.1.2 Planned to facilitate a smooth flow of traffic
- 10.1.3 A feature of new urban developments
- 10.1.4 Makes building easier due to the regular shaped plots
- 10.1.5 Not suitable for steep and hilly land

- 10.1.6 Saves fuel and travelling time
- 10.1.7 Easier to find places
- 10.1.8 Associated with the oldest part of a settlement (8 x 1) (8)

Activity 10.2 – Class work

10.2 The sketch below represents an urban profile and street patterns.



[Source: <http://urbanvistadotnet.files.wordpress.com/2011/08/4-1.jpg>]

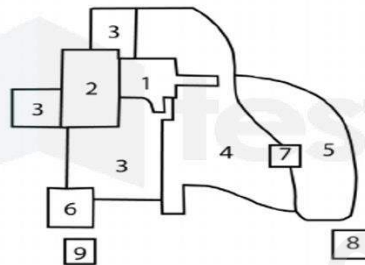
- 10.2.1 Name the street pattern at **A**.
- 10.2.2 Name the street pattern at **B**.
- 10.2.3 Give ONE historical reason for the particular layout of the street pattern at **B**.
- 10.2.4 Give ONE reason why urban planners have chosen street pattern **A** in modern times.
- 10.2.5 State ONE characteristic of the land-use zone at **C**.
- 10.2.6 Give ONE reason why the height of the buildings decreases from **C** to the periphery.
- 10.2.7 Is the density of buildings at **C** high or low? (7 x 1) (8)

Timeframes	
Activity	Time
Revision	15 min
Activity 10.3	10 min
Corrections	10 min

Multiple nuclei model – Harris and Ullman

Discussion and Characteristics

- Cities do not grow around a single nucleus, but rather several separate nuclei.
- Each nucleus acts like a growth point.
- The theory was formed based on the idea that people have greater movement due to increased car ownership.

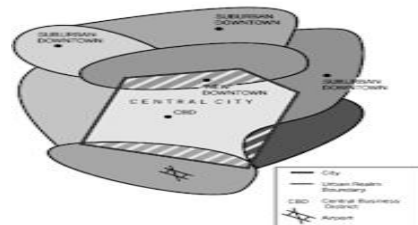


1. CBD
2. Wholesale and light manufacturing
3. Low class residential
4. Medium class residential
5. High class residential
6. Heavy manufacturing
7. Outlying business district
8. Residential suburb
9. Industrial suburb

Modern American-Western city

Discussion and Characteristics

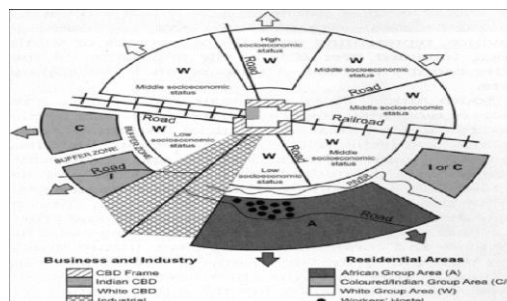
- Large cities in American-western city form parts of giant conurbations; self-sufficient suburban sectors (focused on their own independent CBD).
- Edge cities develop around a downtown area and become independent as they have their own commercial activities and infrastructure.



South African City Land Use Model

Discussion and Characteristics

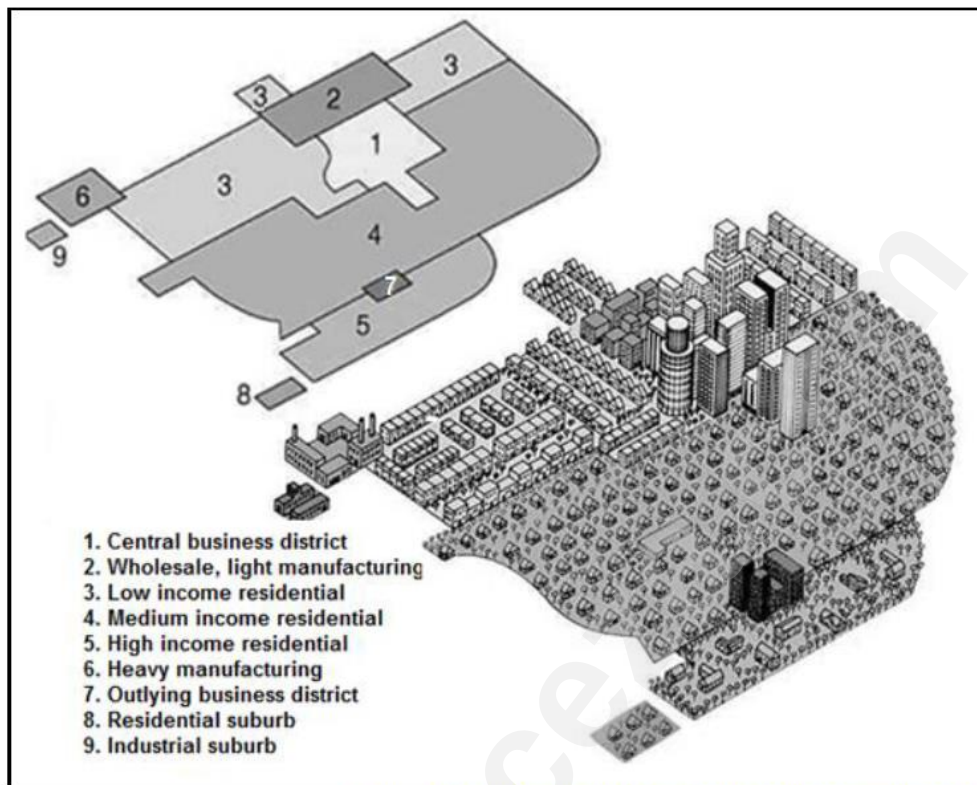
- The apartheid city was characterized by separation of 'races'
- Prioritised investment in white areas
- Under-investment in black areas,
- The burdens of accessing economic and other opportunities in the city being placed extremely on poorer people



Activity 10.3 – Class work

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10.3 Refer to illustration below of a model of urban structure



[Source: <https://planningtank.com/settlement-geography/model/>]

- 10.3.1 Identify the model of urban structure. (1 x 1) (1)
- 10.3.2 Which land-use zone covers the largest area in the illustrated model of urban structure? (1 x 1) (1)
- 10.3.3 Name ONE visible characteristic of the CBD. (1 x 1) (1)
- 10.3.4 Give ONE reason for the development of the outlying business district (7) on the outskirts of the city. (1 x 2) (2)
- 10.3.5 Refer to land-use zones 5 and 6.
- (a) Comment on the location of land-use zones 5 and 6 in relation to each other. (1 x 2) (2)
- (b) Compatibility (ability to live or to exist together) determines the location of land-use zones in an urban area. Give reasons why 5 and 6 are not compatible. (2 x 2) (4)
- 10.3.6 What are the similarities between the South African city and the model identified in FIGURE 10.3.1? (2 x 2) (4)

SESSION 11 - Urban Settlement Issues – 1h30min

Timeframes	
Activity	Time
Revision	20 min
Activity 11.1	10 min
Corrections	10 min
Activity 11.2	10 min
Corrections	10 min
Activity 11.3	10 min
Corrections	10 min

Recent urbanisation patterns in South Africa

Urbanisation took place rapidly in South Africa especially after 1994. This led to a number of challenges.

Urban issues related to rapid urbanisation

<u>Inner city problems</u> ➤ Depopulation at night lead to crime ➤ Congestion of people and traffic ➤ Air and noise pollution ➤ High land values lead to decentralisation ➤ Slums develop in old office buildings that are due for demolishing ➤ City centre become unattractive for business ➤ Urban renewal	<u>Urban blight</u> ➤ Poor maintenance of buildings that are worth less than the land they are built on. ➤ Buildings become dilapidated and abandoned ➤ Slums develop – poverty and other social evils occur in these areas.
<u>Traffic congestion</u> ➤ Movement in and out of CBD and other business areas daily lead to traffic problems. ➤ Poor public transport ➤ Pollution / waste of time and fuel	<u>Lack of planning</u> ➤ Lead to more traffic problems ➤ Pollution hazards ➤ Ineffective use of resources and time
<u>Overcrowding</u> ➤ Housing shortages – ➤ Spread of diseases ➤ Social evils are rife	<u>Housing shortages</u> ➤ squatter camps and slums develop ➤ Informal settlements <u>Service provision</u> ➤ Over utilisation of services

Activity 11.1 – Class work

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- 11.1 Read the newspaper article below on the challenges that South African city planners face.

SOUTH AFRICAN CITY PLANNERS FACE MANY CHALLENGES

[By Suren Naidoo]

Durban – South Africa and the African continent are likely to experience high levels of urbanisation in the next few decades.

It was reported that around half of the world's population is already living in cities, and the number looks set to rise. In South Africa we estimate that 8 million more people will live in cities by 2030.

Our settlement patterns place a large financial burden (strain) on the poorest members of society. This pattern increases the cost of getting to or searching for work and lengthens travelling times.

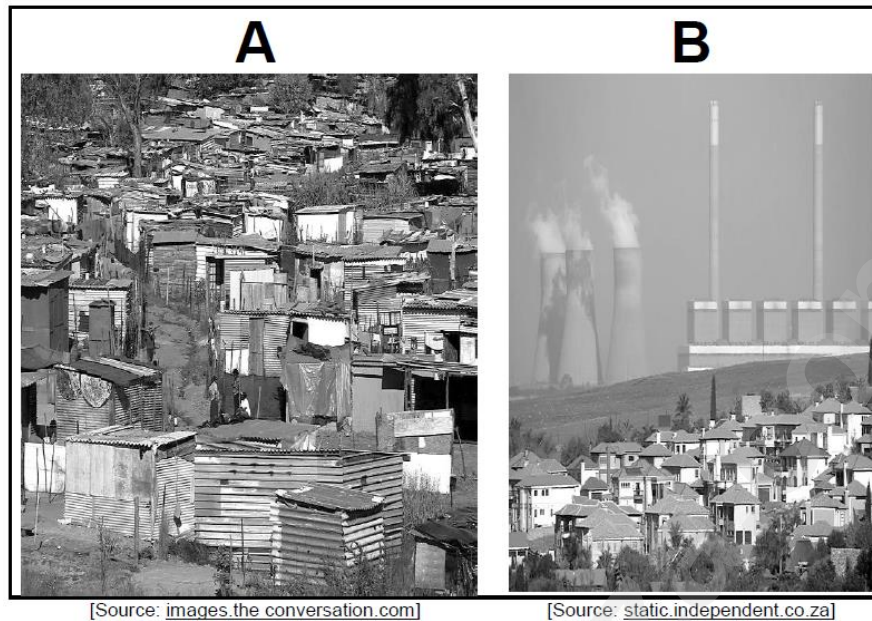
[Source: *The Mercury*, 18 September 2012]

- 11.1.1 Which sector of the population has been most affected by the lack of planning? (1 x 1) (1)
- 11.1.2 Give TWO reasons why the sector of the population in QUESTION 11.1.1 has been most affected by the lack of planning in terms of transportation. (2 x 2) (4)
- 11.1.3 How will the increased travelling cost impact on household budgets? (2 x 2) (4)
- 11.1.4 Suggest THREE measures that urban planners can implement (put in place) to reduce traffic congestion between people's homes and places of work. (3 x 2) (6)

Activity 11.2 – Class work

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11.2 Study photographs **A** and **B** below on urban injustices.

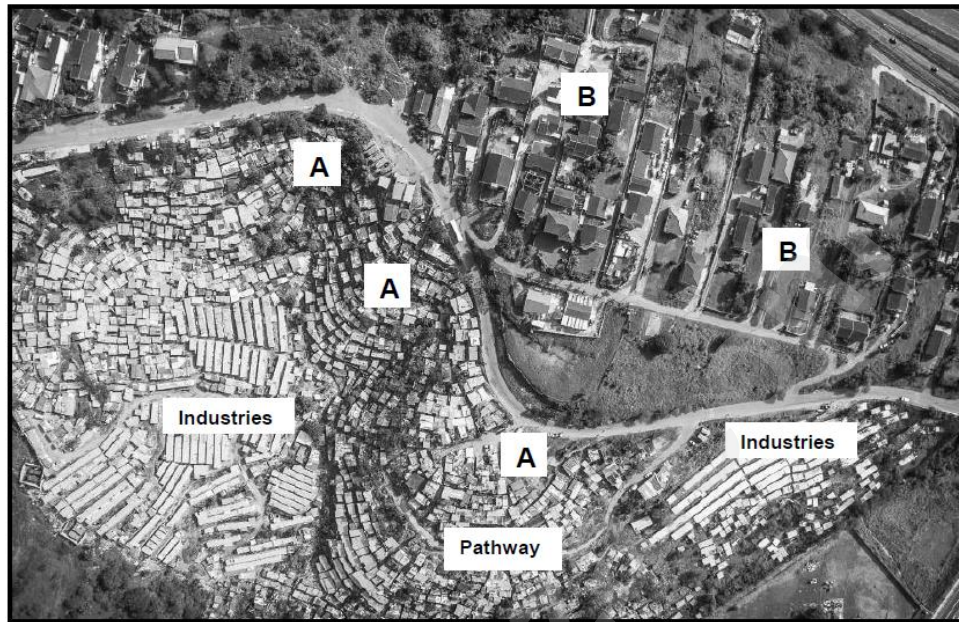


- 11.2.1 What is *social injustice*? (1 x 1) (1)
- 11.2.2 (a) State the unequal access to services and resources illustrated in photograph **A**. (1 x 1) (1)
- (b) Why are the poor mainly affected by the unequal access to services and resources? (2 x 1) (2)
- (c) List TWO negative impacts that unequal access to services and resources can have on a country. (2 x 1) (2)
- 11.2.3 Name the type of pollution causing the environmental injustice in photograph **B**. (1 x 1) (1)
- 11.2.4 Discuss TWO negative effects of this type of pollution mentioned in QUESTION 4.6.3 on the health of the community. (2 x 2) (4)
- 11.2.5 Suggest TWO measures that could be implemented to protect the community against the type of pollution named in QUESTION 11.2.4. (2 x 2) (4)

Activity 11.3 – Class work

Downloaded from eduresourceza.com

11.3 Study the photograph below showing an informal settlement (**A**).



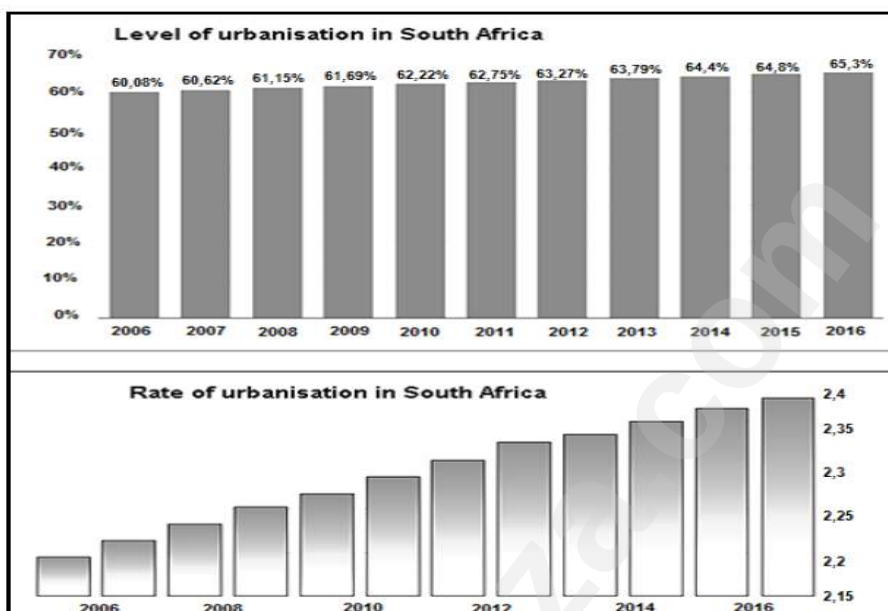
[Source: [https://www.google.com/search?q=informal settlements](https://www.google.com/search?q=informal+settlements)]

- 11.3.1 What is an *informal settlement*? (1 x 1) (1)
- 11.3.2 State TWO basic needs that people who live in most informal settlements do not have easy access to. (2 x 1) (2)
- 11.3.3 State TWO ways in which the appearance of informal settlement differs from the appearance of the formal settlement at **B**. (2 x 1) (2)
- 11.3.4 Name TWO factors that influenced the location of this informal settlement. (2 x 1) (2)
- 11.3.5 Explain how the people living in **A** can benefit from settlement **B**. (2 x 2) (4)
- 11.3.6 Discuss possible solutions that the local municipality can provide to reduce the growth of settlement **A**. (2 x 2) (4)

Session 12 – TYPICAL EXAMINATION QUESTIONS

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- 12.1 Study the bar graphs below indicating the level and rate of urbanisation in South Africa between 2006 and 2016.



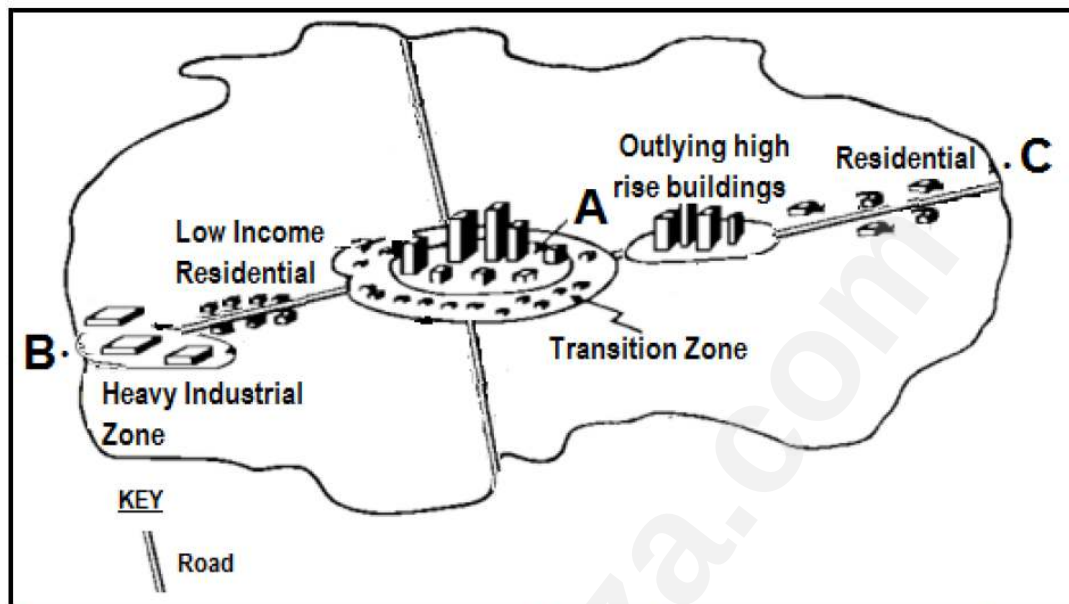
[Source: <https://www.statista.com/statistics/455931/urbanization-in-south-africa/> and <https://tradingeconomics.com/south-africa/urban-population-growth-annual-percent-wb-data.html>]

- 12.1.1 Define the term *urbanisation*. (1 x 1) (1)
- 12.1.2 State the relationship between the level and the rate of urbanisation between 2006 and 2016. (1 x 2) (2)
- 12.1.3 Discuss TWO physical factors in the rural area that could have contributed to the rate of urbanisation shown in FIGURE 3.3. (2 x 2) (4)
- 12.1.4 Write a paragraph of approximately EIGHT lines discussing the reasons why the rate and level of urbanisation has led to increased protests against service delivery in urban areas. (4 x 2) (8)

Activity 12.2

Downloaded from eduresourceza.com

12.2 The sketch below shows urban land-use zones.



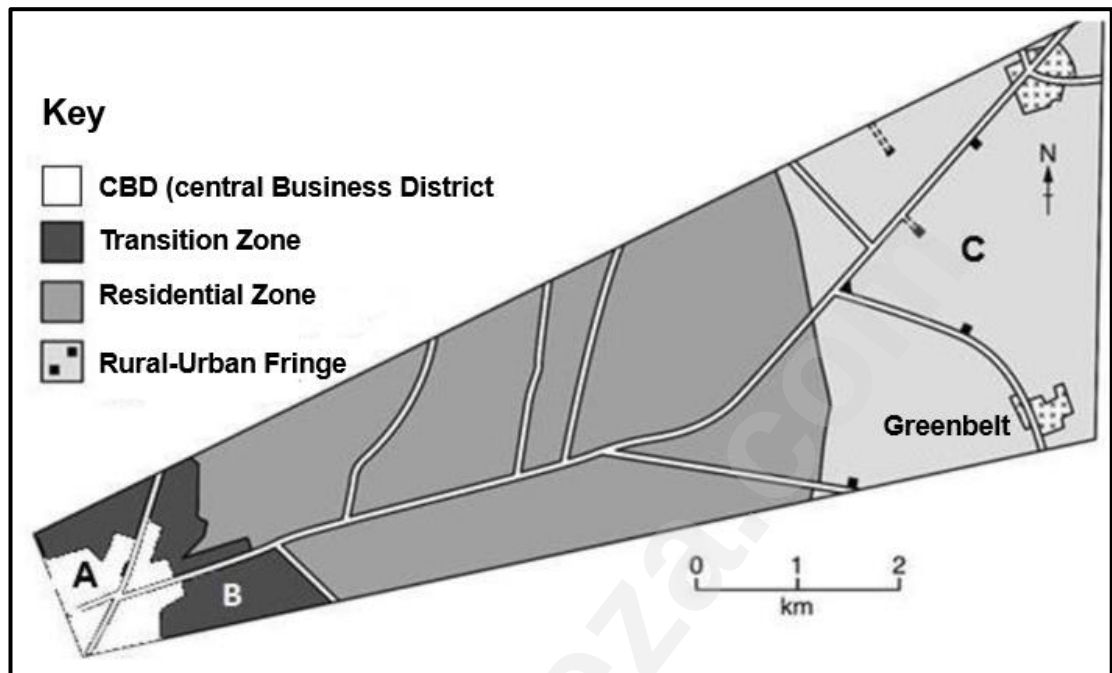
[Adapted from <http://www.globalsecurity.org/military/library/policy/army/accp/in0726/image>]

- 12.2.1 Identify land-use zone **A**. (1 x 1) (1)
- 12.2.2 What evidence suggests that land-use zone **A** has a high degree of accessibility? (1 x 1) (1)
- 12.2.3 Indicate how the accessibility of land-use zone **A** impacts on the morphology of the buildings. (1 x 1) (1)
- 12.2.4 Draw a labelled urban profile from **B** to **C**. (4 x 1) (4)
- 12.2.5 Answer the following questions with reference to the transition zone.
- Why are the buildings in the transition zone poorly maintained? (1 x 2) (2)
 - Give a reason for the high land values in the transition zone. (1 x 2) (2)
- 12.2.6 Give TWO reasons for the location of the heavy industrial zone. (2 x 2) (4)

Activity 12.3

Downloaded from eduresourceza.com

12.3 Refers to the cross-section below on urban land use zones.



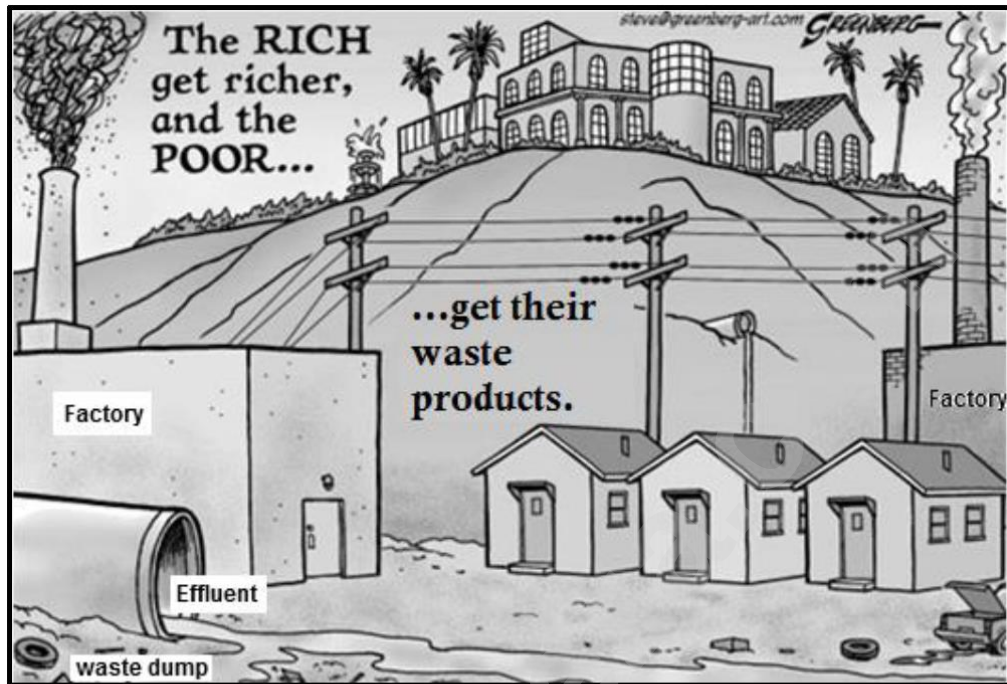
[Source: Adapted from <https://www.google.com/search?q=land-use/>]

- 12.3.1 Identify the land use zone at **A**. (1 x 1) (1)
- 12.3.2 How will decreasing accessibility to land use zone **A** negatively impact commuters? (1 x 2) (2)
- 12.3.3 Give TWO reasons for irregular shape of land use zone at **B**. (2 x 2) (4)
- 12.3.4 Why are buildings at land use zone **B** in dilapidated (poor) condition? (2 x 2) (4)
- 12.3.5 Why would new, high-income residential developments be attracted to area **C**? (2 x 2) (4)

Activity 12.4

Downloaded from eduresourceza.com

12.4 The sketch below shows injustices associated with urbanisation.



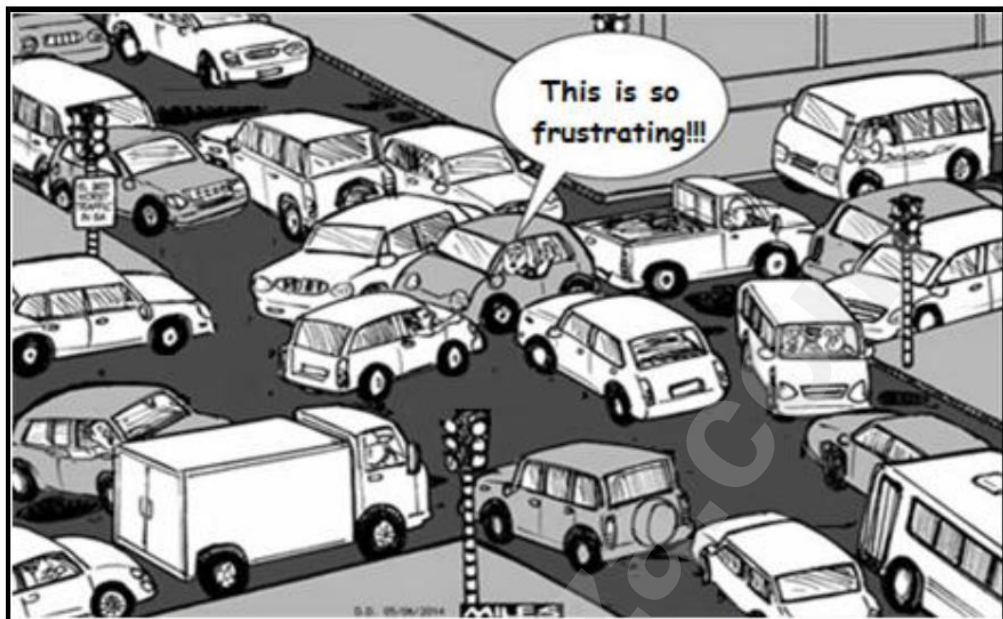
[Source: <https://s-media-cache-ak0.pinimg.com/originals/ca/ab/c7/caabc75946c2e1260c536d4081908cce.jpg>]

- 12.4.1 Define the term *injustice*. (1 x 1) (1)
- 12.4.2 What type of injustice is depicted in the cartoon? (1 x 1) (1)
- 12.4.3 What evidence in the cartoon indicates that the poor are being unfairly treated? (2 x 1) (2)
- 12.4.4 Discuss what is meant by the phrase, 'the POOR get their waste products'. (1 x 2) (2)
- 12.4.5 Explain the impact of waste products on the health and environmental well-being of the poor. (2 x 2) (4)
- 12.4.6 Suggest THREE ways in which to resolve the illustrated injustice in urban areas sustainably. (3 x 2) (6)

Activity 12.5

Downloaded from eduresourceza.com

12.5 Refer to cartoon below based on an urban issue related to rapid urbanisation



[Adapted from <http://cartoonsbymiles.blogspot.com/2014/06/mixed-bag.html>]

- 12.5.1 Identify the urban issue shown in the cartoon. (1 x 1) (1)
- 12.5.2 Give a reason for your answer to QUESTION 12.5.1. (1 x 2) (2)
- 12.5.3 Why is the urban issue in the cartoon common in most cities? (2 x 2) (4)
- 12.5.4 In a paragraph of approximately EIGHT lines, discuss the negative impact of this urban issue on motorists. (4 x 2) (8)