[Syllabus, UNIT – IV: World Population: Factors – Distribution, Density and Growth - Language and Religion – Significance of Fertility and Mortality.]

Population is defined as the number of people living in an area at a particular time.

Over-population: is a situation whereby the population is considered too large for the available resources .

Under-population: is a situation where the population is less than the available resources of a country.

Optimum Population: is a situation where the number of people that can be supported is the same as the available resources.

Population Density: is defined as the number of persons per unit area of land or per square kilometer of land.

Population density: Total population Land Area Population Concepts

Birth rate: this is the number of live babies born per thousand of the population per year, also called natality rate.

Death rate: this is the number of death per thousand of the population per year, also called Mortality rate.

Natural increase: The difference between the birth rate and the death rate. (viii) Migration: the number of people moving in or out of a region. Population Concepts

Total Fertility Rate: the average number of children a women will have in her childbearing years.

Infant Mortality Rate : the number of deaths of children under the age of one per thousand live births. The rate ranges from as low as 3 (Singapore, Iceland) to as much as 150 (Sierra Leone, Afghanistan).

Life Expectancy: the average number of years a person is expected to live Population Concepts

The factors affecting distribution of population may broadly be grouped into the following major categories:
1. **Physical factors**
2. **Socio-economic factors**
3. **Demographic factors and**
4. **Political factors**

Physical Factors

affecting distribution of population Man makes the choice of moulding space according to his cultural values and hence, there are variations in habitations in response to environmental stimuli. He relates to the natural environment through settlements, which are physical embodiments of an ideal environment.

Climate is one of the most important natural conditions. It determines the nature of the flora of the region and influences agriculture. Climate also determines the type of animals that are associated with the region. Humans seek favorable climatic conditions in the places they want to settle in. The climatic belts are the principal areas of most of the human activity. It is evident from the world's population distribution that the highest populated countries of the world are mostly located in the tropical regions. A warm, comfortable climate attracts people. Regions with such climates provide favourable conditions for a wide range of fauna to thrive, supporting the life systems in the place. Agriculture and animal husbandry make it possible to provide food for large populations. On the other hand, places with extreme climatic conditions are usually scarcely populated because it is difficult to sustain human life in such places. Countries in the temperate regions are also well populated. The regions are colder than the tropical regions but are hotter than the polar zones. The polar zones of the Arctic and Sub-Arctic regions remain the least populated of all. The extremely low temperature is not favourable for habitation. Vegetation is scarce. Cold winters and very short summers make living difficult.

Topography or terrain. Navigable areas are more populated than rough ones. Mountains are less preferred because of lack of arable land. In addition, the cost of transportation, construction and agriculture are considerably higher in such places. In general, high altitudes also impose a physiological on humans' capacity to adapt. This is because of reduced atmospheric pressure and low oxygen content. Higher altitudes, therefore, do not favour population and growth. Low lying plains and coastal areas are more favoured areas for human settlement. The Himalayas are thinly populated, the Ganges valley is one of the densely populated areas of the world. Coastal regions have the advantage of ocean-going trade and transportation and thus, the major cities of the world are mostly located in the coastal areas.

Water is essential for human survival. The ancient civilizations of the world flourished near rivers and the coastal areas. The Nile, Amazon, and Ganges river systems supported rich civilizations on their banks. Adequate rainfall favours vegetation and agriculture which in turn, determine a place's suitability for habitation. Because of lack of water, vast expanses of

deserts are uninhabited. For the same reason, there is less population on the rain-shadow side of a hill or mountain; however, the leeward side is often densely populated. Thus, population is tends to be concentrated in the well-watered river valleys and coastal plains.

Soil quality influences density and distribution of the population. A substantial population of populations earn their livelihood from agriculture which depends on the quality of soil. Food crops are grown on the soil, thus, is one of the most important raw materials required by population. The alluvial regions, deltas and the coastal regions of India support high population densities. On the other hand, mountainous regions, where soil erosion is a problem, such as the Terai region of Uttarakhand, or the sandy soils of the desert of Rajasthan, cannot support dense populations. However, scientific agricultural practices, with the aid of technology, have succeeded in converting low-yield soils to better quality ones. In the past, degradation or overutilization of soil led to the disappearance of flourishing civilizations, such as the Mayan in Central America. Vast reserves of mineral resources encouraged the establishment of industries, which attracted settlements. The Chhota nagpur plateau is an area rich in mineral resources. The higher population densities in the Chhota Nagpur Plateau of Jharkhand and in the adjoining areas of Orissa are largely due to the availability of minerals.

Location of a place—proximity to major towns and cities—favours concentration of population. Generally, staying within the city limits increases living costs. The city's periphery or nearby towns provide affordable housing facilities. Cheap and reliable transportation provide convenient means of commuting.

Natural disasters discourage population concentration. Frequent storms, earthquakes, floods, wild fires discourage formation of settlements as people migrate to safer places. There are many examples of destruction of settlements due to the natural disasters. The city of Bichuan, in Sichuan province of China was completely destroyed in 2011 by an earthquake of magnitude 8.0 causing collapse of eighty percent of the buildings and a huge loss of lives. The city was not rebuilt and left abandoned to prevent any further loss of human life in the event of recurrence of the disaster in future.Similar examples could be found in history. On August 24, 79 AD, the volcano Vesuvius erupted, covering the nearby town Pompeii with ash and soil, and subsequently preserving the city in its state from that fateful day. Everything from jars and tables to paintings and people were frozen in time. Pompeii, along with Herculaneum, were abandoned and eventually their names and locations were forgotten. They were rediscovered as the results of excavations in the 18th century

Socio economic factors affecting population distribution

The choice of settlement is generally based on natural processes. However, with time, man has been able to adjust and control the natural processes to some extent. Thus, the factors influencing the choice of a place for settling no longer depends entirely on natural conditions. As needs changed with the evolution of human society, social and economic perspectives gained primacy.

Economic activity is an indicator of employment opportunities. People in the rural areas are largely dependent on agriculture for their livelihood. If the land fails to support the rural population, or with more opportunities available in urban areas, they may choose to migrate to cities. Concentration of population in urban areas is an outcome of diverse economic activities and livelihood options offered by cities. Usually, there is work for almost everyone, which is unlike in villages where there are fewer options. Therefore, population density in the towns and cities tends to be higher than in rural areas, and will continue to increase. By their very nature, cities provide diverse livelihood opportunities in both the formal and the informal sectors. Industries are a large job market, and have attracted cheap labour for several decades. The influx of labour leads to settlements being established, often on otherwise uninhabitable land. For example, Hydroelectric power stations in largely uninhabited areas attract migrants to these places, resulting in increase in population. Similarly, due to growing service and tourism industry, a large migrant population have settled in the city of Dubai, making it one of the fastest growing cities in the world due to tourism.

Social Organization of communities in new areas encourages the movement of people and settling in newer lands. Man is a social animal and it becomes essential for him to form a community, creating a familiar environment where he stays. People moving out of their native places tend to settle in those areas, or parts of the areas, where there are people with language, culture, food habits and habits that are like theirs. It is common to find cities having residential areas which are communal in nature.

Demographic factors of population distribution

The demographic factors are the characteristics of the population that have considerable influence on population distribution and settlement patterns. These include fertility and mortality trends, and migration. Fertility and mortality together influence the natural increase in a region. Over time, the differential growth rates, results of fertility and mortality, lead to changes in population density and distribution.

Migration has deep influence on population distribution. The push factors, or negative circumstances, at the place of origin tend to motivate people to leave their native places to newer areas. Better opportunities in distant lands also encourage migration. People may choose to move due to land scarcity, shortage of work in current place of residence, insufficient wages or salaries, inadequate medical facilities and education, etc. Expectations of a better standard of living are often the main factors that drive rural to urban migration. The migration process allows redistribution of population, but it also puts pressure on the place of destination and increases the population density in this place.

Natural increase is the net outcome of fertility and mortality in a region. If in a region, the fertility level is high, the population of that place tends to increase. In such situations, mortality brings stability because of deaths. Epidemics and disease have always significantly influenced mortality levels. In earlier times, high occurrence of disease resulted in more deaths. To offset the loss, a high level of fertility was maintained. With medical advances,

many diseases could be cured and the death rate fell sharply. In effect, the population grew. However, this created the problems of high population density and pressure on limited resources. With the introduction of contraceptives and with several family planning options available, birth rate began to go down.

Political factors influencing population distribution

War, political disturbance, conflict, and weak administration negatively affect population distribution.

War and political conflicts take a great toll on human lives. Death rates are high, and people are forced to move out in search of safety. Mortality rates peak and the out-migration dominates. Safer locations experience a sizeable population growth because of the in-flow of migrants. This is also the situation in regions near the political boundaries of countries that do not have peaceful relations. Even if there is no conflict, the fear of one compels people to move, making these areas the least populated ones.

Political unrest and discrimination are detrimental to population growth. Clashes between different political parties or people with different religious beliefs have often resulted in a reduction of population in the affected area. Before settling in a new place permanently, migrant population looks for a place that not only provides economic opportunities but also provides safe and healthy environment for wholesome living. A politically unstable region is unable to provide both these conditions and hence it discourages not only the incoming migrant population but also the already residing population which might be forced to leave the region in search of peaceful locations for settlement. Discrimination faced by migrants because of race, language, food, culture etc., discourages in-migration. This has reduced the population growth on one hand and newer settlements on the other.

Policies encouraging migration have often led to population growth in the destination region. International labour movements take place where rules governing cross-border migration are lenient. Migration helps in the redistribution of population. Policies that promote reduction in fertility levels, banning of infanticide, etc. also influence the population growth in a place. For example, China's strict enforcement of one-child policy succeeded in curbing fertility levels and controlling population.

Factors that affect population density

FACTORS	SPARSELY POPULATED	DENSELY POPULATED
Physical factors	Mountainous areas make it difficult to construct buildings and roads. They are often inaccessible and remote. Areas with extreme climates such as hot and cold deserts make it difficult to grow crops and access water. Regions with dense vegetation cover, such as rainforests, provide challenges in terms of access and the lack of services make human inhabitation very difficult. Flood plains present the risk of flooding, so building on them is often prohibited. A lack of natural resources in an area presents significant challenges to economic development. If land is infertile humans are unable to grow food leading to a low population density. Locations that regularly experience natural hazards can discourage people from settling in the area.	Coastal environments and those with rivers provide good access and allow trading to occur, encouraging the growth of economic activities. Locations with favourable climates tend to be more densely populated as food can be produced, and it provides a more comfortable environment to live in. Regions where the relief is flat are easier to build on and develop. The availability of natural resources encourages a higher population density as these can be processed and used in industry and manufacturing. Regions that experience no or few natural disasters are more likely to have a lower population density as they are safer. Fertile land attracts a higher population density as food can be produced. A reliable water supply encourages a high population density as water can be used for drinking, washing, transportation and irrigation.
Economic factors	Regions with little or no economic opportunities tend to be sparsely populated as people are unable to secure a regular income. Locations with little or no	The availability of jobs and economic activities within a region leads to an increase in population density. Locations with an effective infrastructure, including transport, energy, water, and sanitation are usually densely populated.

	infrastructure, including transport, energy, water and sanitation do not attract significant numbers of people. Poor transport infrastructure provides considerable challenges, especially with regards accessibility leading to a low population density.	A good transport infrastructure attracts a high population density as people can travel and commute easily. It also allows the free movement of goods which leads to the development of industry, providing jobs to people in the local area.
Social factors	High levels of crime discourage people from settling in an area, leading to a low population density.	Low crime rates can encourage people to move to an area, leading to a high population density.
Political factors	Poor public services, including education and health care, discourage people from living in an area, leading to a low population density. Civil war and persecution can lead to a low population density as people move to escape violence. Governmental corruption can also lead to a low population density.	Effective public services, including education and health care, attract people leading to a higher population density. A safe, reliable Government can encourage people to a country, leading to an increased population density.

Factors influencing population growth

1. Economic development.
2. Education.
3. Quality of children.
4. Welfare payments/State pensions.
5. Social and cultural factors. ...
6. Availability of family planning.
7. Female labour market participation.
8. Death rates

LANGUAGE

The method of human communication, either spoken or written, consisting of the use of words in a structured and conventional way. Language is a system of words or signs that people use to express thoughts and feelings to each other. (merriam-webster.com). Language is a system of communication, a medium for thought, and a social interaction. Language follows a grammatical structure. Language is based on aural and oral system. Language can die and be extinct.

List of the major language families (in terms of the number of speakers of those languages worldwide and/or the number of sub-families/languages they contain.)

In each case, the language family is followed by one of its sub-families, followed by an example of a language from that sub-family.

- Afro-Asiatic Language family: Semitic - Arabic
- Altaic Language family: Turkic - Turkish
- Austro-Asiatic Language family: Mon-Khmer - Khmer
- Austronesian Language family: Malayo-Polynesian - Tagalog
- Dravidian Language family: Tamil - Kannada
- Indo-European Language family: Germanic - English
- Niger-Congo Language family: Volta-Congo - Dogon
- Sino-Tibetan Language family: Chinese - Mandarin
- Uralic Language family: Finno-Ugric - Hungarian

RELIGION

Religion, human beings' relation to that which they regard as holy, sacred, absolute, spiritual, divine, or worthy of especial reverence. It is also commonly regarded as consisting of the way people deal with ultimate concerns about their lives and their fate after death. In many traditions, this relation and these concerns are expressed in terms of one's relationship with or attitude toward gods or spirits; in more humanistic or naturalistic forms of religion, they are expressed in terms of one's relationship with or attitudes toward the broader human community or the natural world. In many religions, texts are deemed to have scriptural status, and people are esteemed to be invested with spiritual or moral authority. Believers and worshippers participate in and are often enjoined to perform devotional or contemplative practices such as prayer, meditation, or particular rituals. Worship, moral conduct, right belief, and participation in religious institutions are among the constituent elements of the religious life.

WORLD DISTRIBUTION OF RELIGION

Religion	Adherents	Percentage
Christianity	2.382 billion	31.11%
Islam	1.907 billion	24.9%
Secular /Nonreligious/Agnostic/Atheist	1.193 billion	15.58%
Hinduism	1.161 billion	15.16%
Buddhism	506 million	5.06%
Chinese traditional religion	394 million	5%
Ethnic religions excluding some in separate categories	300 million	3%
African traditional religions	100 million	1.2%
Sikhism	26 million	0.30%
Spiritism	15 million	0.19%
Judaism	14.7 million	0.18%
Bahá'í	5.0 million	0.07%
Jainism	4.2 million	0.05%
Shinto	4.0 million	0.05%
Cao Dai	4.0 million	0.05%
Zoroastrianism	2.6 million	0.03%
Tenrikyo	2.0 million	0.02%
Animism	1.9 million	0.02%
Druze	1.2 million	0.015%
Neo-Paganism	1.0 million	0.01%
Unitarian Universalism	0.8 million	0.01%
Rastafari	0.6 million	0.007%
total	**7.79 billion**	**100%**

FERTILITY AND MORTALITY. Fertility and mortality in a population depend on sociocultural history, sanitary conditions, and biological factors. Although the last element is generally similar in all human communities, sociocultural and sanitary factors vary considerably.

Fertility

Fertility is measured by a combination of four classical parameters: birth-rate (number of births per 1,000 total population); fertility rate (birth-rate per 1,000 women fifteen to forty-nine years old), reproduction rate (average number of girls born per woman), and actual fertility (average total number of births per woman).

Whereas birth-rates are based on total population, a large proportion of which plays no role in human reproduction, fertility rate, reproduction rate, and total fertility provide more precise measures, for they are based only on the segment of the population that determines human fertility, women aged 15 to 49 years.

Mortality

Mortality, the number of deaths per 1,000 population, has declined rapidly in Persia since the early 20th century, a significant factor in overall population growth. In contrast to birthrates, death rates are difficult to establish, for they are much less fully registered, so that estimates of the various relevant measures play a much more important role. Three indexes of mortality will be examined here: unadjusted death rate, infant mortality, and life expectancy at birth. Infant mortality is a more precise measure of overall mortality, for it is not affected by the age structure of the population.