

Q1- A residential zone was designed to occupy row houses units with some facilities shown in the table below, the gross residential area was (90 hectare) with housing percentage (40%). According to Iraqi standards, find the following:

- 1- No. of maximum dwelling units that can be built in the site (according to standard).
- 2- No. of proposed dwellers in the zone.
- 3- Gross Residential Density (GRD).
- 4- Net Residential Density (NRD).
- 5- Open space percent %.
- 6- Population forecasting in (2029) for the zone.
- 7- What are the main planning standards (location standards) for health care centre and local market?

Given:

| Facilities | Users Percent% (from total population) | plot user area for one-person m ² /p |
|---|---|--|
| primary school | 15% | 12 |
| health care centre | 50% | 3 |
| mosque | 40% | 1 |
| local market | 75% | 1 |
| Average size of household=5 people, Growth Rate (i)= 3% | | |

Q2- What are the main types of residential units in Kurdistan? Explain two in details. (Support your answer with sketches).

Q3- The traffic directorate in Erbil city has obtained traffic data to develop Zanko street in the city. The street is (2km) contains (2 lane) with limited speed (60km/hr), and designed peak hour factor (PHF 0.75) with maximum flow (1200vehicles/15min). According to the data above calculate the following:

- 1- Actual flow rate on the street (AFR).
- 2- Level of service (LOS).
- 3- Density (*K*) on the street.
- 4- Find the relationship between speed and density.

Q4- According to the city formation patters, analyze the morphological structure of Erbil Citadel. (Explain the advantages and disadvantages of this pattern).

Q5- Briefly, Explain the concept of Urban Planning, and its position within planning levels

Q6- What is Goals Achievement Matrix (GAM) in urban planning? And how smart goals can be formulated?

Q7- Explain the main process of Land Use Planning (LUP).

Q8- A new residential zone with total area (60 hectare) has designed to occupy a specific number of persons with gross density (100p/h). The zone has supported with necessary facilities such as (primary school, health centre, mosque, local market). According to the given data; calculate the following requirements:

- 1- Number of dwelling units. 2- Net Residential Density. 3- Housing Percentage (%).
- 4- Land Use Density for residential. 5- Open space percentage (%). 6- Built up area.
- 7- Land use intensity %. 8- Population forecasting in (2029) for the zone.

Given:

| Facilities | Users Percent% (from total population) | Plot user area for one-person m ² /p |
|---|---|--|
| primary school | 17.5% | 18 |
| health centre | 70% | 4 |
| mosque | 70% | 1 |
| local market | 85% | 1 |
| Average size of household= 6 people. | | Growth Rate (i)= 3% |
| Plot area for one dwelling unit=250m ² | | |

Q9- The traffic directorate in Erbil city obtained traffic data from visual observation to evaluate the existing condition of Zanko street.

| <i>Time Period</i> | <i>Counts (veh/15-min. period)</i> | <i>LOS</i> | <i>v/c (C60)</i> |
|-------------------------------|------------------------------------|------------|------------------|
| 8:00-8:15 am | 1000 | A | 0.33 |
| 8:15-8:30 am | 1400 | B | 0.50 |
| 8:30-8:45 am | 1250 | C | 0.65 |
| 8:45-9:00 am | 970 | D | 0.80 |
| -Number of active lane (N)= 3 | | E | 1.00 |
| -Limited speed= 60 km/p | | F | variable |

According to the traffic data above, calculate the following:

- 1- Peak hour factor (PHF).
- 2- Level of service (LOS) & give technical description of the flow condition.

Q10- What is "voluntary travel behavior change" in transportation planning, and how can be applied in Erbil city?

Q11- In traffic flow parameters, Find the relationship between "speed and traffic flow". Support your answer with analytical chart.

Q12- What are the main planning considerations that should be taken into account when planning residential zones?

Q13- What is Bid Rent Curve (BRC)? Support your answer with diagram.

Q14- The traffic directorate in Erbil city obtained traffic data from aerial photographs show the average spacing between vehicles (20m), for the same section, the observer counted total of (10) vehicles during (20 sec.) interval. Determine:

- 1- The traffic density on the road (K).
- 2- The traffic flow (q).
- 3- The space means speed for the traffic stream (u).
- 4- Explain the relationship between speed and flow.

Q15- What are the main planning characteristics of "**Linear City Plan**". Support your answer with analytical sketches.

Q16- Explain the advantages and disadvantages of the Linear City Plan.

Q17- According to the "Theories of internal composition of the city"; analyze the morphological structure of Erbil city. Support your answer with analytical sketches.

Q18- What are the main planning characteristics of ancient Greece cities? (Mention five points and support your answer with sketch).

Q19- Explain the most important goals of "Zoning" in urban planning?

Q20- Data obtained from an aerial photograph show (12 vehicles on 0.25km) long section of the road, for that same section, an observer counts total of (7) vehicles during (15 sec.) interval. Determine:

- 1-The density on the road (K).
- 2- The traffic flow (q).

- 3- The space mean speed for the traffic stream (u).
- 4- Find the relationship between density and flow; support your answer with diagram.

Q21- What are the most important strategies for creating a sustainable transport system in cities? Mention them and explain one strategy in detail.

Q22- The new Zanko village in Erbil city had designed to occupy (1000 dwelling units) with gross area (50.6 hectare). The zone had supported with necessary facilities such as (primary school, health centre, mosque, local market). According to the given data; calculate the following requirements:

- 1- Net Residential Density. 2- Gross Residential Density. 3- Housing Percentage (%).
- 4- Land Use Density for residential. 5- Open space percentage (%). 6- Built up area.
- 7- Land use intensity %. 8- Population forecasting in (2028) for the zone. 9- What are the main planning standards (location standards) for primary school location in the zone?

Given:

| Facilities | Users Percent% (from total population) | plot user area for one person m^2/p |
|---|---|--|
| primary school | 15% | 16 |
| health centre | 50% | 4 |
| mosque | 100% | 1 |
| local market | 75% | 1 |
| Average size of household=5 people, | | Growth Rate (i)= 4% |
| Plot area for one dwelling unit=250m ² | | |

Q23- Explain the planning characteristics of "Garden City Movement" of Ebenezer Howard?

Q24- What is Bid Rent Curve? Support your answer with diagram.

Q25- What are the most important factors that affect the morphological change in land use in the city?

Q26- What is a Floor Area Ratio (FAR)? and why FAR important to urban planning?

Q27- The traffic directorate in Erbil city obtained traffic data from aerial photographs show the average spacing between vehicles (40m), for the same section, the observer counted total of (20) vehicles during (40 sec.) interval. Determine:

- 1- The traffic density on the road (K).
- 2- The traffic flow (q).
- 3- The space means speed for the traffic stream (u).

4- Explain the relationship between speed and flow.

Q28- Fill the following blanks:

1- A planning is a general word refers to the , and any operation in any field.

2- Urban planning is the study of the of a city, or other urban areas. This is closely related to environmental studies, conservation, and land-use planning.

3- There are three characteristics that make the ancient Mesopotamian cities unique,,

4- Most ancient cities had shared in the same planning characteristics such as and

5- The science that deals with city's shape or form is called

6- Comprehensive planning is an attempt to establish guidelines for

7- Early civilization spread along the fertile valleys where, and were at hand.

8- Medieval cities usually had street patterns and heavy walls.

Q29- Erbil city has a radial concentric plan with CBD as castle zone; explain the following:

1- The main patterns of radial plan.

2- The advantage and disadvantage of radial plan. (Support your answer with sketches).

Q30- Briefly, explain the main levels of planning, and determines the position of urban planning within planning levels.

Q31- According to the "Theories of internal composition of the city"; analyze the morphological structure of Erbil city. Support your answer with analytical sketches.

Q32- What are the main planning characteristics of ancient Greece cities? (Mention five points and support your answer with sketch).

Q33- Explain the most important goals of "Zoning" in urban planning?

Q34- Data obtained from an aerial photograph show (12 vehicles on 0.25km) long section of the road, for that same section, an observer counts total of (7) vehicles during (15 sec.) interval. Determine:

- 1-The density on the road (K).
- 2- The traffic flow (q).
- 3- The space mean speed for the traffic stream (u).
- 4- Find the relationship between density and flow; support your answer with diagram.

Q35- What are the most important strategies for creating a sustainable transport system in cities? Mention them and explain one strategy in detail.

Q36- The new Zanko village in Erbil city had designed to occupy (1000 dwelling units) with gross area (50.6 hectare). The zone had supported with necessary facilities such as (primary school, health centre, mosque, local market). According to the given data; calculate the following requirements:

- 1- Net Residential Density. 2- Gross Residential Density. 3- Housing Percentage (%).
- 4- Land Use Density for residential. 5- Open space percentage (%). 6- Built up area.
- 7- Land use intensity %. 8- Population forecasting in (2028) for the zone. 9- What are the main planning standards (location standards) for primary school location in the zone?

Given:

| Facilities | Users Percent% (from total population) | plot user area for one person m^2/p |
|---|---|--|
| primary school | 15% | 16 |
| health centre | 50% | 4 |
| mosque | 100% | 1 |
| local market | 75% | 1 |
| Average size of household=5 people, | | Growth Rate (i)= 4% |
| Plot area for one dwelling unit=250 m^2 | | |

Q37- Erbil city has a radial concentric plan with CBD as castle zone; explain the following:

- 1- The main types of radial plan.
- 2- The advantage and disadvantage of radial pattern. (Support your answer with sketches).

Q38- Briefly, explain the main levels of planning, and determines the position of urban planning within planning levels.

Q39- Fill the following blanks:

- 1- A planning is a general word refers to the , and any operation in any field.

2- Urban planning is the study of the of a city, or other urban areas. This is closely related to environmental studies, conservation, and land-use planning.

3- There are three characteristics that make the ancient Mesopotamian cities unique,,

4- Most ancient cities had shared in the same planning characteristics such as and

5- The science that deals with city's shape or form is called

Q40- What are the factors that determine the price of housing in the city?

Q41- Define the following terms:

1. Housing planning,
2. Housing Effective Demand,
3. Smart Goals in housing planning,
4. Housing Conservation,
5. Semi-detached houses,
6. Hierarchy of cities

Q42- Discuss the following statement:

Housing planning should be used first as a **policy**, and secondly as a **technical** instrument.

Q43- Housing programs include all programs to develop the housing sector. According to this statement. Discuss the following issues:

- When did the housing programs begin in Iraq?
- Compare housing programs between socialist and capitalist regimes.
- What are the primary programs of housing?

Q44- What is Affordable Housing? And what are the main approaches to measure it? explain only one approach in detail.

Q45- The main housing type in the old city of Erbil is Courtyard Style.

- What are the planning characteristics of this pattern? (*Including: definition, coverage ratio and plot area*).
- Give a simple Sketch of the pattern.
- Discuss the advantages and disadvantages of this pattern.

Q46- The municipality of Erbil City aimed to design a residential zone to occupy row houses units with some facilities shown in the table below, the gross residential area was (120 hectare) with housing percentage (50%). According to Iraqi standards, find the following:

- 8- No. of maximum dwelling units that can be built in the site (according to standard).
- 9- No. of proposed dwellers in the zone.
- 10- Gross Residential Density (GRD).
- 11- Net Residential Density (NRD).
- 12- Open space percent %.
- 13- Population forecasting in (2032) for the zone.

14- What are the main planning standards (location standards) for health care centre and local market?

Given:

| Facilities | Users Percent% (from total population) | plot user area for one person m ² /p |
|---|---|--|
| primary school | 20% | 10 |
| health care centre | 40% | 3 |
| mosque | 30% | 1 |
| local market | 75% | 1 |
| Average size of household=5 people, Growth Rate (i)= 3% | | |

Q47- What are the main types of residential units in Kurdistan? Explain two in details. (Support your answer with sketches).

Q48- The traffic directorate in Erbil city has obtained traffic data to develop Gulan street in the city. The street is (3km) contains (2 lane) with limited speed (60km/hr), and designed peak hour factor (PHF 0.60) with maximum flow (900vehicles/15min). According to the data above calculate the following:

- 5- Actual flow rate on the street (AFR).
- 6- Level of service (LOS).
- 7- Density (*K*) on the street.
- 8- Find the relationship between speed and density.

Q49- According to the city formation patters, analyze the morphological structure of Erbil City. (Explain the advantages and disadvantages of this pattern).

Q50- Briefly, Explain the concept of Comprehensive planning Process. Support your answer with diagram.

Q51- What is SOWT in urban planning? And how can be formulated?

Q52- Explain the main process of zoning in urban planning.

Q53- A new residential zone with total area (70 hectare) has designed to occupy a specific number of persons with gross density (150p/h). The zone has supported with necessary facilities such as (primary school, health centre, mosque, local market). According to the given data; calculate the following requirements:

- 1- Number of dwelling units. 2- Net Residential Density. 3- Housing Percentage (%).
- 4- Land Use Density for residential. 5- Open space percentage (%). 6- Built up area.

7- Land use intensity %. 8- Population forecasting in (2029) for the zone.

Given:

| Facilities | Users Percent% (from total population) | Plot user area for one-person m ² /p |
|---|---|--|
| primary school | 17% | 18 |
| health centre | 75% | 4 |
| mosque | 75% | 1 |
| local market | 100% | 1 |
| Average size of household= 6 people. | | Growth Rate (i)= 3% |
| Plot area for one dwelling unit=250m ² | | |

Q54- The traffic police in Erbil city obtained traffic data from visual observation to evaluate the existing condition of Mosul Street.

| <i>Time Period</i> | <i>Counts (veh/15-min. period)</i> | <i>LOS</i> | <i>v/c (C60)</i> |
|-------------------------------|------------------------------------|------------|------------------|
| 8:00-8:15 am | 1100 | A | 0.33 |
| 8:15-8:30 am | 1500 | B | 0.50 |
| 8:30-8:45 am | 1280 | C | 0.65 |
| 8:45-9:00 am | 990 | D | 0.80 |
| -Number of active lane (N)= 3 | | E | 1.00 |
| -Limited speed= 60 km/p | | F | variable |

According to the traffic data above, calculate the following:

- 3- Peak hour factor (PHF).
- 4- Level of service (LOS) & give technical description of the flow condition.

Q55- What is " travel behavior change" in transportation planning, and how can be applied in Erbil city?

Q56- In traffic flow parameters, Find the relationship between "speed and traffic flow". Support your answer with analytical chart.

Q57- What are the main sustainable planning considerations that should be taken into account when planning residential zones?

Q58- What is Burgess's Model? Support your answer with diagram.

Q59- The traffic directorate in Erbil city obtained traffic data from aerial photographs show the average spacing between vehicles (40m), for the same section, the observer counted total of (20) vehicles during (30 sec.) interval. Determine:

- 1- The traffic density on the road (K).
- 2- The traffic flow (q).
- 3- The space means speed for the traffic stream (u).
- 4- Explain the relationship between speed and flow.

Q60- What are the main planning characteristics of "**Radial City Plan**". Support your answer with analytical sketches.

Q61- Explain the advantages and disadvantages of the Radial City Plan.

Q62- According to the "Theories of internal composition of the city"; analyze the morphological structure of Erbil Citadel. Support your answer with analytical sketches.

Q63- What are the main planning characteristics of Mesopotamia Civilization? (Mention five points and support your answer with sketch).

Q64- Explain the most important goals of "Sustainability" in urban planning?

Q65- Data obtained from an aerial photograph show (15 vehicles on 0.50km) long section of the road, for that same section, an observer counts total of (10) vehicles during (20 sec.) interval. Determine:

- 1-The density on the road (K).
- 2- The traffic flow (q).
- 3- The space mean speed for the traffic stream (u).
- 4- Find the relationship between density and flow; support your answer with diagram.

Q66- What are the most important strategies for creating an efficient transport system in cities? Mention them and explain one strategy in detail.

Q67- Explain the planning characteristics of Ebenezer Howard City?

Q68- In Burgess Model, what is the relationship between land value and distance from city centre? Support your answer with diagram.

Q69- What are the most important factors that affect the morphological change in Cities?

Q70- Compare between ancient Greece Cities and Nile Vale Cities?

Q71- Fill the following blanks:

1-Road can be classified according to the function to the:

a-b-c-.....

2-The planning have multi levels :

a-b-c- d-
.....e-.....

3-There are five types of residential unit :

a-b-c- d-
.....e-.....

4-Housing Module must be appropriated to the :

a-b-c-

5-Roman Empire influenced by Greek civilization, but can be identified the following differences

a-b-

Q72- Analysis the stage of comprehensive planning process, then drawn a chart to show the stages.

Q73- Explain the factors which are affecting change the land use within the cities.

Q74- In twentieth century, Le Corbusier, Frank Lloyd Wright and other architects have designed cities, explain the main concepts which adopted by them.

Q75- A residential zone (Row houses) has the following data in (2020):

1- Total population = (2000 person).

2- Housing area = (80 000 m²).

3- Housing percentage = (45%).

4- Average number of family=5 person.

According to the data above calculate the following requirements:

1- A plot area for the housing unit.

2- Gross Residential Area.

3- Net Residential Density.

4- Social infrastructure percentage.

Q76- Modern city plans have many patterns, Compare between Organic cities and Grid cities plan. Support your answer with sketch.

Q77- In Housing Planning, Residential Units include many types; briefly, explain the types of Residential unit. And show the suitable types in Erbil city.

Q78- What are the main planning characteristics of Greece cities? Support your answer with sketch.

Q79- What are the most important requirements in the design and planning of residential buildings.

Q80- In your opinion, what is the suitable housing in Erbil city, depending on the social and economic conditions of the city. (Explain and show the reasons)

Q81- What are the main planning objectives of the Radburn idea?

Q82- Briefly, explained the history of housing.

Q83- what are the main considerations which are taken in the account during located social infrastructure in the neighbourhood?

Q84- Explain the most prominent methods to evaluate alternatives, support your answer with examples.

Q85- Briefly, Explain the level of planning.

Q86- Explain the main planning characteristics of (Medieval Town), support your answer with sketch.

Q87- Briefly, Explain the most important theories in internal composition of the city.