

## STRUCTURE & PATTERNS OF URBAN SETTLEMENTS 29 MAY 2014

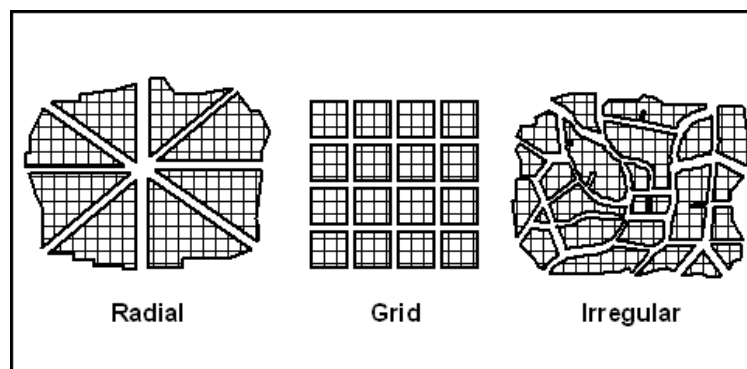
### Lesson Description

In this lesson we:

- Discuss internal structure and patterns of urban settlements
- Discuss land-use zones including reasons for location and characteristics
- Consider factors influencing the morphological structure of a city
- Look at Urban profiles
- Discuss the various models of urban structure

### Summary

#### Street Patterns



#### Grid Iron/Rectangular

Roads meet at right angles

##### Advantages

- Shorter routes
- Easy to extend
- Easy to find places

##### Disadvantages

- Associated with traffic congestion
- Many intersections/robots
- Time consuming
- Fuel consuming
- Road rage/frustration

#### Irregular

No set pattern. It develops due to relief e.g. goes around hilly areas

##### Advantages

- Creates aesthetic appeal due to different roads
- Less traffic congestion
- Less intersections

##### Disadvantages

- Can get lost
- Travel longer distances

## Radial

All roads lead to/out of a central point e.g. CBD

### Advantages

- Less intersections
- Easier flow of traffic
- Aesthetic appeal

### Disadvantages

- Unplanned growth can create traffic problems

## Land-Use Zones

### Commercial

#### CBD

Commercial heart of the city  
Tallest buildings with highest density- land is expensive  
High accessibility  
Mixed zone but dominated by commercial functions  
High and low order functions



#### Other business districts

OBD, Isolated store cluster, commercial ribbon development, planned neighbourhood shopping centre and planned regional shopping centre

### Residential

#### High Income

Near parks, rural-urban fringe and expensive flats in CBD (penthouse), low density large buildings



#### Middle Income

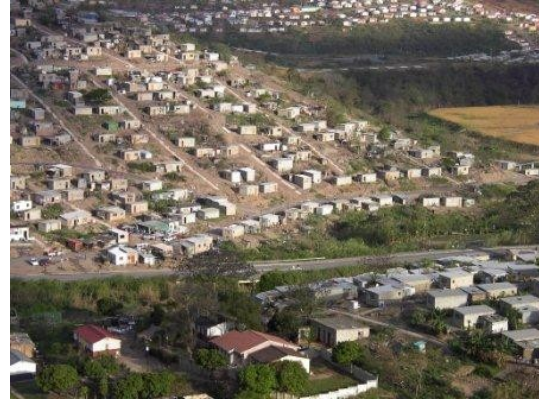
In between high and low income. Single dwellings, medium density



notes for...

### Low Income

Near employment, high density, small buildings



### Informal

Little formal structure, mostly shacks made out of zinc and wooden crate etc, limited basic services e.g. sanitation, electricity



### Industrial

#### Heavy

Outskirts of CBD, due to pollution, traffic congestion.  
Near flat land, bulk transport, water supply, cheap land



#### Light

Located in the CBD, transition zone, residential areas.  
Does cause a lot of pollution, traffic congestion.



notes for...

### Zone of decay/transition zone

Found around CBD

Zone of change

Many dilapidated buildings (low owner occupation). Buildings are taken over by other functions and renovated

Zone of mixed functions



### Greenbelt

Reduce ecological footprint

Green areas e.g. parks, conservation areas



### Rural-urban fringe

Urban functions invade the surrounding rural area

Has urban and rural functions

High income residential areas, golf course, sewage works



## Morphological Structure of a City/Urban Area

Refers generally to the height, density, shape and situation of the urban areas.

Factors influencing the morphological structure of a city:

### Transport

Allowed urban areas to spread out

### Planning

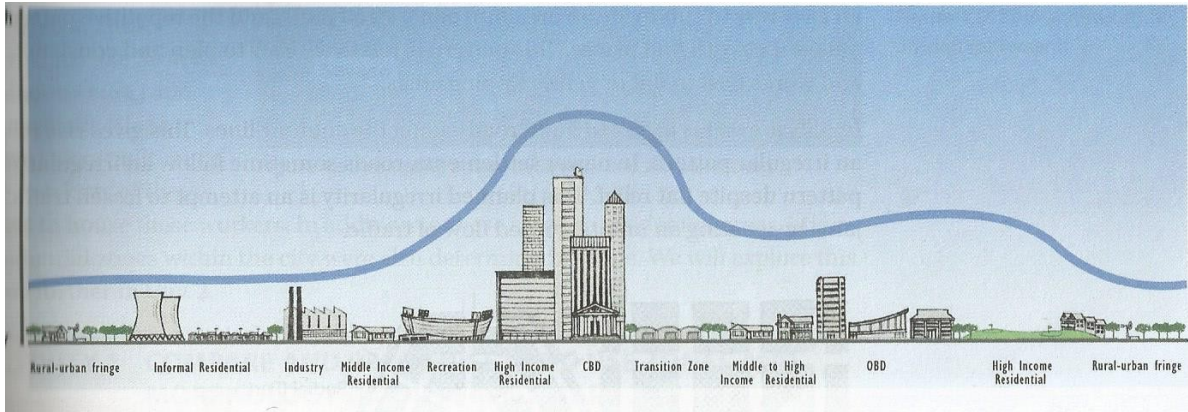
Totally planned, unplanned and piecemeal planning

### Physical

Underlying rock structure, topography/relief and local/micro climate

notes for...

**Urban Profile**



(Adapted from Platinum Geography Grade 12)

Refers to the side view/cross section of an urban profile. Here we can look at the:

- Vertical height of the buildings
- The density of buildings
- The different land use zones

**Models of Urban Structure**

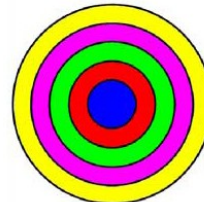
Refer to a general explanation of land use zones e.g. its situation

**Burgess/Concentric**

Land use zones develop in concentric circles/zones around the CBD  
CBD is in the centre

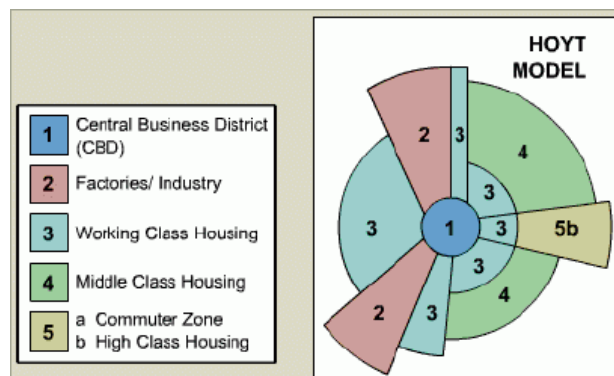
**The Burgess Model**

- CBD
- Factories / Industry (Transitional)
- Low Class Residential (Old Inner City Areas)
- Medium Class Residential (Inter-war Period)
- High Class Residential (Modern Suburbs)



**Hoyt/Sector**

Land use zones develop in sectors around the CBD  
CBD is in the centre

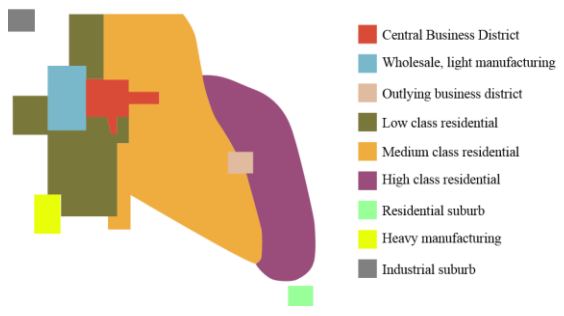


notes for...

**Harris and Ullman/Multiple Nuclei**

Land use zones develop around different nuclei, depending on the needs of that land use zone e.g. heavy industry near bulk transport

Harris and Ullman's Multiple Nuclei Model

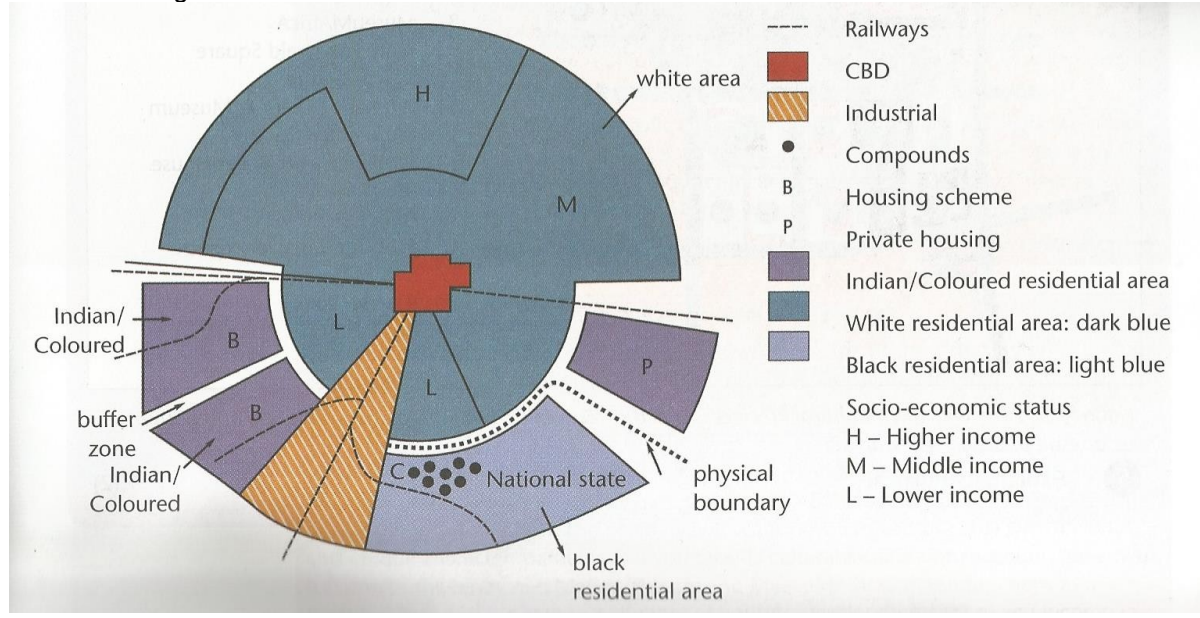


**Modern American-Western City**

Movement of people into urban area e.g. rural urban migration  
Movement of people into urban area e.g. commercial decentralization

**Third World City**

Large scale rural urban migration due to opportunities in the urban areas  
Natural increase  
Formal and large scale informal settlements



**South African City**

Influenced by the apartheid policy e.g. Group areas act.  
South Africa is undergoing transition due to Democracy

## Changing Urban Patterns and Land Use and the South African City

### Urban renewal

- Renovating the urban area
- Facadism keeping the external front of the building but modifying the rest of the building
- Gentrification- upgrade run down areas in the inner city
- Invasion and succession-one inappropriate land use replaced by another more appropriate land use e.g. residential to commercial.

### Decentralisation of functions

- Commercial functions moving to the residential area
- Convenience of having different functions in one area.



## Test Yourself

### Question 1

Various options are given as possible answers to the following questions. Choose the answer and write only the letter (A–D) next to the question number.

- 1.1 ... is a physical factor that influences the morphological structure of a city
- A Microclimate
  - B Planning
  - C Transport
  - D Infrastructure
- 1.2 The Concentric Zone Model states that ...
- A the different land uses form concentric circles around the CBD.
  - B the different land uses form wedges around the CBD.
  - C the different land uses form around different nuclei.
  - D cities in South Africa is different from other countries cities due to apartheid.
- 1.3 The Multiple Nuclei Model states that ...
- A the different land uses form concentric circles around the CBD.
  - B the different land uses form wedges around the CBD.
  - C the different land uses form around different nuclei.
  - D cities in South Africa is different from other countries cities due to apartheid.
- 1.4 The Sector Model states that ...
- A the different land uses form concentric circles around the CBD.
  - B the different land uses form wedges around the CBD.
  - C the different land uses form around different nuclei.
  - D cities in South Africa is different from other countries cities due to apartheid.

- 1.5 The South African City Model states that ...
- A the different land uses form concentric circles around the CBD.
  - B the different land uses form wedges around the CBD.
  - C the different land uses form around different nuclei.
  - D cities in South Africa is different from other countries cities due to apartheid.

### Question 2

Choose a term from COLUMN B that matches the description in COLUMN A. Write only the letter (A–I) next to the question number. You may use each answer only ONCE.

No.	Column A	Column B
2.1	Outlying business district	A Sector Model
2.2	CBD in the centre	B OBD
2.3	Is the external, physical aspects of a city	C Gentrification
2.4	Is the side view of a city	D Fascadism
2.5	Building are renovated but the front is maintained	E Urban structure
2.6	Improving and modernising of old buildings	F Multiple Nuclei Model
2.7	Development of land-uses occur around various nuclei	G Urban profile

### Question 3

Choose the correct term from the options given.

- 3.1 The zone of decay/rural-urban fringe lies on the outskirts of the CBD.
- 3.2 The zone of decay/rural-urban fringe is an area where urban functions are developed in the surrounding rural area.
- 3.3 CBD/OBD is the commercial heart of the city.
- 3.4 High/Low income residential areas are found on the outskirts of the city.
- 3.5 Light/Heavy industries are located on the outskirts, near bulk transport.

### Question 4

State whether the following statements are true or false

- 4.1 Grid iron street pattern is easy to extend.
- 4.2 Radial street pattern has many intersections.
- 4.3 It is easy to get lost when using an irregular street pattern.
- 4.4 The Multiple Nuclei Model indicate that there are four nuclei around which development occurs.
- 4.5 Urban areas can have primary activities





**Improve your Skills**

**Question 1**

Refer to the pictures below and answer the questions that follow.

**A**



**B**



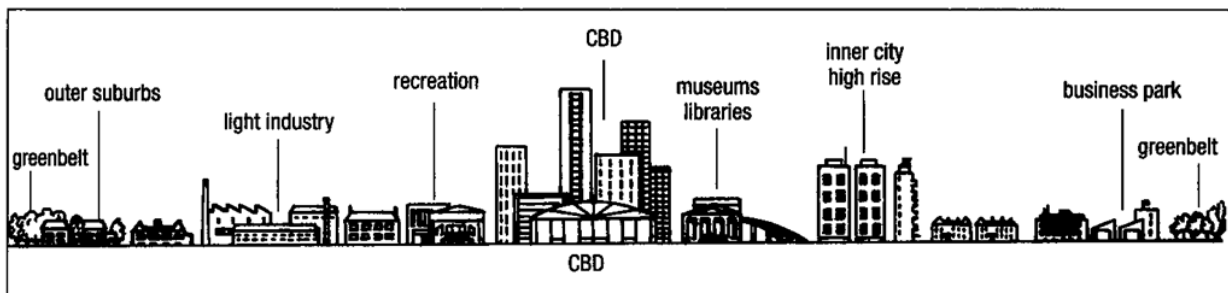
1.1 Identify the land-use zone represented by Figure A and give a reason for your answer.

1.2

- a.) Identify the street pattern shown in FIGURE B.
- b.) The street pattern shown in FIGURE B is generally found in the land-use represented by FIGURE A. Give three reasons for this.
- c.) The street pattern shown in FIGURE B also creates problems in the land-use zone represented by Figure A. explain TWO of these problems.

**Question 2**

Refer to the figure below, a town in South Africa, and answer the questions that follow.

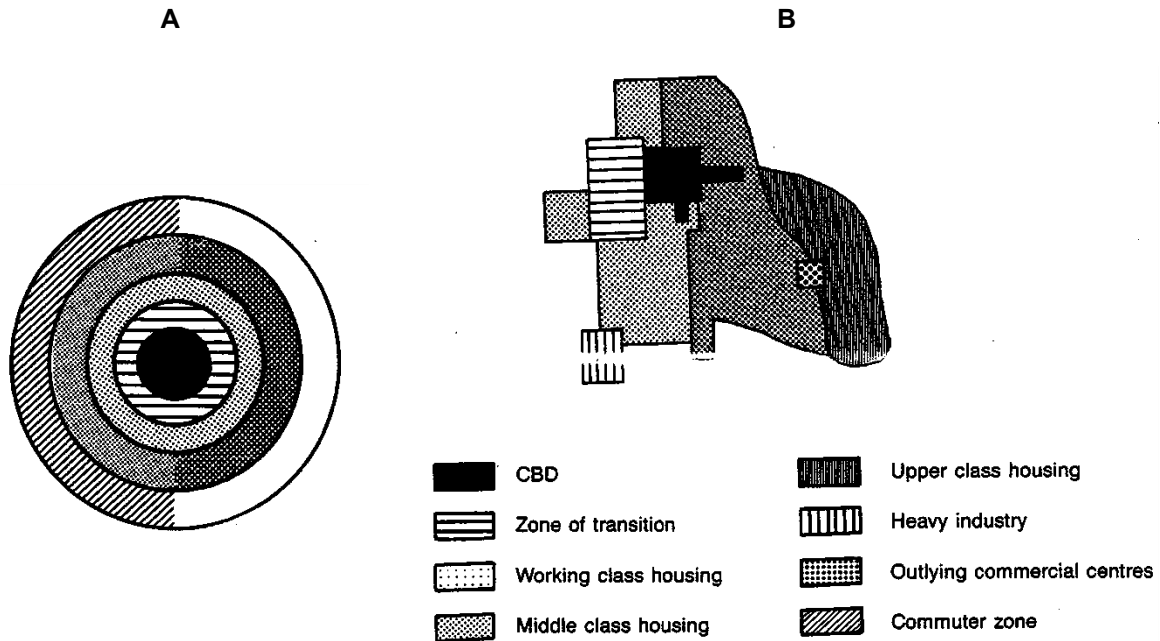


- 2.1 Define the term *urban profile*?
- 2.2 Why is the establishment of greenbelt areas important for any city?
- 2.3 How will land value differ from the inner city to the outskirts?
- 2.4 Congestion in cities is a major problem. Name TWO ways in which cities can reduce traffic congestion.
- 2.5 What are the so-called edge cities that developed on the edge of established urban areas?
- 2.6 A lot of businesses migrate from the CBD to these so-called edge cities for various reasons. Therefore urban renewal is a focus of many cities around the world.
  - a.) Define the term *urban renewal*.
  - b.) Discuss how government and businesses have supported urban renewal in our major cities like Cape Town and Johannesburg, in a short paragraph

**Question 3**

Refer to the diagram below and answer the questions that follow.

**FIGURE 3 Urban land use.**



Refer to figure 3, Urban land use models, and answer the following questions.

- 3.1 Identify land use models A and B.
- 3.2 Explain TWO criticisms of land use model A
- 3.3 Explain how Land use model B is considered more applicable to cities in South Africa compared to land use model A

**Question 4**

Refer to the article below and answer the questions that follow.

**Central Business Districts (CBD)**

CBDs have declined due to loss of buying power to suburban developments. CBDs are no longer used by all groups of the population and poorer groups dominate. This has resulted in lower investment into CBDs. In most towns and secondary cities in KZN the centres require improvements. The role of a CBD is to meet the needs of different markets in an accessible place that facilitates multi and single purpose trips. Many city centres in South Africa have undergone processes of change over time, progressing through a period of decline to (in some cases) later renewal.

*Adapted from devplan.kzntl.gov.za*

- 4.1 According to the article what is the role of the CBD?
- 4.2 According to the article state a problem experienced by the CBD and give ONE reason for your answer.
- 4.3 Explain TWO other changes experienced by the CBD
- 4.4 In a paragraph explain the concept urban retail and explain THREE forces causing it.