UNIVERSITY GRANTS COMMISSION

GEOGRAPHY **CODE: 80**

Unit – 5: population and settlement geography

SYLLABUS

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2	5.1.1.1 Census
3	5.1.1.2 Sample surveys
4	5.1.1.3 Vital statistics
5	5.1.1.4 Data reliability
6	5.1.2 World Population Distribution
7	Factor influencing distribution of population
8	Ecumene and Non Ecumene area
9	5.1.2.1 Ackerman's population Resource Region
10	5.1.3 World Population Growth
11	Positive Growth of Population and Negative Growth of Population
12	5.1.5 Demographic Transition
13	5.1.6 Theories of Population Growth
14	5.1.6.1 Malthus
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16	5.1.7 Fertility and Mortality Analysis
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18	5.1.7.2 Determinants
19	5.1.8 Migration
20	Push Factors
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22	5.1.8.1 Types
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25	A) Ravenstein
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27	C) Principle of Least Efforts
28	D) Lee migration Model
29	E) Zelinsky Migratoin Model
30	5.1.9 Population Composition and Characteristics
31	5.1.10 Population Problems in Developing Countries
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2	5.2.2 Rural Settlements
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4	5.2.2.2 Patterns
5	5.2.3 Contemporary Problems of Rural Settlements

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3	5.3.1.2 Henri Pirenne
4	5.3.1.3 Lewis Mumford:
5	5.3.2 Characteristics and Processes of Urbanization in Developed and Developing Countries:
6	5.3.2.1 Factors of urban growth
7	5.3.3 Urban Systems
8	5.3.3.1 Primate city
9	5.3.3.2 Rank size rule
10	Reilly's law of retail gravitation
11	5.3.4 Central Place Theories
12	5.3.4.1 Christaller’s Theory
13	5.3.4.2 Losch’s Theory
14	5.3.5 Internal Structure of the City, Models of Urban Land Use
15	5.3.5.1 Burgess
16	5.3.5.2 Hoyt
17	5.3.5.3 Harris and Ullman
18	5.3.6 Concepts of Megacities
19	5.3.7 Global Cities and Edge Cities
20	5.3.8 Changing Urban Forms
21	5.3.8.1 Peri-urban areas
22	5.3.8.2 Rural-urban fringe

23	**5.3.8.3 Suburban**
24	**5.3.8.4 Satellite towns**
25	**5.3.9 Social Segregation in the City**
26	**5.3.10 Urban Social Area Analysis**
27	**5.3.11 Manifestation of Poverty in the City: (slums, informal sector growth, crime and social exclusion)**

Section – 1: Unit at a Glance

Sub Unit – 1: Population geography

Thomas Glean Trewartha is known as father of population geography.
Population density: population density is the number of people per unit of area, usually quoted per square kilometre or square mile.

Arithmetic density: Arithmetic density, also known as real density, is very simply the total number of people divided by the total land area.

Agricultural density: Agricultural density is calculated by determining the area of arable (farmable land) divided by the number of agricultural population in that region.

Physiological density: The ratio between total population and total cultivable land.

Census: A census is the procedure of systematically acquiring and recording information about the members of a given population.

Sample surveys: A **sample survey** is a method for collecting data from or about the members of a population so that inferences about the entire population can be obtained from a subset, or **sample**, of the population members.

Factor influencing distribution of population:

1. Geographical factors:
2. Economic factors:
3. Social and cultural factors:

Ecumene: area of highly concentrated of population. The areas are -
1) East Asia: Contain 1/5 of the world population. The leading country is China.
2) South Asia: Contain 1/5 of the world population. The leading country is India.
3) South East Asia: The leading country is Indonesian islands such as Philippines.
4) Western Europe: Contain 1/9 of the world population.
5) NE USA and SE Canada: Contain 2% of the world population.

Non Ecumene: area of sparsely concentrated of population.

1) Cold desert area
2) Desert area
3) Hot wet lands

Ackerman's population Resource Region:

Sl no.	Type	Characteristics
1	Brazilian	Technology-Deficient Area of low Population-Potential/Resource Ratio
2	Egyptian	Technology-Deficient Area of high Population-Potential/Resource Ratio
3	European	Technology-Source Area of high Population-Potential/Resource Ratio
4	U.S.	Technology-Source Area of Low Population-Potential/Resource Ratio
5.	Arctic-Desert Type	Technology-Deficient Area with few Food Producing Resources

Positive Growth of Population and Negative Growth of Population:
A **positive growth** rate indicates that the **population** is increasing, while a negative **growth** rate indicates that the **population** is decreasing.
Net Population change =(Mortality + Fertility)

Demographic Transition:
The "***Demographic Transition***" is a model that describes population change over time. It is based on an interpretation begun in 1929 by the American demographer Warren Thompson, of the observed changes, or ***transitions***, in birth and death rates in industrialized societies over the past two hundred years or so.

1. **Stage 1 –** both high birthrate and death rate is present
2. **Stage 2 –** high birth rate and death rate falls rapidly.
3. **Stage 3 –** falling birth rate and death rate falls slowly.
4. **Stage 4-** low birth rate and death rate.
5. **Stage 5 –** birth rate rising again and death rate remain low.

Malthus:
Malthusianism is the idea that population growth is potentially exponential while the growth of the food supply is linear. It derives from the political and economic thought of the Reverend Thomas Robert Malthus, as laid out in his 1798 writings, An Essay on the Principle of Population.

Crude birth rate: The crude birth rate (CBR) is equal to the number of live births (b) in a year divided by the total midyear population (p), with the ratio multiplied by 1,000 to arrive at the number of births per 1,000 people.

General fertility rate: The general fertility rate is an age/sex-specific birth rate while the total fertility rate is an age/sex-adjusted birth rate

Normal increase of population: natural increase is the difference between the numbers of births and deaths in a population; the rate of natural increase is the difference between the birthrate and the death rate.

Death rate: the ratio of deaths to the population of a particular area or during a particular period of time, usually calculated as the number of deaths per one thousand people per year.

Migration:

The movement of an individual or a group from one place to another place for residence to settle (either permanently or semi permanently) with fertility and mortality. The migration causes due to push or pull factors.

Push Factors: over population, unemployment, poverty, famine, flood etc.

Pull Factors: employment opportunity, better economic and political condition.

Types:

A) International migration:

B) Internal Migration

1. Rural to Urban
2. Urban to Urban
3. Rural to Rural
4. Urban to Rural

Causes and consequences:

1. Push and Pull factors
2. Colonial Development
3. Brain Drain
4. Globalization

Models:

A) In 1885, **Ravenstein** gave the following laws-

1. Large number of migration move in short distance.
2. Migration happens by stages.
3. Each current of migration cause counter current.
4. The natives of the town have low tendency of migration rather than countryside people.
5. Females get migration in the short distance.
6. The magnitude of migration increases with the advancement in technology.
7. Economic motives are the prime among the migrates.

B) The Gravity model:

$$MI = \frac{K \times P1 \times P2}{d^2}$$

Where, MI= Migration Index
K= Proportionality Index
P1= Population Size of Settlement 1
P2= Population Size of Settlement 2
d = distance between two settlements.

C) Principle of Least Efforts:

$$M_{ij} = \frac{K \times P1 \times P2}{D_{ij}}$$

Where, M_{ij}= Magnitude of movement between two communities i and j
P1= population size of community i
P2= population size of community j
D_{ij}= distance between them
K= Proportionality constant.

D) Lee migration Model:

Lee's migration model was created in 1966 describes the push and pull factors of migration which are basically reasons for emigration and immigration. According to him every location has a range of attributes (positive/negative/neutral).
1. Forced Migration- Push factor, forced to move
2. Voluntary Migration- Pull factor, enough to attract to move.
3. Intervening opportunity

E) Zelinsky Migratoin Model:

Zelinsky's Migration Transition Model, claims that the type of migration that occurs within a country depends on how developed it is or what type of society it is. A connection is drawn from migration to the stages of within the Demographic Transition Model (DTM).
Stage one : Premodern traditional society
Stage two : Early transitional society
Stage three : Late transitional society
Stage four : Advanced society
Stage five : Future super advanced society

Sub Unit – 2: Rural Settlements

Site, situation and Location:

Site and Situation. The location and growth of a settlement depended upon its site and situation. The site was the actual place where people decided to locate their settlement. The growth of that settlement then depended upon its situation in relation to accessibility and availability of natural resources.

Types:

1. Rectangular
2. Linear
3. Triangular
4. Star like
5. Circular
6. Nebular
7. Planned etc.

Patterns:

1. Compact or Nucleated
2. Linear settlement
3. Scattered or Dispersed settlement

Contemporary Problems of Rural Settlements:

1. rural-urban migration.
2. Land use changes.
3. Land acquisition and transactions.
4. Unemployment.
5. Traditional lifestyle. Etc.

Sub Unit – 3: Urban and Urbanization Related Issues

Theories of Origin of Towns:

1. Gordon Childe:

G. Childe wrote the book "The Urban Revolution" in1950. He describes urban revolution by some phases- 1) Paleolithic phase, 2) Neolithic Revolution and 3) urban Revolution. He establish his theory by some stages also-

1. small group depends on plants and animals
2. Domestication
3. Agriculture
4. Expansion of farming (Neolithic)
5. Migration Trade
6. Complex social system and politics
7. Rise and fall of the city.

2. Henri Pirenne:

H. Pirenne wrote books -1) Social history of Capitalism (1914), 2) Social history of Medieval Cities (1922). He describe about historical evolution of European cities. He discussed about rise and fall of Cities of Europe as well as rise and fall of economy the cities.

3. Lewis Mumford:

L. Mumford wrote a book "City in History" in 1962. His concept of urban evolution is basically the concept of urban impulsion. His concept is divided into two broad categories-

A) Social changes in Lifestyle:

1. Ecotechnique
2. Paliotechnique
3. Neotechnique
4. Biotechnique

B) Cultural Changes:

1. Eopolis
2. Polis
3. Metropolis
4. Megalopolis
5. Tyrannopolis
6. Necropolis

The Census of India has classified towns into six categories on the basis of their number of population-

1. Class 1 towns with more than 1, 00,000 population,
2. Class II towns with 50,000 to 99,999 population,
3. Class III towns with 20,000 to 49,999 population,
4. Class IV towns with 10,000 to 19,999 population,
5. Class V towns with 5000 to 9,999 population
6. Class VI towns with less than 5,000 population.

Primate city:

In 1939 M. Jefferson introduced the concept of primate city. The term "**primate city**" is used to refer to a **city** that functions as by far the largest **city** in the country it inhabits. It may have a population between a third and a half of that of the whole country. Classic **examples** of **primate cities** include Bangkok in Thailand and Seoul in South Korea.

Rank size rule:

The best known effort to create such a hierarchy is the **rank-size rule** developed by G.K. **Zipf** in 1949. At its most basic, the **Zipf's** formula is as follows: Pr=P1/P2 n where Pr= the population of the rth city, P1 = the population of the largest city, and r = the **size rank** of the rth city in the set.

According to **Reilly's "law**," customers are willing to travel longer distances to larger retail centers given the higher attraction they present to customers. In Reilly's formulation, the attractiveness of the retail center becomes the analogy for size (mass) in the physical law of gravity.

Christaller's Theory:
Central place theory is a geographical theory that seeks to explain the number, size and location of human settlements in a residential system. It was introduced in 1933 to explain the spatial distribution of cities across the landscape.

Losch's Theory:
In 1954, German economist August **Losch** modified Christaller's **central place theory** because he believed it was too rigid. He thought that Christaller's model led to patterns where the distribution of goods and the accumulation of profits were based entirely on location.
Christaller's theory attempts to realise retail business and services better whereby, Loschian model sought to explain the spatial distribution of market based on manufacturing.

Burgess:
The **concentric zone model**, also known as the **Burgess model** or the **CCD model**, is one of the earliest theoretical models to explain urban social structures. It was created by E. Burgess in 1925. It is based on the study of human ecology.

Hoyt:
The **sector model**, also known as the **Hoyt model**, is a model of urban land use proposed in 1939 by land economist Homer Hoyt. It is a modification of the concentric zone model of city development. The benefits of the application of this model include the fact it allows for an outward progression of growth. As with all simple models of such complex phenomena, its validity is limited.

Harris and Ullman:
The **multiple nuclei model** is an economical model created by Chauncy Harris and Edward Ullman in the 1945 article "The Nature of Cities"

The model describes the layout of a city, based on Chicago. It says that even though a city may have begun with a central business district, or CBD, other smaller CBDs develop on the outskirts of the city near the more valuable housing areas to allow shorter commutes from the outskirts of the city. This creates nodes or nuclei in other parts of the city besides the CBD thus the name multiple nuclei model. Their aim was to produce a more realistic, if more complicated, model. Their main goals in this were to:

A **megacity** is a very large city metropolitan area, typically with a population of more than 10 million people. Precise definitions vary: the United Nations Department of Economic and Social Affairs in its 2014 "World Urbanization Prospects" report counted urban agglomerations having over 10 million inhabitants.

A **global city**, also called a **power city**, **world city**, **alpha city** or **world center**, is a city which is a primary node in the global economic network. The concept comes from geography and urban studies, and the idea that globalization is created, facilitated,

and enacted in strategic geographic locales according to a hierarchy of importance to the operation of the global system of finance and trade.
Edge city is a term that originated in the United States for a concentration of business, shopping, and entertainment outside a traditional downtown or central business district, in what had previously been a suburban residential or rural area.

Changing Urban Forms :
Urban form is the physical characteristics that make up built-up areas, including the. shape, size, density and configuration of settlements. It can be considered at different. scales: from regional, to **urban**, neighbourhood, 'block' and street.

Peri-urban areas:
Peri-urban areas (also called rurban space, outskirts or the hinterland) are defined by the structure resulting from the process of **peri**-urbanisation. It can be described as the landscape interface between town and country, or also as the rural—**urban** transition zone where **urban** and rural uses mix and often clash.

Rural-urban fringe:
The rural–urban fringe, also known as the outskirts, rurban, peri-urban or the urban hinterland, can be described as the "landscape interface between town and country", or also as the transition zone where urban and rural uses mix and often clash.

Suburban:
A **suburb** is a mixed-use or residential area, existing either as part of a city or urban area or as a separate residential community within commuting distance of a city. **Suburbs** tend to proliferate around cities that have an abundance of adjacent flat land.

Satellite towns:
Satellite cities or satellite towns are smaller municipalities that are adjacent to a major city which is the core of a metropolitan area.

Social Segregation in the City:
Social segregation happens when people of varying socioeconomic groups in a **city** have little opportunity to be exposed to people different than them.
Such things as exclusionary zoning, redlining by lenders and insurers, racial steering by real estate brokers, and discrimination by property owners are rightfully pointed to as some of very important **causes** of urban **spatial segregation**.

Urban Social Area Analysis:
Social area analysis was one of the techniques evolved to study diversity in income, status and ethnicity and mobility in **urban** population. This technique was a part of the methodological developments under the rubric of ecological school. **Social area analysis** is used more by **urban** geographers than sociologists.

Section – 2: Key Statements

Every candidates appearing for NET/SET examination should follow these key (main) points those can help them a better understanding regarding this unit very quickly.

Basic Key Statements: population density (5.1), arithmetic density (5.1), agricultural density (5.1), Physiological density (5.1), Census (5.1.1.1), Sample surveys(5.1.1.2), Vital statistics (5.1.1.3), Data reliability (5.1.1.4), Ecumene (5.1.2), Non Ecumene (5.1.2), Ackerman's population Resource Region (5.1.2.1), Positive Growth (5.1.3), Negative Growth (5.1.3), Demographic Transition (5.1.5), Malthus (5.1.6.1), Sadler (5.1.6.2), Fertility (5.17), Mortality (5.17), Migration (5.1.8), Push Factors (5.1.8), Pull Factors (5.1.8), Ravenstein (5.1.8.3), Gravity model (5.1.8.3), Lee migration Model (5.1.8.3), Zelinsky Migratoin Model (5.1.8.3), Rural Settlements (5.2.2), Site(5.2.2), situation (5.2.2), Location (5.2.2), Urban Agglomeration (5.3.2.1), Primate city (5.3.3.1),

Standard Key Statements: total fertility rate (5.1.7.1), total marital fertility (5.1.7.1), Crude birth rate (5.1.7.1), General fertility rate (5.1.7.1), Normal increase of population (5.1.7.1), Death rate (5.1.7.1), mortality (5.1.7.2), Rank size rule (5.3.2), Central Place Theories (5.3.4), Christaller's Theory (5.3.4.1), Losch's Theory (5.3.4.2), concentric zone model (5.3.5.1), central business district (5.3.5.1), sector model (5.3.5.2), multiple nuclei model (5.3.5.3), Megacities (5.3.6), global city (5.3.7), , Peri-urban areas (5.3.8.1), Rural-urban fringe (5.3.8.2), Suburban (5.3.8.3), Satellite towns (5.3.8.4), Social Segregation (5.3.9), Urban Social Area Analysis (5.3.10)

Advanced Key Statements: Edge city (5.3.7), Reilly's law of retail gravitation (5.3.3.2),

[N.B. – Values in parenthesis are the reference number]

Section – 3: Key Facts and Figures

Sub Unit – 1:

Population geography

Population Geography is the study of the ways in which spatial variations in the distribution, composition, migration, and growth of *populations* are related to the nature of places. Thomas Glean Trewartha is known as father of population geography.

Some definitions:

a) **Population density:**
population density is the number of people per unit of area, usually quoted per square kilometre or square mile.

b) **Arithmetic density:**
Arithmetic density, also known as real density, is very simply the total number of people divided by the total land area.

c) **Agricultural density:**
Agricultural density is calculated by determining the area of arable (farmable land) divided by the number of agricultural population in that region.

d) **Physiological density:**
The ratio between total population and total cultivable land.

5.1.1 Sources of population data:

5.1.1.1 Census:

A census is the procedure of systematically acquiring and recording information about the members of a given population. This term is used mostly in connection with national population and housing censuses; other common censuses include traditional culture, business, supplies, agricultural, and traffic censuses.

5.1.1.2 Sample surveys:

A **sample survey** is a method for collecting data from or about the members of a population so that inferences about the entire population can be obtained from a subset, or **sample**, of the population members.

5.1.1.3 Vital statistics:

Vital statistics is accumulated data gathered on live births, deaths, fetal deaths, marriages and divorces.

5.1.1.4 Data reliability:

Data reliability means the overall consistency of a measure.

5.1.2 World Population Distribution:

World's 90% population stay in 10% of the area.

Factor influencing distribution of population:

4. Geographical factors:
   a) climate
   b) landforms
   c) water availability
   d) soil
   e) minerals
5. Economic factors:
   a) Urbanization
6. Social and cultural factors:
   a) industrialization

Ecumene and Non Ecumene area:

Ecumene: area of highly concentrated of population. The areas are-

1) East Asia: Contain 1/5 of the world population. The leading country is China.
2) South Asia: Contain 1/5 of the world population. The leading country is India.
3) South East Asia: The leading country is Indonesian islands such as Philippines.
4) Western Europe: Contain 1/9 of the world population.
5) NE USA and SE Canada: Contain 2% of the world population.

Non Ecumene: area of sparsely concentrated of population.

4) Cold desert area
5) Desert area
6) Hot wet lands

5.1.2.1 Ackerman's population Resource Region:

Sl no.	Type	Characteristics
1	Brazilian	Technology-Deficient Area of low Population-Potential/Resource Ratio
2	Egyptian	Technology-Deficient Area of high Population-Potential/Resource Ratio
3	European	Technology-Source Area of high Population-Potential/Resource Ratio
4	U.S.	Technology-Source Area of Low Population-Potential/Resource Ratio
5.	Arctic-Desert Type	Technology-Deficient Area with few Food Producing Resources

5.1.3 World Population Growth

The world's population reaches 800 million by 18th century. By middle of 20th century, it reaches 2.5 billion. By 1988 it was 5 billion. It requires more than one million years reaching one billion population in 1808. The next billion happened in 120 years (1928). The third billion requires only 32 years (i.e. 1960) and the fourth billion requires just 15 years (1975). Fifth billion requires only 13 years (1988).

Positive Growth of Population and Negative Growth of Population:

A **positive growth** rate indicates that the **population** is increasing, while a negative **growth** rate indicates that the **population** is decreasing.

Net Population change =(Mortality + Fertility)

5.1.5 Demographic Transition:

The "***Demographic Transition***" is a model that describes population change over time. It is based on an interpretation begun in 1929 by the American demographer Warren Thompson, of the observed changes, or ***transitions***, in birth and death rates in industrialized societies over the past two hundred years or so.

6. **Stage 1 –** both high birthrate and death rate is present
7. **Stage 2 –** high birth rate and death rate falls rapidly.
8. **Stage 3 –** falling birth rate and death rate falls slowly.
9. **Stage 4-** low birth rate and death rate.
10. **Stage 5 –** birth rate rising again and death rate remain low.

5.1.6 Theories of Population Growth:

5.1.6.1 Malthus:

Malthusianism is the idea that population growth is potentially exponential while the growth of the food supply is linear. It derives from the political and economic thought of the Reverend Thomas Robert Malthus, as laid out in his 1798 writings, An Essay on the Principle of Population.

5.1.6.2 Sadler:

Michael Thomas Sadler, an Economist and a British social reformer, was born in 1780. He was a contemporary of Malthus. He expressed his ideas about population in his book The Law of Population. According to Sadler, the law which regulates the growth of animals and plants is primarily the same as the law which regulates the growth of human population.

He was of the opinion that "The fecundity of human beings is in the inverse ratio of the condensation of their numbers."

Moreover, the fertility rate decreases with the increase in the density of population. In the agriculture based or pastoral countries where the density of population is low, the fertility rate of the population becomes high. In such countries, people have the capacity to work hard and hardworking people give birth to more children.

With the passing of time, when there is industrialization and the population becomes more civilized and literate, the density of population increases. Here people would limit the size of family and in such socio-economic conditions they will be happier and there will be prosperity.

5.1.7 Fertility and Mortality Analysis:

It includes, for **fertility**, the crude birthrate, the child-woman ratio (based on census data), and the total **fertility** rate; and, for **mortality**, life expectancy at birth and the infant **mortality** rate. There is some evidence of rising death rates during the decades.

5.1.7.1 Indices:

Bongaarts proposed a model where the total fertility rate of a population can be calculated from four proximate determinants and the total fecundity (TF). The index of marriage (Cm), the index of contraception (Cc), the index of induced abortion (Ca) and the index of postpartum infecundability (Ci). These indices range from 0 to 1. The higher the index, the higher it will make the TFR, for example a population where there are no induced abortions would have a Ca of 1, but a country where everybody used infallible contraception would have a Cc of 0.

$$TFR = TF \times Cm \times Ci \times Ca \times Cc$$

These four indices can also be used to calculate the total marital fertility (TMFR) and the total natural fertility (TN).

$$TFR = TMFR \times Cm$$

$$TMFR = TN \times Cc \times Ca$$

$$TN = TF \times Ci$$

Mortality rates can be seen as calculated using $(d/p)*10^n$, where *d* represents the deaths from whatever cause of interest is specified that occur within a given time period, *p* represents the size of the population in which the deaths occur (however this population is defined or limited), and n is the conversion factor from the resulting fraction to another unit (e.g., multiplying by 10^3 to get mortality rate per 1,000 individuals).

Crude birth rate: The crude birth rate (CBR) is equal to the number of live births (b) in a year divided by the total midyear population (p), with the ratio multiplied by 1,000 to arrive at the number of births per 1,000 people.

General fertility rate: The general fertility rate is an age/sex-specific birth rate while the total fertility rate is an age/sex-adjusted birth rate

Normal increase of population: natural increase is the difference between the numbers of births and deaths in a population; the rate of natural increase is the difference between the birthrate and the death rate.

Death rate: the ratio of deaths to the population of a particular area or during a particular period of time, usually calculated as the number of deaths per one thousand people per year.

5.1.7.2 Determinants:

The former includes cultural, psychological, economic, social, health, and environmental factors. The proximate **determinants** are those factors that have a direct effect on **fertility**. The background factors operate through the proximate **determinants** to influence **fertility**; they do not influence **fertility** directly.

As per capita income rises, life expectancy rises. Second, nutritional status affects **mortality**. The ability to fend off disease is directly linked to nutrition. Third, public health issues, things like access to a clean water supply and effective waste removal, are also **determinants of mortality**.

5.1.8 Migration:

The movement of an individual or a group from one place to another place for residence to settle (either permanently or semi permanently) with fertility and mortality. The migration causes due to push or pull factors.

Push Factors: over population, unemployment, poverty, famine, flood etc.

Pull Factors: employment opportunity, better economic and political condition.

5.1.8.1 Types:

A) International migration:

B) Internal Migration

1. Rural to Urban
2. Urban to Urban
3. Rural to Rural
4. Urban to Rural

The following types are present-

1. Step migration
2. Chain Migration
3. Counter Migration
4. Channelized migration

The migration in the past and present:

1. Past Migration:
   a) Voluntary migration
   b) Forced Migration
   c) Labour Migration
2. Present Migration:
   a) Migration given a legal status
   b) Illegal Migration
   c) Migrants accepted as refugees.

5.1.8.2 Causes and consequences:

1. Push and Pull factors
2. Colonial Development
3. Brain Drain
4. Globalization

5.1.8.3 Models:

A) In 1885, **Ravenstein** gave the following laws-

8. Large number of migration move in short distance.
9. Migration happens by stages.
10. Each current of migration cause counter current.
11. The natives of the town have low tendency of migration rather than countryside people.
12. Females get migration in the short distance.
13. The magnitude of migration increases with the advancement in technology.
14. Economic motives are the prime among the migrates.

B) The Gravity model:

$$MI = \frac{K \times P1 \times P2}{d^2}$$

Where, MI= Migration Index
K= Proportionality Index
P1= Population Size of Settlement 1
P2= Population Size of Settlement 2
d = distance between two settlements.

C) Principle of Least Efforts:

$$M_{ij} = \frac{K \times P1 \times P2}{D_{ij}}$$

Where, M_{ij}= Magnitude of movement between two communities i and j
P1= population size of community i
P2= population size of community j
D_{ij}= distance between them
K= Proportionality constant.

D) Lee migration Model:

Lee's migration model was created in 1966 describes the push and pull factors of migration which are basically reasons for emigration and immigration. According to him every location has a range of attributes (positive/negative/neutral).

1. Forced Migration- Push factor, forced to move
2. Voluntary Migration- Pull factor, enough to attract to move.
3. Intervening opportunity

E) Zelinsky Migratoin Model:

Zelinsky's Migration Transition Model, claims that the type of migration that occurs within a country depends on how developed it is or what type of society it is. A connection is drawn from migration to the stages of within the Demographic Transition Model (DTM).

Stage one: ("Premodern traditional society"): This is before the onset of the urbanization, and it is very little to no migration and natural increase rates are about zero. There are very high levels of mobility (nomadism), but very little migration.

Stage two ("Early transitional society"): During stage two a "massive movement from countryside to cities" occurs. And as a "community experiences the process of modernization". There is a "rapid rate of natural increase". And Internationally there is a high rate of emigration, although the total population number is still rising.

Stage three ("Late transitional society"): Stage three corresponds to the "critical rung...of the mobility transition" where urban-to-urban migration surpasses the rural-to-urban migration, where rural-to-urban migration "continues but at waning absolute or relative rates", and "a complex migrational and circular movements within the urban network, from city to city or within a single metropolitan region" increased, circulation and non-economic migration starts to emerge. Then the net-out migration trend shifts to a net-in migration trend as more people immigrate than emigrate. That is, more people move in rather than out.

Stage four ("Advanced society"): During stage four the "movement from countryside to city continues but is further reduced in absolute and relative terms, vigorous movement of migrants from city to city and within individual urban agglomerations...especially within a highly elaborated lattice of major and minor metropolises" is observed. A large increase of urban to suburban migration can also occur. There is a "slight to moderate rate of natural increase or none at all".

Stage five ("Future super advanced society"): During stage five "Nearly all residential migration may be of the interurban and interurban variety…. No plausible predictions of fertility behavior because of a declining population,...a stable mortality pattern slightly below present levels".

5.1.9 Population Composition and Characteristics:

Population composition is the description of population defined by characteristics such as age, race, sex, occupational structure, educational level, marital status. These descriptions can be necessary for understanding the social dynamics from historical and comparative research. This data is often compared using a pyramid.

5.1.10 Population Problems in Developing Countries:

1. Rapid growth of population.
2. Unemployment.
3. Malnutrition and poor standard of living.
4. Mismanagement of Natural Resources.
5. Slow growth of industrial sector.
6. Orthodoxy.

5.1.11 Population Problems in Developed Countries:

1. Long span of Life.
2. Small workforce.
3. Declining proportion of rural population.
4. Industrial and Urbanization.

Previous Year Question

JULY-2018, PAPER-II

1. Which one of the following states in India recorded the lowest sex ratio as per 2011 census?
(1) Uttarakhand
(2) Tamil Nadu
(3) West Bengal
(4) Himachal Pradesh

2. Which one of the following countries recorded highest population density as per U.N. Demographic Year Book, 2010?
(1) India
(2) Japan
(3) Bangladesh
(4) Pakistan

3. Which one of the following groups of states in Indian recorded Sex Ratio higher than 950 according to year 2011 census?
(1) Andhra Pradesh, Odisha, Telengana
(2) Andhra Pradesh, Uttar Pradesh, Maharashtra
(3) Uttar Pradesh, Punjab, Andhra Pradesh
(4) Haryana, Bihar, Andhra Pradesh

4. Which one of the following statements indicates to the potential use of a service at a location according to Gravity Model?
(1) Direct relationship to both population size and distance
(2) Inverse relationship to both population size and distance
(3) Direct relationship to population size and inverse relationship to distance
(4) Direct relationship to distance and inverse relationship to population

5. Match the **List - I** with **List - II** and select the correct answer from the code given below:

List - I (Demographic terms)	**List - II (Explanation)**
(a) Cohart	(i) Birth rate minus death rate
(b) Natural increase	(ii) A population group unified by a specific common characteristic
(c) Total fertility rate	(iii) Average number of children that a women will bearthrough her child bearing years
(d) Dependency ratio	(iv) Measure in terms of number of dependants against

Code :	**(a)**	**(b)**	**(c)**	**(d)**
(1)	(iii)	(iv)	(ii)	(i)
(2)	(ii)	(i)	(iii)	(iv)
(3)	(i)	(iv)	(iii)	(ii)
(4)	(iv)	(ii)	(i)	(iii)

6. Which one of the following groups of states of India recorded more than one fourth of total population of the country in the census year 2011?

(1) Uttar Pradesh, Assam, Punjab
(2) Uttar Pradesh, Madhya Pradesh, Karnataka
(3) Uttar Pradesh, Andhra Pradesh, Punjab
(4) Uttar Pradesh, Gujarat, Haryana

7. Match the **List - I** with **List - II** and select the correct answer from the code given below:

List - I (Religious Community)	**List – II (Population Share (%), 2011)**
(a) Christian	(i) 1.7
(b) Buddhist	(ii) 0.4
(c) Sikhs	(iii) 2.3
(d) Jains	(iv) 0.7

Code :	**(a)**	**(b)**	**(c)**	**(d)**
(1)	(i)	(ii)	(iii)	(iv)
(2)	(iv)	(iii)	(ii)	(i)
(3)	(iii)	(iv)	(i)	(ii)
(4)	(ii)	(i)	(iv)	(iii)

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	41	3	
2.	42	3	
3.	44	1	
4.	48	3	
5.	49	2	
6.	50	2	
7.	69	3	

November-2017, Paper-III

1. Which one of the following continents recorded highest density of population as per United Nations Population Fund 2015 data?
(1) Europe
(2) Asia
(3) North America
(4) Australia

2. Japan's population pyramid would most likely resemble to that of:
(1) USA
(2) Brazil
(3) Denmark
(4) India

3. Consider the following statements:
Developing countries have registered increase in population despite significant decline in fertility rates because of:
(a) Increase in Life Expectancy Rate
(b) Increase in Infant Mortality Rate
(c) Falling Death rate
(d) Better Living conditions
Tick one of the following code which reflects the above statements?
(1) (a), (b) and (d) are correct
(2) (a), (c) and (d) are correct
(3) (a), (b), (c) are correct
(4) (b), (c) and (d) are correct

4. Which one of the following statements represents Population Pyramid with Wide base:
(1) Declining Fertility Rates
(2) High Fertility Rates
(3) Declining Death Rates
(4) High Death Rates

5. Match List - I with List - II and select the correct answer from the code given below:

List – I (Term)	**List - II (Definition)**
(a) Site of human settlements	(i) Movement due to opportunities of employment
(b) Situation of human settlements	(ii) The physical and cultural characteristics and attributes of a place
(c) Pull factor in Migration	(iii) The relative location with particular reference to the significance to a place
(d) Migration field	(iv) Area that dominates a locale in and out migration pattern

Code:	**(a)**	**(b)**	**(c)**	**(d)**
(1)	(i)	(iv)	(ii)	(iii)
(2)	(ii)	(iii)	(i)	(iv)
(3)	(iii)	(ii)	(iv)	(i)
(4)	(iv)	(ii)	(i)	(iii)

6. Which one of the following does not have role in push factors that seem to be operative in rural India?

(1) Rapid increase in the population growth
(2) High pressure of population on arable land
(3) Low per capita income and glaring disparity between levels of income of urban and rural areas
(4) Slow but consistent increase in amenities in rural areas and increase in per capita income

7. The percentage of decadal growth of population (2001-2011) is the highest in which of the following states?

(1) West Bengal
(2) Maharashtra
(3) Uttar Pradesh
(4) Arunachal Pradesh

8. Given below are two statements, one labelled as **Assertion (A)** and the other labelled as **Reason (R)**. Select your answer from the code given below:

Assertion (A): With every successive census in India, the growth of population results in greater increase in slum population.

Reason (R): Both the area and the population of India have been increasing continuously.

Code:

(1) Both (A) and (R) are true and (R) is the correct explanation of (A).
(2) Both (A) and (R) are true, but (R) is not a correct explanation of (A).
(3) (A) is true, but (R) is false.
(4) (A) is false, but (R) is true.

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	32	2	
2.	33	3	
3.	34	2	
4.	35	2	
5.	37	2	
6.	40	4	
7.	60	4	
8.	67	3	

November-2017, Paper-II

1. Which one of the following Total Fertility Rate is required to maintain the world's existing population?
(1) 3.4
(2) 2.1
(3) 1.2
(4) 4.2

2. Which one of the following is not included in the Ravenstein's Laws of Migration?
(1) Most migrants proceeds step by step
(2) Most migrants go for short distance
(3) Most migrants move from Urban to Rural areas
(4) Most migrants are adults

3. Given below are two statements, one labelled as **Assertion (A)** and the other labelled as **Reason (R).** Select your answer from the code given below:
Assertion (A): Population growth rate (2001-2011) was high for Bihar as compared to Uttar Pradesh.
Reason (R): Growth rate of population is the outcome of births minus deaths of a place.

Code:
(1) Both (A) and (R) are true and (R) is the correct explanation of (A)
(2) Both (A) and (R) are true, but (R) is not a correct explanation of (A)
(3) (A) is true, but (R) is false
(4) (A) is false, but (R) is true

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	21	2	
2.	23	3	
3.	45	3	

June-2014, Paper-III

1. Which of the following conditions is characterised by the second stage of Demographic Transition?
(1) Low birth rate, High death rate
(2) High birth rate, High death rate
(3) High birth rate, declining death rate
(4) Low birth rate, Low death rate

2.'Chain migration' is based on:
(1) Job opportunities
(2) Kinship
(3) Proximity to place of earlier Residence
(4) Combination of (A) and (C)

3. How many stages of population growth are involved in demographic transition?
(1) 3
(2) 4
(3) 5
(4) 6

4. As per census of India how many categories of urban settlements are identified?
(1) 3
(2) 4
(3) 5
(4) 6

5. As per the Indian census, the difference of sex ratio (Females per 1000 males) of the total population in India between 2001 and 2011 was
(1) 5
(2) 6
(3) 7
(4) 8

6. The census of India (2011) states that maximum density of population is found in which of the following Union Territories?
(1) Andaman and Nicobar Islands
(2) Lakshdweep Islands
(3) Dadra and Nagar Haveli
(4) Daman and Diu

7. According to census, the literacy rate (%) of India in 2011 was recorded as
(1) 80
(2) 78
(3) 76
(4) 74

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	35	3	
2.	37	4	
3.	31	2	
4.	32	4	
5.	34	3	
6.	36	4	
7.	37	4	

July-2014, Paper-II

1. Net population change is determined by
(1) Mortality
(2) Migration
(3) Fertility
(4) Both (A) and (C)

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	22	D	

December-2014, Paper-III

1. Match the following List – I with List – II and select the correct answer from the codes given:

List – I (Ackerman-Population Resource Region)	**List – II (Name of the Countries)**
a. U.S. type	i. India
b. Europe type	ii. Malaysia
c. Brazilian type	iii. Australia
d. Egyptian type	iv. South Korea

Codes:	**(A)**	**(B)**	**(C)**	**(D)**
(1)	i	ii	iii	iv
(2)	iii	iv	ii	i
(3)	ii	i	iv	iii
(4)	iv	iii	ii	i

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	31	4	

July-2016, Paper-II

1. Which one of the following is the child sex ratio in India as per Census of 2011?
(1) 914
(2) 916
(3) 918
(4) 915

2. As per 2011 Census of India, the maximum density of population was experienced by which one of the following Union Territories?
(1) Daman and Diu
(2) Dadra and Nagar Haveli
(3) Andaman and Nicobar
(4) Lakshadweep

3. Which one of the following states has the minimum percentage of literates as per the Census of India 2011?
(1) Bihar
(2) West Bengal
(3) Madhya Pradesh
(4) Uttar Pradesh.

4. As per the Census of India 2011 which one of the following Union Territories is having highest sex-ratio?
(1) Chandigarh
(2) Puduchery
(3) Lakshadweep
(4) Daman Diu

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	22	1	
2.	23	4	
3.	40	1	
4.	42	2	

June-2016, Paper-II

1. Which one of the following authors used the formula dx = do e–bx where, dx represents population density (d) at a distance x from the city centre, do the centre density, e an exponent of distance and b the density radient, to describe the pattern of population density in any city?
(1) C. Clark
(2) B.J.L. Berry
(3) J.W. Simmonds
(4) W. Isard

2. Which one of the following figures of total population of India (Census 2011) is correct?
(1) 1, 21, 08, 54, 977
(2) 1, 21, 04, 74, 877
(3) 1, 21, 03, 64, 957
(4) 1, 21, 05, 44, 777

3. The rapid growth phase of Indian population was lying between which of the following time periods?
(1) 1901 – 1921
(2) 1921 – 1951
(3) 1951 – 1981
(4) 1981 – 2001

4. The second doubling period of world's human population was between which of the following time slabs?
(1) 1650 – 1850
(2) 1750 – 1950
(3) 1850 – 1930
(4) 1850 – 1950

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	22	1	
2.	23	1	
3.	24	3	
4.	25	3	

June-2016, Paper-III

1. Match **List – I** with **List – II** and select the correct answer using the codes given below:

List – I (States)	**List – II (Literacy Rates as per Census of India, 2011)**
I. Tripura	A. 91.33%
II. Goa	B. 94.00%
III. Mizoram	C. 88.70%
IV. Kerala	D. 87.22%

Codes:	**(I)**	**(II)**	**(III)**	**(IV)**
(1)	D	A	C	B
(2)	D	C	A	B
(3)	B	C	D	A
(4)	B	C	A	D

2. Match **List – I** with **List – II** and select the correct answer using the codes given below:

List – I (State/UTs)	**List – II (Decadal Growth Rate of Population as per Census of India, 2011)**
I. Arunachal Pradesh	A. 27.95%
II. Daman and Diu	B. 28.08%
III. Meghalaya	C. 53.76%
IV. Puducherry	D. 26.03%

Codes:	**(I)**	**(II)**	**(III)**	**(IV)**
(1)	B	C	D	A
(2)	D	C	A	B
(3)	C	B	D	A
(4)	A	C	B	D

3. Which one of the following criteria is used by Census of India 2011 to define the town?
(1) Population Growth
(2) Population Density
(3) Literacy Rate
(4) Sex Ratio

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	33	2	
2.	34	2	
3.	38	2	

June-2016, Paper-III

1. Match List-I with List-II and select the correct answer using codes given below.

List – I (Administrative Units)	**List – II (Numbers as per Census of India 2011)**
I. Districts	A. 5767
II. Tehsils	B. 28
III. Cities	C. 640
IV. States	D. 497

Codes:	**(I)**	**(II)**	**(III)**	**(IV)**
(1)	C	A	B	D
(2)	C	A	D	B
(3)	B	C	D	A
(4)	B	A	D	C

2. Match **List-I** with **List-II** and select the correct answer using codes given below:

List – I (Sex Ratio as per Census of India 2011)	**List – II (States)**
I. 991	A. Andhra Pradesh
II. 996	B. Kerala
III. 1084	C. Chhattisgarh
IV. 993	D. Tamil Nadu

Codes:	**(I)**	**(II)**	**(III)**	**(IV)**
(1)	A	B	C	D
(2)	D	C	A	B
(3)	B	A	D	C
(4)	C	D	B	A

3. Out of the following cities, whose population is less than 10 lakhs as per Census of India 2011?

(1) Ahmedabad
(2) Pune
(3) Coimbatore
(4) Ambala

4. Match List-I with List-II and select the correct answer using codes given below.

List – I (Region/Areas)	**List – II (Main Religious Group)**
I. Amritsar	A. Muslims
II. Laddakh	B. Buddhist
III. Maldives	C. Christians
IV. Nagaland	D. Sikhs

Codes:	**(I)**	**(II)**	**(III)**	**(IV)**
(1)	B	D	C	A
(2)	D	B	A	C
(3)	C	A	B	D
(4)	A	C	D	B

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	33	2	
2.	34	4	
3.	39	4	
4.	54	2	

December-2015, Paper-III

1. How physiological density of population is defined?
(1) A ratio between total population and total area.
(2) A ratio between total rural population and total rural area.
(3) A ratio between total population and total cultivated area.
(4) Both (2) and (3).

2. As per the estimate of 2014, how muck population of the world is found in Africa?
(1) About 12
(2) About 14%
(3) About 16%
(4) About 18%

3. Which one of the following techniques would you consider for estimation of requirements of lation in an area for planning allocations?
(1) Carrying capacity analysis
(2) Cost-benefit analysis
(3) Population projection
(4) Rank-sixe rule

4. Which of the following exhibits "cumulative percentages of population against cumulative percentages of area"?
(1) Gravity Model
(2) Beta Index
(3) Ogive Curve
(4) Lorenx Curve

5. The density of population is highest in which of the following states of India according to the census of 201?
(1) Bihar
(2) Punjab
(3) Uttar Pradesh
(4) West Bengal

6. Which of the state Union Territory has continuously maintained favourable sex ratio since census are conducted in India?
(1) Arunachal Pradesh
(2) Meghalaya
(3) Kerala
(4) Puducherry

7. Which one of the following states recorded the highest population in the Census 2011?

(1) Uttar Pradesh
(2) Maharashtra
(3) Bihar
(4) West Bengal

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	33	3	
2.	34	3	
3.	23	4	
4.	37	4	
5.	38	1	
6.	62	3	
7.	64	1	

December-2014, Paper-II

1. Which State in India has recorded the lowest growth rate during 2001-2011 Census?
(1) Kerala
(2) West Bengal
(3) Rajasthan
(4) Bihar

2. The decadal growth of population (1991-2001) according to the 2001 Census is
(1) 23.86%
(2) 21.34%
(3) 24.66%
(4) 24.80%

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	23	1	
2.	25	2	

January-2017, Paper-II

1. Who developed the theory of demographic transition?
(1) Zelinskey
(2) Whittlesey
(3) Warren Thompson
(4) Ravenstein

2. Match List – I with **List – II** and select the correct answer from the codes given below:

List – I (General Terms)		**List – II (Definitions)**	
I.	Crude birth rate	A.	Births over deaths per thousand of population
II.	General fertility rate	B.	Number of deaths per thousand of population
III.	Natural increase of population	C.	Ratio between number of births and number of females in productive age
IV.	Death rate	D.	Ratio between the number of births and total population

Code :	**(I)**	**(II)**	**(III)**	**(IV)**
(1)	D	C	A	B
(2)	A	B	C	D
(3)	C	D	B	A
(4)	B	A	D	C

3. When 0 – 14 and 15 – 44 age groups population of a country is almost identical, the growth of population would be called
(1) Rapid growth
(2) Slow growth
(3) Zero growth
(4) Negative growth

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	23	3	
2.	24	1	
3.	26	3	

June-2015, Paper-II

1. Who is regarded as the father of Human Geography?
(1) Ratzel
(2) Blache
(3) Trewartha
(4) Vallaux

2. Which one of the following states recorded the lowest decadal growth rate of population according to the 2011 census?
(1) Arunachal Pradesh
(2) Madhya Pradesh
(3) Punjab
(4) Nagaland

3. According to 2011 census, which state recorded the highest child sex-ratio (0 - 6 years)?
(1) Manipur
(2) Mizoram
(3) Meghalaya
(4) Arunachal Pradesh

4. Out of total population of 121 crore, what was the level of urbanisation in 2011 census?
(1) 33.16%
(2) 32.16%
(3) 30.16%
(4) 31.16%

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	16	3	
2.	21	4	
3.	22	4	
4.	23	4	

June-2015, Paper-III

1. Which one of the following states in India has the lowest population density in the latest census?

(1) Arunachal Pradesh
(2) Jammu and Kashmir
(3) Sikkim
(4) Mizoram

2. Which of the following stages of demographic transition indicate the state of under development?

(1) High stationary stage
(2) Early expanding stage
(3) Late expanding stage
(4) Low stationary stage

3. Which one of the following districts in India has recorded the highest sex ratio in 2011?

(1) Mahe (Pondicherry)
(2) Almora (Uttarakhand)
(3) Alwar (Rajasthan)
(4) Thanjavur (Tamil Nadu)

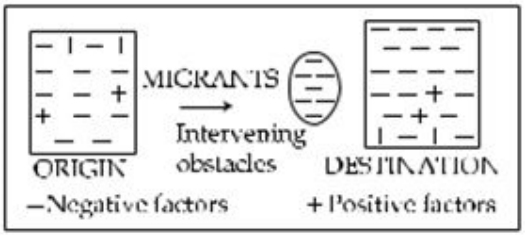
4. Which one of the following density is calculated using following formula : $ED5 \frac{NK}{}$, where SKN is the number of inhabitants, K is per capita quantity of requirement, S is area in square kilometers, and K' is the quantity of resources produced per km^2.

(1) Arithmetic
(2) Agricultural
(3) Physiological
(4) Economic

5. Which of the concept relates population size to the land area with a view to assess pressure of population upon the resources of the area?

(1) Population Growth Rate
(2) Agriculture Density
(3) Population Density
(4) Physiological Density

6. Which one of the following is the propounder of the shown model?



(1) Zelinsky's Mobility Model
(2) Rely's Model of Migration
(3) Gosal Model of Migration
(4) Lee's Model of Migration

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	32	1	
2.	33	3	
3.	34	1	
4.	35	1	
5.	37	3	
6.	52	4	

December-2015, Paper-II

1. The total world population was 500 million in the year:
(1) 1550
(2) 1650
(3) 1750
(4) 1850

2. The 'Mobility Transition Model' of migration was given by:
(1) Clark, W.A.V.
(2) Lee, E
(3) Ravenstein
(4) Zelinsky, W

3. Which of the following group of states of India at current prices recorded Lowest Growth Rate during 2005-2014?
(1) Tamil Nadu, Telangana, Karnataka, Kerala and Odisha
(2) Bihar, Uttar Pradesh, Madhya Pradesh, Jharkhand and West Bengal
(3) Assam, Manipur, Jammu and Kashmir, Arunachal Pradesh and Odisha
(4) Assam, Meghalaya, Manipur, Gujarat and Bihar

4. Which of the states have gross Domestic Product share greater than area but less than the population share (2013-2014)?
(1) Maharashtra, Tamil Nadu and Uttar Pradesh
(2) Punjab, Rajasthan and Haryana
(3) Uttar Pradesh, Bihar and west Bengal
(4) Madhya Pradesh, Jharkhand and Chhattisgarh

5. Which of the following is a major immigrating state of India?
(1) Rajasthan
(2) Uttar Pradesh
(3) Bihar
(4) Maharashtra

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	20	2	
2.	21	4	
3.	38	3	
4.	39	3	
5.	42	4	

Sub Unit – 2:

Rural Settlements

.....

5.2.1 Settlement Geography:

Settlement geography is a branch of human geography that investigates the earth's surface's part settled by humans.

5.2.2 Rural Settlements:

Rural house is an index of the environment.

Site, situation and Location:

Site and Situation. The location and growth of a settlement depended upon its site and situation. The site was the actual place where people decided to locate their settlement. The growth of that settlement then depended upon its situation in relation to accessibility and availability of natural resources.

5.2.2.1 Types:

1. Rectangular
2. Linear
3. Triangular
4. Star like
5. Circular
6. Nebular
7. Planned etc.

5.2.2.2 Patterns:

1. Compact or Nucleated
2. Linear settlement
3. Scattered or Dispersed settlement

5.2.3 Contemporary Problems of Rural Settlements:

1. rural-urban migration.
2. Land use changes.
3. Land acquisition and transactions.
4. Unemployment.
5. Traditional lifestyle. Etc.

Previous Year Question

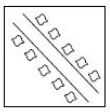
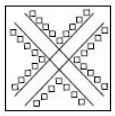
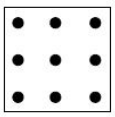
July-2018, Paper-III

1. Match **List - I** with **List - II** and select the correct answer from the code given below:

List – I (Term)	**List - II (Definition)**
(a) Site of human settlements	(i) Movement due to opportunities of employment
(b) Situation of human settlements	(ii) The physical and cultural characteristics and attributes of a place
(c) Pull factor in Migration	(iii) The relative location with particular reference to the significance to a place
(d) Migration field	(iv) Area that dominates a local in and out migration pattern

Code :	**(a)**	**(b)**	**(c)**	**(d)**
(1)	(i)	(iv)	(ii)	(iii)
(2)	(ii)	(iii)	(i)	(iv)
(3)	(iii)	(ii)	(iv)	(i)
(4)	(iv)	(ii)	(i)	(iii)

2. Match **List - I** with **List - II** and select correct answer from the code given below:

List - I (Settlement Alignment)	**List - II (Settlement Pattern)**
(a) 	(i) Uniform
(b) 	(ii) Star Shaped
(c) 	(iii) Linear
(d) 	(iv) Cluster

Code :	**(a)**	**(b)**	**(c)**	**(d)**
(1)	(ii)	(iii)	(iv)	(i)
(2)	(iii)	(iv)	(ii)	(i)
(3)	(i)	(ii)	(iii)	(iv)
(4)	(iv)	(iii)	(ii)	(i)

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	37	4	5.1.8, 5.2.1
2.	47	4	5.2.2

Jan-2017, Paper-III

1. Match List-I with List-II and select the correct answer from the codes given below:

List-I (Distribution of Settlement)		**List-II (Pattern)**
I.		A. Perfect Uniform
II.		B. Cluster
III.		C. Random
IV.		D. Uniform

Codes:

	(I)	**(II)**	**(III)**	**(IV)**
(1)	B	C	A	D
(2)	B	C	D	A
(3)	B	A	D	C
(4)	A	B	C	D

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	35	2	5.2.2

July-2018, Paper-II

1. Rural house is an index of the
(1) Environment
(2) Racial Element
(3) Fashion and Style
(4) Modern Architectural Design

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	23	A	5.2.2

July-2016, Paper-III

1. Match **List – I** with **List – II** and select the correct answer using the codes given below:

List – I (Type of Village)	**List – II (Definitions)**
I. Green village	A. Villages which have developed at an intersection of roads
II. Cruciform village	B. With houses and church clustered around a small village green
III. Dispersed village	C. Found along routeways or where conditions have impeded a lateral developmentof the settlement
IV. Street village	D. Isolated farms and dwellings are scattered irregularly throughout countryside

Codes:	**(I)**	**(II)**	**(III)**	**(IV)**
(1)	C	B	A	D
(2)	B	C	D	A
(3)	A	B	C	D
(4)	B	A	D	C

2. Which one of the following cities is a permanent settlement characterized by a compact, high-density arrangement of building which lacks any order or plan?
(1) World Cities
(2) Pre-Industrial Cities
(3) Shenty Towns
(4) Cities of Peasants

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	35	4	5.2.2
2.	37	2	5.3

December-2015, Paper-III

1. The 'Triangular Pattern' of rural settlements develop generally:
(1) at the bank of the straight rivers
(2) at the confluence of two rivers
(3) between two kills
(4) at the confluence of two rivers and one kill

2. Wkich one of the following forces has expansionary momentum emanating from the centres of economic expansion to other regions?
(1) Centripetal
(2) Centrifugal
(3) Gravitational
(4) Pull

3. Match **List - I** with **List - II** and select the correct answer from the codes given below:

List - I (Zones)	**List - II (Characteristics)**
(a) Non Ecumene	(i) Very Scattered Economic Activities
(b) Intensive Ecumene	(ii) Rural Occupancy ; extensive type of agriculture
(c) Sporadic Ecumene	(iii Empty space witk no foreseeable development
(d) Extensive Ecumene	(iv) Urban Occupancy and industrial patterns, intensive agriculture

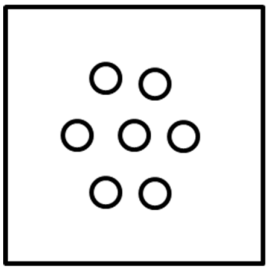
Codes :	**(a)**	**(b)**	**(c)**	**(d)**
(1)	(ii)	(iv)	(iii)	(i)
(2)	(i)	(ii)	(iv)	(iii)
(3)	(iii)	(iv)	(i)	(ii)
(4)	(iv)	(i)	(ii)	(iii)

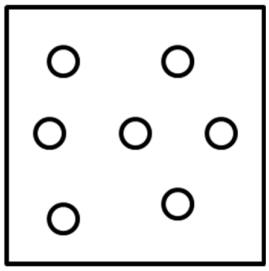
Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	35	1	5.2.2
2.	53	2	5.3.2.1
3.	56	3	5.1.2

December-2015, Paper-II

1. Which one of the following codes is correct to explain the base of given distribution of settlements of an area?





Codes:

(1) Density
(2) Spacing
(3) Shaping
(4) Size

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	23	D	5.2.2

Sub Unit – 3:

Urban and Urbanization Related Issues

.....

5.3.1 Theories of Origin of Towns:

5.3.1.1 Gordon Childe:

G. Childe wrote the book "The Urban Revolution" in1950. He describes urban revolution by some phases- 1) Paleolithic phase, 2) Neolithic Revolution and 3) urban Revolution. He establish his theory by some stages also-

1. small group depends on plants and animals
2. Domestication
3. Agriculture
4. Expansion of farming(Neolithic)
5. Migration Trade
6. Complex social system and politics
7. Rise and fall of the city.

5.3.1.2 Henri Pirenne:

H. Pirenne wrote books -1) Social history of Capitalism (1914), 2) Social history of Medieval Cities (1922). He describe about historical evolution of European cities. He discussed about rise and fall of Cities of Europe as well as rise and fall of economy the cities.

5.3.1.3 Lewis Mumford:

L. Mumford wrote a book "City in History" in 1962. His concept of urban evolution is basically the concept of urban impulsion. His concept is divided into two broad categories-

A) Social changes in Lifestyle:

1. Ecotechnique
2. Paliotechnique
3. Neotechnique
4. Biotechnique

B) Cultural Changes:

1. Eopolis
2. Polis
3. Metropolis
4. Megalopolis
5. Tyrannopolis
6. Necropolis

5.3.2 Characteristics and Processes of Urbanization in Developed and Developing Countries:

5.3.2.1 Factors of urban growth:

Some of the main factors that have led to grow of cities are:

(i) Surplus Resources

(ii) Industrialization and Commercialization

(iii) Development of Transport and Communication
(iv) Economic Pull of the City
(v) Educational and Recreational Facilities

The Census of India has classified towns into six categories on the basis of their number of population-

1. Class I towns with more than 1, 00,000 population,
2. Class II towns with 50,000 to 99,999 population,
3. Class III towns with 20,000 to 49,999 population,
4. Class IV towns with 10,000 to 19,999 population,
5. Class V towns with 5000 to 9,999 population
6. Class VI towns with less than 5,000 population.

Urban Agglomeration (UA): An urban agglomeration is a continuous urban spread constituting a town and its adjoining outgrowths (OGs), or two or more physically contiguous towns together with or without outgrowths of such towns. An Urban Agglomeration must consist of at least a statutory town and its total population (i.e. all the constituents put together) should not be less than 20,000 as per the 2001 Census.

	Type of Towns/UAs/OGs	Number of towns	
		2011 Census	2001 Census
1	Statutory Towns	4,041	3,799
2	Census Towns	3,894	1,362
3	Urban Agglomerations	475	384
4	Out Growths	981	962

In varying local conditions, there were similar other combinations which have been treated as urban agglomerations satisfying the basic condition of contiguity.

5.3.3 Urban Systems:

5.3.3.1 Primate city:

In 1939 M. Jefferson introduced the concept of primate city. The term "**primate city**" is used to refer to a **city** that functions as by far the largest **city** in the country it inhabits. It may have a population between a third and a half of that of the whole country. Classic **examples** of **primate cities** include Bangkok in Thailand and Seoul in South Korea.

5.3.3.2 Rank size rule:

The best known effort to create such a hierarchy is the **rank-size rule** developed by G.K. **Zipf** in 1949. At its most basic, the **Zipf's** formula is as follows: Pr=P1/P2 n where Pr= the population of the rth city, P1 = the population of the largest city, and r = the **size rank** of the rth city in the set.

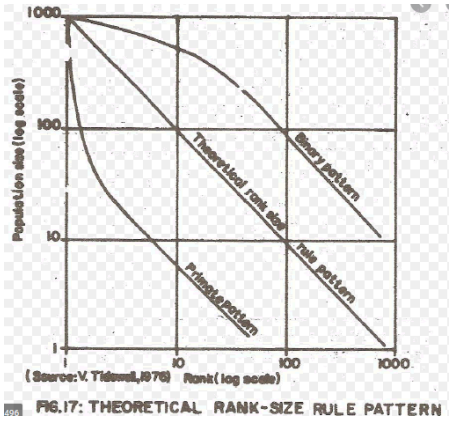


FIG.17: THEORETICAL RANK-SIZE RULE PATTERN

Reilly's law of retail gravitation:

According to **Reilly's "law**," customers are willing to travel longer distances to larger retail centers given the higher attraction they present to customers. In Reilly's formulation, the attractiveness of the retail center becomes the analogy for size (mass) in the physical law of gravity. $\frac{dA}{dB} = \sqrt{\frac{PA}{PB}}$

Where dA is the distance of the point of indifference from A, dB is its distance from B, and $\frac{PA}{PB}$ is the relative size of the two centres. If the customer is on the line connecting A and B, then if D is the distance between the centres, the point of indifference as measured from A on the line is $d = \frac{D}{1+\sqrt{PB-PA}}$

As expected, for centres of the same size, $d=D/2$, and if A is larger than B, the point of indifference is closer to B. As the size of A becomes very large with respect to B, d tends to D, meaning the customer will always prefer the larger centre unless they're very close to the smaller one.

5.3.4 Central Place Theories

5.3.4.1 Christaller's Theory:

Central place theory is a geographical theory that seeks to explain the number, size and location of human settlements in a residential system. It was introduced in 1933 to explain the spatial distribution of cities across the landscape.

Christaller based his theory on a set of following assumptions;

1.There is an isotropic plane(flat surface)on which natural resources are evenly distributed.

2.Population is evenly distributed on plane.

3.All consumers have similar purchasing power and same taste or demand for the goods and services.

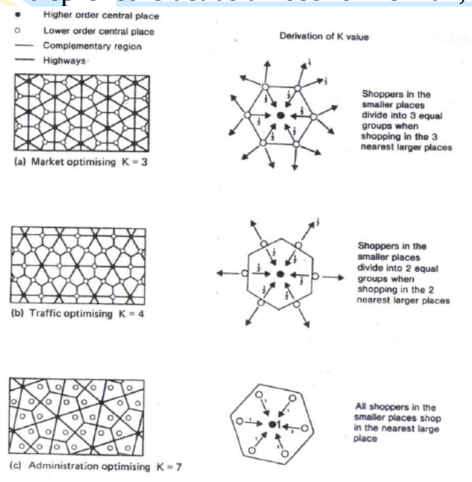
4.There is no excess profit (perfect competition).
5.There is a single means of transport and transport costs rises proportionately with distance.
6.Consumers visit the nearest central place as this minimises the distancetravelled.
7.The entrepreneurs are economic men with aim on profit maximisation. As people will prefer to visit the nearest centre, suppliers will locate themselves as far away from each other as possible to maximise their market areas.
8.The central place hierarchy acts as a closed system.

5.3.4.2 Losch's Theory:

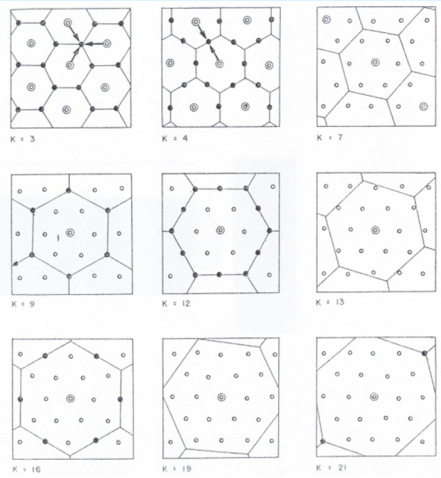
In 1954, German economist August **Losch** modified Christaller's **central place theory** because he believed it was too rigid. He thought that Christaller's model led to patterns where the distribution of goods and the accumulation of profits were based entirely on location.

He based theory on set of assumptions like

1. An isotropic surface
2. Constant supply of goods and services
3. Population is evenly distributed
4. Demand decreases with an increase in price. If the price increase is the result of an increase in the transport costs, demand would decrease with the distance from a production centre, the demand curve would be cone shaped and the market area circular.
5. Entrepreneurs act as an economic man, their main aim being profit maximization.



Different hexagonal structure of K value by Christaller



Different K values introduced by Losch

Christaller's theory attempts to realise retail business and services better whereby, Loschian model sought to explain the spatial distribution of market based on manufacturing.

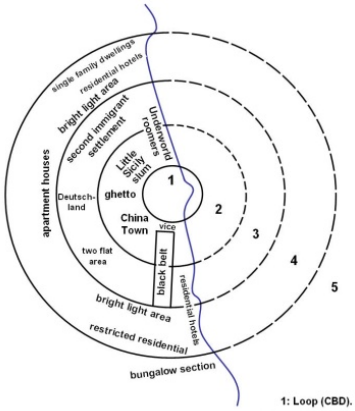
5.3.5 Internal Structure of the City, Models of Urban Land Use:

5.3.5.1 Burgess:

The **concentric zone model**, also known as the **Burgess model** or the **CCD model**, is one of the earliest theoretical models to explain urban social structures. It was created by E. Burgess in 1925. It is based on the study of human ecology.

The zones identified are:

1. The center with the central business district,
2. The transition zone of mixed residential and commercial uses or the zone of transition,
3. Working class residential homes (inner suburbs), in later decades called inner city or zone of independent working men's home,
4. Better quality middle-class homes (outer suburbs) or zone of better housing,
5. Commuter zone.

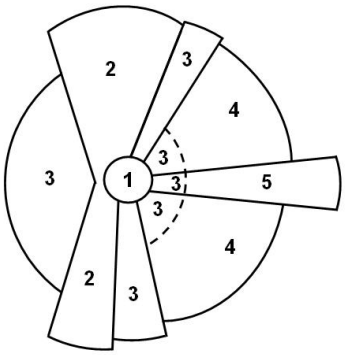


1: Loop (CBD).
2. Transition zone.
3. Workingmen's homes.
4. Better residences.
5. Commuter's zone.

5.3.5.2 Hoyt:

The **sector model**, also known as the **Hoyt model**, is a model of urban land use proposed in 1939 by land economist Homer Hoyt. It is a modification of the concentric zone model of city development. The benefits of the application of this model include the fact it allows for an outward progression of growth. As with all simple models of such complex phenomena, its validity is limited.

Hoyt's Sector City Model



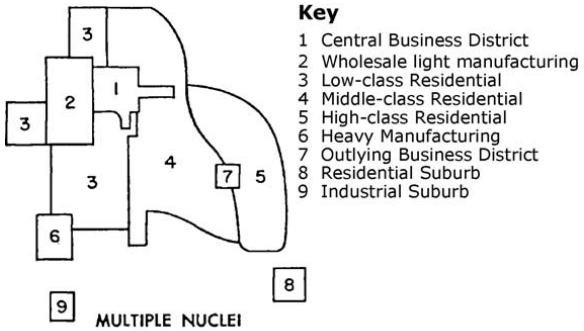
1 CBD
2 Wholesale, light manufacturing
3 Low-class residential
4 Medium-class residential
5 High-class residential

5.3.5.3 Harris and Ullman:

The **multiple nuclei model** is an economical model created by Chauncy Harris and Edward Ullman in the 1945 article "The Nature of Cities"

The model describes the layout of a city, based on Chicago. It says that even though a city may have begun with a central business district, or CBD, other smaller CBDs develop on the outskirts of the city near the more valuable housing areas to allow shorter commutes from the outskirts of the city. This creates nodes or nuclei in other parts of the city besides the CBD thus the name multiple nuclei model. Their aim was to produce a more realistic, if more complicated, model. Their main goals in this were to:

1. Move away from the concentric zone model
2. To better reflect the complex nature of urban areas, especially those of larger size



Source: Harris & Ullman (1945)

The model assumes that:

1. Land is not flat in all areas
2. Even Distribution of Resources
3. Even Distribution of people in Residential areas
4. Even Transportation Costs

5.3.6 Concepts of Megacities:

A **megacity** is a very large city metropolitan area, typically with a population of more than 10 million people. Precise definitions vary: the United Nations Department of Economic and Social Affairs in its 2014 "World Urbanization Prospects" report counted urban agglomerations having over 10 million inhabitants.

5.3.7 Global Cities and Edge Cities:

A **global city**, also called a **power city**, **world city**, **alpha city** or **world center**, is a city which is a primary node in the global economic network. The concept comes from geography and urban studies, and the idea that globalization is created, facilitated, and enacted in strategic geographic locales according to a hierarchy of importance to the operation of the global system of finance and trade.

Edge city is a term that originated in the United States for a concentration of business, shopping, and entertainment outside a traditional downtown or central business district, in what had previously been a suburban residential or rural area.

5.3.8 Changing Urban Forms :

Urban form is the physical characteristics that make up built-up areas, including the. shape, size, density and configuration of settlements. It can be considered at different. scales: from regional, to **urban**, neighbourhood, 'block' and street.

5.3.8.1 Peri-urban areas:

Peri-urban areas (also called rurban space, outskirts or the hinterland) are defined by the structure resulting from the process of **peri**-urbanisation. It can be described as the landscape interface between town and country, or also as the rural—**urban** transition zone where **urban** and rural uses mix and often clash.

5.3.8.2 Rural-urban fringe:

The rural–urban fringe, also known as the outskirts, rurban, peri-urban or the urban hinterland, can be described as the "landscape interface between town and country", or also as the transition zone where urban and rural uses mix and often clash.

5.3.8.3 Suburban:

A **suburb** is a mixed-use or residential area, existing either as part of a city or urban area or as a separate residential community within commuting distance of a city. **Suburbs** tend to proliferate around cities that have an abundance of adjacent flat land.

5.3.8.4 Satellite towns:

Satellite cities or satellite towns are smaller municipalities that are adjacent to a major city which is the core of a metropolitan area.

5.3.9 Social Segregation in the City:

Social segregation happens when people of varying socioeconomic groups in a **city** have little opportunity to be exposed to people different than them.

Such things as exclusionary zoning, redlining by lenders and insurers, racial steering by real estate brokers, and discrimination by property owners are rightfully pointed to as some of very important **causes** of urban **spatial segregation**.

5.3.10 Urban Social Area Analysis:

Social area analysis was one of the techniques evolved to study diversity in income, status and ethnicity and mobility in **urban** population. This technique was a part of the methodological developments under the rubric of ecological school. **Social area analysis** is used more by **urban** geographers than sociologists.

5.3.11 Manifestation of Poverty in the City: (slums, informal sector growth, crime and social exclusion)

1. A slum is a highly populated urban residential area consisting mostly of closely packed, decrepit housing units in a situation of deteriorated or incomplete infrastructure, inhabited primarily by impoverished persons. It is a part of the city where the housing quality is low quality and living conditions are poor.

2. The informal sector refers to those workers who are self employed, or who work for those who are self employed. People who earn a living through self employment in most cases are not on payrolls, and thus are not taxed. Many informal workers do their businesses in unprotected and unsecured places i.e. rickshowpullers, toto and auto driver, swiper, daily shop worker etc.

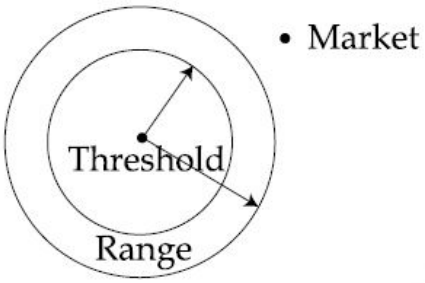
3. Social exclusion. ... It involves the lack or denial of resources, rights, goods and services, and the inability to participate in the normal relationships and activities, available to the majority of people in a society, whether in economic, social, cultural or political arenas.

Previous Year Question

July-2018, Paper-II

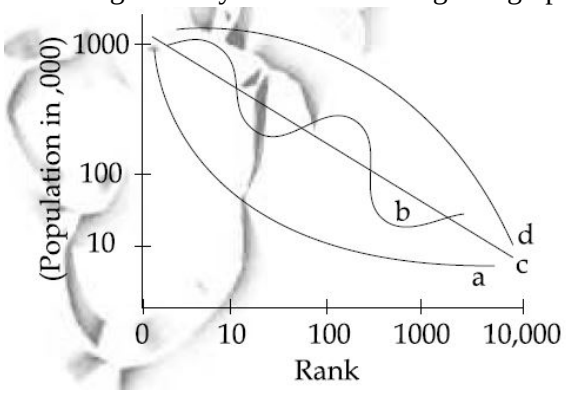
1. Which one of the following statements correctly depicts the threshold according to Central Place Model?
(1) Point at which consumer movement is minimum.
(2) Distance far which consumer will travel for a service.
(3) Minimum number of people needed to support a service.
(4) Economic base of a service centre.

2. Which one of the following Models is explained by the given figure below:



(1) Weber's Model
(2) Central place Model
(3) Von Thunen Model
(4) Gravity Model

3. Which one of the following code is correctly depicting the pattern of distribution of population among cities by 'd' curve in the given graph?



Code:
(1) Primate
(2) Slepped order
(3) Binary
(4) Rank Size Rule

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	43	3	5.3.4
2.	45	2	5.3.4
3.	46	3	5.3.2

November-2017, Paper-III

1. Which one of the following depicts correct statement of Population Threshold for any service?

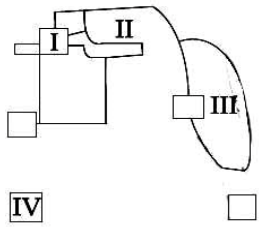
(1) Maximum distance that people can travel to use a service
(2) Minimum distance required for opening a service
(3) Minimum population size required for a service
(4) Maximum population size required for a service

2. Match **List - I** with the **List - II** and select the correct answer from the code given below:

List - I (Term)	**List - II (Definition)**
(a) Central City	(i) Continuous built-up landscape with high density of buildings with no reference to political boundary
(b) Network City	(ii) Areas outside city with urban characteristics
(c) Urban Influence Zone	(iii) Urban area contained within the official boundaries of the main city around which suburb develops
(d) Urbanized Area	(iv) Two or more independent but complementary cities having high speed transport corridors

Code:	**(a)**	**(b)**	**(c)**	**(d)**
(1)	(i)	(ii)	(iv)	(iii)
(2)	(iii)	(iv)	(ii)	(i)
(3)	(ii)	(iv)	(iii)	(i)
(4)	(iv)	(ii)	(i)	(iii)

3. Locate the following places in Multiple Nuclei theory of urban structure in the figure and match it with the list given below:



List :

(a) Wholesale and Light Manufacturing
(b) High class residential
(c) Medium class residential
(d) Industrial Suburb

Code:	**(I)**	**(II)**	**(III)**	**(IV)**
(1)	(b)	(c)	(a)	(d)
(2)	(a)	(b)	(c)	(d)
(3)	(a)	(c)	(b)	(d)
(4)	(c)	(d)	(a)	(b)

4. Match **List - I** with the **List - II** and select the correct answer from the code given below:

List – I (Number of likely settlements of different orders)	**List - II (K values)**
(a) 8, 32, 128	(i) K7
(b) 4, 13, 40	(ii) K13
(c) 3, 20, 141	(iii) K3
(d) 2, 27, 351	(iv) K4

Code:	**(a)**	**(b)**	**(c)**	**(d)**
(1)	(iv)	(iii)	(ii)	(i)
(2)	(iv)	(ii)	(iii)	(i)
(3)	(i)	(iii)	(ii)	(iv)
(4)	(iv)	(iii)	(i)	(ii)

5. Given below are two statements, one labelled as **Assertion (A)** and the other labelled as **Reason (R).** Select your answer from the code given below:

Assertion (A) : Metros are emerging as efficient, viable and alternate means of transportation in metropolitan cities in our country.

Reason (R) : Old and unplanned cities with rapidly growing population are burdened with multi-mode of transportation in India.

Code:

(1) Both (A) and (R) are true and (R) is the correct explanation of (A).
(2) Both (A) and (R) are true, but (R) is not a correct explanation of (A)
(3) (A) is true, but (R) is false.
(4) (A) is false but (R) is true.

6. Given below are two statements, one labelled as **Assertion (A)** and the other labelled as **Reason (R).** Select your answer from the code given below:

Assertion (A): Urban agglomerations and metropolitan cities are growing rapidly in India.

Reason (R): Satellite towns are not sufficiently and significantly developed to release the pressure of urban population.

Code:

(1) Both (A) and (R) are true and (R) is the correct explanation of (A).
(2) Both (A) and (R) are true, but (R) is not a correct explanation of (A).
(3) (A) is true, but (R) is false.
(4) (A) is false, but (R) is true.

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	36	3	5.3.4.2
2.	38	2	5.3.5
3.	39	3	5.3.5.3
4.	42	4	5.3.4.1
5.	55	2	5.3.6
6.	58	2	5.3.7

November-2017, Paper-II

1. Which of the following characteristics are required for any area to be called an urban area according to census of India
(a) Any place with municipality, corporation, cantonment or notified town area
(b) At least 70% of male working population engaged in non-agricultural activities
(c) Minimum population of 5000 persons
(d) Density of population of 100 persons per square kilometer

Code:
(1) (a) and (b)
(2) (a), (b) and (c)
(3) (a) and (c)
(4) (a), (b), (c), (d)

2. Which one of the following is correct statement for Patna city in Bihar and Kolkata city in West Bengal?
(1) Edge City
(2) World City
(3) Post Industrial City
(4) Primate City

3. Which one of the following principles denotes K-4 of Christaller's Model of central places?
(1) Market
(2) Administrative
(3) Transport
(4) Economic

4. Which one of the following does not belong to the Exploitive Model of Urban Structure propounded by William Bunge?
(1) City of Superfluity
(2) City of Death
(3) Central Business District
(4) City of Need

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	22	3	5.3.2
2.	24	4	5.3.3.1
3.	25	3	5.3.4.1
4.	40	3	5.3.5.1

Jun-2014, Paper-III

1. A process of population deconcentration away from large urbansettlements to non-metropolitan areas is termed as:
(1) Urban dispersal
(2) Urban sprawl
(3) Counter-urbanization
(4) Sub-urbanization

2. In the acceleration stage of urbanization the urban population constitutes:
(1) More than 70% of the total population of the state
(2) 25% to 70%
(3) 10% to 25%
(4) Less than 10%

3. The concept of primate city was advanced by
(1) Jefferson
(2) Zift
(3) Mumford
(4) Sjoberg

4. Given below are two statements, one laballed as **Assertion (A)** and the other labelled as **Reason (R).** Select your answer from the codes given below:
Assertion (A): Losch's model is less restrictive than Christoller's.
Reason (R): Losch treated each function as having a separate range, threshold and hexagonal hinterland.

Codes:
(1) Both (A) and (R) are true and (R) is the correct explanations of (A).
(2) Both (A) and (R) are true but (R) is not the correct explanation of (A).
(3) (A) is true but (R) is false.
(4) (A) is false but (R) is true.

5. Which one of the following pairs is not correctly matched?

Scholar	**Concept**
(1) E.W. Burgess	– Concept of megalopolis
(2) W. J. Reily	– Law of retail gravitation
(3) G. K. Ziff	– Rank-size rule
(4) Patrick Geddes	– Concept of conurbation

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	31	1	
2.	32	3	
3.	33	1	5.3.3.1
4.	34	2	5.3.4.2
5.	38	1	5.3.5.1

Jan-2017, Paper-III

1. Given below are two statements, one labelled as Assertion (A) and the other labelled as Reason (R). Select your answer from the codes given below:
Assertion (A): Urbanization is a defining phenomenon of this century and the developing countries are at the focus of this transformation.
Reason (R): The urban shift has happened in the last few decades largely due to rapid growth of mega cities in the developing countries.
Codes:
(1) Both (A) and (R) are true and (R) is the correct explanation of (A).
(2) Both (A) and (R) are true, but (R) is not the correct explanation of (A).
(3) (A) is true, but (R) is false.
(4) (A) is false, but (R) is true.

2. Which one of the following models is based on the study of human ecology?
(1) Burges and Park's concentric zone model
(2) Weber's location model
(3) Haggerstrand's innovation diffusion model
(4) Zelinsky's mobility transition model

3. Match List-I with List-II and select the correct answer from the codes given below:

List-I (Geographers)	**List-II (Theories/Model/Concepts)**
I. J. Gottmen	A. Concentric zone theory
II. E. Burgess	B. Primate city
III. M. Jefferson	C. Multiple Nuclei model
IV. C. Harris and E. Ullman	D. Megalopolis

Codes:	**(I)**	**(II)**	**(III)**	**(IV)**
(1)	A	D	C	B
(2)	B	A	D	C
(3)	C	B	A	D
(4)	D	A	B	C

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	41	3	
2.	33	1	5.3.5.1
3.	54	4	5.3.5.1,5.3.5.2,5.3.3.1,5.3.6

JULY-2017, Paper-II

1. The stages of inception in the dynamics of urban growth refers to
(1) The factor which gives rise to a city in a particular place.
(2) The process through which separate functional districts are carved out
(3) The outward, often radial, movement of activities from the centre.
(4) The pattern of forcing activities out of an area.

2. What are the three bases for spatial interaction as described in Edward Ullman's model?
(1) Complementarity, Transferability and intervening opportunity
(2) Complementarity, Commodity specific relationship and surplus-deficit relationship.
(3) Complimentarity, convenience and residential neighbourhood.
(4) Human behaviour, convenience and transferability

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	24	1	5.3.8
2.	30	1	5.3.5.3

December-2014, Paper-III

1. Which one of the following is the correct sequence of stages of urban development as postulated by Lewis Mumford?

i. Polis ii. Ecopolis
iii. Megalopolis iv. Metropolis

(1) ii, i, iv, iii
(2) i, ii, iii, iv
(3) iii, iv, ii, I
(4) iv, iii, i, ii

2. What is the trend of Urbanization in India?

(1) Urban population is rising slowly.
(2) Urban population is rising rapidly.
(3) Growth rate of urban population is lower than total.
(4) Urban population is falling.

3. Both Ulanbator in Mongolia and Lagos in Nigeria are example of

(1) Primate cities
(2) World cities
(3) Enclaves
(4) Edge cities

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	33	2	5.3.1.3
2.	34	2	5.3.6, 5.3.7
3.	36	1	5.3.3.1

July-2016, paper-II

1. Among the following theories, which one is concerned with the discovery of order in the spacing of population clusters and settlements?
(1) Sector theory
(2) Multiple Nuclei
(3) Concentric zone
(4) Central Place

2. Two towns with population of 40,000 and 5,000 respectively are located 18 kilometres away. At what distance the breaking point will lie from the smaller town?
(1) 2.9 km
(2) 3.9 km
(3) 5.9 km
(4) 4.9 km

3. Which one of the following methods is most suitable for delineation of hinterland of central places?
(1) Thiesen's polygon
(2) Reiley's breaking point
(3) Nearest neighbour
(4) People's choice

4. Which one of the following methods is most appropriate for raising centrality of central places?
(1) Raising Agricultural Productivity
(2) Establishing Small Scale Industries
(3) Strengthening Central Function
(4) Promoting export-based activities

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	20	4	5.3.4.1
2.	24	4	5.3.3.2
3.	37	4	5.3.4
4.	38	3	5.3.4

July-2016, Paper-II

1. Match **List – I** with **List – II** and select the correct answer using the codes given below:

List – I (Definitions)	**List – II (Concepts)**
I. Continuum of Urban Sizes	A. Groups of towns of decreasing but approximately equal size and importance
II. Losch Model	B. Relationship between the largest city and second largest city
III. Urban Hierarchy	C. Various hexagonal systems operate at different levels and are superimposed on each other
IV. Primate City	D. Gradual and continuous decrease of urban population size with descending rank

Codes:	**(I)**	**(II)**	**(III)**	**(IV)**
(1)	D	C	A	B
(2)	B	A	C	D
(3)	C	B	D	A
(4)	A	D	B	C

2. Which one of the following terms denotes the net population increase of towns and cities?

(1) Urban Growth
(2) Population Growth
(3) Urbanisation
(4) Urban Area

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	21	1	5.3.4.1, 5.3.3.1, 5.3.4.2
2.	35	1	5.3.2.1

July -2016, Paper-III

1. Given below are two statements, one labelled as Assertion (A) and other labelled as Reason (R). Select your answer from the codes given below:
Assertion (A) : Losch's model is less restrictive than Christallers's model
Reason (R) : Losch treated each section as having separate range, threshold and hexagonal hinterland

Codes:
(1) Both (A) and (R) are true and (R) is the correct explanation of (A).
(2) Both (A) and (R) are true, but (R) is not the correct explanation of (A).
(3) (A) is true, but (R) is false.
(4) (A) is false, but (R) is true.

2. Which one of the following principles explains importance of transport costs as it maximises the number of central places on straight line routes?
(1) Traffic
(2) Administrative
(3) Marketing
(4) Service

3. In which year, M. Jefferson examined the size relationship between the primate city and next largest cities in a study entitled 'The Law of the Primate City'?
(1) 1938
(2) 1937
(3) 1936
(4) 1939

4. Match **List – I** with **List – II** and select the correct answer using the codes given below:

List – I (Type of Towns)	**List – II (Cities)**
I. Port Towns	A. Singhbhum, Kyonjhar and Rewa
II. Industrial Towns	B. Agra, Jaipur and Madurai
III. Mineral Resource based towns	C. Bombay, Calcutta and Madras
IV. Historic towns	D. Bhilai, Rourkela and Jamshedpur

Codes:	(I)	(II)	(III)	(IV)
(1)	B	A	C	D
(2)	D	B	A	C
(3)	A	C	D	B
(4)	C	D	A	B

5. Given below are two statements, one labelled as Assertion (A) and other labelled as Reason (R). Select your answer from the codes given below:
Assertion (A): Metropolitan cities in general are flanked by satellite towns.
Reason (R): The towns have an important function to release the pressure of the city.

Codes:
(1) Both (A) and (R) are true and (R) is the correct explanation of (A).
(2) Both (A) and (R) are true, but (R) is not the correct explanation of (A).
(3) (A) is true, but (R) is false.
(4) (A) is false, but (R) is true.

6. Match **List-I** with **List-II** and select the correct answer using codes given below.

List – I (Zones according to Burgers)	**List – II (Descriptions)**
I. 4	A. CBD
II. 2	B. Zone of Workingmen's homes
III. 3	C. Residential zones
IV. 1	D. Zone in Transition

Codes:	**(I)**	**(II)**	**(III)**	**(IV)**
(1)	A	B	D	C
(2)	C	A	B	D
(3)	C	D	B	A
(4)	D	C	A	B

7. Given below are two statements, one is labelled as Assertion (A) and other labelled as Reason (R).Select your answer from the codes given below.
Assertion (A) : Urbanization is a defining phenomenon of the century and the developing countries are at the focus of this transformation.
Reason (R) : The urban shift has happened in the last few decades largely due to rapid mega cities growth in the developing countries.

Codes:
(1) Both (A) and (R) are true and (R) is the correct explanation of (A).
(2) Both (A) and (R) are true, but (R) is not the correct explanation of (A).
(3) (A) is true, but (R) is false.
(4) (A) is false, but (R) is true.

8. Which one of the following authors stated 'if all the urban settlements in an area are ranked in
(1) P. Lloyd
(2) L. Mumford
(3) W. Scott
(4) G.K. Zipf

9. Which one of the following authors defined three phases of city development, i.e., the preindustrial phase, industrial phase and metropolitan phase?

(1) K.C. Zachariah
(2) E.E. Lampard
(3) H.H. Golden
(4) P.M. Houser

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	36	1	5.3.4.1
2.	37	1	5.3.4.1
3.	39	4	5.3.3.1
4.	60	4	
5.	61	1	5.3.6
6.	35	3	5.3.5.1
7.	36	3	5.3.6
8.	38	4	5.3.3.2
9.	55	2	5.3.1.3

December-2015, Paper-III

1. Wkich one of the concepts describes the absence of cities and towns within a radius of 75 km from a large city?

(1) Urban Clusters
(2) Urban Dispersals
(3) Urban Agglomeration
(4) Urban Shadows

2. Wkich one of the following author's theory of primate cities focuses on the forces of agglomeration and cumulative effects of agglomeration in the growth of large cities?

(1) Walter Ckristaller
(2) G.K. Zipf
(3) Gotman
(4) Mark Jefferson

3. Match **List - I** with **List - II** and select the correct answer from the codes given below:

List – I	**List - II**
(a) Central Place Tkeory	(i) Land use pattern in large cities developed around a number of discrete centres ratker tkan a single centre
(b) Multiple Nuclei Tkeory	(ii) Position of tke breaking point between two towns
(c) The law of retail trade	(iii) Hexagonal service area gravitation
(d) Breaking point theory	(iv) Predict the proportion of retail trade the two towns will derive from a settlement lying between them

Codes:	**(a)**	**(b)**	**(c)**	**(d)**
(1)	I	IV	III	II
(2)	III	I	II	IV
(3)	III	I	IV	II
(4)	IV	II	III	I

4. Match **List - I** with **List - II** and select the correct answer from the codes given below:

	List - I (Zones)		**List - II (Definitions)**
(a)	Slum Zone	(i)	Lack in prestige and ckaracterised by low grade retail stores, warekouses and wkolesale trading premises and a kigk proportion of vacant property
(b)	Zone of Assimilation	(ii)	Extensive areas of low density kousing
(c)	Suburban Zone	(iii)	Extensive redevelopment and spread of skops, offices and kotels into former residential areas
(d)	Zone of Discard	(iv)	Residential belt of considerable density surrounding tke C.B.D

Code:	**(a)**	**(b)**	**(c)**	**(d)**
(1)	(iv)	(iii)	(ii)	(i)
(2)	(ii)	(i)	(iv)	(iii)
(3)	(i)	(iv)	(iii)	(ii)
(4)	(iii)	(ii)	(i)	(iv)

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	32	4	5.3.8
2.	51	4	5.3.3.1
3.	58	2	5.3.4, 5.3.5.3
4.	59	1	5.3.8, 5.3.9

December-2014, Paper-II

1. Which one of the following statements indicates the chief characteristics of the Policentric city?

(1) Circumferential urban beltway
(2) Replacing sub-urban to urban
(3) All roads lead to downtown
(4) Many downtowns

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	43	4	

January-2017, Paper-II

1. Which one of the following letters represent the total number of settlements of a certain order served by a central place of the next higher order?
(1) K
(2) J
(3) L
(4) F

2. The rule "size of population of nth ranking town in a region will be 1/nth of the largest city in terms of population" was given by
(1) M. Jafferson
(2) J. Gattman
(3) G.K. Ziph
(4) C.D. Harris and E.L. Ullman

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	22	1	5.3.4.1
2.	25	3	5.3.3.2

June-2015 Paper-III

1. The concept of the laws of 'primate city' was given by:
(1) E. Huntington
(2) E. C. Semple
(3) M. Jefferson
(4) W. Christaller

2. Which of the urban structure models labelled three areas: (1) the city of death, (2) the city of need and (3) the city of superfluity?
(1) Exploitive model of urban structure
(2) Multiple nuclei
(3) Sector model
(4) Social area analysis model

3. Match **List - I** with **List - II** and select the correct answer from the codes given below:

List - I (Concept)	**List - II (Definitions)**
(a) Urban growth	(i) relatively large and densely settled populations engaged primarily in non-agricultural economic pursuits
(b) Town group	(ii) net population increase of towns and cities
(c) Urban	(iii) proportionate increase of the urban population in relation to total population in a given country
(d) Urbanisation	(iv) a group of towns which adjoined one another so closely as to form a single inhabited urban locality

Codes:	**(a)**	**(b)**	**(c)**	**(d)**
(1)	(iv)	(i)	(iii)	(ii)
(2)	(ii)	(iv)	(i)	(iii)
(3)	(iii)	(ii)	(iv)	(i)
(4)	(i)	(iii)	(ii)	(iv)

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	25	3	5.3.3.1
2.	55	1	
3.	60	2	

December-2015 Paper-II

1. Which one of the following cities is known as the 'Mile City'?
(1) Seattle
(2) Phoenix
(3) Denever
(4) London

2. Which one of the following does not refer to 'Primate City'?
(1) Harare
(2) Rabat
(3) Windhoek
(4) Size

Answer with Reference Table

SL. NO.	QUESTION NO.	ANSWER	REFERENCE NO.
1.	22	C	
2.	24	B	5.3.3.1