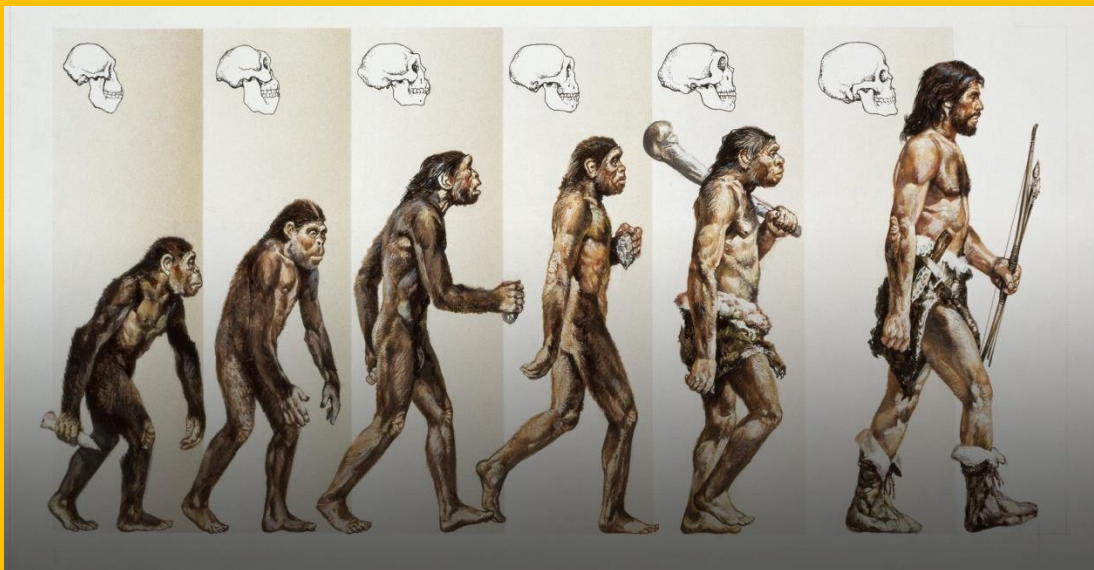




## HUMAN GEOGRAPHY



**DEPARTMENT OF GEOGRAPHY AND NATURAL RESOURCE  
MANAGEMENT**

**SCHOOL OF EARTH AND ENVIRONMENTAL SCIENCE  
UTTARAKHAND OPEN UNIVERSITY**

(Teenpani Bypass, Behind Transport Nagar Haldwani (Nainital) Uttarakhand)

**GEOG - 601**

**HUMAN GEOGRAPHY**



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## **BLOCK 1 - CONCEPT AND NATURE**

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### **UNIT 1 –MEANING, DEFINITION, NATURE, SCOPE, AND ELEMENTS OF HUMAN GEOGRAPHY**

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#### **1.1 OBJECTIVES**

#### **1.2 INTRODUCTION**

#### **1.3 MEANING, DEFINITION, NATURE,SCOPE, AND ELEMENTS OF HUMAN GEOGRAPHY**

#### **1.4 SUMMARY**

#### **1.5 GLOSSARY**

#### **1.6 ANSWER TO CHECK YOUR PROGRESS**

#### **1.7 REFERENCES**

#### **1.8 TERMINAL QUESTIONS**

## ***1.1 OBJECTIVES***

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After reading this unit, you will be able to:

- Understand the meaning and definition of Human Geography
  - Learn about the nature of Human Geography
  - Gain knowledge about the scope and elements of Human geography
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## ***1.2 INTRODUCTION***

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Because the desire to understand the secrets of nature has existed from the beginning of human evolution, geography might be considered the oldest field of study. Humans have an innate tendency to use natural resources for their livelihood. The field of information grew over time. Originally, this information was provided in text format. It was later expanded to incorporate maps. This was the original version of geography, to which social sciences were subsequently added. This is the point at which human civilization was incorporated with geography, earning it the moniker "human geography." The social sciences were accorded equal weight with the natural sciences in geography.

One category of social science is human geography. Human relationships and the interplay between social facts and physical conditions are examined in this science. The study of human geography is still in its early stages and is developing slowly. We will discuss the definition, significance, nature, and application of human geography in this unit. We would begin by going over the definitions, nature, and scope of the discipline as well as the fundamental knowledge of human geography.

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## ***1.3 MEANING, DEFINITION, NATURE, SCOPE, AND ELEMENTS OF HUMAN GEOGRAPHY***

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Since the beginning of human-environment interaction, human geography has developed. It has deep historical roots. Although the issues of human geography span a wide time span, methods for expressing them have evolved over time. The discipline's lively nature is demonstrated by this dynamic and articulation shifts.

Initially, there was very little interaction between different societies, and little was known about one another. Before embarking on a journey, explorers and travellers gather knowledge

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about the way or location they are travelling to because navigation abilities were not developed. Explorations and riddles about people and nations began to surface, with Europe being the first to observe this in the late 15th century.

Human geography is the scientific study of the functional interactions between human groups and their surroundings, as well as the spatial distribution of human facts on the earth's surface. Human geography is the main field of geography that studies people, communities, economics, cultures, and how they interact with their surroundings. The following are definitions provided by a few human geography geographers:

- According to E.C. Semple, “Human Geography is a study of the changing relationships, between the unresting man and the unstable earth”.
- According to French Geographer Vidal de la Blache “Human Geography offers a new conception of the inter-relationship between earth and man..... a more synthetic knowledge of physical laws governing our earth and of the relations between the living beings which inhabit it”.
- According to Brunhes, J, “Human Geography is the ensemble of all these facts in which human activity has a part to play-a complex group of facts in finitely variable and varied, always contained within the limits of physical geography, but having always the easily discernible characteristics of being related more or less directly to man”.
- According to American Geographer E. Huntington “Human Geography may be defined as the study of nature and distribution of the relationships between Geographical environment and human activities and qualities”.
- According to Demangeon, “Human Geography is the study of human groups and societies in their relationships to physical environment”.
- According to Ratzel “Human Geography is the synthetic study of relationship between human societies and earth surface”.
- According to George F. Carter “Human Geography is primarily concerned with the relations between man, ways of life and the places in which they live”.
- According to Dickens, S.N. and Pitts, F.R. Human Geography is looked upon as the study of man and his work.

- According to H. de Blij study of how people make places, how we organize space and society, how we interact with each other in places and across space, and how we can make sense of others and ourselves in our locality, region and world.
- According to Rubenstein, “Human Geography is the study of where and why people and human activities are located”.

In simple terms, human geography examines how a region's physical environment affects its inhabitants' social, cultural, religious, and economic life.

Physical geography is the study of the earth's physical surroundings. Human geography examines the relationship that exists between the physical environment and the sociocultural environment that humans have produced through their interactions with one another.

Topics covered under physical geography include landforms, climate, temperature, soils, rainfall, vegetation, flora, and wildlife, among others. Human geography covers topics such as occupational structure, population density, road and railway networks, house types, airline and pipeline networks, industries, farms, and ports on Earth.

There should not be a dualism between humans and nature, in my opinion. Some specialists attempted to use dualism. They need to be viewed in their entirety. Since nature and humanity cannot be identified without one another, it is not simply simple to separate them. We cannot imagine a human being's existence without nature, particularly as he is deeply and intricately linked to it.

Man interacts with his surroundings with the aid of technology. A single human-made good, in my opinion, is produced without the use of any natural resources.

Technology is a sign of a society's cultural growth. Only after comprehending natural rules was all that we see today created.

Understanding of nature is at most important for developing technologies & as a technology develops, the shackles of natural disasters and problems loosen their grip. Natural resources sustain human beings and human beings are directly dependent on natural resources.

With the passage of time people begin to understand their environment and the forces of nature. With the help of social and cultural development, humans develop more better & efficient technology. With environment they create new possibilities. Humans avail the

opportunities provided by nature. Man sustains the opportunity given by nature. Gradually in this way the humanization of nature takes place & imprints of human activities become visible.

Human geography is highly inter-disciplinary in nature. It develops close interference with other sister disciplines in social sciences in order to explain and understand elements of humans on the earth's surface.

In human geography, the major thrust is on the study of human society with relation to the habitat or environment. It embraces the study of human races; the growth, distribution and density of populations of the various parts of the world, their demographic attributes and migration patterns; and physical and cultural differences between human groups and economic activities. It also covers the relationship between man and his natural environment.

Human geography consists of a number of sub-disciplinary fields that focus on different elements of human activity and organization, such as, cultural geography, economic geography, historical geography, political geography, population geography, social geography, transport geography, urban geography etc.

The interrelationship between man and his physical environment was recognized and emphasized in Geography, from the starting by Greek and Romans such as Hecataeus,

Herodotus, Aristotle, Eratosthenes and Strabo. The Arab Geographers also established relationships between cultural characteristics and physical environment. In the classical period of modern geography, Humboldt and Ritter, the German Geographer focused on the relationship between social groups and their physical environment. In his work "Erdkunde" Ritter concluded that the earth and its inhabitants stand in the closest reciprocal relation and one cannot be truly presented in all its relationship without the other. Friedrich Ratzel the German Geographer established human Geography as an independent discipline. His two-volume work "Anthropogeographie" presented for the first time a broad vision of man and his work. Ratzel developed systematic human Geography.

The French Geographer Vidal de la Blache is regarded as one of the founding fathers of modern human Geography and the father of "possibilism". Jean Brunhes elaborated Blaches ideas on human Geography and possibilism.

Before knowing the subject matter of human geography, it is necessary to know that what kind of study is human geography and why it is studied. Various aspects of the human

population are used to study the natural resources, cultural landscape and the functional relationships of all these human progress, so we divide the area of this subject into six parts.

A-Population

B- Natural resources

C- Cultural landscape

D- Human environment adjustment

E- Economic social and cultural relations of different regions

F- Study of the era of development by time

Frinch and Trivarttha considered human geography as the study of usefulness of a given land area. To explore the geographic study of an area, there has to be a closer relation between natural and cultural conditions.

Ellsworth Huntington, an eminent American geographer while determining the area of human geography took a comprehensive view of physical conditions, forms of life and human responses. According to Huntington all elements of bio-physical environment are inter-related and affect each other and their combined affect is reflected in various human responses.

Today, human dominance over the natural conditions has increased and its cultural progress has taken place. As a result of civilization and culture, human desires and actions have been expressed by the effect and response of physical conditions.

Brunhes divided human geography into two bases while explaining the area of human geography.

- 1- According to the development of civilization
- 2- Real division on the basis of cultural facts

Based on the development of civilization, the facts of human geography are classified as following sub-divisions.

- A- Geography of mandatory requirements
- B- Land violation geography

C- Social geography

D- Political and Historical geography

Based on the cultural facts, the facts of human geography are classified under the following headings:

A- Unproductive work of land

a- Home            b- Way

B- Conquest of plants and animals

a- Agriculture    b- Animal husbandry

C- Destructive occupation of soil

Paul Vidal de La Blache has classified the study of human geography into the following chapters:

**Population:** its distribution, density, major gathering, means of subsistence, relationship in population density, causes of population growth.

**Cultural elements:** Environment adaptation of environment i.e., plants, animals and humans, tools and raw materials, means of subsistence, house building materials, development of human settlements and civilizations.

**Transport and excursion:** Human, animal transport and carts, roads, railway and ocean transport. Apart from this, the Blache has also mentioned human races and urban centers.

According to Dominion, the study areas of human geography are as follows:

- 1- Human life in natural regions
- 2- Industries such as hunting, fisheries farming, animal husbandry, industry and trade.
- 3- Human habitat and migration
- 4- Human settlements

American geographer C.L. White and G.T. Reiner have given great importance to the adjustment in the study of human geography. The main three classification of adjustment are given:

- 1- Economic adjustment: in which industries are studied.

- 2- Social and cultural adjustment: in this, population, land owned social classes, caste classes, human habitation, dresses, home, art and religious beliefs etc.
- 3- Political adjustment: it has local, provincial, national governance and international union etc.

These geographers also assume that geography has the ability to solve many complex problems in the world. Generally following actions are necessary to fulfill this goal:

- 1- Surveying the world's social events.
- 2- Classification of the physical and biological elements of the human environment.
- 3- The mutual impact of these two elements on human events.

With all the facts we get to know about the sequential information about human geography development & to understand, the development of this discipline has been a steady process.

### **The scope of human geography**

- Cultures: Human geography helps in the understanding of cultural characteristics such as languages, religions, and ethnic groups by examining the connection between social conventions and the cultural landscape.
- Development, encompassing the elements of economic activity such as primary, secondary, and tertiary sectors, is studied by human geography.
- Population: Human geography examines the features and distribution of populations.
- Settlements: The study of human geography examines the development of settlements.
- Urbanism: Human geography helps in the process of sustainable urbanization by researching urban issues.
- Relationship between humans and the physical world: Human geography examines how people interact with the natural world and the connections between the natural and artificial worlds.
- Social well-being: Human geography examines the various facets of people's social well-being, including housing, health, and education.

## **1.4 SUMMARY**

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According to the human geographers, human geography is the study of the intimate connection between people and their natural surroundings. The study of human society in relation to the environment or habitat is the focus of human geography. Human geography is the study of the evolving links between humans and the earth, according to E.C. Sample, one of the many geographers who provided definitions in this unit. Human geography, according to Vidal de la Blache, provides a fresh perspective on how humans and the planet interact. Six categories were used by human geographers to categorize human geography: population, natural resources, cultural landscape, human environment adjustment, economic, social, and cultural relations of various places, and the study of development throughout time.

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## **1.5 GLOSSARY**

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**Urbanism**-is the study of how inhabitants of urban areas, such as towns and cities, interact with the built environment.

**Settlements**- A place where people live.

**Ecology**- Branch of biology dealing with the relations and interactions between organisms and their environment, including other organisms

**Cultural landscape**- Cultural properties that represent the combined works of nature and man.

**Era**- Era is long and distinct period of time that passed away.

**Environment**- The conditions in which a person, animal, or plant lives or works.

**Adjustment**- The process of adapting or becoming used to a new situation.

**Inter-relationship**- The way in which each of two or more things are related to the other or others.

**Impact**- A marked influence.

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## **1.6 ANSWER TO CHECK YOUR PROGRESS**

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1- “Earth as a home of man” ideology is derived from which of the following sciences?

A- The Physics

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B- The Sociology

C- The Ecology

D- The Philosophy

2- What is the basis of the realistic division of Brunhes related facts about in human geography?

A- Natural facts

B- Social facts

C- Economic facts

D- Cultural facts

3-Which of the following is studied in human geography?

A- Primitive

B- Animal and birds

C- Human community

D- Solo human

4-Who wrote “Erdkunde”?

5-Who wrote “Anthropogeographie”?

6-What is the basic purpose of human geography?

7-Who was the father of human geography?

8-According to E.C.Semple, “Human Geography is a study of the changing relationships, between the unresting man and the unstable earth”.

9-According to Rubenstein, “Human Geography is the study of where and why people and human activities are located”.

10-According to Ratzel “Human Geography is the synthetic study of relationship between human societies and earth surface”.

11-The French Geographer Vidal de la Blache is a regarded as one of the founding fathers of modern human Geography and the father of “possibilism”.



12-Human geography is highly inter-disciplinary in nature. I

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## **1.8 TERMINAL QUESTIONS**

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- 1-Explain when and how did human geography begin?
- 2-Define Human Geography and give definitions of Geographers.
- 3-Explain the nature of Human Geography.
- 4-Write a note on the scope of human geography
- 5-Explain the purpose of Human Geography.
- 6-Explain the elements of Human Geography.

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## **UNIT 2 BASIC PRINCIPLES AND DEVELOPMENT OF HUMAN GEOGRAPHY**

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**2.1 OBJECTIVES**

**2.2 INTRODUCTION**

**2.3 BASIC PRINCIPLES AND DEVELOPMENT OF HUMAN GEOGRAPHY**

**2.4 DEVELOPMENT OF HUMAN GEOGRAPHY**

**2.5 SUMMARY**

**2.6 GLOSSARY**

**2.7 ANSWER TO CHECK YOUR PROGRESS**

**2.8 REFERENCES**

**2.9 TERMINAL QUESTIONS**

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## **2.1 OBJECTIVES**

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After reading this unit you will be able:

- To define basic principles of Human Geography.
  - To understand the concept of Human Geography.
  - To explain about development of Human Geography.
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## **2.2 INTRODUCTION**

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You covered the definition, nature, scope, and branches of human geography in the previous unit of this block. The definition of the phrase "geographical concept" is covered at the beginning of this unit. The definitions of a few basic and secondary concepts related to human geography are then covered. Along with this, we will also know the process of development of human geography.

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## **2.3 BASIC PRINCIPLES AND DEVELOPMENT OF HUMAN GEOGRAPHY**

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Concepts are vital parts of each field since they give it its identity. Nonetheless, the fundamental ideas of a field are significantly influenced by the type of data examined in that field as well as the perspectives employed to analyse those facts. Because disciplines employ a variety of perspectives and focus on different sets of facts, they each have their own unique sets of concepts.

What definitions are there for concepts? Preston E. James (1967) defined an idea as an image of an object or event in one's mind. Its importance is comparable to that of perception and information. He defined perception as an individual's direct use of his senses to see an object or event. Stated differently, a percept is an empirical observation grounded in sense and experience. An empirical observation can also be referred to as a factual assertion. A fact is a single thing, event, or individual. Concepts are the characteristics that a group of events have in common, as opposed to perception and facts. They represent something that a lot of objects, events, or people share. By utilising Hamlet as an example, it is possible to better understand the difference between notion and perception. A precise and scientifically confirmed observation of a particular hamlet is called a percept. However, our perception of a village is based on the characteristics we associate with all villages collectively, or our mental image of a village.

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A few fundamental concepts are needed to understand human geography. They are useful in elucidating its distinct qualities. They are thus referred to as the fundamental concepts of human geography. The fundamental concepts of human geography are time, space, location, spatial distribution, spatial interaction, geographic structure, hierarchy, spatial organisation, perception of space and ecology, cognition and behaviour, culture, society, development, and inequality.

Human geography is intrinsically linked to several concepts, such as spatial structure, spatial interaction, spatial distribution, and space itself. On the other hand, concepts like time, society, culture, perception, behaviour, development, and inequality have their roots in nature. Related social science disciplines like economics, sociology, anthropology, psychology, and history are the sources of these concepts.

## **Scale**

Scale in geography primarily refers to space. According to D.R. Montello (2001), it can mean at least three different things. It explains the relationship between a feature's map representation and its actual size in the real world. The scale of a map is the ratio of a given distance on the map to its actual distance on the ground. For example, a centimetre on a map could be equivalent to twenty-five kilometres on the ground. The analysis scale, which comes in second, is the size of the region at which a problem is evaluated, such as the national, state, or local levels. The term "phenomenological scale" refers to the global scale across which geographical processes occur or at which geographical structures exist. Geographers study phenomena at the micro, meso, and macro spatial levels. It may also be present on a local, regional, or worldwide scale. Local dialects, for instance, are spoken by certain communities. Conversely, a language might exist on a regional or worldwide scale.

## **Time and space**

Time and space are two fundamental components of anything that exists on Earth's surface. Immanuel Kant, the renowned German philosopher (1724–1804), held that space and time included all human experience. Everything, including people, has a specific place and time. Time and space are considered normal ideas since they are encountered by everyone daily. As a result, we all understand these ideas in a sensible way. It is difficult to describe these concepts, nevertheless. Time is the space of time that separates two related occurrences. On the other hand, the separation between two points is what defines space.

Traditionally, the definitions of geography and history begin with the ideas of time and space, respectively. Time is a topic in history. Historians are therefore interested in the temporal aspect of reality. Their primary area of interest is the historical development of society. However, a lot of people frequently ignore the earth's spatial and ecological reality while evaluating various kinds of changes. Though, everything that has ever occurred in human history has only occurred in certain locations. In contrast, geography is the study of space. Geographers are therefore interested in the spatial aspects of reality. They characterise the variations in place attributes. They also discuss how the spatial distribution of occurrences is comparable. Given that geography is an "areal" or "spatial" discipline, some geographers tend to disregard time when examining the surface of the globe. But the truth is that everything that exists anywhere on Earth's surface has a specific history and evolves over time. As a result, when studying the globe, geographers cannot afford to neglect time.

The fact that time and location are interdependent only serves to highlight the necessity of history and geography working together more closely. According to the Greek historian Herodotus (c. 485–428 B.C.), "all geography must be treated historically and all history must be treated geographically." Even though geographers are primarily interested in space, historians cannot afford to overlook this idea while researching societies. In a similar vein, when studying the globe, human geographers cannot afford to overlook time or the temporal component. They research how the world's features evolve over time.

### **Area, Location, and Regions**

Geographers have established the ideas of area, location, and regions to make sense of the world. An area is commonly understood to be a specified portion of space or the earth's surface. An area can be any size, even though its extent is a crucial feature (e.g. large area, medium size area or small area). It doesn't have a specific place because it is a generic idea.

On the other hand, a location or a place is defined as a region with clear or undefined boundaries that is unique in terms of its functions and physical attributes, both cultural and physical. A location's physical attributes include elements like soils, water bodies, landforms, temperature, wind, rainfall, and animal and plant life, among other things. Human settlements, factories, and other structures like schools, hospitals, defence installations, highways, railroads, buildings for language and religion, etc. are examples of human traits. When we talk about places, we mean particular locations on the surface of the globe, which can be homes, villages, or cities. It has a well defined site, situation, and absolute

placement—that is, its precise location on the surface of the globe. It takes a long time for the physical and human aspects to constantly and dynamically interact to give it its traits. A location's significance to its inhabitants also defines it.

A region is an extremely developed idea. Every region is distinguished by a feature that binds the area together. Therefore, in contrast to a place, a region is described as a homogeneous area with a fixed position on the earth's surface and a significant extent and size. A region may be institutionalised, functional, formal, or colloquial.

## **Network**

A network is a collection of components that are linked to one another, or linked nodes. One way to think about a spatial network is as a network of spatial elements. The elements that are dispersed or positioned on the surface of the earth are known as spatial elements. Within the broader area of geographical networks are transport networks. Conversely, non-spatial networks include things like biological systems, social networks, and office structures. Spatial networks particularly interest geographers. An entire network's symbolic representation, including all its connections, is a graph. It is made up of several nodes connected by links. In geographical networks, vertices (nodes) and edges (links) are the two most important constituents. The terminal or intersection point of a graph is called a node. Nodes in a transportation network include things like road intersections and transportation terminals (such stations, terminuses, harbours, and airports). An edge is formed by a link that joins two nodes. In a transport network, the transport infrastructure that makes it easier for nodes to move around is referred to as an edge. An edge is defined by a direction. The organisation and structure of human social, economic, and cultural aspects on the surface of the globe is of interest to human geographers. Road networks, railway networks, energy networks (power grids), mobile phone networks, social and contact networks, etc. are a few examples of networks where nodes and edges are embedded in space.

## **Spatial Interactions**

On the surface of the earth, locations are not isolated from one another. People from different places form relationships with one another. There is interaction between towns, between towns and villages, between cities, and between the port and the hinterland. Spatial interaction is the interdependent link that is created between locations because of the flow of people, products, services, capital, information, and ideas.

Edward L. Ullman first used the phrase "spatial interaction" in 1954 to describe the interconnection of geographical areas. In his view, this interdependence is a supplement to the interdependence between society and nature within a particular area. He thought of it as a primary area of geographic research. The idea of "the geography of circulation," which gained popularity in French geography during the first quarter of the 20th century, is comparable to the idea of spatial interaction. Any type of movement is referred to as circulation. Three fundamental elements that influence the spatial interplay of commodity flow between two places have been identified by Edward Ullman. These are chances for intervention, complementarity (which has to do with the nature of places), and transferability (which has to do with the nature of commodities and the cost of transportation).

Complementarity is correlated with area character. For interactions to take place between two regions or locations, two requirements must be satisfied. Demand needs to be able to be met in one place before it can exist in another. The location of demand must be able to pay for the supply for there to be a two-way movement. The complementary qualities of the two locations produced by these conditions provide the basis of interaction. Transferability is influenced by the characteristics of the commodity. The only things that will happen are interaction between complementing zones and the product's capacity to move, which varies based on the commodity. The transferability of a product is mostly determined by its transportation costs. A product will only be transferred if the buyer deems the economic distance—that is, the cost of transportation—to be reasonable. Transferability declines with increasing economic distance.

The term "intervening opportunities" describes the presence of nearby markets or supply sources. Only in the absence of chances for buyers and sellers to more readily obtain what they need can there be interaction between complementing locations. A buyer will often purchase a product from a closer source if there are nearby sources of supply. In a similar vein, the producer would sell his goods in a nearby alternative market centre rather than a market that is located far away.

In the past, interactions between geographical areas were governed by the distance-decay law, which states that interactions eventually vanish as distance increases. On the other hand, advances in communications and transportation technologies have raised the degree of interaction between widely separated geographic places. As a result, interaction patterns and processes have grown far more complicated in the modern world. This process, which we call

"globalisation," is defined by an increase in the volume and ease of movement of people, ideas, information, goods, services, capital, etc. among various locations on Earth's surface.

### **Position and Geographical Dispersion**

The goal of human geographers is to identify, classify, and explain the positions and distribution of places and occurrences on the surface of the world. However, one must first comprehend the notions of spatial, distribution, location, occurrence, and magnitude in order to fully comprehend the concepts of location and distribution as they are utilised in human geography. In the sentences that follow, Gordon J. Fielding (1974) distinguished between these ideas. A spatial event is one that takes up space on part of the earth's surface. Distributions are collections of events that are connected to one another. An identified phenomena of a particular size is called an event. The grouping of instances of the same kind is called a distribution.

Places, things, events, or objects that populate the surface of the earth can be observed and fixed cartographically. Since 'where' refers to a place, item, object, or event on the surface of the earth, it can be used to define the term spatial location. Conversely, the phrase "spatial distribution" refers to the dispersion of similar locations, items, events, or entities over the whole or a portion of the earth's surface. The position and distribution of people on the surface of the earth, along with their homes, workplaces, factories, stores, highways, railroads, landfills, and other infrastructure, are the focus of human geographers. Spatial distribution has three components: pattern, dispersion (or concentration), and density. The total frequency of occurrence of a phenomenon inside a certain area, proportional to the area's size, is known as the density of a spatial distribution. The degree to which a phenomenon has dispersed in relation to the area in question is known as the dispersion of a spatial distribution. On the other hand, a pattern of spatial distribution describes the geometric organisation of a phenomenon independent of the area's size.

Random and non-random spatial distribution patterns are the two sorts of patterns that exist. There is no observable order in a random distribution, and events or things happen by coincidence. A forest's uneven and non-clustered tree-spacing pattern is an illustration of a random distribution. The effects of multiple processes are reflected in the random distribution pattern. Non-random distributions show configurations that are improbable to have happened by accident. Distribution patterns that are not random can be clustered, uniform (systematic), or a combination of the two. The process or processes that result in this type of pattern can



either be spatially concentrated in one or more areas of the designated area, or they can be dispersed uniformly throughout the area. Occurrences are dispersed more regularly in uniform patterns than in random patterns. For instance, in a spatially homogeneous area like the alluvial plains, one can observe the establishment of a regular pattern of communities.

Compared to a random distribution pattern, events in a clustered distribution are more concentrated in space. Geographic events that benefit from being close to one another usually follow a clustered pattern. In India's oldest towns, for example, wholesale speciality stores such as grain stores, ironwork shops, wood shops, etc., are often situated next to each other. They go by the names lakdi mandi, galla mandi, and "grain market," "iron market," and "wood market," respectively, throughout the community. A few basic ideas determine patterns of spatial distribution. The role of the human geographer is to identify the principles that give rise to a particular pattern of spatial distribution.

### **Structures and Place-Based Organisation**

The ranking or ordering of items according to size, function, or any other significant factor is known as hierarchy. The globe can be thought of as a hierarchically ordered entity in terms of space, based on factors such as size, functional significance, or other factors that are significant geographically. The ranking or arrangement of different locations and objects on the surface of the earth might be considered the spatial hierarchy. The Indian settlement hierarchy serves as a very basic example. India's settlements range in size from the largest (metropolitan cities) to the smallest (hamlets), all based on population numbers. In a similar vein, the Indian Census establishes the hierarchy of urban towns according to population size. Regional hierarchy is another instance of spatial hierarchy. Within a hierarchy of regions belonging to the same category, a region holds a fixed position. Each zone of progressively higher rank in this hierarchy is made up by collections of regions of the immediate lower level. For instance, there are six water resource regions that make up India's whole land. Each region of water resources is made up of multiple basins, which can be made up of a single large river or a group of smaller, adjacent rivers. A catchment has multiple sub-catchments, which are primarily smaller tributaries and streams; a sub-catchment may include multiple watersheds, which are the smallest sized hydrologic units in the macro level category. A basin is created by combining multiple catchments, which are primarily main tributaries, a group of contiguous tributaries, or individual streams. A watershed is made up of sub-watersheds,

which are made up of numerous micro-watersheds, the smallest hydrological units, and major rivers and streams that are used to define sub-watersheds.

The degree of contact between communities is frequently determined by their size. If all else were equal, there would be more interaction between towns with larger populations than between settlements with smaller populations. For instance, Mumbai and Delhi are closer to Dehradun and have a closer functional relationship (as indicated by the flow of people, products, services, information, etc.) than Delhi and Dehradun. This occurs even though Delhi and Mumbai are geographically farther apart than Dehradun and Delhi. The idea of spatial hierarchy is frequently applied in national development planning and administration. For instance, the nation is divided into states and districts for administrative purposes. The state is separated into a hierarchy of various geographical ranks, such as districts, blocks, panchayats, and revenue villages, for the purpose of development planning.

The ideas of space, location, distribution, interaction, and hierarchy covered in earlier sections must be kept in mind in order to comprehend the idea of spatial organisation. Human-made features and human activity on the earth's surface are known to be the focus of human geography. Houses, villages, towns, cities, roads, railroads, parks, stadiums, factories, tanks, dams, airports, and so on are examples of man-made features. Spatial (such as movement), economic (such as agriculture, industry, and services), political (such as taking part in the political process as a citizen), and cultural (such as learning and creating diverse cultural artefacts) activities are examples of human activities. Human activities and man-made features are together referred to as (human) geographical phenomena. The spatial appearance of these phenomena as manifested in their location, distribution, and organisation is of interest to human geographers. The earth's surface has regularities and patterns, as shown by the spatial analysis of these occurrences. The distribution and location of human phenomena on the surface of the globe, for instance, follow certain orders.

Patterns of interactions among places are often found to have some order and regularity, much like spatial distribution. We are aware that the degree of interaction between locations is mostly determined by their physical separation from one another as well as their population size and functional significance. As a result, we frequently discover that there is more contact between large towns than between small ones. In a similar vein, locations that are close together tend to be more closely related than ones that are farther apart. Thus, patterns of spatial position, distribution, and interaction are governed by specific principles. As a result,

there are often certain ordering to the spatial manifestations of the position and distribution of human activities, locations, and objects on the surface of the globe, as well as the interactions between places.

The study of human activity in a spatial environment is the focus of spatial organisation. The spatial arrangements of people, man-made features, their institutions and activities, and the connections between locations are all examples of how geographical space is ordered. For instance, economic geographers examine how economic activities—like manufacturing, agriculture, urbanisation, and the transportation system that connects them—are distributed geographically. Similar to this, patterns of the spatial distribution of urban centres of various sizes are of interest to urban geographers. In India, urban settlements are often arranged spatially according to the subsequent hierarchical pattern: There are fewer and more widely separated big cities. Urban centres are becoming more numerous and their average spacing (distance) between each other is getting smaller. In other words, there are numerous smaller cities and towns and their average distance from one another is smaller than that of larger cities.

Human geographers are concerned with more than just identifying and elucidating the way space is now organised and the underlying logic of their specific kind of organisation. They also aim to challenge the way space is now organised and offer ideas for reorganising it (i.e. regional planning). Given these, the following queries are posed by human geography students:

1. Where is it? (i.e. location and distribution)
2. Why is it so? (i.e. reasons for the existing patterns of location and distribution)

## **Culture and Society**

Two significant human geography derived notions are society and culture. When multiple people live together, they interact with one another and form relationships of some kind. A society is characterised as a web of connections or exchanges among the residents of a certain location. Individual interactions might take on social, economic, political, or religious characteristics. An illustration of economic contact is the relationship between a manufacturing owner and their employees. Individuals may also engage in a cooperative, peaceful, competitive, consensual, or conflictual manner. In essence, society is a network of these social connections.

Society is a composite concept. Along with individuals, it encompasses a range of communities, groups, institutions, and groupings. The main institutions of society are social (marriage and family), political (the state), economic (factories), legal (courts), educational (schools), health care (hospitals), and so forth. An individual could be a member of one or more of these groups. As members, they interact with their institutions. The relationship between the state and its citizens is one instance of a political interaction. In this way, a variety of interactions make up society.

The world's human population is distributed across many geographical regions. In every place, they engage in complicated interactions with both their (natural) environment and the people and organisations that make up their civilisation. Different social interactions within the community lead to the emergence of distinct systems of production, livelihoods, and social relationships in various geographic contexts. These include agriculture, industry, services, horticulture, floriculture, hunting, fishing, and animal husbandry (cattle rearing).

Giving systematic descriptions of the variations between societies in various parts of the world is a major interest of human geographers. Different patterns of interactions between individuals and the environment make up these societies. Based on the characteristics of social interactions and production processes, human geographers categorise human civilisation into two groups: generally simple homogeneous and complicated heterogeneous. Simple homogeneous societies include rural-tribal societies. However, urban-industrial civilisations fall within the category of complex heterogeneous societies due to the intricacy of their labour division and production processes.

Now let's talk about culture. All human creations are included in the first aspect of culture. Everything that people have produced since they first arrived on this planet is considered a cultural artefact. Tools, technology, instruments, and methods used in hunting, farming, building homes, creating clothing, and other activities are all included in this category. These are the tangible, material, and objective components of cultures. Human behaviour is the second facet of culture. Behaviour refers to the thoughts, feelings, and outward actions of people. However, a person's actions cannot be categorised as their culture. When the majority of people in a society share it, it becomes a part of the culture. Culture in human geography refers to the regional manifestations of both material and non-material culture. There are two methods used by human geographers to investigate the material and immaterial facets of culture. They start by researching the traits and development of culture in

connection to the physical surroundings. A society's culture is closely linked to its physical surroundings. People who live in desert surroundings have distinct dietary habits, wardrobes, home styles, and lifestyles than people who live in mountainous or coastal regions. Human beings form civilisation and culture through the process of adjusting to their geographical surroundings or finding harmony with them. The steady evolution of a society's culture from prehistoric times to the present in connection to its geographical surroundings is the focus of human geographers.

Second, human geographers investigate how culture spreads over time and geography. Certain aspects of culture that emerge in one location spread to other locations. Buddhism, Christianity, and Islam, for instance, all have their origins in particular locations. These religions spread to distant locations over time. Similar to this, many nations around the world currently speak languages and dialects that historically originated in particular locations, such as English, French, Spanish, and Bhojpuri.

There are distinctions even though human geographers use ideas of culture and society to comprehend how space is socially organised. Cultural geography is the primary field of study for culture because it is frequently linked to anthropology. However, since the concept of society was borrowed from sociology, social geography is the field in which it is mostly researched. Nonetheless, human geography includes both social and cultural geographies. Human geographers have historically been most closely associated with anthropology (anthropogeography was the original name of human geography), and hence with the cultural idea. Later on, however, they made extensive use of sociology. As a result, understanding how space is organised requires an understanding of society and social organisation.

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## ***2.3 DEVELOPMENT OF HUMAN GEOGRAPHY***

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The development of human geography can be traced back through different phases of intellectual thought, influenced by other disciplines such as anthropology, sociology, economics, and political science.

### **1. Pre-Modern Period**

- Early human geography was largely descriptive, focusing on the exploration and documentation of new lands, especially during the Age of Exploration (15th-17th

centuries). Geographers like Ptolemy and Strabo contributed significantly by mapping the world as they knew it.

## **2. Environmental Determinism (Late 19th Century)**

- This approach suggested that the physical environment, particularly climate, determined human behavior and societal development. It emphasized the dominant role of nature in shaping cultures and economies. However, it was later criticized for being overly simplistic and deterministic.

## **3. Possibilism (Early 20th Century)**

- In response to environmental determinism, possibilism emerged, arguing that while the environment sets certain constraints, humans have the agency to make choices and adapt. People are seen as active agents who can modify and influence their environments.

## **4. Regional Geography (Mid 20th Century)**

- Regional geography focused on the in-depth study of specific areas or regions, blending physical and human geographic perspectives. This approach emphasized the unique characteristics of regions, studying them as individual, coherent units.

## **5. Quantitative Revolution (1950s-1960s)**

- This period marked a shift towards a more scientific, data-driven approach in human geography. Geographic research increasingly relied on statistical and mathematical models to explain patterns and processes. It also saw the rise of spatial analysis and Geographic Information Systems (GIS).

## **6. Behavioral and Humanistic Geography (1970s)**

- In reaction to the overly objective, number-driven focus of the quantitative revolution, humanistic geography emphasized subjective human experience and decision-making. This approach sought to understand geography from the perspective of individuals and communities, focusing on how people perceive and experience space and place.

## **7. Radical and Marxist Geography (1970s-1980s)**

- Radical geography emerged as a critique of mainstream geography, focusing on social inequalities and power dynamics in space. Marxist geographers, in particular, sought to understand how capitalism shapes geographic space and influences class struggles.

## **8. Postmodern and Feminist Geography (Late 20th Century)**

- Postmodern geography rejects the idea of a single, universal truth, instead emphasizing diversity, multiplicity, and difference in geographic inquiry. Feminist geography focuses on gender relations and how they shape space and place, highlighting the importance of identity and power relations in spatial analysis.

## **9. Globalization and Sustainability (21st Century)**

- In contemporary human geography, there is significant focus on globalization, environmental sustainability, urbanization, and the impacts of climate change. Global processes like migration, trade, and technology are analyzed alongside local responses, emphasizing interconnectedness and the need for sustainable development.

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### ***2.4 SUMMARY***

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These principles and historical developments provide a comprehensive framework for understanding human geography, emphasizing the interactions between people, places, and environments across space and time.

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### ***2.5 GLOSSARY***

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- Fundamental- Basic.
- Influenced- The power to affect.
- Examined- To look at something carefully.
- Concepts- A basic principle.
- Object- A thing that can be seen and touched but is not alive.
- Communities- A group of people living in the same place or having a particular characteristic in common.
- Frequently- Many times and at short intervals.
- Development- The process of creating something more advanced.
- Contemporary- Belonging to the same time as somebody else.

- Universal truth- Widely accepted facts which does not changeover period, circumstance, location.
- Quantitative revolution- The application of statistical and mathematical techniques, theorems and proofs in understanding geographical system.

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## ***2.6 ANSWER TO CHECK YOUR PROGRESS***

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- Time and space are two fundamental components of anything that exists on Earth's surface.
- An area is commonly understood to be a specified portion of space or the earth's surface.
- A location or a place is defined as a region with clear or undefined boundaries that is unique in terms of its functions and physical attributes, both cultural and physical.
- A region is an extremely developed idea. Every region is distinguished by a feature that binds the area together.
- A network is a collection of components that are linked to one another, or linked nodes.
- Spatial interaction is the interdependent link that is created between locations because of the flow of people, products, services, capital, information, and ideas.
- An identified phenomena of a particular size is called an event.
- The grouping of instances of the same kind is called a distribution.
- Regional geography focused on the in-depth study of specific areas or regions, blending physical and human geographic perspectives.
- Radical geography emerged as a critique of mainstream geography, focusing on social inequalities and power dynamics in space.
- Postmodern geography rejects the idea of a single, universal truth, instead emphasizing diversity, multiplicity, and difference in geographic inquiry.

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## ***2.8 TERMINAL QUESTIONS***

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- 1- Discuss the concept of Human Geography?
- 2- Explain the basic principles of Human Geography?
- 3- Write in detail the development of Human Geography?
- 4- What do you understand by determinism?
- 5- What do you understand by possibilism?
- 6- Write a note on globalization and sustainability?

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## **UNIT-3 BRANCHES OF HUMAN GEOGRAPHY AND SCHOOLS**

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***3.1 OBJECTIVES***

***3.2 INTRODUCTION***

***3.3 BRANCHES OF HUMAN GEOGRAPHY AND SCHOOLS***

***3.4 SUMMARY***

***3.5 GLOSSARY***

***3.6 ANSWER TO CHECK YOUR PROGRESS***

***3.7 REFERENCES***

***3.8 TERMINAL QUESTIONS***

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### **3.1 OBJECTIVES**

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After reading this unit you should be able to:

- Understand the branches of Human Geography.
- Explains the schools of Human Geography.

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### **3.2 INTRODUCTION**

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In the previous unit you read about the general principles and development of human geography. In this unit you will learn about the branches and schools of human geography. There are many branches of human geography. Such as Cultural Geography, Economic Geography, Political Geography, Social Geography, Population Geography, Urban Geography, Historical Geography etc.

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### **3.3 BRANCHES OF HUMAN GEOGRAPHY AND SCHOOLS**

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#### **Branches of Human Geography**

The study of human geography examines the interactions between people and their environment. It is a broad and fascinating area. An overview of some of the primary areas of human geography is provided below:

- 1. Cultural geography:** discusses the differences in human cultures, languages, religions, practices, and traditions according to geographic location. Investigates the relationship between cultural activities and their surroundings and how the latter influences the former.
- 2. Economic geography:** Examines how economic institutions and activities are distributed geographically throughout the world. Examines elements such as patterns of development, trade, consumption, and production.
- 3. Political Geography:** Examines how political power systems and geography are related. Investigates issues through a geographical perspective, including borders, elections, and international relations.
- 4. Social geography:** Examines the spatial patterns and social inequality in human communities. Focuses on issues related to social justice, poverty, gender, and racism within a specific geographic area.
- 5. Population Geography:** Examines the demographics, migratory trends, and geographic distribution of human populations. Investigates the trends in population growth and decline and their effects on various regions.
- 6. Urban Geography:** Examines the formation, evolution, and use of cities and metropolitan regions. Examines socioeconomic issues, transportation networks, and urban development in cities.

**7. Historical Geography:** Investigates the evolution of human cultures and their relationships with the environment. Makes use of geographic analysis and historical data to comprehend the past.

There are numerous more subfields within human geography that focus on themes, such as medical geography, environmental geography, and behavioural geography; this is by no means an entire list. Human geography is beautiful because it is multidisciplinary. It incorporates ideas from history, economics, sociology, and other fields to give a comprehensive picture of the human experience in space and time.

### **Schools**

Immanuel Kant gave philosophical base to geography. Humboldt and Ritter developed the subject and placed it in the position of an independent branch of knowledge. From the middle of the nineteenth century to contemporary times, many philosophical thoughts changed in geography, definitions changed, new rules were developed and teachings were born. French, German, British, American and Russian scientists contributed to the main concepts and principles in geography. Description of these schools is presented in this chapter.

### **German School**

German has made a significant contribution to the field of geography. The Germans made significant progress and established a solid foundation for the subject in the 18th and 19th centuries. They provided it a scientific and philosophical foundation. Universities' roles underwent a clear shift in the years following Humbolt and Ritter. The standardization of curriculum in the physical, biological, and social sciences, together with the introduction of elective subjects, occurred in the mid-1800s. The first university in Germany was founded in 1809, but geography was only taught in a very small number of institutions until the end of the 19th century. The field of geography was growing extremely slowly in its early years, and the teachers were not well-versed in the subject. Most of the geography professors were Carl Ritter's students, and even they lacked significant geographic knowledge because of their backgrounds in other fields.

The German academics also attempted to define geography and provide several definitions. Some of the key geographical ideas that German academics defined and promoted. Europe had a period of political unrest in the middle of the 1800s. Military leaders and administrators had a tremendous need for maps and charts because they wanted to know more about the physical and cultural characteristics of various countries and regions of the world. Everything that could be plotted on a map was deemed geography since maps were so useful.

### **CONTRIBUTIONS OF GERMAN GEOGRAPHERS:**

#### **(1) Oscar PescheL (1826-1875):**

In 1871, renowned German geographer Oscar Peschel was employed as a professor at the University of Leipzig. He served as the editor of "DAS AUSLAND," a publication that once featured articles on the geography of other nations. Comparative geography was developed by Oscar Paschal. He also established the framework for contemporary physical geography. He disregarded the importance of humans in the field of geography when

studying landforms and physical geography. His book on physical geography was released after his death, at the age of 49.

**(2) Ferdinand Von Richthofen (1833-1905):**

The German empire was established in 1871 following the unification of Germany following the Franco-Prussian War. There was a strong need for geography instruction following the end of the Franco-Prussian War. In response, new geography textbooks were written, and the subject was taught in 10 national universities. By now Ferdinand von Richthofen had become little more than a geologist advocating for geography. After his tour, he created a map of China's coalfields. In addition, he mentioned and attempted to explain the origin of the loess deposits in Northern China. According to him, the goal of geography is to draw attention to the various phenomena that interact with one another on the surface of the planet.

The first German academic to distinguish between "general" and "regional" geography was Reichthofen. He underlined the need for descriptive regional geography to draw attention to a region's most notable characteristics. On the other hand, general geography examines the global spatial distribution of distinct phenomena. He underlined the importance of fieldwork for the methodical regional investigation.

**(3) Friedrich Ratzel (1844-1904):**

Ratzel, who was born in 1844, attended numerous German universities for his early schooling. He travelled to Mexico in 1874–1875, the United States, and Italy in 1872. With a background in geology, Ratzel dominated Germany's topography throughout the latter half of the 1800s. As Darwin's contemporary, he was impacted by the Theory of Evolution of Species and gained notoriety for applying Darwin's biology theories to human cultures.

Prior to Ratzel, Carl Ritter and Alexander Von Humbolt established the groundwork for regional geography and systematic geography, respectively. Ratzel conducted a methodical investigation of human geography by contrasting the lifestyles of various tribes and nations. He had a strong interest in tribes, races, and nations, and it was during his sufficient fieldwork that he came up with the phrase "anthropogeography."

Ratzel enlisted in the Prussian army in 1870, and following Germany's unification in 1871, he dedicated his time to researching German expatriates' lifestyles. He travelled to Transylvania and Hungary for this reason. He travelled to the US and Mexico in 1874–1875, broadening his field of study. He researched the economy, society, and environment of the native Americans and their tribes in the United States, focusing on the way of life of the Red Indians. He attempted to develop some broad theories about the spatial patterns arising from the interaction between the retreating and hostile human groups and the growing groups on the basis of his field research.

After finishing his fieldwork in the United States and Mexico, he returned to Germany in 1875 and was hired as a professor of geography at the University of Leipzig in 1876.

He wrote two books about North America's physical and cultural geography, which were released in 1878 and 1880. He finished "ANTHROPOGEOGRAPHY" between 1872 and 1899. The first volume of anthropogeography examines the interaction between humans and the environment, whereas the second volume discusses how humans affect the environment. In

anthropogeography, he presented the first comprehensive analysis of human geography using a logical method.

His deterministic approach gained a lot of traction outside of Germany, particularly in the United States, France, and England. The Theory of Evolution of Species by Darwin also had an impact on Ratzel. He applied Darwin's theory to human societies, arguing that just as plants and animals must battle to exist in specific conditions, so too must human organizations. This is known as "SOCIAL DARWINISM."

#### **(4) Alfred Hettner (1859-1941)**

Alfred Hettner is a student of Ratzel and Richthofen. In essence, he was a regional and physical geographer. He travelled a lot and then wrote research papers. In 1907, his book "Europe" was released. He defines geography as the study of areas or as a chorological science. He emphasized the value of regional geography and expounded on the significance of phenomena dispersion. According to him, geography is a field where objects must be described in relation to their geographical location on Earth, just as history is a field where objects must be evaluated in relation to their historical context.

Hettner claimed that geography is not monothetic (general) but rather idiographic (regional). He believed that understanding the differences between the many earth regions was what made geography unique. Since humans are seen to be an essential component of a place's natural environment, "mere description has been replaced in all branches of geography by search of causes." He promoted the idea that "the unity of geography is in methods."

Hettner disagreed with the idea that geography could be classified as either regional or general. Like other academic disciplines, geography must deal with both topics (regional geography) and universal topics (general geography), but its primary focus is on the study of regions. German geographers became attracted to this idea of uniqueness (regional geography) for many years, and it continues to be a contentious issue in the field. Regional studies were conducted after Hettner, focusing on the location, geology, surface features, climate, vegetation, natural resources, distribution of settlements, economics, transportation networks, and political divisions.

Hettner's approach was also criticized. Critics said that Hettner was trying to emphasize the physical environment while ignoring the importance of cultural influences. As an example, the population density, the economy, social institutions, cultural characteristics, religious beliefs, and political policies are all directly linked. Also, many of the relationships seen in regional research were changing over time. Many herders who were previously nomadic begin to settle down and lead sedentary lives due to sociocultural and political influences.

#### **(5) Albrecht Penck:**

In the early 20th century, renowned German geographer Albrecht Penck developed the idea of "geomorphology." From 1885 till 1906, he taught at Vienna. He was connected to Eduard Suess, a cartographer who created maps of the world's principal geological zones. He established the fundamentals of the evolution of landforms and demonstrated how to use a chorological (regional) perspective to approach the systematic study of features. Penck (1910) proposed the theory that landform analysis can be used to classify climates in situations when meteorological data is unavailable. It was him who first noticed that

evaporation rises with warmth. Additionally, he made note of the fact that the current temperature directly affects the effective rainfall, or the difference between a location's rainfall and runoff + evaporation.

He saw man as a significant force that shapes the earth's surface. Penck emphasized how crucial precise maps displaying relief features are to an organized study of geography. Thus, he proposed the concept of topographical maps. His recommendations led to the preparation of large-scale topographical maps, or those that display important terrain features, water bodies, vegetation, and human-made structures on an inch to mile scale.

Many young scientists have chosen to work in the fields of geomorphology and climatology as a result of Penck's groundbreaking theories. The German scientist Wladimir Koppen, who was born in Russia, began researching global climate according to Penck's recommendations. In addition to using the temperature and precipitation data that were gathered between 1884 and 1918 for his climatic study, Koppen made multiple attempts to generate an accurate classification of climates.

Many young scientists have chosen to work in the fields of geomorphology and climatology as a result of Penck's groundbreaking theories. The German scientist Wladimir Koppen, who was born in Russia, began researching global climate according to Penck's recommendations. In addition to using the temperature and precipitation data that were gathered between 1884 and 1918 for his climatic study, Koppen made multiple attempts to generate an accurate classification of climates. Koppen used vegetation, rainfall effectiveness, seasonal and annual fluctuations in temperature, and rainfall to support his classification. With the use of these indicators, he was able to identify specific patterns in the distribution of temperature and rainfall. He found that there are year-round moisture deficits on the western borders of both hemispheres between 20° and 30°, and that continental regions at the same latitudes experience colder winters and warmer summers than regions near bodies of water (oceans, seas).

### **FRENCH SCHOOL**

The geographical concepts and ideas that Ratzel and his followers first introduced disseminated throughout the surrounding nations. French academics were inspired by the writing and publishing of Alexander Von Humboldt's thirty books, which he wrote and published in Paris. During the mid-1800s, historians, geologists, engineers, and members of the armed forces taught geography in both Germany and France. One historian affiliated with the Faculty of Letters even held the chair of geography at the Sorbonne in Paris.

The first French scholar to critique the widely used approach of representing demographic, economic, and other statistics in administrative divisions was Phillippe Bauche (1752). He believed that using a natural region as a frame is the best way to describe geographical data. A river basin, in his opinion, is the ideal form of natural area. The national territory was then suggested to be divided into natural regions, each of which was given a brief description by Baron Coquebert, the Director of the French Statistical Office from 1796 to 1797. This endeavor sparked curiosity about France's regional divides. However, Omalius Halloy's 1833 geological map of France, which established the connections between underlying rocks, soils, and landforms, challenged this approach. About the time of 1870, a

significant advancement in the field of geographic knowledge took place. Soon, a number of geographical societies were founded at France's several colleges. However, the Vidal de La blache era saw the beginning of the genuine boom in French geography.

### **CONTRIBUTIONS OF FRENCH GEOGRAPHERS:**

#### **(1) Vidal de Lablache (1848-1918):**

Vidal de Lablache is known as the founder of Human Geography. He studied the classical languages. While he was studying archaeology in Athens in 1865, his interest in geography began to grow. Subsequently, he worked as a geography professor at the University of Nancy (1871–1877) before joining Ecole.

He established a brand-new, professional journal in 1891 to publish the best writings on geography. The journal was known as “Annales de géographie.” The first edition of the “Atlas Generale Vidal- Lablache” was released by Vidal in 1894. He held the position of Professor of Geography at the University of Sorbonne from 1896 until his death in 1918. He emphasized in 1899 that it was better to study the link between a person and their immediate environment in tiny, homogeneous areas known as pays.

Vidal was an outspoken critic and opponent of the environmental determinism theory. He supported the theory of “possibilism” put out by Febvre. His fundamental theory of the study of man and environment was that while nature provides opportunities and boundaries for human settlements, how a person responds to these circumstances depends on their own customs. This is one of the two main tenets of geographical study. "Tableau de la Géographie de la France," written by Vidal, was a valuable contribution to the literature on geography.

Vidal is against using a drainage basin as a research unit. Although he disapproved of the idea of using a drainage basin as the study unit, he believed that doing so would make it difficult to comprehend the realities of a given area. For instance, the French central Massif is a clearly defined natural region overall, but if it is split up into drainage basin divisions, it becomes impossible to fully comprehend the people's institutions, customs, culture, and attitudes. Vidal believes that the best units of study and training for geographers in geographical studies are the relatively small regions. In France, the practice of micro-region study is still prevalent.

Vidal passed away in 1918, but his seminal work "Human Geography" was published posthumously in 1921. Vidal de La Blache's son-in-law, Emmanuel de Martonne, gave the nearly finished piece its final form.

Vidal contends that separating natural and cultural phenomena should be considered impossibility because they are inextricably linked. For instance, the animal and plant life of France in the 19th century was very different from what it would have been if humans had not been there for generations. Studying the natural landscape in isolation from the cultural landscape is therefore no longer feasible. Man and nature have a bond so close-knit that it is impossible to discern between man's and nature's influences on one another. A region is the space across which a close bond between humans and the natural world has grown over many ages. As a result, Vidal promoted regional geography as the fundamental component of geography.



As he aged older, Vidal came to the realization that the finer aspects of French culture were disappearing due to industrialization. In the future, he recommended that instead of focusing on the interactions between natural and cultural factors, we investigate the economic interactions between an area and the metropolitan centre that controls it. By 1921, there were 16 geography departments in France, one in each of the 16 institutions, thanks to Vidal's efforts. It's interesting to see that Vidal's students filled every geography chair. He is therefore appropriately referred to as the "Father of Human Geography."

## (2) Jean Brunhes:

Jean Brunhes, who was born in 1869, studied under Vidal de Lablache. He prepared himself for the conceptual framework of human geography by studying geography and history. He attempted to define the parameters and approach of human geography following in the footsteps of his teacher.

In 1910, he published his major work, "Geographic Humaine: essai de classification positive." He restricted the study of human geography to two areas:

- (1) unproductive occupation of soil.
- (2) Things connected with the conquest of plant and animal world.
- (3) The destructive economy- "robber economy" or violent attack on nature which may result in poverty.

He placed special emphasis on two ideas in his geographical research method:

- (4) Principle of activity.
- (5) Principle of interaction

**Principle of Activity:** According to Jean Brunhes, cultural and physical phenomena should not be viewed as static in terms of time, but rather as dynamic processes that are always changing. He believed that nothing is "stable and static" and that "everything is growing or diminishing," "expanding or shrinking." For instance, the shape, size, and attitude of things like volcanoes, sea level, ice sheets, glaciers, valley sizes, deltas, and forests are always changing. Therefore, it is important to keep in mind the concept of activity in order to arrive at a just synthesis when understanding the interaction between the physical and cultural components of a meso or micro unit.

**Principle of Interaction:** Jean Brunhes took this concept from Vidal de La Blache, who promoted the idea of the terrestrial whole. According to Brunhes, geographical phenomena need to be researched in all of their many combinations or while keeping in mind all of their permutations and combinations because they are strongly tied to one another. One of the basic ideas that later inspired "regional synthesis" was the concept of the "terrestrial whole" or "terrestrial unity." The interminable interrelationships of the conditions that all physical and human forces bring produced bond things together.

To develop his theory of interactions, Brunhes looked at how animals and domesticated plants interact, identifying the types of soil exploitation, cultivation techniques, and economic structures that these animals are typically linked to. To put it clearly, the foundation of our work is the major geographical principle of interaction. Since humans are similar to plants and animals, the idea of interaction should guide any thorough investigation of geographical data. The results of their relationships and the outcomes of these relationships bond the forces of physical nature together.

### **(3) Elisée Réclus (1830-1905):**

Reclus was first and foremost an idealist who refused to compromise. At the age of 20, he moved to Berlin to pursue his studies in theology. However, it was during Carl Ritter's lectures that he rediscovered his interest in geography. Reclus went widely throughout North and South America, more to observe than to undertake study. In 1857, he returned to France and befriended the renowned anarchist, Mikhail Bakunin (1814-76).

Reclus thereafter became a member of the inner band of the covert anarchist group Fraternite International. Reclus believed in societal anarchy. With the publication of "La Terre," a study of systematic physical geography, he gained prominence as a renowned French geographer (1866-7). His 19-volume regional geography work "Nouvelle Geographic Universelle" (1875-94) is the work for which he is most known.

Towards the end of his life, he wrote "L'Honne et la Terre," which was largely published posthumously in 1905-8 and could be considered social geography. His primary area of interest was the human aspects of geography. He talked about the interaction between humans and nature in a very scientific manner and had a strong interest in protecting the environment and maintaining its beauty.

### **(1) Emmanuel de Martonne (1873-1955):**

Vidal de Lablache's son-in-law and student was Emmanuel de Martonne. His specialty was physical geography, with a particular focus on Central Europe. In addition to biology, he had studied geophysics and geology. He was keen to learn more about the issue of Alps glacier degradation. Martonne's "Traite de Geogrpahic Physique and La France Physique" are among his most well-known compositions. Numerous French geographers were motivated to pursue careers in physical geography by him.

### **(2) Albert Demangeon**

Demangeon spent the most of his time editing the Annals, contributing 31 articles and 89 notes to the magazine. He dedicated his life to pursuing the spatial variations of farmsteads, to which he made a significant contribution. He wrote on transport geography, population and international economy. In addition, he created maps of land use and classified the various types of land. He suggested that research be done on the main ethnic groups in the Far East, the interactions between Whites and Blacks, irrigation in desert regions, and the expansion of large cities.

Demogeon had extraordinary vision and was a teacher of many virtues. He was a courteous and modest individual. There is widespread recognition for his contribution to the Vidalian tradition. During the interwar years, geography was studied using a new

methodology following the decline of the Vidalian tradition. With the advent of new instruments and methods, analytical research came to the fore. In the realm of agricultural geography, this trend was particularly apparent. The French academics likewise embraced advanced statistical methods.

### **American School**

When the new geography arrived in North America about a decade after its appearance in Germany, there was already a long record of interest in geographical studies and in the teaching of geography in schools and colleges. As in other parts of the world, work that can be identified as geographical in nature was contributed by scholars (e.g. Benjamin Franklin and Thomas Jefferson) for whom geographical studies constituted only one of many intellectual interests. Pioneers like George Perkins, Marsh, Mathew, and Fontaine Maury added fresh perspectives to the study of the land as the human habitat. Scholars like Arnold Guyot at Princeton and Louis Agassiz at Harvard introduced European geographic concepts to America. Major European thematic mapping improvements were brought to the United States during the 1800s thanks to the work of individuals like Lorin Blodget, Joseph C.G. Kennedy, Daniel Coit Gilman, and Francis A. Walker. The tradition of field surveys and the subsequent emphasis on induction from observations rather than deduction from theory formed a significant portion of the backdrop for the creation of the new geography in America. The United States Geological Survey had recently been formed by combining the Great Surveys of the West in the 1880s. Without any prior instruction in geography concepts and procedures, the men who worked on these surveys had to figure out the answers on their own to the five crucial questions: i) what to observe ii) how to observe iii) how to generalize iv) how to explain v) how to communicate? These field workers were able to see landforms and the processes that produced them without being heavily influenced by expectations stemming from earlier, important studies. Another benefit that these American field workers enjoyed that the landforms students in Europe did not share was the fact that a sizable portion of western North America is arid or semi-arid, meaning that the surface's forms are not obscured by dense vegetation. This favourable setting made it easier to observe landform features and comprehend the mechanisms that led to their creation. Their work was driven by a pragmatic rationale. They held mistrust for both theory and the conclusions drawn by researchers from theory. Grove Karl Gilbert penned:

“In the testing of hypotheses lies the prime difference between the investigator and theorist. The former one seeks diligently for the facts which may overthrow his tentative theory, the other closes his eyes to these and searches only for those what will sustain it.” (Gilbert, 1886).

The conditions were in place by 1880 for the emergence of what has come to be known as new geography. When Daniel Coit Gilman was appointed president of the recently established Johns Hopkins University in 1876, the idea of the university as a community of intellectuals made its debut in America, but it quickly spread to other reputable universities. For the first time, faculty members with advanced degrees and ongoing research activities were chosen to direct the education of future generations. For the first time, academic performance in any discipline could be led and guided by a professional group without outside intervention.

In Germany, geographers started attending this novel form of higher education in 1874, and the idea quickly expanded around the globe. The pioneer who introduced the new geography in America was the geologist William Morris Davis, who had been appointed instructor of physical geography in the geology department at Harvard in 1878.

Davis helped form several professional institutes and established the first paradigm for geographical research. Initially, the study of geography was mostly related to geology. However, soon after, universities such as Cornell University (1902), University of California (1903), University of Chicago (1903), University of Nebraska (1905), Miami University, Ohio (1906), University of Minnesota (1910), University of Wisconsin (1911), Harvard University (1911), University of Pennsylvania, and New York University (1913) established departments dedicated to teaching six courses in geography.

Among these universities, Harvard, Yale, Pennsylvania, and Chicago were presumably the main providers of the concepts discussed in the academic competition. William Morris Davis was a Harvard geographer who developed physical geography by include humans into his model. One of Davis's students, H.E. Gregory, at Yale, created a good human geography department, in large part because of I. Bowman and E. Huntington. E.R. Johnson and J.R. Smith established economic and commercial geography at the University of Pennsylvania. The first geography department in the US was established in 1903 at the University of Chicago, and it offered graduate-level coursework. The physical, human, and economic geography components of the Chicago program were strong points.

William Morris Davis the pioneer who introduced the new geography in America was born of Quaker parents in Philadelphia in 1850. He graduated from Harvard in 1869 and a year later he received the degree of Master of Engineering. From 1870 to 1873 Davis worked as an assistant at the Argentine Meteorological observatory in Cordoba, Argentina. Returning to Harvard for further study in geology and physical geography, he was appointed assistant to N.S. Shaler in 1876 and was promoted to instructor in physical geography in 1878. He became an assistant professor of physical geography in 1885 and then elevated to the rank of professor. He lectured as a visiting professor at numerous colleges. He served as president of the Association of American Geographers three times (1904, 1905, and 1909), having been one of its founders in 1904.

In addition, he presided over the Harvard Travelers Club and the Geological Society of America. Davis made numerous contributions to geology and geomorphology, but the idea of the erosion cycle—which he dubbed the "geographical Cycle"—was the one that held the key to all the others. Besides giving the names for the stages of his cycle, Davis also gave technical terminology for the various landforms, each phrase with an accurate description. He added following, obsequent, and re-sequent rivers to Powell's original three categories of rivers—antecedent, superimposed, and consequent. He used the name monadnock from Mt. Monadnock in the New England peneplain for the low mountains that rise above the overall level of a peneplain. Additionally, he made an effort to save geography instruction from being overly focused on factual information and underutilized basic notions as a framework for organizing the data. Apart from this, Davis was an exceptional educator. Given his versatility, it would be difficult to adequately sum up his contribution to the evolution of American geographical philosophy in a condensed amount of space. His pupils made additional contributions to the growth of the geography field.

## **British School**

Halford J. Mackinder was appointed to Oxford University in 1887, geography began to gain traction in British universities, but the real explosion of growth occurred after 1900. British geography, as taught in schools, was largely seen as a tedious and arduous subject in the 19th century. A list of locations and items that students needed to memorize was given to them by uninspired and inexperienced teachers. Geologists taught geography in the universities, and historians gave lectures on geography as a framework for comprehending the path of history.

But then there was the extraordinary Lady Mary Somerville of 19th-century Britain. a self-taught geographer who has extensive reading knowledge and close relationships with the top academics in her field. When it came to her comprehension of the nature of geography as an area of study, she was far ahead of her peers. She had written two volumes on the physical sciences and celestial mechanics before beginning work on *Physical Geography* in 1839. *Physical Geography* was first published in 1848. She discussed the topography of the land, the seas, the atmosphere, the geography of plants and animals, and how man affects the changes in the earth's physical aspects. Throughout her life, she worked on numerous updates, adding new information as it came to her attention. This included information found in Keith Johnston's *Physical Atlas*, which was based on Berghau's *Atlas*. However, it doesn't seem like her book had much of an impact on British geography. In distant Vermont, it touched a nerve. Her insights about how destructively men exploit the land intrigued George P. Marsh, who frequently cited her work.

Francis Galton, a British academic most renowned for his research on heredity, was another influential figure in geography. Following his travels across South Africa, he was a member of the Royal Geographical Society council from 1854 to 1893. Based on observations from eighty stations, he created the first British weather map in 1861 because of his interest in studying British weather. He was the first to identify the characteristics of air circulation surrounding a center of high pressure as well as the weather pattern that could be seen by drawing lines of equal air pressure on a map (isobars). He created a weather map for the *Times* that was the first to appear in print (April 1, 1875)

There was no professional group of scholars to continue the ideas of Somerville and Galton at the time they were making their contributions since university geographers were not organized into clusters. The Royal Geographical Society played a major role in the introduction of geography to British universities. John Scottt Keltie, the Society's Secretary at the time, was tasked in 1884 with surveying the state of geography in Great Britain and contrasting it with other nations. He stated that most universities in the other European and American countries employed geography professors, and that Britain's performance in this area was inferior to that of the other countries. The Society's President wrote to the administrators of Oxford and Cambridge in 1886, citing the survey's results and recommending that something be done about them. As a result, a geographer was hired by Oxford in 1887, Cambridge in 1888, and nearly every other British university after that.

## **Russian School**

It is difficult to determine where Russian geography originated. Nonetheless, it is thought that the school changed during the Age of Discovery. But the creation of the "Imperial Geographical Society" in 1845 was the main catalyst. Russian geography has a long history

of growth and a rich and significant legacy. It is a vast repository of geographic information. Soviet geography has continuously expanded its body of knowledge over its history. New empirical information has been obtained, progressive classic scientific trends have been continued and enhanced, and new theoretical ideas based on Scientific Marxism have been

Russian has a long history of contributing to geography, from publishing regional monographs to producing maps and atlases. The promotion of geographical research on the newly discovered regions of the country was greatly aided by Russian geographers. The language barrier prevented Western European and American geographical experts from appreciating the significance of the work done by Soviet/Russian geographers and their forebears for many years.

Most of the exploration and charting was done by Russians, however knowledgeable western mapmakers provided significant aid. Von Humboldt was pushed by Peter the Great, the Russian emperor who ruled from 1682 to 1725, to investigate precise topographical data in order to direct the Russian empire's eastward development. He backed exploration efforts and the publishing of the findings from those efforts. Maps depicting the southern region of European Russia were surveyed in the latter part of the 17th century and published. All official Russian mapping endeavors were consolidated under the first Russian Cartographic office in 1719, and when new data became available, maps were regularly updated. French cartographers provided technical support in 1734 for the development of an atlas of Russia. Finding rivers, beaches, and mountains as well as locations where furs or valuable metals might be found were the voyages' main goals. The vast array of works with a geographical concentration had an institutional focus thanks to the Academy of Sciences.

Because there were several regional descriptions available prior to 1800, Russian geographers embraced the concept of dividing European Russia into latitudinal zones with distinct natural conditions, North, Middle, and South. Russian geography from the beginning of the 19th century placed a strong focus on regions as the framework for organizing geographical research and the practical study of these regions. To provide a venue for the presentation and discussion of various research types pertaining to the physical planet and its human inhabitants, geography established a need for some sort of institution in the 1840s. With the founding of the Imperial Geographical Society in 1845, geography research in Russia took off. Numerous departments, schools, and universities of geography were founded. The study of geology, meteorology, hydrology, anthropology, and archaeology is also encouraged by the group. The term "Geographical Sciences" refers to the broad range of specializations represented in the society (Hooson, 1968).

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### **3.4 SUMMARY**

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- The study of human geography examines the interactions between people and their environment.
- Cultural Geography investigates the relationship between cultural activities and their surroundings and how the latter influences the former.
- Social Geography examines the spatial patterns and social inequality in human communities.
- Historical Geography investigates the evolution of human cultures and their relationships with the environment.

- Human geography is beautiful because it is multidisciplinary. It incorporates ideas from history, economics, sociology, and other fields to give a comprehensive picture of the human experience in space and time.
- German has made a significant contribution to the field of geography.
- Vidal de Lablache is known as the founder of Human Geography. He studied the classical languages.
- Jean Brunches prepared himself for the conceptual framework of human geography by studying geography and history.
- The Royal Geographical Society played a major role in the introduction of geography to British universities.

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### ***3.5 GLOSSARY***

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- Anthropology- The study of human beings, especially of their origin, development, Customs, and beliefs.
- Geology- the study of rocks and of the way they are formed.
- Meteorology- is the science of measurement
- Hydrology- is scientific study of the Earth's water, especially its movement in relation to land.
- Archaeology- the study of the past, based on objects or parts of buildings are found in the ground.
- Geographical Society- those associations established to advance geographical knowledge through publications, debates, funding, and related promotional and intellectual activities.
- Cultural- connected with the customs, ideas, beliefs of a society.
- Economic- connected with the supply of money, business, industry.

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### ***3.6 ANSWER TO CHECK YOUR PROGRESS***

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- Political Geography examines how political power systems and geography are related.
- Population Geography examines the demographics, migratory trends, and geographic distribution of human populations. Investigates the trends in population growth and decline and their effects on various regions.
- Urban Geography examines the formation, evolution, and use of cities and metropolitan regions.
- Urban Geography examines socioeconomic issues, transportation networks, and urban development in cities.
- Vidal de Lablache is known as the founder of Human Geography.
- Ratzel, who was born in 1844, attended numerous German universities for his early schooling.
- Prior to Ratzel, Carl Ritter and Alexander Von Humbolt established the groundwork for regional geography and systematic geography, respectively.
- Ratzel conducted a methodical investigation of human geography by contrasting the lifestyles of various tribes and nations.

- Halford J. Mackinder was appointed to Oxford University in 1887, geography began to gain traction in British universities, but the real explosion of growth occurred after

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### 3.8 TERMINAL QUESTIONS

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- 1- Explain the branches of Human Geography.
- 2- Evaluate the contributions of French and German Geographers in the development of Geography.
- 3- Discuss the contribution of French Geographer Vidal de La Blache.
- 4- Evaluate the contribution of German Geographer Friedrich Ratzel.



- 5- Describe briefly the various phases of development of modern geographical thought in United Kingdom and United States of America.
- 6- Describe briefly the various phases of development in Britain school.

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## **UNIT-4 MAN AND ENVIRONMENT RELATIONSHIP**

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### **4.1 OBJECTIVES**

### **4.2 INTRODUCTION**

### **4.3 CHANGES IN MAN AND ENVIRONMENT RELATIONSHIP**

### **4.4 SUMMARY**

### **4.5 GLOSSARY**

### **4.6 ANSWER TO CHECK YOUR PROGRESS**

### **4.7 REFERENCES**

### **4.8 TERMINAL QUESTIONS**

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## 4.1 OBJECTIVES

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After having the detailed study of this unit you will be able to

- Learn in detail about the relationship between humans and the environment.
- Understand about the changes that have taken place in human-environment relations from the prehistoric era to the present era.
- Able to understand the international efforts being made to maintain a better balance between human-environment relations.

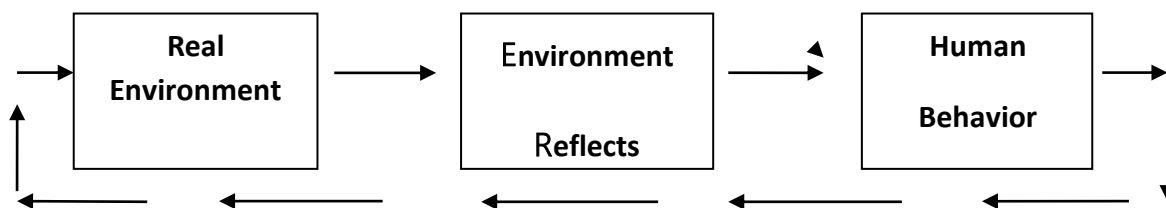
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## 4.2 INTRODUCTION

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The study of human-environment relations is an integral part of human geography. Human-environment relations are a highly complex chain of interrelationships. In the previous units of this part you studied the definition, nature and scope of human geography. In this unit you will study human-environment relations and human-environment balance. The basic premise is that the relationship between man and environment is not direct or static but complex and multidimensional, as has been accepted since the emergence of human civilization that man and nature cannot be separated from each other, because environment is the basis of life and all living beings have evolved in this environment. Man is the most intelligent creature among living beings. Man has maintained a close relationship with the environment around him from the beginning of his emergence till the present. Various natural phenomena such as - day and night, feeling of winter and summer, rain, sunshine, clouds, snowfall etc. have had a special impact on man's intelligence, discretion, livelihood etc. By establishing coordination with these phenomena, man increased his knowledge, understood the mysteries of nature and moved towards development by using natural resources. Since the emergence of human civilization, man and the environment have been influenced and affected by each other. Moreover, man has always acknowledged the importance of nature and worshipped it. So now man is not only a product of his environment, but he is also its transformer and creator.

### The traditional 'model' of human-environment relationship



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### 4.3 CHANGES IN MAN AND ENVIRONMENT RELATIONSHIP

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As discussed in the previous units, the relationship between man and environment is the main focus of human geography. From the scientific point of view, the development of human geography began in the 18th century but man-environment relations were observed since the origin of man. After human geography came into existence as an independent science in the 18th century, different geographers expressed different views regarding man-environment relations. Environment and regional differences has been the mainstay of study in the study of geography from the very beginning. In this context, the Landshut or area school of Germany, the human-ecological school of France, the spatial school of America and the complex-integral area school of the erstwhile Soviet Union are regional or systematic study methods. A committee of leading geographers under the aegis of the National Academy of Sciences of America published a document in the year 1965, which emphasized the study of human environment system in terms of land surface distribution and land surface relations. In the context of human-environment relations, in the 19th century, environmental possibilism was developed in Germany, France, neo-determinism in England and America and currently in all the countries of the world, views and explanations are being given on the study of human-environment relations. After the industrial revolution in the 18th century, production increased from industries and more employment was created. Industries also promoted urbanization, as a result of which the migration of people from villages to cities increased. As a result of industrialization and urbanization, consumerism gradually increased and natural resources started being used more and more in manufacturing work, transportation, industry and other works, as a result of which biodiversity and resources started declining. Urbanization is a natural by-product of social development and economic change. It affects both the person and the place, but on the contrary, the problem of environmental pollution started arising due to increasing population in cities, whereas the lack of balance in the environment is necessary not only to maintain the beauty of nature, but also to run daily life smoothly. The ideal environment is that natural state in which pure air is available to breathe, pure food to eat and pure drinking water to drink, but due to the ever increasing human intervention, such quality things are now becoming rare in nature. Today we have come to the brink of civilization where it is absolutely necessary for humans to change their mindset based on exploitation of the environment to maintain their existence and that of the earth. In the context of human-environment relations, Mahatma Gandhi had said that - "Nature can fulfill the needs of every person, not greed because human greed has no limits."

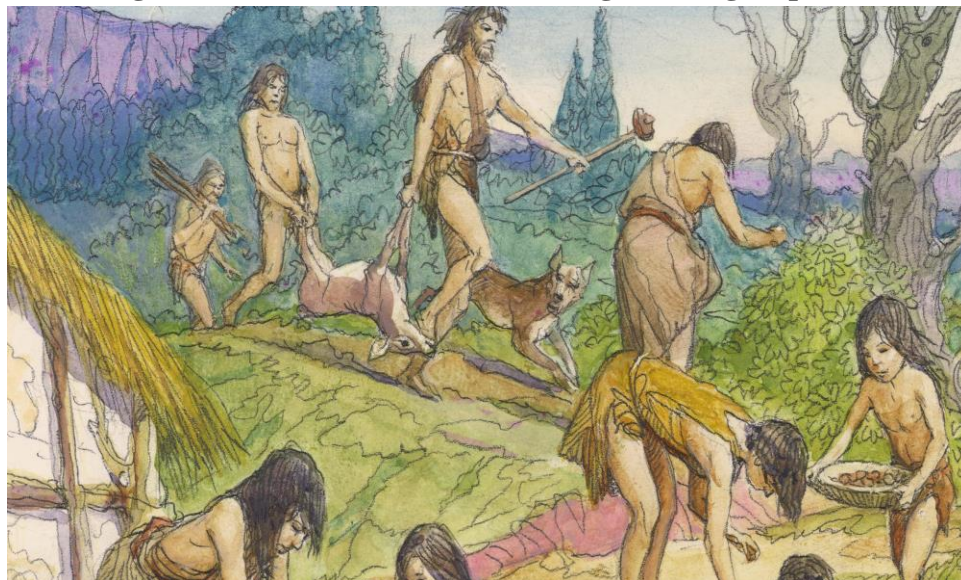
Botham's view about human-environment relationship is that "the aim of every intellectual creature is to obtain maximum happiness for him." Bentham believes that man is selfish by nature. By giving the idea of 'maximum happiness for maximum number' in his hedonistic theory, Bentham has sought social happiness instead of individual happiness. Therefore, we should take from nature only as much as is actually necessary. Hence, from the early historical era of human civilization to the present era, there have been many changes in

human-environment relations. These changes can be understood by dividing them into different periods.

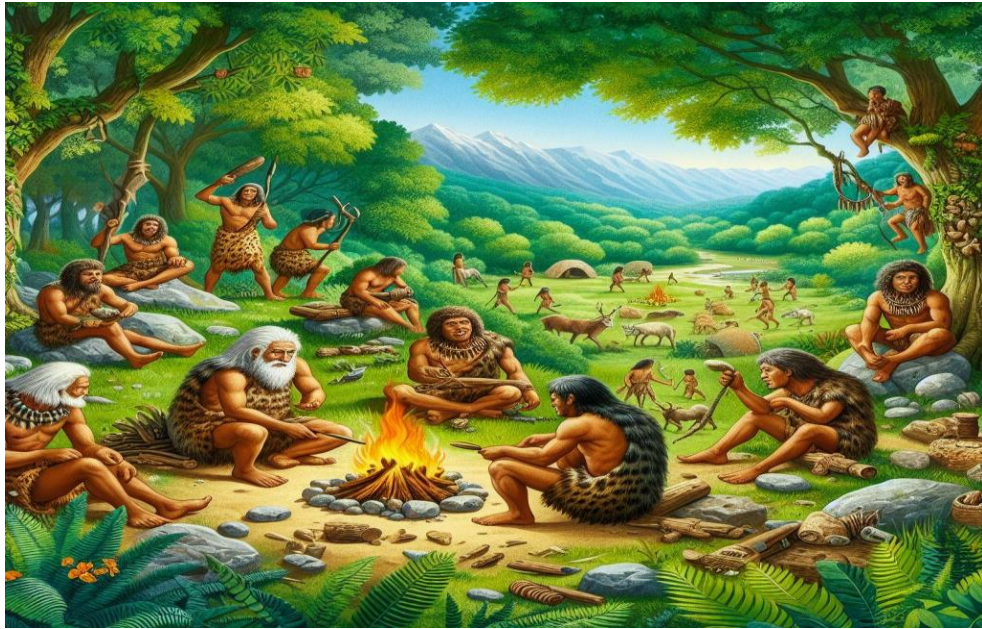
### 4.3.1 Prehistoric period (primitive stage):

Millions of years ago when the first human emerged, he was just a creature like other living beings. And the relationship between man and the environment was very deep and interdependent. The life of early man depended on hunting and gathering. He would satisfy his hunger by eating roots and tubers available in nature, kill animals and eat meat, quench his thirst by drinking water from rivers and springs and spend his life living in caves. From hunting to collecting herbs and fruits, all his activities were in accordance with the environment. This sequence of human life continued for millions of years. He kept moving from one place to another while living in groups. In this sequence of development, man neither had any kind of permanent residence nor did he have any tendency to collect resources. In this long period, due to limited need and very low population and no development, natural resources could not be used much. Early human civilizations had limited impact on the environment, because their population was small and their technical capabilities were also limited. They often used the resources of the environment sustainably and took care of the recurrence of resources. Early human societies had a sense of respect and conservation for the environment and nature. They considered animals and trees sacred and worshipped them. Many ancient cultures deified various elements of nature and tried to live in harmony with them. Overall, the relationship between early humans and the environment was a highly interdependent and harmonious one. Their life processes and traditions were in sync with and respected natural resources.

**Fig. 4.1 Prehistoric nomadic hunter-gatherer groups**



Source: Google imag

**Fig.4.2 Prehistoric nomadic groups after the discovery of fire**

Source: Google image

### 4.3.2 Agro-Animal Husbandry Age:

After the prehistoric era, man entered the agricultural and animal husbandry era, which lasted till about twenty thousand years ago. In this era, due to the development of human intelligence, man started using natural resources on a large scale along with worshiping nature. He cleared the forest land by burning the forests and started converting it into agricultural land and settlements. And he kept burning the forests to protect them from predatory animals. Due to the protection of crops, human life became stable in the agricultural era. Due to which the feeling of mutual cooperation also increased, as a result of which huts, settlements and transport routes between two settlements developed. Due to the increasing need of animals in agricultural work, some animals became companions of human life. Due to which animal husbandry business also developed as a supporting business along with agriculture. Man adopted animal husbandry to fulfill the following objectives: plowing of fields, meat, milk, transportation, leather and wool etc. With the increase in population, agricultural land and settlements expanded and the number of domesticated animals increased. Human-environment relations kept deteriorating. This expansion led to further destruction of forests. River valley civilizations developed in this era. Indus Valley and Ganga-Yumna Valley Civilization in India, Nile Valley Civilization in Egypt, Mesopotamian Civilization in Iraq and many civilizations developed in many countries of the world. To avoid the harshness of climate and disasters, man adopted migratory life and pastoral life, which led to further destruction of forests.

In the ancient agro-pastoral era, the relationship between man and environment was mostly based on the sustainability of natural resources and conservation of ecosystem. In this era, man used natural resources carefully and tried to maintain harmony with the environment.

**Fig. 4.3 Early agricultural eras**



Source: Google image

**Fig. 4.4 starting burning forests for agriculture**



Source: Google image

### **4.3.3 The era of industrialization and urbanization:**

Between the 18th century and the 20th century, there was a major change in the view of human- environment relations. During this period, different societies, cultures and thinkers gave

different interpretations about human-environment relations. When the Industrial Revolution took place in Europe in the middle of the 18th century, the natural resources started being exploited indiscriminately for large-scale production in industries. Gradually, industrialization started taking place at a rapid pace all over the world. During industrialization, natural resources such as minerals, water and energy were overexploited. This disturbed the environmental balance and reduced the availability of resources. Along with industries, new cities were born. This led to large-scale destruction of nature in urban areas and these newly emerging areas developed as trade and service facilitation centers. In this era, there was a major change in the views of Western countries. Earlier, human-environment relations were completely natural, but due to industrialization, the greed for more income and profit has created new problems in the environment. With the growth of industries, air pollution increased, causing health problems. Apart from this, water pollution also increased due to industrial waste and chemicals, which had a negative impact on water quality. The problems of air pollution, water pollution, soil pollution and solid waste are the results of industrialization and urbanization. According to an estimate, today there is 50% more carbon dioxide in our atmosphere than before industrialization. The problem of climate change became serious due to the increasing level of carbon emissions and other greenhouse gases. As a result, global warming and extreme weather events became more common. This crisis started arising in all components of nature. These problems did not arise suddenly, but their basis is the Western philosophical idea 'theory of hedonism'. Western philosophical thinkers Bentham, Mill, Epicurus, Aristides and Sedgwick are supporters of this theory. All these thinkers are unanimous in considering happiness as the ultimate goal of life. That is why all of them believe that a person remains in search of happiness throughout his life.

**Fig. 4.5 The industrialization caused of pollution**



**Source: googol image**



**Fig.4.6 problems of Urbanization**

Source: googol image

#### 4.3.4 Science and Technology Era

The last 20th century and the present 21st century is the age of science and technology. In this age of science and technology, the relationship between man and environment is a complex and important subject. This age has taken human life to new heights, but at the same time many environmental problems have also arisen. Industries, means of transport, thermal power plants, nuclear plants, especially the burning of fossil fuels, etc. emitted large amounts of harmful poisonous gases into the lower atmosphere. Carbon dioxide and other greenhouse gases were released in considerable quantities. Nuclear power plants caused nuclear pollution and human genocide by the use of nuclear bombs, ozone layer depletion occurred due to emission of greenhouse gases. As a result, bitterness came in man-environment relations. In this period, man started trying to become the master of nature instead of becoming its slave. In this age of science and technology, material development is considered to be the only basis of development. According to this materialistic ideology, the person or country which makes maximum use of material things is considered developed. At present, the basis of development of the entire world is industry-centric. In most countries of the world, where governments are in favour of multinational companies and allow them to exploit natural resources to the maximum, achieving maximum happiness through maximum exploitation of the environment has become the philosophy of life today. And this desire to achieve maximum happiness is the root cause of environmental crisis. At present, due to more attention being given to the industry-centric aspect and ignoring the environmental aspects in the entire world, the human-environment balance has deteriorated. In the view of the western world, even today the solution of environmental problems is possible by using the same processes and technology, due to which these problems arose. This is the reason that the western world even today wants to solve this problem by

continuously increasing its level through more production and more consumption. The flaw in this view is that the current environmental problems are not like a watch or a vehicle that if any part of it gets damaged, it can be replaced as soon as the problem arises. As a result of continuous exploitation of natural resources, many environmental problems have arisen at the global level, such as global warming, climate change, increase in extreme weather disasters, depletion of ozone layer, loss of biodiversity, soil erosion and decrease in productivity of agricultural land, increase in pollution, destruction of wetlands, problem of waste management etc.

In this age of science and technology, the principle of maximum production and maximum consumption has created and exploited nature. Due to this, the capacity of the earth to bear life has diminished and this process continues. According to environmentalist **Bharat Dogra**, "A lifestyle of luxury is inevitably linked to the destruction of the environment. In a world with millions of poor people, this luxury is also linked to the usurping of the resources of others. A society in which a lifestyle of luxury is presented as a shining goal, which everyone should run after, such a society cannot be presented as an example of meaningful development. In a society in which goods are sold and an artificial hunger for new consumer goods is created every day, human-environment relations can neither satisfy people nor save the environment."

#### **4.3.5 Man-Environmental Balance**

Human-environmental balance refers to such harmony between man and his environment in which there is proper coordination between the two. Its goal is to make sustainable use of environmental resources without harming the environment through human activities. Its objective is to ensure the availability of resources for future generations while meeting the needs of the current generation, judicious use of natural resources, conservation of natural resources like water, air, land and forest and promotion of renewable energy sources, control over air, water and soil pollution so that there is no adverse effect on humans and the ecosystem. Conservation of biodiversity and conservation of natural habitats as well as implementation of effective policies for environmental protection etc. are included. The changes that took place in the human-environment relationship from the emergence of humans to the modern technological era led to massive environmental destruction and created new global environmental crises. To avoid these crises, for the first time in the 7th decade of the 20th century, an attempt was made to consider environmental problems at the global level, for which a world-level human-environment conference was organized at Stockholm (Sweden) from 5 to 16 October 1972 on the initiative of the United Nations. After this conference, many conferences were organized at the global level for environmental protection, such as

##### **1.Human-Environment Conference Stockholm 1972:**

The Human-Environment Conference, also known as the Stockholm Conference, was a conference organized to discuss modern environmental issues at the international level, which

was held between 5 and 16 June 1972 in Stockholm, the capital of Sweden. Its main objective was to recognize environmental problems: especially global pollution, overexploitation of resources, and recognize the importance of environmental protection. To encourage international cooperation: To inspire countries to find solutions to environmental problems together. To introduce the concept of sustainable development: To emphasize the need to preserve natural resources for future generations.

This conference paved the way for the establishment of the United Nations Environment Program (UNEP), which is still a major international organization to address global environmental issues. This conference is seen as an important step in the field of environmental awareness and policy-making and it still serves as a historical reference for environmental discussions and conferences.

## **2. Cocoyoc Declaration 1974:**

It was issued at an international conference held in Cocoyoc, Mexico in 1974. The Cocoyoc Declaration Conference was organized by the United Nations Environment Programme (UNEP) in Cocoyoc, Mexico with the aim of discussing environmental problems and development issues at the global level. The Cocoyoc Declaration Conference included several important points: Development and Environment: This declaration acknowledged that traditional development models put excessive pressure on environmental resources and result in environmental problems. Sensitivity and Sustainable Development: The Cocoyoc Declaration emphasized the need for sustainable development, which gives importance to environmental protection along with the economic and social development of society. Management of Resources: This declaration underlines the need for prudent management of environmental resources and advises to work towards such a development model that can minimize environmental damage. Role of Society: The declaration also mentioned that active participation of all sections of society is necessary for environmental protection and sustainable development. The Cocoyoc Declaration played an important role in raising awareness of environmental issues and setting a new direction for sustainable development.

## **3. Human-Environment Conference Nairobi 1982:**

In 1982, the Human-Environment Conference was held in Nairobi, Kenya, also known as the "Nairobi Conference", the full form of which was "United Nations Conference on Human Settlements" and is also known as Habitat. The Nairobi Conference adopted the "Habitat Agenda", which provides a framework for settlements and residential development at the global level. This agenda passes guidelines for the development and improvement of settlements in different parts of the world. The main objective of this conference was to formulate global policies and plans for the development of urban and rural settlements, the major issues of which included urbanization, housing, environmental sustainability and improving the quality of life of

human settlements. And laid a foundation for future Habitat conferences, the most prominent of which was the "Habitat II" conference held in Istanbul in 1996.

#### **4. Earth Summit Rio de Janeiro 1992:**

The Earth Summit, officially known as the 'United Nations Conference on Environment and Development' (UNCED), was held in Rio de Janeiro, Brazil in 1992. The conference was an important milestone in focusing global attention on environmental and development issues. Its key points include: Agenda 21: It is a comprehensive plan that guides sustainable development. It sought to bring together environmental protection, economic development, and social justice. Rio Declaration: It is a set of 27 principles that provide ethical and legal guidelines for environment and development. It emphasized sustainable use of natural resources, environmental justice, and international cooperation. Support to Concordia statements and treaties: It saw the signing of important agreements such as the 'Climate Change Convention' and the 'Biodiversity Convention'. These agreements are important for combating global climate change and protecting biodiversity. Civil Society Participation: The conference also provided a platform to non-governmental organizations and local communities to voice their views and concerns at a global platform. The summit played a vital role in focusing attention on global environmental issues and inspired many countries to work towards sustainable development.

#### **5. Earth Summit, Johannesburg 2002:**

Earth Summit, Johannesburg 2002, also known as "World Summit on Sustainable Development". This summit was held in Johannesburg, South Africa in September 2002. Its objective is to set concrete plans and commitments to achieve the goals of sustainable development at the global level - to establish a balance between environment, society and economy, poverty eradication - to develop plans and policies to eliminate poverty, climate change - to suggest measures to reduce the effects of climate change, conservation of natural resources - to manage water, forests, and other natural resources sustainably etc.

#### **6. Kyoto Conference 1997:**

The Kyoto Conference was an important international conference held in 1997, also known as the "Kyoto Protocol". It was held in Kyoto city of Japan in December 1997. Its aim was to reduce the emission of carbon dioxide and other greenhouse gases to control the increase in global temperature. The Kyoto Protocol obliged industrial countries to reduce their greenhouse gas emissions to a set target. In this, all the countries pledged to reduce emissions under a target, which was implemented from 2008 to 2012.

#### **7. Cancun Climate Change Conference 2010:**

Cancun Climate Change Conference 2010 was held in the city of Cancun, Mexico in November - December 2010. Which was an important international meeting, this conference is

also known as "COP16", in which "COP" means "Conference of the Parties" and "16" indicates its 16th session. This conference was organized under the United Nations Framework Convention on Climate Change (UNFCCC). The purpose of which was to realize global agreements and measures on climate change issues. Many important decisions and treaties were passed in the Cancun Climate Conference: Like various countries voluntarily committed to reduce their greenhouse gas emissions, and it was decided to establish a Green Climate Fund, the purpose of which was to help developing countries deal with the effects of climate change and reduce their greenhouse gas emissions. Providing financial and technical assistance to developing countries to bear the negative effects of climate change was also discussed. The success of the Cancun Conference reflects a positive effort towards cooperation and solution to the global problem of climate change.

### **8. Durban Conference 2011:**

The Durban Conference 2011, also known as the "17th Meeting of the Parties to the Climate Change Convention" (COP 17), was held in November 2011 in Durban, South Africa. The main points of the conference included the extension of the Kyoto Protocol of 1997, which was meant to reduce greenhouse gas emissions by developing countries, to 2013. The creation of a Green Climate Fund to help vulnerable countries cope with the effects of climate change. A new Durban Platform was created with the aim of reaching a comprehensive and legally binding climate agreement by 2020. Additionally, the conference took several initiatives towards climate change measures and implementation, such as collecting data on greenhouse gas emissions and promoting environmental education. The challenge of climate change is addressed at the global level and all countries are brought together to reduce the effects of climate change.

### **9. Kyoto Protocol Extension 2012:**

Also known as "Doha Amendment" The main purpose of this amendment was to provide guidelines for a new commitment period after the first commitment period of the Kyoto Protocol (2008-2012). The Doha Agreement introduced a new commitment period from 2013 to 2020 and included the following main points: It demanded reduction in greenhouse gas emissions from developed countries and set new emission reduction targets for different countries. It focused on the reform of carbon markets and proposed new mechanisms of financial and technical assistance to help developing countries adapt to and mitigate climate change.

### **10. Paris Climate Agreement 2015:**

The Paris Agreement is a legally binding international treaty on climate change. It was adopted by 196 parties at the United Nations Climate Change Conference (COP-21) in Paris, France in December 2015. It is an international agreement with the broad goal of "keeping the increase in the global average temperature to well below 2°C above pre-industrial levels" and "pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels". Under this agreement, each country was given the freedom to declare its own climate goals and plans,

called 'Nationally Determined Contributions' (NDCs). Developed countries have committed to provide financial and technical assistance to developing countries to deal with the effects of climate change and support their local climate actions. Under this agreement, countries must submit their emissions data and reports on climate change-related actions. Every five years, there is a process of reviewing and updating the agreement's goals, called a 'global stock take'. The Paris Agreement aims to steer global climate policy in a common direction and to motivate countries to collectively tackle climate change.

**Fig.4.7 Man-Environmental Balance**



Source: googol image

#### 4.4 SUMMARY

The relationship between man and the environment is part of a dynamic and constantly changing landscape. From the time of human origin to the present technological age, the relationship between man and the environment has undergone many significant changes over time. In ancient times, man's relationship with the environment was mainly based on coexistence and balance. People used limited and sustainable natural resources. Most of their lives depended on forests, rivers and other natural resources, and they used these resources carefully. Gradually man moved towards development and the pressure on natural resources increased. The industrial revolution brought significant changes in the relationship between man and the environment. Industrial machines and factories started using resources on a large scale. This led to indiscriminate cutting of forests, water and air pollution and land use change. Urban areas grew

rapidly, causing degradation of natural land and increased pollution. In the present modern technological age, the growing population and increasing demand for energy for industrial activities led to overexploitation of mineral, water and forest resources and human-environment relations are becoming hostile towards each other. Now it is necessary that we examine the relations between earth, society and culture in the context of hot country and time. Efforts to improve human environment relations have been started since the 7th decade of the 20th century in which international conferences were organized at various levels. Also, various conferences are being organized from time to time in many countries and regions of the world to protect the environment and reduce climate change and efforts are being made to re-establish human environment relations. For which special emphasis is being laid on various subjects such as sustainable development and environment, ecology and biodiversity conservation, natural resource management and conservation, food-nutrition management, environmental pollution prevention, environmental impact assessment and environmental education etc. So that a healthy and prosperous environment can be ensured for future human generations.

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#### **4.5 GLOSSARY**

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- **Civilization:** Civilization refers to an organized society with its own culture, language, and social system. It includes cultural, social, and technological developments, which are indicative of the development of human society.
- **Conservation:** Conservation means protecting natural resources and the environment so that they remain available for future generations. It is widely applied in various fields, such as forest conservation, water conservation, wildlife conservation, and pollution control.
- **Environmental Probabilism:** Environmental Probabilism is a geographical theory that holds that human behavior and social structures are influenced by environmental conditions such as climate, topography, etc., but humans can control those probabilities through their choices and decisions. And the final outcomes depend on human actions and decisions.
- **Green Climate Fund:** The Green Climate Fund is an international financial mechanism that provides financial assistance to combat the effects of climate change and for climate change-related projects. It was established in 2010 during the United Nations Climate Change Conference (COP16). Its main objective is to provide financial assistance to developing countries for climate change mitigation and adaptation efforts.
- **Industrial Revolution:** The Industrial Revolution was an important historical event that began in Europe, especially Britain, in the 18th and 19th centuries and transformed the world's industrial and social structure. The Industrial Revolution laid the foundation for the modern era and brought about sweeping changes in the structure of society, economics, and technology.

- **Industrialization:** Industrialization refers to the transition from an agriculture-based economy to an industry-based economy. It is a process in which industries develop and expand in a country or region. It involves technological advancement, use of machines, modernization of production processes, and large-scale production.
- **Natural Resources:** Natural resources are those things and elements which are obtained directly from nature and are used for human life and activities. Such as water, forest, solar energy, wind, minerals, petroleum, coal etc.
- **Neo-Determinism:** Neo-Determinism is a geographical theory that holds that environmental factors have a significant influence on social and economic development, and that human activities and technological progress can alter or mitigate this influence to some extent.
- **Prehistoric Era:** Prehistoric times refer to the time when there were no written records of the development of human civilization. It is divided into three main eras: the Stone Age, the Copper Age, and the Iron Age. Archaeology, fossils, and other ancient remains are used in the study of prehistoric times.
- **Sustainable Development:** Sustainable Development refers to such development that fulfills the needs of the present generation without endangering the needs of future generations. Its main objective is to maintain a balance between environment, society and economy.
- **Urbanization:** Urbanization is a process in which people migrate from rural areas to cities and change the social, economic, and geographic structure of cities. It involves the movement of rural population to cities, development of infrastructure in urban areas, and improvement in living standards. This process leads to population growth in cities, and development of new industries, housing, and services in cities.
- **Greenhouse gas:** Greenhouse gases are gases that retain heat on the earth's surface and their presence in the atmosphere causes global warming and climate change problems. The major gases are: Carbon dioxide (CO<sub>2</sub>), Methane (CH<sub>4</sub>), Nitrous oxide (N<sub>2</sub>O), Chlorofluorocarbons (CFCs) etc.

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#### 4.6 ANSWER TO CHECK YOUR PROGRESS

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**1. Which of the following statements is correct with reference to mind-environment relationship?**

- (a) Environment is only a set of natural elements and does not include human activities.
- (b) There is a unilateral relationship between man and environment, in which only human activities affect the environment.
- (c) The mind-environment relationship is a dualistic relationship, in which both sides affect each other.
- (d) The environment affects only human life, but human activities do not affect the environment.



Answer: (c)

**2. Which concept is used to understand the relationship between mind and environment?**

- (a) Ecology
- (b) Psychology
- (c) Sociology
- (d) Physics

Answer: (a)

**3. In which of the following eras human-environment relations were in a friendly state?**

- (a) Science and Technology Era
- (b) Primitive Era
- (c) Industrialization and Urbanization Era
- (d) Agro-Animal Husbandry Age

Answer: (b)

**4. Which is the negative result of the relationship between man - environment?**

- (a) Conservation of flora and fauna
- (b) Climate change
- (c) Industrialization and its environmental effects
- (d) All the options are correct

Answer: (b)

**5. What is mean by the word civilization?**

- (a) Origin of humans
- (b) Modern humans
- (c) Organized society
- (d) None of these

Answer: (c)

**6. Where did the Industrial revolution begin?**

- (a) Australia
- (b) America
- (c) Britain

(e) India

Answer: (c)

**7. What effects do urbanization and industrialization have?**

- (a) Air pollution
- (b) Water pollution
- (c) Soil pollution
- (d) Climate change
- (e) All of the above

Answer: (e)

**8. Choose the incorrect option from the following?**

- (a) Earth Summit, Johannesburg 2002.
- (b) Cocoyoc Declaration 1974.
- (c) (C) Human-Environment Conference Stockholm 1972.
- (d) Kyoto Protocol Extension 2011.
- (e) Answer: (d)

**9. What is the natural resource which gets exhausted due to excessive use called?**

- (a) Unlimited resources
- (b) Non-renewable resources
- (c) Renewable resources
- (d) Limited resources
- (e) Answer: (b)

**10. Which of the following is the result of deforestation?**

- (a) Soil erosion
- (b) Air pollution
- (c) Climate change
- (d) All of the above
- (e) Answer: (d)

**11. The concept of 'sustainable development' refers to?**

- (a) The process of meeting the needs of the present generation as well as the needs of future generations
- (b) Only economic development
- (c) Only environmental protection
- (d) Only social justice

(e) Answer: (a)

**12. What is the main cause of 'global warming'?**

- (a) Emission of greenhouse gases
- (b) Depletion of ozone layer
- (c) Deforestation
- (d) All of the above
- (e) Answer: (d)

**13. Through which policy efforts are being made to control climate change?**

- (a) COP Agreement
- (b) Kyoto Protocol
- (c) Paris Agreement
- (d) All of the above
- Answer: (d)

**14. Which organization plays a major role in solving environmental problems?**

- (a) World Bank
- (b) United Nations Environment Programme (UNEP)
- (c) World Health Organization (WHO)
- (d) International Monetary Fund (IMF)

Answer: (b)

**15. Which option is a way for humans to protect the environment?**

- (a) Excessive use of water resources
- (b) Excessive use of plastic
- (c) Recycling
- (d) Burning garbage
- (e) Answer: (c)

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## **4.8 TERMINAL QUESTIONS**

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### **LONG QUESTIONS**

1. Detailed Explain in trend of changing relationship between man and environment.
2. Make a comparative description of the relationship between man and environment in the context of prehistoric period (primitive stage) and science and technology age.
3. Describe in detail the major changes that took place in human-environment relations in the era of industrialization and urbanization.
4. Explain the major global efforts made to balance the changes in human-environment relations?
5. Explaining the concept of human-environment relationship, explain the changes in human-environment relationship in the present era.

### **SHORT QUESTIONS**

1. What is the human-environment relationship?
2. How do human activities affect the environment?
3. Mention the changes in human-environment relationship during the agro-pastoral era
4. What is climate change and what are its main causes?
5. Explain the changes in human-environment relations during the era of Industrialization and Urbanization?
6. Briefly mention the first Man-Environment Conference?

7. Briefly explain Man -environment balance?
8. What is sustainable development and how does it balance environmental and human well-being?
9. How does excessive use of natural resources harm the environment?
10. Briefly mention any two conferences organized to re -establish human-environment relationship

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## **BLOCK -2 HUMAN RESOURCE DEVELOPMENT**

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### **UNIT-5 EVOLUTION OF HUMAN DEVELOPMENT**

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#### **5.1 OBJECTIVES**

#### **5.2 INTRODUCTION**

#### **5.3 PERIOD OF HUMAN ORIGIN**

##### **5.3.1 AUSTRALOPITHECUS (THE FIRST MAN APE)**

#### **5.4 SUMMARY**

#### **5.5 GLOSSARY**

#### **5.6 ANSWER TO CHECK YOUR PROGRESS**

#### **5.7 REFERENCES**

#### **5.8 TERMINAL QUESTIONS**

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## 5.1 OBJECTIVES

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After reading this unit you should be able to:

- Describe the concept of human geography.
- Trace the development of human economic activities.
- Classify various human economic activities.
- Sequence of human occupancy

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## 5.2 INTRODUCTION

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In the nineteenth century, Charles Darwin's important book 'Theory of Animal Evolution' (1860, 360) was the first in the Western world to discuss the origin and development of mankind. Prior to this, no scientific theory explaining the origin of humans had been proposed. Although in India, through the sixteen incarnations in the Vedas and Puranas, the process of evolution from inorganic to organic, aquatic to terrestrial and animal, and human to animal was made evident even in ancient times (7 to 2 thousand years ago), Darwin's progress The theory did not correspond to the Biblical views popular at the time. As a result, this ideology faced widespread hostility.

Darwin proposed three explanations for the evolution of caste in relation to the origin of humans: (1) Transformation Theory - Every element's form is constantly changing in a variety of directions. Because of the transformation orientations, the transformed forms are also of distinct sorts. (2) The principle of adaptation - In this process, some species are better able to survive in their environment than others. (3) Natural selection. Organisms that can adapt live; the remainder perishes. Nature only maintains alive those who have the most vital power. Nature maintains them alive, and the order of the organic world frequently changes as a result of unexpected changes in nature. In the Vedas, it is known as the 'Roar of God'.

Darwin introduced the concept of evolution in a biological context. Humans are thought to have evolved from lower level species in the animal kingdom using the concepts of evolution, transformation, adaptation, and natural selection. T.H. Huxley approved Darwin's idea in his classic book 'Man's Place in Nature'. Huxley's philosophy was presented in scientific terms. It was the first worldview to hold that man evolved from other creatures. In his speech at Oxford University, he stated unequivocally that my ancestors were orangutans.

According to Darwin and Huxley, humans are animal-like organisms in terms of their body shape and brain. Several lakhs of years ago, this species thrived on a branch of other human monkeys, and shortly after its evolution, it began creating substantial changes in its surroundings using its intelligence and innovative power. These scientists' classified humans as 'Mammals' by comparing their anatomy to that of other living organisms. As the world's species evolved, various branches grew.

The class of animals that includes humans' closest predecessors is known as higher-mammal humans, primates, or the main class. This branch of the major class represented the human race. Mankind flourished on this branch several million years ago, and shortly after evolution, he began making substantial changes in his surroundings thanks to his intelligence and inventiveness. As a result, the ancestors of this particular animal group all came from the same branch. In terms of anatomy and brain, humans are a distinct type of ape. We can explain this in the following way.

All families of animals in this class reflect the following common characteristics:

1. In general, they are all classified as mammals.
2. There are only two mammary glands in them.
3. The thumb is fashioned differently from the other fingers to grip objects. This category's key distinguishing feature is the ability to bend the thumb and hold objects firmly.
4. The animals in this category have fully formed shoulder bones. Hands linked to the shoulders began to hold objects.
5. The arm can rotate in any direction, which is a key feature of the arm class.
6. Both hands and feet have five fingers apiece, which aid in grasping the object and transporting it to the mouth.
7. The section of the jaw is not as protruded towards the front as it is in other lower class mammals.
8. The eyes are at the centre of the skull. As a result, they get equanimity.
9. The nasal region is tiny.
10. Their brains are relatively large, with volumes ranging from 1,100 to 1,500 cc.
11. The number of teeth ranges from 28 to 36.

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### ***5.3 PERIOD OF HUMAN ORIGIN***

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Writing a systematic history of human progress is extremely challenging. There are remains of around six different types of ancient primate (higher-mammal) creatures from the prehistoric period. The oldest human remains discovered in Egypt date back to the Oligocene period. Following this, remnants of big monkey descendants have been discovered, particularly in Europe and India, during the Upper Miocene and Pliocene periods. All of these fossil remains show that traces of ape emergence began in the late Oligocene era. These apes' progenitors can



be traced back to the remains of 'Parapithecus' and Propmythecus discovered in Egypt's Fayum region. This ape class included African gibbons, orangutans, gorillas, and chimps located in South-East Asia.

**Fossil Primates** – Palaeontology has provided key evidence for the evolution of humans and the genesis of hominids. The Tertiary period, which is thought to have begun around 650 million years ago, shows evidence of the existence of primitive 'primates'; while they cannot be classified as 'Primates' physiologically, they can be considered advanced animals. The climate during this time was hot. Paleontology has provided key evidence for the evolution of humans and the genesis of hominids. The Tertiary period, which is thought to have begun around 650 million years ago, shows evidence of the existence of primitive 'primates'; while they cannot be classified as 'Primates' physiologically, they can be considered advanced animals. The climate during this time was hot. This core group of creatures, which evolved around 260 million years ago during the Miocene period, is thought to have played an important role in the evolution of humans. Large-sized 'primates' were discovered throughout the ancient world at the time. Many of their remains have been discovered and categorized into 20 genera. In paleontology, the skeletons or fossils discovered in the French Middle Miocene sediments were named 'Dryopithecus Fontani' or Oak-ape in 1856.

Fossils of such huge beasts have also been discovered in East Africa. Many researchers believe that if the large apes were not the ancestors of humans, then one of their species must have played the most essential role in the subsequent development of hominids.

In geological history, the Pleistocene period corresponds to the time when human ancestors first arrived on Earth. Charles Lyell, a famous English geologist, named it in 1839. The term Pleistocene epoch was used in the context of most recent'. During this period, changes in numerous physical conditions enabled the evolution of human life. This is regarded as a time of instability. There was three times more ice cover than today, the ice line came down and rose up, the water in the oceans rose and plummeted 150 meters, and the ice accumulation in the northern half melted, resulting in the formation of lakes and rivers. Change your direction. Thus, significant physical changes occurred throughout this time. As a result, numerous elements changed. This period's three ice ages and four interglacial periods had a significant impact on organic life that had already emerged.

The forebears of innovative people are the period's most important product. All living things are tied to one another. Certain organisms are more closely related than others. Humans are more similar to mammalian animals than to other biological beings. Humans are vertebrates, mammals, and higher-order mammals (primates). 'Primates' organized their meals. The rare carnivorous higher mammals (primates) that required time to feed walked while standing. It is from here that humans' ancestors began to move on two legs, acquire food with their hands, and use their brains. He also required hands to grab the marine buoy.

Ramapithecus is the name given to the first fossilized remains of a human-like creature discovered in northern Pakistan, as well as comparable remains found in India's Shivalik Hills.

These remnants are thought to be from 100 to 140 lakh years ago. These have been referred to as human-like primates. They are thought to be the most distant predecessors of humans in human evolution. Some teeth have been discovered in their jaws. It was given the name 'Kenya piteous' when identical fossil remnants were discovered in East Africa. It walked erect using its two hind legs. Its teeth reveal information about its food and life, which share similarities with modern humans. It is a species similar to Mazo, said to be in the direct line of human development, whose remains were discovered; however, no remains prior to this have been discovered.

### 5.3.1 Australopithecus (The First Man Ape)

in 1924, Raymond Dart discovered a child's skull near Taung, South Africa. The upper section of the cave was unearthed, and bones from several skulls, jaws, and body parts were discovered. All of these and similar species were classified as members of the 'Australopithecinae' subfamily. Many of these fossils have been collected from old caves in Transvaal (South Africa) since 1937, along with many other notable fossils. These fossils reveal that the animals of the major class 'Australopithecine' have the following characteristics:

1. Brain capacity was comparable to that of modern great apes.
2. Jaws protruded outwards.
3. Large molars, pre-molars, teeth, and short incisors and canines.
4. Hip and arm bone structures resembled those of humans.

These 'Australopithecines' were small-bodied creatures, standing around 4 feet tall, walking straight with a slightly curved spine near the waist. They had larger teeth and jaws than modern humans, but no chin. The brows above the eyelid protruded outwards. The brain capacity was slightly higher, at 450 to 600 cc. Thus, 'Australopithecines' represented the human brain, van humans.

Dart separated 'Australopithecines' into two divisions in 1925 based on fossil remains discovered in South Africa:

1. Australopithecus Africanus
2. Australopithecus robustus.

**1. Australopithecus Africanus** - It was little, around four feet tall, and weighed 47-50 pounds. The brain capacity was approximately 500 cc. The facial characteristics were slightly larger. The bones of its arms and waist indicate that this creature walked using its rear legs. The structure of teeth indicates that this species was closer to the ancestors of humans.

**2. Australopithecus Robustus** - A few years after the discovery of Dart, Robert Bruce looked in several sites in southern Africa and concluded that 'hominids' lived here at the time based on information gleaned from numerous remains. Who did not fit the specified definition of Dart? These have been named 'Australopithecus robustus. These animals stood over five feet tall and weighed more than 100 pounds each. The brain size was 500 cc, similar to the first, and the body shape was hefty, with a high forehead and a heavy jaw; hence, its time was regarded later

than the first. The teeth were appropriately little. Some scholars have described it as forehead and heavy jaw and accordingly its time has been considered to be earlier than later. The teeth were small accordingly. There are some scholars who believe that his time is considered to be later than the first.

## **Homo erectus**

The creatures of this class have been referred to by numerous names in the past, including Pithecanthropus or Java man, Sinanthropus in China, Peking man, and Atlanthropus in North Africa. These humans of the Mid-Pleistocene period interacted with one another. They were dubbed 'Homo Erectus' after discovering similarities.

Human remains of this branch (*Homo erectus*) have been discovered on several continents, including China and Java in Asia, Africa, and Europe. Their remains are regarded as a significant link in the evolution of mankind. These human-like animals first appeared in prehistoric times, between 5 and 10 lakh years. (Old World) lived on these continents; they are thought to be the progenitors of modern people. However, it is still unclear how *Homo erectus* evolved into *Homo sapiens*.

Although the organism '*Homo erectus*' is extinct, its remains and the material collected from them constitute an important link in human evolution. The cranial capacity of the species at this time (Middle Pleistocene) was discovered to be around 1,000 cc, which is nearly identical to that of the modern human. Many changes have been discovered in the morphology of jaws and teeth; their length was greater than that of modern evolved people (*Homo sapiens*).

**1. Java Man (*Pithecanthropus*)** - The first human of the *Homo erectus* lineage was discovered in 1891 at Trinil in Central Java's Solo River Valley. Bone remains of a Java man were discovered here in alluvial soil deposits thought to date back to the Second Ice Age. Despite its diminutive size, this cranium had a larger brain capacity than any other primate. Other comparable remains were discovered in Java. These bones reveal that this species used to move upright and on two legs. Ernest Haeckel argues that the remains of Java man are the connection between man and monkey, and he is known as the dumb ape-man; Eugene Duboy, a notable humanist from the Netherlands, has conducted extensive research on *Homo erectus* and *Homo sapiens*. He believes that the Javan monkey man may have lived during the Pleistocene epoch. As a result, all anthropologists think that *Pithecanthropus* of the *Homo erectus* species lived in the deep forests of Java during the Pratisutya period. They moved from Java to various parts of Asia, including Sumatra, Borneo, and the Malaya Peninsula.

**2. Peking Man (*Sinanthropus*)** - In 1927, Chau-ko-tin near Peking discovered remnants from lower caves beneath which molar teeth were discovered, and two years later, a primitive kind of preserved skull was discovered from the same location. This section yielded the remains of approximately 40 individuals, as well as portions of their facial characteristics.

The second ice age (4 lakh to 2 lakh years ago) is thought to be the time when humans reached their apex. Although these remains are not as ancient as those of the 'Java Man', they are thought to have a more advanced cranium. Their brain volume was determined to be greater than 1,000 cc. Many skulls have 915 to 1,225 cubic centimetres, which is comparable to that of modern individuals. The skull found in China is unique in that it has a flat skull, the bone above the brow protrudes to the outside, the walls of the brain are made of hard bones, and the jaw and teeth are enormous. There is no chin bone in them. The frontal lobes were more developed than those of Java people. Their teeth were mainly comparable to those of modern people (*Homo sapiens*).

Excavations in the lower caves resumed in 1958, and more *Homo erectus* remains were discovered. Along with these remnants, stone-made tools and the remains of certain animal bones were discovered, revealing that they were the progenitors of humans. *Homo erectus* began utilising stones and bones as tools. The remains of burnt bones discovered in these locations show that these people used fire, hunted animals, and had a social life.

**3. *Homo erectus*** - Following the Second World War in Africa and Europe, it was widely assumed that the creature '*Homo erectus*' was limited to the continent of Asia, but in 1954-55, at a site named Terni fine in Algeria, remains comparable to those of Peking Man were discovered. Jaws and teeth from a creature comparable to '*Homo erectus*' were discovered near Morocco in 1954; however, these remains were slightly more evolved. The most significant remains were discovered in Tanzania in 1961 and can be considered to be indicative of *Homo erectus*. *Atlanthropus* is the name given to this region's '*Homo erectus*'.

In Europe, bones have been discovered at 'Vertesszollós', 50 kilometres west of Budapest, Hungary, where a child's milk teeth were discovered, which were comparable to those of Peking man and Java man. Similarity can also be detected in brain capability.

**4. Heidelberg man** - The jaw of a humanoid species, a contemporary of *Homo erectus*, was discovered in 1907 at a depth of 24 meters at a location known as 'Mauer' in Heidelberg, Germany. The anatomy of this jaw looks to be of human and ape shape, however many anthropologists believe the structure of teeth to be comparable to that of humans on this premise. The Heidelberg Stone Man is thought to be the ancestor of the Neanderthal man. These people lived in caverns. Other similar bones from the Late Cretaceous period have been discovered.

The early remnants of sentient human '*Homo-sapiens*' were discovered in the continents of Africa and Europe. Following then, remnants were discovered in many places of the ancient globe. Remains from the interglacial period, dating back 2,50,000 years, were discovered at the Swancombe site of Kesht in Met Britain. Remains from this period have been discovered in Steinheim, near Stuttgart, Germany. The Swancombe skull and remains discovered in Germany have been named "*Homo Neanderthalensis*." Neanderthal humans were discovered to be different from modern humans but existed before *Homo sapiens*. The skeleton was discovered in

German lime mines in 1956; this occurred. Previously thought to be an ape skeleton, human biologists such as William King and T.H. Huxley believe it is a creature that before Homo sapiens (intelligent human). Skeletons of this type have been discovered in France, Belgium, Germany, Italy, Spain, and Palestine, among other places. Along with these remnants, various stone tools and the remains of domesticated animals such as horses, bears, and reindeer were discovered.

**5. Neanderthal Humans** – Human remains from this group have been found primarily in Europe and Africa. Neanderthal remains were discovered in 1856 in the Neander Valley near Düsseldorf, Germany. Following that, it was found in France, Italy, Belgium, Egypt, Czechoslovakia, the Soviet Union, North Africa, and Middle Eastern countries such as Palestine. Because of the peculiarities of its remains, they were once regarded a distinct race of humans, but modern classification specialists place them solely under Homo sapiens. Some scientists have given the specific classification term "Homo Sapiens Neanderthalensis." This species was a unique, little, powerful, muscular creature that could thrive in frigid climates.

Based on the remains discovered in Europe, the morphology of Neanderthal humans is believed to be distinct from that of Homo sapiens, with longer bones in their hands and legs and different ankle bones. Their height was 1.55 meters, and that of the women was approximately 4 feet 9 inches. The brain capacity in their skulls is estimated to be roughly 1,280 cc. The face is longer than that of modern people, and the nose is wide and elevated. Neanderthal man's cheekbones are similar to modern humans.

Although the spinal cord of Neanderthal man has not been retrieved in its whole, some anthropologists consider him to be a little bent creature, while others believe he is a perfectly straight walking species. It had thick hair and lived in caverns. This sort of creature lived in Europe between 750,000 and 40,000 years ago. Only legitimate remains of Java and Peking human types are taken into account, and it is estimated that Neanderthals in Europe and Java-Peking people in Asia were contemporaneous.

Summary, 'Pithecanthropus' and 'Sinanthropus' are the most ancient stone humans, providing insight into the early stages of human evolution. This shows how man evolved from an ape over a long period of time. They are regarded to be in the 'human formation stage' and are the ancestors of Neanderthals, who represent the transition from ape to human.

### **Homo sapiens (Homo sapiens)**

After Neanderthal man, clever man emerged. The entire continent of Europe was blanketed in ice sheets; this was the last ice age of the Quaternary period, known as the Würm. Many geologists believe that this epoch occurred between 35 and 50 thousand years ago. Subtropical climates gradually emerged in Europe. Many anthropologists believe Homo sapiens, or modern humans, must have evolved during this time. This human was superior to his

predecessor, the Neanderthal human. Many anthropologists believe that Neanderthal humans were the forefathers of Homo sapiens; however others feel that this is an independently formed human race.

Homo sapiens is claimed to be the first It must have originated in North Africa or Europe, as all of the remnants discovered so far are from these two continents. According to some anthropologists, both species (Neanderthals and Homo sapiens) were contemporaneous, but because the new humans were more powerful and intellectual, they may have invaded and exterminated their forefathers. Some anthropologists speculate that both these human races might have mixed with each other, and as a result, it might have been possible for the development of a new human race, 'Co-Magnon Man', which is the ancestor of the present-day human being, which is prevalent not only in most parts of Europe but also in the Old World; Was also found at any place.

Based on the traits of 'Homo Sapiens', we shall investigate the fossil remains of all places discovered in Europe and Africa during the Upper Pleistocene epoch. Homo sapiens' characteristics include a cranial capacity of 1,350 cc (vertical forehead), a rounded parietal region of the skull, a thin and short part connecting the brain to the spine (neck), a small jaw and teeth, and small canines. The following traits were used to identify Homo sapiens: teeth, a pointed and projecting chin, and hand and limb bones capable of supporting him upright.

An attempt has been made to trace the early ancestors of Homo sapiens using stone remains discovered so far in Europe and Africa.

Human stone bones were discovered in Budapest, Vertesszollo, in 1965, and are thought to be 3,50,000 years old; bone remnants of other mammalian creatures, stone tools, milk teeth, and evidence of fire use were also discovered in the same location. This period's person has been identified as the Stone Age human, with a brain capacity of 1,400 cc, which is comparable to that of today's human. As a result, humans are thought to be the intermediate species between 'Homo erectus' and 'Homo sapiens'. Skullbone remnants were discovered in Swanscombe, North Kent, England, in 1935, 1936, and 1955. Some anthropologists see them as the forefathers of Homo sapiens.

The fossils unearthed at 'Amo' I and 'Amo' II in East Africa have also been identified as Homosapiens.

The following three ideologies are fundamental to Homo sapiens:

1. Some English archaeologists claim that Homo Sapiens humans evolved in England based on teeth, jaws, and human skulls discovered in 1911 at a site known as 'Piltdown', however Piltdown's status is questionable. Is human? The jaw found here is comparable to that of a monkey, and the skull is similar to that of a human; nevertheless, uncertainty arises since this jaw and teeth are more similar to Vana (Ape) than human teeth, and this type of monkey (Ape) was discovered in England. Does not go at all; as a result, on the basis of the Piltdown remains, this human cannot be definitively identified as the ancestor of Homo sapiens.

2. Another theory holds that Homo sapiens predecessors were Neanderthal humans. These anthropologists believe that as the geographical environment changed, so did humans, and that Neanderthal humans evolved into Homo sapiens.

3. According to the third and final theory, 'Homo Sapiens' humans must have originated in Africa and Asia. From these continents, they reached Europe as a developed human and conquered the Neanderthal human, or both species lived together and mixed, allowing the development of Homo sapiens-sapiens (brilliant human, modern human).

The following branches of Homo sapiens are found in the continent of Europe:

1. Grimaldi Man,
2. CroMagnon Man,
3. Rhodesian (Zimbabwe) man.

Similar stone remains were discovered in Rhodesia in 1921. The three branches of Homo sapiens are considered the parent branch:

**1. Grimaldi Man-** The fossil bones discovered in Italy indicate that this sort of human race lived in the Mediterranean Sea's coastline countries. The skeletons discovered in the Grimaldi caves shed light on Late Cretaceous humans. These people had a tall forehead, chin that protruded forward and larger teeth. The legs and limbs were fairly lengthy, similar to those of Nigro people. Some researchers claim Grimaldi man was an inhabitant of Asia. One of its branches reached Australia via Malaya, while the other reached Europe.

Many anthropologists believe that Grimaldi humans were the forebears of Cro-Magnon humans.

**2. Cro-Magnon Man** - In 1868, the remains of this human were discovered in the Cro-Magnon rocks of France's Dodon area. Similar human remains have been discovered in numerous Southern and Eastern European countries, implying that this last species of Homo sapiens lived throughout Europe, Asia, and Africa. Their time period is estimated to be 30,000 years old. Many anthropologists believe their forebears were Neanderthals. Were beings who died out 20,000 years ago. These Neanderthals were more developed than humans, thus they were thought to be intelligent. Figure 8.12 - The skull height of the Co-Magnon human was 180 cm, and the brain capacity was 1,660 cc. He was a skilled hunter.

Various anthropologists dispute on whether Neanderthal humans became extinct or amalgamated with Cro-Magnon humans. After Cro-Magnon humans, cultural development began to take precedence over physical development in humans.

**3. Rhodesian (Zimbabwe) Humans-** The remains of early man which have been found in fossilized form, throw light on the gradual development of his life. From the Java man to the

Cro-Magnon and Chalcedon man, the tools and weapons of man must have been generally made of stone and wood, but due to their being brittle, it was not possible for them to remain safe for so long. The beautiful man-made tools made of stone; bone and ivory that have been found indicate that Neanderthal humans were highly developed. Cro-Magnon humans seem to have advanced even further. The frescoes made by him, excavation of stones etc. testify to this progress. There seems to be a kind of Dark Age for some time after the Cro-Magnon man, while the man moved towards degradation rather than progress because after that nothing is found in a sequential manner about the development and racial characteristics of the man.

## **Human Evolution**

Early man's fossilized remains shed light on the gradual evolution of his life. From the Java man to the Cro-Magnon and Chalcedon man, man's tools and weapons must have been primarily composed of stone and wood, but their brittle nature prevented them from remaining secure for long periods of time. The magnificent man-made tools made of stone, bone, and ivory discovered show that Neanderthal humans were highly evolved. Cro-Magnon humans appear to have advanced even more. His frescoes, stone excavations, and other accomplishments attest to this advancement. There appears to be a Dark Age following the Cro-Magnon man, during which time the man degraded rather than progressed, because nothing is found in a sequential fashion about the man's development and racial features. Only 10-15 thousand years ago, a new type of human was discovered sweeping across Europe. He had animals and understood how to farm. Its manner of life should be innovative. This era is known as the Neolithic Age.

Among the humans who lived in Europe shortly before the Neolithic Age, the residents of Switzerland consumed almost entirely non-vegetarian food. The people of Moravia ate 90% meat, while the people of Denmark ate 100% fish, but the people of the Neolithic age had a wide variety of dietary options, including meat, fish, fowl, fruits, grains, and so on. Because of farming, their homes were permanent. They used to build houses on the banks of lakes out of oak, cedar, or birch wood on wooden stilts, complete with separate rooms and fire pits. They also knew how to spin, weave, and stitch clothing. Hair and baskets were utilized for hunting and other purposes. They used to create boats by hollowing out trees and attaching wheels. Their tools were constructed from stone, wood, shells, and bones. By the time humans arrived in this epoch, they had advanced significantly.

Skeletons and figures of primitive humans have also been discovered in India, in Siganpur, Madhya Pradesh, and in the caves of Adichkalur, Cuddappa district, on the basis of which it has been estimated that, like the Cro-Magnon humans in Europe, intelligent humans lived for 40-50 thousand years in South India, and their description would have been similar to that of the people mentioned above from the Neolithic era. Semi-humans, such as Neanderthals, must have inhabited in Southern India long before this time. Civilized Aryan people lived in North India between 20 and 30 thousand years ago, with advanced cultures.



Humans have progressed from primordial to developed states over time. While humans in Java and Peking were extremely rudimentary, Neanderthal and Cro-Magnon humans advanced tremendously in terms of intelligence, mental power, and resource use. Neolithic humans spent a significant amount of time using their thoughts and hands. Humans had advanced in every way compared to their ancestors by the time they reached the Iron Age, following the Copper Age and Bronze Age.

The remains of Neolithic Age people, as well as evidence of their current civilization, can be found from South England in the west to Spain, Portugal, France, Mediterranean coastal areas, North Africa, Asia Minor, Western India, China, and Peru in South America, and Mexico in North America. However, these remnants are not discovered in Northern Europe (because of excessive cold) or Central Africa (due to hot, dense woodlands). This civilization is known as Brunette Civilization. It is still impossible to identify definitively where this civilization originated, as well as the order and timing of its growth elsewhere. It is possible that this civilization originated in South-Western Asia (Iraq, Asia Minor, etc.), or that it flourished in North Africa before spreading to other regions.

The table below explains how humans develop gradually:

Table 5.1 Human evolution

Estimated period	Age	Human evolution and dispersal	Human characteristics
From 5 lakh years ago to 50 thousand years ago	Paleolithic or Stone Age	Era Java man, about 10 million years ago, in Java. Heidelberg man, about 4 million years ago in Germany. Peking man, about 5 million years ago, in China. Piltdown man, about 3 million years ago, in England. Rhodesian humans, in Southern Africa.	Sub-humans who are now extinct. Use of stone axe, spear, covering the body with trees, leaves, animal skin, living on trees or in caves, eating tuberous fruits and meat.

About 50 thousand ancient Stone Age middle Paleolithic age from today	Middle Paleolithic Age	Possibly Central Asia (emergence of modern intelligent humans (Homo - Pamir, Turkistan) or Sapiens). Originating in the Caspian-Aral Sea region, it spread here and there or got separated here and there in the regions of North Africa, Mediterranean Sea, Iran, Iraq, China, India etc.	Riseing of homo sapiens
Stone Age from 50 thousand years ago to 15 thousand years ago	Late Paleolithic age	From the Mediterranean region to North Africa, South Western Asia, South India, Western and Northern Europe and from Asia to North America via the Baring Sea.	Shapes made of stone and flint, use of beautiful tools, living in caves, wearing skin clothes, hunting and gathering, painting, living in groups.
From 15 thousand years ago to 6 thousand years ago (ie before the rise of organized civilizations)	Neolithic Age	In Western Europe, from southern England to Spain, the Mediterranean region, North Africa, Asia Minor, Iraq, western and southern India, China, America, Mexico and Peru	Flint, copper and bronze metal tools, farming and animal husbandry, living in huts and mud houses, making clothes, making utensils by using wheel, worshiping gods and goddesses and making sacrifices.

Source:

#### 5.4 SUMMARY

It is a fact that as the early humans climbed the ladder of civilisation, due to changes in climate and the convenience of hunting in different environments, due to inconvenience and from the point of view of self-defence from wild animals and their enemies, wandering from one place to another, alone and then as a group, it has had to change its habitat repeatedly. It is no surprise that many human groups have become extinct due to the.

It is a fact that as the early humans climbed the ladder of civilization, due to changes in climate and the convenience of hunting in different environments, due to inconvenience, and from the point of view of self-defense from wild animals and their enemies, wandering from one place to another, alone and then as a group, due to unfavorable climate, it has had to change its habitat repeatedly.

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## 5.5 GLOSSARY

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**Australopithecines** -An early group of hominine species with brains similar in size to those of chimpanzees; they flourished in Africa between 4 and 1 million years ago.

**Bipedalism** - The ability to walk on two rear limbs (legs).

**Culture** -The customs, values, beliefs, and general patterns of behavior of a particular group of people.

**Foraging** - Relying on wild (uncultivated) plants and animals for sustenance; hunting and gathering. Foraging was the dominant way of life during the Paleolithic era.

**Fossils** - The preserved remains of organisms from the distant past. Fossils are usually mineralized or hardened remains of the organisms themselves, but can also include traces of an organism's behavior (for example, footprints) that have been preserved.

**Genetics** - The scientific study of how traits are inherited.

**Hominines** - All bipedal species in the human line since it diverged from the common ancestor with chimpanzees; first appeared 8 to 5 million years ago. The only survivors of this line are *Homo sapiens*, or modern humans.

**Homo ergaster or Homo erectus** - A hominine species that originated in Africa around two million years ago and migrated into Eurasia, reaching as far as China and Java; Almost as tall as modern humans, their brains were larger than those of *Homo habilis*, and they may have been able to control fire. *Homo erectus* and *Homo ergaster* may have been the same species.

**Homo habilis** - A hominine relative of human beings; that appeared in Africa between 2 and 3 million years ago; and was able to make simple tools.

**Homo sapiens** -The scientific name for our species, which is thought to have evolved in Africa between 200,000 and 300,000 years ago.

**Neanderthal** - A species of hominine very closely related to our own species, *Homo sapiens* that went extinct roughly 35,000 to 30,000 years ago. Genetic research shows that the DNA of people with Eurasian ancestry is partly (a few percent) Neanderthal. Though Neanderthals have sometimes been portrayed as brutish or stupid, they were probably very similar to *Homo sapiens*, and some experts even consider them part of our species.

**Nomadic** - Describes a way of life in which people move from place to place rather than settling in a single location; movements are often dictated by climate and availability of food sources.

**Paleolithic era** - A long, early era of human history that featured the creation and use of many different types of stone tools; literally means “Old Stone Age.”

**Primate** - A member of the order of mammals appearing between 60 million and 70 million years ago that is characterized by a relatively large brain, hands with multiple movable fingers and nails instead of claws, and eyes positioned on the front of the skull to enable stereoscopic vision.

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## 5.6 ANSWER TO CHECK YOUR PROGRESS

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1. Whose book is titled 'Man's Place in Nature'?

- (a) Darwin
- (b) Huxley
- (c) Arthur Smith
- (d) None of these

Answer: B

2. Pithecanthropus Erectus name has been given to:

- (a) Java man
- (b) Sinanthropus
- (c) Homo Erectus
- (d) All

Answer: A

3. Who is the ancestor of Neanderthal man?

- (a) Palaconthropus
- (b) Eoanthropus
- (c) Perentropus
- (d) Propliopethecus

Answer: A

4. The scientific name of Java man is:

- (a) Pithecanthropus erectus
- (b) Homo erectus erectus
- (c) Homo habilis
- (d) First Two

Answer: D

5. Probably First Prehistoric man was:

- (a) Australopithecus
- (b) Ramapithecus
- (c) Homo habilis
- (d) Zinjathropus

Answer: C

6. The continent from where fossils related to man have been found in maximum quantity

- (a) Europe
- (b) Africa
- (c) America
- (d) Asia

Answer: B

7. The discoverer of Java man is:

- (a) Leakey

- (b) Dubolis
- (c) Lebey
- (d) Mayer

Answer: B

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### **5.8 TERMINAL QUESTIONS**

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#### **Long Answer Type Questions**

1. Write a short essay on origin of man.
2. Write note on the following:
  - (a) Homo-sapiens, (b) Neanderthal man, (c) Homo Erectus, (d) CroMagnon Man.
3. What condition of human evolution has been in Africa? Clarify your answer with examples.
4. "Neanderthal humans are the ancestors of Homo sapiens." Discuss this statement logically.

Or.

"Neanderthal men are ancestors of Homo-sapiens." Discuss this statement.

### **Short Answer Type Questions**

1. Explain about Australopithecus.
2. Write about Australopithecus Africans.
3. Who is called Java man?
4. Write a short note on Synanthropus.
5. Write about Neanderthal man.

## **UNIT-6 HUMAN RACES OF THE WORLD**

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### **6.1 OBJECTIVES**

### **6.2 INTRODUCTION**

### **6.3 HUMAN RACES**

#### **6.3.1 CRITERIA FOR CLASSIFICATION OF RACES**

#### **6.3.2 PRINCIPAL CLASSIFICATION OF RACES**

### **6.4 SUMMARY**

### **6.5 GLOSSARY**

### **6.6 ANSWER TO CHECK YOUR PROGRESS**

### **6.7 REFERENCES**

### **6.8 TERMINAL QUESTIONS**



## 6.1 OBJECTIVES

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After reading this unit you should be able to:

- You will understand the factors that lead to the evolution of races.
- You will know the criteria for classification of breeds
- You will learn to describe the major classifications of breeds

## 6.2 INTRODUCTION

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On a continental scale, our species is divided into races or ethnic groups, and we rely on a simple visual assessment to distinguish between various groups, particularly differences in skin color, which ranges from a very pale color in North Europe to an extremely dark brown in the African Congo or New Guinea. Human stature also varies greatly, from

Another prominent feature is hair form, which ranges from straight and long in the Japanese to short and spiral-shaped in the Africans. Furthermore, the size and shape of the human face varies significantly around the world, as do the proportions of the lower limbs and trunk. Many more minor distinctions between human populations occur, such as the frequencies of different blood classes, types of blood enzyme and protein polymorphisms, and DNA markers, which must be determined using specialised procedures.

## 6.3 HUMAN RACES

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Anthropologists have attempted the division of human populations into races based on color, form, size, and other physical features. Scientists and anthropologists define race as a biological notion. According to this, a distinct human group was classified as a species based on physical traits. These physical traits are passed down from generation to generation within that human group via heredity and are largely unaffected by the environment. Physical traits are nearly identical within a species, but in terms of physical structure, all members of a species are not the same, and various variances arise between individuals individually. Each species is regarded as an ideal type based on its physical traits and is associated with it.

Many scholars have given definitions of species, some of which are included below: According to Kroeber, "species is a proven zoological concept." It is a group that is related by heredity, ancestry, or racial features, or a subgroup; this socio-cultural term is not." According to Haddon, "Species" refers to a specific class of organisms that have common traits. It is a biological race whose natural characteristics differ from those of other species."

**According to Golden Weiser**, "A species is a subdivision of human beings in which certain physical characteristics are inherited."

Pro. Blache defined race as follows: "Human species are classified on the basis of the shape and physical characteristics of the human body."

Griffith Taylor states, "The human species represents a breed, not a culture." Mendel, a biologist, said: "Genes in the human body are present in such subtle cells that through them the physical characteristics of human classes continue to be passed on from generation to generation."

Dr. Majumdar, an Indian sociologist, states: "If a group of individuals can be identified from other groups on the basis of similar physical characteristics and no matter how diverse the members of that biological group are, they are a species." As a matter of fact, "A species is a group of individuals in which a certain combination of physical characteristics is found and which can be identified on the basis of genetic characteristics."

A species has the following characteristics:

1. Species is a biological concept. It has nothing to do with religion, nationality, caste, or language.
2. Each species has distinct biological and physical traits that distinguish it from other species.
3. The physical traits of the species are passed down from generation to generation via genes. The environment has a relatively small impact on their physical traits.
4. The physical traits used to determine species should be found in a broad population of humans.
5. All human races around the world are essentially the same. External changes in their skin, color, and hair

The nose, eye shape, and so forth are all superficial traits. It is difficult to establish for certain when and how the human species originated.

According to Kroeber, "We can conclude that the formation of the human species must have occurred at least millions of times." What circumstances contributed to their variances, where each gained its features, what components united them, and how did the many species re-integrate?

Responses to all of these mixed issues have yet to arrive."

## **FACTORS CAUSING EVOLUTION OF RACES**

It is a commonly known truth that when a region's climatic conditions changed, new distinctions in the physical structure of the human race emerged, resulting in the separation of those species. The four primary elements that influence diversity are considered:

1. Climatic Changes,
2. Endocrine Secretion,

3. Biological Mutation and Selection and

4. Racial Mixture.

**1. Climatic Changes** - Among the natural forces which were under control in the initial period of human development, climate was the main one. The four major ice ages that occurred in the Pleistocene period were also influenced by the warm climate of the inter-glacial period. Griffith Taylor's statement is more noteworthy in this regard. According to him, the human race originated in the steppe region of Central Asia when the climate there was warm. There were forest areas in the north of this region and desert and forests in the south. The tribal's of this period lived by hunting or collecting wild tubers, roots and fruits. With the coming of the Ice Age, these woods shifted to the south of the steppe, and thousands of years later, when the cold climatic conditions ended, mild climatic conditions were established in Central Asia, causing the belts of flora and animals to travel north once more. She stepped aside. With this shift, some sub-castes returned to their previous homes, while others established there permanently. Because of the hot environment in the south, the look and skin of these resident species have suffered. As a result of harsh sunlight and heat, their skin got dark, their heads were long, and their lips became thick; nevertheless, the species that reached Central Asia remained rather pale in complexion, and their heads. The scorching climate of tropical regions was not energizing. This type of conditions persisted for millions of years during the interglacial period; therefore there was no significant change in the physical structure of early humans. When people returned to Central Asia, the cold environment made them more energetic and developed. Neanderthal humans arrived from Central Asia during the second ice age, just as the Mediterranean variety, known as Mindal, was emerging. It moved to Europe during the third ice age, known as 'Riss'.

**2. Endocrine Secretion** - According to Sir Arthur Keith, the genesis of all human species is the same, and they are all offspring of the same ancestor; nevertheless, in the species skin, hair The variances in the eyes, face, and other areas of the body are caused by glands that have various functions. These glands degrade chemical substances known as hormones. People of the Caucasian race have a taller height, a heavier body, a healthy foetus, a beautiful nose, and a larger chin due to their more active pituitary gland. On the contrary, due to thyroid gland dysfunction, members of the Mongolian ethnicity have a flat nose and face, a broad forehead, and a short height. Adrenal glands alter skin color. Along with changes in this system, from ancient times, the color of human skin has changed.

Change in glands and hormones caused by the gradual shift from cold to hot climates in Central Asia resulted in alterations in the species' physique and facial traits. The Negro and Mediterranean races are said to have developed in a similar fashion. This latter dry climate resulted in the creation of Alpine and Mongoloid species.

**3. Biological Mutation and Selection** - The essential physical traits of any species are found in its genes, which are passed down to future generations but change with time. This alteration is the result of natural selection. Migration is regarded as the most significant feature. At any one time, humans of various sorts and temperaments can be found in any species. Migration presents a wide range of challenges. The first difficulty is climate change, and the second is the inability to build total harmony with the changing environment's directions. As a result of these impediments, the weak and sick individuals are left behind in the species' migration, while the robust and sturdy individuals advance. Long-term migration causes physical symptoms to change. These alterations may also occur as a result of long-term living in a certain place.

The Tundra region's populations have built peace with their environment and live a more pleasant existence than their forefathers. The same is true for the tribal inhabitants of Africa's equatorial woods and the Amazon basin, Arabia's Bedouins, and the Kalahari Bushmen. Similarly, after migration, the Mediterranean species established themselves in North America, Asia, and Polynesia, and their features evolved over time.

**4. Racial Mixture** - When creatures from one place migrate to another for invasion or permanent settlement, they eventually mix with humans of other species who live there. Castes frequently mingle as a result of mutual marital ties between different caste groups. The mixing of black and white races is an obvious illustration of this. In America, we can see Nordic, alpine, and a new family of Negroid species.

Professor Hayden believes that Geographical Isolation is important because it allows a species' physical structure to adapt to its environment while also developing its social and cultural aspects, which are important for later mixing. It stays even after that. Blache's firm belief is that "separation is necessary for a species." The condition is as follows. If it doesn't make a difference, at least the concept of a difference can be kept."

### **6.3.1 Criteria for Classification of Races**

Anthropologists have classed species based on certain traits of human physical structure (e.g., hair color, skull length, jaw protrusion, body height, facial shape, eye structure). Some have placed more emphasis on one basis than others; According to Dr. Kroeber, "When identifying human species, simply one or two physical structure traits should not be used as the basis for species categorization. Natural basis and correct classification can only be achieved by using the largest number of qualities as the basis. "More important characteristics receive more attention than less important ones." This is significant since a feature is frequently observed in multiple species. For example, many species can have several characteristics, such as skin color.

There are two types of physical traits that are used to identify species:

1. There are two types of physical traits: external, superficial, or indeterminate; and internal, structural, or indefinite
2. External symptoms are those that occur without the use of any device. These include skin color, hair texture, height, facial features, eye color and shape, lip shape, and so on.

Internal characteristics are those which are not reflected from above but which can be seen by mechanical-human measuring instruments; can be measured with anthrop meter, vernier caliper and compass. The features included under these are the capacity of the skull, list of nose, blood group and structure of the bones of the body.

### **A. External symptoms**

**Indefinite Traits-** These are more impacted by the environment than certain qualities. It is impossible to measure them using any device. The symptoms are as follows.

**1. Skin Color** - In terms of skin color, the following variances can be found among humans around the world: Due to an increase or reduction in the amount of melanin and carotene (hemoglobin) in human skin. The color of the skin or hemoglobin begins to turn black, yellow, or red; when the majority of the melanin is detected in the skin, the person's color changes to black or dark brown. Excess carotene causes it to turn yellow, while excess hemoglobin causes it to turn white or fair.

Human skin color changes from black to white as we go from the equator to the North or South Pole due to variations in climate.

The world's races have been categorized into three major categories based on skin color: white, yellow, and black; however, there are numerous variations in these three colors; Are. For example, the complexion of individuals in Scandinavia and Northern Europe ranges from extremely light to white, mixed with olive and black among those near the Mediterranean Sea; in contrast, Asian people with pale skin have complexions that range from very light brown to pale. Africans south of the Sahara desert are entirely black, although they also have a lot of blackish brown. Melanesians, Nigro, Papuans, Nigroids, and pre-Dravidian people all exhibit this variety in dark color.

**2. Texture of Hair** - The texture of the hair on the head is regarded essential in species categorization for two reasons: (i) the environment and age, sex, climate, or food has less effect on the texture of the hair; and (ii) it is dictated by inheritance, therefore it can be measured. Some human species have more hair in the centre of their heads, whereas others have more hair all over their bodies. There is also a myth that the shorter the hair on the body, the longer the hair on the head. Probably this is why women's hair is so long. Hair has five structural components.

Their foundation is the shape of the hair (whether it stands straight or is rough like wool), the colour (good or poor), the cross-section of the hair, and the length (long or short). (1) Straight hair is thick, hard, and long. Asians with yellow skin (Chinese and Mongolian) are Amazon Basin American Indians who live in the Eastern Archipelago. (2) Smooth and wavy hair (soft and thin) is found in Europe, Western Asia, North Africa, India, Australia, and other areas where such individuals exist. (3) Woolly and curly hair that is matted and thick. Negro, Negritos, Papuan. It belongs to the Melanesian people.

**3. Body Stature** - Topinard, an anthropologist, classified species based on human height. Modern humans have an average body height of 163 cm. It occurs.

1. Very short, 148-158 cm. Today, there are Pygmies and Andaman's in Africa, Oceania, and East African communities - East Asians (Chinese, Japanese), Beddas, Sakai, Lams, Peruvians, and South Indians.

(2) Medium height, 159–168 cm. Tak, Russian, and Kyrgyz people occupy Malaysia, East Sumatra, and New Guinea;

(3) Tall, 169–171 cm. Melanesians, Hottentots, Australians, Dravidians, and Mediterranean people are characterized.

(4) Tall stature of 172 cm. It was discovered around 1000 BC in Eastern Sudan, Negroids, Afghans, the Alpines, Russia, Patagonia, Scotland, and the people of England and Australia.

**4. Shape of the Face** - People with long hair have long and wide faces, whilst those with round hair have wide or round faces.

The width of the mouth is plainly the greatest distance between the opposing sections of the cheek bones, whereas its length is measured along its centre line from the top jaw to the lower part. These measurements are referred to as facial signs because of their link to one another. People are grouped into three categories based on their facial features: (1) wide mouthed below 85, (2) medium mouthed between 85 and 98, and (3) long mouthed around 98.

Expansion of the jaws (Prognathism) - When the lower region of the mouth (jaw) is particularly noticeable, it is treated as shown in the figure below. This is particularly common among Negro people. Mongolians have less forward projecting (depressed) jaws. On the contrary, 'Orthognathous' refers to a mouth with no or very little outflow. This shape is visible among modern-day humans.

**5. Eye-color and Folds** - The color of the eyes is black in all species, but there is some variation in the color of the pupil. For example, the eyes of the Caucasian race (European and American people) are blue, green, or brown, whereas the eyes of Indians are typically black.

There are differences in the structure of the eyes. Some eyes are slanted like almonds and open completely horizontally. Such eyes are present in individuals from Europe, North Africa, South-Western Asia, and India; whereas in people from China, Japan, and Mongolia, the slit is oblique and there is a fold of skin in the upper half that is in the inner corner of the eye. Hides the face and spreads to the cheeks. This form of eye is known as the Mongolian type eye-slit.

**6. Lip Forms-** Lip structure varies as well. As a result, it is used to assist determine the species. The shape and thickness of the membrane on the lips reveal racial variances. In Negroids and West Africans, the membrane is extremely thick. It is swelled and turned outward, making the lip's margin clearly visible. Other people's lips are much smaller. In these, there is little thickness or expansion, no fluctuation in the lip joint, which is turned outward or no difference at all, indicating that the lips are thin and twisted inwards.

## B. Internal Traits

Definite qualities are those on which the environment has no or little effect. The symptoms are as follows:

**1. Cranial Shape or Cephalic Index** - To establish the shape of the skull, its length and width are measured and their relationship is discussed. The length of the head is measured from the brows over the nose to the same line in the back, while the breadth begins about above the ears. The Cephalic Index is calculated by multiplying the breadth of the head by 100 and dividing by the length of the head. The index is always displayed in units.

$$\frac{\text{Head index}}{\text{Head length} \times 100} \\ \text{Head width}$$

Looking at the contour of the head, it is evident that some are longer and some are shorter; in general, long heads are narrower and shorter heads are wider. Human heads are classified into three types based on their cranial index: (i) long heads (index less than 75), medium or middle heads (index 75 to 80), and tiny or broad heads (index greater than 80).

(i) Dolico-cephalic Melanesians, Negros, Eskimos, Negroids, Bantu, American Indians, inhabitants of Northern and Southern Europe, Pura dravidians, Dravidian people; (ii) Medium-headed (Meso-cephalic) Bushmen, Hottentots, Mediterranean, Nordic, Ainu, Northern Amerinds; (iii) Small-headed (Brachy-cephalic) Alps-Carpathians, Turks, Tongues, Mongols, etc.

**2. Nose shape or nasal index** - Species are often identified based on nasal index. Nasal index is the percentage ratio of the nose's length to its width. To calculate this, multiply the width of the nose by 100 and divide by the length of the nose.

$$\text{Nasal index} = \frac{\text{Nose width} \times 100}{\text{Nose length}}$$

This index classifies a person's nose as thin, wide, or medium. If the index is less than 70, the nose is thin; 70 to 85 is medium; and more than 85 indicates a broad nose.

According to Dr. Hayden's NASA index, tropical people have a narrow/thin nose (Leptorrhine), while Polynesians, Siberian dwellers, some Americans, Indians, and yellow people have a medium nose (Mesorrhine). (3) People who live in semi-arid deserts, the Pacific Ocean, and Australia have flat-wide noses (Platyrrhine).

### 6.3.2 Principal Classification of Races

Intersexual connections, geographical isolation, and other factors all contribute to species' distinct existence. The environment, food, and other factors influence the development of physical complaints. If the species remains in the same environment or has intersexual interactions, classification is simple; however, this is not the case in practice. Human species have interbred to the point where it is difficult to categorize them based on physical characteristics. Currently, species are so entwined that they cannot be separated, but anthropologists have attempted to classify them.

These classifications are primarily based on the inheritance of physical attributes. In their classification, various anthropologists have emphasized different physical traits, shared ancestors, physical attributes, geographical location and shape, and so on. Here, we'll use Kroeber, Hayden, and Taylor's classification.

#### Kroeber's Classification

Kroeber classified the extant species into three major classes. Primary Stock: (i) Caucasian or White; (ii) Mongoloid or Yellow; (iii) Dniroid or Black. These have been separated into eleven sub-departments. Aside from that, Kroeber has highlighted four dubious races that cannot be included in the above classification. They are: Australoid, We droid, Polynesian, and Ainu.

#### Haddon's Classification:

In 1924, Haddon classified the human species on the basis of hair, height, skin color and skull as follows classified as:

According to hair, three types have been classified as follows:

1. Woolly or waxy hair (Ulotrichi);
2. Wavy hair (Cymotrichi) and
3. Straight hair (Leitrochi)



The short-haired species' hair is waxy and resembles wool. The vertical cut of hair goes from 40 to 50. Skin color is black, and height might be short or tall. Negrito and Negro are species with similar features that reside in Southern and Central African countries (Sudan, Republic of the Congo, Uganda, Tanzania, Malagasy) as well as South-East Asia in the Andaman Islands, Malaysia, Sumatra, New Guinea, Papua New Guinea, and the Philippines. Its primary representatives are the Semang, Aug, Bantu Bushman, Papuan, and Malaysian species. Wavy-haired species have a vertical hair cut ranging from 60 to 70. Based on skin hue, they are classified into two subclasses:

(a) It contains Australoid species with black hair up to 60 cm, medium height, and a long head. The hair is nearly wavy. This species is represented by primitive tribes in South India, Australia, Bajil, Java, Sumatra, Malaysia, Sulaweti, and other Indonesian islands, including the Berata Toda, Kadar, Bhil, and Sakai.

(b) This group includes brown, brown, and white Caucasian species from the Mediterranean, Nordic, and Alpine regions. Mediterranean colors include dark brown, Nordic brown and Alpine white. Mediterranean and Nordic are medium-headed, while Alpine are broad-headed. This category includes species from South-Eastern Europe, Northern India, Iran, Arabia, Afghanistan, North Africa, and Armenia. The Nordic species is found in northwestern Europe. This is represented by species such as the Ainu, Afghan, Amerindian, and Semite. Straight-haired animals undergo hair cuts of up to 80%. Their colors are yellow or brown. The height is average, and the head is broad (nearly spherical). This class is represented by the Mongolian species. They have numerous subspecies that live in China, Manchuria, and northern Siberia. Some areas stretch into Russian Turkestan, Tibet, Sinkiang and Malaysia:

Hayden has considered the following 6 main species in his classification:

(1) Dhumdhyasagri. They have long heads, tan or white skin, a narrow nose, and wavy hair. They have no special habitat, but can be found in both tropical and temperate climates. Because of their widespread movement, it is impossible to determine their origin.

(2) Alpine: These are people from the temperate zone with broad heads, straight or wavy hair, and full or white skin.

(3) Negritos have taller heads, wider noses, dark ebony skin, and curly hair. They live in tropical environments.

(4) Mongols: These are people with a yellow complexion, less hair on their heads, short to medium height, and small eyes that inhabit in East Asia.

(5) Pura Dravidians have tall heads and darker complexion.

(6) Caucasians are classified into three categories: Mediterranean, Nordic, and Alpine.

## Griffith Taylor's Classification

Taylor clarified in 1919, while classifying human species using the Climate Cycle and Migration Zone Theory of Race Evolution that the first five human species (Negro, Negrito, Australoid, Mediterranean, and Alpine Mongolian) originated in Central Asia prior to the Great Ice Age and spread to other continents. Variations in the physical traits of human species have persisted alongside climate changes. Taylor identified seven human species based on their hair structure and vertex index. The Shirasya index lists them in the following order:

- (1) Negrito – Very thin head.
- (2) Negro (Negro) Very long head.
- (3) Australoid – Long head.
- (4) Mediterranean – Medium long head.
- (5) Nordic – Medium head.
- (6) Alpine -Broad head.
- (7) Mongolian or Alpine – Very broad head.

(1) The color of Negrito species varies from red chocolate to dark brown. Its body is short (less than 150 cm), with broad lips and a large, flat nose. Under a molecular microscope, their hair appears flat, lace-like, and thick. They wrap themselves together to make a knot. Their jaws and teeth protrude forward, resulting in a convex shape. Currently, only a few thousand Negritos remain alive. There has been so much mingling of blood from different castes in them that it is impossible to say exactly what the size of their skull was, but it must have been between 68 and 70.

Negritos reside in the hilly forests of Sri Lanka, Malaysia, the Philippines, Indonesia, Luzon, and New Guinea. They are found in large populations in Uganda, the French Equator, the Congo Basin, Cameroon, and the Andaman Islands. Traces of them can also be discovered in Western and Southern Africa. Previously, they lived in Tasmania and Java. The Negrito species was unable to penetrate Europe, Eastern Siberia, and North America due to exceptionally cold temperatures.

(2) The skull of the Negro species is particularly long, with a ratio of 70 to 72. In cross-section, their hair is long and oval, causing it to curl. Their skin tones typically range from brown to pale crimson, black, and kajal-like. Their jaws protrude, while their nose is flat and large. The Negro race exists in two locations: on both sides of the Old World. The first can be found in Western Africa on the Sudan and Guinea coasts, and the second in New Guinea. Nigro also inhabited in Southern Europe and Asia during the prehistoric period. They use Kol in India and Bedda in Sri

Lanka as their symbols. Anthropologists assume that the prehistoric Grimaldi man was likewise Negroid, race also lived in ancient Susa.

(3) The skull of the Australoid species is long and prominent, with a cranial index ranging from 72 to 74. The hair is totally curly, and the skin color varies between dark black, brown, and pale yellow. Each hair is a vertically long oval. The jaws are slightly projecting, and the nose is moderately large. These human species are found in Australia. These were once distributed throughout Australia (pre-British colonies). These people also live in the forests of southern India. See you. The Dons and Buto-Cuto castes in Brazil are additional examples of this.

It is comparable to the Bantu race of East and Central Africa. Australoids were discovered in North America, East Asia, and Southern Europe during prehistoric times. This species' current range is limited to the south-east of India, Australia, Brazil, some central Africa, and sections of the archipelago. Traces of this species have also been discovered in New Mexico.

(4) The Mediterranean (Mediterranean) species has a tall skull, a cranial index ranging from 74 to 77, an oval snout, curly hair (Aurignacium is elliptical in vertical section), and projecting jaws. Its oldest species (for which it is famed), the leap, is big in size with a bony face. The Iberian has a strong build and is olive and copper in cooler. The Semite race is tall and attractive, with a blunt nose. This species is found on the outskirts of all inhabited continents. This comprises the Portuguese of Europe, the Mikhis of Africa, and the Micronesians of Australia. This category also includes the Tupi of South America and the Iroquois of North America.

(5) The Nordic race is distinguished by a medium-length and wide head (78 to 82), wavy hair (oval vertical section), a flat face, and an aquiline nose. Most Nordics have light brown to pinkish complexion. Northern Europeans have fair to pinkish complexion. At the dawn of human history, this species was widespread on the Mediterranean beaches of Europe, Asia, and both Americas. It is also thought to have been widespread in New Zealand and sections of Polynesia in the broader Australian marine regions. The tropics do not just spread in Africa, yet some of its symptoms are clearly seen among the people of North-West Africa.

(6) Alpine animals have large heads (cranial indexes of 81 to 86) and broad facial structures. The nose is distinctively small, the hair is straight (rounded in vertical part), and the skin tone ranges from brown to fair. The western branch of the Alpine race, which includes the Slavs, Armenians, and Afghans, is fair-skinned, whereas the eastern branch, which contains the Finns, Magyars, Manchus, and Siwaks, is slightly yellowish. At the start of human history, both were found in America and some parts of Asia, and they had spread to the centre of Europe.

(7) Mongolians North Alpine or Mongolians have almost round skulls (cephalic index 85-90). Their hair is straight and flat, with a concave face and jaw. The nose is slender and narrow, and the cooler is bright yellow-apricot.

At the start of history, this species was restricted to Central Asia's central regions. It then expanded to Turkistan in the west and the East Coast in the east. In the backward regions, it mated with the Alpine, Nordic, and Mediterranean people, resulting in a new hybrid race found in China and its neighboring regions.

The above caste classification was based primarily on their average head index, although hair, height, skin cooler, and other factors were also considered.

### **Development change**

According to the above-mentioned species classification, some physical traits continue to change as the human species evolves. There have been changes in four specific characteristics: the form of the head, the shape of the hair, the shape of the face, and the cooler of the skin.

- (i) Early species had long heads, while later humans' heads grew bigger.
- (ii) The hair was originally ring-shaped but later turned straight.
- (iii) The form of the face altered from convex to concave, and the nose got thinner.
- (iv) The skin's cooler went from black to brown, then to white yellow.

**Taylor's Zone-Strata or Migration Zone Theory:** Dr. Taylor's 1919 taxonomy of human species incorporated the notions of 'climate cycle' and 'evolution'. It also shed information on the migration of human populations. He criticized the so-called level hypothesis of human evolution. This hypothesis has been described as the evolution of human species through maps, and it is regarded as geography's primary contribution.

Dr. Taylor proposed this theory by presenting species-related facts in the form of the following principles.

- (1) Among the vast landmasses of the Earth, there is a centre continent with three major peninsulas: Eurasia, Australia, and America.
- (2) Castes exist in the form of racial areas on each peninsula. The entire human species originated in Central Asia, near the Caspian-Arabian Sea. This location was home to the first human species. The species that evolved after this also emerged in this centre, but they continued to drive the species that formed before them out of the centre, and the species on the periphery became primitive.
- (3) In the first stage of species evolution, the earliest primitive species are found near the continental borders; the Negrito species can be found in Tasmania, Cape Colony, mainland, and Brazil.

(4) The second component of species evolution was the emergence of the Australoid species following the Negro, which pushed the first two species further afield. The species that evolved last is found in the centre, where the forces that drive evolution have been strongest throughout history.

(5) The third component of species evolution: Where species have evolved the greatest, the most buried layers of primitive species can be found in the soil. Buried relics, bone fragments, tools, artefacts, place names, and folk legends are some of the most important witnesses.

(6) The fourth component of species evolution. The sequence of evolution remains the same whether one cross the tropics while moving away from the centre of evolution or examines the levels below the centre.

(7) Primitive castes are found alive in areas where they did not even originate..

(8) Evidence from Europe, Africa, South Asia, and Australia clearly shows that centrifugal migration originated in Central Asia. From here, species from Turkistan and its surroundings were introduced to regions. The testimony obtained from America is more sophisticated, but of the same type.

The summary of Taylor's theory is (i) the first species originated in Central Asia. (ii) The species which evolved first, evolved later. The species were driven towards the outer parts of the continents. (iii) The latest evolved species are found mostly in the interior parts of the continents. It is clear from the above description that although there has been a lot of difference of opinion among anthropologists in the classification of species, but broadly the species of the world can be divided into three main parts:

1. White race or Caucasoids,
2. Yellow races or Mongoloids and
3. Black races or Negroids.

Many classes of these main species are found. Many types of species are found in different parts of the world, whose distribution can be shown as follows:

**1. Caucasoids:** This race is commonly referred to as the white race, yet their color is actually a mild red rather than pure white. Eye cooler varies from dark pale blue to brown. Hair colors vary from beige to black. Hair is straight and wavy, with more hair on the body; thin lips and a gorgeous chin, with a cephalic index greater than 80 cc and a brain density of approximately 1800 cc. According to Howell and Elliot Smith, this species has three sections:

(a) **Nordic** – This species is regarded as the best in terms of both physical and mental abilities. The color is complete and blue. The head is somewhat high, with a broad forehead, a short nose,

and a small but broad face. The hair is yellow or brown, disheveled, and wavy. People of this species can be found in Spider and the United States.

**(b) Alpine-** The structure of the head is broad. The head is high, the forehead is straight, the brows are short and low, the Shi index is medium, the nose index is medium, the lips are thin, the skin is light white and red, and the hair is medium or brown in color. The average height is 165 cm. And there's more hair on the body. This species is widespread in central Europe.

(c) This Mediterranean species has a cephalic index of less than 75. The head is long, low, and medium in size, with a straight forehead, tiny brows, a medium nasal index, and thick lips. The eyes are light and dark brown. The hair is wavy or curly, black or dark brown in color. The skin color ranges from olive to khaki brown, with an average height of 160 cm. This happens. There is more hair on the body. This species is widespread in areas such as Spain, Portugal, Southern Italy, North Africa, and Egypt.

**2. Mongoloids:** This race is thought to have originated in Central Asia. The majority of humans in this species live only in Asia. The key characteristics of this species are half-open eyes, heavy eyelids, and yellow eyes. The deep face is broad, with a large forehead and a short height. This type of species can be found in China, Mongolia, Manchuria, Korea, and Central Asia, among other places.

**3. Melanesian:** This species features dark eyes and skin, curly hair, arched brows, a wide nose, a medium cut, and a round skull. This species is found on the South Pacific Islands. Even now, persons of this species dwell on islands such as New Guinea and Fiji.

**4. African Negroid** The location and period of origin of this species are unknown, but it is believed to have originated between Africa and Oceania. This species is widely distributed throughout Africa, particularly from Sudan to southern Africa. Their hair is black and thick like wool, with a wide nose, long skull, high head, straight forehead, big and protruding lips, and an average height of 170 cm. And the feet are outstanding.

**5. Micronesian-** Polynesian This race is characterized by broad heads, but medium and long heads are also common. Their head is elevated, the forehead is slanted, and the nose is moderately or severely lifted. Lips are thick, skin is yellow or brown, eyes are brown, hair on the head is wavy or curly, and the complexion is black. The average height is 160 cm. And there is less hair on the body. Their habitat is the northern Melanesian islands.

**6. Congo or Central African Pygmy:** The average height of this species is 150 cm. This species of humans is less black than African Negroids and Melanesians. They are dark, with thick, curving hair.

**7. Far-Eastern Pygmy:** This species has thick lips, woolly hair on the head, less hair on the body, brown or dark black skin, and an average height of 150 cm. this happens. The habitat includes Mindanao, Luzon, and the Philippine Islands.

**8. Australoid:** This species' habitat is Australia. The head is long, with a low, powerful forehead. The brows are large, the nose is broad, the lips are thick, the complexion is dark brown, and the hair is brown. The average height is 165 cm. this happens. This species has frequently been isolated; hence some of its traits are unique.

**9. Bushman-Hottentot-** The Kalahari Desert in South-Western Africa contains two categories of species. The head is high, the cheeks are shaped, the face is small and triangular, the nose is wide, the lips are out, the complexion is dark, and the hair on the head is curved.

**10. Ainu-** This species represents the original species of the Japan Archipelago. Its skull is long to medium in size, with an angled forehead, long brows, and a medium-sized face. The nose is large and prominent, the lips are thick, the complexion is white or dark brown, and the hair is light brown or black. The eyes are dark, and their average height is 155 cm. This happens.

**11. Vedoid-** This species is considered a subspecies of the Caucasoid family. Ayunu, Australoid, and Dravidian species have similar morphological traits. Their head is long and narrow, with long brows, a long face, a wide nose, thin lips, dark brown or black complexion, hair, and eyes, and an average height of 150 cm. It happens.

Scholars feel that categorizing human groups as species is utterly arbitrary. This category holds no practical relevance.

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## 6.4 SUMMARY

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Race is a broad classification of humanity based on distinct morphological or bodily characteristics. Anthropologists and other prominent researchers have long attempted to comprehend the degree of human variety through somatoscopic characteristics such as skin color, hair shape, and so on. Even some scholars used serological and genetic characteristics to categories human races. In general, humans have been classified into three major races: Caucasoid, Negroid, and Mongoloid. Each major race has unique identifying characteristics that have spread throughout the world. According to the UNESCO Statement on Race, there is no better or inferior race, and all humans are equal.

These various characteristics used for racial classification are entirely biological in the sense that they are the consequence of a complex interaction of genetic and environmental factors, with specific evolutionary pressures acting on them.

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## 6.5 GLOSSARY

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**Australoid:** a descriptive category including principally the Australian Aboriginal peoples and sometimes including Papuans, Melanesians, various peoples, as Negritos, of the Philippines, Malay Peninsula, and Andaman Islands, and some of the tribes of central and southern India.

**Origin:** The origin is defined as the appearance of the simplest primordial life from non-living matter.

**Evolution:** Evolution of life refers to the process of gradual formation of complex organisms from simpler ones.

**Hominine:** Any of a taxonomic tribe of the hominids that includes present day humans together with extinct ancestral and related forms.

**Palaeoanthropology:** The scientific study of extinct numbers of the genus *Homo sapiens* by evidence of their fossil remains.

**Hominid:** A primate of a family which includes human and their fossil ancestors and also at least some of the great apes.

**Neanderthal:** The widely distributed as an extinct species of human that was in ice-age Europe between 120,000 and 35,000 years ago, with a retreating forehead and evident brow ridges.

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## 6.6 ANSWER TO CHECK YOUR PROGRESS

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**1. Race in genetic context** is a population that differs in the frequency of some gene or genes, which exchange or capable of exchanging genes across boundaries and separate it from other populations of the species.

**2. Caucasoid:** Characterized by light reddish white to olive-brown skin color, moderate or abundance body hair, dolichocephalic to brachycephalic head, leptorrhine to mesorrhine noses, medium to tall stature, and relatively high incidence of A2 and Rh-ve blood groups.

**3. Negroid:** Characterized by brown to brown-black skin color, curly to frizzy or wooly hair form, predominantly dolichocephalic head, prognathism, platyrrhine nose, very short to tall stature, relatively high incidence of A2 and B blood groups and moderate frequency of Rhve blood group.

**4. Mongoloid:** Characterized by light yellow to yellow-brown skin colour, straight hair, scanty body hair, predominantly brachycephalic head, face broad with prominent cheekbones, mesorrhine to platyrrhine nose, epicanthic eye fold, medium to short stature, relatively high incidence of A1 blood group and Rh-ve blood group is rare.



**5. Races** are classified purely on the basis of biological variation. Those having more or less similar characters are grouped together. These variations are because of the interaction of genetics and environment in which the evolutionary forces act on it.

**4. All humans** living today belong to a single species, *Homo sapiens*, and the variation among them is because of evolutionary forces. There is no racial superiority and inferiority; hence, all humans have equal rights and opportunities

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## **6.8 TERMINAL QUESTIONS**

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### **(A) Long Answer Type Questions**

1. Give definition of races
2. Explain Haddon's classification of races
3. Explain the classification of Griffith Taylor.
4. Classify races on the basis of hair texture.

### **(B) Short Answer Type Questions**

1. Define race.
2. Write the characteristics of race.

3. Explain Mediterranean race.
4. Write note on Negro.
5. Write note on Negrito.

**(C) Objective Type Questions**

1. Who and when used the word race:

- A. Fracus-1970
- B. Linnacus -1758
- C. Cuvier - 1817
- D. Topinard – 1878

Answer: A

2. Who is not included in the scholars to study race:

- A. Krober
- B. Gisbert
- C. Haddon
- D. Topinard

Answer: B

3. “Cephalic index is the chief way to classify human race.” Who among the following took it as base:

- A. Topinard
- B. Huxley
- C. Griffith Taylor
- D. Dixon

Answer: C

4. Who is to classify the word races on the basis of blood group?

- A. Linnacus

B. Landstaner

C. Dixon

D. Haddon

Answer: B

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## **UNIT- 7 RACES OF INDIA**

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**7.1 OBJECTIVES**

**7.2 INTRODUCTION**

**7.3 CLASSIFICATION OF INDIAN RACES**

**7.4 SUMMARY**

**7.5 GLOSSARY**

**7.6 ANSWER TO CHECK YOUR PROGRESS**

**7.7 REFERENCES**

**7.8 TERMINAL QUESTIONS**

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## 7.1 OBJECTIVES

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After having the detailed study of this unit you will be able to:

- Know classification of races.
- Mixture of human species and current distribution pattern.
- Study of physical characteristics of the human species.

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## 7.2 INTRODUCTION

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"It must be clearly understood that no rigid separation of the races is possible as there is a considerable over-lapping of the types. From a broad point of view, a Nordic territory in the north-western India mixed with Mediterranean's and Orientals can be distinguished from a territory in Peninsular India containing older Palaeo Mediterranean element. On both sides of this, are the domains of the Alpo- Dinarics, mixed no doubt with other types. The primitive darker elements have come in everywhere and, with blood from other strains, chiefly Palaeo Mediterranean; they constitute the lower stratum of population. The Mongoloids occupy the submontane regions of the north and east, but various thrusts from them have gone deeply into the composition of the people. Thus, India has been a melting pot of races." - Guha, B. S., Racial Elements in India's Population.

The Indian population is a mixture of several human species that have occasionally entered India from prehistoric times to historic times. Situated on the Indian Ocean in the far south of the Asian continent, surrounded by mountain ranges in the north, north-east and north-west and isolated by seas in the south, India is such a safe region from geographical point of view, in which if anyone wants to enter, he can do so only through mountain passes. Or can do it from coastal areas only. As a result of the above mentioned land conditions, the hawk species that had been living in India for a long time, instead of getting destroyed, started moving towards the south and south-east and thus hawks also have great prominence in the Indian population. Similarly, the hills and forests have saved a large number of tribal's from annihilation by giving them a place in their number. The population of India contains elements of all the major human races which are generally not found to this extent in other countries.

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## 7.3 CLASSIFICATION OF INDIAN RACES

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### Risley's Classification

From the philosophical point of view, the first classification of Indian races was done by Herbert Risley in the Indian census of 1901. Indian population includes the following seven different human races: According to Sir Herbert Risley.

**(1) Dravidian** - Before the historical era, a species called Dravidian was the first in India, which can be called the tribal people of India. There has been a big difference in their race due to the contact with the Aryan, Scythian and Mongol races that came from behind. They live in the south of India in the plateau of Tamil Nadu, Andhra Pradesh, Chhota Nagpur and southern parts of Madhya Pradesh. Paniyan of Malabar, Juang of Orissa, Kaund of Eastern Valley, Gond of Madhya Pradesh, Hoda of Nilgiri, Bhil of Rajasthan and Gujarat and Santhal of Garasia and Chhota Nagpur are representatives of this species. Their height is short and their color is usually completely black. Their eyes are black, the head is broad and with thick hair (which is sometimes curly), the nose is very wide (which is sometimes buried in the roots) and the skull is large. This species constitutes approximately 20 percent of India's population.

**(2) Indian Aryan (Indo-Aryan)** - It is estimated those 2,000 years before Christ, the Aryan people left India from Central Asia and they drove the Dravidian race living here towards the south. At present this species is generally found in Punjab, Rajasthan, Uttar Pradesh and Kashmir. The present members of this caste are Rajputs, Khatri and Jats. 75 percent of India's population is of this species. The three upper castes of Hindus (Brahmin, Kshatriya and Vaishya) are descendants of the Aryan race. Their height is tall, fair complexion, head is high, eyes are sharp and deep, arms are long, shoulders are broad and waist and legs are thin, nose is high, pointed and narrow. They have abundant hair on their faces.

**(3) Mongoloid** – This species is spread in the Himalayan region, Nepal and Assam. Kanet of Lahaul and Kullu, Lepcha of Sikkim and Darjeeling, Limb, Marmo Bar and Gurug of Nepal, Bodu of Assam and Bhotiya people of Bhutan are the main representatives of this species. Their stature is short, head is broad, nose is wide, face is flat, eyebrows are crooked, complexion is pale and there is less hair on the body.

**(4) Arya-Dravidian** – This species belongs to the Aryan and Dravidian people; made from a mixture. It is spread in some parts of Uttar Pradesh, Bihar and Rajasthan. It is represented by Hindustani Brahmins among the clans and Harijans among the lower clans. The head of these sources is usually long or medium sized. The height is slightly shorter than the pure Aryans, the nose is wider than the sad yam and the complexion is light brown whitish.

**(5) Mongolo-Dravidian** – This species is found in West Bengal and Visayas. Bengali Brahmins and Bengali Kayasthas are its main representatives. It is made up of Pacific, Dravidian and Mongol elements. Share of Indian Aryan blood in the upper classes Mr. is given. The height of these people is medium and sometimes short. Their head is broad and the soul is fair, the hair is thick and the nose is wide.

**(6) Sytho-Dravidian** - This species is made up of a mixture of Scythian and Dravidian people. These people are from the hilly parts of Kerala, Saurashtra, Gujarat, Kutch and Madhya Pradesh. The Scythian element is prominent in the upper echelons of the society and the Habic

element is prominent in the lower echelons. I consist of small bobber. Their head is relatively long and nose is medium. There is less hair on their body.

**(7) Turko-Iranian:** At present this species is found in Afghanistan and Baluchistan. Riskey's classification has now become invalid due to several reasons. It is not based on the physical characteristic of the races but languages. It is incomplete and Riskey has not made any mention of the Negrito element in the Indian population, but the presence of the Negrito element in the pre-Dravidian races in India cannot be ruled out. Iyer has tried to prove with the example of curly hair of the Bulaya and Yurali and kanikar people of Kadar, Cochin that the entry of Negrito element in India must have definitely happened between the eighth and tenth century. Dr. Hayden has mentioned a very ancient black Negro race in Susiana. It does not seem impossible for it to enter India. Laipik has also found some special Negro faces near the forest regions of South India; according to Dr. Hutton, the eastern frontier of India.

Negrito elements are also present in the population. After Riskey, many experts in genetics have tried to classify Indian species, but no proper and scientific classification could be presented till the 1931 census. Other classifications are:

### **Giuffrida's Classification**

According to Mr. Guffida, the classification of species of India is as follows:

1. Negritos include the Veddahs of Lanka and some tribes living in the southern Indian forests and the Aug tribe of the Andaman Islands.
2. Pre-Dravidians or Australoids - Its main examples are Behu, Sanchal, Oran, Munda and Haas tribes. Their physical characteristics are also Negrito. Are just like that.
3. Dravidians species is found in Southern India. Under this Telugu and Tamil language speaking people have been included.
4. Tall Dolicho-Cephalic species like Toda of Nilgiri and Kadar of Cochin.

### **Haddon's Classification**

According to Hayden, India is mainly divided into three geographical regions, the Himalayan entrance, the northern plains and the southern plateau. Elements of the following species are found in these regions:

(a) In the Himalayan region (1) Indian Aryans (Indo-Aryans) like the kanets who are found in the Kullu valley of Himachal Pradesh and in whom the lineage of Tibetan blood is found. (2) Mongoloids like Bhutia Gurung, Gurmi, Gurkha, Lepka and Newar people are found in the mountainous parts of Nepal and Bhutan. (3) Kanet people of Lahaul region in the mountainous areas.

(b) Two types of people are found in the plains (1) Jats, Gujjar and Rajputs living in the valley of Kashmir, Rajasthan and Punjab, whose complexion is fair, tall in stature, long head, horse hair, long and narrow face and Has a straight long nose. (2) Hilly people of Shivalik region in the Himalayan region and people towards the south.

(c) Hayden has used the word Dravidian for the people found on the southern plateau. Here according to them these elements are found (1) Pre-Dravidians Santhal, Paniyan, Kadar, Kurumba, Irula, Kannikar, Kaundh, Bhil, Gond, Kolari and Munda people are examples of this. They are short, with black to brown wavy hair and broad noses. (2) Dravidians: Residents of Malabar Coast and Kerala which include Nayyar, Baraga, Tiyan, Kanari Hindus, Ijuban and Tamil Brahmins. These people speak Tamil, Telugu, Malayalam and Kannada languages. (3) Southern broad headed people (Southern Brachy Cephals) are spread from northern arkat Batti to Tiruveli district; And is their representative. (4) Western broad headed people (found in Kerala on the western coast. Nagar, Brahmin, Prabhu, Kurg is the Maratha representative.

### **Eickstedt's Classification**

In 1929, Eickstedt's classified Indians according to both physical and cultural aspects. According to them, there are four main species in India, with seven subspecies.

(1) Weddid or ancient rains of ancient Indian forest regions are divided into these categories:

(a) Gondid people are of short to medium height, dark brown in color and have hairy hair. They believe in magic. The main ones among them are Auran, Oraon and Gond.

(b) Malid are more civilized with short stature, curly hair and dark brown color. Their main tribes are Kurumba, Irula, Chenchu, Kannikar, Malewan and Beddu.

(2) Malanid or Black Indians is a myth which is divided into two parts:

(a) South Malanid is the fair-skinned people of the far southern plains of India. Yanadi is their main example.

(b) Kolid are very ancient inhabitants of the northern forest regions of the south country. They are of dark complexion and are of short stature. Examples of these are Santhal, Kharia, bhuiya, Bhumij and Munda.

(3) Indid or New Indians: Those people are more and they live in open fields. These are divided into the following parts:

(a) Gracile Indid: Yellow complexion, thin nose and the same people who believe in ancestral family like Bengalis etc.

(b) North Indid, which is light brown in color from the beginning believers like Doda and Rajput people.



(4) Pre-Mongol (Palco Mongoloid) migrating people of Wayanad district.

### **Hutton's Classification**

Hutton has presented his classification about Indian species. None of its species is native to India. All species are bound here from outside. These are the different species according to the order of weft.

(1) Negrito species is the oldest species of India. It spread from Melanesia to Assam, Burma, Andaman-Nikibar and Malabar, but we are not found in the main part of India.

(2) Proto-Australoid after Negrito their place of origin was Palestine. From here they came to India from the west. The color is chocolate brown and black and the skull is long; is present in them.

(3) Pre-Mediterranean species from Eastern Europe to India Is left. In this, the head of some is long and that of some is wide. This species is found spread in the Central Indian region through Gujarat, Madhya Pradesh till West Bengal. He had knowledge of irrigation and digging.

(4) More developed Mediterranean species came to India. It became a dual species. They are taller and fairer in complexion. These are the people in northern India spread in Punjab and the upper valley of the Ganges. This species had knowledge of the use of metals and the art of building cities. Probably they were the ones who developed the Indus Valley Civilization.

(5) Alpine or Pre-Vedic Aryans who live in Gujarat and see you in West Bengal.

(6) Nordic or Vedic Aryans came to India from the European steppe region about 2 thousand years ago and settled in Punjab, Rajasthan and the upper reaches of the Ganges settled.

(7) Mongoloid - Coming from the north-eastern parts, they spread and settled in the eastern parts of India, Bengal, and Indonesia.

### **Guha's Classification**

The most important and universally accepted classification has been presented by Dr. B. S. Guha (in the population census report of 1931).

Dr. Guha's classification is as follows:

(1) Negritos

(2) Proto-Australoids or Pre-Dravidians.

(3) Mongoloids: (i) Pre-Mongols (Palaeo-Mongoloids); (ii) Long-headed type; (iii) Broad-headed type; (iv) Tibetan Mongol (Tibeto-Mongoloid).

(4) Mediterranean: (i) Ancient Mediterranean (Palaeo-Mediterranean); (ii) Mediterranean; (iii) Eastern people (Oriental type).

(5) Western broad-headed or Alpo-Dinaric (Western Brachy-cephals or species of India the Alpo-Dinaric): (i) Alpinoid; (ii) Dinaric; (iii) Armenoid.

(6) Nordics.

(1) Negritos - The inclusion of Negrito element in the Indian population is a doubtful and controversial subject. The true Negrito race is found in the form of the Semang and Sakai people of the Philippines, New Guinea, the Andaman Islands and the Malaysian Peninsula. The presence of these people in India cannot be said with certainty. According to Lapic, a part of Negrito caste is found in the tribals of South India. The Kahars and Puliyan of Travancore-Cochin and the ancient tribes of Wayanad and the Irula people are often seen to have woolly hair on their heads, which from the ontological point of view indicates Negro blood. But Mr. Gharston has refuted the above opinion. On the contrary, Newfroda Rujiri is of the opinion that Neshrito, found among the tribes of South India, still exists today. Racially, these people are related to the Bedda people of Sri Lanka, the Batin people of Sumatra and the Tola people of Celebes. Hayden has also accepted this opinion that although it is suspected that there is a Negrito race in the south, its actual truth is not yet known.

Dr. Hutton has paid special attention to the Negrito problem. According to him, Negrito element is found in the population of the eastern frontier of India. He has observed special wool-like hair in some Angami Nagas of Manipur and Kadar hills. Dr. Guha has also accepted the Negrito element in Kadar and some other hill castes. According to Dr. Sarkar, curly hair is found in the primitive castes of Rajmahal hills. After considering all these facts, Dr. Hutton has written that the earliest inhabitants of the Indian Peninsula were probably of the Negro race, but later they rapidly declined. Although they are still present in the Andaman Islands, very few traces of them remain on Indian soil. Among the Kadar and Yurali people of the forests of the far south are occasionally seen people of short stature; curly hair and Negro physique, which actually explain the remnants of the Negrito race in India. Guftida considers the presence of Negrito people between the Sari of India and Persia before the historical period.

The presence of Negrito or partly Negro people in the Bay of Bengal, Peninsular Malaysia, Fiji Islands, New Guinea, South India and Southern Arabia leads to the assumption that at some pre-historic period the Negrito people occupied large parts of the Asian continent, especially the southern part; were surrounded. Later, with the arrival of the Pre-Dravids and Dravidians (who were more powerful than them), these people became extinct or merged into them; in present time

These people are found only as remnants at some places. The Negrito element is mainly found in the Andaman Islanders. It is also in the Rajmahal hills of Assam and Eastern Bihar. Their other representatives are Angami Naga, Bangadi, Irula, Kavar, Pulayan, Muiyuan and

Kannikar etc. Prof. Keen Kadar, Muthuwan, Paniyan, Semang, Oraon and Australians consider the Aborigines to be the descendants of those people who once lived throughout India. These people first entered India from Malaysia through the Bay of Bengal and spread to the foothills of the Himalayan Mountains in the north and the peninsula in the south. The main characteristic of these people is that they are very short in height. Their head is small but their forehead is raised. Their hair is beautiful and woolly (pepper corn). These are black in color. The shape of the head ranges from round to long or medium. Their hands and feet are soft. The face is small, the nose is flat and wide, the forehead is protruding forward, the bones are flat and the beard is short and the lips are thick and curved.

The civilization of the Negrito people was in a very developed condition. They brought pre-Stone Age civilization to India. Apart from crude weapons made of stone, bone and bow and arrow, they had no knowledge of any other weapon. They had no pride in farming, making pottery and building buildings. These people lived in caves and collected things for food. They did not know how to do agriculture but they used to worship the ficus tree. The purpose of this puja was to obtain children and to provide salvation to the dead. The practice of worshipping the Butt tree in Indian culture and the construction of caves is the contribution of these people.

(2) Proto-Australoids were probably the second species to come to India, the Adi-Dravidians. Although their ancestors may have lived in Palestine, when and how they came to India is still not known. But the share of this species is highest among the present day tribes of India. This species is found in all the decades in India? There is so much similarity among these people in the complexion, face and hair etc. of the people of Sri Lanka, Australians and Malaysians that it is clear that all four are descendants of the same species. Whether these people have come to India from outside or have reached foreign countries from India itself is still a subject of controversy. Since they are very similar to Australian people, they have been named Adi-Dravidian. The original Australians had a narrow nose, a strong chest and thick body hair, which are not often seen in Indian tribes. But among the Chenchu, Malayan, Kurumba, Yarooba, Munda, Kol, Santhal and Bhil groups of South India, many such people are found who have the above mentioned characteristics. Scheduled castes are considered to be mainly made up of this species. These people are short in height and dark brown or black in color. Their head is long and their nose is broad, flat or pointed. Their hair is curly and their lips are thick and fleshy.

(3) The origin of the Mongoloid race is considered to be the Irrawaddy River valley, China, Tibet and Mongolia. From here, in the middle of the first century BC, they went to India and gradually entered the north-eastern Bengal plains and the hills and plains of Assam. The difficult terrain and routes of the extreme north and north-east hindered their entry in large numbers, but still they continued to move ahead. This is the reason why three types of Mughal people are found in the north-eastern parts of India, in Nepal, Assam and East Kashmir. Mongol species differs from other species in these respects. The difference is that their mouth is flat and the cheek bones are prominent. The eyes are almond shaped. There is less hair on the forehead and body. Their height is small to medium and the head is broad and the color is yellowish.

There are three species in the Mongol group:

(i) Palaeo-Mongoloids are a very ancient race. It is not recognized quickly. They can be identified only by the structure of the head, nose and color. These are divided into two categories: (1) Mongol species whose height is normal, nose is normal but less high, absence of hair on face and body, eyes are oblique and do not have much bend, face is flat and small, color is dark to light brown. Long-headed type: This is found very much in the tribal people (like Naga, Miri, Bondo etc.) living on the border of Sub-Himalayan region, Assam and Burma. (2) The second species of this group is broad-headed type. The Chittagong Hill Tracts (like Chakmas) in Bangladesh belong to this category. Lapcha caste of Kalimpong is also included in this group. Their head is broad, black in color and nose is of medium size. The face is small and flat. The hair on the head is straight but has some curly tendency.

(ii) Tibetan Mongoloids (Tibeto-Mongoloids) people are tall, broad headed and light color. Their other characteristics are wide flat nose, long flat mouth and absence of hair on the body. These people are found in Sikkim and Bhutan. They are believed to have come to India from Tibet.

The Mongol race has had a great impact on the culture of India. The use of milk, tea, rice, paper, betel nut cultivation, practice of group houses, terraced farming, lion hunting etc. are the contributions of these people.

(4) Mediterranean or Dravidians: The tribal people of India have more elements of three major races (Negrito, Pre-Dravidian and Mongol). Apart from these, the general population is mainly made up of Mediterranean, Alpo-Dinaric and Nadic species. Among these, the Mediterranean group is the largest. This species is found in Uttar Pradesh, Punjab, Maharashtra, West Bengal and Malabar Coast. There is not just one variety of this species but there are many varieties which are identified by their long head, black color and their height. Three varieties of this species are found in India.

(i) Palaeo-Mediterranean people are black or dark brown in complexion and have straight heads. Long face, wavy hair, broad nose, medium height and less hair on the face and body are their other characteristics. This species is highly prevalent among the Telugu and Tamil Brahmins of South India.

Many practices like making pottery, erecting monuments of huge stones (megalithic culture), human sacrifice and birth rituals were brought to India by them. The credit for the origin of matriarchal families and the high position of women in the society of South India also goes to these people.

(ii) The Mediterranean race is credited with giving birth to the Indus Valley Civilization of India. Around 2500 BC, when Aryan language-speaking invaders came to the Ganga plain from northern Mesopotamia through Iran, these people kept spreading here and there. Eagle: This element is most present in the population of Northern India. People of this species are spread in

Punjab, Kashmir, Rajasthan and Uttar Pradesh. Marathas of Madhya Pradesh and Brahmins of Uttar Pradesh, Cochin Maharashtra and Malabar are the representative forms of this caste. These people are of medium to tall height. His nose is narrow but his beard is well developed. The face and head are usually long and the color is black or brown. Dense hair on the body, large open eyes, dark brown and black eyes, wavy hair and slim body are their other characteristics.

This species adopted and flourished the Indus Valley Civilization. Most of the present Indian wealth and culture is created by them. Common domestic animals, river transport, clothes and jewellery, building construction, use of bricks and creation of cities etc. have been popularized by these people. He has also made an important contribution to Indian script and astronomy.

(iii) The Oriental Race or Semitic Type: The place of origin is Turkey and Arabia. It is from here that this species came to India. This species is very similar to the Mediterranean species but there is a slight difference in the structure of its nose. The nose of these people is long and concave. These people in India are from Punjab, Rajasthan and are found in western Uttar Pradesh.

These people came to India with the Neolithic civilization. They grind the stones and they used to make base pots, used to take sod with spade, used to make round earthen pots etc. with potter's wheel. These things are considered to be the gift of these people to India. Many words of this species are found in the languages prevalent in India. Paddy, banana, coconut, brinjal, betel nut, blueberry, blackberry, cotton etc. are the products of this species. This species domesticated the elephant. This species has given a lot to India in the cultural field also. The use of vermilion and turmeric in betel nut and festivals is taken from this species. The idea of rebirth, many legends related to the origin of the universe and creation, worshiping stones as gods, worship of animals like snakes, crocodiles, monkeys, etc., the idea of prohibition of things, etc. are all the contributions of Dravidians. Calculating dates according to the moon is also a contribution of this civilization.

His contribution to Indian culture is immense. Making earthen pots, making bows and arrows, making native boats, rearing animals like peacocks, horses, ponies, etc., making sugar from sugarcane juice, counting each item in twenty according to the cowry, Kumkum on occasions like marriage etc. And he has also given the use of turmeric to India. To keep the memory of the Stone Age intact, consider the stone as a deity and worship it, apply vermilion and sandalwood on it, burn incense sticks in front of it, ring bells and gongs sing and dance in front of it, offer offerings to the idol and offer offerings to it. To be distributed as Prasad. All this is the gift of these people to India. There were fewer women with them, so they married the women here and adopted their culture. Worship of Shivalinga also started. Yoga practices, use of medicines, city building as civilization, methods of high-grade farming, well-built boats, proficiency in warfare, skillful use of tools (weaving and spinning clothes), worship of snakes and deities of animals and trees, Respect for mother power and marriage customs are also the contribution of these people.

(5) The Western Brachy-Cephal species has come to India from the west from the Central Asian Mountains. They are divided into three parts: Alponoid, Binaric and Shaminoid. Their names are based on the region in Europe to which they belong.

(i) Native people of Alponoids species are found in large numbers near the Alps Mountains in the middle of Europe. These people are of medium short height. Their shoulders are broad, chest is broad, legs are long and wide and fingers are short. Their head and face are round and thin and pointed. The complexion is lighter than that of the Mediterranean people and the body is thick and strong. There is abundant hair on the body and face. Probably these people have reached Karnataka, Tamil Nadu, Sri Lanka, and Bengal along the Ganges from Southern Baluchistan via Sindh, Saurashtra, Gujarat and Maharashtra. This species is found in the Ganges delta of Saurashtra (Kathi), Gujarat (Bania), Bengal (Kayastha), Maharashtra, Kannada, Tamil Nadu, Bihar and eastern Uttar Pradesh.

(ii) The origin of the Dinaric race is the Alps. These people are of tall stature and shy. The head is very small but not very broad. The nose is long and usually pointed. The body is muscular, heavy and even tone, Thick neck, broad lips, fair skin, and light brown hair, black and brown hair. This species is found mixed with Mediterranean people in West Bengal, Kerala, Tamil Nadu, Saurashtra and Kashmir region.

(ii) Armenoids people are fair skinned and of short or medium height. Their head is broad and nose is thin. The Parsi people of Bombay are their main representatives. People of this species are also found among Bengali Kayastha and Vedda people.

(6) The Nordics or Indo-Aryans people came to India last. Leaving their habitat in the northern steppe region, they gradually started moving towards the south-west and entered the north-western parts of India in the second century BC.

These people first came and settled in Punjab, then started living in the valleys of Yamuna and Ganga. Later these spread all over India. They came here and drove the Dravidians further south. They called him Dasyu (Dasyus). Gradually they also assimilated the Dravidian civilization. The civilization of the Aryans was Vedic. Their gods were Indra, Varun and Pusha. They used to perform yagya-havan and used Sanskrit language. Later, Dravidian deities like Shiva, Vishnu, Uma, Ganesh, Hanuman, Shitala etc. also started being worshipped. They adopted all the Dravidian rituals of worship, Shivalinga worship, idol worship, ringing bells and gongs, offerings, considering Tulsi sacred, worshiping the banyan tree, etc. The Vedic people drank milk, ate butter and used barley. But after coming here they started using wheat, pulses, ghee and oil, cotton clothes etc. According to linguists, in the present culture of India only 25% is Vedic and 75% is non-Vedic.

In the present times, Aryan people are found in Northern India, especially in the upper class of the society. Rajput, Sikh etc. are the main representatives who are quite strong.

Indian culture has got a huge contribution from these people. These people brought with them horses, good quality wheat, use of iron, milk, use of liquor, gambling, chariot racing, ancestral family system and Aryan language. These people are also directly and indirectly responsible for the brightness of Indian literature, Indian philosophy and Indian art.

From the above description it will be clear that the present population of India is the combined form of almost all the human species of the modern world. Whatever adversities are seen here are the result of the influence of the climate and environment here. Although from the anthropological point of view the species of India can be divided into many sub-divisions on the basis of their characteristics, but it is a clear fact that the interaction of the species is so much that it is not possible to separate them properly. Not there. The Negrito people are now almost extinct. The Adi-Dravidians live in the isolated and very remote hilly forest areas of south-western and central India. The Mongol people could not get along with everyone. The people of the Mediterranean gradually settled in the Indus valley and the present desert areas and moved forward along the Ganges valley. Their continuous forward movement and settlement resulted in many wars and defeats. Over time, Alpine, Nadik and all three of them settled in the vast northern plains and merged into Bapas. In the Ganga valley, there is a predominance of Mediterranean people in the upper part and Alpo-Dinaric people in the lower part (in Bengal). The Mediterranean and Alyo-Hinaric groups along with some Adi Dravidians settled in the southern region of Vindhyaachal and assimilated with them. In the south, Nahik and pre-Nadic people go there with difficulty; although some people are seen occasionally in Madhya Pradesh.

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## 7.4 SUMMARY

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India has been a confluence of different species and cultures since ancient times, but at present, like other countries, no species is found in its pure form here. That is why it has been said that “India is a melting pot of races”. On the basis of the types of different species, it is not unreasonable to say that India is actually a museum of races. Here representatives of all species are found whose groups have intelligence, skill, tact, physical capacity, courage, strength of character and a special ideology of life as per the environment, where material civilization and faith in God come together.

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## 7.5 GLOSSARY

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**Aryans:** Historically, this term refers to the Indo-European-speaking people who migrated into India around 1500 BCE, shaping much of the early cultural and social structures of the Indian subcontinent.

**Dravidians:** A major group of people native to South India. They are often contrasted with the Aryans. Dravidian languages include Tamil, Telugu, Kannada, and Malayalam.

**Adivasis:** Indigenous peoples of India often referred to as Scheduled Tribes (STs). They include groups such as the Bhils, Santhals, and Gonds, and are primarily found in central and eastern India.

**Punjabis:** People from the Punjab region, which is divided between India and Pakistan. They speak Punjabi and have a distinct cultural heritage that includes the Sikh religion, as well as Hindu and Muslim communities.

**Bengalis:** Native to the Bengal region, which includes West Bengal in India and Bangladesh. They speak Bengali and are known for their rich cultural traditions in literature, music, and art.

**Marathis:** People from the state of Maharashtra. They speak Marathi and have a distinct cultural identity shaped by historical figures like Chhatrapati Shivaji Maharaj.

**Tamils:** Inhabitants of Tamil Nadu in South India. They speak Tamil, one of the oldest living languages, and have a rich cultural heritage that includes classical music and dance forms like Bharatanatyam.

**Telugus:** Native to Andhra Pradesh and Telangana. They speak Telugu and have a unique cultural identity with influences from historical dynasties like the Chalukyas and Kakatiyas.

**Kashmiris:** Inhabitants of the Kashmir Valley, which is currently part of Jammu and Kashmir. They speak Kashmiri and have a unique cultural and religious identity, with a history influenced by both Hindu and Muslim traditions.

**Sindhis:** Originally from Sindh, now in Pakistan, many Sindhis migrated to India post-partition. They speak Sindhi and have a rich cultural and commercial tradition.

**Rajasthani:** People from the state of Rajasthan. They speak Rajasthani and are known for their vibrant festivals, traditional music, and historical forts and palaces.

**Gujratis:** Inhabitants of Gujarat. They speak Gujarati and are known for their entrepreneurial spirit, as well as rich traditions in dance and cuisine.

**Manipuris:** People from Manipur in northeastern India. They speak Manipuri and are known for their classical dance form, Manipuri, as well as a distinct traditional culture.

**Mizo:** Native to Mizoram in northeastern India. They speak Mizo and have a rich tradition of weaving and music, influenced by their unique tribal heritage.

**Nagaland Tribes:** Various ethnic groups in Nagaland, such as the Angami, Ao, and Konyak. They have distinct languages and cultural practices.

**Bodos:** Indigenous people of Assam. They speak Bodo and have a distinct cultural identity with traditions and festivals unique to their community.



**Sikkimese:** Inhabitants of Sikkim. The state is known for its diverse ethnic groups including Lepchas, Bhutias, and Nepalese, each with their own languages and traditions.

**Assamese:** People from Assam. They speak Assamese and are known for their festivals like Bihu and a rich tradition in arts and crafts.

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## 7.6 ANSWER TO CHECK YOUR PROGRESS

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1. Which ancient group is traditionally associated with the early migration into the Indian subcontinent around 1500 BCE?

- A) Dravidians
- B) Mongols
- C) Aryans
- D) Austroasiatics

**Answer: C**

2. Which language is primarily spoken by the Dravidian ethnic group in Tamil Nadu?

- A) Telugu
- B) Kannada
- C) Tamil
- D) Malayalam

**Answer: C**

3. Which of the following is not a Scheduled Tribe (ST) in India?

- A) Bhils
- B) Santhals
- C) Gujaratis
- D) Gonds

**Answer: C**

4. The Konkani-speaking community is primarily associated with which Indian state?

- A) Maharashtra
- B) Goa
- C) Karnataka
- D) Kerala

**Answer: B**

**5. Which community is predominantly found in the state of Gujarat?**

- A) Tamils
- B) Punjabis
- C) Marathis
- D) Gujaratis

**Answer: D**

**6. The Manipuri classical dance form is native to which Indian state?**

- A) Assam
- B) Manipur
- C) Mizoram
- D) Nagaland

**Answer: B**

**7. Which of the following ethnic groups is not native to northeastern India?**

- A) Mizo
- B) Naga
- C) Bodo
- D) Rajasthani

**Answer: D**

**8. The Punjabi language is primarily spoken in which region of India?**

- A) Punjab
- B) Gujarat
- C) Kerala
- D) Maharashtra

**Answer: A**

**9. Which of the following groups is known for their traditional weaving and vibrant festivals in Mizoram?**

- A) Nagas
- B) Mizo
- C) Khasi
- D) Bodo

**Answer: B**

**10. The Bhil community is primarily associated with which region of India?**

- A) South India
- B) North East India
- C) Central India
- D) West India

**Answer: C**

**11. Which Indian state is known for its unique Lepcha, Bhutia and Nepalese communities?**

- A) Sikkim
- B) Assam
- C) West Bengal
- D) Tripura

**Answer: A**

**12. Which of the following groups is traditionally associated with the state of Rajasthan?**

- A) Konyak
- B) Bhil
- C) Manipuri
- D) Marwari

**Answer: B**

**13. Which language is spoken by the people of Karnataka?**

- A) Tamil
- B) Kannada
- C) Telugu
- D) Malayalam

**Answer: B**

**14. The term 'Adivasi' is commonly used to refer to which of the following?**

- A) Scheduled Castes
- B) Scheduled Tribes
- C) General Categories
- D) OBCs

**Answer: B**

**15. Which community has historically been known for its commercial and business acumen in Gujarat?**

- A) Marwaris
- B) Punjabis
- C) Bengalis

D) Tamils

**Answer:** A

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## 7.8 TERMINAL QUESTIONS

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### Long Questions

1. How do the major ethnic groups in India, such as Indo-Aryans, Dravidians, Mongoloids, and others, differ in terms of their historical origins, cultural practices, and languages?
2. What are the significant historical migrations and invasions that have shaped the ethnic and cultural landscape of India, and how have these movements contributed to the diversity observed today?
3. How have colonial policies and post-colonial developments influenced the socio-political status and interrelations of different ethnic groups in India?
4. In what ways do the linguistic and cultural diversity among the different races in India impact social integration and regional identity? Can you provide examples of how this diversity is reflected in everyday life and traditional practices?
5. What role do religion and ethnicity play in the social hierarchy and caste system in India? How have different ethnic groups historically interacted with and influenced the caste system?

6. How do the demographic distributions of various ethnic groups in India affect regional politics, economic development, and resource allocation?
7. What are the challenges faced by ethnic minorities in India in terms of representation, rights, and access to resources? How have government policies and initiatives addressed or failed to address these issues?
8. How do traditional arts, crafts, and festivals of different ethnic groups in India reflect their historical and cultural backgrounds? Can you provide examples of specific traditions unique to each major ethnic group?
9. How has globalization and modernity affected the cultural practices and identity of various ethnic groups in India? Are there any notable examples of cultural blending or preservation efforts?
10. In what ways do geographical features, such as the Himalayas, the Thar Desert, and the Western Ghats, influence the lifestyle, culture, and ethnic composition of the regions they surround?

### **Short Question**

1. What are the main ethnic groups in India?
2. How do the Dravidian and Indo-Aryan ethnic groups differ culturally?
3. Which ethnic group is predominantly found in the northeastern states of India?
4. How has the migration of Indo-Aryans influenced Indian culture?
5. What role does ethnicity play in India's caste system?
6. How have historical invasions shaped the ethnic diversity of India?
7. Which Indian ethnic group is known for its unique language and cultural practices in the southern region?
8. How do the indigenous tribes of India contribute to the country's ethnic diversity?
9. What are some examples of festivals that are specific to particular ethnic groups in India?
10. How has globalization impacted the traditional practices of India's ethnic groups?

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## **UNIT-8 HUMAN MIGRATION AND OCCUPATION**

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### ***8.1 OBJECTIVES***

### ***8.2 INTRODUCTION***

### ***8.3 MOVEMENT OR MIGRATION OF POPULATION***

#### ***8.3.1. TYPES OF MIGRATION***

#### ***8.3.3 CAUSES OF MIGRATION***

### ***8.4 HUMAN OCCUPATION***

#### ***8.4.1 PASTORALISM***

#### ***8.4.2 AGRICULTURE***

### ***8.5 SUMMARY***

### ***8.6 GLOSSARY***

### ***8.7 ANSWER TO CHECK YOUR PROGRESS***

### ***8.8 REFERENCES***

### ***8.9 TERMINAL QUESTIONS***

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## **8.1 OBJECTIVES**

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After reading this unit you should be able to:

- Understand the List and explain main types of migration.
- Examine the importance of migration as an agent of social change
- Understand Explain the various reasons of migration
- Discuss the consequences of such migration in the national and international
- To study the various processes done by humans for survival from ancient times to present times.
- To understand the systematic development of different models of agricultural economy from the primitive agricultural economy to the present one.

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## **8.2 INTRODUCTION**

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Migration is usually defined as a geographical movement of people involving a change from their usual place of residence. But it is distinguished from temporary and very short distance moves. Migration can be internal (within the national boundaries) or international (across the international borders). After discussing the sociological significance and the definition and concepts of migration we discuss the major determinants of migration in terms of social, economic, psychological, political and religious factors. Migration might be rural or urban, voluntary or involuntary. What happens when people move to different places within or across national borders is discussed, as are the problems of refugees and displaced persons in national and international situations, as well as national and international migration policy and future migration trends.

Human economic activities are constantly influenced by their physical and social surroundings. The physical environment encompasses geographical location, surface, geological structure, water flow, climate, soil, natural vegetation, and mineral resources; Population, technical advancement, urbanization, modes of transportation, industry, trade, and so on all play an essential role in society. Human economic activities vary according to the physical and social conditions in various locations of the world.

During the early phases of development, humans lived a primitive and challenging life with few requirements. People used to go from one location to another in search of food and water, and to fulfill their hunger, they would hunt animals and edible trees. They gathered fruits, nuts, roots, stalks, and leaves from plants. Pastoral life is defined as the practice of hunting animals, gathering food from wild plants, and fishing for subsistence without human domestication of plants or animals.



The Agricultural Revolution was founded on the use of fire for cooking and heating food, animal domestication, crop cultivation, and permanent village dwelling. The Agricultural Revolution transformed man's life by giving him more time for other activities. As a result, agriculture and related activities served as the foundation for all of the economy's development.

According to R. Lutgens, humans' principal vocations have occurred in accordance with their evolutionary history. The study of human culture reveals information about its evolution. He began as a nomadic herder, but as agriculture advanced, he transitioned to permanent animal husbandry. From agriculture, he began to obtain sufficient quantities of other items such as food and clothing. After making a living, he began devoting his time to fine arts, handicrafts, craftsmanship, business, and other pursuits. At this point, he began working in mineral extraction and commercial enterprises, among other things. In this way, human companies were able to evolve from the beginning until the present age.

According to Krzymowski, human professions evolved in three stages: hunting, fishing, continuous travelling for animal grazing, and early agriculture; however, other academics believe that animal husbandry evolved after agriculture as a result of the activity. Animal husbandry as we know it today became conceivable when humans began to live permanently in one place.

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### **8.3 MOVEMENT OR MIGRATION OF POPULATION**

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Population settlement, movement, or migration refers to a shift in how a human group or individual interacts with their geographical region. According to the United Nations, "movement is a type of geographical relocation or spatial movement that occurs between one geographical unit and another in which both the institutions of residence and access have changed. This sort of residence-migration is permanent because the location of human habitation varies over time." According to David Heer, "Moving from one's usual place of residence to another place is called migration."

J. Bogg explains: "The term migration is reserved for those changes of residence which involve a complete change and readjustment of a person's community relations." (The term 'migration' refers to residence changes that result in a complete shift and modification of the individual's community affiliation.)

E.S. Lee defines relocation as "a temporary or semi-permanent change of domicile. Distance doesn't mean much."

Prof. Berkeley, According to "Generally, population transfer interrupts the natural rate of demography. The effect of transmission can be quite fast. It leads to the transfer of millions of individuals in just a few months."

(Migration generally interrupts the natural flow of these processes. It can have a quick impact, shifting millions of people in a few of months.

Generally, mobility refers to the movement of people from one location to another for economic, social, or political reasons.

Housing and migration immediately affect the size, distribution, and structure of a country's population. As a result, such changes occur fast and unexpectedly, making them impossible to foresee in advance through both imagination and study. Migration has historically been intimately linked to a country's economic ups and downs, as well as national events. The movement of people from one location to another, or between countries, is obviously recognised a shift in population structure. Ms. The model assumed that the world's population structure consisted of diverse settlements and migrations. His belief is that human growth on Earth has occurred gradually; for example, the Gipsimath race of New Zealand is gradually spreading everywhere.

The primary goal of population migration research is to investigate changes in the population development of a specific country. For example, how many people live in that country? How much labor force is available for economic tasks, and how should economic development be implemented? When a group of people migrates from one location or region to another, it is regarded as a significant indicator of societal change, as most countries have experienced. That, in conjunction with industrialization or economic growth, human migration begins from agricultural areas to urban areas, from one city to another, or from one country to another.

As a result of technical advancements, human populations in Asia and Latin America relocated from rural to urban areas, resulting in the formation of several metropolises. Human tribes have been moving from one location to another since antiquity. The reality is that human migration to many new countries is the primary driver of population expansion. Similarly, due to the lure of gold, there was a continuing movement of Europeans to Australia and Latin America due to increased economic activity until recently. As a result, when this transfer occurs on a wide scale, many significant alterations might be observed.

Population transfer occurs in two ways:

(1) Emigration and

(2) Immigration

As a result of technical advancements, human populations in Asia and Latin America relocated from rural to urban areas, resulting in the formation of several metropolises. Human tribes have been moving from one location to another since antiquity. The reality is that human migration to many new countries is the primary driver of population expansion. Similarly, due to the lure of gold, there was a continuing movement of Europeans to Australia

and Latin America due to increased economic activity until recently. As a result, when this transfer occurs on a wide scale, many significant alterations might be observed.

Aspects of population transfer: There are following five aspects of population transfer:

- (1) Country (Space),
- (2) Time,
- (3) Cause,
- (4) Number and
- (5) Stability

Population transfer research examines where the transfer occurred, whether permanently, temporarily, or for a brief length of time. What are the reasons for the transfer, and how many persons have been moved?

### **8.3.1 Types of Migration**

In general migration can be placed in two categories:

- A. Inland Migration and
- B. International Migration

In today's world of global ties and economic competition, international migration might be seasonal or permanent in certain conditions. Internal migration can be classified into three sub-categories, each of which can be divided as follows:

#### **A. Inland Migration**

Inland migration has been sub-divided into three sub-categories as follows:

- (1) From the point of view of time or period,
- (2) In view of change of place and
- (3) In terms of distance from the place of birth.

#### **1. from the point of view of time or duration:**

**Sudden or short-term migration** - In India and many other parts of the world; for social, family, and religious reasons, such as marriage and relocation to Goa. Such short-term stays include things like making fun of, seeking a daughter-in-law, meeting family members, attending

social and social gatherings, and travelling for religious purposes, among others. Similarly, when a person or group travels domestically or internationally for business, political, or administrative purposes, he or she returns to his or her original location after finishing his or her work efficiently and within the time frame.

**(ii) Temporary Migration:** Temporary migration occurs when an army of workers and laborers travel to other locations for a set period of time to complete the development of an industry, institution, railway, or highway. Examples include the Indira Gandhi Canal Area, Narmada Valley Development, Super Thermal Power Station, and large religious rituals. A person leaves his place of birth deliberately and then returns or settles in his permanent abode after completing his work or plan.

**(iii) Periodic or Seasonal Migration** - Every year, thousands of Bihar workers migrate to Punjab and other places during the harvest season to earn greater salaries. Similarly, cattle herders in dry and semi-arid regions migrate annually from their homes to humid regions (from India's Thar Desert to Madhya Pradesh, Gujarat, and East Rajasthan) at the start of summer and return after a period of rain. Let's go. This is known as occasional or seasonal migration.

**(iv) Semi-Permanent Migration-** When a person, family, or group relocates to another location, such as industrial centers or metropolitan cities, for a specific business, job, industrial, or administrative task, but does not return to their birthplace; Follows the customs and traditions of the country while maintaining social relationships there. After a short period, a few years, or the completion of his job, he returns to his birthplace. For example, in major cities such as Mumbai, Chennai, Bangalore, Surat, and Indore, domestic servants, businessmen, working class, and businessmen relocate from their birthplaces and settle there for this purpose, returning after many years to pass on their businesses to the next generation.

**(v) Permanent Migration** - Special mineral-based industries in a region, on a large scale, during the expansion of the canal command area, to key centers. And in the developing commercial marketplaces, many families from other towns and villages make their decisions based on a variety of economic factors. Many families have moved to Indore permanently as a result of Chhattisgarh's increasing industrialization and business development. The situation is similar in Mumbai, Kolkata, and Delhi, among other rapidly rising cities. Everyone here, from workers to industrialists, wants to settle permanently after some time.

Women who leave their birthplace and settle elsewhere fall into this category after marriage; however migration from Europe occurs at a low rate in India. In the late middle Ages, hundreds of people and families travelled to the New World and settled in Australia and New Zealand each year, demonstrating the importance of permanent migration. It's believed.

## 2. From the point of view of change place:

**(i) From Village to Village** - Even today, in rural sections of India, a girl is married to a neighboring village, so laborers from neighboring villages come and permanently dwell in communities with better irrigation facilities. More than two-thirds of all movement in the country happens between villages. **(ii) From Village to City** - As education, business, industry, and economic activities expand, more people move from rural to urban areas. Between 1961 and 1991, there was a steady growth in migration from villages to towns, cities, and industrial centers in India. For the past 30 years, this exodus has never stopped. The single or primary cause for migration to cities has been economic prosperity and a promising future.

**(ii) From City to City** - In general, people migrate from one city to another for political, social, administrative, or professional reasons. When a branch of a large industry, bank, or corporation opens in a small town, many employees from the headquarters must relocate there. Similarly, due to favorable economic factors, there is migration from small towns to metropolitan cities, such as Dehra, Badwani, Alirajpur, Jhabua, and Maheshwar, which is constantly rising from places like Mao to the metropolis of Indore.

### **(iv) From Cities to Rural Areas (Migration in reverse or retrograde direction)**

This is an unusual direction of migration. Such migration occurs slowly and for inexplicable reasons. Administrative policies can be argued to be the primary cause of such migration. For example, when an administrative unit, such as a police station, school, police station, post office, or cooperative shop, is established in a rural region, people from the towns must relocate and dwell there. Such migration is usually not voluntary; is transient or short-lived.

### **(3) In terms of distance from the place of birth:**

**(i) In the district of birth-** In a country like India, most migration occurs in the district of birth because the majority of conservative and traditional Indians are compelled to leave their birthplace, albeit reluctantly. According to the 1981 and 1991 censuses, this category accounted for around 60 percent of migration. The majority of female migration (80%) falls into this category.

**(ii) State or province of birth-** Such migrants move from small rural communities to newly developed or fast rising industrial centers in the state in quest of a better education or more economic opportunities. Such movement has taken place primarily in regional and provincial capitals.

**(iii) Inter-state migration** - People frequently migrate from specific regions of the country to metropolitan areas in neighboring states for economic reasons. Workers from Rajasthan and

Madhya Pradesh are relocating to cities such as Ahmedabad, Indore, and Surat, while businesses from neighboring states are migrating to cities such as Mumbai, Ahmedabad, Surat, and Indore in order to make money and improve their economic situation. 2.5 and 3 in India's metros Crores of people have arrived and settled from neighboring and faraway states.

## **B. International Migration**

International migration occurs when a resident of one country moves to another for certain reasons. From this perspective, it is also crucial to note that migration to a certain country or any region of the world is only conceivable if the society and government embrace immigrants from other countries as well as the labor and abilities of those who come to such places. Both the facility and the motivation to use it profitably should exist. On a global scale, the large-scale migration from Europe to the New World and Australia-New Zealand between 1550 and 1850 is a historical record unto itself. At the time, both America and Australia-New Zealand were largely uninhabited continents.

As a result, practically all of Europe's rising population, or millions of people, landed on these new continents as early immigrants, while former immigrants welcomed those who arrived later from their home country. Similarly, on a limited scale, thousands of Indian laborers moved to nations such as Sri Lanka, Suriname, Mauritius, Fiji, and Guyana in the nineteenth century and remained permanently. Similarly, in the twentieth century, many people moved from India to Singapore, Hong Kong, Indonesia, and the Gulf countries for business. Even now, a huge number of Indians are travelling to Middle Eastern countries for a variety of skilled labor, high technology, medical, and economic opportunities.

Similarly, throughout the nineteenth and twentieth century's, numerous Chinese and Japanese people settled in Asian countries and America. Following World War II, most governments either totally prohibited such uncontrolled movement or regulated it through special restrictions designed to suit the country's economic needs for specific kinds of individuals or groups. Similarly, in Australia, New Zealand, Argentina, and other wealthy countries, only Europeans can migrate.

International migration mainly happens in three ways:

**(1) Economic attraction** - When a wealthy country wishes to develop swiftly, it draws people and skilled technicians at high wages. Southern United States of Negro Society from Africa In the 18th and early 19th centuries, migration continued to offer labor to India's hot regions. Similarly, the allure of the 'discovery of gold' in South America and Australia was so strong that hundreds of Europeans began travelling there fast each year. When a man from one nation marries a woman from another, he or she may migrate for social reasons.

**(ii) Independent or organized migration-** When a community that has already settled in a place invites relatives and kin from their home country, it promotes international migration. Similarly, organized migration occurs when an institution or organization brings people from outside to settle in a certain location for a set length of time in order to complete new tasks or plans swiftly. Such migration has little influence on the nature of the people or countrymen.

**(iii) Special level of migration-** In current times, practically all rich or developed countries seeking progress welcome doctors, engineers, skilled workers, technicians, and businessmen with exceptional abilities or traits, as well as people from other developing countries. They keep inviting people based on the needs of the country. Every year, thousands of talented, highly skilled, and enlightened people from the Indian subcontinent are drawn to Britain, Canada, the United States, Brazil, and wealthy Middle Eastern nations on this basis, as well as the extremely high salaries and facilities. Many of them later live there permanently after marrying and obtaining citizenship.

The primary reason for international migration is a higher income, a higher standard of living, and a strong desire to take advantage of better and more appealing living conditions, among other things.

### 8.3.2 CAUSES OF MIGRATION

There are different reasons for migration in the world, which can be grouped into the following four categories:

(1) Physical, (2) Economic, (3) Religious and (4) Political.

**(1) Physical Factors** - Physical factors include climatic change (such as extreme rainfall, floods, and drought), earthquakes, volcanic eruptions, increased glacier occurrence, soil sterility, and flooding or submergence of beaches, to be included. According to Kumari Sample, when Central Asia's dryness worsened, the Aryan race began migrating in all directions. One of its branches travelled from Turkistan to Afghanistan before arriving in India. Similarly, during the middle Ages, invaders from this dry region (Shakas, Huns, Tatars, Mongols, etc.) reached China, India, and Greece. Even in Europe, during the latter period of the Preletocene age, when the Himalayan region extended up to the northern Baltic peninsula, the population progressively shifted from southern to northern Europe.

Migration of population in the Northern Hemisphere has occurred not only from north to south, but also from east to west along the Atlantic and Pacific Oceans, as seen in North America and Western Europe, Mediterranean region, East Asia, etc; is due to the excellent and invigorating climate and sufficient rainfall, races like Huns, Goths, Alans, Slavs, Tatars, and Tartars from the steppe regions of Asia moved towards Western European countries, In Asia, the human community has moved from the west to the east. Humans spread from the hilly regions of

Mongolia to the plains of Yangtsiqiang, where together with the pleasant climate and fertile land is also the reason responsible for this.

Aside from climate-related changes, floods and famines account for a considerable proportion of migrations. When the occurrence of floods or famine subsides, people return to their places or settle permanently in places where fertile land and water are accessible; Kosi in Bihar, China. Residence-migration is the movement of population. Due to severe floods in the Mekong River in Jagho and Cambodia, as well as changes in river flow, human communities are forced to leave their original locations of residence and modify their migration paths to safer locales. Earthquakes also limit human migration. Thousands of people migrated to West Bengal, Uttar Pradesh, and Orissa following the Bihar earthquake in 1934. Similarly, thousands of people fled to neighboring states after an earthquake struck Latur (Maharashtra) in 1993.

Epidemics and diseases of crops and animals lead to human migration. This typically occurs in Africa, the Americas, and western North America.

Humans are compelled to evacuate their homes as a result of the volcano's unexpected eruption. As a result, numerous individuals from Sicily, Lipari, the Philippines, and the Hawaiian Islands immigrated to other countries.

**(2) Economic Factors** - The main economic factors include population density, food scarcity, the appeal of new and fertile land, irrigation infrastructure, and the availability of mineral and forest resources, among other things. Dr. Hayden concurs: "The main reason for population migration is the shortage of food items in a country due to excess population on its land, which leads to invasions to benefit from the wealth of neighboring countries." There is a sense of paying taxes."

This type of transfer happens for the following reasons:

(a) Driven by economic factors such as a need for food or a desire for future growth, human tribes migrate to other countries to build massive empires, make new countries habitable, establish relationships with other countries around the world, and eventually give birth to a new higher civilization. The abundance of cultivable land in North America, Latin America, Australia, New Zealand, and Southern Africa has attracted people from Europe, China, Japan, and India. Similarly, irrigation facilities have caused people migration from other areas of river basins, with rivers like the Nile, Yangtze, Indus, Ganges, Tigris, and Euphrates being key examples.

(b) Humans continue to migrate to neighboring countries, drawn by their natural resources, whether they be land or climate-related. The inhabitants of mountainous or dry infertile regions, primarily the Mongols and other Central Asian human tribes, entered the Ganga, Yamuna, Dajla, Euphrates, and Yangtze River valleys to escape their unfavorable environment. The discovery of gold in Alaska and Australia drew Europeans in the sixteenth century. The same is true for areas



near Central Asian oil wells. During the nineteenth century, numerous European tribes settled in Africa, North and South America, Australia, and New Zealand.

The British had established colonies in several parts of the world. Countries like Spain, Portugal, France, the Netherlands, England, Russia, and China continue to struggle for empire expansion.

(c) Transfers are now made for business purposes. Traders are soldiers who lead permanent settlements. He is referred to as their guide because they can only get there by taking the same path he did. Fur traders assisted the French in crossing Canada, Russia, Siberia, and the Roman Alps to reach the plains of Northern Europe.

(d) Pilgrimages cause migration from one part of the world to another. Usually, this type is transient owing to sickness. This sort of migration includes the journeys of thousands of Muslims to Mecca, Jews to Jerusalem, Christians to Rome, and so on.

**(3) Socio-cultural factors** - Aside from theological difficulties, there are a number of socio-cultural factors. Similarly, due to India's division in 1947, thousands of Muslims went to Pakistan. The population change is believed to be the biggest in history. The division between Greece and Turkey resulted in a population swap.

From the third century BC to the fifth century AD, numerous Indian religious speakers migrated to Myanmar, Sri Lanka, China, Japan, Sumatra, Bali, and Java. Similarly, from the seventh to the twelfth centuries, wars between Islam and Christianity caused additional migration from Spain to Iran. The Spaniards moved to Mexico for religious reasons, whereas the French relocated to Canada. Similarly, many Jews from Germany and the Soviet Union immigrated to America.

Thousands of Parsi families from Iran went to India in the eleventh century in search of freedom from Arab Muslims who had settled.

**(4) Political Factors-** Political causes of human movement include invasions, conquests, the discovery of new countries, the establishment of colonies, and forced migration.

There are various examples of invasion-induced relocations, such as before the arrival of the Mughals during the invasions of Alexander the Great, Mahmud Ghaznavi, Muhammad Gori, Changez Khan, and Taimur Lang, many people who accompanied them to India lived here. Similarly, immigrants who migrated from Britain to North America, Australia, and New Zealand pushed natives into the forests. When the traders of the East India Company arrived in India and established their dominion, many Englishmen came and stayed there. Many British expats settled here permanently after investing in industries including tea, coffee, and rubber. Some English clergymen came and stayed to propagate religion.

Numerous European governments established new settlements and colonies across continents. Spain and Portugal established colonies in Latin America, the French in Canada and the United States, and Africa did likewise. These colonies were primarily established to boost agricultural and mining companies.

**Forced migration-** Is found in many countries throughout the world. English-speaking Indians were sent as coolies to countries like Mauritius, Guyana, and Natal. Similarly, many Africans were transported from Africa to the United States between the 18th and 19th centuries. From 1788 to 1867, more than 1,50,000 criminals were transported from England and transferred to Australia. During the nineteenth century, one million Russian civilians were deported to Siberia.

According to sociologists, the following two factors lead to migration:

There are two types of elements: adverse or push forces, and favourable or enticing components (pull factors).

**(i) Adverse Factors (Push Factors) -** Is found in many countries throughout the world. English-speaking Indians were sent as coolies to countries like Mauritius, Guyana, and Natal. Similarly, many Africans were transported from Africa to the United States between the 18th and 19th centuries. From 1788 to 1867, more than 1,50,000 criminals were transported from England and transferred to Australia. During the nineteenth century, one million Russian civilians were deported to Siberia.

According to sociologists, the following two factors lead to migration: There are two types of elements: adverse or push forces, and favorable or enticing components (pull factors).

**(ii) Pull Factors -** Under these circumstances, a person is compelled to travel somewhere in order to make his life happier. These reasons are known as Pull Factors. These include the following components.

(1) Availability of good job opportunities (2) A pleasant climate, a viable housing system, and fertile land. (3) Sense of security.

To summaries, humans are dynamic beings. When a region's population becomes uneven in comparison to its economic resources, people leave and relocate.

Pro. Blache stated the reality as follows: "When the beehive is completely full, the bees leave and go somewhere else." This has been the history of all time. In this regard, it is critical to remember that a person spends some time in one location before migrating to another. As a result, except in a few areas, individuals have been unable to settle permanently anywhere. Miss Semple accurately remarked that, while it is widely considered that the world was formed by

gradual migrations, the facts show that humanity has spread gradually over the globe in the same way that the Gipsy Moth spread in New England. Another important fact is that human migration is a result of the social, economic, cultural, political, and another important reality is that human migration is a product of the social, economic, cultural, and political conditions that individuals and societies face.

### **Seasonal Migration**

Another type of migration happens in many countries around the world, known as transitory or seasonal migration. In this case, migration only occurs during a given season or time. This type of migration occurs in response to dramatic temperature swings, a scarcity of food, or to meet economic or social requirements. There are many examples of this. This type of migration occurs more frequently in Canada, Siberia, Central Asia, and the Tundra region. Farmers farm in the Prairie and Steppe plains during the winter, but when it snows, they work in clustered forest areas to cut wood, collect wood, or hunt. After the snow melts in the spring, they return to their original locations.

The tundra's Eskimo and Samoyed people go north in the winter to hunt seals, whales, walrus, and other creatures in the Arctic Ocean, before returning south to hunt caribou and reindeer.

During the winter season in the Himalayan heartland, residents of Bhutia, Kashmiri, Nepali, Tibetan, etc. Along with the sheep and goats, the family treks to the hot valleys to undertake animal husbandry duties like spinning wool and weaving. They return to the upper regions as summer arrives. Similar seasonal migrations occur in the Thar Desert.

Historically, similar seasonal movement was observed in Central Asian pastures such as Kazakh, Khirgiz, and Turkestan. Heat scorches the grass here in the spring, resulting in the emergence of multiple low-grade pastures. Relatively beautiful pastures can be found in lake basins and troughs, as well as on the slopes of low plateaus, however they are short lived.

As a result, the Kyrgyz and Khyrgyz people moved extensively throughout the summer season. They used to roam in small groups with their animals and build temporary shelters; staying in one place for more than a week is difficult for them. Northern tribes generally travelled north and up to the forest regions, whereas southern Turkestan tribes and large groups of people travelled east, towards the mountainous areas and the entire valley region because there is more rainfall here or because the snow in the rivers has melted. Regardless of whether the barriers are constructed, there will be more rainfall, but it will be limited. This is only a matter of history

## Effects of Migration

Population transfer provides great benefits to both migrant and resident countries. As a result, the countries undergo profound economic, political, social, and religious changes. The further humanity has travelled, the more prosperous they have gotten. The Arabs and Moors had established an empire in Spain, far from their ancestral homeland. The Greeks established several Asian cities. The Europeans have taken control of the Australian continent and New Zealand.

**1. Effect on Culture** - Human displacement leads to the following cultural changes:  
(i) When immigrants are in the majority and powerful, residents relocate to the new country, shaping its culture. For example, the Greeks dispersed Hellenic civilization across the Eastern Mediterranean. Similarly, Spaniards gained influence in Mexico. English influence is also visible in undivided India, Myanmar (Burma), and Sri Lanka.

(ii) On the contrary, if immigrants arrive in a country where the population's culture is well-established and impossible to change, they will mix with the locals. All foreigners who arrived before the Mughals were assimilated into Indian culture. A similar situation existed in Lombardy, Italy.

(iii) Immigrants frequently change a country's culture. A mixture is formed in it. India's present culture blends ancient Aryan, Dravidian, Muslim, and English traditions.

**2. Economic Effect** - Population transfers have an economic consequence. These immigrants have contributed significantly to the economic prosperity of their new countries. The arrival of Europeans facilitated the formation of new nations such as the United States of America, Canada, Australia, and Latin America. As the country develops, the economic conditions of its residents improve.

## Barriers in Migration

Certain favorable elements or items encourage migration, while others create barriers or hindrances in the migration journey. There are two types of such barriers.

**1. Physical or geographical obstacles-** Deserts, high mountains, large distances between places, oceans, dense and inaccessible woods, dangerous wild beasts, and cannibalistic tribes are all obstacles to migration.

**2. Artificial or human obstacles-** Man has created such hurdles by his actions, policies, and decisions. Examples include China's Great Wall, the Berlin Wall, Russia and China's particular stringent rules, Australia's white caste migration policy, Western Asia's migration policy favoring specific religion adherents, and many countries' special policies for limited accommodation.

Migration is now generally outlawed in all countries throughout the world. Even in rare cases, only a few families are awarded residency and citizenship.

**Primitive humans and migration-** Humans are thought to have evolved in the Pleistocene era. During this time, perhaps around 9,50,000 years, human growth and habitat were severely limited, but fifty thousand years ago, he abandoned his home and began wandering free. By then, he possessed a diverse set of tools and abilities. It was similar to how humans travelled across vast regions of the earth. Within a few thousand years after its inception, it had reached many remote corners of the planet.

During the Ice Age or glacial epoch, the climate was extremely harsh, but man not only survived, but greatly improved his circumstances. At least four perennial evergreen plants emerged from the low to mid latitudes, while snow cover extended to the middle latitudes. The amount of ice changed among ages. At least four times, the continents experienced mini-ice ages, with ice sheets covering the mid-latitudes. The Earth warmed four times, causing the ice to evaporate. As the amount of ice increased over time, trees, animals, and people moved south. They began to go north and continued to do so when the snow melted.

Glacial times were both cooler and warmer than interglacial periods in the ice-free southern lands. There is evidence that the Sahara was exceedingly cold and humid at the time of discovery.

During the Ice Age, ice cover had the greatest impact on North Western Europe. Some interglacial periods were warmer than expected, while others were more severe, but humanity survived. Unlike the ice cover, people were able to survive here because they had developed some characteristics, while others were obtained before to the ice age and may be acquired later through research. Long before the Ice Age, humans learnt to utilize their hands for a range of tasks, such as walking upright on land and utilizing tools. Humans' first tool was most likely a stick with a pointed flint stone at its tip. As time passed, the first primitive tools were created.

Because humans knew how to use fire, they were able to stay warm as they travelled to colder climates and prepare food that could be cooked over fire. He used fire to clear the woods and restore the meadows. As a result, he was able to purchase land for hunting, grazing, and farming. Humans most likely used them only if they could start a fire, because they could use fuel from forest fires during volcano eruptions and natural lightning to keep it running for labour and transit from one region to another. He would likely have mastered a number of fire-making techniques over time.

Another important fact was that humans had access to fire before understanding how to make it with flint or revolving sticks.

In the battle against nature, man's most significant asset was his speech. He was able to share his newly acquired knowledge through speaking, significantly advancing cultural growth.

His ability to chew also proved useful. He could chew and digest such foods since he had excellent teeth and a healthy digestive system. Because to this expertise, early man was able to go to new places and survive on fruits, flowers, and animals. Aside from these abilities, humans had learnt to move their arms independently, climb things with soft but strong hands, and focus their sight on a single point.

Aside from that, he could see, but what mattered most was his mind, which made him a rational and imaginative being.

## **Early Migration**

Man has always been a mobile, nomadic creature. As a result, migration represents another type of human behavior. Humans migrate for various causes. When the status of migration changed, she would suddenly go from the mountains to the sea for no apparent cause. Many people provide grass and water for their pets; Is. For human reasons, migration was carried out by coworkers and hunters who moved around in quest of good migration and resettlement places. Some people migrated away from home for other reasons, and there was a small population.

The basic goal of this migration was to facilitate food gathering, avoid enemy attacks, and then not return. Only a few people were involved in these early migrations because, at the time, the majority of the world's population moved from the sea to the mountains during a specific season for a variety of reasons, and migration required people to leave their homes and relocate to new ones; they had to find a place.

Because the world was not overpopulated at the time, only a few people participated in these early migrations. The primary goal of this movement was to facilitate food procurement and guard against hostile attacks. The majority of migrations were triggered by climate changes. Volcanic eruptions, earthquakes, floods, and other natural disasters forced people to evacuate their homes. And new locations to live had to be found. Floods occurring at regular intervals made individuals realize that their current dwelling was not in a suitable location, so they relocated to a higher elevation. Migration has also been caused by intergroup ties.

During wartime or warfare, the stronger caste would drive the lower caste out of their homes. As a result, they had to locate a new place to live in a less desirable location. Many tribal migrations occurred as a result of unhappiness with their local environment or conflicts between individuals and groups. Migration has occurred numerous times throughout history as a result of religious and political repression.

**Routes of migration-** When primitive man began moving from Africa and South Asia, the origins of his growth, various pathways were open to him. Many early transfers took place solely over land. Later, when humans built boats, migration began over rivers and seas. Most migrations were slow and steady, broadening the range of human hunting and gathering.

Such steady and definitive migrations contrasted with the sudden and fast migrations caused by wars and conflicts. When discussing migration routes, we must consider the existence of old land bridges. The sea level is thought to have been around 92 meters lower during the last ice age than it is now. As a result, at the time, there were certain land bridges that connected continents. As a result, it is possible that prehistoric humans travelled from France to England on foot via a bridge. The Bering Land Bridge is another hypothetical land bridge over which humans could have reached North and South Africa from Asia.

The Dardanelles route between Asia and Europe was also popular. This strait is still extremely shallow. Similarly, before the sea level increased, people and animals moved between Asia and the eastern islands across the Strait of Malacca. Many early migrations were made possible by the existence of several land bridges. Although the world did not have all of the tiny canals, many of the world's land bridges were quite useful for migration. Based on such evidence and migrations, it is impossible to argue that humans evolved separately in many parts of the world.

**History of early migrations-** Although we do not have complete information of the conditions during early human migrations, the general outline is well understood. As he travelled from one environment to another, he encountered numerous issues. He has learnt about several new plants and creatures. This means that he created numerous new procedures and technologies. The most essential aspect of these movements was the potential for unfamiliar species to meet. The species profited considerably from this relationship. We can divide human migrations into five periods:

- (1) First period (from 10 lakh years BC to 5 lakh years BC),
- (2) Second period (from 5 lakh years BC to 20 thousand years BC),
- (3) Third period (from 20 thousand years BC to 5 thousand years BC), (4) Fourth period from 5,000 years BC to 1,500 years BC) and
- (5) Fifth period (from 1,500 years BC to the first century AD).

**1. First period (from 10 lakh years BC to 5 lakh years BC) -** During this time, mankind migrated to Africa or the southeast. In Asia, cultural humans may have developed from animals. From here, he will go to other lands. Many similar evidences have been discovered, indicating that humans existed in East Africa, South-Western India, and South-East Asia during the time. It is obvious that humans had migrated from their initial home. The primordial man went from his hot-temperature native site to the deserts and other southern regions, eventually arriving in China's temperate environment. In the midst of this, he undoubtedly crossed at least one land bridge.

**2. Second period (from 5 lakh years BC to 20,000 years BC)** - During this time, mankind migrated to Africa or the southeast. In Asia, cultural humans may have developed from animals. From here, he will go to other lands. Many similar evidences have been discovered, indicating that humans existed in East Africa, South-Western India, and South-East Asia during the time. It is obvious that humans had migrated from their initial home. The primordial man went from his hot-temperature native site to the deserts and other southern regions, eventually arriving in China's temperate environment. In the midst of this, he undoubtedly crossed at least one land bridge.

Until roughly 50 thousand years ago, humans were limited to low latitudes far from their natural habitat. Previously, during the Ice Age, he attempted to relocate to the chilly parts of Europe and Central Asia, where the environment was likely pleasant and habitable, but primitive humans found it impossible to survive owing to the impact and growth of recurring snow. It must have happened because he lacked clothes, shelter, and tools, as well as problems making fire in those chilly and humid places, but when the last ice sheet receded, humans began to consider assaulting new territory; they were more capable. At the time, he was creating new tools and weapons out of bone, horn, ivory, wood, and flint. During this time, he acquired a superior sort of spear and a unique weapon known as a harpoon, which he used to make harpoons. However, he must have worked hard to gain the ability to drive it.

**(3) Third period (from 20 thousand years BC to 5 thousand years BC)**- With the last layer of ice disappeared, primitive man began to find the land of intermediate latitudes quite appealing. He then migrated to the Northern European plains. There were additional hunting facilities in this area. The grasslands were home to massive, heavily furred creatures. Because the animals became heavier and larger, they produced more meat. People could keep flesh in frigid climates; therefore such species provided sustenance for a long period.

During this time, population growth led to an increase in migration. There is considerable evidence that it reached northern Europe and the heartland of Asia via Siberia in the east during this time. During this time, the Bering Water Treaty facilitated migration to North America. Many academics believe that many migrations occurred during this time period by water routes, but the majority believes that all of these migrations took happened over land routes from Asia to Japan, Turkey to Cyprus and Crete, and the islands of Malagasy and Sicily.

**(4) Fourth period (from 5,000 years BC to 1,500 years BC)**- During this time, significant migrations took happened across all continents. During this time, many sea trips were undertaken, capturing New Zealand, many South Pacific islands, and the Hawaiian Islands. Because of stringent travel limitations, the majority of migrations during this fourth period occurred on a modest scale. Migration was a lengthy process in which some cultures were destroyed or forced to abandon new locations.



Migrations intensified between 1000 BC and the beginning of the Christian era. Although people's interest in movement waned with the emergence of agriculture, no permanent settlements could be established. People in ancient Greece moved around regularly. All modern writers agree that only fertile lands have been targeted. There were fewer modifications in less fertile places. Ancient Rome was the epicenter of migration and settlement. People come here from all over the world. Some people were brought here from Northern Europe, Africa, and the East as prisoners of war or slaves who refused to be immigrants.

The first thousand years of the Christian era were one of constant mobility. At the time, there were more individuals moving around than there were facilities for. Following this, no large-scale migration occurred.

**(5) Fifth period (from 1,500 BC to the first century AD)** - Several significant migrations occurred during this time. During this time, the Mongols marched towards the European continent and Germany. The Slap people went north and east from their point of origin, the Dnieper River, towards the Urals.

### **Historical Migration**

(1) European Migration - The major transcontinental migrations occurred from various European countries to North America, South America, South Africa, North Africa, and Siberia, Australia, and New Zealand from the 17th century until the middle of the twentieth century.

(2) Most human migration occurred in the nineteenth century and the second part of the twentieth century. Between 1846 and 1932, roughly 5 crore individuals moved from Europe to the new countries described above. They also carried civilization and technology with them. They were successful in growing food and other critical raw resources on fertile areas in other countries by applying their perfected technique. Migration was promoted as transportation improved in the nineteenth and twentieth century's. Most housing developments during century took place in the United States.

(3) In the seventeenth century, migration occurred to places colonized by Europeans for exploitation. They aspired to construct, which meant bringing natural wealth such as rare diamonds. In the 18th century, Britain had a vast population and a robust economy. As a result, Britain had the greatest amount of migration, and it obtained political power over the majority of these temperate-zone countries. The number of persons leaving from Britain was 5 lakh in the 17th century, 15 lakh in the 18th century, and around 2 crore 50 lakh individuals settled in other nations in the nineteenth and latter half of the twentieth century's.

(4) In the eighteenth century, European nations took control their colonies and encouraged independent migration. Between 1840 and 1880, roughly 4.6 million people immigrated from European countries and settled in the United States. Many people from Soviet Russia, Poland, and Germany came to Britain as refugees between 1870 and 1950, yet out-migration

outnumbered the number of people residing in Britain by more than 3.5 million. Every year since World War II, over 8.5 lakh individuals migrate to Commonwealth countries.

(5) Even during WWII, the United Nations assisted in the return of over 80 lakh European refugees to their home countries, including France, Italy, Australia, Germany, the Netherlands, and the United Kingdom.

Human migration from European countries to other countries will continue indefinitely in temperate regions. The health of Europeans deteriorates amid the high temperatures of the tropical climate.

## **Modern Migration**

Around 1500 BC, as new territories were found and their distribution was described, the form of human migration shifted dramatically. The migration process began slowly, but about 1500 AD, things changed. Books and maps helped people learn about new countries and regions. Migration was organized by the government and commercial companies. During this time, significant improvements were made in transportation. With these new methods, crossing seas, mountains, deserts, and marshes became easier than previously. At the time, the primary goal of migration was to gain mineral wealth or expand trade. Instead of permanent migration, colonies were founded in various places of the world.

For example, the French conquered Eastern Canada, Sahara, Sudan, Cambodia, Laos, Vietnam, and Madagascar; the British visited Western Canada, the United States, British Guiana, Myanmar (Burma), Sri Lanka, India, Trinidad, Jamaica, Aden, Malaysia, Singapore, and the Fiji Islands; the Spaniards defeated Argentina; the Dutch conquered Java and Guyana; the Japanese established colonies in the Hawaiian Islands; and the Chinese established colonies in Malaysia. Many countries, including Germany, Italy, and Belgium, had colonies in various locations. The big migrations that occurred after 1500 AD began in Europe and Asia and progressed mostly to North and South America.

Over the previous century, nearly 60 million Europeans have travelled to America. Approximately 10 million of these made their way to North America, while 20 million went to Central and South America. Initially, immigrants travelled to North America primarily from Northern Europe, but later numerous people arrived from Southern Europe (primarily Italy). Approximately 3 crore 4 lakh people from all European countries, including Britain, Germany, Spain, Italy, Russia, and Sweden, settled in the United States of America. The amount of European immigrants in Canada, Brazil, and Argentina varied between 4 and 6 crores.

Europeans first arrived in the New World in the 16th century, and soon after, numerous groups began to settle permanently. This process continued at an unbroken rate until the nineteenth century, when the population of North America was very low and the land, while

fertile, was not being properly utilized due to a shortage of humans. As a result, towards the end of the nineteenth century, there was a massive influx of migrants. This human flood occurred most in the United States between 1845 and 1854, when over 3 million people arrived and settled in European countries (the population at the time was around 2 crores).

The second wave of migration occurred in the 1880s, followed by the third in the early twentieth century. From 1800 to 1924, an estimated 60 million individuals crossed the Atlantic and settled in North America, with 35 million settling in the United States alone. During this time, the majority of migrants (1.70 crore) came from Britain. Migrants arrived in great numbers from various countries, including Italy (95 lakh), Germany (45 lakh), Spain (40 lakh), Russia (20 lakh), Portugal (15 lakh), and Sweden (10 lakh). Their arrival can be attributed only to Europe's fast population growth. There was a scarcity of nutrition and a desire for endless lush land in North America.

### **Migration in United States of America**

The population of the United States has expanded by about 200 times in the last 200 years. In 1700, the population of the United States was 79 lakh 29 thousand 672, which climbed to 828 crore 14 lakh 21 thousand 906 by 2000. In 1993, 18,783 people arrived in the United States. For the past two centuries, the majority of the population has arrived from other countries and settled here. There are four major findings of population transfer in the United States:

- (i) Settlement of people groups from many countries, primarily European ones.
- (ii) Humans from various countries originally settled in the coastal region of the eastern United States. To do this, after the population got dense in the Atlantic coastal area of the eastern United States, they went westward. New lands were established in the western states. As a result, agriculture in the United States has advanced significantly.
- (iii) Population got denser as a result of industrial growth in the eastern states; then, as western rural population shifted to eastern cities.
- (iv) The majority of those who immigrated to the United States from other nations did so for economic reasons and to live a happier life. Aside from this, people came for the following reasons.
  - (a) Criminals from Britain and other countries were expelled.
  - (b) The greatest number of folks arrived with a wish to live a better life.
  - (c) Being influenced by a desire for religious freedom.
  - (d) Refugees who escaped government repression.
  - (e) Negroes were transported from Africa as slaves to work in agriculture.

Following the abolition of slavery, millions of laborers from China, India, and Japan travelled periodically for contract work, with many settling in the United States.

Between 1840 and 1880, an estimated 21.5 million people came to the United States. After 1860, approximately one crore people came every decade. After 1930, the number of migrants declined. 90% of the migrant population came from Europe. In 1854, 2.5 lakh people came from Britain each year, but this number has since decreased significantly; 13,385 people arrived in the United States in 2000, 18,436 in 2001, 16,421 in 2002, and 9,601 in 2003. Apart from Britain, people have come from Germany, Italy, Austria, Hungary, and other places. The chart below the table shows the population migrating to the United States from various continents:

Highlights the population migrating

	2000	2001	2002	2003
Europe	1,32,480	1,75,371	1,74,209	1,00,769
Asia	2,65,400	3,49,776	3,42,099	2,44,759
North & Middle America	3,44,805	4,07,888	4,04,437	2,50,726
South America	56,074	68,888	74,506	55,247
Africa	44,731	53,948	60,269	48,738
Australia/ New Zealand	3,031	4,044	3,705	2,731
Other Country	3,286	4,403	4,507	2,857

Source: Google

## Migration in Asia

The majority of migration to the Asian continent occurred in prehistoric times. These migrations largely came from Central Asia. Later, migrations occurred from eastern China to Cambodia, Laos, and Vietnam, as well as from India to Myanmar, southern Cambodia, Laos, Vietnam, Malaysia, and the eastern islands.

In the past, some Mongolians migrated to East China. Many of the Mongol warriors who accompanied Kubla Khan and Genghis Khan's 13th-century conquests of China settled in China. Migration from China to other countries increased in the 18th and 19th centuries. Prior to World War II, the majority of migrations occurred in eastern Asia.

Due to Japan's rapidly expanding population, people began migrating to other countries in the late nineteenth century. They moved to countries such as Manchuria, Korea, Brazil, and India.

## **Migration in India**

India has been extensively populated from prehistoric times. Outsiders have long been drawn to this area's natural wealth. The Aryans landed here during the prehistoric period. Later, when the environment in Central Asia began to dry up, Shaka and Hun primitive human races attacked India multiple times, and in the third century before Christ, various Indian faiths were created in Bali, Java, and Sumatra, Cambodia. Since the climate grew dry, Indians travelled to Central Asia, Mongolia, Iran, Myanmar, Laos, Vietnam, Shyam, Malaya, Sri Lanka, and Myanmar to spread religion. Following that, in the early century AD, thousands of Indians travelled to Bali, Java, Sumatra, Cambodia, Laos, Vietnam, Shyam, Malaya, Sri Lanka, and Myanmar.

## **Immigration**

Many invaders from the Khyber valley in the western Himalayas continued to arrive in India on a regular basis. Mahmud Ghaznavi, Muhammad Ghori, Changez Khan, Babar, Taimur, and Nadir Shah were among those who attacked; many of his warriors remained in India.

During wartime, many individuals are forced to abandon their homes and relocate. There are numerous examples of this kind of migration. During or after the conflict, the majority of place names were exchanged. Approximately 60 lakh individuals became homeless during World War I, whereas 6 crore became homeless during World War II. Even before the conflict, many people, including Indians, were compelled to flee their homes to avoid surprise attacks or religious upheavals.

Aside from that, there was a massive population movement between India and Pakistan. Approximately one crore Hindus migrated to India from Pakistan. Around 4 lakh Muslims have migrated from India to Pakistan. During the 1971 war with Pakistan, around one crore refugees fled to India and remained there.

## **Emigration from England**

Migration from England occurred from the early nineteenth century to around 1950. During this 150-year era, approximately 250 lakh people left the British Isles and settled in the Commonwealth and the United States. In contrast, over the last 80 years, a huge number of Russians, Poles, and Germans have arrived in England and settled there. From 1871 to 1950, England lost over 35 lakh people as a result of migration; "between" 1931 and 1935, migration

happened mostly between different sections of the United States. The United States benefited from this influx by almost 5 million people.

During this time, refugees from various parts of Europe arrived and settled in England. Following World War II, approximately 85,000 individuals from England began settling in Commonwealth countries each year. According to Prey Car Saunders, some 85 million people live outside of the British Isles. Similarly, it is estimated that there are around 2,000 lakh people of European heritage living elsewhere.

The majority of migration during the last two centuries has happened between Atlantic countries Australia, and New Zealand.

Asians have had limited engagement with Africa and colonization. Europeans established the vast majority of Africa's colonies. Residents from Spain, France, and Italy primarily settled in North-West Africa. The British and Dutch dominated southern Africa. A high number of British citizens settled in Oceania; because to limits on Asian immigration to Australia and West Africa, around 11 million individuals moved from Europe to Africa and Oceania. Few migrants from East Asia have arrived in these countries.

### **Migration from Asian countries**

There were various migrations from Central Asia throughout the prehistoric era, the most notable of which were.

(i) East China via the Jade Gate to the Huangho River Valley, then via the coastal plain to the Yangtze Valley, Cambodia, Laos, and Vietnam.

(ii) To the Indus valley by the Khyber, Bolan, and other passes, and then to the great plain to the north;

(iii) Tigris to the rich semicircular region of Euphrates, then to the Nile Valley.

(iv) The Danube River Valley through Ukraine in Eastern Europe, the Volga Valley in southern Russia, and the western Black Sea coast.

(v) Beyond the Nile River Valley in Egypt, through the Mediterranean coastal region to Spain, and then to France via Gibraltar:

(vi) Mongolia and the Anadyr Peninsula, to the east. (vii) From Anadyr to North America via the Bering Strait a coastline:

There are numerous examples of international migration to Asia before World War II. Every year, more than ten lakh people move from one country to another. The population of Southern

China continues to migrate to less populous nations such as Malaysia, Cambodia, Laos, Vietnam, and Thailand. Between 1820 and 1950, nearly 4 million Chinese immigrated to the United States from different nations across the world. Currently, an estimated one crore people live there.

In 1951, there were 26.15 lakh Chinese in Malaysia and 25 lakh in Thailand, with 8.5 lakh in Cambodia, Laos, and Vietnam, 3 lakh in Myanmar (Burma), and 1.2 lakh in the Philippines. Overall, there were only 8.5 million Chinese residing overseas, and they were mostly concentrated in Southeast Asian countries. The transmission of species was restricted to Asia. A small number of Chinese dwell throughout North and South America, Africa, and Europe. In contrast to foreign migration, China has seen an increase in internal migration. Many Chinese people from central and northern China have settled in Manchuria.

There has also been a large amount of migration from Japan. Around 1880, hundreds of Japanese travelled to Korea, the Hawaiian Islands, the United States, and Canada. Between 1918 and 1938, 8 to 28 thousand Japanese left each year. Before World War II, just 1.2 million Japanese lived in Taiwan, Korea, and Manchuria. Hokkaido has the greatest Japanese population (3 million).

Human migration from India to neighboring countries dates back to antiquity. Indians settled in Malaysia, Thailand, Indonesia, Cambodia, Brazil, Mozambique, Malagasy, Sri Lanka, and other countries for commercial and religious purposes, but trade and cultural links were severed when the Vijayanagara Empire collapsed and the Palavas governed Bengal. As a result, sea turtles spread throughout the Indian Ocean, from Madagascar to Makassar.

At the same time, foreigner colonies were established in eastern countries such as Malaysia, Cambodia, Laos, Vietnam, Australia, Bonneau of the French and India of the British; Eastern Archipelago Dutch; Africa French; Belgium came under the control of the Dutch and the British; however, the transfer of porters and laborers from India began in the first quarter of the nineteenth century. They were relocated from India to British Guiana in 1838, Trinidad in 1844, Jamaica in 1845, Australia in 1851, Santa Lucia in 1850, and Mañana from 1858 to 1865. Natal in 1860; Fiji in 1879; New Zealand in 1887; France in 1891; and Brazil in 1910. Pro. Davis Between 'between' 1824-35 and 1936-3, 30,191 persons left India and 23,941 arrived from outside. This resulted in a total benefit of 6,250 persons. Between 1929 and 1951, 28 lakh people who had gone abroad came home, whereas 41 lakh people left India.

Currently, the government prohibits the transfer of uneducated labor to foreign countries. Educated workers can only leave if they meet particular standards; in some nations, such as Canada, the United States of America, the Philippines, Thailand, and Indonesia. Indians are only accepted in fixed numbers (quota system). Transferring Indians to Zambia, Australia, New Zealand, Sri Lanka, Nyasaland, Myanmar (Burma), and many other North American and European nations is either outlawed or impeded by national legislation. In several other countries, Indians are not permitted to dwell permanently; but, if they meet the terms of the

countries' restrictions, they may be permitted to stay for a period of time. Uganda, Kenya, Tanzania, Nigeria, Ethiopia, Rwanda, Republic of Congo, Aden, Mauritius, and British East Africa Tanzania, Bahrain, Kuwait, Saudi Arabia, Japan, England, the British Western Islands, British Guiana, Malaysia, and Sabah.

The majority of Indians have settled in coastal countries along the Indian and Atlantic Oceans, where sea routes are accessible. Migration to neighbouring nations has been virtually nonexistent due to India's inaccessible Himalayas to the north and fast-moving rivers and dense forest areas to the east.

### **Inter-Region Migration**

Internal migration typically happens between areas with higher economic density and lower economic density. For example, many people from West Bengal have relocated in the Brahmaputra valley, whereas those from Uttar Pradesh have settled in Punjab's agricultural districts. As a result, the population density in these states has increased relative to previous levels. The western United States is highly populated as a result of eastward migration. During the American Civil War, the majority of the population of the United States was concentrated in the Atlantic coastal states; nevertheless, by 1860, the migration movement had become so high that the number of immigrants from Ohio, Kentucky, and Tennessee grew. This migration lasted until 1920, after which California remained the main attraction for residence.

The United States has experienced four types of internal migration: (1) First, East Side people migrated to the Allegheny Plateau to secure game land: (2) As railways were built, the concentration of population grew industrial. It began to happen closer to the following areas: (3) as a result of city industrialization and development, people began migrating for administrative and other services. (4) Because of the convenience of motor transport, this migration began to occur from cities to towns and villages.

Internal migration also occurs in the British Isles. This migration has resulted in an increase in the urban population and a decrease in the rural population, with the population in hilly areas declining while in the south. It is growing in eastern regions, industries, and administrative districts. Population loss has been notably evident in Wales, northern England, and the Highlands of Scotland, whereas expansion has occurred in Glasgow-Edinburgh, the West Midlands region, and Greater London. people in North Wales visit Merseyside and the West Midlands of South Wales due to their proximity, whilst people of South-East Lancashire visit due to their distance.

Internal migration in Soviet Russia has primarily occurred to the east. The migrants first travelled from Russia's far west to the Urals, then crossed the Trans-Siberian Railway and arrived on the Pacific coast. In recent years, migration from Russia has been lower than that from North America, although there is a lot of overlap in the movement of people between the two countries.



Many census results in India indicate that very few people live anywhere other than their birthplace. Approximately 90% of people live where they were born. In 1901, 9.27% of the population was counted away from where they were born. This percentage dropped to 8.7% in 1911 before rising again to 9.8% in 1921. Even in 1951, just 55% of the total population lived outside of Gaya. In 1961 and 1971, the percentages were only 3.3 and 3.5. Only 15% of migrants came from bottleneck states, which included Uttar Pradesh, Kerala, and Uttar Pradesh, Bengal, Andhra Pradesh, Karnataka, Punjab and Haryana. Housing took place in Maharashtra, Delhi, Orissa, Assam, Meghalaya, Rajasthan, Tamil Nadu, and Gujarat, among other states.

The low rate of migration has been attributed to Indians' devotion to their birthplace, the caste system, the diversity of languages, and a lack of education. The farming population's immobility, which is inextricably linked to the soil, is also to blame, and it has been exacerbated by caste, language, social norms, and a natural fear of change. The caste system is the most important social aspect impacting Hindus, and living outside of the social circle can be challenging.

The most significant economic barrier to migration is Indians' heavy reliance on agriculture. People are cautious to forsake this strategy because they are concerned about losing their ability to earn a living elsewhere if they own or are interested in a small piece of property. Malaria, hookworms, and other illnesses may have detrimental repercussions. Furthermore, the majority of locals remain trapped in the clutches of moneylenders, who constantly place obstacles in their path of leaving the town.

Despite the immobility of the majority of the population, the country is experiencing some movement. More people have moved from agricultural areas to industrial, mining, and plantation farming areas than in other states. This movement is extremely uneven in different sections of the country.

Assam and Meghalaya have a tiny and scattered population, but plenty of agricultural area. Residents here believe it is useless to work as a wage laborer. As a result, laborers for tea gardens are recruited from remote locations. The vacant cultivable land in the Brahmaputra valley draws landless people from other states. West Bengal accounts for 60% of the population, with the remaining 15% coming from Bihar, Orissa, Nepal, Madhya Pradesh, Chhattisgarh, Rajasthan, and Tamil Nadu. These migrants come to labor in the gardens. The majority of migrants are either landless farmers or persons with very poor economic conditions.

Bihar, Jharkhand, and Orissa account for over 60% of all immigrants to West Bengal, with the remainder coming from Uttar Pradesh, Assam, and Madhya Pradesh. The main sources of immigration are (1) from Bihar, Jharkhand, Orissa, and eastern parts of Uttar Pradesh in Kolkata and its surrounding industrial areas; (2) from Santhal Parganas in the districts of Vir Bhooni, Malda, Dinajpur, and North Bengal; and (3) Darjeeling, as well as Chhota Nagpur and Nepal in the tea gardens of Jalpaiguri.

The relatively high productivity of West Bengal's soil, the rise of industry, Bengalis' dislike to manual labour, and other factors all contribute to this occupancy. The state's internal migration is unique in that people from the central belt migrate to the industrial areas around Kolkata and, on the other hand, to the valleys of North Bengal and Assam.

The housing in Gujarat-Maharashtra is unique in that people from Punjab, Madhya Pradesh, Chhattisgarh, and Tamil Nadu have settled in major industrial and business hubs. Three flows of immigration arrive here - (i) The first is from North-Western India, which includes the huge expanses of Punjab, Rajasthan, Delhi, and Uttar Pradesh. (ii) The second one is from the south-east, specifically Tamil Nadu and Andhra Pradesh. The influx from the north increases the number of impoverished in Mumbai, while the flow from the south moves to Bhila.

Maharashtra has a more sophisticated industrial perspective than West Bengal. Due to the low fertility of the soil, population density is low, and local labor is abundant. A relatively tiny portion of the labour demand indicated in its land is met by people living outside of the state. (iii) Internal migration is defined as the movement of people from different parts of the state to industrial areas in districts such as Satara, Ratnagiri, Colaba, and Konkan.

Aside from these states, the majority of the farming community has settled in irrigated areas due to irrigation infrastructure and the availability of rich land along Rajasthan, Punjab, and Uttar Pradesh's borders. Migration has also occurred in the upper Ganga valley and Yamuna-Ganga doabs. Population has also been drawn to industrial centers distributed across numerous states, particularly in cities such as Chennai, Hyderabad, Nagpur, Jaipur, Jabalpur, Indore, Ujjain, Gwalior, Kanpur, Lucknow, and Dehradun, where trade, arts, and administrative services are increasingly common. Development has taken place.

India's housing and migration areas are classified into two major categories:

**1. Region of Lowest Immigration** - are areas where (a) the agricultural population is already concentrated on agricultural land, agriculture has peaked, and there is room for future agricultural expansion. are very limited; (b) Urbanization in these areas has been gradual, with tiny cities; (c) Despite the reduced population, much land is unavailable for cultivation; (d) Industry and trade have developed very little; and (e) The economy is predominantly poor. Because of these factors, individuals from other places are not drawn to these locales.

**2. Regions of Highest Immigration** - are those places where (a) agriculture has started to thrive on new land or where labor is needed for tea or other items, and (b) new towns and industrial centers have formed as a result of commerce, traffic, and industry growth.

## 8.4 HUMAN OCCUPATION

### FOOD GATHERING

Humans have been gathering food and hunting since prehistoric times. Early humans lived in woodlands and made a living by hunting wild animals. Aside from that, he collected a variety of forest items to meet his demands.

Until 12,000 years ago, all people lived as hunters and gatherers, and they were scattered across all habitable areas on the earth's surface. Currently, only one person in a population of one lakh (less than 0.0001 percent) lives this way.

People that hunt and gather have extremely high immunity. Even in 1950, these people inhabited one-third of the planet. Their habitat comprised all of Australia, primarily significant areas of the northeast.

Food collection is primarily done in remote places at extremely high and low latitudes. High-latitude areas include Northern Canada, Northern Europe, Northern Asia, and Southern Chile. The Amazon Basin (in Brazil, Peru, Ecuador, and Venezuela), scattered tropical Africa, northern coastal areas of Australia, interior parts of New Guinea and Borneo, and interior areas of South-East Asia (Myanmar, Thailand, and China) are examples of low-latitude regions.

Fruits, roots, tubers, betel nuts, sticks, flowers, leaves, berries, roots, fibers, and many other types of little objects supplied in abundance by nature were collected in ancient times, as were wild birds and fish caught by net. These provide humans with food, shelter, clothing, and materials for producing tools.

Harvesting is primarily done in high-latitude places for things gained from animal life - caribou and musk oxen on land, and fish such as seals, walruses, whales, salmon, and so on from water, as well as eggs from birds flying in the air. The Eskimo people of North America are highly skilled hunters. Similarly, in America, Red Indians hunt deer (thus the name 'People of the Deer') and collect a variety of resources from them.

Fruits, seeds, leaves, timber, meat, eggs, and other products are acquired from a variety of trees, plants, and animals in low-latitude tropical zones, and they are the primary foods of these people; Aucas of Ecuador, Bushmen of Northern Kalahari, Pygmies of Congo and New Guinea. Papuans use snares to hunt animals and fish, as well as collect various tubers, roots, and fruits.

#### 1. Hunting and Gathering

This oldest human activity is carried out in the polar and sub-polar regions of Eurasia and North America, with the exception of deserts, as well as in the subtropical steppe and low-latitude equatorial regions that are constantly hot and humid. It is especially noteworthy that as a

result of the development of animal husbandry and farming in these areas, tribals from many places are often moving elsewhere or their numbers are decreasing.

Bushmen used to hunt large and small animals such as antelope, eland antelope, giraffe, elephant, rhinoceros, zebra, boar, and ostrich, but as European herders moved in, their numbers declined. The wide plains of North America were also dominated by hunters, fisherman, and castes that collected animals with nets. Tribes such as Blackfoot, Crow, Arapaho, Kiowa, Assiniboine, and Comanche were distributed from north to south.

All of the above-mentioned tribes' economies can be described as traditional and self-sustaining. Their instruments are classified into two types: those that can be used to collect far objects, such as a bow and arrow, throwing stick, or boomerang, and those that can only be used to obtain nearby objects, such as a noose, wood, spear, and so on. These are primarily composed of wood or bones. Bushmen utilize a variety of tools for hunting. Eskimos use spears, bows, hooks, harpoons, and other weapons to kill flying birds, and harpoons, nets, and hooks to hunt fish such as walrus, seal, and narwhal in the summer, while caribs use guns in the spring. The Pygmies of Congo and the Poonan of Borneo hunt with poisoned bows, arrows, and spears, and gather fish with hooks, nets, spears, and other tools. Eskimos are thought to be the most intelligent hunters in the world.

Eskimos can only hunt successfully if they are intimately versed with the season, daily weather, snow conditions, and hunting patterns. In the summer, when the snow melts, the Eskimos go out into the rivers and open sea with their kayaks, harpoons (killing iron), guns, and other weapons. Men and women fish together on the shores of rivers and lakes using nets, hooks, and harpoons. Seals, walruses, belugas, and narwhal fish are particularly sought for in the open waters. Women use nets to catch birds such as ptarmigan and doves. On northern Greenland, hunting takes place on kayak boats for up to two months, whereas in the south it lasts several months. When the snow starts to fall, carib hunters use sleds (drawn by dogs) instead of kayaks. These automobiles keep slipping on the ice. The hunting season for caribs is limited to a few weeks since they move swiftly to different areas. Due to the harsh cold and cold winds in the winter season, Eskimos generally rest and exchange summer and fall food, as well as celebrate, however seals, polar bears, and walruses are killed during this time. They remain buried under the snow, but are hunted with a harpoon through the hole produced at the point of respiration.

In North America, Indians hunt Caribs exclusively in the autumn, when the thick-tailed Caribs begin to migrate to the tundra. Aside from these, fur-bearing species such as fox, rabbit, bear, marten, squirrel, fox, otter, sable, beaver, and fisher are hunted throughout the year. Sea animals are primarily hunted.

**New commercial form of collection-** In the present day, one form of collection has become market-driven and commercial. It has the following features:

1. The leaves bark, or entire plant of important medicinal herbs is harvested and sold in marketplaces following a basic processing.
2. Leaves are used to make beverages, medicines, cosmetic fibers, thatch, and clothing.
3. Kernels are useful in both food and oil.
4. The tree trunks yield rubber, gum, resins, and balata (gum from the Bulli tree of South America, which is utilized as rubber and gatapercha).

## **2. Forest products and collection**

Listener: Collection of things from public locations occurs primarily in two regions: the Middle of the Northern Hemisphere.

2. Tropical regions.
3. Other regions include Southern Chile, South Eastern Australia, New Zealand, and the Mediterranean.

Objects derived from woods are typically obtained through two activities: logging and gathering various types of objects.

### **Materials obtained from why- Following are the materials obtained from forests:-**

1. Tree sap, which contains rubber from the lap.
2. A wide variety of nuts are used to make margarine, oil, soap, candles, sisal, coconut (white flesh), palm, and other products.
3. Fibrous plants from which fibers are extracted - Kapok, cut from a coconut.
4. Tree leaves, such as Abaca and Manila hemp, are used to make ropes and other products. Coca bush leaves include cocaine and yerba mate, both narcotic substances. Mate) the bushes stems produce tea-like leaves.
5. Tree barks, such as cinchona bark and cinnamon bark.

## **3. Fisheries**

Fish production is humanity's oldest occupation. Fish is an inexpensive, convenient, and nutritious food. This is why it is still a staple of the human diet today. The world's growing population and scarcity of food have drawn mankind to the ocean's renewable resources (fish). Fish account for around 3% of global human food consumption. Fish such as herring, sardine,

anchovies, cod, hake, haddock, fillet, mackerel, tuna, flounder, bobber, wasps, and salmon are often utilized.

### **Favorable fishing conditions**

The conditions below are favorable for obtaining fish:

1. Shallow seas
2. Mouths of rivers
3. Ocean currents
4. Climate
5. Fish are fished commercially in temperate regional seas. The reasons for this are as follows—
  - (i) Because the sea shores of Western Europe, Britain, and North America are indented, it is easier to catch fish here, and there are several safe harbors.
  - (ii) Because of the chilly climate in these places, fish do not decay. Cold water bodies serve as natural cold storage facilities.
  - (iii) These regions have an abundance of shallow oceans, as well as cold and hot water currents.
  - (iv) Wood is available in sufficient quantities from nearby forest regions to build boats.
  - (v) In most temperate locations, there is a scarcity of cultivable land along the coast; therefore people gravitate towards the sea.
  - (vi) These places' fish are excellent, plentiful, and non-poisonous, unlike tropical fish.
  - (vi) Because the majority of countries in temperate zones are wealthy and developed, fish are captured using scientific equipment. Fish are used to make a variety of products, including food, medications, oil, and other commodities.

### **Principal Fishing Areas**

Some fish have been taken on the earth's surface, including beaches, shallow and deep seas, but the world's temperate and cold tropical regions provide the most fish for commercial and food purposes. Pelagic fish, such as herring, sardine, and mackerel, dwell on or near the water's surface, whereas demersal fish, such as cod, haddock, and halibut, reside on the ocean floor.

The following are the primary areas of health attainment around the world:

1. North Pacific Ocean coastal region

2. North Atlantic Coastal America Region
3. North Western European Region: Norway and Britain are the main producers.
4. Japanese Sector: Japan is the main producing country of this sector. After Japan, China and Korea are the major producers.

### **8.4.1 Pastoralism**

Man's primitive existence consisted solely of hunting and collecting. At the same time, he was successful in domesticating several animals, which marked a watershed moment in the history of human civilization.

People living in various climatic conditions chose and domesticated useful animals found in their environment, such as cattle in the grasslands, reindeer in the tundra region, and camels in the tropical desert, the Andes Mountains, llamas and alpacas in the Himalayas, and yak in the Himalayas. Aside from these, prominent domesticated animals include the horse, donkey, buffalo, sheep, goat, and dog. Humans use milk, dairy products, and meat from these animals. There are two kinds of animal husbandry.

(i) Pastoral Nomadism or Nomadic Herding

(i) Commercial Livestock Rearing

### **Traditional Pastoral Nomadism**

There is a subsistence activity that relies on animals. Cattle farmers must travel from one location to another to gather food and water for their cattle. Hence, they are termed nomads. Every cattle herder grazes his animals in a set space. The animals of nomadic cattle herders rely only on natural resources.

1. Cattle are raised in grasslands with relatively high rainfall and soft, long grass.
2. Sheep are raised in short-grass pastures with little rainfall.
3. Goats are raised on little grazed and rough meadows. Nomadic pastoralists mostly raise sheep, goats, camels, cattle, horses, and donkeys.

### **Transhumance**

Cattle herders in various parts of India constantly relocate their livestock as the seasons change. Seasonal migration refers to the movement of cattle herders and their herds in response to the changing seasons. For example, in the Himachali region (Kangra, Kullu, and Alaknanda valleys), the Gujars, Bakarwals, Gaddis, and Bhotiyas migrate to the mountains in the summer and return to the plains and valleys in the winter. Similarly, in Europe, herders in the Alps migrate to higher pastures (Alps) in the summer and return to valleys in the winter. Even in the

tundra, migratory herders and reindeer herders travel north in the summer and south in the winter. Maasai herders (Kenya and Tanzania, Africa) also migrate according to the season.

## **World Distribution of Nomadic Herding Occupation**

**Tropical region-** Many primitive species thrive in the grassland between the equatorial temperate forest and the hot desert. They constantly move their pets from one location to another in search of adjacent creatures. Tall and dense Savanna grass is more common in Africa, particularly between the equator and the desert. Only one or two trees can be found in remote areas. Savanna grassland lands are called as Savanna in Africa, Compose in South America, and Selva and Lanoge in Queensland, Australia. The primary occupation of the people living in this area is nomadic pastoralism.

**Desert arid and semi-arid regions of Western Asia-** It is found in the desert, dry, and semi-arid regions of Western Asia, ranging from Saudi Arabia to Central Asia. Residents here continue to roam around with their pets in search of pasture. Because of the dry and semi-arid climate, this area is desert. Grass is only found around oases. The Baddu caste inhabits this region and raises animals such as camels, horses, sheep, and goats. These people rear a vast number of camels. Animals provide the majority of their nourishment. As a result, their livelihoods are dependent on animal husbandry and business. Aside from the Bedouins of Arabia, persons from the Kurdish, Bastiori, Loot, and Kashmai primitive castes of Iran are involved in this activity.

**Central plateau region of Asia -** People of the Khirgiz, Kazak, and Kalmuk tribes who live here continue to roam with their tamed animals in search of pasture. These folks raise animals such as sheep, goats, and horses. The Khyriz people migrate seasonally. The Khyriz people migrate with the seasons. They exclusively eat meat and milk from domesticated animals.

**The tundra climate regions of Eurasia –** The local Lap, Samoyants, Tungus, Chukchi, and Koryak tribes primarily raise reindeer. Their primary occupation is reindeer rearing and hunting, which is used for milk, meat, sledge hauling, and other purposes.

**Eastern part of the African continent -** Nomadic pastoralism is also the primary occupation of the Masai primitive tribes that live on the eastern plateaus of Kenya, Tanzania, and Uganda. The Masai people raise animals such as cattle, sheep, goats, and donkeys. They are constantly changing their residence in quest of pastures.

## **2. Commercial Livestock Rearing**

Traditional pastoralism includes the following characteristics:

1. In the present day, animal husbandry is strictly scientific.



1. Large regions are used to raise fodder crops and grass for livestock. There is no reliance solely on natural grass.
3. Wires are used to separate pastures into enclosures when the grass in one enclosure runs out, the animals move on to the next, and so on.
4. The quantity of animals and other organisms is determined by the capacity of the pasture.
5. High-milk-yielding breeds such as Holstein, Jersey, Ayrshire, and Brown Swiss cows are raised.
6. Cows of high meat production breeds such as Hereford, Aberdeen, and Agans are raised.
7. Sheep of the Marino breed, which produces more wool, and horses of superior breeds are raised.
8. A special emphasis is placed on animal breed improvement, illness prevention, and health.
9. Machines are used to cultivate fodder, prepare milk, and can meat, which is then sold to other countries.
10. Commercial animal husbandry is predominantly practiced in industrialized countries.

### **Distribution of Commercial Rearing**

The United States, Canada, Argentina, United Kingdom, France, Denmark, Germany, Russia, Australia and New Zealand are the major commercial herding countries

### **8.4.2 Agriculture**

Climate, terrain, and soil variations, as well as socio-cultural, economic, and political diversity, can be found around the world. People in different parts of the world have adopted various farming systems as a result of these variations. They are farmers based on the local conditions, facilities, and agricultural methods. Grows various crops and raises various animals. Based on these variances, the world's agricultural systems have been classified as follows.

#### **Subsistence agriculture**

This is an agricultural system in which all products are used by the farmer's family rather than being sold. The major characteristic of this agriculture is that there is virtually no surplus. Farmers raise a variety of cereals, lentils, and flax to suit their nutritional needs, as well as sugarcane. The farmer relies primarily on agriculture but also raises some milch cows.

Subsistence agriculture is classified into two types: primitive and intense. This is an ancient method of agriculture. This form of agriculture was initially adopted by humans.

## Shifting agriculture

During the dry season, trees and bushes are chopped from a small portion of the land and allowed to dry. During this time, the farmer constructs a hut out of grass and straw for his home. Burning occurs when plants and shrubs dry out. The ashes of burning vegetation are used as fertilizer. When it rains, seeds are sown using wooden pegs or spades.

Agriculture is shifting in tropical places with high rainfall. The soil becomes infertile very quickly as a result of crop growth and leaching. As a result, after three or four years, the farmers look for a new field. In this case, the abandoned field Farming is repeated every 20 to 25 years. This is referred to as the "field cycle" rather than the crop cycle.

## Features of shifting agriculture

The shifting farmer chops, dries, and burns vegetation on hill slopes ranging in size from 0.5 to 1.00 hectares. Slash and burn agriculture is so named because it involves cutting and burning plants, in changing agriculture. Aside from wooden pegs and spuds, no other tools are utilized. The plough is not used. Animals are not helped. Shifting agriculture is mostly used to grow maize, sorghum, millet, hill paddy, tapioca, cassava, yam, and banana. The soil becomes infertile quickly as a result of excessive manure and fertilizer use, as well as the leaching process. As a result, one field remains uncultivated for three or four years.

This agriculture is carried out by tribals from tropical locations. These individuals address the food grain crisis by collecting, hunting, and fishing. In shifting agriculture, the yield per acre is quite poor. As a result, even a huge space can only accommodate a few people. As a result, its sister capacity is quite low. Modern methods of boosting per unit yield cannot be applied in shifting agriculture.

**Disadvantages:** The main downsides of shifting agriculture include forest depletion, soil sterility, and soil erosion.

## Sedentary Agriculture

Following the transition to shifting agriculture, permanent agricultural systems with permanent farms and settlements evolved in locations with favorable climates and good soil. Great civilizations based on permanent agriculture emerged some 6,000 years ago in fertile river valleys such as the Tigris, Indus, Huang He, Euphrates, Nile, and Chang Jiang. Stationary agriculture is the exact opposite of moving agriculture. Farmers practice agriculture in one location on a permanent basis. In this approach, a family or group of households raises crops on a permanent basis in one location. The primary characteristics of spatial agriculture are as follows:

1. Agriculture is done in one location, and the farmer lives a permanent existence.
2. A crop rotation strategy is employed to keep the land fertile.
3. The crops are well cared after.
4. Fallow land is maintained.
5. Animal husbandry is an essential component of agricultural agriculture.
6. Multiple crops are grown depending on the climatic circumstances and length of the rainy season.

### **Intensive Subsistence Agriculture**

Subsistence agriculture is the most common farming method in the majority of the world. More than half of the world's population, 3.35 billion people, is involved in this sort of agriculture. This is more than farming; it is a way of life. There are two forms of intensive subsistence agriculture:

1. Rice-dominated.
2. Intensive subsistence agriculture that excludes rice.

### **Intensive subsistence agriculture dominated by Wet Paddy Cultivation**

This agricultural practice is widely used in highly populated places around the world. The population pressure on land is really high. Crops are planted on every inch of land. A significant number of people are involved in farming on a tiny plot of land; this is the primary economic activity in this area of agriculture, but production remains subsistence level. There is very little overstock left for selling.

Main areas: Intensive subsistence agriculture is only found in monsoon-prone regions of South and Southeast Asia. The most noteworthy countries in this agricultural system sector include India, China, Bangladesh, Sri Lanka, Myanmar, Thailand, Laos, Vietnam, Indonesia, Malaysia, the Philippines, Japan, and Korea.

**Objective:** The main objective of this agricultural system is to produce maximum production by using land intensively and in multiple ways. In this farming system, more emphasis is given on production per hectare than per capita production.

### **Features:**

1. Predominance of rice.

2. Population pressure and low availability of land per capita.
3. Small and scattered farms.
4. Old tools and manual labor.
5. Less capital investment
6. Animal power dominance
7. Agricultural dependence
8. Higher production per hectare
9. Dependence on monsoon rains.
10. Modern technology of agriculture.

**Demerit:**

1. Reduction in land reform
2. Defects in marketing system

**Intensive Subsistence Agriculture Dominated by Crops other than Paddy**

Focus on the four global factors: The amount of rainfall and temperature vary throughout monsoon zones. Aside from that, there is significant variety in relief, soil, and other geographical elements across such a broad area. Because of these geographical variances, rice cannot be grown in every place. The major crops produced in this system are wheat, soybean, barley and sorghum.

**Main areas:** Manchuria (China's northernmost territory), North Korea, and Northern Japan. Wheat is grown primarily in India's Ganga-Indus plains. Jowar, millet, and ragi (millets) are grown in India's dry western and southern regions.

**Main Features:** In contrast to rice-based agriculture, irrigation is the primary element of this system, and all other characteristics of rice-based intense subsistence agriculture apply to it as well.

**Extensive commercial grain farming**

Commercial grain production takes place on the plains at mid-latitudes. The principal crop is wheat. Maize, barley, oats, and rye are also grown, demonstrating the right impact of elements on agriculture. Oil, palm, cocoa, rubber, coffee, sugarcane, shoes, peanuts, cotton, tea, rice, and other commodities are clearly produced mostly in hot climates. There are crops grown in tropical regions. Temperate tropical crops include rapeseed, linseed, sugar beetroot, sunflower,

wheat, rye, oats and potatoes. The spatial distribution of crops is primarily determined by temperature. Tropical crops demand high temperatures, whereas temperate crops may flourish even in low temperatures. Some crops are produced across a large region because they can withstand bigger temperature variations. Such crops include cotton, maize, rice, wheat, and potatoes. Some crops can only be cultivated in thin strips because they require precise temperatures to grow. This group includes crops such as oil, palm, cocoa, rubber, coffee, and jute.

**Agricultural regions:** Prairie grasslands in the United States and Canada, Ukraine, Western Europe, pampas, Argentina (South America), southern Australia (Downs), Canterbury, New Zealand, South Africa, Punjab, Haryana, and western North India. Business activity cease.

**Mechanization:** The farms are extremely huge. The output per hectare is lower, but per person is higher because only one or two people work on such a large farm. As a result, machines perform the majority of agricultural tasks.

### **Plantation Agriculture in the tropics**

Plantation agriculture in the tropics is a gift from Europe. It was developed during the colonial era. Europeans created this agricultural strategy to obtain tropical agricultural goods.

**Features of plantation agriculture:** Plantation farms are vast. These are situated in sparsely populated areas. Farm sizes range from 5 to 40 hectares. Plantation agriculture cultivates crops based on geographical conditions, such as coffee, tea, banana, coconut, pineapple, sugarcane, cotton, and rubber.

1. Plantation agriculture demands a lot of labor, and there aren't enough local workers available. However, laborers are also recruited from other parts of the country or from abroad.
2. Establishing and operating plantation agricultural farms require a significant amount of capital.
3. Plantation agriculture employs modern, scientific agricultural techniques. Fertilizers, insecticides, high-quality seeds, agricultural equipment, and other machinery must be imported from overseas.
4. Plantation agriculture produces all crops for trade. Agricultural products are processed entirely or partially on farms. Sometimes canning is done on the farm itself.
5. Plantation agriculture has impacted the economies of numerous countries. Malaysia, Brazil, Costa Rica, and Sri Lanka's economies rely on the export of plantation agricultural products.

### **Mixed Farming**

It is a style of agriculture that prioritizes both agricultural production and animal husbandry. Directed agriculture prioritizes maximal production, diversity, and crop selection flexibility. In Europe, beetroot, potatoes, and other vegetables are cultivated below ground, while mustard, wheat, and mustard are produced above ground. Immediately after harvesting these crops, a short-term ripening crop, known as a catch crop, is planted are based on the export of plantation agriculture products.

**Features of mixed farming:** This is a fairly intense way of farming. Farmers are constantly engaged in crop production and animal husbandry throughout the year.

Popular agriculture makes use of modern scientific techniques. The farmer makes careful and effective use of chemical fertilizers, hybrid seeds, and irrigation. Its additional qualities include modern machinery and scientific crop rotation.

Farmers are safe in this form of agriculture. Multiple sources of income would protect him from financial ruin.

**Areas of mixed farming:** Mixed farming is most prevalent in the eastern United States, Canada, Argentina, the Commonwealth of Independent States (former Soviet Union), and Western Europe (France, Germany, the United Kingdom, the Netherlands, and Ireland).

## **Dairy Farming**

Dairy agriculture is primarily concerned with milk and its products (such as cheese, butter, and ghee). Milk output in India has expanded dramatically after the White Revolution. This is why it is now available in major cities.

### **Factors favoring dairy farming development:**

1. Wide pastures with lush green grass,
2. Plain area or general undulating area,
3. Normal temperature,
4. Centers of consumption, and
5. Marketing and export facilities.

### **Features of Dairy Farming:-**

1. More skilled and capable workers are needed than crops.
2. In dairy farming there is work day and night throughout the year.

3. Rearing of milch animals, milking, making dairy products, everything should be done scientifically.
4. Modern dairy farming farms equipped with modern machines.
5. Heavy capital requirement.
6. It is necessary to pay more attention to animal breeding, their health and veterinary facilities.
7. There is a great need of workers for milking, animal care etc.
8. Milk and its products are in demand only in areas located near urban and industrial areas. Therefore, dairy farms are run around them.
9. Facilities for transportation, refrigeration, pasteurization and other processes of testing are necessary.

**Major region:** North-Western Europe, in which Denmark, Holland and Britain are the major countries.

- (1) North American regions: United States and Canada.
- (2) Oceania region: South-eastern regions of Australia, Tasmania and New Zealand.
- (3) Gujarat, Maharashtra, Punjab, Karnataka and Tamil Nadu of India.

### **Mediterranean Agriculture**

Mediterranean agriculture is a diverse and unique farming system. Traditional and commercial agriculture, as well as the climate, have all had a significant impact. Mediterranean agriculture comprises cereals and fruits, produce, memorabilia, horticulture, and floriculture.

**Location:** (i) California (United States of America); (ii) Central Chile; (iii) Southern part of South Africa; (iv) Lower part of the Murray-Darling basin in Southern Australia.

**Climate:** It rains in winter and summers are dry. Average annual rainfall is 50 cm. And temperature difference is 10°C. Ranging from 30°C. Lasts till.

### **Agricultural Practices:**

1. Grain Agriculture.
2. Plantation agriculture.
3. Animal husbandry and horticulture.

**Characteristics: Mediterranean agriculture has the following characteristics:**

1. Agriculture is multidimensional. Grain production, plantation crops and animal husbandry are the main parts of this agricultural system.
2. This agriculture includes horticulture and vegetable production.
3. Dry farming is also done. Figs and olives are produced during the summer months.
4. Angoori liquor is the specialty here.
5. Animal husbandry is also very beneficial from economic point of view.

**Market Gardening and Horticulture**

This is the cultivation of high-priced vegetables, fruits and flowers. Its entire product line is designed for metropolitan environments. This agriculture exhibits the following characteristics:

(i) The sizes of the forms are small. (ii) Forms are located near cities in areas that are connected to rapid transportation. (iii) Its products are for high income group urban people. (iv) This agriculture is both labor and capital intensive. (v) Cultivation of precious flowers like tulips is its other special feature. (vi) Truck Farming (Vegetable Cultivation) Farms for this farming are set up in such areas so that the produce can be sent to the market by trucks in one night. Therefore such cultivation of vegetables is called truck farming. In this farming, farmers have developed expertise and skills in growing vegetables, maintaining their color, shape etc. (vii) Factory Farming: In this, farmers mainly rear cattle and poultry. Breed selection and scientific breeding are other specialties of this agriculture. (viii) Heavy capital investment.

**Status of agricultural areas:** Major areas of marketing garden agriculture are:

- (i) Industrial regions of North-Western Europe.
- (ii) North Eastern Territory of the United States of America.
- (iii) Mediterranean region.
- (iv) Factory forming in North America and Western Europe.

**Cooperative Farming**

A cooperative society is formed when a group of farmers voluntarily pool their resources (land, plough, bullocks, etc.) in one location in order to practice efficient and lucrative agriculture. Individual farms remain unchanged; only farming activity is carried out with a communal attitude and inspiration.



## **Benefits of cooperative farming**

1. Cooperative societies help farmers in purchasing agricultural goods etc.
2. Helps in selling the products at reasonable higher prices.
3. Helps in getting the products processed cheaply.

## **Cooperative farming sector**

The cooperative movement, which began around 100 years ago in Western European countries and was successful, was also there. Denmark, the Netherlands, Belgium, Sweden, and Italy are significant examples of cooperative agriculture. The cooperative movement in Denmark was so successful that nearly every farmer today belongs to a cooperative society.

## **Collective Farming**

The Soviet Union's community farms (known as kolkhozes) are now a thing of the past, and no such farms exist today. The land on such farms has been divided among the farmers, or alternative farming methods have been used. This historical agricultural method is offered here solely for the purpose of research.

**Objective:** The means of production were socially owned, and labor was collective. In the former Soviet Union, collective farms, or kolkhozes, were developed to serve two purposes.

- (i) Inefficiencies of traditional procedures.
- (ii) Increase agricultural production for self-sufficiency.

## **Working of Collective Form:**

1. Farmers pooled their resources of land, livestock, and labor.
2. Previously, the government set annual production targets.
3. Products could only be sold at prices set by the government.
4. Production in excess of the aim was divided to members or sold in the market.
5. Farmers were required to pay tax on the rental of production machines.
6. Good work was recognized with monetary or in-kind rewards.
7. Since the fall of the Soviet Union, the shape of these collective forms has changed.

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## **8.5 SUMMARY**

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Some states in the country have such a high population load that it is necessary to organise people transfers to jurisdictions with a lower population strain on land. In states such as Uttar Pradesh, Bihar, Jharkhand, Orissa, and West Bengal, the land-to-population ratio is low.

The Lower Ganga Valley, Upper Ganga Plain, South Kanara, Malabar-Konkan Coast, Southern Tamil Nadu, Orissa, and Andhra Pradesh's coastal areas are all extensively populated. In contrast, extensive parts of the Sundarbans, Terai, Western Rajasthan, Assam, Madhya Pradesh, and Orissa have been depopulated. In some of these areas, there is a scarcity of water, while in others, there is an abundance of forests or the wrath of unhealthy climate, but if efforts are made to improve the land and provide irrigation facilities in these parts, to increase the area of cultivable land by clearing forests, and to increase the fertility of the soil, if efforts are made to conserve and arrange cheap hydroelectric power, etc., then people can be easily transferred to these areas from areas with burden.

Now, regional economic development is being carried out with this goal in mind, so that by developing backward and less populated areas where economic resources are accessible, a balance in population distribution can be achieved across the country.

Business refers to all economic operations carried out by humans for the purpose of making a living. Humans engage in economic activities based on their abilities and technological knowledge. Cutting and gathering wood in forest locations, nomadic life in desert places, animal herding and hunting, fishing in coastal areas, farming in flat and rich river valleys, and so on are all industries that are dependent on the resources available in the area. Thus, geographical considerations such as resource availability, natural conditions, climate, education, capital, and technological expertise influence human professions.

Humans used to meet their requirements only by hunting wild animals and foraging in forests. As man's intellectual development progressed, he began keeping hunted animals for milk and other purposes. After learning about the process of wild plant growth, he began working in agriculture. He used to live a nomadic lifestyle, but after learning about agriculture and animal husbandry, he began to settle down with his family.

Food collecting is primarily undertaken by primitive societies living in deserted forests. People living in many parts of the world do not create any specific commodity, but instead rely on the collection of forest produce for their survival. Apart from collecting forest produce in forest areas, other activities such as hunting wild animals and fishing are also carried out.

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## 8.6 GLOSSARY

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**Climate migration** – The movement of a person or groups of persons who, predominantly for reasons of sudden or progressive change in the environment due to climate change, are obliged to leave their habitual place of residence, or choose to do so, either temporarily or permanently, within a State or across an international border.

**Emigration** – From the perspective of the country of departure, the act of moving from one's country of nationality or usual residence to another country, so that the country of destination effectively becomes his or her new country of usual residence.

**Immigrant** – From the perspective of the country of arrival, a person who moves into a country other than that of his or her nationality or usual residence, so that the country of destination effectively becomes his or her new country of usual residence.

**Immigration** – From the perspective of the country of arrival, the act of moving into a country other than one's country of nationality or usual residence, so that the country of destination effectively becomes his or her new country of usual residence.

**Integration** – The two-way process of mutual adaptation between migrants and the societies in which they live, whereby migrants are incorporated into the social, economic, cultural and political life of the receiving community. It entails a set of joint responsibilities for migrants and communities, and incorporates other related notions such as social inclusion and social cohesion.

**Internal migration** – The movement of people within a State involving the establishment of a new temporary or permanent residence.

**International migration** – The movement of persons away from their place of usual residence and across an international border to a country of which they are not nationals.

**Labor migration**- Movement of persons from one State to another, or within their own country of residence, for the purpose of employment.

**Migration** – The movement of persons away from their place of usual residence, either across an international border or within a State.

**Regular migration** – Migration that occurs in compliance with the laws of the country of origin, transit and destination.

**Horticulture**: Cultivation of fruits and vegetables. This is usually done in small scale farming, with greater intensity than other types of farming.

**Intensive Agriculture**: A practice that uses large amounts of capital and labor to produce higher yields per unit of land.

**Mixed Agriculture:** A type of agriculture in which along with the cultivation of crops, animal husbandry is also done. Both have great importance in the economy.

**Nomadism:** A way of life in which people keep changing their residence from one place to another for fodder for their animals. Animals are very important in the economy of the nomads.

**Pastoralism:** An economy based entirely on animals. Nomadic grooming is done only for survival. Modern ranches, large cattle farms, are forms of commercial pastoralism.

**Seasonal migration (Transhumance):** Transhumance is the migration of shepherds with their livestock according to the change of seasons. In this, shepherds go to the mountains or come down or move from one state to another. One

**Sedentary Agriculture:** Agriculture practiced on the same piece of land on a regular basis year after year by farmers living in one place permanently.

**Shifting Agriculture:** This is a type of farming in which after two or three years the old field is left and a new field is made. Due to change of fields it is called shifting agriculture.

**Subsistence Agriculture:** In this, most of the products are for the consumption of the farmer and his family. Very little quantity is left to sell whereas in commercial agriculture all the products are for sale on a large scale.

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### **8.7 ANSWER TO CHECK YOUR PROGRESS**

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1. Going from one place to another place is called:

- (a) Emigration
- (b) Immigration
- (c) Internal Migration
- (d) Outer Migration

**Answer: A**

2. Migration from one continent to another is called:

- (a) Inter Continental
- (b) International
- (c) Inland
- (d) None of them

**Answer: A**

3. Migration from one state to another state is called:

- (a) Inland Migration
- (b) Continental Migration
- (c) International Migration
- (d) Permanent Migration

**Answer: A**

4. The dweller coming from outside is called:

- (a) Emigrant
- (b) Immigrant
- (c) Dweller
- (d) Outsider

**Answer: B**

5. Every day going and coming in the factory is called:

- (a) Seasonal Migration
- (b) Short-term Migration
- (c) Temporary Migration
- (d) Daily Migration

**Answer: D**

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## **8.9 TERMINAL QUESTIONS**

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### **Long Answer Type Questions**

1. What is meant by migration of population? Describe chief migrations of the world.
2. What is migration of population? What are the causes of it?
3. Discuss the factors affecting migration in the world.
4. Discuss reasons, types and features of international migration of the world.
5. Describe chief population migrations of the world.
6. Clarify the causes of human migration. How do barriers and attractions of migration effective in the world?
7. What do you understand by inland and international migration? Explain with examples.
8. Throw light on the migration of population in India.
9. Explain chief causes of population migration in the world.
10. Explain major population migrations of the world and describe migration with reasons.
11. Briefly describe the main features of hunting and gathering.
12. What are the characteristics of commercial pastoralism?
13. Write a short note on the new changes in rice dominated humid intensive subsistence agriculture.
14. How is Mediterranean agriculture unique and multifaceted? Explain .

### **Short Answer Type Questions**

1. What is meant by migration?
2. Tell the difference between emigration and immigration.
3. What is permanent migration? Give examples.
4. Explain inland migration.
5. Describe the barriers in migration.
6. Write note on seasonal migration.
7. What is meant by international migration?
8. Which country's experiment in cooperative farming has been most successful?
9. In which country is extensive commercial grain farming prevalent?
10. Explain the characteristics of commercial animal husbandry?
11. Seasonal migration is done by which species?
12. How many types of animal husbandry are there?

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## **BLOCK-3 CULTURE AND SOCIETY**

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### **UNIT - 9: CULTURAL REGION AND LANDSCAPE**

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#### ***9.1 OBJECTIVES***

#### ***9.2 INTRODUCTION***

#### ***9.3 CONCEPT OF LANDSCAPE***

##### ***9.3.1 ELEMENTS OF CULTURAL LANDSCAPE***

##### ***9.3.2 CHIEF CULTURAL REGIONS OF THE WORLD***

#### ***9.4 SUMMARY***

#### ***9.5 GLOSSARY***

#### ***9.6 ANSWER TO CHECK YOUR PROGRESS***

#### ***9.7 REFERENCES***

#### ***9.8 TERMINAL QUESTIONS***



## 9.1 OBJECTIVES

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After having the detailed study of this unit you will be able to:

- Know about population change in any area
- Understanding the spatial process and spatial interactions
- Understanding types of migration
- Describe the concept of human economic
- Classify various human economic activities

## 9.2 INTRODUCTION

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“Whatever causes diversity of form or feature on the surface of our planet-mountains, great lakes, grassy, steppes and even deserts surrounded by a coast like margin of forest-impresses some peculiar mark or character on the social state of its inhabitants. Continuous ridges of lofty mountains with snow impede intercourse and traffic; but where lowlands are inters read with discontinuous chains and with groups of more moderate elevation, metrological processes and vegetable products are multiplied and varied and different kinds of cultivation, even under the some latitude, give rise to different wants, which stimulate both industry and the intercourse of its inhabitants.” – Alexander Von Humboldt, Cosmos.

The concept of landscape arose in Germany in the early nineteenth century. It derives from the German word 'landschaft'. Visible land is the land that humans can see. According to Hartshorne, visible land refers to the Earth's exterior shape beneath the atmosphere. Finch defines landscape as the area that is visible to anyone. Carl Sawar described the landscape as equivalent with the German word Landschaft. In 1955, he wrote a paper on the notion of landscape in the United States called 'Morphology of Landscape'. He defined the concept of landscape as "the area minus its material phen.

Karl Sawer believed natural and biological features to be part of the landscape. His theory was that in landscape studies, by modifying the natural landscape with human technology, as well as natural and biological aspects, a scenario known as cultural landscape is displayed.

He included natural area traits and human activities into the landscape structure, which became known as cultural landscape.

Scholars including Homeyer, Oppel, Humboldt, Froebel, and Wivel shed insight on the concept of landscape. Barwell used the term visible landscape rather than visible landscape. His definition is this: "Landshaft is that part of the earth's surface and the sky above it which is visible to us when viewed from a single point."

### 9.3 CONCEPT OF LANDSCAPE

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In German language *Landschaft* was used in two forms.

The distinction between (1) overall affiliation of an area and (2) aesthetic feeling of a specific location was not made apparent anywhere here. Confusion among geographers persisted as a result of the failure to distinguish between these. In France, as in Germany, the word *passage* for landscape was employed in a twofold sense. According to James Preston, the geographer who employs this phrase (*Landschaft* or *Landscape*) redefines it for no apparent reason. Latensach taught the German phrase *Landschaft*, as well as how to include information about regional caste and language into it, emphasising the importance of understanding this word in depth.

According to Helpanch, “landscape is the entire impression between any one part of the earth's surface and the fixed sky.”

Scholars like as Lautens, Schleeter, and Smithener, among others, examined the landscape and its surroundings closely. Did it and explained it thoroughly. Schleeter regarded humans to be a significant element of the landscape, which is accepted. *Passage*, on the other hand, saw humans and other living entities as part of the scenery. His belief was that if this was not done, one landscape would not be melded into another.

Mr. Penk includes only those layers in his landscape concept that, in our opinion, include human impacts on the world rather than humans themselves.

Pawlowski defined landscape as all of the elements that occupy a space. These organs allow us to experience our senses. Latensach contained both natural events and natural scenery within the context of landscape. Mal Sir regarded the political system as a component of the landscape, claiming that the state influences the landscape.

Landscapes, according to Karl Sauer, are distinct components within a larger territory. A landscape is a unit of space defined by a specified population in a given area. Karl Sauer's opinions make it obvious that landscape contains both natural and cultural regions. Humans can lessen or augment natural facts. And occasionally wrecks it. Those who saw area and landscape as synonymous were resisted, and efforts were made to clarify the distinction between the two. Landscape, as defined by James Preston, is "a part of a large area that represents the same fact when examined from several essential points of view." This clearly indicates that the terrain was regarded a region. Broeck He clarified the notion of landscape. He believed that the landscape is a visible element of the surface. He defines landscape as an abstract landscape. It is free of time and place (country) limits, and even the invisible ones complete (include) the remaining relevant data.

Thus, landscape refers to all of the properties of a region that are seen by human senses. This idea incorporates the earth's outward from beneath the sky. This form includes both static and dynamic elements.

As previously stated, the concept of landscape encompasses both natural and cultural factors.

It is vital to comprehend them individually.

**(1) Natural Landscape** - Karl Savar split the landscape into two parts: natural and cultural. Natural landscapes encompass all natural conditions and traits, whereas cultural environments incorporate man-made phenomena. It studies natural components such as soil and groundwater. It is common to witness natural landscapes everywhere on the earth's surface, however as soon as human meddling occurs, the natural landscape changes. According to Hartshorne, natural landscape can take three shapes.

(a) The primary landscape that existed before humans arrived in an area.

(b) Wild terrain - human-modified but not entirely controlled.

(c) Present-shaped landscape: This is a speculative landscape that does not appear in any populated area.

**(2) Cultural Landscape** - Cultural landscape is another contentious topic. Cultural landscapes refer to human-created landscapes. The cultural landscape contains the beliefs, social organizations, methods, and resources of the people who live in a particular location. According to Richard Hartshorne, natural landscapes transform into cultural landscapes as soon as they come into contact with humans. As a result of human access, natural landscapes have nearly vanished, leaving cultural landscapes in their place. The cultural landscape is the one that plainly reflects human transformation. At the moment, the entire environment should be classified as cultural landscape because no place is out of reach of humanity. Man has access to every place where he has undoubtedly made his mark via his work.

Man transforms the natural environment into a cultural environment. Human desire plays an important role in the formation of cultural landscape. Human desire is both creative and destructive. Karl Savar said that in cultural landscape, the interrelationship between nature and man should be studied because the landscape created with the cooperation of nature and man is called cultural landscape. Rumi geographers have given special importance to the exploitative relations between nature and humans in the cultural landscape.

**9.3.1 Elements of Cultural Landscape** – Elements created by human activities are included in cultural landscape. Generally the following elements are included in it

- (1) Human beings or population,
- (2) Human settlement,
- (3) Creation of economic products, exchanges and distributions,
- (4) Study of power resources,
- (5) Development of means of transport,
- (6) Means of communication,
- (7) Agricultural crops,
- (8) Mining,
- (9) Means of irrigation, boundaries of agricultural fields, various gardens, pet animals, enclosures etc.,
- (10) Administrative areas, international borders, administrative offices etc.,
- (11) Educational institutions,
- (12) Entertainment institutions,
- (13) Center built for art and other activities,
- (14) Religious institutions, and
- (15) Social institutions.

In this way, the landscape is a composite form of the initial physical conditions of that area and the results of the interactions between humans and the environment; it is directly manifested by humans themselves and through human actions and the consequences of those actions.

Cultural landscape plays an important role in the development of any region and on its basis the development of that region is also estimated. Cultural situation is determined by inland or international

## **Cultural Region**

Human beings are one-of-a-kind creations of nature. Man was born with his family and relatives all around him, even though he was oblivious of them. It gradually developed. He established his own separate habitat based on his requirements and preferences. His colleagues and co-religionists began residing in this setting. As a result, a distinct independent zone emerged that

differed from other places in some ways. This is where the cultural landscape emerged. A cultural region is defined as an area where comparable cultural goals are prevalent. Spencer defined the cultural region as follows: "The people living in a small area and their culture have a wide influence in the related areas."

Cultural regions are large areas of influence with a homogeneous cultural makeup.

Cultural regions are demarcated based on regional cultural features, but this can be challenging at times due to the diversity of cultural qualities. When such a situation develops, they are defined based on the most important cultural features. Language, education, religion, culture, customs, conduct, and other aspects of each society all have an impact on its delineation. As a result, each cultural region has unique traits due to varying conditions.

It is obvious that man is the inventor of the cultural region because he did not allow nature to entirely govern him and has made exceptional progress in all fields. In this environment, several cultural zones were given birth to unique personalities. Cultural regions are sometimes known as cultural circles.

**9.3.2 Chief Cultural Regions of the World** - Efforts have been made to split the world into cultural zones based on distinct features and characteristics. Historically, the globe was separated into two categories.

There are two categories of cultural regions: ancient and modern.

In ancient times, the following cultural regions (circles) existed:

The following cultural circles exist: Mesopotamian Great Cultural Circle, Nile Valley Cultural Circle, Eastern Mediterranean Coastal Cultural Circle, Indus Valley Cultural Circle, Sapta Saindhava and Aryavarta Cultural Circle, Hwangho-Weiho Valley Cultural Circle, and Cultural Circles of the New World.

To classify the cultural zones of the conquering period, numerous scholars have actively attempted to demarcate them according to various features. Spencer and Thomas, Russell and Kniffen, Phillip Taylor, are split. When scholars such as Spencer and Thomas discussed global culture, they classified it into cultural regions, big cultural regions, and cultural sub-regions. Russell and Kniffen split the world into 67 cultural zones. This kind has higher accuracy because it has been classified with remarkable precision. Spencer's classification goes as follows:

**1. Cultural Circle** (a) Western European Circle, (b) Arab Muslim Circle, (c) Africa, (d) Eastern Europe and former Soviet Russia, (e) Southern Asia, (f) South-Eastern Asia, (g) East Asia, (h) Australia, (i) Pacific Islands, (j) Anglo America and (k) Latin America.

**2. Large cultural regions** Scandinavia, North-Western Europe, Mediterranean, Turkey, Israel, North Africa coast (Egypt or Nile Valley), Sahara, Arabian Peninsula, Iran, Afghanistan, Sudan, Central Africa, Southern Africa, East Africa, Madagascar, Ethiopia, East European intermediate or transition belt, European Russia, Siberia, Pakistan, India, Sri Lanka, Bangladesh, Buddhist circle, Vietnam, Muslim mainland, Philippine, Papuan, Mongolia, Inner Desert (Gobi), Tibet, China, Korea, Japan, Rikyu Is

**Cultural sub regions** Mainland, British Isles, France and Swiss Territories, Germany and Benelux Territories, Iberia Peninsula, Italy, Greece, Mesopotamia (Iraq), Guinea Coast, Congo Basin, South-Western Bushman Region, European Minorities, East Africa Plateau Region, Muslim Somalia, Armenia, Arctic, Central Asian, Himalayan region, Northern India, Southern India, Maldives, Andaman Islands, Burma (Myanmar), Thailand, Khmer, Malaysia, Western Indonesia, Eastern Indonesia, Sunda Sea

The classification of Thamus and Spencer can be understood in detail from the following table:

	Cultural circle	Mega cultural region	Cultural sub region
1.	Western Europe circle	A. Scandinavia	A. Greenland
		B. North-Western Europe	A. British Isles B. France and Swiss territories C. Germany and Benelux
		C. Southern Europe (Mediterranean)	A. Iberia Peninsula B. Italy C. Greece (including islands)
2.	The Arab Muslim world	A. Turkey B. Israel C. North African coast (Egypt or Nile Valley) D. Sahara	
		E. Arabian Peninsula	Mesopotamia (Iraq)
		F. Iran-Afghanistan	
3.	Africa	A. Sudan	
		B. Middle Africa	A. Guinea coast B. Congo Basin C. South-Western Bushman Region
		C. South Africa	
		D. Eastern Africa	A. European Minorities East Africa Plateau Region B. Muslim Somalia

		E. Malagasy (Madagascar)	
		F. Ethiopia	
4.	Eastern Europe and former Soviet Union	A. Eastern European Central (transition belt)	
		B. European Russia	A. Armenia (mountainous)
		C. Siberia	A. Arctic regions B. Central Asian
5.	Southern Asia	A. Pakistan	
		B. India	A. Himalayan Region B. Northern India C. Southern India D. Maldives E. Andaman Islands
		C. Sri Lanka	
		D. Bangladesh	
5.	South-East Asia	A. Buddhist circles	A. Burma (Myanmar) B. Thailand C. Khmer ((Laos and Cambodia)
		B. Vietnam	
		C. Muslim-majority	A. Malaysia B. Western Indonesia C. Eastern Indonesia D. Sunda Sea Region
		D. Philippines E. Papua (New Guinea)	
6.	Eastern Asia	A. Mongolia B. Internal desert region (Gobi) C. Tibet	
		D. China	A. Northern China B. Southern China C. Taiwan (Pharmusa)
		E. Korea F. Japan G. Rikyu Islands	A. North Korea B. South Korea
7.	Australia	A. Australia B. New Zealand	
8.	Pacific Islander	A. Micronesian Islands B. Melanesian Islands	

		C. Polynesian Islands	
9.	Anglo America	A. United States of America	A. Alaska Eskimo Territory B. Red Indian Eskimo region
		B. Canada	A. French Canadian territory
10.	Latin America	A. Mexico B. Central America C. Cuba D. Caribbean Islands E. Guyana	
		F. Northern Andes and north-western coastal region	A. Red Indian Interior
		G. Brazil H. Chile-Argentina Uruguay-Paraguay I. Falkland Islands	A. Red Indian Interior

Broadly based on cultural differences the world has been divided into the following 6 cultural parts:

1. Western cultural region,
2. Indian Cultural Region,
3. Islamic cultural region,
4. East Asian Cultural Region,
5. South-East Asian Cultural Region and
6. Central African Cultural Region.

**1. Western Cultural Regions:** Western civilizations' influence and expansion. Over the last four centuries, mostly the citizens of these countries have migrated to other countries and formed empires. Wherever Europeans went in the last four centuries, they brought European civilisation with them and assimilated that culture into those countries. Among the European races that contributed to this work, the English, Spanish, Portuguese, Germans, Dutch, and Russians stood out. These cultures travelled far and wide, establishing colonies, creating new communities, and influencing the surrounding cultures. In this way, Western civilization extended from Europe to North and South America, Africa, Australia, New Zealand, and Asia.

All of these regions are located in the world's mid latitudes and tropics, where Europeans established trade and power. Aside from that, Western civilization influenced civilizations around the world through cultural diffusion. The influence and expansion of commodities



manufactured using Western European technology occurred faster than the cultural institutions of these European countries. These technologies and economic systems also shaped humans' cultural values. The Industrial Revolution in England had a global economic impact and eventually altered cultures.

Western cultural spread mainly came from three areas.

- (a) Spread from the coastal countries of the Mediterranean Sea,
- (b) Spread from the countries of North-Western Europe and
- (c) Spread from the eastern countries of continental Europe.

**(a) Cultural diffusion from the coastal countries of the Mediterranean Sea:**

The coastal districts of the Mediterranean Sea served as cultural transmission centers in the latter half of the mediaeval period, or until the 16th century. Merchants from Venice and Geneva had developed trade relations with countries throughout the whole Mediterranean coast. Spain and Portugal began maritime journeys thanks to Italian geographers and mariners. The Spaniards arrived in Central and South American countries and influenced the local institutions, customs, and so on. After arriving, the Spaniards affected Indian culture with Western civilization by founding the Catholic Church, religious conversion, education through schools, and marriage ties. Because of this, Central and South American countries are known as Latin American countries.

**(b) Cultural diffusion from the countries of North-** Western Europe - In the early seventeenth century, the cultures of England, France, and the Netherlands spread all of the commodities and institutions that were unique to their own countries. Public opinion, governance, trade, capitalism, and modern technology spread from North-Western European countries, and with empires and colonies in North America, Australia, Africa, and East Asia, Western civilization spread to all places where North-Western Europeans landed. As a result of the presence of residents from several main European civilizations in the United States, a new culture emerged based on European culture, making the formation of a new nation feasible.

English and French culture spread over Canada. French culture was primarily created in Quebec, while English culture was established throughout the rest of Canada, although the cultures eventually intermingled. The culture of the United States and Canada was dubbed Anglo-American culture, but its primary origins remained in Western Europe. Similarly, the English people are responsible for the establishment of English culture in New Zealand, Australia, and South Africa.

**(c) Cultural spread from the eastern countries of continental Europe-** Soviet Russia's eastward expansion and cultural dispersion into Central Asia and Siberia occurred in the

17 and eighteenth centuries. Turks, Kijjaak, Khirghiz, and other Central Asian civilizations have been impacted and modified, and Eastern European civilization now influences all of North and Central Asia.

**2. Islamic Cultural Region-** Some Anthrop geographers have referred to this civilized region as the Civilization Region of the Middle East. This civilization runs from Morocco in North West Africa to Pakistan's eastern border. Islam was founded for Arabs in the seventh century AD, during which time many Jewish and Semitic cultural characteristics and ideas were embraced and adapted, as well as Ravine culture. With the support of troops, Islam quickly spread to Morocco and Spain in the west, Central Asia and Western China in the northeast, and India in the south. Between the eleventh and twelfth centuries, Islamic soldiers propagated Islamic civilization everywhere they went. Religious conversion and cultural influence had an impact on everyone's life, philosophy, and faith. Islamic culture moved to East Asian countries such as Malaysia and Indonesia, while the expansion of European civilization was limited during the mediaeval period. This civilization encompasses North Africa (Morocco, Algeria, Libya, Sudan, and Egypt), Western Asia, Turkey, Arabia, Jordan, Iraq, Iran, Afghanistan, and Pakistan.

**3. Indian Cultural Region-** Because of the Himalayas in the north and the sea in the south, the Indian subcontinent is regarded a major geographical unit, with Central Asia influencing only the north-west region. The races from Central Asia founded empires in India on occasion, but when their power declined, their empires were destroyed and they were integrated into this country's magnificent culture. Castes such as Huns and Mongols arrived from Central Asia and assimilated into the culture of this country. Islamic culture spread with the support of rulers, but they were unable to significantly impact the culture of this country, which was founded on religion and devotion. Money is important in Indian culture; as is religion, but the spirit and destiny have a greater importance. The influence of priests, mahants, and priests has grown, and as a result, this region's culture has been able to survive. Although the entrance of Islam and Christianity altered the country's cultural structure, their impact had little effect on people's lives.

India has a stronger influence on other countries because of its spiritual system, philosophical concepts, and religious belief. Buddhism spread the characteristics and qualities of Indian culture to Central Asia, Tibet, Chon, Korea, and Japan, as well as Sri Lanka in the south, and Indian philosophers and religious preachers brought their religious traditions to Sri Lanka, Central Asia, China, Japan, Thailand, Burma (Myanmar), and Indonesia. These countries still retain Indian cultural traditions, traits, and religious beliefs.

In the eighteenth and nineteenth centuries, numerous Indians migrated as workers to Mauritius, Africa, and the northern section of South America (Guyana and Suriname) to promote Indian culture. Even now, descendants of Indian descent in these nations preserve Indian culture through temples and holy books. Despite being inspired by many Western technologies, Indian culture is still present in some form or another.

Although many of India's challenges are as complex as those of other emerging countries, inhabitants may still rely on historic cultural traditions and political unity for guidance.

**4. East Asian Cultural Region-** East Asia is essentially the region of Chinese civilization in all of its forms, as well as Korean and Japanese civilization and culture. China was less influenced by external civilization during its historical period because it was surrounded by desert and high mountains; only Western Asia attempted to influence it by entering the country's borders through some Central Asian oases; from two centuries BC to today, China's borders have remained nearly unchanged. Human interactions are more important than permanence in Chinese traditions and culture. In place of religion, family, community, and the state take precedence in China. Chinese people retain their original characteristics even after moving to South-East Asia.

Japan and Korea's cultures have a significant influence on Chinese culture. Bon's influence on Japanese language and culture dates back to the fifth century BC. This cultural transmission reached Japan via Korea. Many Japanese words, writing styles, and other characteristics derive from Chinese heritage. Buddhism spread from India to Japan via China and Korea. Later on, due to Japan's insular state, Japanese civilization remained isolated from East Asian cultural influences. Japanese technology advancements have now influenced much of Southeast Asia and Western Asia.

**5. South-East Asian Cultural Region-** This region has no independent cultural heritage; instead, it has served as a transitional location for other cultures, allowing different cultures to enter and interact. The culture here is not Indian, East Asian, Muslim, or Western. This region is located east of India and south of China and it includes all of the eastern islands. The residents are of the South Mongol caste. In this aspect, they are more similar to East Asians. There has been a lot of Indian influence on the entire region, which is clearly visible in the religious beliefs and art here. There have been more political and a trade relation with China, but China has not tried to influence the culture of the residents of any other south-eastern country except Vietnam. Although Hinduism and Buddhism were replaced by Islam in Malaysia and Indonesia, its influence could not exceed the Indian influence. Christianity has spread in the Philippines. This entire region has been an area of cultural diffusion for 2,000 years. This state did not affect any other state. This region is divided into many racial and linguistic regions; hence for development and security, efforts will have to be made to unite this entire region.

**6. Central African Cultural Region-** Natural barriers between other regions of Africa and the central section have traditionally prevented the development of modes of transit. As a result, there has been cultural backwardness in this area. Despite the Sahara Desert in the north, which stretches approximately 5,600 km from east to west and 1,920 kilometers from the Mediterranean Sea in the north to Sudan in the south, the road from Central Africa to the

Mediterranean Sea continued along the Nile Valley. Many Egyptian herders travelled via Sudan's grasslands to the interior of Central Africa. Many castes along the east coast interacted with Arab, Indian, and Malaysian traders. Many ruins on Madagascar's shore suggest that Malaysian communities were constructed 1,500 years ago. Religion did not emerge in any form among the inhabitants of this region, nor was any language written here; but, with the advent of the Europeans, exploration of this continent began, and it was split into several countries. European religion, law, education, medicine, production, and trade have all contributed to the fast expansion of this continent's civilization.

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#### **9.4 SUMMARY**

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Many castes along the east coast interacted with Arab, Indian, and Malaysian traders. Many ruins on Madagascar's shore suggest that Malaysian communities were constructed 1,500 years ago. Religion did not emerge in any form among the inhabitants of this region, nor was any language written here; but, with the advent of the Europeans, exploration of this continent began, and it was split into several countries. European religion, law, education, medicine, production, and trade have all contributed to the fast expansion of this continent's civilization. Human beings, both individually and collectively, adapt their behaviors to the environment and, using their choice, modify the environment to meet their requirements; in other words, the environment organizes the area through selection. Man has used nature to build a cultural environment in many parts of India. Man has caused several changes in the plant and animal kingdoms. Human activities have both positive and negative effects on the environment.

Humans, both individually and collectively, adapt their behaviors to the environment and use their choices to modify the environment to fulfill their needs; in other words, the environment organizes the area through selection. Humans have exploited nature to create a cultural environment in several places of India. Humans have created several changes in the plant and animal kingdoms. Human activities have a beneficial and harmful impact on the environment.

The speed of cultural change is determined by two opposing forces: 1) cultural interaction and 2) cultural persistence. Cultural contact allows for the intermingling of civilizations and the formation of new cultures, whereas cultural lag causes the loss of old civilizations and cultural features. There is still a great desire for cultural contacts. Cultural interactions occur for a variety of causes, including the search for hunting or pastures, the discovery of new countries or precious minerals, empire expansion, religious travel, and so on. The spread of knowledge and culture is known as diffusion. In diffusion, the influence of distance and incident is significant.

Contact with other regions gets simpler as the distance decreases; nonetheless, a community living in a region does not have to adopt the culture of its neighboring community.

Cultural delay, or conservatism, causes some delay in cultural mixing, and the state of cultural dormancy endures, however the effect of delay is steadily lessening as science and education proliferate.

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## 9.5 GLOSSARY

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**A cultural region** is a geographical area defined by shared cultural characteristics such as language, religion, customs, and traditions. Examples include the Hispanic, Francophone, and Anglophone worlds.

**Landscape:** The observable features of a piece of territory, comprising both natural components (such as mountains and rivers) and man-made elements (such as cities and farm fields).

**A cultural landscape** is one that has been impacted, altered, or moulded by human activities. It depicts the interaction between human societies and their surroundings, including terraced fields, metropolitan areas, and holy locations.

**Cultural diffusion** is the process by which cultural elements, such as ideas, values, or technologies, travel from one region or group of people to another.

**Cultural Hearth:** A geographic place where a certain culture originated and diffused to other areas. Mesopotamia, for example, is regarded as an early civilization's cultural centre.

**Ethnic Enclave:** A geographical area with a high concentration of individuals from a certain ethnic community, frequently distinguished by unique cultural customs and businesses. Examples include Chinatown and Little Italy.

**Land use** is the management and transformation of natural habitats into constructed environments such as communities, agriculture, and industrial zones. It captures the connection of cultural behaviors and physical landscape.

**Cultural ecology** is the study of how cultural behaviors and ideas adapt to and change their surroundings. It investigates the reciprocal interaction between culture and environment.

**Ethnos cape:** A term used to explain human movement and migration, as well as the impact these movements have on cultural landscapes and identities. It includes patterns of migration, tourism, and Diaspora.

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## 9.6 ANSWER TO CHECK YOUR PROGRESS

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1. In which cultural region is Mexico?

(a) Arab Muslim Region

- (b) Latin America
- (c) Anglo America
- (d) Eastern Asia

Answer: B

2. Which of the following is a cultural landscape?

- (a) City
- (b) Crater
- (c) Waterfall
- (d) Alluvial Fan

Answer: A

3. How many cultural regions are there in the world?

- (a) 5
- (b) 6
- (c) 7
- (d) 8

Answer: B

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### ***9.8 TERMINAL QUESTIONS***

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#### **Long Answer Type Questions**

1. What is cultural landscape? Describe its various elements.
2. Divide the world into different cultural regions.
3. Briefly describe the characteristics of Indian culture.

#### **Short Answer Type Questions**

1. What is called cultural region? What is called cultural realm?
2. What is meant by western cultural region?
3. Explain the Indian cultural regions.
4. Explain the difference between cultural and natural landscapes.
5. Explain human settlement as a cultural element.

## **UNIT- 10 HUMAN ECONOMY**

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### **10.1 OBJECTIVES**

### **10.2 INTRODUCTION**

### **10.3 CONCEPT OF HUMAN ECONOMY**

#### **10.3.1 Elements of Human Economy**

#### **10.3.2 Evolution of Human Economy**

#### **10.3.3 Spatial Structure of the Economy**

### **10.4 SUMMARY**

### **10.5 GLOSSARY**

### **10.6 ANSWER TO CHECK YOUR PROGRESS**

### **10.7 REFERENCES**

### **10.8 TERMINAL QUESTIONS**



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## ***10.1 OBJECTIVES***

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After having the detailed study of this unit you will be able to

- Describe the concept of human economy
  - Trace the development of human economic activities
  - Classify various human economics activities
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## ***10.2 INTRODUCTION***

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The study of the human economy encompasses the complex interactions, behaviors, and systems, through which societies organize, produce, distribute, and consumer goods and services to meet their needs and desires. This introduction provides an overview of the fundamental concepts, historical developments, and contemporary issues that define the human economy.

Human economy is the study of how individuals and societies allocate scarce resources to satisfy their unlimited wants and needs. It is a multifaceted field that encompasses the production, distribution, exchange, and consumption of goods and services within various economic systems and structures.

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## ***10.3 CONCEPTS IN HUMAN ECONOMY***

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**1. Scarcity and Choice:** Scarcity is central to the human economy, in which resources (such as land, labor, and capital) are limited in comparison to individual and societal desires. This scarcity implies decisions concerning resource allocation and utilization.

**2. Production and Resources:** Human economies rely on the production of things (tangible products) and services (intangible activities) from available resources. Production processes differ between industries and sectors, driven by factors such as technology, labor skills, and natural resources.

**3. Distribution and Allocation:** After production, commodities and services must be distributed and allotted to customers. Markets determine allocation based on prices and supply-demand dynamics, whereas regimes such as central planning or gift economies allocate resources based on different principles.

**4. Consumption and usefulness:** Consumers decide how to spend their money on various goods and services in order to maximize their satisfaction or usefulness. Factors influencing consumer behavior include income levels, tastes, prices, and social influences.

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**5. Markets and Exchange:** Economic activity frequently occurs in markets, where buyers and sellers engage to exchange products and services. Markets are defined by competition, prices, and the pursuit of profit, which influence resource allocation and economic results.

**6. Economic Systems:** Human economies are classified into three types: market economies (based on private ownership and decentralized decision-making), command economies (in which the government regulates production and distribution), and mixed economies.

**7. Growth and Development:** Economic growth is defined as an increase in the production of goods and services over time, as measured by metrics such as GDP (Gross Domestic Product). Economic development extends beyond growth to encompass enhancements to living standards, infrastructure, healthcare, education, and overall well-being.

**8. Globalization and Interdependence:** In the modern period, economies are linked by globalization, which includes international trade, investment flows, and cultural interchange. Globalization has an impact on economic policy, employment trends, and income distribution around the world.

**9. Policy and Regulation:** Governments play an important role in human economies by implementing policies that promote economic stability, address market failures, redistribute income, and achieve social goals such as environmental sustainability and poverty reduction.

**10. Challenges and Sustainability:** Human economies face numerous challenges, including income disparity, environmental degradation, technology upheaval, and demographic shifts. To achieve sustainable development, we must strike a balance between economic growth, social fairness, and environmental stewardship.

### 10.3.1 Elements of Human Economy

The human economy includes a wide range of components that are critical to understanding how civilizations organize and manage their resources. Here are several important elements:

**1. Resources:** Natural resources (land, minerals, and water), human resources (labor, skills, knowledge), and capital resources (machines, infrastructure, and financial assets).

**2. Production** is the process of combining resources (land, labor, and capital) to generate things and services that meet human desires and requirements.

**3. Consumption** is the consumption of products and services by people and households to meet their needs and desires.

**4. Distribution:** The division of goods and services among individuals and groups in society. This involves questions of justice and fairness in resource distribution.

**5. Exchange:** The act of transferring goods, services, or assets among individuals, businesses, or countries. This includes markets, prices, and the procedures for buying and selling.

**6. Market:** The institution or system through which buyers and sellers exchange products, services, or assets. Markets can be both physical (like a farmer's market) and virtual (like internet markets).

**7. Money and Finance:** The payment methods (money) and financial systems (banks, stock exchanges, etc.) that enable economic transactions and investment.

**8. Government and Policy:** How the government regulates and influences economic activity through taxation, expenditure, trade, and regulations.

**9. Globalization:** The interdependence of economies around the world by commerce, investment, technology, and migration.

**10. Economic Growth and Development:** The long-term aims of expanding production of commodities and services (economic growth) and improving individual and societal well-being (economic development).

**11. Sustainability:** The concept of managing resources in a way that meets present requirements while ensuring future generations' ability to meet their own.

**12. Innovation and Entrepreneurship:** Economic advancement is driven by the development of new goods, processes, and businesses.

Understanding these factors enables economists and policymakers to analyze and control the complex interactions and dynamics that occur within human economies, with the goal of allocating resources more efficiently and improving living standards.

### 10.3.2 Evolution of Human Economy

The human economy has evolved over thousands of years, passing through various distinct periods, each marked by advances in technology, social organization, and economic systems. Here is a general overview of its evolution:

## A. Hunter-Gatherer Economy:

The hunter-gatherer economy is one of the most primitive and basic stages of human economic evolution. The following are the essential traits and aspects of the hunter-gatherer economy:

### 1. Lifestyle and Subsistence:

**Nomadic:** Hunter-gatherer tribes were often nomadic, migrating with the seasons to track animal migrations and collect seasonal vegetation.

**Subsistence:** They fed themselves by hunting wild animals, fishing, and gathering wild herbs, fruits, nuts, and roots.

### 2. Social Organization:

**Small Bands:** Groups were typically small, consisting of extended families or clans, with numbers ranging from a few dozen to a few hundred.

**Egalitarian:** These societies were primarily egalitarian, with little hierarchy or social division based on money or status.

### 3. Economic Principles:

**Sharing and Reciprocity:** Economic activities were frequently founded on the ideals of sharing and reciprocity within the group. Resources were shared to maintain survival, and reciprocal transactions promoted social togetherness.

**Current Consumption:** Economic decisions were made with the goal of meeting current needs rather than building wealth over time. Surpluses were modest and often perishable.

### 4. Technology and Tools:

**Simple Tools:** They used basic tools and weapons made of stone, bone, wood, and plant fibers. Examples include spears, bows and arrows, and stone knives.

**Limited Technology:** While technological achievements were limited in comparison to subsequent agricultural and industrial societies, they did gain extensive knowledge of local ecosystems and resources.

## 5. Environmental Impact:

**Sustainable Practices:** In general, hunter-gatherer societies used resources sustainably. They possessed extensive ecological understanding and frequently relocated to new regions as local resources dwindled, allowing ecosystems to rebuild.

## 6. Cultural and Spiritual Practices:

**Connection to Nature:** Their economic activities were frequently linked to cultural and spiritual beliefs, as well as rites and behaviours involving hunting, gathering, and natural phenomena.

## 7. Adaptation and Resilience:

**Adaptive:** Hunter-gatherer economies were highly adaptable to a wide range of locales, from frozen tundra to tropical rainforests, demonstrating human adaptation and resource inventiveness.

The hunter-gatherer economy existed for tens of thousands of years before agriculture was widely adopted approximately 10,000 BCE, indicating a profound transition in human economic and social development. Despite its seeming simplicity, this stage lay the groundwork for future economic systems by influencing human connections with resources, technology, and social organization.

## B. Agricultural Economy:

The agricultural economy is a watershed moment in human history, signaling the transition from nomadic hunter-gatherer tribes to stable communities based on food cultivation and animal domestication. Here are the essential dimensions and features of the agricultural economy:

### 1. Development and Timeline:

**Emergence:** Agriculture began to arise independently in diverse regions of the world approximately 10,000 BCE, triggering the Neolithic Revolution.

**Key Regions:** Early agricultural development centers include the Fertile Crescent (Mesopotamia), Nile Valley, Indus Valley, Yellow River Valley, Mesoamerica, and the Andes.

## 2. Subsistence and Surplus:

**Subsistence Agriculture:** Initially, agriculture served primarily for subsistence, providing a more reliable food supply compared to hunting and gathering.

**Surplus Production:** Agriculture enabled the production of surplus food beyond immediate needs, allowing for population growth, division of labor, and specialization in crafts and trades.

## 3. Technological Advancements:

**Domestication:** Domestication of plants and animals was a key innovation. Examples include wheat, barley, rice, maize (corn), cattle, sheep, and pigs.

**Tools and Implements:** Development of agricultural tools such as plows, sickles, irrigation systems, and storage facilities improved efficiency and productivity.

## 4. Social and Economic Changes:

**Settlements:** Shift from nomadic lifestyles to settled communities and villages, with permanent dwellings.

**Social Organization:** Emergence of social hierarchies and specialization of labor (e.g., farmers, artisans, rulers).

**Trade:** Increased trade and exchange of agricultural products and goods among neighboring communities and regions.

## 5. Impact on Environment and Society:

**Environmental Impact:** Agriculture led to significant changes in landscapes, deforestation, soil erosion, and alterations in local ecosystems.

**Population Growth:** Surplus food production supported population growth and denser settlements, leading to the development of cities and early civilizations.

**Cultural Development:** Agricultural societies developed complex cultural practices, beliefs, and religious ceremonies related to farming cycles and fertility.

## 6. Economic Systems:

**Barter Economy:** Initially, trade and exchange were based on barter, where goods were exchanged directly for other goods.

**Development of Markets:** Over time, markets and trade networks expanded, facilitating exchange beyond local communities.

## 7. Legacy and Continuity:

The agricultural economy laid the foundation for subsequent economic and social developments, including the rise of complex civilizations, technological advancements, and the evolution of economic systems such as feudalism, mercantilism, and eventually capitalism.

Overall, the shift to agriculture represented a fundamental change in human societies, enabling greater food security, population growth, and the development of more complex social, economic, and political structures that shaped the course of human history.

## C. Ancient Civilizations and Early Trade:

### 1. Development and Timeline:

**Period:** This era spans from approximately 3,000 BCE to 500 CE (depending on the region), encompassing civilizations in Mesopotamia, Egypt, the Indus Valley, China, Mesoamerica, and the Andean region.

**Key Civilizations:** Examples include Sumerians, Egyptians, Babylonians, Assyrians, Persians, Greeks, Romans, Harappa's, Chinese dynasties (e.g., Shang, Zhou), Olmecs, and Incas.

### 2. Urbanization and Centralized Governance:

**City-States and Empires:** Cities and urban centers emerged as political, economic, and cultural hubs. Many civilizations evolved from city-states to larger empires with centralized governance and bureaucratic administrations.

**Legal Systems:** Development of legal codes (e.g., Code of Hammurabi, Twelve Tables of Rome) and administrative structures to govern diverse populations.

### 3. Trade and Commerce:

**Trade Networks:** Extensive trade networks developed, connecting distant regions and facilitating the exchange of goods, technologies, and cultural influences.

**Key Trade Routes:** Examples include the Silk Road (connecting China with the Mediterranean), the Indian Ocean trade routes, Trans-Saharan trade routes, and trade networks in the Americas.

### 4. Economic Systems:

**Marketplaces:** Markets and trading centers (such as bazaars and agora) became focal points for economic activity, where goods from different regions were bought, sold, and exchanged.

**Currency and Trade Instruments:** Introduction of standardized currency (coins) and trade instruments (such as bills of exchange) facilitated commerce and economic transactions.

### 5. Technological and Cultural Exchanges:

**Technological Advancements:** Exchange of technologies and innovations in agriculture, metallurgy, shipbuilding, and writing systems (e.g., cuneiform, hieroglyphics, alphabets).

**Cultural Diffusion:** Spread of religious beliefs, philosophical ideas, art styles, languages, and architectural practices across different civilizations.

### 6. Impact on Society and Culture:

**Social Hierarchies:** Development of social hierarchies based on wealth, power, and status within urban societies and imperial structures.

**Cultural Flourishing:** Growth of literature, art, architecture, and monumental structures (such as pyramids, ziggurats, temples, and palaces) as expressions of cultural achievements.

### 7. Legacy and Continuity:

The achievements of ancient civilizations in governance, trade, architecture, literature, and scientific inquiry laid the foundation for subsequent developments in Western and Eastern civilizations.

Many cultural and institutional legacies, such as legal systems, political ideologies, and religious traditions, continue to influence contemporary societies.



In summary, the era of ancient civilizations and early trade was characterized by remarkable cultural achievements, technological advancements, and the establishment of extensive trade networks that connected diverse regions and laid the groundwork for the development of subsequent societies and economies.

## **D. Feudal Economy:**

The feudal economy refers to a socio-economic system that emerged in Europe during the middle Ages, roughly spanning from the 9th to the 15th century. Here are the key aspects and characteristics of the feudal economy:

### **Feudalism and Social Structure:**

**Feudal Hierarchy:** The feudal system was characterized by a hierarchical social structure where land was held in exchange for service and loyalty.

**Feudal Pyramid:** At the top was the monarch or king, who granted land (fiefs) to nobles (lords or vassals) in exchange for military service and loyalty. The nobles, in turn, granted land to knights and lesser lords (vassals) who served them.

### **1. Manorialism and Agricultural Economy:**

**Manors:** The basic unit of the feudal economy was the manor, which was a self-sufficient estate controlled by a lord.

**Agriculture:** The economy was primarily agrarian, focused on subsistence farming and the cultivation of crops (like wheat, barley, and oats) and livestock (cattle, sheep, pigs).

**Serfdom:** Peasants, or serfs, worked the land in exchange for protection from the lord and were bound to the manor. They paid rents, taxes, and labor services to the lord.

### **2. Economic Relationships:**

**Feudal Obligations:** The feudal system was based on reciprocal obligations and duties between lords and vassals. Lords provided land and protection, while vassals provided military service and loyalty.

**Limited Trade:** Trade was limited and primarily local, with manors producing most of what they needed for daily life.

### **3. Legal and Political Systems:**

**Legal Framework:** Feudal law varied across regions but generally included customs, traditions, and agreements between lords and vassals.

**Decentralized Governance:** Political authority was decentralized, with power fragmented among various lords and nobles rather than centralized in a single authority.

#### 4. Cultural and Religious Influence:

**Cultural Patronage:** Feudal lords were patrons of art, architecture, and literature, often commissioning works that reflected their wealth and status.

**Religious Influence:** The Church played a significant role in feudal society, providing moral guidance, education, and sometimes acting as a mediator in disputes.

#### 5. Challenges and Decline:

**Internal Struggles:** Feudal societies were prone to internal conflicts, such as disputes over land, inheritance, and power.

**External Pressures:** Factors such as invasions, population growth, and the revival of trade contributed to the decline of feudalism.

#### 6. Legacy:

The feudal system left a lasting legacy in European history, influencing later developments in law, governance, land tenure, and social hierarchy.

The decline of feudalism paved the way for the rise of centralized monarchies, the growth of towns and cities, and the emergence of new economic systems during the Renaissance and Early Modern periods.

Overall, the feudal economy was characterized by its hierarchical structure, agricultural focus, and complex network of reciprocal obligations between lords and vassals, shaping medieval European society and laying the groundwork for subsequent historical developments.

### E. Mercantile Economy and Colonialism:

#### 1. Mercantile Economy:

**Period:** Emerged primarily during the 16th to 18th centuries, coinciding with the Age of Exploration and the rise of European maritime powers.

#### Characteristics:

**State Control:** Mercantilism emphasized state control of trade and commerce to enrich the nation's treasury and increase its power.

**Balance of Trade:** Governments sought to export more goods than they imported, aiming to accumulate precious metals (gold and silver) as a measure of wealth.

**Colonial Trade:** Colonies were established as sources of raw materials (like sugar, spices, cotton, and minerals) and markets for finished goods from the mother country.

## 2. Colonialism:

**Expansion and Control:** European powers (such as Spain, Portugal, England, France, and the Netherlands) established colonies across Africa, Asia, the Americas, and Oceania.

**Motivations:** Colonies were initially exploited for their resources and labor, often through coercive or exploitative means (such as slavery).

**Impact on Indigenous Peoples:** Indigenous populations were often displaced, enslaved, or assimilated into colonial societies, leading to profound demographic and cultural changes.

## 3. Trade Networks and Routes:

**Global Trade:** Mercantilism fostered extensive trade networks connecting Europe, Africa, Asia, and the Americas, known as the Triangular Trade (Europe-Africa-Americas).

**Key Trade Routes:** Examples include the transatlantic slave trade, the spice trade in Southeast Asia, and the silver trade from the Americas to Asia.

## 4. Economic Systems:

**Colonial Economies:** Colonies served as economic appendages to the mother country, producing raw materials and agricultural products for export.

**Development of Industries:** Mercantile policies often encouraged the development of domestic industries to reduce dependence on foreign goods and enhance national power.

## 5. Political and Social Implications:

**Geopolitical Rivalries:** Competition among European powers for colonies and trade dominance fueled conflicts, such as wars for colonial possessions.

**Social Hierarchies:** Colonial societies were often stratified along racial and class lines, with Europeans holding positions of power and privilege.

## 6. Cultural Exchange and Influence:

**Cultural Exchange:** Colonization led to the exchange of languages, religions, technologies, and cultural practices between Europe and its colonies.

**Cultural Hegemony:** European cultural norms often supplanted indigenous traditions, shaping modern cultural identities in colonized regions.

## 7. Legacy and Critiques:

**Legacy of Inequality:** The legacy of colonialism includes persistent economic disparities, political instability, and social tensions in former colonies.

**Critiques:** Mercantilism and colonialism are criticized for their exploitation of indigenous peoples, environmental degradation, and perpetuation of racial and economic inequalities.

In summary, the mercantile economy and colonialism were pivotal in shaping global trade patterns, economic systems, and geopolitical relationships during the early modern period. They laid the foundation for modern capitalism, global interconnectedness, and the complex legacies of imperialism that continue to impact societies worldwide today.

## F. Industrial Revolution:

### 1. Period and Origins:

**Late 18th to 19th Century:** The Industrial Revolution started around the late 1700s and continued well into the 19th century.

**Great Britain:** It began in Britain due to factors such as abundant coal and iron resources, technological advancements, capital accumulation from trade and colonialism, and a stable political environment.

### 2. Technological Advancements:

**Machinery and Automation:** Innovations such as the steam engine (by James Watt), textile machinery (like the spinning jenny and power loom), and iron and steel production techniques revolutionized industrial production.

**Transportation:** Development of steam-powered locomotives and steamships revolutionized transportation, enabling faster movement of goods and people.

### 3. Industrialization:

**Factory System:** Production shifted from small-scale artisanal workshops to large-scale factories, where machines powered by steam or water replaced hand labor.

**Division of Labor:** Increased specialization of labor and mechanization led to higher productivity and the mass production of goods.

#### 4. Urbanization and Social Changes:

**Rural to Urban Migration:** Industrialization led to mass migration from rural areas to growing industrial cities in search of work.

**Working Conditions:** Harsh working conditions, long hours, and low wages characterized early industrial labor, leading to social unrest and labor movements.

#### 5. Economic Impact:

**Economic Growth:** Industrialization spurred unprecedented economic growth, leading to increased GDP, wealth accumulation, and rising standards of living (eventually).

**Capitalism:** The Industrial Revolution laid the foundation for modern capitalism, with emphasis on profit, private ownership of means of production, and market competition.

#### 6. Impact on Society and Culture:

**Social Classes:** Industrialization created distinct social classes: wealthy industrialists, middle-class entrepreneurs, and a working class employed in factories.

**Cultural Changes:** Changes in lifestyle, consumption patterns, and urban culture emerged alongside industrialization, influencing art, literature, and societal norms.

#### 7. Globalization and Imperialism:

**Global Spread:** Industrial technologies and capitalism spread globally, transforming economies and societies in Europe, North America, and later Asia, Africa, and Latin America.

**Imperialism:** Industrial powers sought resources and markets in colonies, leading to imperialism and geopolitical rivalries.

#### 8. Environmental Impact:

**Pollution:** Industrialization contributed to environmental degradation through air and water pollution, deforestation, and resource extraction.

**Resource Depletion:** Increased demand for raw materials and energy resources led to resource depletion and ecological changes.

#### 9. Legacy:

The Industrial Revolution laid the groundwork for modern industrial economies, technological advancements, and the rise of urbanized societies.

It also raised debates about labor rights, environmental sustainability, and the balance between economic growth and social welfare.

In summary, the Industrial Revolution was a watershed moment in human history that reshaped economies, societies, and cultures globally, setting the stage for the modern world characterized by industrialization, urbanization, and technological advancement.

## **G. Modern Economic Systems:**

Modern economic systems refer to the diverse frameworks and structures through which economies organize production, distribution, and consumption of goods and services in contemporary times. Here are some key modern economic systems:

### **1. Capitalism:**

**Private Ownership:** Capitalism is characterized by private ownership of the means of production (such as factories and businesses) and resources.

**Market Economy:** Prices and production are determined by market forces of supply and demand.

**Profit Motive:** Profit maximization drives economic decisions, promoting innovation, entrepreneurship, and competition.

**Examples:** The United States, United Kingdom, Japan, and many Western European countries have capitalist economies, although they may have mixed elements with government intervention.

### **2. Socialism:**

**Public Ownership:** Socialism advocates for public or collective ownership of major industries and resources.

**Central Planning:** Economic planning by the government aims to allocate resources, set production goals, and regulate prices.

**Equity and Social Welfare:** Focuses on equitable distribution of wealth and resources, with an emphasis on social welfare and public services.

**Examples:** Historically, countries like the Soviet Union and China under Maoist policies pursued socialist economic models. Today, countries like Sweden, Norway, and Denmark have mixed economies with socialist elements.

### 3. Mixed Economy:

**Combination of Systems:** Most modern economies are mixed economies, blending elements of capitalism and socialism.

**Government Intervention:** Governments intervene to provide public goods (like education and healthcare), regulate markets, and redistribute income.

**Examples:** Countries like Canada, Australia, Germany, and many others have mixed economies where both market mechanisms and government intervention coexist.

### 4. Market Economy:

**Free Market Principles:** Market economies rely predominantly on supply and demand to determine production, investment, and distribution of goods and services.

**Limited Government Intervention:** Minimal government interference in economic activities; with emphasis on private enterprise and individual choice.

**Examples:** Singapore and Hong Kong are often cited as examples of market economies with strong adherence to free market principles.

### 5. Command Economy:

**Centralized Control:** Command economies are characterized by central planning and government ownership of resources and production means.

**Price Setting:** Prices are set by central authorities rather than through market forces.

**Examples:** North Korea and Cuba historically operated as command economies, where the government directs most economic activities.

### 6. Green Economy:

**Sustainability:** Focuses on sustainable development, reducing environmental impact, and promoting renewable resources.

**Circular Economy:** Emphasizes recycling, reuse of materials, and minimizing waste.

**Examples:** Various countries and organizations are moving towards green economies to address environmental challenges and promote long-term sustainability.

These economic systems represent different approaches to addressing fundamental questions of resource allocation, production efficiency, distribution of wealth, and societal

priorities. The choice of economic system often reflects historical, cultural, political, and ideological factors within each country or region.

### 10.3.3 Spatial Structure of the Economy

The spatial structure of the economy refers to the geographical organization and distribution of economic activities, resources, and populations within a region or country. It encompasses how economic processes, such as production, consumption, trade, and transportation, are spatially arranged and interconnected. Here are key components and considerations of the spatial structure of the economy:

#### 1. Urbanization and Cities:

**Urban Hierarchy:** Cities vary in size and function, forming a hierarchical structure where larger cities typically serve as regional or national economic hubs.

**Functions:** Cities specialize in various economic activities such as manufacturing, finance, services, and administration, reflecting their role in the economy.

#### 2. Industrial and Commercial Zones:

**Industrial Clusters:** Concentrations of industries and manufacturing activities in specific geographic areas, often due to factors like access to resources, labor, and transportation.

**Commercial Centers:** Locations where retail, commercial services, and business activities are concentrated, serving local and regional markets.

#### 3. Transportation and Infrastructure:

**Transport Networks:** Roads, railways, ports, and airports connect regions and facilitate the movement of goods, services, and people.

**Logistics and Distribution:** Distribution centers and logistics hubs are strategically located to optimize supply chain efficiency and reduce transportation costs.

#### 4. Natural Resources and Agriculture:

**Resource Extraction:** Economic activities related to extraction of natural resources such as mining, forestry, and agriculture are influenced by the spatial distribution of resources.

**Agglomeration Effects:** Clustering of related industries around resource-rich areas to capitalize on proximity to raw materials.



## 5. Residential Areas and Housing:

**Housing Markets:** Residential areas are influenced by factors such as proximity to employment centers, amenities, and quality of life.

**Spatial Segregation:** Socio-economic factors often lead to spatial segregation, where different income groups reside in distinct neighborhoods or regions.

## 6. Regional Disparities and Development:

**Regional Disparities:** Disparities in economic development and wealth between regions, influenced by factors such as historical development, policy interventions, and natural endowments.

**Regional Policies:** Governments implement policies to promote balanced regional development, investment in infrastructure, and attract industries to less developed areas.

## 7. Globalization and Economic Integration:

**Global Linkages:** Economic activities are increasingly interconnected globally through trade, investment, and technology transfer.

**Global Cities:** Major cities act as global hubs, playing a pivotal role in international trade, finance, and cultural exchange.

## 8. Spatial Planning and Policy:

**Urban Planning:** Government policies and planning strategies influence the spatial structure through zoning regulations, land use planning, and infrastructure investments.

**Spatial Equity:** Policies aim to promote spatial equity, ensuring that economic opportunities and resources are fairly distributed across regions and communities.

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## 10.4 SUMMARY

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Understanding the spatial structure of the economy is critical for policymakers, urban planners, entrepreneurs, and researchers to make sound decisions about infrastructure investments, economic development strategies, and long-term urban growth. It entails examining how spatial arrangements influence economic efficiency, social equality, environmental sustainability, and general quality of life in an area or country.

The human economy, which has evolved over millennia, reflects changes in societal organization, resource management, and economic connections. Here's a summary that encapsulates its main components and phases:

Throughout these eras, the human economy has undergone major modifications as a result of technological advancements, population upheavals, cultural contacts, and political and economic ideologies. Today's global economy is interrelated and faces difficult challenges such as sustainability, inequality, and the ethical consequences of economic actions on a global scale. Understanding the historical framework and history of the human economy sheds light on current economic difficulties and prospects for directing its future trajectory.

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## 10.5 GLOSSARY

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**Economic System:** The structure and organization of production, distribution, and consumption of goods and services within a society or country.

**Capitalism:** An economic system characterized by private ownership of the means of production, market-based allocation of resources, and profit maximization.

**Socialism:** An economic system where the means of production are owned or regulated by the state or collective, with the goal of equitable distribution of wealth and resources.

**Mixed Economy:** An economic system that combines elements of capitalism and socialism, where both private enterprise and state intervention coexist to varying degrees.

**Market Economy:** An economic system where economic decisions and pricing are determined by supply and demand in the marketplace, with minimal government intervention;

**Command Economy:** An economic system where the government or central authority controls the production, distribution, and pricing of goods and services.

**Subsistence Economy:** An economic system focused on meeting basic needs through local production and self-sufficiency, often found in traditional societies and rural areas.

**Globalization:** The process of increased interconnectedness and interdependence among countries and economies through trade, technology, and cultural exchange.

**Industrial Revolution:** A period of rapid industrialization, technological advancement, and urbanization that began in the late 18th century, fundamentally transforming economies and societies.

**Mercantilism:** Economic policies in the 16th to 18th centuries aimed at accumulating wealth through trade, colonialism, and protectionist measures.

**Feudalism:** A medieval social and economic system based on land ownership and hierarchical relationships, where land was exchanged for loyalty and service.

**Colonialism:** The establishment, maintenance, and exploitation of colonies in one territory by people from another territory, often for economic gain and resource extraction.

**Trade:** The exchange of goods and services between individuals, communities, or countries, typically involving monetary transactions or barter.

**Urbanization:** The process of population concentration in urban areas, often accompanied by economic and social transformation.

**Sustainability:** The ability to meet current economic, social, and environmental needs without compromising the ability of future generations to meet their own needs.

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### ***10.6 ANSWER TO CHECK YOUR PROGRESS***

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1. Which economic system was characteristic of early hunter-gatherer societies?

- A) Capitalism
- B) Feudalism
- C) Subsistence economy
- D) Mercantilism

**Answer: C**

2. Which development marked the transition from the Paleolithic to the Neolithic era?

- A) Invention of the wheel
- B) Domestication of plants and animals
- C) Rise of complex civilizations
- D) Establishment of trade routes

**Answer: B**

3. Which ancient civilization was known for its extensive trade networks across the Mediterranean Sea?

- A) Sumerians
- B) Egyptians

- C) Greeks
- D) Phoenicians

**Answer: D**

4. During the middle Ages, which economic system was characterized by the exchange of land for military service and loyalty?

- A) Capitalism
- B) Feudalism
- C) Mercantilism
- D) Socialism

**Answer: B**

5. Which economic policy aimed to accumulate wealth through trade, colonization and the acquisition of precious metals?

- A) Capitalism
- B) Feudalism
- C) Mercantilism
- D) Socialism

**Answer: C**

6. The Industrial Revolution began in which country?

- A) France
- B) Germany
- C) United States
- D) Great Britain

**Answer: D**

7. Which technological innovation played a crucial role in the Industrial Revolution by improving efficiency in factories and transportation?

- A) Steam engine
- B) Printing press
- C) Telegraph
- D) Electric motor

**Answer: A**

8. Which economic system emphasizes public ownership of major industries and central planning?

- A) Capitalism
- B) Socialism
- C) Mixed economy
- D) Market economy

**Answer: B**

9. Which economic concept promotes the idea of maximizing profit through private ownership and market competition?

- A) Communism
- B) Socialism
- C) Capitalism
- D) Mercantilism

**Answer: C**

10. Which modern economic challenge is closely related to sustainability and minimizing environmental impact?

- A) Income inequality
- B) Economic growth

- C) Globalization
- D) Green economy

**Answer: D**

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### ***10.7 REFERENCES***

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Principles of Economics by N. Gregory Mankiw - A comprehensive textbook covering principles of economics, including microeconomics and macroeconomics.

Capital in the Twenty-First Century by Thomas Piketty - Explores the dynamics of income inequality and wealth accumulation over centuries.

The Wealth of Nations by Adam Smith - Considered a foundational work in classical economics, advocating for free markets and the invisible hand.

Das Kapital by Karl Marx - Marx's critique of capitalism and exploration of labor exploitation and class struggle.

World Bank Publications - Reports on global economic trends, development policies, and poverty reduction strategies.

International Monetary Fund (IMF) Reports - Economic outlook reports, country assessments, and policy recommendations.

European Central Bank (ECB) - Offers economic and financial data, research publications, and reports on the Eurozone economy.

World Trade Organization (WTO) - Provides statistics, trade policy reviews, and publications on international trade and economic development.

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### ***10.8 TERMINAL QUESTIONS***

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#### **(A) Long Questions**

1. Discuss the concept of spatial inequality in human geography. How does spatial inequality manifest in different regions of the world, and what factors contribute to its persistence?

2. Explain the concept of urbanization and its impact on human geography. How has urbanization evolved over time, and what are the social, economic, and environmental implications of rapid urban growth in developing countries?
3. Discuss the role of migration in shaping human geography. How do push and pull factors influence migration patterns, and what are the economic, social, and cultural impacts of migration on both sending and receiving countries?
4. Describe the concept of cultural landscape in human geography. How do human activities shape and modify the physical environment, and how does cultural landscape reflect the interplay between human societies and their natural surroundings?
5. Discuss the impact of globalization on human geography. How has globalization facilitated economic integration, cultural exchange, and technological advancement across the globe? What are the challenges and opportunities of globalization for different regions and communities?
6. Explain the concept of political geography. How do political boundaries, state sovereignty, and geopolitical dynamics influence human interactions, economic activities, and social structures within and between countries?

### **(B) Short Questions**

1. Describe the main characteristics of a subsistence economy.
2. What were the key factors that led to the transition from hunter-gatherer societies to agricultural economies?
3. Explain the significance of trade in the development of ancient civilizations.
4. How did the feudal system structure economic relationships in medieval Europe?
5. Discuss the economic impact of the Industrial Revolution on society and the global economy.
6. Compare and contrast capitalism and socialism as economic systems.
7. What role did mercantilism play in shaping global trade and colonization during the early modern period?
8. Describe the concept of a mixed economy. Provide examples of countries that have mixed economic systems.

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## **UNIT-11 HUMAN ADAPTATION TO THE ENVIRONMENT**

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### **11.1 OBJECTIVES**

### **11.2 INTRODUCTION**

### **11.3 HUMAN ADAPTATION TO THE ENVIRONMENT**

#### **11.3.1. POLAR REGION**

#### **11.3.2. TOPICAL DESERTS**

#### **11.3.3. PLATEAUS**

#### **11.3.4. MOUNTAIN REGIONS**

### **11.4 SUMMARY**

### **11.5 GLOSSARY**

### **11.6 ANSWER TO CHECK YOUR PROGRESS**

### **11.7 REFERENCES**

### **11.8 TERMINAL QUESTIONS**



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## ***11.1 OBJECTIVES***

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After reading this unit you should be able to:

- You will learn that human adaptation to environment.
- Knowledge of major environmental regions of the world and their geographical conditions.
- Knowledge of human harmony and adaptation in different environmental regions.

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## ***11.2 INTRODUCTION***

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Modern humans arose a few hundred thousand years ago and spread both within and outside of Africa, encountering a variety of new and demanding conditions. Humans can now be found in some of the most severe habitats on the planet, including hypoxic high altitudes, parched deserts, and the frigid and barren Arctic. Humans have mostly overcome these settings by technological breakthroughs like as fire, clothing, shelter, and advances in hunting equipment and habits, as well as food and water storage technologies. However, there have most certainly been concomitant biological adaptations, in which humans have experienced genetic and physiological modifications to live in their environment. Such cases are intriguing not only from an anthropological standpoint, but also as research systems for studying human physiology and genetics. The lack of testing on full living creatures makes studying genetics in humans more difficult than in model species. However, examples in which humans live in harsh environments provide an opportunity to study the physiological response to these conditions. Similarly, genetic adaptations (heritable phenotypic changes driven by natural selection) allow us to better understand the genetic variation that underpins physiological differences among humans, as well as the genetic components that are important for responding to environmental changes. Over the last ten years, several studies have used genetic analysis of populations adapted to severe settings to discover causal genes or genetic variants affecting human physiology. In this review, we will look at three types of adaptation: life in the arctic, high altitude, and diving.

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## ***11.3 HUMAN ADAPTATION TO THE ENVIRONMENT***

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Human life is primarily influenced by the environment. Man has been adjusting to his surroundings for a long time. They have been working tirelessly to transform the natural environment so that they might live their lives as they see fit, while their food, clothes, shelter, and economic activity, among other things, are dictated by the natural world. This section provides information on the castes that live in various areas. These are being investigated within the context of the following areas:

- (1) Polar regions or cold regions,
- (2) Hot desert,
- (3) Plateau,
- (4) Mountains.

### 11.3.1 Polar Regions

**Location and Extent** - The Polar Regions extend from 65° to 75° north latitude in Canada, Greenland, the Northern Russian Federation of North America, and the Eurasia continent. Tundra regions are the coldest places on the planet. These are also known as chilly deserts.

**Natural Environment** - The ground in this region is blanketed in snow for the most of the year. Permanent frost conditions exist beneath the ground throughout the year since the temperature frequently falls below the freezing point; in the summer, the temperature might reach 10 degrees Celsius. The earth layer is thin and frozen with snow. In several areas, the dirt is hidden, leaving only naked rocks exposed. Vegetation is observed to be quite limited in both type and amount, with no trees present. The major vegetation here consists of mosses, lichens, and occasional flowering plants.

Because this location is permanently under the influence of snow, rainfall is minimal, and any rainfall that does occur is in the form of snow. The winter season is mostly dark, while the summer season is more light-filled. Winter nights and summer days might stretch for several days.

**Animals** - Because of the harshness of the environment, only species that can withstand extreme cold can survive. The lake is home to Arctic rabbits, wolves, caribou, polar bears, reindeer, dogs, and a variety of marine species such as whales, seals, and walrus fish.

#### Inhabitants of Polar Regions

No.	Continent	Area	Resident
1.	Asia	Northern coastal part of Siberia	Semoides, Yukagirs, Yakuts, Chukchi, Tungus etc
2.	Europe	Scandinavia and Finland	Lapps, Finns
3.	Northern America	Alaska and Canada and southern coastal part of Greenland	Eskimos

## 1. Eskimos

**Habitat** - The Eskimo race's habitat is the tundra region of the Polar Regions, which is distributed across northern latitudes. The same sort of civilization can be found from Greenland to the Bering water system in the east and as far west as Alaska. The Eskimos live on the mainland, while the Tungus and Yukaghir live off Russia's Eurasian polar coast. All of them share almost identical economic activities, mechanical skills, social conventions, and so on; they are defined as having features of similar interaction with similar and severe environments. These people live in the arctic areas of Canada and Greenland and are known as 'Eskimos'. Their name is 'Eskimo', which was given to them by their neighbor 'American Indian', which means 'eater of raw meat.'

**Environment** - The ground in this region is virtually always covered in snow. During the autumn season, the temperature decreases dramatically and there is a scarcity of light. Summers are short yet bright. In the summer, the daytime temperature hovers about 10°C. The terrain here is continually covered in snow; there is a thin layer of soil, which is not always visible. Naked rocks can also be seen between these. No plant can thrive under such harsh conditions. Only moss, lichen, and plants that produce summer fruits grow. This plant arises and develops during the short monsoon season, resulting in a colorful atmosphere. At this season, a variety of birds and cranes add color and sweetness to the surrounding environment. As soon as winter approaches, they are all buried in snow. Snowstorms last for several days in winter. In such a case, all exterior work and economic activity cease.

**Structure of Body** - Purebred Eskimos are of average height. Their body length ranges from 150 to 160 cms, and their color is brown and yellowish. Their face is round and shapeless, their eyes are dark and small, their nose is flat, they have a muscular body, their jaws are heavy, their teeth are very strong, and their hair is extremely hard, Even though a soft sensation emanates from every area of his body. There is no harshness in his existence. People with mixed white blood have exquisite facial characteristics, complexions, and body structures.

Eskimos cannot be described as short in terms of height. They're of medium height. Eskimos have also been discovered to be approximately one foot tall. Their bodies are powerful and muscular at the front, while the waist is often weaker. Probably the reason for this is that they have to sit curled up in their narrow boat-kayak all day, which has to impact their lower back muscles.

The Eskimos are connected to the American Indians of the South and the Mongoloid race of northeastern Asia. These are little but thick. Their heights range from 5'2" to 5'4". Their eyes are almond-shaped.

Eskimo people have all black hair. They are tough and straight, and they do not get their hair clipped. Sometimes children's hair is clipped. Women braid their hair in a bun on top of their heads and embellish with various types of colorful ribbons.

**Characteristic Features-** Hunting seals and walrus is a question of survival. It is a betting game that can only be played by daring and patient participants, such as Eskimos. Only in the risky situation of a selfless hunt can one glimpse the Eskimo's genuine essence. In general, white Europeans have accused these people of being 'cowards', citing their tremendous tolerance and humility in social behavior as well as their policy of not reacting to attacks with the sword, yet bravery is not included in the Eskimos' ethnic dictionary. It does not imply losing one's mental balance in the heat of fury, but rather keeping one's steadiness, seriousness, and wisdom even in the face of the most severe crises. Its introduction occurs at every stage of his life. They have never experienced the greed and mutual animosity that have plagued other so-called 'civilized' castes. Their lives are difficult, possibly more so than those of any other races in the planet. Their war is with nature. They continually battle to take food from their mouths; like us, they dislike snatching from one another and have never learnt to do it. Eskimos are the most pleasant, happy, and conflict-free people on the planet. In reality, they are unaware of the concept of abuse because there is no such word in their language. They never do anything to hurt the hearts of others. His objective is truthfulness, but he never says difficult truths. Their nature is childlike, straightforward, honest, and charming. This is their greatest legacy, on which these individuals have lived their lives with great comfort, free of the pains of the past and concerns about the future. They don't like lying and don't know how to steal. If someone borrows or loans something to someone, he does not believe it is appropriate to return it. If someone piles the wood that has washed up on the seashore in one location, no one else will touch it.

**Food -** Eskimo folks eat nothing except meat. Seal, walrus, and whale meat, as well as caribou, reindeer, and polar bears, are their primary sources of nutrition. There is no set time for meals; I eat whenever I feel hungry. Many times, confusion persists due to special challenges in acquiring food. Sometimes food was available, sometimes not, and only the hunter and his family went hungry. Meat is typically consumed raw, however it is occasionally boiled. They rely on hunting for their nourishment. These people occasionally consume animal blood, similar to how sugarcane juice is consumed. In general, Eskimos live in three distinct seasons; they hunt in different ways and with unique methods:

**Winter Hunting-** In the winter, Eskimo families congregate towards the coast, where they remain until March-April. During this time, these folks hunt fish along the coast. According to specific experience, Eskimos drill holes in the frozen ice bodies here, allowing walrus and seals to breathe. When the fish comes, the Eskimo dog begins clawing the hole, which is covered with thin ice. When the Eskimos hear the sound of the fish, they use their harpoon (special weapon) to pierce the seal's mouth and pull it out. The weight method is known as 'fish sock' (MAUPOK). In Poland, fish are hunted utilizing the 'Ttuarpok' method. The hunters make

two holes in the ice: on one side, one person hunts for the seal, while on the other, another person stands with a harpoon, killing the seal as soon as he receives the signal. Seals and walrus are hunted throughout the winter season. These fish provide food, fat for burning, bones, weaving threads, liver oil, and other products.

**Spring Hunting-** When the days grow longer in March, Eskimo families head out to hunt seals. When seal fish emerge from their breathing holes and begin eating sunlight, their prey becomes easily accessible. Spring hunting is known as Utoq. The Eskimo hunter abandons his sledge and team in favor of a hunting dog and pursues seal herds. 'Utok' hunting yields a large reward in a short period of time, and a skilled hunter can kill a large number of seals in a single day. Hunting has changed dramatically around Baffin Bay and along Hudson Bay's northern coast. Whale fish move north from this location and walrus is the most abundant fish here. It is killed by harpoon and transported in a skin-covered kayak instead of a sledge cart. Seal fat is harvested in adequate quantities and stored in leather bags before being buried behind hard rocks in the coastal area to protect it from wolves, foxes, and other predators.

This season, the Eskimos pay less attention to hunting marine mammals because the herbivorous musk ox of the North Pole is readily available in the northern regions and islands. It does not move according to the seasons. These animals move considerably slower than the caribou found in the southern region. They are surrounded by dogs in little creeks, and Eskimo hunters kill them with birds or spears. Their meat is quite good. Polar bear hunting is very prominent in these glaciated regions. It is hunted using a sledge cart and dogs.

**Hunting in summer-** In mid-summer, when the snow begins to melt and various types of vegetation sprout, the residents here hunt animals. The Eskimos return to the sea and travel down a valley connecting the coastal area to the lower interior. As they travel farther into the region, they come upon vast herds of caribou and reindeer that stretch across the tundra to the far north. These mammals feed on summer moss, lichen, and tiny shrubs. Some of these creatures reach the northern island groups before the ice melts, while the majority spread beyond the Baffin area. Throughout the year, herds of these animals remain on the tundra, but in the winter, they become so far dispersed that they remain out of reach. Although individual hunting with arrows is common during the season; the presence of caribou in groups stimulates collective hunting, allowing families that were separated in the spring to hunt again before heading into the interior. Meet in one location. Summer camps are established near wide valleys to improve access to tight river valleys and highland locations. Sometimes these folks have to travel up to 200 miles in search of animals. These people have been travelling the same route for many years, yet their travel times occasionally vary somewhat. At the beginning of the season, these creatures are frequently not moved to marshy areas. At that time, only a thin covering of snow remained, providing the hunter with tremendous convenience.

The most successful hunting strategy is thought to be when the Hankara is limited to a lake or river, and the Eskimo, seated in his 'kayak', quickly kills the prey with a spear.

Fishing, like hunting, is a vital winter activity. Salmon and trout fish are very abundant here. Large fish migrate to rivers and lakes in June as the snow melts. Sometimes enormous fish groups become so broad that they obstruct the flow of water. While floating, they were thoroughly penetrated with trident-shaped spears. Are given, and then pulled up. In some regions, they are caught in bag nets. When fishing, Eskimo use hooks and string, as well as miniature ivory fish as bait.

In the summer, women harvest a variety of berries, roots, and other plants, but these do not contribute much to meeting food requirements. This season's accommodations are special types of tents fashioned of little Saul or casheb skins and put up as encampments. This building is composed of an oak stick, with the back section formed like a semi-cone. In addition to caribou and reindeer, jackals and rabbits are trapped with nets, while ducks and swans are slaughtered with spears.

At the conclusion of the summer, Central Eskimo settlements return to the shore, bringing with them enough food supplies. In some ways, the early winter season is like a break for them, with few caribou observed in coastal areas beginning in early November and the snow not freezing effectively until December. These people already have enough food with them, so this is a time of joy and leisure for them. These people are now celebrating festivals and making trip plans. Some of these organizations collect stones and build mud houses, which they then refurbish and redecorate. These houses resemble igloos.

The Eskimo people rely heavily on aquatic species like as seals, whales, walruses, and salmon for their survival. These folks hunt them since they are the only ones available in this region. In some areas, a reindeer called caribou is hunted, but many Eskimo people have never seen one. These folks consume fish and meat raw, and they occasionally boil it. They're also dried and stored. Whale and seal fat are frequently chewed uncooked. Similarly, they use several varieties of seaweed in their vegetation.

During a famine, they eat everything is available in the neighborhood, including the dogs. It is reported that when the time comes, they cut the tent skins into pieces, prepare a soup out of them, and then feed them to their stomachs. These people do not have a set time for eating. We eat whenever we feel hungry. Sometimes a circumstance arises that requires hunters too fast for the entire day. It is not an exaggeration to claim that these folks have an incredible ability to fast, but when they sit down to eat; they consume so much in one sitting that bystanders have to bite their teeth.

The Eskimo's only life occupation is hunting, and he seeks to become entirely adept in his career beginning in youth. Like all other castes in the world, men are in charge of procuring food for subsistence, while women are in charge of all home chores and child care. The man's task is just to catch the prey; it is the women's responsibility to chop it, cook it, dry its skin, and manufacture garments, bags, and bedding. Women cover the skins on the kayaks, undertake all

the sewing work, care for the kitchen, and collect wood, water, prepare the cottages, set up and take down the tents, and use the special boat for ladies. Is farming; Apart from that, when men go hunting for seals, walruses, and so on, it is the women who pick up the killed animals from the beach and transport them home.

**Residence or House-** In the summer, they live in tents made of reindeer and caribou hide, but in the winter, the Eskimos of mainland and North America build snow houses; on the beach, only a few Eskimo settlements have permanent snow houses. These are round or rectangular. These are known as igloos. These are built over an area of three or four hectares. The bedroom and its route to the house are located below, but the floor of the interim dome is one foot higher than the passage to guard against cold. The rear section has a bedroom. This is sufficient accommodation for two families.

In this, heat and light are maintained by burning fat, which continues to come out. Eskimo leather in spring, the smoke and the gas dwell in camps outside a specific opening in the top of the central dome known as a tupik. These tupiks are built on the edges of garden areas in the south. Throughout the winter, they reside in igloos or ice huts. In the winter, they build a domed structure in the shape of a lime kiln by cutting and arranging ice stones like bricks or stones. The entire Eskimo family lives there. This house has only one room with bench-like sitting areas made of ice. These seats are utilized for sitting during the day and sleeping in night. This room is entered and exited via a long tunnel-like passage. Eskimo communities have igloo-like solitary dwellings made of mud and snow that are distributed around the area. These houses collapse throughout the summer owing to snow melting, thus tents, known as tupiks, must be built.

**Clothes -** Various animals. In the summer and winter, the Eskimo people used the skins from hunting birds and fish. Main and inner garments are manufactured by. Caribou leather is used in outerwear. Women and men wear almost identical clothing. The men wear sleeveless garments similar to modern woollen jerseys constructed from the inside out of seal, caribou (reindeer), or other animal hides. It's called Tamiyaak. It also has a cap-like tail above the neck that is worn over the head like a cap. Seals from dogs, bears, wolves, and other creatures are used to decorate the collar and sleeves. On their feet, they wear seal skin pajamas. Their shoes, known as Kamik, are fashioned of seal skin. In Poland, women wear soft leather bodices with a high collar at the top. This collar is adorned with a wide garland of glass-like beads in various colors. Women's pajamas are shorter, reaching to the knees, and their shoes are longer than men's. Mothers wear a particular sort of fabric on their backs known as Amaut, which includes a bag-like pocket on the back that allows them to work while keeping their infant safe. Women soften all types of leather with their mouths before sewing it with intestine threads and bone needles. Because of this hard effort, women's teeth are fully worn out by the age of 35.

**Tools of Daily Life - (1) Sledge** - It is a vehicle without wheels that travels through snow. It is composed of seal or animal bones. It is hauled by dogs with ropes or intestines. Sleds are available in a variety of sizes. Normally, a useful sledge is five meters long. Handling a team of dogs hauling a sledge demands a high level of ability. The strongest and most excited dogs are positioned in the front, while the weaker and more unpredictable dogs are placed near the sledge. A pair of oxen can draw a sledge loaded with 40 kg at a pace of 4 km/h. Reindeer are useful for lengthy voyages and moderate movements, but dogs are useful for quick movements, including migration and hunting expeditions.

(ii) **Kayak** - The Eskimo people utilize a boat called a kayak. This boat is composed of bones, wood, and thick leather. Its calf is given a bank of seal skin. The fibers (gut) also bind the skin together. This boat is 5 meters long and 80 to 150 centimeters wide.

(iii) **Umiak** - Big boats are called Umiak in which skilled hunters sit and hunt whales.

(iv) **Harpoon**- This is a spear designed to kill fish. It is of the boosted type and is employed in a unique manner. In the winter, thrusting harpoons are used to hunt seals from holes, while throwing harpoons are used to hunt at sea.

**Economy** - The severe environment of the residential region makes it evident that agricultural or animal husbandry, as well as industrial development, is not possible here. There is little flora; the entire economy is centered on hunting animals. Salmon and walrus fish provide skin, meat, fat, and bones, while caribou provides bones, hides, and meat for consumption. Whale fish is only caught under ideal conditions. Fur is collected from a variety of animals, including bears and foxes. The Eskimo is an expert hunter and fisherman. During the summer, women collect various tubers, berries, and plants. Birds are also slaughtered during this period, and as much food as possible is saved for a few weeks before to the difficult winter season. This may help them escape malnutrition during snowstorms.

**Social Life** - Eskimo people live in small families and strive to live their lives in accordance with the authoritarian environment. All family members labor together on domestic activities like as hunting, building igloos, collecting plants, creating kayaks and sewing skin garments. These people strive to live independent lifestyles in accordance with the environment. These individuals are culturally backward.

These people do not enjoy taking baths. As a result, they live a dirty life. These people wear their garments until they rupture. These folks engage in some form of entertainment. These include games such as football, cards, wrestling, dog riding and sledge racing.

They have a strong feeling of hospitality. When a guest arrives, he is serviced to his full potential. When a big game is discovered, everyone celebrates and eats together.



Among these persons, there is a magician who is regarded as highly important. They think that a spirit lives in the body of a magician who cures ailments and forecasts that all diseases will be incurable.

**Deadly contact with other races-** Since their first interaction with Europeans, the Eskimo people's culture, religion, and trade has all changed. Their basic isolated life has undergone significant change. The innocent creatures of nature are rapidly losing their health, ethnic purity, traditional vigor, and honest natural instincts as a result of European civilization. They've recently begun to acquire firearms and other hunting equipment. Along with this, grass and some flora can be found in the southern regions. Reindeer and other fur animals are currently being raised. As a result, tribes such as the Eskimo and Yukagir have begun to reduce their need to travel far and wide for hunting.

### 11.3.2. Tropical Deserts

**Location and Extent** Hot deserts can be found in both hemispheres, particularly the western sections of continents between 15° and 32° latitude. The eastern coasts of the Northern and Southern Hemisphere continents experience frequent rainfall at these latitudes because of trade winds flowing from sea to land. On the western coast, however, the same winds blow from land to sea and become dry, resulting in only one rainy season per year. As a result, prolonged drought in the aforementioned latitudes on the western coast leads to deserts, which is the primary cause of their development. Western Asia and North Africa form a massive landmass at these latitudes (with the exception of the small sliver of the Red Sea). For this reason, the world's longest and largest desert region stretches from Western India (Rajasthan) to Western Sahara.

**Natural Environment** - Hot deserts have an exceptionally harsh climate. These are the regions with the hottest temperatures and the least rainfall in the world. Here, the air is extremely hot, and strong winds blow, which are known by several names in these deserts, including Simoon in Sahara. Temperatures remain high all year. The average temperature throughout the spring season ranges from 30°C to 35°C. In the afternoon, the temperature reaches 44° Celsius; even in the winter, the temperature ranges from 15° Celsius to 27° Celsius. The average rainfall in these areas is typically 25 cm. Is less than. Due to the severe heat and dryness, there is virtually little flora here; however, prickly plants and some greenery can be found in oases.

**Animal Life** - The desert region also has a lower animal population, with only a few varieties of foxes observed. Humans primarily use camels.

Due to the aforementioned poor and unfavorable surroundings, the native population here must live in extremely difficult and hungry situations. Mineral oil and other unique minerals are available in sufficient quantities. The population in the rest of the huge territory is extremely restricted and dispersed due to the severe environment and resource scarcity.

Because of the Middle East's vast mineral oil reserves, the region's small population can live well on imported resources. Animal welfare remains deplorable.

## **Bedoins of Arabian Desert**

**Habitat-** Beddoes lives on the western Arabian Peninsula in South-Western Asia and in North Africa's harsh desert, the Sahara. Because of their terrible living conditions, these daughters-in-law are regarded as belonging to a less evolved culture. Beddoes' lives are classified into two types: (1) permanent dwellers of oases and (2) travelling residents.

**(1) Permanent Dwellers** - People live permanently in water sources, river valleys, and oases throughout the Arabian Desert. There are mostly the following four areas: (1) the oases located in the vast valleys on the Najd plateau, (ii) Oman's south-eastern coastal plain, (iii) Aden's southern coastal area, and (iv) Yemen's south-western region. Settlements have been founded in all of these locations. Now that mineral oil is available, the situation is rapidly changing, as previously indicated.

**(2) Nomadic Dwellers** - The Beddoes' way of life has become nomadic due to the unique conditions in the desert districts of Hamad and Nefad, which are located near the Arab Peninsula's west coast. Beddoes trek over the Sahara with their camel caravans, from Western Egypt, Southern Libya, and Western Sudan to Mauritius.

**Geographical Environment-** In these deserts, there is tremendous heat during the lengthy months, and the temperature often soars more than 44° centigrade; the world's tallest The temperature in Al-Aziz is recorded as 54.8°C. During the winter, the temperature drops to 10 degrees Celsius. There is a similar distinction between day and night. Because of its location in calm areas and dry wind belts, there is little rainfall. The entire year remains dry. Dusty storms blow. Sand dunes (barkhans) can be seen all throughout the region, and their positions vary frequently during intense storms. Thorny shrubs are found exclusively in some sheltered areas, oases, and valleys, while palm trees can be found near water sources.

**Structure of Body** - Beddoes believe themselves to be ancient Semites. As a result, these people are healthy, of average height (up to 1.7 meters), and have a lovely pale and brown complexion. They're good horsemen. One branch's descendants share the caste's characteristics.

**House-** Beddoes has no permanent residences other than the permanent residential districts. They continue to journey with their tribes, including camels, horses, dogs, sheep, and goats, in search of feed, water, and oases. They live in large tents made of skin, wool, camel, thick felt, and carpet. The tent contains six to eight wooden pillars. They are covered by a skin roof. Tent ropes are also constructed of camel and goat hair. Women and children are separated by installing curtains in the centre of the tent. Due to the cool ground level at night, camel wool carpets, skin rugs, and blankets are spread. There is room for camels, horses, and other animals

nearby. When it comes time to set up camp, they gather all of their goods and load them onto the camel, which all of the tribal members ride atop. The male members all ride horses and travel to the new location. Permanent buildings erected in oasis are composed of mud and have very wide roofs.

**Food-** Dates are the major diet of the Beddoes people. Dates can be dried or boiled to make a variety of foods. In addition to dates, this tribe consumes wheat, barley, maize, and other cereals. They use camel and goat milk. Sometimes animals are killed and the meat is used. Goat, sheep, and camel flesh are used. In addition, they cook and dine with stone and wooden utensils. Bags made of animal skins are used to hold milk and water, among other things.

**Clothes -** To avoid the blazing heat, these folks wrap their entire body in cotton garments. Their clothes are loose-fitting. They wear a loose cloak that covers their entire body and ties a fabric around their head. The head and lips can be banked as needed.

**Economy-** Beddoes inhabitants primarily raise sheep, goats, camels, and horses. They offer dates, wool, animals, meat, and milk to desert dwellers in exchange for wheat, barley, clothing, tobacco, and other necessities. Camel is the predominant animal here, and it represents the people's prosperity. There are no other vehicles available in these areas but camels. Horses are also raised on plateau and rocky arid areas, which are quite useful. Camels produce hair, meat, milk, and other products. Camel hair and wool are used to make ropes, rugs, and clothing coverings. Their requirements are minimal; therefore they get everything through bartering.

**Social Life -** Beddoes always go by caravan. A caravan is a mobile settlement. Their leader is their guide, who looks after and protects the entire tribe. In the Sahara desert, these caravans travel along routes with oasis or water in between. It has more camels and many other items, which it distributes to other clan members as needed. These individuals begin their treks in caravans after sunrise and sunset. Most of the daughters-in-law now live near the oasis.

The clan leader holds an important position. Its position is Ancestral. He exercises authority over the tribe's social life. The family members are related by blood, and the father has been recognized for three generations. Slavery used to be a component of their social lives, but that is no longer the case. Negro servants are responsible for establishing camps, uprooting them, carrying things onto camels, and driving animals, among other tasks. Polygamy is common among them; according to Islamic norms, daughters-in-law might marry four times and leave them.

Even in the Sahara, people's living standards are fast altering. Because of the availability of water in Egypt and mineral oil in Libya and Algeria, these people have become permanent residents and have begun to work elsewhere. The dissemination of education has risen. The more developed and generally permanent Beddoes pastoralists are still scattered across Niger, Chad,

Mali, and Mauritania, with fanaticism of the Islamic system and religion remaining the dominant feature. Even now, the relevance and impact of the severe environment are plainly visible.

**Religion-** Beddoes are people who welcome Islam and have followers, as well as fervent religious supporters and guests.

### **Bushmen of Kalahari**

**Habitat-** The Kalahari Desert stretches into areas of South-West Africa (Namibia), which is located in the northwestern part of the Union of Southern Africa. Bushmen reside in this desert, although their habitat spans 80,000 square kilometers over the political borders of Botswana, Zimbabwe, and the Union of Southern Africa, from 18° south latitude to 27° south latitude.

**Geographical Environment -** The entire area is a mountainous country with elevations ranging from 1,000 to 2,000 meters. The entire region's east contains high mountain ranges. The Kalahari Desert has a high and low surface, and it is completely covered with white and black soil. Small hills dot the middle of this soil. Most areas have sand dunes that are 1 to 3 meters high.

Because of the height, the climate here is both dry and semitropical. The temperatures here are normally high throughout the year. The temperature in January (summer) ranges from 30°C to 33°C. July (winter) temperatures can reach 15 degrees Celsius. Rainfall is normal; in the north-east, it is 50 cm, but in the south-west, it is only 25 cm, which is insufficient rainfall. After a few years, the land becomes overgrown with flora, creating an ideal grazing place for animals. Grass grows to a height of one meter, but there is little vegetation in the south. During regular summer rainfall, when the springs are full of water, grass, bushes, and other plants grow well; nevertheless, the grass quickly scorches owing to the blistering heat of July.

**Animal Life-** This state is home to both vegetarian and non-vegetarian wild animals. Carnivorous animals include antelope, blackbuck (deer), mule, jensvaak, giraffe, duiken, ostrich, cheetah, wild lynx, and hyena. Vipak chameleons are abundant in this area for a brief period of time, just after the rains. Aside from them, small critters such as ants, lizards, frogs, grasshoppers, rabbits, bats, rodents, and several species of birds can be found.

**Structure of Body -** Bushmen are short (150 cm), with a flat face, heavy eyelashes, and slanted eyes. Their color is brownish and yellowish. These humans have wavy hair and resemble the Nimrod species. The accumulation of fat on the buttocks is a unique physical feature of Bushman women.

**Dwelling-** Bushmen villages are in the early stages of development and lack stability. These folks frequently live in mud houses and caves. Their round houses are built of grass and supported by 120 cm long wooden poles, with a domed roof of leaves and skins. Bushmen's

makeshift villages are made out of 8 to 10 homes. Is there only one door in these? This happens. Reeds are abundant in the Ngami region; hence homes are fashioned from them. The northern half has marshes and more grass. The environment there is more favorable, hence more settlements are found.

**Clothes-** Bushmen generally stay nude. Skin is utilized to cover certain parts of the body. Men wrap a triangular loincloth of skin across their waists. Women wrap a strip of skin from waist to knee and bind behind the waist. Leather slippers are worn on the feet. Various forms of fat are employed to protect the body from heat and dust. They apply mud mixed with fat to protect them from the sun during the day, cold at night, and mosquitoes. These people don't take a bath for months. As a result, a thick crust of paste forms on their bodies. They also cover themselves with skins during the night to keep warm.

**Food-** Bushmen are predominantly a non-vegetarian caste. It feeds on a wide variety of species. Their primary source of income is hunting and harvesting meat. Each family collects food for itself. Their primary source of sustenance is herbivorous animal hunting, with termites being their favorite. Ants and their eggs are included into food. Aside from that, they eat the fruits and roots of trees that grow all over the place. In the spring, they eat tsama, watermelon, and some knotweed roots. These people also consume fruits and honey. They use wild watermelon [Tsama] for both food and drink.

**Tools and Utensils -** Bushmen's tools are often sparse and rudimentary, fashioned from the restricted resources accessible in this region. Many of their weapons and tools are constructed of wood, including bow and arrows, pointed throwing sticks, spears, barges, and fire sticks. Ropes are produced from tree peels. Many different things are also made from canes grown in the wetlands. In times of drought, it is also used to extract water. It is buried in the dry beds of rivers or lakes, and water is gradually sucked out via the mouth. Stone knives, for example, are made to be approximately 5 inches long. In some regions, Bushmen have begun to use iron.

Because sugar is so abundant, they have stockpiles of leather, bones, and nerves. Ho and sinew are extremely important to them as they prepare the bow and its string. Ostrich and giraffe leg bones are crushed into sharp points that serve as arrow tips. The bow string length varies from 25 to 3 feet. In addition to the bow and arrow, these folks carry a stick, a knife, and a fire rod. Rub this fire rod to start a fire. Their bait consists of reed with a stone, bone, or iron connected to the tip. The "throwing stick" is created from a tall bush that is 2 to 3 feet tall. These folks create stunning bags and bags from the skin of Sambar. Ostrich eggs are used to hold water. Cups are produced by splitting it in half and using them to eat and drink. These eggs are also used to make water bottles and drainage. Only after giving away these decorations do they purchase iron knives, millets, millet, and gorgeous pay from outside sources.

**Economy -** These folks make their living primarily through hunting. Hunting is the only way to gather food, clothing, and other necessities. As a result, it becomes necessary for them to

travel from place to place in search of prey, running after it for miles and eventually killing it. Their requirements are limited, yet meeting them is tough. All economic operations revolve around acquiring food stuff. They do not require clothing and remain naked; their main garments are loincloths made of leather or other materials to cover the areas below the waist.

Bushmen are skilled hunters. These folks hunt with bows and arrows, axes, and so forth. Their main tasks include hunting herbivorous and carnivorous animals for food, eating raw meat, and providing sustenance for their families. Because of the scorching environment, they are unable to collect or preserve food. The natural conditions in this location do not motivate them to raise animals; hence they do not employ animals as a mode of transportation. Humans do all the labor themselves. Women raise and transport children and goods on their backs and heads. Bushmen employ materials found in their surroundings to create useful and attractive products. Arrows, axes, and spears are crafted from bone, while cups and ornaments are made from ostrich eggs. In exchange for these items, they purchased tools from foreign sources, as well as jowar-millet and other items.

**Social Arrangement and Behavior** - Bushmen are thought to be one of the most primitive castes in the world. Their numbers are steadily decreasing. Nothing has changed in their social system. These people belong to separate families. These households rely on their own resources. The community consists of 20 to 100 persons. Women make houses, while men search for food. Large hunts are done together. Generally, hunting grounds are segregated so that people from other villages cannot hunt without permission. The family has no tradition of a head, etc. The family is small since these folks die at a high rate from a variety of ailments. Bushmen are separated into several different communities based on their language. Koroka, Bargadama, Kung, Nusan, Namib, Koran, and Gjam (Xam). They believe in ghosts and use witchcraft to increase their hunting success rates. A person who applies the ash of the same species' flesh to the mouth, body, and wounds of the animal he desires to hunt is 100% guaranteed of his hunting success. They practise no religion. The most popular religion is stomach fulfillment.

Bushmen, on the other hand, live in arid regions and hunt in semi-desert woodlands for a living. However, the environment leaves a permanent mark on these individuals. They have always evolved in a dry environment, thus very few fundamental changes have occurred in them. Because of a scarcity of resources in this state, their population is gradually decreasing. These people frequently face problems and go without food or water for days. The man travels with his weapons, fire stick, and hookah because he is always on the lookout for prey. These individuals are gradually improving mentally. In some situations, these individuals have been influenced by the Western environment. They believe in gods, goddesses, and ghosts.

Their beliefs regarding God, heaven, and hell are uncertain. These Kalahari Desert hunter-gatherers make a substantial contribution to the adaptation of environmental conditions and situations.

### 11.3.3. Plateaus

By presenting a detailed description of the following plateau residents, their link with the environment was demonstrated:

#### 1. Masai

The Masai people live in the northern and southern tropical grasslands of East Africa, where they have characteristics with both the Mediterranean and Negroid races. This caste can be found herding cattle in northern Kenya, northern Tanzania, and the plateau regions of eastern Uganda in East Africa.

The main Masai are maybe the last of the three civilizations to communicate with one another through language and custom. They gained dominance of this area by forcing their ancestors, particularly Wondorobo or Asi and Lumbwa, also known as Kipsigi and Kwafi, to the western and southern territories, have finished. These Wanderobos have assimilated with the Nimro and Neimito communities and abandoned their nomadic existence. They hunt wild animals and engage in small-scale trade with Negro and Hametic communities. Many of these are legitimate Masai serfs.

The Lumbwa have been highly incorporated into the Negroid community, with agriculture widely accepted as the primary priority. During the late nineteenth century, the Masai and Lumbwa clashed ferociously. The Masai were successful in their campaign, driving the Lumbwa from their territories and northward.

**Habitat** - The habitat ranges from 1° north to 6° south latitude in East Africa, including plateaus, rift valleys, and mountainous terrain. It can be found on the lower slopes of Mounts Elgan, Kenya, and Kilimanjaro. The entire plateau region rises 1,000 to 3,000 meters above sea level. The Masai Protected Area spans around 450 thousand square kilometers of plateau, rift valley, and steep terrain in Kenya and Tanzania.

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Despite being an equatorial locale, rainfall remains constant regardless of height. It is slightly more than 5 cms and in certain regions it is only up to 50 cms. Rainfall is primarily concentrated between April and June, when strong monsoon winds from the Indian Ocean blow in this direction. Rainfall falls in numerous highlands throughout the months of November and December. From June to October, the weather is usually dry. Grass grows in the majority of regions due to insufficient rainfall and appropriate temperatures. Heavy rains have caused tall

grass to sprout on the hillsides. The grass in rainfall-deficient and low plateau areas is short (60 cm). This grass is particularly beneficial to animals since it is soft and nutritious.

Some of the grassy areas have acacia trees. Cedar, oak, and fig trees can be found at higher elevations with rainfall averaging around 100 cms.

**Structure of Body** - The Masai are tall and slim. Their arms and legs are long, yet their fingers are thin. These people share Equatorial and Negroet ethnic characteristics. Their shade ranges from light brown to extremely dark brown or brown. Their head is tall and narrow, and their nose is long and thin. Their lips are not very thick, and their hair is less curly and longer.

**House** - Every family has its own house or group, as well as its own shelter, which is known as a kraal. A kraal consists of twenty to fifty homes that move around continually. When a new camp needs to be built, a site with plenty of pastureland and water is sought. Furthermore, care is made with the neighboring cluster of trees, etc. The women themselves build and maintain the kraal. Such houses are elliptical in shape and arranged in a circular configuration. There is an open space in the core that is 40 to 100 yards in circumference. The homes are surrounded on the outside by thorny bushes to defend them from wild animals and foes. Some gates are also built to be at least two or up to four yards long, with a three or four-yard spacing. These gates allow family members and cattle to pass. There is a small square or field in the heart of the camp where the cattle are kept at night.

Each wife has an own hut that she builds and maintains. The floor is rectangular in shape, with rounded corners all around, measuring around four or five yards long by three or four feet wide. Long, flexible pegs of one foot in length are buried and securely attached to the ground at a one-yard distance with twig rope. A roof pole is tied in the ground along the length of the hut, leaving the upper part five feet until the end. The wall pegs are connected to the roof pillars to form an arch-shaped structure that is linked together systematically with thin sticks. This circular design allows a door to extend from the main construction of the hut on each side. The roofs are also covered in ox hide, especially when oxen die in large numbers due to plague outbreaks and other causes.

Such small shelters are still built temporarily during seasonal migration in conjunction with kraal construction, though walls are built in dwellings designed for large permanent residences. Roofs up to a foot thick are also constructed using long grass in a bamboo structure, which is then coated with cow dung or mud, which hardens when dried. The doors are made of tough leather and only opened at night. The perishable products are leather-coated. These huts are completely black, with just holes to allow light in. These holes are also accessible, especially at night or in inclement weather.



Men, women, and their children sleep on one side of these shelters, away from the entryway, while the inside half features a scaffold on which ox hides are laid. Their wares include milk utensils, wooden plates, and certain weapons kept on a triangle stool on the floor. Calves, lambs, and goats must be placed in huts at night, with an unoccupied area in the corner near the door.

**Food** - Their main source of food is blood, which they get from cows, usually bulls, by pulling their necks with a leather rope, causing a massive vein to swell. Then an arrow with a broad blade is inserted into it. A light and short bow is used for stabbing. The blood is then collected, mixed with milk, and used fresh.

Everyone, excluding warriors, consumes sorghum, millet, and maize. Men despise roots and bananas, which are only consumed by women and children. These grains and vegetarian meals are acquired from travelling Negroes and Vandrobos in exchange for animals and leather. They are boiled and blended like milk and butter because they have no constraints when used with meat. Some wild animals and birds are killed just for their leather, horns, and feathers; the meat is not eaten. They use wild honey either raw, diluted, or in beer. This is actually one of their favorite drinks.

**Clothes** - Masai people wear lightweight leather clothing. This leather comes from cows, bulls, and goats. Coats are made of leather and cover the area below the waist. These people also wear caps fashioned from the skins of various wild animals, including baboons and tigers. The bull's leather is used to produce slippers for the Masai people to wear. Masai women wear many iron rings around their necks, which hide their breasts. The inside garments are now made of cotton or thread. The trend of wearing knitted clothing is growing.

**Economy** - The Masai people are cattle herders, and livestock represent the main wealth of their tribe. Every family owns a large number of milk-producing cattle (cows and goats). Women milk the cows before they go out to pasture. Milk is preserved in gourd tumblers, as well as aluminum and clay containers. The calves are castrated. Animal skins and meat are presented as gifts. The Masai do not kill their domesticated animals; Wandorobos are assigned to do so. Cows are never butchered, and their flesh is only devoured after death. The Masai people also farm sheep, goats and donkeys for hides and to transport burdens.

The Masai people engage in caste discrimination. A number of industries are also present. Only a few clans of Masai tribe members can make iron weapons and jewelery. They come from various castes and families. Their marriages and other social activities happen inside their own caste. The work is passed down from father to son. They swap blacksmiths' weapons and goldsmiths' jewels for meat, milk, leather, and other commodities. The Masai community has a barter system. Similarly, by selling hides, leather, and iron ornaments in the market, we can get the clothing, utensils, and other goods we need.

**Cattle Wealth** - The animals are this caste's actual value. Each family raises a large number of milk-producing animals. Women milk their cows early in the morning. Men or children lead them to pasture, and they return after nightfall. The bottle gourd tuber is used to collect and store milk. To ensure purity, the milk jug is washed with cow pee.

Most of the time, the calves were allowed to mature as soon as possible before being castrated after birth. Their skin and meat are used to make gifts and host feasts for the animal community. Wandorobo is tasked with killing them because no butcher would slaughter his own beasts.

These people only use raw milk. Boiled milk is only given to sick patients. Butter is prepared by whirling milk in a large bottle gourd, but these people do not know how to make cheese.

There are equally as many sheep as cattle here. They consume milk, flesh, and blood from sheep, but the Masai people place little importance on them. Goats are grown alongside sheep. Leather belts are tightly wrapped around the tummies of bulls and lambs to keep them from mating at the wrong seasons.

Many families also keep a few donkeys to help carry heavy loads. Some eastern villages keep camels for this purpose, which they acquired from Somalis. Cattle are not used for draft until they are ready. No animals are ridden. Travel and animal care activities are carried out on foot. The animal society that lives in a kraal is organized by a young man who is protected and mentored by married males. Dogs are used to guard sheep and can only alert people to the presence of strangers or animals to hunt; they are insufficiently intelligent for this purpose.

During common festivities and family gatherings, animals are slain, but the meat is prepared outdoors rather than at home.

**Social Life** - The Masai live in small villages. Groups of twenty to fifty huts live together. They don't stay in one spot for long. In Masai civilization, caste structures based on occupation and gotras are especially important. Gotras play an important role in the inheritance of marital property. Gotra can only be determined through ancestral inter-gotra marriages. These clans are unimportant politically. Clan members live and travel across the country together. Adult marriage is common in this circumstance. Boys marry when they are 20 to 25 years old. These people practice dowry as well. When people marry, they receive livestock. Polygamy is also prevalent among these people.

**Leader** - The Masai have a particular religious leader known as Laibon. It has long been the pioneer of genuine unity-functioning in this community, even though the 'kraal' is dispersed and the strong individualism of local warrior groups should not be overlooked. Labon has been compared to Israel's high priest, and his followers to the Levites. Even though the Masai priest

has substantial administrative responsibilities, he enjoys high status in his own society. The leader of the Aiser group is not only regarded as a religious leader among the Masai, but he is also respected by tribes such as Wandorobo, Lumbwa, and Bakuafau, who fear him. Labon is a religious leader rather than a government official, and his legitimate influence stems from the certain reliability of his predictions. These leaders prepare God's worship in the name of En-Gai and make their desired prayers a success. This status is passed down from father to son in a family through patrimony. He directs the attacks of numerous warrior communities and thereby implements an economic program to safeguard the ethnic people from external invasions. The people of the aforementioned Sweetness kindred are not required to participate in the real fight; instead, he alone casts magic for the success and triumph of the attack in the war, develops a magical strategy, and grants power to the warriors.

The magician also has power over the successful magical treatments. This causes sickness in humans and animals. It is caused by, and it's incredible ability to heal wounds and prevent infections is worth examining. Its diet consists solely of goat liver, milk, and honey because it is believed that other foods will deplete the groom's strength, power, and other qualities. When there is a severe drought or no rain for an extended length of time, rain-related intellectuals are called to pray for years. They quickly recite the mantras one by one, which requires them to settle in a large secret location.

## 2. Gond

Gond is Madhya Pradesh most important tribe, having historically inhabited in the area known as Gondwan. It was an independent tribe with its own kingdom and 52 forts, 14 of which were located in Central India. Its dominion lasted for generations, until the Mughal and Maratha kings assaulted them, took over their country, and forced them to seek refuge in impenetrable jungles and hilly locations. Madhya Pradesh is home to almost 50% of the overall Gond population.

**Habitat** - The Gond tribe's current habitat is the plateau region of Madhya Pradesh (which includes the districts of Chhindwara, Betul, Seoni, and Mandla), the southern inhospitable portions of the Chhattisgarh plain, the districts of Bastar, Chhattisgarh, Godavari, and Wainganga. Apart from the steep parts of the rivers, Balaghat is located in Bilaspur, Durg, Raigarh, and Raisen districts. Their maximum concentration is found in Madhya Pradesh's intermediate hills and forested plateaus, as well as the Satpura Mountains' eastern and southern inaccessible parts. This is their home. It is located between 17°46' and 23°22' north latitude, and 80°15' and 82°15' east longitude.

**Conditions related to Environment** - It is the home of Gonds. It's fully hilly and forest-covered. This region's soil is red, red-brown, rocky, and sandy in certain parts, producing coarse grains, but shaggy dirt in the low plains is brown-black in color. It produces both paddy and wheat.

The normal altitude of this region is 700 to 800 meters; however the Abujhmar Mountains are above 1,000 meters tall. River plains range in height from 250 to 300 meters.

The climate in this region is cold and humid. Summers are warm, but winters are slightly colder. The yearly temperature ranges from 15°C to 30°C, with an average rainfall of 125 to 150 cm. Stays until. As a result, the majority of the region is covered with dense, lush green woods with a variety of species. The forest's primary trees include seven teak, palas, haldu, shisham, hurd-baheda, tendu, mahua, safflower, and bamboo. The principal creatures found in the forests are kangal buffalo, leopard, wild dog, nilgai, sambar, bear, wolf, deer, and a variety of birds, monkeys, green pigeons, and peacocks.

The Gonds' way of life is greatly influenced by their surroundings, plants, and animals. When kept in seclusion, they are backward but honest and simple-minded, generous, fearless, smart, and candid. They are not lazy, but circumstances have rendered them inert. Wild tuberous fruits are collected from forests, several varieties of baskets are utilized for home construction, and the juice of mahua, palm, dates, and other plants is used to make spirits. When iron is discovered in mountainous locations, it is melted and used to produce basic tools.

The term 'God' has been used to refer to numerous tribes that live in the hilly and plateau areas of Madhya Pradesh's south-east region. The name 'God' means 'cow murderer' and 'cow meat eater', hence they identify as Gonds. They call themselves Koi (Koi) and Koitur (Koitur).

Rijley considers this tribe to be linked to the Dravidian group, although Hayden, Venkatacharya, and Dastan consider it pre-Dravidian. Majumdar thinks them to be of mixed blood, the result of the Rajputs' changing lineage. Dr. Guha believes they are linked to the Proto-Australoid species, which is culturally associated with the Kolorian group because their language is the Dravid family's original form (Tamil and Kannada). It is thought that these people once lived in Southern India, but due to difficulties, they split into two groups and travelled north.

They initially arrived in Chandrapur district via the Godavari River, and then continued to the confluence of the Indravati River. From here, the group was divided into two parts: one down the Indravati in Bastar district and the other along the Wainganga towards the Satpura Mountains.

**Body Structure** – Gond people have black and dark skin. Their physique is well-shaped, yet some of its portions are unattractive. The hair is thick, dark, knotted, and curly; the head is round; the face is oval; the eyes are black; the nose is flat; the lips are thick; the mouth is broad; the nostrils are wide; the beard and moustache have less hair; and the height is 165 cms. This happens. Gond women are shorter than men, but have a well-built and gorgeous body, a darker complexion, longer hair, fuller lips, and black eyes.

**Settlements and Houses** - In general, the Gonds consider two factors while building dwellings and settlements: a favorable geographical location and the availability of water. These

are constructed on plateaus, plains, hill slopes, and low plains where natural protection exists. Water supplies should be located near their fields. In a hamlet, closeness to trees is more significant since it allows people to get wood, tubers, roots, fruits, and go hunting.

Before deciding on a location for the community, worship and animal sacrifices are performed. The Panchayat and the village priest jointly choose the location. The community of Tola has up to 50 cottages. There is some empty area between the clusters. A road running east-west connects the hamlets. With this assistance, the hamlet is positioned in the shape of a line on one side. The deities are located in the centre of the village. This involves building a high platform and accommodating guests. Some flags are planted near the eastern edge of the village as tributes to the spirits of the deceased. Beyond this, there is a cremation ground and a Mata temple made of bricks.

The temple is typically built in the shade of a Mahua or Seja tree. There are also 'Youth Homes' in suitable locations. In large settlements, a large residence known as 'Kos Gontul' or 'Bank Gontul' was built for the stay of state personnel. The village has an abundance of trees such as mango, jamun, and peepal.

When a location for a settlement is picked, the first structure created is a house. If it is successful experimentally, with no hurdles and a good first crop, the entire village will be settled, with the village head's house, guest house, youth house, and Mata's temple being the first to be built.

Villages are often small, with 15-20 huts, such as those of the Pahari MariyaGonds. Only local resources are used to construct village dwellings. Wood, bamboo tiles, grass, leaves, and mud are used to build dwellings and shelters. The huts are rectangular. The walls are built of grass, straw, and bamboo tiles, although they are not particularly robust. The plains' walls are mud-coated. Both sides of the walls are covered with a sloping thatch made of grass, leaves, and twigs. The huts are built in two parallel rows, separated by a 5 to 10 meter wide roadway.

The cottages or dwellings are small and have only one door. It lacks windows and other features. There is a high raised platform outside the room. The outer walls feature carvings of humans and animals. A hut consists of a bedroom, a room, a kitchen, and a pig pen.

There is another hut behind the home, although its door faces the house rather than the village. This is where menstruation women live during their period. During this time, she neither sees nor touches anyone. The hut is fashioned out of castor leaves.

All of the Gonds' huts are built around the courtyard. New shelters are built following the harvest, while old huts are refurbished in May.

The residences of Gonds include no unusual objects. There are implements for cooking and filling water, a mortar for crushing grains, soup bowls, and laying mats. A stone mill for

grinding grains, clay pots for keeping water, a hat made of grass and leaves for weather protection, a few small stools for sitting, a mantra cot, and a bamboo mat or sticks for sleeping are used and brought. Both leaves are mostly utilized for food and drink. Cheap kitchenware made of aluminum and zinc is now often used.

**Food** – Gonds rely more on the food options provided by their surroundings. Their primary food is Kodo and Kutki coarse grains, which are boiled in water and consumed in the form of broth, rabri, or porridge three times per day in the morning, midday, and evening. Rice is liked at night. Kodo and Kutki are sometimes served with vegetables and lentils. Roti (Godala) is produced using Koda flour. Fresh fruits including Mahua, Tango, and Char are also consumed. Mango, blackberry, custard apple, and gooseberry, as well as a variety of roots and tubers, are eaten. The bread is coated with oil. The major vegetables include pumpkin, cucumber, gramme leaves, yam, tamarind, and mango. Bamboo shoots, mushrooms, onions, garlic, and chilli are also utilized. Rice, boiled pulses, and spices are commonly utilized at festivals and feasts. Their favorite foods are tuber roots and red tips. Hunted meat from pigs, cows, goats, ducks, cats, dogs, deer, crocodiles, snakes, pigeons, and other animals is widely consumed in the plains. These folks also consume flesh from rats, iguanas, and squirrels. Fish are eaten where they are found. These folks consume tubers, roots, animals, and birds.

Alcoholism is more common among them. Alcohol is consumed, particularly at weddings and festivities. Mandia from Mahua flowers, Toddy from palm and date juice and Longa liquor from rice are all increasingly popular. There is also a widespread custom of consuming ganja, bhang, tobacco, betel leaf, and betel nut. Tobacco is smoked using a pipe made of clay or leaves. Cow, buffalo, and goat milk are also consumed. Honey collected from woodlands is also used.

**Clothes and Ornaments** - In the beginning the Gond people either remained completely naked or covered their bodies with leaves. Now they have started using clothes but the clothes are in less quantity. Mostly men cover their private parts and thighs with loincloth. Sometimes a scarf type cloth is also tied on the head. Some people wrap their waistcoat separately to cover their stomach and waist. Women wear dhoti which covers the upper and lower parts of the body. She doesn't wear a blouse. The breasts remain empty. Boys up to 7-8 years of age remain naked and girls of 5-6 years of age wear loincloths. To protect from rain, raincoat and hat are also used, which are made of leaves and bamboo slats. Woolen blankets are used to cover the body in winter.

They paint their bodies with ashes and pigments. Feathers from various animals and ducks are worn on the head. Men have longer hair. The head is likewise embellished with bull horns. Men wear a garland of white or red pearls around their necks, earrings in their ears, and combed their hair. Women get tattoos on their faces, thighs, and arms. They place flowers in the synthetic hair and always attach horn combs to it. A belt with tiny brass bells was wrapped around the waist.

Yes, earrings are worn on the ear. Glass bracelets or silver gloves are worn on the hands. During festivals or celebrations, men and women adorn their bodies with natural things. Dancers have special types of costumes. Their main musical instruments are drums, drums, and a flute.

**Physical Culture** - The Gonds' ancient occupation was hunting and fishing, but due to the ban on hunting animals, hunting is now done secretly. Previously, leopards, wild buffalo, deer, and birds were mostly hunted; now, deer, rabbits, and wild buffalo are mostly hunted. Generally, poisoned arrows are used for hunting; only for rabbits, nets, and snares are used. Gonds have complete knowledge of the different forms and habits of wild animals and birds, so they get complete success.

Many techniques are employed to capture other huge wild animals. A bamboo circle is drawn around the fields, with the main gate at one end and a short walkway in front of which a long hole is dug and covered with twigs, leaves, and grass, and then sand is poured on top. When an animal enters the field at night, the owner yells for help, which scares the animal and causes it to go towards the narrow road and fall into the pit there. Monkeys and rats are also killed. Fishermen typically catch fish in ponds and rivers using baskets, nets, and bamboos. Fishing is done individually and collectively by all the adults. Many times, the water in rivers is poisoned, causing the fish to perish and being removed by women.

Wild tuberous fruits, knotty vegetables, herbs, honey, flowers and leaves, sycamore, Mahua, Semal cotton, Chironji, Kachnar, Amaltas, Harsingar, dates, palm fruits, lac, tamarind, blackberries, and sago come from forests. It is collected and sold in nearby marketplaces. They are also eaten. Animal skins are also gathered from the jungle. Gonds also raise cattle, buffaloes, and goats for milk, bulls for draft, and pigs, ducks, and pigeons for meat.

The majority of Gonds now engage in farming, known as shifting agriculture. This form of farming involves cutting and burning trees or bushes, then cultivating them for 2-3 years before preparing additional fields. This sort of agriculture is known as dippa or parka. Paraka agriculture cultivates trees, whilst Dippa agriculture cultivates bushes. This method of agriculture involves digging with a shovel to spread seeds. After the seeds have been sown, animals are sacrificed to the forest gods and goddesses to ensure a fruitful crop.

Penda agriculture refers to the practice of cultivating hill slopes using terraced fields. It is typically done in Bastar. The fields are sown without plugging. After harvesting two to four harvests, the fields are left open, and when weeds return, they are burned. The soil is preserved by constructing embankments of lades or mudstones near the slope's base.

Shifting agriculture is still used in some tribal areas of Mandla's Vaigachak, Abujhmad Surguja of Bastar, Bilaspur, and Raigarh. Farming methods are outdated. Their sole tools are iron hoes and axes. Production is limited due to a shortage of fertiliser, high-quality seeds, and irrigation.

The Gond people plant three crops: Chhota Kosra, Bada Kosra, and Os Kosra. Crops for Chhota Kosra, Kutki, Sama, Kodon, Madiya, and Sika are sown in May-June and harvested in September. In BadaKosra, Kodon, Kutki, Bajra, Urd, Arhar, Bean, Kag, and other crops are planted in June-July and harvested in December. Os Kosra's primary crops are moong, horse gramme, and coarse grains, which are cultivated in August-September and harvested in December/January.

Farming is typically done near homes. Men and women work together in farming; Men and youngsters labor together to thresh and clean grain. Women help to prepare the fields. Farming is also done through manipulation. The sequence is as follows: coarse grains, maize, pulses, and beans. Enclosures on raised land near the house are used to cultivate crops such as tobacco, cucumber, gramme, and pumpkin, which are fertilized with animal excrement and excreta.

Aside from farming, Gonds work as laborers in building, wood cutting, cow herding, potters, carpenters, blacksmiths, hoisting palanquins, and other occupations. Some Gaud women create baskets and ropes. She also conducts other household chores.

**Social Arrangement** – Gond people are separated into numerous tiny groupings. Groups are often classified according to the name of the region where the Gond people dwell. In the Bastar district, Hare is known as Muria or Maria. Muria is separated into three areas: Jagdalpur, Muria, Jhoria, Muria, and Ghotul Muria. The Muria people are divided into two sub-groups: Hill Marias and Bisan Horn Marias. Mandla district has four sub-divisions of Gonds: Dev Gond, Suryavanshi Raj Gond, Suryavanshi Dev Gadhiya Gond, and Ravana Vanshi Gond. The latter types of Gonds are at the bottom of the social hierarchy, whereas the other three consider themselves to be on par with the Kshatriya. Jharkhand is divided into three sub-divisions: Rajgond, which is for the top class; Dhurgond, which is for farmers or the general category; and Kamiya, which is for labourers. Rajgonds include Malgujars, Patels, village landowners, and the village headman; The farmer class farms by renting land from the first class, while the third class consists of workers such as Ojha, Baiga, Guniya, and Lohar, who service various classes.

**Gotra (Clan)** - The majority of Gonds are clan-based groupings that practice exogamy, which means they marry outside of their established social group. The Gonds' gotras are named after animals and trees. Tumarihavika gotra is derived from the Tendu tree, Tikam gotra from the Tikam tree, Nagvan from the snake, Kitimarvi from the goat, and Padimarvi from the pig. Gotra is determined by the father's Gotra. All members of a Gotra are thought to be related, and marrying is prohibited. In most cases, people from the same clan live together in villages. The Gonds follow both joint and individual family customs.

Bhai-band is the name given to the joint family's brother. A brotherhood is made up of a husband and wife, their minor boys and girls, married sons, and their spouses and children. All of these factors contribute to the formation of a social and economic unit. All members labor



together on projects such as agriculture, hunting, and home construction. Their leader's name is Sardar. All actions are carried out per his instructions, and he is granted family rights. The consent of this family is regarded shared property. Personal family consists of the husband, wife, and their minor sons and daughters. The family is patriarchal. The distribution of labor between men and women is evident. Women perform household tasks (cleaning, cooking, and caring for animals), assist with agricultural work, and collect wood and other goods from forests. They collect taxes. Men engage in activities such as farming, hunting, and trading.

**Marriage** – The marriage system is well developed among the Gonds. Child marriage is not a burden. Marriage is usually not performed until the female is menstruation and has engaged in sexual activity. A boy marries between the ages of 24 and 25 years. Adult males and girls choose their own life partners. Monogamy is widely practiced; however rich Gonds may have more than one wife. Polygamy is a practice used to overcome infertility and gain greater sexual power, as well as to exhibit prosperity and social supremacy.

The Gonds believe that cross-cousin marriage is the finest option. Such a marriage is known as 'milk-return'. If this does not happen, the offending party must pay compensation, known as Doodh Bunda. The second type of marriage is mutual property, in which girls dissolve turmeric and pour it over the guy of their choice in front of several people, and then the boy eats it and feeds the community, making the marriage legitimate. The third marriage ritual is to curse the wife via service (Lamsena, Lamna), in which the boy works for 5 years in the girl's father's house doing farming and household chores. Following this, they get married. Sometimes the lad and his pals steal the girl from her village and pour turmeric water on her, causing her to marry him. Later, more rites are done on the boy's doorstep. In another technique, the girl visits the house of her preferred boy, especially if she falls pregnant with him. Thus, there is so much diversity and flexibility in the Gonds' weddings that it is frequently difficult to determine which marriage is regular and which is irregular and rejected. Following the sexual rites, all forms of marriage ceremonies are done, and all types of sexual interactions between men and women are legalized through a feast for the community. Marriage rites include walking around the pillar and applying turmeric to both boys and girls. Water is spilt, people dance and sing, and oil is applied. Drinking is the most important thing.

Divorces can be filed by any spouse, but they are uncommon in general. Divorce is most commonly caused by bad character, quarrelsomeness, sexual diseases, and other factors. If the wife files for divorce before the village panchayat, the new husband must pay appropriate compensation to her former spouse and host a feast for the community. After one year, the widow can remarry. In general, the widowed wife of the elder brother marries the younger brother, but if the widow prefers another guy, she applies turmeric and oil to him and the man forces her to wear a garland, ring, or bangles, but that man is not permitted to present a feast to the community. It is necessary to give.

Rural institutions consist of a Panchayat in each village or a Panchayat in multiple villages, led by Mandal Patel or Mukkadam. The Panchayat's function is to maintain village amenities and settle problems and disagreements. Other Panchayat officials include the head priest (Bhuma-Gait), caste priest (Vadai), and Guniya or Vaidya (Doctors). A priest's primary responsibility is to carry out religious rituals. Guniya uses herbs to treat villagers and exorcises to cure ghost-related maladies. There are three primary communal institutions in Gond villages: Bara, Guri, and Ghotul.

Bara is the village head's residence, and it is located in the village centre. The village's problems are discussed here, and government officials and travellers stay here as well. Guri is a community gathering spot in the hamlet where entertainment activities, Panchayat meetings, and government officials visit and stay.

**Ghotul** - Among the Gond people, it is a youth dormitory where unmarried young men and women from the hamlet gather at night for entertainment. These Ghotuls hold social relevance. As Dr. Shyamcharan Dubey puts it "In these homes, young men and women get to know and become closer to each other on a social level, gain experience of sexual relationships and receive education about future married life." Dr. Majumdar believes that these institutes provide theoretical and practical Kamshastra instruction to Gond young men and women in accordance with traditional policy, so that before entering matrimony, they are totally conversant with the art of Kama and can enjoy life to the utmost.

Through this organization, young men and women form pairs with each other. In reality, entry of married men this organization brings together young men and women in partnerships. In truth, married men and women are not permitted to enter this facility save for recreational purposes. Attracted creates its own atmosphere in which and women is completely prohibited in this establishment only for fun, enjoyment and frolic. Attracted has its own environment in which.

The formation of Ghotul follows a regular process. Diwan, Sardar, and Mukhwan are regarded the institution's key workers, making decisions on disputes and upholding discipline. The young males are known as Chelik, and the girls as Motiyarin. These two are Ghotul's soul. The Motiya women massage the Cheliks' hands, feet, and bodies, apply oil, comb their hair, make mattresses for them, and then go to a separate room with them for sexual activity in the morning. When it is finished, they return to their various homes. Chelik produces ghotul. It's embellished with various pictures and forms. They enjoy dancing, singing, and having fun with their Motiyarins. The pairs of Chelik and Motiarin are usually permanent, but if there is no harmony between them, they shift. The Belliks build exquisite combs for the Motiyarins and give them garlands of cowries, coral, and other items to show their respect and sexual satisfaction. Both must follow Botul's regulations or face financial and bodily consequences. Motiyarni will have to leave Ghotul after her marriage. Marriage is normally performed with the person of one's choice, but it is not required.

The Gonds practise both cremation and burial of the deceased, with minors and unmarried individuals being burned. After ten days, the community is treated to a feast, and the job of restoring peace to the deceased's soul is accomplished by worship of the Bade Dev.

**Religion-** The Gonds are scared of religion and magic. These people believe in supernatural beings and acknowledge the presence of spirits. They think that situations like lack of rain, epidemic, floods, increase in the dread of predatory animals, lack of children, or lack of hunting or fishing, etc. are caused by the dissatisfaction of the spirits, so to placate them. Guniya goat sacrifices a pig or a fowl serves liquor and conducts puja. The Gonds' religious practice is based on animism, or magical ceremonies.

After a good harvest, Dulhadev, Mothibhavani, and Chitkauri Devi are worshipped before the rains to protect the stored crop from insects. Badadev (also known as Bhaira-Pen in Bastar and WadiyaSah in Surguja district) is consulted for all security issues. Aside from that, Narayan Dev is revered for his protection of farms, barns, gardens, cows, and homes. Other gods and goddesses who are adored include Holoradev, Bhagesura-Gar Khermai, Alohadev, Bhavani Mata, Ratamai, and Metobhai. Gonds are typically superstitious and believe in witchcraft. Modern civilization has had a great impact on the Gonds' social and economic lives, and they have begun to dress similarly to their civilized neighbors; there has also been some progress in farming methods.

### 11.3.4. Mountainous Regions

This region is dispersed throughout the world's mountainous regions. It runs from the equator to the poles across all continents. The climate in mountainous places varies with height, just as it does as one move from the equator to the poles. Coldness gradually increases with altitude in hot locations due to the higher altitude of the snow line, and vegetation grows there depending on the amount of rainfall and its seasonal distribution, such as in the lower Himalayas. Due to heavy rainfall on the slopes, evergreen forests are located on the intermediate slopes, temperate forests above 2,500 meters altitude, and angled woods are found here to gain relief from the heat of the hot plains.

Tourists visit hill tourist centers at elevations of 3,000 meters, which are only found at lower altitudes due to the cold environment. Climate and mixed and conical woods are present.

The impact of mountainous environments on human life is evident. A full overview of the Gujjar people of the Himalayan region is provided.

## 1. Gujjar

Gujjar is the predominant caste in Jammu and Kashmir. People from this caste identify as descendants of the ancient Gujjar caste. They represent a Central Asian pastoralist lineage. According to numerous influences, the Gujjars are descended from the people who lived between

the Black Sea and the Caspian Sea, south of the Caucasus Mountains. According to popular belief, these people live in Rajouri, Poonch, Reasi, and Jammu. During the famine (Satsia) in Rajasthan and Gujarat, they moved to Jammu & Kashmir.

**Environmental Situations** - Gujjars' living location is hilly, and they move between high and low hills. The climate in the Himalayas varies. These areas are hilly throughout, with running rivers and snowy peaks all around. There are many peaks in this region that are higher than 7,500 meters. Due to the hot heat of the Jammu region, it is more commonly found in Ladakh and Jammu; available monthly. The temperature in January is 14°C in Leh, 14°C in Jammu, and below freezing in Kargil and Leh. Due to Dras in January, practically all mountain ranges are blanketed with snow, resulting in low temperatures and strong frigid winds.

The natural environment of Jammu and Kashmir has a significant impact on the lives of the Gujjar people, who migrate seasonally for economic reasons. Precipitation comes in the form of snow and water in summer, but is more abundant in winter due to western storms originating over the Mediterranean Sea. However, the winter monsoons weaken by the time they arrive.

**Food-** Their lives revolves around animals. As a result, humans depend on them for food as well. Their diet consists of milk, curd, cheese, ghee, and meat. Rice, wheat, maize, potato, barley, gramme, peas, and other foods are also consumed in some quantities. Here, spirits is prepared for special events.

**Settlement and Home-** Gujjars are nomadic livestock herders. They spend most of their time searching for food for their animals. Because there is a scarcity of fodder owing to snowfall in the winter, they migrate to lower valleys in search of better pastures, while in the summer they migrate to higher areas, resulting in a permanent reduction in population. Their villages are small, and their homes are primarily constructed of wood and grass. Houses are built on mountain slopes. They build temporary shelters while living with their animals.

**Economy** - The primary activity of the Gujjar people is animal husbandry. Their animal husbandry is nomadic, meaning they move according to the seasons. With the winter, when the high mountain ranges and meadows are blanketed with snow, the hills of Jammu division provide ideal grazing conditions for animals. When it gets hot in the south, they go with their livestock to the high mountains of the north. They have three types of pastures: winter, summer, and intermediate pastures.

These folks raise sheep, goats, yaks, deer, and cows. These people maintain dogs to defend themselves from wild predators. Their primary responsibilities include woodland hunting, agricultural chores such as ploughing, herb gathering, and musk collection. Women fetch wood for cooking, spin, and manufacture woolen garments.

Animal products include milk, meat, wool, skin, and hair. These individuals also sell animals.

**Social Life** - Gujjar people call their families as (i) Dera (family), (ii) Grandfather and grandson. (iii) Divided into (Vansha) and (iii) Gotra. ,

A person's separate household is known as his camp. It comprises of five or six members. In the camp, women undertake home work while males do outdoor work. When many camps meet, a clan forms. Here, pastures are dispersed according on bloodline. A lineage consists of about 200 individuals. Each tribe selects a leader to oversee social, economic, and political activities. Gujjars are separated into various gotras.

Caravans are groups of Gujjar families who wander according to the seasons. Marriage Ceremony - Gujjar marriage ceremonies have an impact on their lives and government (Maria). Betrothal occurs in the early months of the year. The style is complete. Marriage is completed after five years. Marriage is normally performed during the summer months in a simple marriage ceremony; the groom's father determines the amount of dowry in the form of animals, jewels, money, and other property. Marriages are based on conventions and traditions.

According to Muslim tradition, the dead body is buried. When someone dies while travelling, he gets buried along the road. A grave is prepared for the deceased, and a mound of stones is gathered for identification. Every year throughout his stay, the deceased is remembered at that location by burning a lamp.

**Religion** – Gujjars follow Islam. They believe in the essential principles of Islam, and we should follow them. These folks perform Islamic-based ceremonies and rituals. Gujjars' religious activities and festivals are important. During Ramadan, these folks pray five times a day and fast. The influence of migration is abundantly seen in their festivals. Aside from that, Eid-ul-Fitr, Idul Juha, Navroz, and Vaisakhi are observed. After celebrating the Vaisakhi celebration, moving higher becomes a priority.

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## **11.4 SUMMARY**

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Man is a geographical factor, and the activities and reactions of the natural and cultural environments revolve around him. Humans adjust and adapt to their surroundings, including both natural and cultural environments.

For regional studies, the entire world is split into numerous divisions based on some common traits. Such a wide area is commonly referred to as an environmental region. The concept of an environmental region originated around 1905 AD.

The climate in the tropical region is hot and unpleasant. The average annual temperature is 27 degrees Celsius, the relative humidity is 80 percent, and the average annual rainfall exceeds

200 centimeters. Rainfall here is mild and occurs on a daily basis. There is no winter season. Because of the favorable climatic conditions, high temperatures, and abundant rainfall, lush evergreen vegetation can be found here. The principal trees in these forests include mahogany, gutta-percha, bamboo, birch, cinchona, ebony, sandalwood, and rubber. Elephants, rhinoceros, wild boar, giraffes, and hippopotamus are among the most prominent creatures. There are lions, leopards, crocodiles, insects, mosquitoes, monkeys, toxic flies, fish, and so on.

Because the equatorial regions are behind in terms of economic development, shifting cultivation is practiced alongside hunting, and plantation agriculture has been introduced in recent years. Is Copper is obtained by mining in the Congo Basin, mineral oil in the Amazon Basin and Indonesia, and tin in Malaysia. The states have a low population density. The climate of this tropical desert is varied. The summer temperature ranges from 35° to 40° centigrade. In the winter, temperatures might reach 10 degrees Celsius. The annual and daily temperature variations are large, and the average rainfall is less than 25 centimeters. The desert climate is characterized by high temperatures and little rainfall. Date palm, acacia, palm, khejri, shehud, hawthorn, and thorny bushes are the primary vegetation in these areas.

The creatures include reindeer, wolves, rabbits, lizards, rats, snakes, ants, and insects. Camels, horses, sheep, and goats are domesticated animals.

Jowar and millet are shown here because there has been less rainfall. Wheat, cotton, oilseeds, and pulses are farmed in areas with irrigation infrastructure. Mineral resources have not been exploited extensively. Mineral oil, gold, iron ore, copper, and diamond are the most common minerals here. There has been little development in transportation. Due to unfavorable conditions, the population is quite low. These locations lag far behind industrially.

In monsoon regions, summer temperatures exceed 30° Celsius, while winter temperatures drop to 10° Celsius. Temperatures vary greatly on a daily and annual basis. Winter is usually dry. During the summer, monsoon winds bring rain. Summer brings 85 percent of the rainfall in this area. The average yearly rainfall is between 100 and 150 centimeters. Mahogany, cedar, logwood, teak, rosewood, sandalwood and neem etc; Animals include deer, pigs, and camels. Cows, bulls, buffaloes, sheep, and goats are among the most common livestock raised.

The monsoon region is an agricultural area. These lands are abundant in wheat, rice, barley, cotton, sugarcane, oilseeds, pulses, tobacco, tea, coffee, rubber, and other commodities. Vegetables and fruits are grown in great quantities. Industrial growth is accelerating in these mineral-rich regions. Transport facilities are expanding. These states are particularly densely populated.

The climate of temperate grassland is continental, with severe temperature variations. The summer temperature is 26°C, and the winter temperature ranges from freezing to below. The average annual rainfall is 50 cm, which typically occurs throughout the year.

Because of the abundance of short and soft grass in these places, milch animals such as cows, buffaloes, sheep, and goats are raised in huge numbers. The nomadic people of Central Europe are known as Khirgi. Wheat is mostly grown on the plains of Steppe, Pampas, Prairies, and Downs. The primary occupations of the people of this state are agriculture and animal husbandry. The Prairies region of North America has become a well-known agricultural and industrial hub. Due to sophisticated modes of transportation and industrialization, dense population is found here.

The Mediterranean region is regarded as good for both economic activity and health. The average summer temperature is 27°C, while the winter temperature is 10°C. Evergreen vegetation is available. Wheat, rice, barley, maize, and a variety of fruits are grown here, including mango, lemon, orange, apple, pear, and mulberry. Animal husbandry is also practiced here.

Here, copper, iron, coal, mercury, marble, gold, and mineral oil are extracted. Fruit-based cottage industries have grown significantly. Some large-scale enterprises have developed as a result of advanced transportation, a dense population, affluence, and other factors.

The arctic region's environment is harsh, with winter temperatures below freezing and typical summer temperatures of 5 degrees Celsius. During the summer, flowering plants and grasses flourish. Animals found include white bears, polar bears, wolves, rabbits, and reindeer, as well as fish such as walruses and seals. During the summer, you can also see colorful birds, ducks, and storks.

There is virtually no agriculture here. The life of primitive castes such as Eskimo, Yakut, and Chukti is difficult. In the present period, these castes' traditional practices are altering. The population here is quite small.

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## ***11.5 GLOSSARY***

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**Adaptation:** The action or process by which an organism adapts itself to its environment.

**Igloo:** A semicircular and dome-shaped house of the Eskimos, who live in the tundra regions of Northern Canada and Greenland, made of pieces of ice.

**Range of Temperature:** The difference between the highest and lowest temperatures of a place. Temperature variation occurs daily, monthly or annually.

**Prairies:** Flat, treeless, temperate grasslands in North America that extend from the Rocky Mountains in the west to Lake Michigan in the east. Temperate grassland areas similar to prairies are also found in other continents, which are called Steppes in Eurasia, Pampas in South America, Velds in Africa and Downs in Australia. The length of grass in these areas ranges from 60 centimeters to 2.4 meters.

**Basin:** The area where flowing water reaches a river. It is called river basin or drainage basin. Like Congo Basin, Amazon Basin etc.

**Oasis:** A lush green area around a body of water located in the middle of a vast desert, which is possible only due to the absence of water on vegetation-less desert land. Human settlements are found around it.

**Selva:** Portuguese term for the equatorial rain forests of the Amazon Basin in South America.

**Transition Zone:** The area or belt between two adjacent natural or environmental regions where the conditions of both regions meet.

**Freezing Point:** The temperature at which a liquid changes into a solid.

**Sirocco:** Hot, dry and sandy wind originating from the Sahara desert and moving in the north direction, which crosses the Mediterranean Sea and enters the coastal countries like Italy, Spain etc. It is a short-term wind that blows suddenly, whose duration is one wind. It is called Khamsin in Egypt, Ghibli in Libya, and etc. called Livik in eastern Spain.

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## ***11.6 ANSWER TO CHECK YOUR PROGRESS***

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1. Which race will you not include among the races of equatorial region?

- (a) Pygmy
- (b) Bushman
- (c) Boro
- (d) Semang

Answer: B

2. Which race will you not include among the races of Tundra Region?

- (a) Eskimo
- (b) Yucagir
- (c) Semang
- (d) Samoids

Answer: C

3. Who among the following are called omnivorous?

- (a) Papuan



- (b) Pygmy
- (c) Boro
- (d) Bushman

Answer: B

4. The houses of which of the following species are called kraal?

- (a) Bushman
- (b) Bedoings
- (c) Masai
- (d) Semang

Answer: C

5. Igloo is the houses of which race?

- (a) Maasai
- (b) Sakai
- (c) Eskimo
- (d) Khirgiz

Answer: D

6. Who uses a boat called Kayak?

- (a) Yucagir
- (b) Samoids
- (c) Eskimo
- (d) Bushman

Answer: C

7. Yurts are the residences of which species?

- (a) Pygmy
- (b) Sakai

(c) Bushman

(d) Khirgiz

Answer: D

8. The pairs of world races and their habitat are given. Tell the wrong pair?

(a) Pigmi- Congo Basin

(b) Bedoins - Arab

(c) Sakai- Siberia

(d) Eskimo- Tundra Region of the North America

Answer: C

9. Gond tribe is the main tribe of which state?

(a) Uttar Pradesh

(b) Rajasthan

(c) Madhya Pradesh

(d) Bihar

Answer: C

Of which tribe dormitory is Ghotul?

(a) Bhutia

(b) Santhal

(c) Bhil

(d) Gond

Answer: D

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## ***11.8 TERMINAL QUESTIONS***

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### **(A) Long Questions**

1. Describe human life in equatorial regions or temperate grasslands. regions or temperate grassland.
2. Examine the effects of environment of equatorial region on man.
3. Explain the relationship between humans and the environment in temperate grasslands.
4. Clarify the relations of man and environment in equatorial regions. 5. Describe the habitat, economy and society of Eskimo or Bushman.
5. Describe habitat, economy and society of Eskimo or Bushman.
6. Describe the economic functions of the hot deserts of the world.
7. Describe human life in the Polar Regions.
8. Describe interaction of man and environment in Polar Regions.
9. Discuss the 'relationship between humans and environment' in the Polar Regions of the world.
10. Describe in detail the economic functions of the temperate grasslands of the world.
11. Describe Pygmy or Masai
12. Describe the environmental conditions in the hot deserts of the world and their effects on human life.
13. Describe environmental conditions and their effects on human life in the equatorial regions in the world.
14. Describe human life in the equatorial region.

15. Explain the impact of geographical environment on the life of Bushmen.
16. Explain the relationship between human life and environment of the Boro community of Amazon Basin.
17. Describe the effect of environment on the people of hot deserts.
18. Describe the impact of the environment on the lifestyle and economic activities of the residents of any one geographical region of the world.
19. Discuss the interactions between humans and the environment in the context of human life in hot deserts.
20. Explain the effect of environment on the habitat, economy and society of any one of the following:
  - (i) Khirgiz, (ii) Bushman.
21. Describe the mode of life and socio-economy of Bushman or Pygmy in relation to natural environment.
22. Mention the socio-economic life of Khirgis.
23. Explain the habitat, economy and social life of the Pygmy people.

### **(B) Short Questions**

1. Describe the food of the Pygmy people.
2. Explain society and behavior of Pygmy.
3. Describe the economy of Semang.
4. Describe the habitat of Bushmen.
5. Describe the dwelling of Masai.
6. Write the characteristic features of Eskimos.
7. Explain the winter hunting of Eskimos.
8. Describe the tools of Eskimo.

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## **UNIT 12 - POPULATION MEANING AND RESOURCES**

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**12.1 OBJECTIVES**

**12.2 INTRODUCTION**

**12.3 POPULATION MEANING AND RESOURCES**

**12.4 SUMMARY**

**12.5 GLOSSARY**

**12.6 ANSWER TO CHECK YOUR PROGRESS**

**12.7 REFERENCES**

**12.8 TERMINAL QUESTIONS**

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### ***12.1 OBJECTIVES***

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- To convey the depth of the meaning of population to the learner.
  - To know the role of world population pattern and factors of population settlement.
  - To know the importance of population resources
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### ***12.2 INTRODUCTION***

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Population is the centre of study of human geography because all activities are conducted by human beings. Because it is human beings who use the natural and cultural environment through their own intelligence and discretion. He, who is considered to be the best creation of the earth, is the supreme user of all natural and human resources. Population is generally understood to mean the number of humans found on earth. The scenario and trends of population are clarified through the nature of humans, number discrimination power, working capacity and its mutual relation with other areas, ratio, age, place of residence, lifestyle, food habits, population growth, caste-wise comparative mixture of population, literacy, population density, occupational pattern, etc. In this scenario, the meaning of population is clarified on the basis of the characteristics of the work done by him, the way of working, the benefits received from that work and contribution to human development, birth-death rate, fertility rate, age structure, etc. Because man is influenced by the elements of his natural and cultural environment and by changing them, he determines the population of a region. And the human powers are estimated from human social organization, political management and cultural development and developmental activities of natural resources.

The meaning of population is clarified on the basis of these characteristics. Apart from this, population resources are estimated from the number of humans living in different parts of the earth, population growth, residence-migration, its physical strength, age group, male-female ratio, economic occupation of the population and stages of development, which is described by the development journey from the origin of man to the present time and the number of humans. If a critical study of population resources is done, then just like natural resources, the distribution of human resources in the world is also uneven. In some parts there is no place for humans to live, in some places there are not even 2 people permanently and in some places even today humans are settled in a deserted state. Due to this inequality, some countries of the world are going through a state of population explosion while some countries are struggling with population

shortage. Most of the Earth is still uninhabited, no human resides there and neither natural nor human possibilities of human habitation exist. Whereas, by the current year 2024, a population of about 8 billion is residing in the world, which is not evenly distributed, in which physical elements (climate, topography, soil and minerals), cultural, social, political, economic and demographic factors mainly affect the population resources.

As a result of which 6.0 percent of the world's population resources reside in areas with a height of less than 200 meters, about 80 percent of the population resides in areas with a height of less than 500 meters, the remaining 20 percent of the population resides at an altitude of 500 meters. If the condition of the hemispheres of the Earth is seen, then 90 percent of the population resources are found in the Northern Hemisphere and the remaining 10 percent of the population resources are found in the Southern Hemisphere.

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### ***12.3 POPULATION MEANING AND RESOURCES***

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#### **12-3-1 Meaning of Population-**

In general terms, population means the number of people living in different parts of the earth, which includes all women, men, children and the old population. Thus, the number of known humans on earth clarifies the meaning of population, which is spread from primitive form to the most developed land area of modern civilization and is the biggest known resource of the earth along with being the best creature on earth. In a defined form, population means a group of more than 30 people at a place at a time, then it is considered human population. In statistical terms, the meaning of population refers to the number of individuals through which all the resources related to human development are analyzed from a human point of view. The determination of population i.e. its structure is determined by the regional pattern of the earth (geomorphology, climate, natural resources, security).

Based on these elements, the population in the known world is determined in different ways in different places. Since human beings have a central place among all living beings, they use natural resources according to their need and convenience. Those plots of land where all kinds of natural possibilities have been found suitable for human life are surrounded by human populations from ancient times to the present time, instead of the areas lacking facilities, because development of human culture is possible only

based on the availability of natural resources, for example, civilizations of ancient river valleys have developed in areas naturally rich in facilities in determining human development and human population.

Population analysis is done especially by studying statistical and numerical aspects. Apart from this, the geographical study of the population mainly includes the number of people in a region, health, male-female ratio, percentage of children, young, old i.e. age group, level of different professions, rural and urban ratio, their education, science, level of technological progress etc. Because the population of a country is the basis on which the real strength and capacity of progress of that nation is estimated. Apart from this, in population study, socioeconomic characteristics of the population include human social organization system, residence, economic production, level of education, occupational status, religious beliefs, rural and urban residence etc.

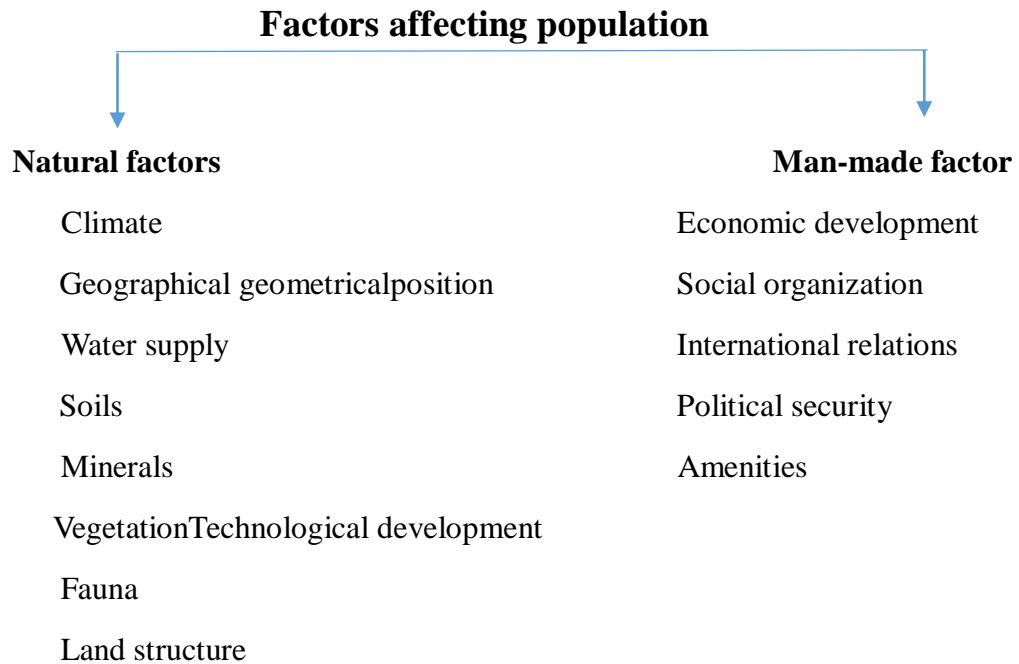
### **12.3.2 Aspects of Population Study**

Since human population is the first parameter of the progress and capability of a nation, seven main aspects of population study (1) Calculation of the number of population living in different parts of the earth, population growth and decline (2) Population density and population distribution (3) Population housing-migration number (4) Functional capacity of population (5) Male-female ratio of population (6) Economic progress made by the population (7) Discovery of new places of population residence are included. Based on these facts, a comprehensive study of the population of a state is done and along with that, remedial measures are taken to solve the future possibilities and problems along with the goals of sustainable development. 12.3.3 Factors Affecting Population Distribution

Population being a dynamic aspect of the earth, has always been changing which has been changing and affected since the time of origin of humans on earth i.e. in the past, present and future, due to which extreme complexity is seen in the population of humans in any part of the earth. Many physical and cultural factors contribute to affecting the population. Among the physical elements, the availability of elements of climate (rainfall, temperature, humidity, precipitation, heat, frost, fog, clouds and hot and cold winds), soil, land texture, water supply, minerals and number of animals etc. and among cultural factors, elements like human economic development level, cultural, religious



equality-inequality, political security-peace, technological development and level of amenities primarily affect the population.



## 1. Natural factors affecting population

**1. Climate-**Climate is the first among the factors affecting the population the most because climate mainly includes two elements water and air, due to which it is the physical element found in the highest quantity in the human body, without which human life cannot be imagined, therefore, the places where these physical elements are in abundance, the human population is more there if the water supply is available in sufficient quantity for drinking water and economic activities, then those places have the highest population density and where there is lack of water and clean air, the human population is less in those places. For example, the most inhabited parts of the world are the regions of monsoon climate and temperate climate, China, India, Japan, Vietnam, Bangladesh Western Europe and the United States of America are the most densely populated countries of the world due to their temperate climate. In the same hot, cold and mountainous regions with extreme climate, population density is found to be less or almost negligible, such as Sahara, Arabia, Kalahari, Atacama, Australia's hot deserts and the snow-covered North and South Polar regions, besides the regions near the Tropic of Cancer where population is sparsely settled due to the predominance of dry climate.

**2. Geographical Geometrical Position-**The effect of the geographical position of a region or country also contributes to the settlement of the human population, whether

that position is geometrical or political, both affect human settlement. About 75 percent of the world's population lives in the coastal areas of oceans and seas. The coastal position provides a conducive climate along with the facilities for fishing and transportation, which have been areas of ease for human health and economic activities. Apart from this, the borders with other countries and international relations also play a special role in the concentration of population. For example, India is the centre of trade and transportation due to its geometrical position in the eastern, western and Middle Eastern countries, due to which the population size in India is increasing day by day.

**3. Minerals-**The development of modern civilization depends on the availability and utility of minerals. Where the condition of minerals is good and proper development of mineral resources can be done, the population is settled more in the form of mining towns and industrial towns, for example, the most densely populated regions of Europe are coal regions, Belgium, Britain, Germany, Russia of western and central Europe have become densely populated countries due to the availability of iron, copper, zinc. The countries at 50 degrees north latitude strengthen the population due to the huge reserves of coal. In the same sequence, mineral areas of the United States of America and China are identified as densely populated regions.

**4. Fauna and Flora-** The development of human civilization is considered to have started from the primitive economy in which man used areas covered with vegetation as a place of residence and hunted animals for food and human settlement was more there. But in the medieval and modern periods, human settlement has been more in those areas of the world where there were more facilities for animal husbandry and the climate was more mild.

**5. Land structure -**In the physical structure, the role of mountains, plateaus, plains, lakes, river valleys and fertile soils also contribute to human settlement. For example, plains are considered to be the best for population settlement as compared to plateau and mountainous regions, but even in plains where the climate is harsh, human settlement is rarely found. For example, in India, the Ganges and coastal plains are the shelters of the largest population by providing favourable conditions for human settlement. The desert regions have been the shelters of the least population. The plain regions, on being prosperous with the availability of agriculture and irrigation water, facilitate economic activities such as industrial development, transport development and development of

residential settlements. Similarly, other regions of the world, the plain regions of China, the lake regions of America, the coastal regions of Japan, and the Danube and Rhine plains of Europe are examples of dense populations.

**6. Soil** -Due to the natural ability to produce seeds in the soil, it is the only basis of food for all living beings. Life of living beings is not possible in the absence of food. Therefore, only when the soil is fertile or has all the qualities, good crops, vegetation and grasses are produced, due to which animals along with humans can easily get food. The fertility of the soil has become the centre of human settlement in the present times. For example, more population pressure is found due to the river valleys of alluvial soil in China, India, and Europe.

## **2. Cultural factors affecting population**

**1. Economic development-** The impact of the economic progress of a region also holds special importance in determining human population. Economic development determines the economic and living standards of citizens. When economic access is strong, even in resource-deficient areas, essential commodities are supplied from any place through import. Especially in areas with industrial units, such human settlements take place which are based on secondary and tertiary jobs instead of primary jobs. Great Britain, Germany, and Switzerland are such countries which import food items from other places and in return feed their dense population by exporting manufactured goods.

**2. Social organization-**In the localization of population, the density and distribution of population are also determined based on social customs, religious beliefs and social harmony. People of one caste and one religion mostly want to live in one place; they consider themselves safe in such an environment and do not want to live in other places, for example, even after the First World War, the residents of China did not leave the graves of their ancestors and settled there. Many times, rapid population growth has been observed due to religious blindness, for example, due to not adopting family planning in the Muslim religion, the world's highest growth is seen in Muslim countries.

**3. Political security-** Political factors mainly include border security, peace and friendly relations with other countries and peace in home areas. If there is stability due to such factors then the population density and growth are more in those countries. If there is unrest in the nation and states then the citizens of those countries always live in fear of

insecurity and migrate from those places. Secondly, class discrimination also determines the level of the population like in Australia, due to the white policy, even today the population is less than in other countries of the world because they allow only white people to reside here.

**4. Amenities-**The history of human settlement and residence proves that since ancient times, human settlement has been more in those places where there is an abundance or possibility of physical and cultural amenities for human life. Due to the availability of amenities, human settlement has been more in river valleys since ancient times where there is fertile land for farming, drinking and irrigation water, fear-free environment, easy access from one place to another, basic elements of living i.e. food, clothing and housing facilities have been available. But in the current scenario, apart from basic amenities, population density is increasing in those places where facilities of health, medicine, education, and means of employment, transport and communication have been more.

For example, in the major cities of the world's developing and developed countries, due to the availability of basic amenities, a dense population has settled. For example, in India, Delhi, Mumbai, Chennai, Kolkata and modern Greater Noida and state capitals have the highest population pressure due to the availability of current amenities because in the 21st century, facilities are being developed even in impossible places through human efforts and are being made human-friendly. Apart from this, in cities like Tokyo, Seoul, Mexico, New York, Jakarta, Sao Paulo, Shanghai, Moscow, Cairo, Buenos Aires, Beijing and Karachi, population pressure has been high due to amenities.

**5. Technological development-**Technological development, especially the advancement of communication systems and science, is also creating favourable conditions for human settlement at present. For example, in harsh climate areas, man-made facilities are being developed from artificial environments with the help of artificial resources. For example, in hot areas, the use of fans, coolers air-conditioning equipment, the use of refrigerators is making even adverse conditions man-made. For example, after industrial development in Europe, the population density was more than 1000 persons. Due to technological development, at present, whether it is the regions with negative and positive temperatures of more than 50 degrees or the settlements in earthquake-prone areas, areas of dense population are being created with human settlements by using

technology. The gradual increase in the means of power has worked to change the scenario of the population.

**6. International relations-**In present times, due to globalization and specialization, the importance of political relations is increasing, due to which the population pressure is also increasing in the border areas. Where there are no cordial relations between the two nations, the distribution of population remains at a low level.

### **12.3.4 Human Population Resource**

Human resource is a concept which looks at the population as capital or asset instead of a liability to the economy. It transforms into a human resource due to the intelligence, work capacity and skill of a human being. Human resource is measured by the level of human development i.e. human resource wealth, health and access to resources. A human being is a resource in itself which can discover, consume and manage various natural resources. He uses the resources for economic development. He transforms the resources from their actual form with the help of technology and makes them useful for himself, due to which he is termed as the best resource.

At present, the richness of human resource is such that by the year 2024, more than 8 billion people are living in the world, whose number is estimated to increase gradually. Most of the world's population is settled according to regional diversity, which is spread unevenly. The creative power of man in human resource development works to strengthen the expansion of human capital in an area, nation under an organization, through which the resourcefulness of the nation is ensured through human resource development and employment policies. According to Adam Smith, "The capabilities of individuals depend on the use of the education they have received, human resource development is largely a means of controlling the environment that promotes the process of training and learning and is a systematic series of humans".

Human resources is an organic structure which works on the principle of individual development in the form of an organization. Nadler 1984 "In the context of a nation, it is a planned approach between health, education and employment". In the organizational form, a successful human resource development program prepares the individual to take the work to a higher level, which generally works to develop the most important part of any business. The development of the modern concept of human resources is considered to have started in the 1900s, in which initially more attention was

given to increasing the intellectual knowledge capacity of humans, ways to increase production and more attention to human assets than to the economy. More emphasis was laid on strengthening human capital by focusing more on humans through the development of education, health, training and medical services because the development of a large population is a positive aspect of human resource development, which determines the condition and direction of a nation. Human capital is in a way superior to other resources such as land and physical capital because human resources can use land and capital.

Land and capital cannot be useful on their own. It is proved that the country in which a large number of people live is more prosperous because until the development of humans (education, health, modern technology, agriculture, scientific research and other training) is not done in general humanities, that country is considered to have low-grade human resources. The first pillar for making human resources rich is that human health is very important, it is the moral responsibility of every nation to first correct the health policy and provide health benefits to the citizens of its country so that the working capacity of humans can be made fully useful and the concept of modern human resources can be realized. Since humans have a central place in resources, they are the users of all physical and cultural resources, so until humans do not use any substance of nature or make it useful, it is not called a resource.

It is only humans who make the means of agriculture, animal husbandry, industry, trade, transportation and production suitable for themselves by using various resources like land, water, soil, minerals, energy resources, plants, and animals for the functioning of life in their habitat. As in the past years, humans have achieved victory to some extent by using technology even in impossible areas. Mineral and energy resources found on the surface of the earth are being developed as natural resources and economic benefits are being derived from them. Minerals which were beyond the reach of humans and were not useful for them have also been developed as human resources due to human capability. Humans have created modern culture by using natural resources using their education, science and technology. As a result of this, the number of human resources, regional distribution of population, growth, structural features, capabilities and solutions to problems have also been discovered, which has been the biggest achievement of human resources.

**Human Resource Development Sequence** - The development of human population started from the prehistoric period itself. At that time, due to harsh climate on earth, the growth of population resource was slow. Population resource development is described in three phases sequentially. The first phase is from 8000 years before Christ to 1750 AD in which 5 million people were in the form of human resources on earth. The second phase is considered to be the time from 1750 to 1950, which started after the industrial revolution in Europe, then the total population of the world was around 2500 million. The third phase is considered to be the time after the Second World War, in which the rate of population growth was the highest. The average annual growth rate was more than 0.5 percent when the Great Population Decades emerged. With the improvement in health services, there was a rapid increase in population, by the year 1990, the world population had achieved a growth rate of 100 million per year. The details of the world's human resources i.e. human population growth development have been explained in Table No. 12.1.

### World Population Growth

S.No	Year	Population
1	1	2 Million
2	1000	30 Million
3	1650	50 Million
4	1850	100 Million
5	1930	200 Million
6	1960	300 Million
7	1975	400 Million
8	1987	500 Million
9	1999	600 Million
10	2011	700 Million

Source- Chronicle Geography

According to the UNESCO Statistical Year Book 1955-1990 and World Population Data Sheet 1999, there are three main characteristics of population resource development in the world.

**1. From the year 1650 to 1750**, there was normal growth in Asia and Europe, negative growth in Africa and very little population development in America.

**2. From the year 1750 to 1900**, the development of population resources was rapid in all continents, in which Asia, Europe and North America had the highest population expansion.

**3. After the year 1900**, the 20th century has been the year of the highest population in the world. There was rapid population growth in Asia and North America, which crossed the figures almost three times in 50 years.

Overall, the level of population growth in the world has increased almost 9 times in three centuries. About 75 percent of the world's population resides in Europe and Asia, which has been the golden period of human resource development.

**Stages of human resource development-**The stages of human resource development mean in which stages the population development takes place in the world, and how the population is settled in the world at present, resource development is estimated based on the advances of science, by which the sequence of human population, resource development and problems is clarified. At present, five stages of human development are included in the study.

**1. First stage-** This is the stage of the high birth and death rate of human development, which was the time before the Industrial Revolution in the world.

**2. Second stage-** This is the stage of high birth rate and decline in death rate in the middle of human development. At present, many countries in Africa and Latin America, South East and South West Asia are going through this stage. **3. Third stage-** This is the stage of human development in which there is a sharp decline in birth rate and decreasing death rate, under which countries like North and South Korea, Israel, Portugal, Spain, Yugoslavia, Canada, Chile, Argentina etc. are included.

**4. Fourth stage-** This is the stage of human development in which there is a decline in both birth and death rates, under which currently developed countries like America, Western European countries, Australia, New Zealand, South Africa, and Japan are included.

**5. Fifth stage-** This is the last stage of human resource development in which instead of population growth, the death rate decreases and due to negative population growth, the crisis of depopulation starts coming. Currently, Germany, Austria, Denmark, and Sweden are going through this stage.



## Human resource distribution

The current population of the world is around 8 billion, which resides in a land area of 13.6 crore square km of the earth. Excluding the uninhabited areas, the average density of land area is 43.5 persons per square km. Which is unevenly spread on the earth. 3/4 percent of the world's population lives in 10 percent of the earth's land area. In terms of continental distribution, 85 percent of the world's population resides in the Northern Hemisphere and 15 percent in the Southern Hemisphere. In latitudinal distribution, 90 percent of the population lives in the northern part of the equator and 10 percent in the southern part. In the northern hemisphere, less than 1 percent of the world's population lives north of 60 latitudes. Whereas 30 percent of the population lives between 40-60 degrees latitude and about 10 percent of the world's population is concentrated mainly in Asia between 20 and 20 degrees latitude. About 80 percent of the world's population is found in 20 to 60 degrees latitudes. It is known from the regional distribution of population that most of the world's population is settled on the shores of the continents while the inner part is sparsely populated or devoid of population.

Three-fourths of the population of the world is spread within 960 km of the sea and two third the population is spread within 480 km. In terms of height from the sea level, 3/5 population lives in areas 200 meters above the sea level, and the remaining population lives in areas with more than 500 meters in height. The distribution of population in the world is not uniform and natural conditions are unfavourable for humans, due to which there is inequality in distribution which has been divided into human habitat and habitation areas.

**1. Habitat area-** Under habitat area, the world has been divided into four primary supergroups **1.** Asian population **2.** European population **3.** Anglo-American population **4.** African population.

**1. Asian population-** East Asian countries like China, Japan, and Korea are included in the Asian population and India, Pakistan, Bangladesh and Indonesia are the main countries in the South Asian population where 58% of the world population is concentrated.

**2. European population-** The European population mainly includes countries with high populations like Germany, Great Britain, Italy, France, Poland, Spain, Yugoslavia, Slovakia, Netherlands, Hungary, Belgium, Greece, Russia, Ukraine and Romania where

about 72.8 crore population resides. Which is settled in the coal belt of Europe along the 40-degree latitude.

**3. Anglo-American population-** Countries of North and South American continents are included in the Anglo-American population which includes countries like the United States of America, Venezuela, Colombia, Ecuador, Brazil, Argentina, Uruguay and Chile.

**4. African human population-** Only the Nile River valley basin is included in the African population, where about 12.4 per cent of the world's population lives.

**5. Australian population-** The Australian continent is mainly included in this population, under which Australia, New Zealand and New South Wales are the major regions, where 4.18 crore people live.

**2. Inhabitable area-**Due to physical inequality, most of the world's parts are not suitable for human settlement and residence, about 70 percent of the earth, and about 5 percent of the world's population live. The main reason for the absence of human settlements in these regions is the climate and uneven structure of the land. The major inhabited areas of the world are mainly divided into 5 parts.

1. Extremely cold region
2. Desert and dry region
3. Equatorial wet forest region
4. High mountain region
5. Aquatic region

### **12.3.5 World Human Population Resource Region**

As human resources, the world population is divided according to population distribution and density. The world has been divided into the following six parts as major population resources.

**1. Asian Population Region-** At present, a population of about 4.75 billion lives in the continent of Asia, under which India, China, Pakistan, Indonesia Bangladesh etc. are the countries with high populations, which is the most densely populated region.

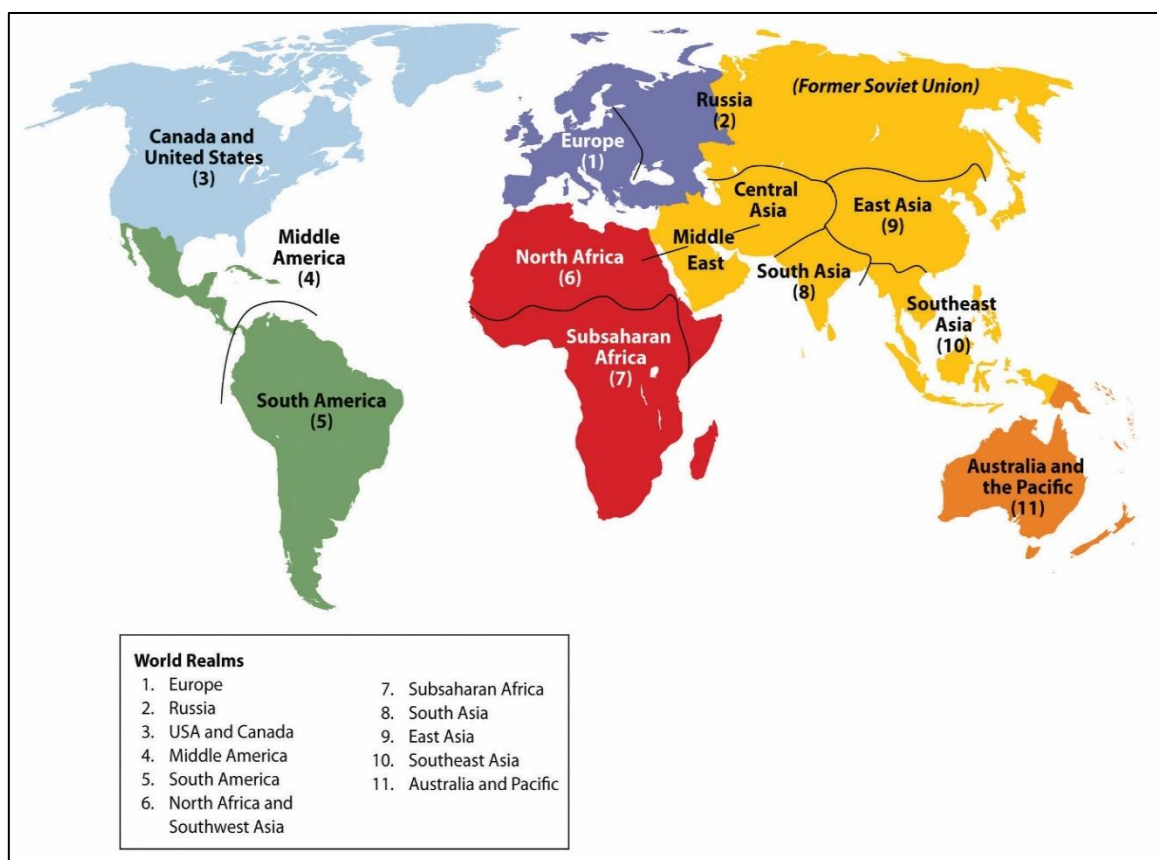
**2. Africa Population Region-** It is the second most populated region in which a total of

1.46 billion people of the world live, under which the most populated countries of Africa are included.

**3. European Region-** The continent of Europe is mainly included in this population region. Where 742 million population of the world resides.

**4. Latin America and Caribbean Region-** It includes Latin American and Caribbean regions in which about 665 million population of the world resides.

**5. North America Region-** The continent of North America is included in this population region, in which the United States of America and Canada are mainly included.



Source: <https://www.bing.com/images/search?view=detailV2&ccid>

**6. Oceania Region-** Australia and its neighbouring islands are included in the Oceania population region.

Population census experts estimate that the status of the population regions will remain the same till the year 2050 and Asia will remain in the first place. The number of major population regions of the world has been clarified in the following table number 12.2.

### World Population Population of Region

Population Region	Population Year 2023	Population Density	Population Area Square Kms.	Population Percentage.
Asia	4,753,079,727	153	31,033,131	59.1 %
Africa	1,460,481,772	49	29,648,481	18.2 %
Europ	742,272,652	34	22,134,900	9.2 %
Laten America	664,997,121	33	20,139,378	8.3 %
South America	378,904,407	20	18,651,660	4.7 %
Oceania	45,575,768	5	8,486,460	0.6 %

Source: [www.worldometers.info/world-population/population-by-region/](http://www.worldometers.info/world-population/population-by-region/)

#### **12.4 SUMMARY**

Generally, population means the mathematically calculated number of people living on earth, which includes women, men, children and the elderly. In population geography, a major branch of human geography, human is the main focus of study and all activities are conducted by humans. Along with being the best creation of the earth, man is also the user of all natural and human resources. The study of the nature of humans, number discrimination power, working capacity and its mutual relation with other areas, ratio, age, place of residence, lifestyle, food habits, population growth, caste-wise comparative mixture of population, literacy, population density etc. completes the concept of human resource development. Apart from this, the access to resources and purchasing and consumption capacity of the population living in different parts of the world reveals the standard of human life. The development of the human population is considered to have started in prehistoric times when due to the harsh climate on earth the population growth was slow but since the Pleistocene era with a gradual increase in the pace of development of population as a resource, the prosperity of human resources has currently reached around 8 billion in the world by the year 2024 in which gradual increase is continuing and six population groups in the world, Asian, African, European, Latin America and Caribbean, North America and Oceania have established themselves

as population regions which show that human resources in the world are at the peak of their development.

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### **12.5 GLOSSARY**

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Population	The known mathematical number of humans who live on the surface of the earth.
Natural environment	The environment found around the living beings which is provided to humans free of cost by nature.
Cultural environment	The environment created by humans is called a cultural environment such as settlements, roads, means of transport, industries and others.
Sex ratio	The number of women per 1000 men is called sex ratio.
Population explosion	The population is growing at a rapid pace for which the country and state do not have the means and reach to support it.
Population resources	The group of about 8 crore human population of the world is called population resources.
Habitable areas are	Those geographical areas which provide suitable physical conditions for human habitation where humans are currently settled.
Habitable areas	Those geographical areas which do not provide suitable geographical conditions for human habitation such as mountainous, desert, aquatic and icy areas etc.
Anglo-American population-	The Anglo-American population includes the countries of the continents of North and South America.
Continent	The largest physical unit of continental land mass such as Asia and Europe.
Technology:	The inventions of science and the simple method of working are called technology.

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### **12.6 ANSWER TO CHECK YOUR PROGRESS**

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- The largest physical unit of land mass is called a continent.
- About 80 percent of the world's population lives in areas with a height of up to 200 meters above sea level.

- 10 percent of the world's population resources are found in the Southern Hemisphere.
- In general terms, population means the number of people living in different parts of the Earth.
- Population study is done by studying the numerical and statistical aspects of the population.
- The residence of the human population on Earth is considered to have started from prehistoric times.
- The second phase of population resource development is considered to be the period from 1750 to 1950.
- By the year 1990, the world's population has achieved a growth rate of 100 million per year.
- The 20th century is counted among the decades with the highest population in the world in human resource development. □About 75 percent of the world's population lives in the continents of Asia and Europe.
- The world's 8 billion population lives in an area of only 13.6 crore square km.
- Less than 1 percent of the world's population lives in the 60-degree north latitude in the Northern Hemisphere.
- The Nile River Valley Basin is included in the African population group.

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## 12.8 TERMINAL QUESTIONS

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### (1) Long Answer Questions

- Q-01** Explain the meaning of population and explain the developmental sequence of human population resources?
- Q-02** What is population resource? Explain the stages of population development and describe in detail the major human groups and population regions of the world?

### (2) Short Answer Questions

- Q. -01** Explain the meaning of human population resource?
- Q. -02** Explain the sequence of human resource development?
- Q. -03** What are the main aspects of human population resource study?
- Q. -04** What are the physical elements affecting population resources?
- Q. -05** How do cultural elements affect population distribution?
- Q. -06** What do you mean by the geometry of land blocks?
- Q. -07** What is meant by the concept of economic development?
- Q. -08** What are the characteristics of the population described by UNESCO and World Population Data Sheet 1999?
- Q. -09** Describe the Oceania population.
- Q. -10** What is the fifth stage of human development?
- Q. -11** Explain the human resource distribution in the world.
- Q. 12** In how many parts can the world's habitat areas be divided?

### (3) Multiple Choice Questions

- Q-1** What occupies a central place in population study?
- (a) Natural resources
- (b) Human resources
- (c) Cultural resources

(d) None of the above

Answer- B

**Q-2** The number of major aspects of population study is?

(a) 5

(b) 6

(c) 7

(d) 8

Answer- C

**Q-3** The estimated population of the world by the year 2024 was?

(a) 7 crore

(b) 8 crore

(c) 6 billion

(d) 7 billion

Answer D

**Q-4** What percentage of the world's population lives in areas at a height of 500 meters above sea level?

(a) 40 percent

(b) 20 percent

(c) 30 percent

(d) 50 percent

Answer B

**Q-5** Population study mainly includes?

(a) Statistical aspect

(b) Quantitative aspect

(c) Qualitative aspect

(d) Both A and B

Answer D

**Q-6** What are the natural factors affecting the population?

(a) Climate



- (b) Soil
- (c) Animals
- (d) All of the above

**Answer D**

**Q-7** What are the cultural factors affecting the population?

- (a) Political factors
- (b) Economic activities
- (c) Technology
- (d) All of the above

**Answer D**

**Q-8** “The capabilities of individuals depend on the use of education received by them, human resource development is largely a means of controlling the environment promoting training and learning process and is a systematic chain of human beings” is the statement?

- (a) Buchanan
- (b) Adam Smith
- (c) Debor
- (d) John Mill

**Answer B**

**Q-9** How much percent of the world's population is included in the African human population?

- (a) 12.4
- (b) 13.5
- (c) 18.5
- (d) 10.5

**Answer A**

**Q-10** What was the human population in the world 8000 years ago?

- (a) 4 million
- (b) 5 million
- (c) 7 million
- (d) 6 million

**Answer B**

**Q-11** From when to when is the second phase of population development considered?

- (a) From 1650 to 1750
- (b) From 1750 to 1850
- (c) From 1750 to 1950
- (d) From 1850 to 1950

**Answer C**

**Q-12** The number of the population included in the health sector is?

- (a) 2
- (b) 4
- (b) 6
- (d) 8

**Answer B**

**Q-13** What percentage of the population currently resides in the Asian population region?

- (a) 6.75
- (b) 5.75
- (b) 4.75
- (d) 8.75

**Answer D**

**Q-14** Population development has been divided into how many stages?

- (a) 3
- (b) 5
- (C) 7
- (d) 9

**Answer B**

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## **UNIT 13 - WORLD POPULATION, POPULATION REGION AND POPULATION PROBLEMS**

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### **13.1 OBJECTIVES**

### **13.2 INTRODUCTION**

### **13.3 WORLD POPULATION, POPULATION REGION AND POPULATION PROBLEMS**

### **13.4 SUMMARY**

### **13.5 GLOSSARY**

### **13.6 ANSWER TO CHECK YOUR PROGRESS**

### **13.7 REFERENCES**

### **13.8 TERMINAL QUESTIONS**

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### ***13.1 OBJECTIVES***

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- Analyzing the world population and population growth
  - Studying demographic changes, birth and death rates.
  - Understanding the major population regions of the world.
  - Studying population distribution and complexities.
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### ***13.2 INTRODUCTION***

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Anthropologists believe that humans originated on earth in the Paleocene era of the Tertiary period. In the history of human civilization, most humans have lived as hunters and gatherers, due to which the human population remained limited during that period. With the development of agriculture, an increase in human population was observed. YearEarth of Humans In the Paleocene era of the Tertiary period, 1 A.D., the world population was approximately 30 crores, which increased at a normal pace to 76 crores in 1750 and after the industrial revolution, it picked up the normal pace, as a result of which the world population reached 1 billion in the 18th century, while in the 20th century the world population has crossed 7 billion. World population refers to the number of humans living on earth. As per the estimate for the year 2023, this number is estimated to be more than 8 billion. In the history of population, from the primitive stage to the scientific age, the population has increased by several crores. In the past centuries, a significant increase in the world population has been seen, especially after the Industrial Revolution. Health and medical facilities have expressed the possibility of population growth being more than 2 percent per decade. The United Nations estimates that by the year 2050, the world population may exceed 9.7 billion. Because the increase in fertility rate and decrease in death rate have been the main factors of population growth, it is expressed that the world population may reach 10.9 billion by the year 2100.

The distribution and density of the population in the world are unevenly spread. While more than 60 percent of the population lives in the continent of Asia, in future, half of the population may live in the continent of Africa by 2050, while the decrease and decline in population in the continents of Europe and America are still continuing. Natural analysis of world population shows that the first estimate of population study was made by William Petty in the 17th century in which the world population was stated to be around 320 million, by the

end of the 18th century it became close to one billion while the study of the population was accurately estimated from the first half of the 19th century.

The highest growth in global population has been between 1955 and 1975 which has been around 2.1 percent. But between the years 2015 and 2020, it has been 1.1 percent per year, which shows that a decline in population growth rate can be recorded in the 21st century. In the study of population, it is known that when there is an increase in population, there is a crisis of food, housing, energy, and natural resources in the whole world, whereas a decrease in population can cause a decrease in the use of resources. Due to this the imbalance of population in the world can worsen. Therefore, it is very important to have an equal balance of population, because the condition and direction of economic development is determined based on population resources. Therefore, understanding and managing the world population is very important to ensure sustainable development and improve the quality of life at the global level because the regional distribution of the world's population is uneven, where the continent of Asia has about 4.7 billion population, with half of the total population residing in China, India, Indonesia, Pakistan and Bangladesh. In the same South African continent, 1.4 billion population of the world is in Nigeria, Ethiopia, Egypt, the Democratic Republic of Congo and Africa and 750 million population in the European continent's Russia, Germany, the United States, France and Italy; in Latin America and the Caribbean there are approximately 660 million nations with stable population or countries with low birth rate and high life expectancy who are settled in Brazil, Mexico, Colombia, Argentina and Peru; in North America, there are approximately 370 million in the United States of America, Canada, Mexico; 43 million population lives mostly in Oceania's Australia, Papua New Guinea, New Zealand and Fiji countries.

No human is living in Antarctica; this continent is being used only for seasonal research and scientific studies. Due to the uneven distribution of the population and lack of equality in birth rate, the population has given birth to many types of problems such as lack of resources, environmental improvement, pollution, urbanization, industrialization, housing, employment, cleanliness, nutrition, health-related problems, migration and lack of livelihood means, social, religious inequality, class-distinction, current man-made climate change etc., which are called population problem in the study of population. A multi-dimensional approach is required to solve the population problem, along with international cooperation, new policies and awareness towards sustainable development are very important. According to the United Nations, according to human prehistory and history, it took only 218 years for

the world population to reach 8 billion, which is no less than a warning of crisis for mankind because according to the human population, we have limited land for human habitation, in which finding sufficient space for the rapidly increasing population is a matter of challenge.

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### ***13.3 WORLD POPULATION, POPULATION REGION AND POPULATION PROBLEMS***

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#### ***13.3.1 WORLD POPULATION***

The general meaning of world population is that the human population in the world is derived from the amount of human resources on the world stage along with human strength development. The local form of economic development of any part of the world is governed by the population resource, which determines the population pressure and proportion in which part of the world. The form of population depends on the political, social and economic dynamics of a place and the availability of resources. The internal structure of the world population, gender ratio, age structure, education, health and occupational structure, and social, moral and cultural characteristics play an important role. The regional structure of the population is reflected in the residential nature of different land parts of the world. The distribution balance of the population reflects the overall development in different parts of the world.

By observing the world population, it is known that in the current century, by the year 2024, an estimated population of more than 8 billion has been found in the world. After 1750, the world population started increasing rapidly and the percentage of population growth was higher in developing countries as compared to developed countries. Between 1750-1850, the population growth rate of developed countries was 0.6 percent while in developing countries it was 0.4 percent. In the 250-year history of world population, for 200 years, the growth rate of developed countries was higher than the growth rate of developing countries and only in the last 50 years, there has been a sharp change in the population growth rate of developing countries. During 1750-1950, the total population of developed countries increased from 19.1 crores to 83.2 crores, i.e., it increased by 4.4 times, whereas the population of developing countries increased from 56.7 crores to 168.4 crores, i.e., it increased by 3 times. Hence, the year 1950 became very important in the history of world population growth. After 1950, the population growth of developing countries took a new turn and started increasing rapidly.

In the two decades of 1950-70, the population of developed countries grew at the rate of 1.1 percent, but in developing countries, it grew at the rate of 2.2 percent. Thus, after 1950, the growth of the population of developing countries increased rapidly, whereas, in 1970, this growth was found to be 2.5 percent per year. The world has witnessed the highest increase in population especially during the period of 15 years from 1959 to 1974. According to UNDP, the world population crossed 6 billion in the year 1999. On 31st October 2011, the world population reached 7.0 billion symbolically. In the 40 years of 1950-1990, developing countries have increased the world population by about 240 crores.

During this period, the total world population has increased by 280 crores. This means that 85% of the growth in the last 40 years is due to developing countries only, while 1% is due to developed countries, China and India together contributed 40% to the world population. According to the data obtained after the systematic world population census of 1951, the world population was 2,543,130,380 in 1951, 3,068,370,609 in 1961, 3,770,163,092 in 1971, 4,524,627,658 in 1981, 5,40,6245,867 in 1991, 6,230,746,982 in 2001, 7,073,125,425 in 2011, 7,909,295,151 in 2021 and 8,045,311,447 in 2023. According to the actual study of population in 1996, the total population of the world was found to be 580 crores, out of which 351 crores were from Asia, Africa was in second place with 74.8 crores, Europe with 32.5 crores and Oceania with 2.9 crores. This continent had the lowest population in the world. But in the year 1960-93, the world population grew at the rate of 1.9 percent per year, while in industrially developed countries, the average population growth was only 0.8 percent per year, which was 0.4 percent per year between 1993-2000. While the population growth rate in developing countries was 2.2 percent per year, while in the backward countries which are smaller in size than the developing countries, their population growth was 2.5 percent per year.

After the decade of population transition in 1980, the average growth rate in the world population was 2.8 percent. In this way, the rapidly increasing population has brought about changes in the world population trends and has accelerated the population dynamics. It has been estimated that every decade, the world population will increase by about 100 crore people and this process will continue till 2025, which will be a cause of concern for the world. The uneven growth of population is increasing the gap between developed and developing countries in the world. An in-depth analysis of the world population trends shows that before 1750 and before the Industrial Revolution, the population growth rate in the world was low. The industrial revolution in northwestern Europe started the demographic transition

in the world and from here this process spread to other regions of the world as well. It is expected that the population will increase to 910 crore by the year 2075, after which it will stabilize to some extent. But still, demographers estimate that the world population will exceed 1000 crore by 2150.

The world human population has experienced steady growth since the Great Famine and Black Death period of 1350-1417 when it stood at around 370,000,000. The highest growth was 2.1 per cent between 1965 and 1970, while the birth rate decreased by 1.1 per cent between 2015-2020. There are indications of further decline in the 21st century. As the global population continues to grow, changes in fertility and mortality rates pose uncertainty about the long-term scenario. Demographers estimate that the human population will begin to decline in the second half of the 21st century. The number of people born in the world is 140 million per year in the year 2015-20, which is estimated to reach 141 million per year by 2040-2045 and will decrease to 126 million per year by the year 2100. The death rate which is currently 57 million per year is indicated to reach 121 million per year by the year 2100.





and from 800 million to 1 billion in the 1840s. The current estimates show that it will increase by 3 to 5 per cent. The rapidly increasing population in the urban areas of the world shows that it was 47 percent in 2000, while in 2010 it was 50.5 percent and it may reach 70 percent by 2050.

Many countries of the developing world have achieved very rapid growth in world population in the 20th century due to economic development and improvement in public health. The population of the Indian subcontinent was 389 million till 1941, which included countries like India, Pakistan, Nepal, Bhutan, Bangladesh and Sri Lanka. The United Nations estimates that the world population reached one billion for the first time in 1804 and reached two billion in 1927. It took 123 years to reach two billion, only 33 years to reach three billion, 14 years to reach four billion, 13 years to reach five billion, 12 years to reach six billion and 13 years to reach seven billion. It will take 20 years to reach 8 billion in 2022, 9 billion in 2037 and 10 billion by 2057. Taking this growth as a basis, the United Nations has declared 31 October 2011 as the day of seven billion and the name of the eight billionth person has been identified on 15 November 2022.

With the increase in population, an increase in life expectancy is also being recorded in many countries. In the year 2015, the World Health Organization stated the average global life expectancy as 71.4 years. By 2020, the global sex ratio was about 1.01 men per 1 woman. 24.7 percent of the total world population is below 15 years of age while 65.2 percent are in the age group of 15-64 years. In the year 2020, the global average life expectancy was 73.3 years, in which women live an average of 75.9 years and men live 70.8 years. British researchers have clarified in 2020 that the total human weight on Earth has become 287 million tons, which is an average of 62 kg per person. According to the United Nations Report 2022, the details of the world population have been clarified by

Table No. 13.1.

Serial No.	Region	Population (in million)	Population %
1	Sub-Saharan Africa	1152	14-51
2	North Africa and Western Asia	549	6-91
3	Central Asia and South Asia	2075	26-13
4	East Asia and South Asia	2342	29-49
5	Europe and North America	1120	14-10

6	Latin America and the Caribbean	658	8-29
7	Australia and New Zealand	31	0-39
8	Oceania	14	0-18
<b>Total population</b>		<b>7942</b>	----

Source by mediawiki.org

According to UNDESA's estimate, the world's population has doubled. During the second century, it took half the time for the population to double, but after 2024, this possibility is estimated to be low. Nevertheless, the global population will double in the 21st century.

### 13.3.2. Region-wise details of the world's population

According to the World Population Distribution Census 2011, 75.5 percent of the world's total population lives in the underdeveloped areas of Latin America, Africa, Asia, Polynesia, Melanesia and Micronesia. These areas are also currently going through the first and second stages of demographic transition. As the second group of population distribution, the remaining 24.5 percent of the population lives in developed areas like Europe, North America, Australia, Japan, and New Zealand. The inequality of population distribution in the world is mainly in the Northern and Southern Hemispheres. At present, there are three main concentrations of world population, the first is South East Asia, second is Western Europe and third is North East America, in which the average population density is 100 persons.

It is well known that the regional distribution of population is spread unevenly, out of the seven known continents of the world, permanent human settlements are found in six continents, in which according to regional distribution, the continent with the highest population is Asia where 4.46 billion population of the world lives which is about 60 percent of the total population. Whereas the continent of Antarctica is still temporarily limited to the people engaged in scientific inventions. According to the United Nations data of 1995, on average, 44 persons live per square km in the world, while in the year 2023, the density of the world population has been 100 persons. The pattern of distribution of population is formed in the form of linear, diffused, centroid clusters, etc., which is related to the size and area of the population, which emphasizes the proportional relationship between people and areas. When population distribution is studied in human geography, more attention is given to the distribution pattern of the population. Many methods are used to describe the regional distribution of population, in which mainly statistical methods are considered most appropriate. The simplest method of finding population distribution in the world is considered to be percentage distribution, in which the percentage of people living in the area

is estimated, for example, to study the distribution of population in India, calculation is done based on the population of people living in each state and union territory.

Similarly, to find out the regional distribution of the population, the population is divided into a certain category, and each regional unit is arranged in sequence, after which the distribution of population is shown on world and regional maps. Many geographers have also used average point calculations to show the distribution of population such as main location mean point, average point population centre, and minimum set transmission point to reveal the distribution of population. Population distribution is key to identifying various demographic components which are used by social scientists, especially population geographers, to measure the distribution and concentration of the population and the population distribution data in the world is prepared on an administrative basis.

Population distribution is generally affected by physical factors (climate, topography, natural and energy resources and regional relations) and human i.e. cultural reasons. The continent-wise details of the world population as per the data of the year 2020 are given in

Table No. 13.2.

<b>Region</b>	<b>Population (in millions)</b>	<b>Most populous country</b>
Asia	4641	China
Africa	1340	Nigeria
Europe	747	Russia
Latin America	653	Brazil
North America	368	United States
Europe	42	Australia

**Table No. 13.2**Source by mediawiki.org

According to the available population data of the world, the continent of Asia ranks first in the world with the highest population in the world population distribution, in the same order Africa, Europe, Latin America, North America and Oceania come respectively. As of the year 2023, the 10 countries with the highest population in the world have been clarified by the following table number 12.3, which is about 4.6 billion population in the world and represents 57 percent of the world's population. According to the United Nations estimates, India has become the most populous country in the world. Details of the world population as per the data of the year 2023 are given in Table No. 13.3

Table No. 13.3

Country	Population	World Population Percentage
India	1]425]775]850	17-6
China	1]409]670]000	17-4
U.N. S. America	3]36]671]470	4-15
Indonesiya	278]696]200	3-43
Pakistan	229]488]994	2-83
Nigeriya	216]746]934	2-67
Brigeel	217]903]651	2-68
Bangladesh	168]220]000	2-07
Russia	147]190]000	1-58
Maxcico	128]271]248	1-58

Table No. 13.3 Source: United States 2023

Along with the above-mentioned countries with the highest population density, the countries with the highest population density in the world are Singapore 8235, Bangladesh 1116, Palestine 867, Taiwan 655, South Korea 520, Lebanon 509 and Rwanda 500 persons per square km respectively. Thus, the size of the world population has been fluctuating according to regional differences, the population is increasing in most of the inhabited geographical areas. During the 20th century, an observation of the global population scenario shows that the population is passing through a phase of demographic transition. Demographers also believe that this population growth will continue for a long time, in the year 2019 the United Nations has clarified that the global population is registering a decline even though it is in a phase of transition. If this trend continues, then the growth rate may come down to zero level by the year 2100, the plateau of population will be seen in the world population after 10.9 billion. However, estimating long-term global population growth is not an easy task, because the birth rate and death rate in the global average population are decreasing rapidly. While on the one hand negative growth in population is being recorded in developed countries, both birth and death rates are at a high level in developing countries. Apart from this, fluctuations in population have also been observed in the past centuries due to diseases, epidemics, wars and other disasters. As of 2015-20, the number of babies born globally has been 140 million per year, which is estimated to reach 141 million per year by

the year 2040-45. The death rate is 57 million per year, which is estimated to reach 121 million per year by the year 2100.

### **Features of world population distribution**

Along with the factors (physical and cultural) affecting population distribution, other features also affect the distribution of population. For example

(1) The biggest peculiarity of world population distribution is the presence of extreme discrepancies due to regional inequality in population distribution. 90 per cent of the world's population is found in the northern part and the remaining 10 percent in the southern part. In the northern hemisphere too, 10 percent of the world's population is mainly found in the continent of Asia between 0 degrees to 20 degrees latitude, more than 50 percent of the world's population again lives in Asia between 20 to 40 degrees latitude, 30 percent of the world's population again lives in Europe between 40 to 60 degrees north latitude, only one percent of the world's population lives north of 60 degrees north latitude. About half of the world's population lives in the 50 to 60 percent area. (Tivarttha 1969)

(2) The coastal areas of all the continents of the world have dense populations and the intervening areas represent sparse populations. Three-fourths of the world's population lives within 1000 km and two-thirds within 500 meters of the sea. The main reason for the excess population in this area is the moist marine climate and easy accessibility. This can be estimated from the fact that 50 percent of the world's population lives at a height of 500 meters above sea level.

(3) Dense and sparsely populated areas have been the result of the spread of knowledge and culture of ancient traditional and new technological areas. Dense areas being the centers of human life's comforts and amenities have become the main areas of population settlement. The sparsely populated areas, dry, high latitudes, humid and cold regions and dense forest areas are the areas of sparse population in the world.

(4) 55 to 60 percent of the total area of the world's continents is ecumene. The concentration of population in this ecumene is not the same. There are different reasons for population accumulation and there are also disparities in population density as three-fourth of the world's population is settled in four major regions of the world, in which two parts live in Asia and one part each in Europe and America continents.

This conclusion comes from the discussion of world population distribution. Most of the rapidly increasing world population is accumulating in developing countries. Europe continent being industry-oriented, is becoming the center of population accumulation more than the agricultural areas of Asia. In developed countries, the population is either stable or is increasing at a very slow pace. This reveals the biggest feature of world population distribution, huge inequality in distribution and extreme regional discrepancies. From the point of view of population distribution, the density of population distribution in the presently populated areas appears brighter in the future as compared to other areas. Thus, by closely observing the present scenario of population distribution, it is known that there are many regions on earth which are sparsely populated and where the population density is less than 1. Person per square km, especially the areas above 60 degrees north latitude. For example, Mongolia has 2. Persons, Namibia, and Suriname 3. Persons, Guyana, and Botswana 4. Persons, Gabon and Kazakhstan 5. Persons and Kazakhstan 6 persons per square km, whereas Macau has 19845 persons, Monaco 17790, Singapore 7589, Hong Kong 6866 and Bahrain 1734 persons live per square km. According to the sub-continental population distribution 2011, the distribution of population living in the world has been made clear in Table No. 13.4

Table No. 13.4

World Population Group	Population (in millions)	Major Regions
Asia	4207	North Asia, East Asia, South Asia and East Asia
Africa	1072	North Africa, West Africa, Central Africa, East Africa and South Africa
America and Caribbean	942	North America, Central America, Caribbean, South America
Europe	740	North Europe, Eastern Europe, Eastern Europe, Southern Europe
Oceania	40	All Australian countries with high population

Table No. 13.4 Source: Population and Urbanization S.K. Ojha 2014

### World Population Resource Regions

Measuring world population and population resources quantitatively is not only difficult but also a very complex task. The first division of world population and population regions was

done by Ackerman in 1970. He divided the world into five population resource regions including population, resources and technology.



Source: <https://www.google.com/url?sa=i&url>

**(1) United States of America type of population regions-**In such regions, the population capacity and resource ratio are as follows. In such regions, the known and potential resources are more, while the population size is relatively less. In terms of population and resources, these regions are considered to be very rich. Due to the abundance of social and economic resources, the standard of living of the people is very high. These regions include countries like the United States of America, Canada, Australia, New Zealand etc.

**(2) European-type regions-**In such regions, the population capacity and resource ratio are high. In terms of population resource technology, this region is in excellent condition, although these regions are also counted among the developed regions. These regions are highly populated, with less expansion and limited resources. The ideology of these regions towards resources has been conservative. In these regions, economic development is considered to be based on the abundance of plains and population density. In this group, the countries of Southern and Western Europe, Japan, Israel and Central Soviet Russia region are prominent. Apart from this, countries like China, India, and Korea are entering this category.

**(3) Brazilian type of regions-**These are the countries of the world which are technologically backward and the ratio of population and resources is low, whereas due to the large area, the ratio of population is found to be low. With technological development, the possibility of a high standard of human life can be expressed in these regions. Egypt and its neighbouring countries are included in this.

**(4) Egyptian type of regions-**In these types of regions, technology is very backward but the ratio of population and resources is high. It is also called as China type of regions. From the point of view of population resources, these regions are the most problematic regions where the level of population growth is rapid and the basis of livelihood of the population is of subsistence type. Limited resources, limited capital and backward technology are the biggest characteristics of these regions. In Africa, Egypt, Algeria, Greece, China, India, Pakistan, Bangladesh and Nepal are included in this.

**(5) Arctic type of regions-**These regions are technically at zero level. Population depopulation and wide geographical spread are the main features of this region. These include cold and dry deserts, high mountainous regions, dense forest regions and snow-covered regions. These are recognized as resource regions of the future.

### **13.3.4 World Population Problems**

As a world population problem, it is known that the population pattern in the world has been very complex from ancient times to the present time. Where the size, distribution and density of population have been a concern, many regions are going through a state of explosion due to the burden of population. Many parts are worried about the lack of population, many parts are still devoid of population, while in many parts the population is struggling with the lack of housing and basic amenities. It is known from the World Population Study that the population in the world is 100% as per the UN. According to the report of 2011, the world population is estimated to reach 9.31 billion by the year 2050 and 10.1 billion by the end of the 21st century. To maintain such a huge population on earth and to manage the means of livelihood is no less than a big challenge. All the developed and developing countries are worried about the population because it is becoming a complex and serious problem for the world's humanity. On one hand, rapid population growth and on the



other hand, population decline, both have become issues. Thus, the main facts in the form of population problems on the world stage can be described as follows.

**1. Rapid and frightening growth** -As has been described in the above part that the population growth in the world is increasing at a rapid pace, which has taken a short time to increase from 1 billion to 8 billion. In the last four centuries, the world population has increased by more than 5 billion. Overpopulation also remained high in limited areas of the world as more than half of the world's population lives in the continent of Asia and Europe, while many areas are still uninhabited. In developed countries, instead of population growth, the population is moving towards the fourth and fifth stage of population transition. If the predictions of rapid population growth are correct, then after two centuries, the world population will exceed 10 billion, in which urban areas will have the maximum population burden.

**2. Resource Management Problem**-Resources available on earth for the huge population are limited which will get exhausted forever one day, because many natural resources are depletable and it is not possible to replenish them. Also, the limited size of earth is not capable of fulfilling all the needs of humans. Due to humans' unwise resource consumption policy and lack of concern for the future, renewable resources are also not likely to be useful for humans, such as air, water and soil, which despite being available in huge quantities, are not fit for human health due to pollution at present. Due to the limited amount of resources and the dependencies of humans and other living beings for food and other activities, the greatest impact is likely to be on human food resources and livelihood resources, due to which most humans will die due to lack of food. Apart from this, exploitation of natural resources done in the name of development will become the carrier of many types of diseases. Therefore, developing resources in a sustainable manner will be necessary to maintain human life on earth for a long time.

**3. Uneven distribution of population**- Population distribution on earth is not uniform in all places, which has been discussed in detail in the above section. 90% of the world's population is concentrated in the northern hemisphere, while about 10% of the population lives in the southern hemisphere. Population is also unevenly concentrated in both the hemispheres, for example, in the continent of Asia, China, India, Pakistan, Indonesia, Afghanistan, Nepal and Sri Lanka, in the industrial belts of Europe, in the continent of

America, about 80% of the humans live in the lakes and industrial regions, while in other parts, very less population lives. If we look at the latitudinal distribution, 50% of the world's population lives in the latitudes of 20 to 40 degrees. Thus, the population is also increasing at twice the pace of development of resources, especially in developing countries. Due to high concentration of population at one place, changes are also taking place in population density, distribution and geomorphological balance, which are giving rise to cultural and natural problems. The technology and other resources of human science are not able to settle humans in the land unused for human habitation, due to which human-less areas will remain human-less for a long time.

**4. Problem of land use change-** The population growth which is increasing at a rapid pace is currently causing the most change in the pattern of land use. The most fertile land of the world is being used for the development of human settlements and cities, development of transport resources, as a result of which there is a change in land use. Fertile land is being converted into concrete jungles, due to which there is a shortage of land for the production of food grains in the world, especially in developing countries. For the development of human settlements, huge forest land has been destroyed for farming and other works, due to which environmental problems have started taking a terrible form. The problem of land use is becoming the biggest crisis at present.

**5. Problem of food and nutrition-**This huge population of the world requires food on a large scale for which a large agricultural land and farmer population is required. But at present, a large part of the population wants to live in the cities, due to which the possibility of food crisis is increasing due to lack of basic activities. Apart from this, to meet the demand, food grains are produced by using chemical fertilizers and medicines, due to which there is a lack of natural elements in the food grains and the food produced in this way is becoming a carrier of many types of diseases. Apart from this, the lower and helpless class is going through malnutrition and starvation because many nations of the world are not able to supply food grains as per the demand of the citizens of the country and the standard of living of humans is becoming low.

**6. Problem of population burden -**The burden of more than 8 billion humans in the world has already become a burden on the earth and it is likely to keep on increasing in future as well, which is found to be more of a problem in old settled countries as compared to newly

settled countries. With the increase in population, human settlements work to disturb the local geo-equilibrium, if there are more changes in the local structure, then any natural or man-made disaster can take place at that place. Due to rapid increase in population, there are high chances of class conflicts, civil wars and global wars due to attacks on other regions for the fulfillment of food, shelter and other daily needs.

**7. Environmental Problems-** With the increase in population, the problems related to environment are arising at a rapid pace in the world, as human beings are directly and indirectly dependent on natural resources for the development of residence and livelihood means, but excessive use of natural resources has given rise to many types of man-made problems such as air, water, soil pollution, deforestation and the present man-made ozone layer, climate change problem and epidemics etc. Due to the imbalance of environment, the life of living beings on earth is in danger, but at present many man-made problems have created painful conditions for humans.

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### **13.4 SUMMARY**

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Anthropologists estimate that humans originated on Earth in the Paleocene era. In the history of human civilization, most humans were hunters and gatherers, so the human population was limited then. World population means the human population in the world and its population on the world stage. The local form of economic development of any part of the world is governed by population resources, which determines the population pressure and proportion in which part of the world. While the form of population depends on the political, social and economic dynamics of a place and the availability of resources. The internal structure of the population, gender ratio, age structure, education, health and occupational structure, and social, moral and cultural characteristics play an important role. It reflects the totality of the population in different parts of the world. From the point of view of population data, the world population started increasing rapidly after 1750 and in the history of 250 years, for 200 years, the growth rate of developed countries was more than that of developing countries and only in the last 50 years there has been a rapid change in the population growth rate of developing countries. After the population transition decade of 1980, there was an average growth rate of 2.8% in the world population. Every decade approximately 100 crore people increase in world population, this process will continue till 2025, which will become a matter of concern for the world, such is the estimate by demographers. Because in the world

1A. During the 18th century, the world population was around 30 crores, which increased at a normal pace to 76 crores in 1750 and after the industrial revolution, it picked up the normal pace, as a result of which the world population reached 1 billion in the 18th century, whereas in the 20th century, the world population crossed 7 billion and according to the estimate of the year 2023, it is estimated to be more than 8 billion.

The first estimate of the world population was made by William Petty in the 17th century, who said that the world population was 320 million in 1682. In the current estimates, it has been said to have increased by 3 to 5 per cent. According to the World Population Distribution Census 2011, 75.5 percent of the total world population lives in the underdeveloped areas of Latin America, Africa, Asia, Polynesia, Melanesia and Micronesia. These areas are also currently going through the first and second stages of demographic transition. As the second group of population distribution, the remaining 24.5 percent population lives in developed areas like Europe, North America, Australia, Japan and New Zealand. The inequality of population distribution in the world is mainly in the Northern and Southern Hemispheres. Currently, there are three main concentrations of world population, the first is South East Asia, the second is Western Europe and the third is North East America, in which the average population density is 100 persons. Out of the seven known continents of the world, permanent human settlements are found in six continents, in which according to regional distribution, the continent with the highest population is Asia, where 4.46 billion population of the world lives, which is about 60 percent of the total population. Whereas the continent of Antarctica is still temporarily limited to the people engaged in scientific inventions. Along with population distribution, linear, diffused, nucleated and clustered patterns are developing.

In terms of the world population and population resources, the world is divided into five population resource regions, namely, United States of America type, European, Brazilian, Egyptian and Arctic type regions with an abundance of known and potential resources, as per the population capacity and resource ratio. In the same sequence, due to the population structure being very complex, the size, distribution and density of the world population have been a topic of discussion. Many regions are going through a state of explosion due to the burden of population. Many regions are worried about the lack of population and many regions are still without population. According to the UN report 2011, the world population is estimated to reach 9.31 billion by the year 2050 and 10.1 billion by the end of the 21st century. Maintaining such a huge population on earth and managing the means of livelihood

is a big challenge which has given birth to many problems such as rapid and alarming growth, resource management, uneven distribution of population, land use change, food and nutrition supply, population burden and environmental problems have been the major ones which have surrounded the human beings with many problems.

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### **13.5 GLOSSARY**

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Palaeocene era:	The period of geological time in which the last period of life was seen on Earth.
Industrial Revolution:	The period between the latter half of the 18th century and the first half of the 19th century, when industrial development took place.
Primitive stage:	The first stage of human development, in which he lived a nomadic life, eating roots, fruits and raw meat.
Birth rate:	The number of babies born per 1000 living people is called the birth rate.
Death rate:	The number of deaths per 1000 living people is called the death rate.
Antarctica:	The large geographical unit of the earth, which is uninhabited and covered with ice.
Asia:	A group of 14 countries, which includes Australia, Papua New Guinea, New Zealand, Fiji and Solomon Islands, and the Federated States of Micronesia.
Life expectancy:	The average age at which the citizens of a country die.
Sex ratio	The ratio of women per 1000 men in India
Age structure:	The ratio of men and women in different age groups
Population transition:	The stage of population growth in which the birth rate is higher than the death rate.

Black Death:	The period from 1350-1417 in which the world witnessed the greatest destruction of mankind due to epidemics.
Linear pattern:	The pattern of population formed with the help of roads and railway lines is called linear pattern.
Ecumene:	The centres of dense population habitable for humans

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### ***13.6 ANSWER TO CHECK YOUR PROGRESS***

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1. Humans originated on earth in the Pleistocene period of the Tertiary Era.
2. In 1 A.D. the world population was approximately 30 crores.
3. By the 2100th century the world population is likely to reach 10.9 billion.
4. The continent of Antarctica is still uninhabited. This continent is used only for meteorological research and scientific studies.
5. It took only 218 years for the world population to reach 8 billion.
6. The average weight per person on earth is 64 kg.
7. After the Population Transition Decade of 1980, the world population has seen an average growth rate of 2.8 percent.
8. The period of 1350-1417 has been the time of great famine and Black Death in the population decades.
9. The world population was first estimated by William Petty in the 17th century.
10. The United Nations has declared 31 October 2011 as the day of seven billion.
11. The second group of population distribution includes 24.5 percent of the population.

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### **13.8 TERMINAL QUESTIONS**

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#### **(1) Long Type Questions**

1. What do you mean by population resource? Describe the world's population resources in detail?
2. Explain the distribution of population resources in the world and explain the problems of population?

#### **(2) Short type question**

- Q-1. What do you understand by population resource?
- Q-2. In which era did humans emerge?
- Q-3. In the first A.D. how many crores was the world population estimated to be?
- Q-4. In which year did the world population cross 7 billion?
- Q-5. It has been estimated that the world population will reach 7 billion by the year 2050.
- Q-6. In which decade did the global population reach its highest growth?
- Q-7. On which year did the United Nations declare the International Population Year as the basis?
- Q-8. What was the nature of the world population in the past?
- Q-9. What are the main factors affecting the distribution of world population?
- Q-10. What do you understand about the Asian population?
- Q-11. What are the main problems of the world population?
- Q-12. What do you mean by population resources?

#### **(3) Multiple Choice Question**

Q-1. In which era of the Tertiary period is the origin of human beings considered?

a) Jurassic

b) Triassic

c) Pliocene

Q- Miocene

**Answer- C**

**Q-2.** What was the approximate population of the world in the Cretaceous period?

- a) 20 crore
- b) 30 crore
- c) 25 crore
- d) 50 crore

**Answer- B**

**Q-3.** When did the world population cross seven billion?

- a) 18th century
- b) 19th century
- c) 20th century
- d) 17th century

**Answer- C**

**Q-4.** How many billions of the world's population will be estimated by demographers by the year 2050?

- a) 7.5 billion
- b) 9.5 billion
- c) 9.7 billion
- c) 10 billion

**Answer- B**

**Q-5.** What percentage of the world population lives in the continent of Asia?

- a) 40 percent
- b) 50 percent
- c) 60 percent
- d) 70 percent

**Answer- C**

**Q-6.** What is the form of human habitation in the continent of Antarctica?



- a) Permanent
- b) Seasonal Research and scientific study
- c) Six months
- d) All of the above

**Answer- B**

**Q-7.** The time it took for the world population to reach 8 billion was.

- a) 218 years
- b) 219 years
- c) 221 years
- d) 230 years

**Answer- A**

**Q-8.** The world population transition decade is considered.

- a) 1990
- b) 1980
- c) 1972
- d) 1950

**Answer- B**

**Q-9.** What is the average weight of the world population on Earth?

- a) 70 kg.
- b) 65 kg.
- c) 64 kg.
- d) 75 kg

**Answer- B.**

**Q-10.** There have been great famines and Black Death years in the world population.

- a) 1350-1417
- b) 1450-1517
- c) 1550-1617

d) 1250-1417

**Answer- A**

**Q-11.** In which year did the United Nations declare the world population as seven billion days?

a) 16 October 2011

b) 26 November 2011

c) 31 October 2011

d) 5 December 2011

**Answer- C**

**Q-12.** The order of patterns of world population settlement is

a) Linear

b) Centric

c) Both of the above

d) None of the above

**Answer- B**

**Q-13.** What percentage of the world population lives in the Northern Hemisphere?

a) 90 percent

b) 75 percent

c) 60 percent

d) 50 percent

**Answer- A**

**Q-14.** Who first divided the world population into population and population regions?

a) Ackerman

b) Zimmerman

c) Isa Bauman

d) All of the above

**Answer- A**

**Q-15.** The world's unpopulated regions are?

- a) Cold desert
- b) Hot desert
- c) Dense forest and high mountain areas
- d) All of the above

**Answer- D**

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## **UNIT14 - HUMAN SETTLEMENT, RURAL & URBAN (TYPES AND PATTERN)**

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### **14.1 OBJECTIVES**

### **14.2 INTRODUCTION**

### **14.3 HUMAN SETTLEMENT, RURAL & URBAN (TYPES AND PATTERN)**

### **14.4 SUMMARY**

### **14.5 GLOSSARY**

### **14.6 ANSWER TO CHECK YOUR PROGRESS**

### **14.7 REFERENCES**

### **14.8 TERMINAL QUESTIONS**

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### ***14.1 OBJECTIVES***

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- To understand the meaning and importance of rural and urban settlements.
- To discuss settlement morphology and functions.
- To study the trends of rural and urban populations.

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### ***14.2 INTRODUCTION***

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Human settlements are a branch of human geography that mainly includes studying man-made dwellings and their physical and cultural elements. Human settlement is the cultural landscape generated by humans where humans reside and where people live in a single and joint form. It reveals the totality of the human community on earth where all human-generated social, physical, organisational, spiritual and cultural elements i.e. all human-generated elements are included. The formation of human settlements is generally more dependent on physical conditions. Settlement can be a group of several thousand houses ranging from a single house through which humans fulfil their life goals. But common people mean settlements as a group of houses, whereas settlements include slums, kutchra, pucca, and multi-storey houses. According to archaeologists and geographers, settlement is the place where people live, settlements are mainly divided into rural and urban forms based on functions. Based on their historical characteristics, settlements are considered to be located around religious places.

In rural settlements, the size of houses is small and the means of livelihood are agriculture and animal husbandry. The size of urban settlements can range from small to huge buildings and there is a predominance of secondary and tertiary activities as occupation. Here, primary occupational activities i.e. agriculture and animal husbandry are almost negligible. The establishment of human settlements is generally determined based on dynamic and static elements available at a place, such as humans living in a particular place who build houses, roads and other cultural objects and form the economic and social organization of the settlement, such as houses and roads leading to houses are called dynamic elements, which help the humans living in that place in providing shelter, security and in fulfilling economic, religious and other objectives.

In this way, human settlements are a branch of human geography, which mainly includes the study of man-made dwellings and their physical and cultural elements. Human settlement is a cultural landscape created by humans where humans reside and where people

live in a single and joint form. It reveals the totality of the human community on earth where all human-generated social, physical, organizational, spiritual and cultural elements i.e. all human-generated elements are included. The formation of human settlements is generally more dependent on physical conditions. Settlement can be a group of several thousand houses from a single house through which humans fulfil their life goals. But common people consider settlements to mean a group of houses, whereas settlements include slums, kutchas, pucca houses and multi-storey houses.

In rural settlements, the size of houses is small and the means of livelihood are agriculture and animal husbandry. The size of urban settlements can be from small to huge buildings and secondary and tertiary works are abundant in the form of business. Here, the work of primary works i.e. agriculture and animal husbandry is almost negligible. In the establishment of human settlements, especially the location, size, layout of a place, climate, land texture, slope direction, sunlight and sunshine, water supply, fertility of soil, means of living, social security, advancement of science and technology and political security are the factors that contribute especially in rural settlements, while in urban settlements, land structure, water supply, means of transportation and climate, economic conditions like industry, trade, mining, administration and social and cultural integrity and political environment are mainly responsible. Based on these characteristics, many patterns of settlements are formed. Like linear, radial, arrow-shaped, spider-web-like, star-shaped, square-striped, fan-shaped, staircase-like, beehive-like and amorphous etc. In the establishment of rural and urban settlements, there is similarity in most of the elements like climate, land texture, slope, sunlight, social, religious and political security etc., but the basis of division is mainly based on functions.

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### ***14.3 HUMAN SETTLEMENT, RURAL & URBAN (TYPES AND PATTERN)***

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#### **14.3.1 Human Settlement**

**Meaning of Human Settlements-** Human settlements is the cultural scene created by human knowledge in which a tent, a kutchas hut, a kutchas house, a concrete single-storey to a multi-storey house, a single house to a multi-storey house in which humans reside are called human settlements. In this way, human settlements mean the study of houses i.e. human residences, whether the residence is permanent or temporary, old or new, a dilapidated hut or a mansion, all are part of human settlements.

**Identification of Human Settlements-** Among the activities and creations of humans on earth, the most important solid human structure visible from a distance is human settlements. In which the basic fact is house or residence. Human settlements include houses, buildings, shelters, residences bungalows etc. of human residence. All types of houses or shelters are included in them, whether it is a thatched roof or a building made of mud and concrete, in which people of all classes, poor and rich, reside. Whether that residence is of people living in the jungle in human form or of billionaires living in huge cities. In terms of size and status, a human settlement can be the house of only one person or one family, or it can be a small settlement of two or four families or a village or town where many families reside.

The houses settled in it can be located at some distance from each other or can be dense residences adjacent to each other. In this way, settlements are studied separately as rural and urban settlements because urban and rural settlements are built in different shapes based on the predominance of rural activities, population and construction material of houses, based on which human settlements are divided by words like parish, hamlet, village, town, city, metropolis, suburb, urbanized area, major city and city mall. Historically, the broad meaning of human settlements is that the dwellings built since ancient times by man for his livelihood by changing the elements of the natural environment are made of houses made of straw, wood, mortar and stone which provide life to man in the form of permanent residence by giving protection to him from complex environmental elements, violent animals, are termed as human settlements, whether they are caves of ancient times or floating houses and skyscrapers of the present times, all of them explain the historical sequence of human settlements.

Human settlements began with the origin of man. He has been building houses according to his environment since time immemorial, examples of which are being seen at present by humans residing in different parts of the world using different forms and construction materials based on environmental elements. For example, with the discovery of science, the construction of modern concrete and multi-storey earthquake-resistant houses has become the identity of the present world. On the other hand, the houses of tribes such as Baddu, Eskimo, Kyrgyz, Bushmen, Semang, Pygmy Sakai and Semoyedus Chakchi have all been built according to environmental conditions, in which the environment has a special influence. But at present, new inventions of science have started adopting housing construction processes by ignoring environmental elements and local structure, which itself is not suitable from the point of view of humans and the environment. Establishment of human

settlements In the order of settlement development, it is known that various civilizations have worked to develop their residences based on their needs such as farming, animal husbandry facilities, means of livelihood, security, trade and means of transportation.

In human settlements, permanence, population growth, agriculture and animal husbandry development are first seen in those places where the elements of climate have been more useful to humans. Although human settlements are found in various places on the earth even in harsh climate regions, a large number of human settlements have not been established there permanently. There, human settlements are seen as more of a temporary nomadic type. In this way, human settlement describes the place where the activities of human life are conducted, which is the result of individual and collective efforts of humans in human settlement history, where there is a glimpse of human socio-cultural and scientific elements. Humans have developed their settlement sites i.e. residences in different parts of the world according to geographical and social conditions. For example, settlements have been established since ancient times according to the availability of water and flat land near river banks, which are still giving their identity in history as river valley civilization. At present, globalization, urbanization and environmental pollution have given new dimensions to human settlements, which are not being built in an environment-friendly form but in an anti-human form, in which environmental, social and economic aspects are being given less attention, due to which the possibility of occurrence of many types of disasters remains high. Due to population growth, the use of similar shapes and construction materials in the construction of houses in both rural and urban areas has started due to the effect of modernization, in which the effect of the lifestyle of human communities, modern technology, economic development has been seen more, where since ancient times, rural communities have been developing according to the local climate and business elements.

### **Factors affecting human settlements**

Among the factors affecting human settlements, the climate and geomorphological conditions of a place have the greatest influence, which has a major impact on the establishment of both rural and urban settlements. The main factors affecting settlements can be described as follows.

**1. Geographical structure-** Geographical structure mainly includes geomorphological features like mountains, plains, and valleys, which affect the development of human



settlements, industry and means of transport. Due to this it is difficult to develop mountainous areas as compared to plain areas and human settlements are also located far away.

**2. Natural resources-** Natural resources include clean air, water, land, forests and minerals. If all these facilities are available in one place, then dense human settlements are found there.

**3. Economic factors-** Human settlements have been determined from ancient times to the present based on economic activities because big cities have been established in the world due to construction work, trade, transportation, mining, administration etc. in cities, such as Tata Nagar, Bhilai, Pittsburgh, Kyiv, Ahmedabad, Sholapur, Kanpur, Howrah, Johannesburg and Pretoria cities are mainly the result of economic progress, while rural settlements have also expanded and spread due to economic activities that sustain rural life. Because in these places there are employment opportunities, possibilities for trade and industry and continuous stability.

**4. Social and cultural factors-** Social factors mainly include social traditions and customs of a community, education and health services and harmony of the community with each other. Through these activities, urban settlements are born from rural settlements.

**5. Political factors-** Local administration and government policies also help in the development of villages and cities. As in our country, cities and rural areas have been developed through five-year plans. Government policies, schemes, administrative facilities and law and order are included in it.

**6. Technology and Infrastructure-** In the modern scenario, the contribution of technology and infrastructure development has also become an effective factor in the development of human settlements. Transport and communication facilities, electricity and water supply, housing and health facilities etc.

**8. Environmental factors-** Among the environmental factors, protective elements that provide suitable conditions for life, salty conditions and harmful elements like earthquakes, floods, drought, hot and cold winds and additional painful weather events affect human settlements.

**9. Population Density-** The distribution and density of the population also determines the nature of settlements. As in the areas where the population density is high, the human settlement is also more there as compared to the areas with less population distribution, urban areas are the best examples of this. 10. Means of health, education and employment- In

present times, apart from population distribution and density, means of health services, education and employment are also determining the number of human settlements. In the areas where the above facilities are available, the concentration of human settlement is more in those areas.

**11. Industrial and tourism development-** In the areas with industrial development and in the areas where tourism development is taking place, the nature and number of settlements have increasing after the present industrial age, which is a new element in the study of settlements.

In this way, elements are influencing the establishment and development of human settlements, which determine the development and expansion of human settlements.

### **Aspects of the study of human settlements**

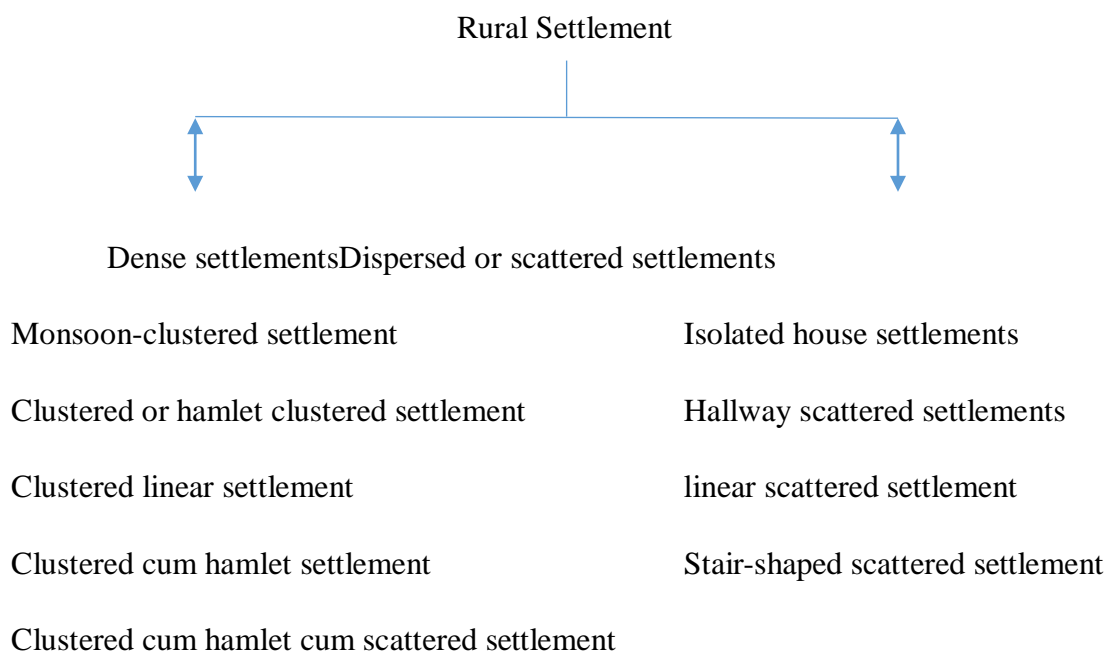
The first aspect of human landscapes is human settlements, which are important in the development of human civilization and permanent settlements. Therefore, the main aspects of human settlements are the shapes of houses, floors of buildings, construction material of houses and the arrangement of water flow in houses. On the second aspect, the types of settlements, location of settlements, pattern, size, function, stages of development and distribution of settlements in the world are studied under human settlements.

### **14.3.2 Rural settlements and their patterns**

Rural settlements are those where the majority of the residents are engaged in agriculture and animal husbandry and earn their livelihood through agriculture and animal husbandry. They are called rural settlements. Apart from this, cutting of forests, fishing, mining, hunting, collecting roots and tubers as livelihood resources are also the identity of rural areas. Rural settlements are smaller than urban settlements and the population density is also less, houses are also far apart and scattered. Rural settlements are determined by the climate, topography, availability of water resources, soil, sunlight, vegetation, economic activities, agricultural system, cropping pattern, local transport system, security, caste system, population, social customs and traditions and political factors of a place. The role of these factors is effective in the establishment of rural settlements.

## Types of rural settlements

Types of rural settlements are not divided according to any fixed scale, but the work of classifying settlements is done based on rural characteristics and regional residential distribution. Types of rural settlements are determined based on the number of houses in a settlement and the mutual distance between the houses, based on which rural settlements are mainly divided into two parts.



**1. Dense settlements-** Dense settlements are also known as concentrated, clustered, nuclear and collected settlements. These settlements are more developed in those areas. Where there is less surface unevenness, adequate water supply, and advanced farming and animal husbandry facilities. This is especially seen in fertile alluvial plains. Dense settlements are again divided into five parts based on their characteristics.

**a) Monsoon clustered settlement** - These settlements are found in monsoon climate areas, mainly in alluvial plains where paddy cultivation is done more, such as Eastern China, Eastern and Southern parts of India, Bangladesh, Irawati, Mekong and Menam plains globally.

**b) Clustered or Purva clustered settlement** - This type of rural settlement are especially found in the doabas of the world, the influence of religion and caste is more visible in these settlements. In India, it is found in the form of hamlets in the western parts of the vast plains, upper parts of China, Delta regions of the Nile River in Egypt, plains of Pakistan and coastal areas of the Mediterranean Sea.

**c) Clustered linear settlement-** These settlements have developed on the banks of the main canal of Kanyakumari, Rajasthan and the Nile River of India, which are spread around canals, rivers and transport routes.

**d) Clustered cum Purva settlement-** This is seen mainly in monsoon regions of South Asia. Influential people have authority at the centre of these settlements, these are also called joint settlements.

**E) Clustered cum Purva cum scattered settlement-** In this type of settlement, along with the main settlement, hamlets and scattered settlements are also connected jointly, which are spread in the deltaic areas of rivers and South Asian regions. In India, this is seen in the southern regions and around farmhouses.

**2. Scattered or scattered settlements-** These are scattered settlements in the form of one or two houses which are located around common religious places, especially churches and mosques in Africa. Apart from this, the identity of these settlements is also that the houses in them are not attached but are located far apart or there is agricultural land in between the houses. Mostly, it is also spread in areas with uneven topography like dense forests, areas with infertile soil, and marshy and desert areas. Apart from this, scattered settlements are also found in agricultural farms in developed countries. For example, these settlements are also located in the desert areas of the United States of America, New Zealand and India, the plateau and high mountain areas of Malwa and the highlands of Ethiopia, Kazakhstan and Turkmenistan. Scattered or scattered settlements are also divided into four sub-parts.

**a) Isolated home settlements -** This type of rural settlements are found in the Prairies of the United States of America, the Pampas of Argentina and the Downs of Africa which are vast and mixed agricultural regions.

**b) Purva scattered settlements-** These settlements are found in a group which is located at some distance. They are divided into the form of curves. This pattern is seen especially in fertile valleys and plateau regions, Chota Nagpur plateau, Kashmir valley and mountain valleys, Basil plateau, North China.

**c) Linear scattered settlement-** Linear scattered settlements are located on the sides of footpaths, rivers, canals and transport routes. In India, they are found in Rajmahal hills, Arunachal, Uttarakhand, Africa, Canada, and Siberia.

**d) Stepped scattered settlement-** These settlements develop around roads and footpaths in mountainous and high mountainous regions. Mainly the human-inhabited high mountainous regions of the world are the main examples.

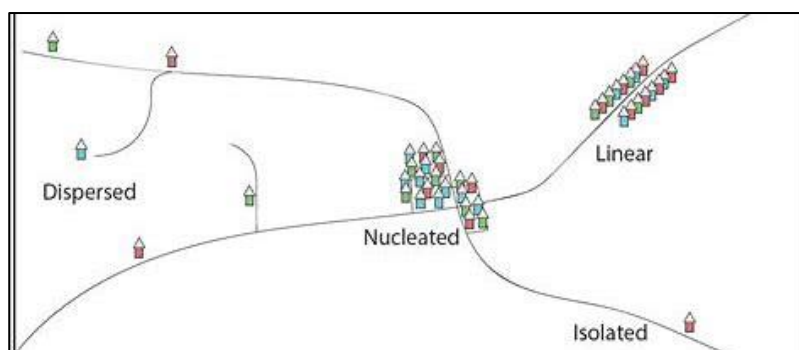
**Patterns of rural settlements-**The geometrical form of the settlements established in rural areas are the settlement patterns, which are determined in the order of the position of the roads according to the shape of the settlements. In the form of these orders, the main patterns of rural settlements are divided as follows.

**1) Rectangular pattern-** Usually, this type of residential pattern is formed in fertile alluvial plains and wide intermountain valleys and placed at right angles to the roads.



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**2) Linear pattern-** This pattern is generally formed by the buildings built on the banks of roads, railway lines and canals. The doors of the buildings are towards the road and canal. Doon Valley of Uttarakhand is the best example of this pattern.



[www.bing.com/images](http://www.bing.com/images)

3) **Chowk-patti pattern**- In the plain areas, the villages start settling at the Chaupala or cross of the meeting of two roads, the streets of those villages match the roads and Chowk-patti-like patterns are formed at the meeting points of two roads.

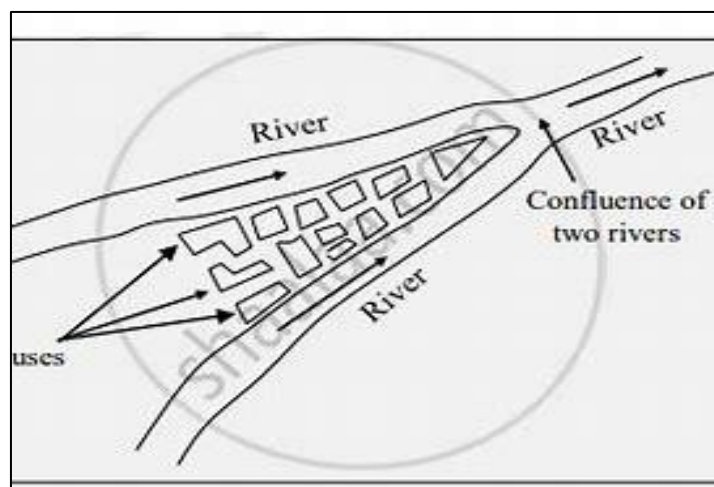
4) **Circular Pattern**- This pattern is made in a circular shape around ponds, wells, lakes, playgrounds, banyan trees, and religious places.



[www.bing.com/images](http://www.bing.com/images)

5) **Arrow Pattern**- The residential structure made in the headwaters or sharp turns of a river is called an arrow pattern.

6) **Triangular Pattern**- This pattern is made in those places where a road meets another road but does not cross it.



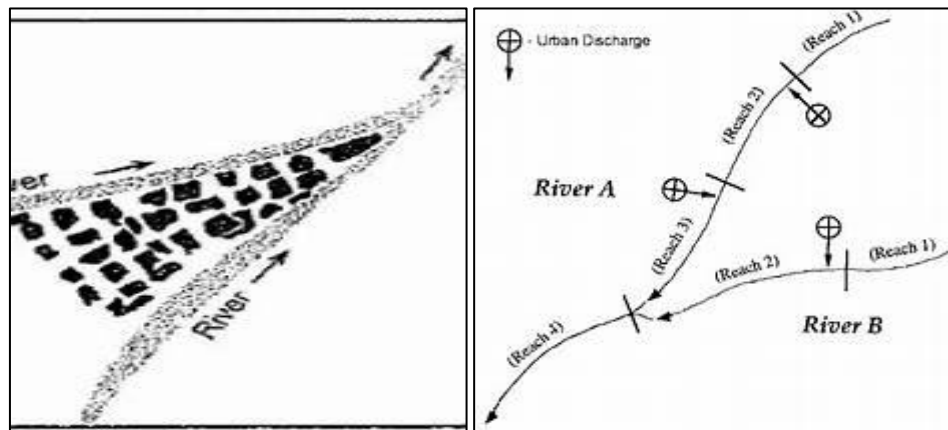
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7) **Terraced Pattern-** The pattern made by the houses in terraced fields on hilly slopes is called terraced pattern which appears in the shape of a ladder when seen from a distance.



[www.bing.com/images](http://www.bing.com/images)

8) **Nuclear Pattern-** The nuclear pattern is a circular road arrangement which ends at a central place.



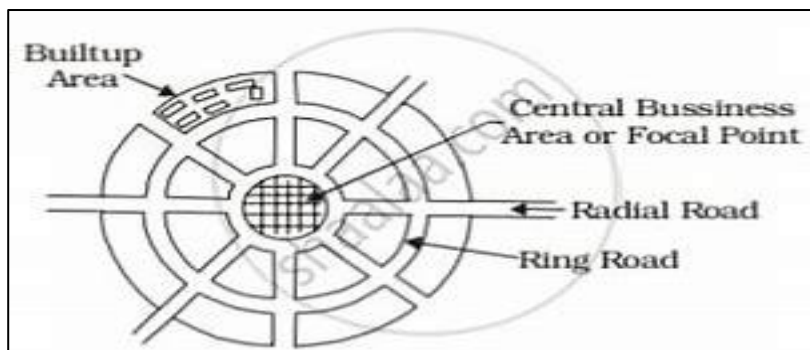
Source: [www.bing.com/images](http://www.bing.com/images)

9) **Star Pattern-** Star rural housing pattern is made in those areas where many roads meet each other.



Source: [www.bing.com/images](http://www.bing.com/images)

**10) Radial Pattern-**A radial pattern is formed in rural areas where many roads meet or where roads go out of the village in many directions. The radial pattern is the speciality of Indian villages. Apart from this, such rural settlement patterns are also seen in Pakistan and China.



Source: [www.bing.com/images](http://www.bing.com/images)

**11) Fan Pattern-** Such villages are settled in the deltas of rivers. Deltas of Mahanadi, Godavari, and Krishna are examples of fan patterns. Apart from this, villages of this shape are also established in the foothills of the Himalayas where there are alluvial fans.

### 14.3.3 Urban settlements and their patterns

The urban settlement is a densely populated area where the population is predominantly in non-agricultural activities. Urban settlements are the centres of industry, trade, administration, security, education, technology, culture and entertainment. The population of urban settlements is engaged in secondary, tertiary and quaternary occupations i.e. construction industry, transport, trade, commerce, higher services and administration. All the above are not found in urban areas. In urban settlements, there is a division of labour and specialisation of work as compared to villages. The construction industry and trade activities



are mainly carried out to earn livelihood among urban residents. Basic facilities like roads, water supply, electricity, education, health services etc. are available which are the centres of economic activities which employ many people. Urban settlements are equipped with various types of structures and facilities in which residential, commercial industrial and entertainment places are prominent. Some of the main characteristics of urban settlements are high population density, developed infrastructure, economic activities, educational and health services, cultural and entertainment facilities, religious and cultural diversity, communication and transport facilities and commercial institutions etc. Thus, all these facilities provide a distinct identity to the cities and are also a symbol of economic progress and social change in a nation. At the international level, the demarcation of urban settlements is based on the census of the country, and the size of the population, and in the second category, the population density with minimum population size, economic basis and administrative facilities have been considered.

### **Factors affecting urban settlements**

The following elements are included in the elements influencing the origin and development of cities in the world.

**1. Physical elements** - Physical elements include land structure and topography, water supply, clean air, climate and other elements of weather which are effective in human health.

**2. Economic elements** - The development of urban morphology is accomplished through economic activities. Thus, it is very important for the elements that drive economic activities to be present in or around the city area, such as raw material for the construction industry, means of power, means of transportation, capital, skilled labour, engineering and technology, i.e. all inventions of science are included in economic elements.

**3. Social and cultural elements-** Social tendencies play an important role in urban settlement and development. They are both helpful and obstructive in development work. The helpful elements are those who work to establish cities by adjusting the dimensions of development, while the obstructing elements are those who do not want to live in cities, like the nomadic tribes of the world who do not want to settle in permanent villages and cities for centuries.

**4. Political elements-** The stability and instability of political elements also contribute significantly to urban development. Developmental works are accelerated only by political stability. If the governments are not stable, then the developmental works also get obstructed.

**Types of urban settlements-** Usually, urban settlements are established only after the development of rural settlements which change into urban shapes. Because, the development of urban settlements progressively takes place from a rural hamlet to Nagar Panchayat, Nagarpalika, Municipal Corporation, Mahanagar and Big City. Just as a big city is formed from a town, in the same way, the form and size of settlements in cities also change. For example, in small towns, the houses are not small and not very high as compared to metros. The following order is formed as a general development of urban settlements.

**1. Village to Town-** This is the order of the rural economy in the beginning in which most of the work is done in farming and animal husbandry. In the center a small town develops which becomes the market of that area and gradually it takes the form of a town and along with the houses, small commercial buildings start getting constructed. Houses and shops are attached.

**2 Town-** It is a mini market in a rural area which has 10-20 shops which provide daily use items at the local level, and gradually after some time it becomes a small urban area.

**3. Nagar Panchayat-** It is an extended form of town where shops and houses are nearby. Construction of single-storey to multi-storey houses starts here. There is dense housing in the centre of the city and an abundance of rural settlements and agricultural land around it.

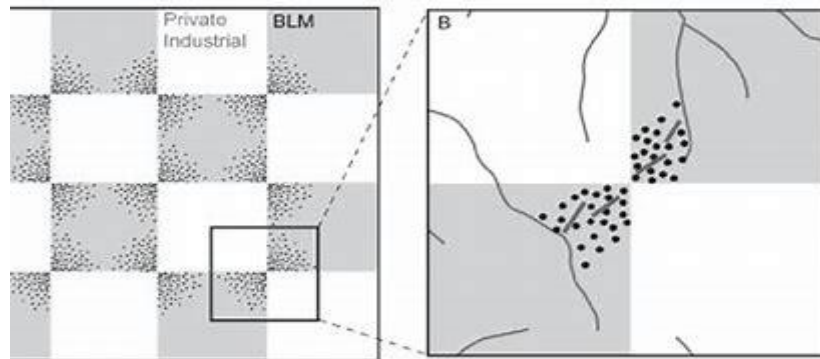
**4. Nagar-** It is an urban settlement formed after Nagar Panchayat in which more than 50 thousand population reside. Secondary and tertiary works are abundant. Along with this, roads are widened and paved drains and lanes are constructed. All the basic facilities available in cities are developed here. **5. Metropolis-** It is the most densely populated area among urban settlements in which more than 1 lakh population resides. The city is divided into many parts. Apart from all types of urban economic activities, wide roads, multi-storey houses and all administrative services, city development is done under a modern master plan.

### **Patterns of Urban Settlements**

The layout and pattern of urban settlements are according to the roads of the city, the main routes coming in and going out of it, railway lines, mutual positions of buildings and their various functions. Urban patterns are established and studied based on the settlement of cities. The main patterns formed by urban settlements are as follows.

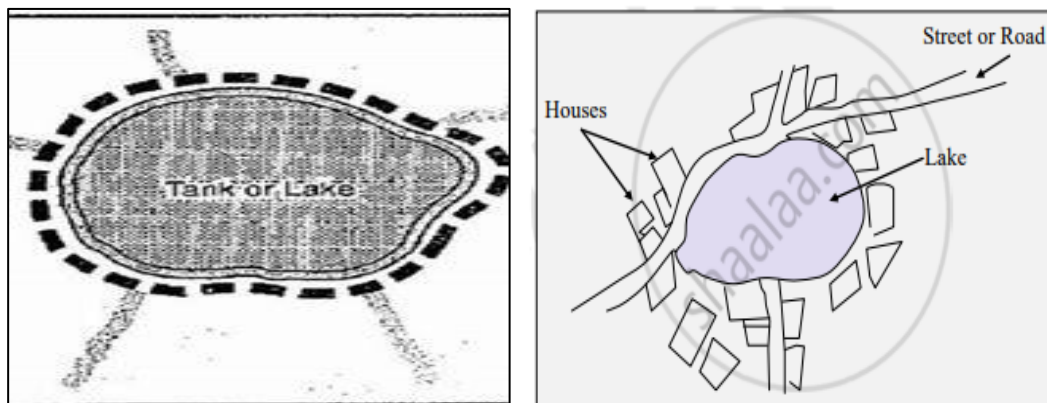
**1. Checkerboard pattern-** This pattern is mainly formed in the roads that meet at right angles and parallel to the roads built inside the city. Particularly its shape is rectangular. In India, cities have developed in this pattern since the Indus Valley Civilization. Similarly, in

the medieval period also, cities with rectangular boundary walls were established for protection from looters and invaders. At present, Meerut, Ambala, Amritsar, Ludhiana, Mathura, Jhansi, and Bangalore are cities with checkerboard patterns.



Source: [www.bing.com/images](http://www.bing.com/images)

**2. Circular pattern** – This urban pattern was built in the form of forts surrounded by boundary walls in European and Asian countries in the Middle Ages for protection from unruly elements and invaders.



Source: [www.bing.com/images](http://www.bing.com/images)

**3. Radial or radius pattern** - This city is formed by settlements built at the crossroads of roads and railways. Which keeps expanding with the help of railways and roads. The cities of Moscow, Paris, Pittsburgh, Delhi, Bhopal and Indore are settled in the radial pattern.



Source: [www.bing.com/images](http://www.bing.com/images)

**4. Star Pattern-** The development of the settlements of the star pattern is first of all of the radial type, which spreads in different parts for a long distance with the help of roads and also starts becoming wider, the shape of which starts appearing in the star pattern.

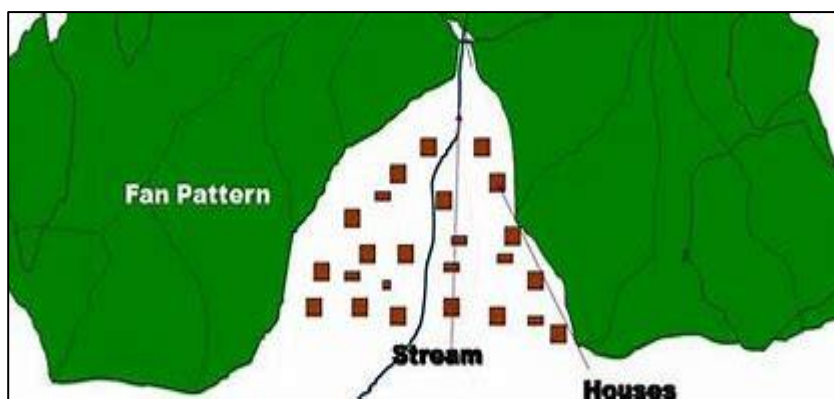
**5. Linear Pattern-** This is the developed form of a village settled on the bank of a canal, which is a row of houses with a wide strip located near the road. As per the convenience of transport, they are built near the road.



Source: [www.bing.com/images](http://www.bing.com/images)

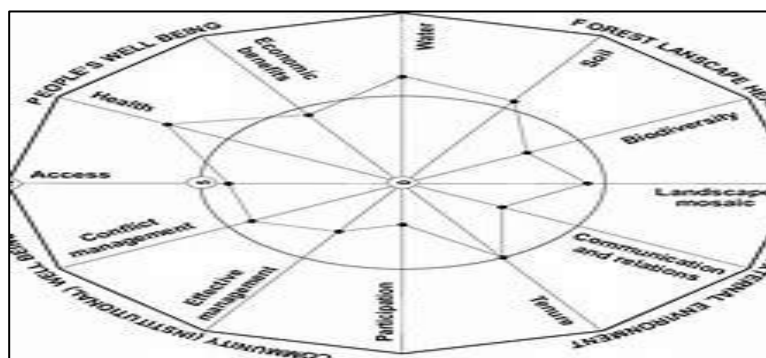
**6. Coastal Fan Pattern-** This pattern is formed in the cities settled near the sea coasts, they spread towards the back region as well as along the coast. From a distance, it seems that not buildings but the wings of birds are spread, Madras city of India is an example of this. 7.

**Open hand pattern-** This pattern is formed on seashores where water has entered many places of the land and the land part enters deep into the sea, there open hand pattern is formed, especially it is found in sea valleys.



Source: [www.bing.com/images](http://www.bing.com/images)

**8. Spider web pattern-** This pattern spreads outwards from Raj Bhavan, temple, church or any spiritual place, where roads are in both radial and circular shape, then spider web pattern is formed there.



Source: [www.bing.com/images](http://www.bing.com/images)

## 14.4 SUMMARY

Human settlements are the study of man-made dwellings and their physical and cultural elements. Human settlement is the man-made cultural landscape where humans reside, where people live individually and jointly. Where all human-made social, physical, organizational, spiritual and cultural elements, i.e. all human-made elements are included. The formation of human settlements is generally more dependent on physical conditions. The settlement can be a group of several thousand houses, ranging from a single house, through which humans fulfil their life goals. Human settlements include huts, kutchra, pucca houses, and multi-storey houses. In rural settlements, the size of houses is small and the means of livelihood are agriculture and animal husbandry. The size of urban settlements ranges from small to huge buildings and secondary and tertiary functions are abundant. In the establishment of human settlements, especially the location, size, layout of a place, climate,

land structure, direction of slope, sunlight and sunshine, water supply, fertility of the soil, means of livelihood, social security, advancement of science and technology and political security are the factors that contribute. In urban settlements, land structure, water supply, means of transportation and climate, economic conditions like industry, trade, mining, administration and social and cultural integrity and political elements are important. Based on these characteristics, many patterns of settlements are formed. For example, linear, radial, arrow-shaped, spider-web-like, star-shaped, square-striped, fan-shaped, staircase-like, beehive-like and amorphous patterns are formed. Thus, human settlements are the cultural elements created by human knowledge which are a journey from the time when humans lived in caves to the multi-storey buildings built in the modern cities of the present world, which assimilate the local characteristics, cultures and scientific methods and are capable of protecting humans even during natural disasters.

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### **14.5 GLOSSARY**

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Human settlements	Human-made residences (houses) which provide permanent life and security to humans from nomadic life.
Cultural landscape	The houses, cities, roads, industries and other elements created by human knowledge which are visible to us are called cultural landscapes.
Rural settlements	Human settlements are engaged in agriculture and animal husbandry activities and the number of houses is far apart and agriculture is more.
Urban settlements	Human settlements are engaged in secondary and tertiary activities leaving the primary work, i.e. living an urban life.
Mobile elements	The routes of arrival in rural and urban areas and economic activities are included in the mobile elements.
Dense settlements:	Those settlements where the houses are connected and are of a multi-storey type and the population density is high, then they are called dense settlements.

Settlement Historical Sequence	The development of modern houses and cities from the time of humans living in caves to the present time is known as the settlement historical sequence.
Livelihood Resources	Primary means of living farming, animal husbandry, hunting and economic activities etc.
Geomorphology	The relief structure present on the surface of the earth determines the form and development of settlements.
The primary aspects of settlement	The shapes of houses, floors of buildings, construction material of houses and water flow of houses are included as the main aspects of human settlements.
Monsoon clustered settlement	Those settlements are mainly found in alluvial plains in areas with monsoon climate where paddy cultivation is more.
Purva settlement -	Rural settlements which are especially found in the doabs all over the world.
Scattered settlements	In the form of one or two houses are located around common religious places, especially churches and mosques in Africa.
Linear Pattern	The pattern formed by the buildings built along the road, railway line and canal is called linear pattern.
Terraced Pattern	The pattern of houses built in terraced fields in hilly areas is called the terraced pattern.
Physical Elements	Physical elements include elements of land structure and topography, water supply, clean air, climate and weather.

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#### **14.6 ANSWER TO CHECK YOUR PROGRESS**

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- Settlements are a branch of human geography in which man-made dwellings and their physical and cultural elements are studied.
- Settlements include a group of houses ranging from a single house to thousands.

- In rural settlements, the size of houses is small and the main source of livelihood is agriculture and animal husbandry.
- Human settlements are the cultural scene created by human knowledge which includes a tent, a kutcha hut, a kutcha house, a concrete one-storey to a multi-storey house, and single and multi-storey houses.
- Identification of human settlements is the simplest identification among man-made activities and creations on earth.
- Natural resources include clean air, water, land, forests and minerals.
- Dense human settlements in the world are found where the availability of natural, cultural and economic elements was easy at the time of initial settlement.
- As a second aspect of human settlements, the type, location, pattern, size, function, stages of development and distribution of settlements are studied.
- The square-strip pattern is formed by settlements at the meeting or crossing of two roads in plain areas.
- The circular pattern is formed in a circular shape around ponds, wells, lakes, playgrounds, banyan trees and religious places.
- The fan pattern is formed by villages settled in river deltas.
- An urban settlement is an area of dense population where the population is more in non-agricultural activities.
- A metropolis is the most densely populated area among urban settlements in which there are settlements of more than 1 lakh population.
- The coastal fan pattern is formed by cities located near the sea coasts. □Open hand pattern is found on sea coasts where water enters the land (places with ports).

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## **14.8 TERMINAL QUESTIONS**

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### **1- Long Type Question**

- Q.1-** What do you understand by settlement, identification of human settlements, and describe in detail the factors affecting human settlements?
- Q.2-** What do you understand by human settlement; describe in detail the types of settlements and their patterns?

### **2- Short Answer Questions**

- Q.1-** Explain the meaning of human settlements?
- Q.2-** What are the main indicators for the identification of human settlements?
- Q.3-** What effect does geographical structure have on settlements?
- Q.4-** What do you mean by natural resources?
- Q.5-** How does technology play a role in settlement infrastructure?
- Q.6-** What are the main aspects of human settlements?
- Q.7-** What are rural settlements?
- Q.8-** Describe the main types of rural settlements.
- Q.9-** What are scattered settlements?
- Q.10-** Where are rectangular patterns formed?
- Q.11-** What do you understand by urban settlements?
- Q.13-** Explain the main patterns of urban settlements?
- Q.14-** Describe the main factors affecting urban settlements?
- Q.15-** Explain the main types of urban settlements?
- Q.16-** Where is checkerboard patterns made?

### **3. Multiple Choice Questions**

- Q.1-** Settlement geography is a branch of?

(A) Physical Geography

- (B) Human Geography
- (C) Economic Geography
- (D) Historical Geography

**Answer: B**

**Q.2-** On which factor is human settlement most dependent?

- (A) Physical
- (B) Cultural
- (C) Social
- (D) Political

**Answer- A**

**Q.3-** Settlements include?

- (A) Single House
- (B) Multi-Number House
- (C) Collective House
- (D) A and B above

**Answer: D**

**Q.4-** What is the main characteristic of rural settlement identity?

- (A) Farming and animal husbandry work
- (B) Wage work
- (C) Nomadic life
- (D) Temporary house

**Answer: A**

**Q.5-** What is the main characteristic of urban settlement identity?

- (A) Prevalence of primary functions

- (B) Prevalence of secondary functions
- (C) Prevalence of tertiary functions
- (D) All of the above b and c

**Answer: D**

**Q.6-** Factors affecting human settlements include?

- (A) Physical factors
- (B) Economic factors
- (C) Technical and technological factors
- (D) All of the above

**Answer: D**

**Q.7-** Rural settlements are mainly divided into how many parts?

- (A) Two
- (B) Three
- (C) Five
- (D) Seven

**Answer: D**

**Q.8-** The ideal examples of isolated home settlements are?

- (A) Prairies of the United States of America
- (B) Pampas of Argentina
- (C) Downs of Africa
- (D) All of the above

**Answer: D**

**Q.9-** In which parts are the terraced scattered settlements located?

- (A) Mountainous and high mountainous regions
- (B) Plain regions

(C) Coastal regions

(D) Desert regions

**Answer: A**

**Q.10-** Rectangular patterns are found in?

(A) Fertile alluvial plains

(B) Mountainous regions

(C) Plateau regions

(D) None of the above

**Answer: A**

**Q.11-** Linear patterns are formed in?

(A) Road sides

(B) Near railway lines

(C) Around canals

(D) All of the above

**Answer D**

**Q.12-** Spider web pattern is formed by combining which patterns?

(A) Radial and circular

(B) Linear and square strip

(C) Fan shaped and nuclear

(D) Spider web and rectangular

**Answer: A**

**Q.13-** Square strip like pattern is formed in?

(A) At crossroads in hilly areas

(B) At the meeting points of two roads in plain areas

(C) Around the lake

(D) None of the above

**Answer: B**

**Q.14-** Which of the following is not included in urban development?

(A) Rural hamlets

(B) Nagar Panchayat and Nagarpalika

(C) Municipal Corporation and Mahanagar

(D) Developed village

**Answer: D**

**Q.15-** The checker board pattern is mainly concentrated on?

(A) On right angled roads built inside the city

(B) Around religious places

(C) At the meeting points of rural footpaths

(D) All of the above

**Answer: A**

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**UNIT15 - URBAN MORPHOLOGY, FUNCTION,  
CLASSIFICATION OF TOWNS**

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**15.1 OBJECTIVES**

**15.2 INTRODUCTION**

**15.3 URBAN MORPHOLOGY, FUNCTION, CLASSIFICATION  
OF TOWNS**

**15.4 SUMMARY**

**15.5 GLOSSARY**

**15.6 ANSWER TO CHECK YOUR PROGRESS**

**15.7 REFERENCES**

**15.8 TERMINAL QUESTIONS**

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### ***15.1 OBJECTIVES***

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- To do a physical analysis of urban structure.
- To understand the importance of city functions and services for the urban population.
- To study the functional and mutual relations of urban areas.
- To create understanding among learners about urban development, environmental and social impacts.

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### ***15.2 INTRODUCTION***

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Urban morphology is generally the study of the formation processes of urban settlements, which is a sequential study of the journey of transformation of a city from a village to a metropolitan area and its various forms. In general terms, urban morphology is the geomorphology of the city, which mainly includes the study of the elements that give shape to the urban landscape, urban infrastructure development studies, urban land use patterns and problems of urban development. Urban morphology was first studied for the urban development that took place in Central Europe at the end of the 19th century, after which urban morphology developed rapidly in the first three decades of the 20th century, which was named the golden age of urban development. It was from here that geographers expressed their concern towards urban development and emphasized the implementation of many principles and plans of urban development. In the second half of the 20th century, due to intensive research and study by geographers and architects, work on urban development and morphology at the global level began to be by the current demands.

Urban morphology is the science of theories, concepts and methods to address the physical form of cities, which includes the analysis of their impact on the social, economic and environmental aspects of urban life. Thus, theories related to the internal and external structure of cities are known as urban development theory or morphology, which includes the location, shape, size and pattern of cities, architecture of construction of houses, functions of cities, economic occupations of the population living in it, social systems, traditions, cultures and urban administration, urban historical events and urban transition etc. That is, studying the urban structure physically, analysing the layout of buildings, roads, parks and other infrastructure, studying the historical and cultural aspects of urban development, improving planning for city improvement and gathering the necessary resources, knowing the effects of

urbanisation and implementing and evaluating the policies and plans for sustainable and inclusive city development is the subject matter of urban morphology.

In essence, urban morphology is a study related to the analysis of the physical form and structure of cities and towns, which studies various urban elements, patterns and changes in city development. The functions of cities mean providing amenities like housing, business, educational institutions, industry, health facilities, construction of hospitals, means of entertainment and transport etc. to the people living in the city and providing a modern look to the cities by working on new plans for the development of cities and getting rid of the problems of cities, finding the works of urban development, identifying services and analysing the functional interrelationships of urban areas are the functions of the city. Similarly, the classification of cities is a complex subject because the urban population is engaged in different types of work, yet it is necessary to classify cities, which is mainly based on the function of the cities, urban population and economic activities.

Generally, the classification of cities is done based on size, population, economic activities and administrative importance of the cities, in which the characteristics and challenges of the cities are also taken into consideration, based on size, small, medium and big cities and based on population, cities are divided into village, town, city and metropolis and based on work, industrial cities, business cities, tourist cities, religious cities and educational cities, while based on economic activities, they are divided into agriculture-based cities and service based cities. Thus, urban morphology, city functions and classification of cities are integral parts of urban studies which help in understanding the structure, function and development of cities and also work on important principles like forecasting the direction and possibilities of city development, using new technology and research work for building modern cities, making concrete strategies for improving development management of urban areas and solving urban problems.

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### ***15.3 URBAN MORPHOLOGY, FUNCTION, CLASSIFICATION OF TOWNS***

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#### ***15.3.1 Urban Morphology***

**Meaning and Definition of Urban Morphology-** In urban morphology, the word morphology is made up of two words of the Greek language, morphe and logos, morphe means shape and logos means study, i.e. the science that studies urban shape. In geography,



this word was first derived from the study of urban settlements on the surface of the earth. Dudley Stamp has clarified in its explanation that "it is the science of form and structure and is related to the development that affects the form". Therefore, urban morphology is an urban structure which analyzes the shape of cities, their development, and the characteristics of the physical structure, which includes the study of city buildings, roads, public places and other urban elements. That is, the external form of the buildings situated in the city and their location which will attract our attention, at some places the houses are of one storey, at some places they are as high as the sky, at some places the houses are situated on the sides of the roads, at some places factories are situated in the middle of settlements, at some places shops are spread till residential areas, at some places there are slums and heaps of garbage, all these facts reveal the urban morphology.

**Dickinson** has clarified the definition of urban morphology in this way "Morphology is related to the plan and built-up area of the city, its study and observation is done in the context of the development, origin and function of the city".

According to **R.E. Murphy**, the meaning of urban morphology is "In morphology, the elements related to the form of the urban area such as the arrangement of streets and roads, the form of buildings and the entire urban landscape are studied".

**Scope of Urban Morphology-** Urban morphology is the science that studies the construction of human settlements and the processes of construction materials and change, which is a display of the structure of the urban area, town, city or metropolis, which mainly includes the physical form of the city (roads, housing, drains, parks, footpaths, streets and drainage). In urban morphology, special attention is paid to how the physical form of the city is changing over time and how one city has different characteristics from another city. Goethe was the first to start writing about urban morphology in 1790, but urban morphology originated when Lewis Mumford, James Baines and Sam Wass studied urban morphology sequentially.

Urban morphology is generally a scientific means of knowing the environmental level related to the design of the city. This includes the buildings established and being replaced in the city, transport routes, urban patterns, streets and open spaces and human activities, as well as is the modern and simplest medium to understand the underlying structures and processes of the road and provides relief from the problems arising in the urban area. Thus, there are some factors affecting urban morphology, in which the main factors are explained as follows.

## Factors Affecting Urban Morphology

**1. Natural factors** - Natural factors especially include the structure of the land and other natural elements, which include the settlement position of a city, physical structure in the settlement place such as plain land, mountainous land, river banks, sea shores and desert areas etc.

**2. Cultural factors** - Cultural factors include the effects of human society, caste, religion culture, customs and thoughts on the formation of the city. All these elements act as the centre of urban development around which the structure of the city develops.

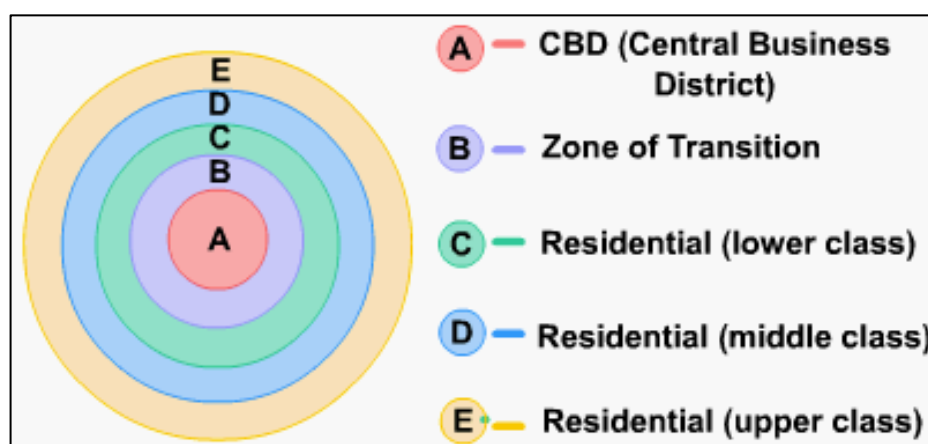
**Types of urban morphology-** Types of urban morphology are specifically divided into two parts **1-** Unplanned morphology **2-** Planned morphology

**Unplanned morphology-** In unplanned morphology, no attention is paid to the development of cities, drainage, streets, roads, parks, intersections, street lights and recreational places i.e. on the plan of city planning. Development work is not done under any planned framework in the city, hence there is no layout of the city like Old Delhi, Saharanpur, Meerut and Kashi, all old cities are included in this category. **Planned morphology-** In planned morphology, before settling a city, the physical conditions of the city are assessed and attention is paid to all the dimensions of city development such as the condition of houses, direction of doors, wide roads, parks, recreational places, footpaths, drains, lights, drinking water management, health centres and educational institutions and sewage lines are mainly included and keeping these points in mind, cities are settled in which the possibilities of urban problems and environmental damage are seen to be less. Some of the major cities settled under planned morphology are New Delhi, Chandigarh, Gandhinagar, Bhubaneswar, Canberra, Washington D.C. Chicago etc.

In the urban morphology development sequence, the present morphology of the city has to pass through a long time and many sequences of events to be formed. Just as an embryo attains old age after birth, in the same way, the city also gives final shape to its urban morphology from its embryonic stage to old age. In this way, many scholars have contributed to urban morphology, in which most of the work has been given by Burgess, Hoyt, Harris and Ullman in the form of urban morphology theory.

## Theories of Urban Morphology Development

**1. Concentric Ring Theory** - For the explanation of urban morphology, the concentric area model was first propounded by Burgess in 1923 in a case study based on the city of Chicago. His model expands outwards from the central business district. A common annular pattern of cities is changed by the land structure, roads and other such factors. Each new belt establishes its new settlements with expansion in the next belt, hence the expansion of the city is mainly formed in a radial pattern. To explain the concentric area model, Burgess divided the area into a central business area, light manufacturing industry on a bulk scale, low residential area, middle-class residential area, high-class residential area, heavy manufacturing industry, outer merchant belt, transistors belt etc. Urban morphology was mainly divided into five parts, which are as follows.



Source: [www.bing.com](http://www.bing.com)

**1. Inner Central Business Belt-** This is the place where the most crowded area of the city is located, which is the heart of the city, which is called the Central Business Area (CBD), which is the most important place of any city, from where the activities of the entire city are conducted and facilities are provided to the neighbouring areas and other cities. There are big business centres in this belt.

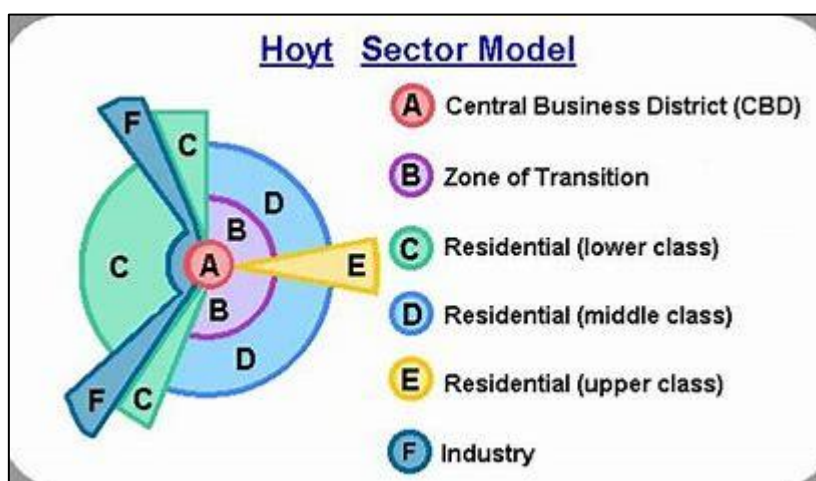
**2. Transition Belt-** This is the second belt of the city, which is known as the Transition Area. This is the area around the CBD, which has the tallest buildings in the city, hotels, administrative buildings and business establishments. This area is a retail trade area and a business entertainment area. This belt is the area between the industrial and business areas, which is encroached upon by both of them.

**3. Labour Residential Housing Area-** This area consists of residences of workers working in industries. These people do not like to live in the transition zone but live near the inner part of the city so that they can easily reach the city for their work.

**4. Superior Residential Housing Area -** This zone is spread widely outside the worker's residential housing zone where people engaged in business activities live, in which owners of small business establishments and people working in them reside.

**5. City Access Zone -** This is the outermost zone of the city which acts as an access zone with the sub-city areas and subsidiary cities, some scholars also consider it as the housing zone of workers working in the city.

**2. Sectore theory-** This theory of urban morphology was propounded by a person named Homer Hoyt in 1939. This theory was based on the study of 142 American cities in which the city has been divided into five parts.

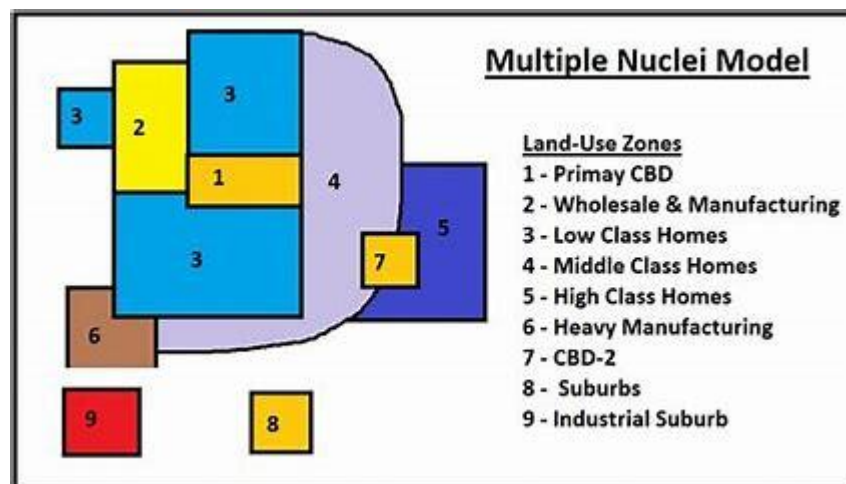


Source: [www.bing.com](http://www.bing.com)

**1. Central Business District -** This area is the centre point of the city which is known as CBD. This area itself works to conduct the urban works of the entire city. All the areas are directly connected to this belt.

**2. Wholesale and light manufacturing area/Zone of transition-** This belt is the residence of those people who do wholesale trade of goods produced by manufacturing work and are established in small industries.

- 3. Low-class residential housing-** This is the housing belt of low-class people working in industry and markets, which is more crowded.
- 4. Middle-class housing-** This belt comes after the low-class working class in which the secondary class workers working in industry and other fields reside and other small business activities are carried out here.
- 5. High-class housing-** This is considered to be the last belt of the city in which there is a predominance of 4th and 5th-class jobs industrialists and other high-class people. Here the lanes leading to the houses are wide, drains are clean, and parks and open spaces are in abundance.
- 3. Multiple Nuclei Theory -** The multiple nuclei theory was propounded by Harris and Ullman in 1945 after studying the cities of America. They clarified that apart from the central business area, many small centres are established in the city whose centres have their influence in another belt. Harris and Ullman have divided the urban morphology into nine main parts.



Source: [www.bing.com](http://www.bing.com)

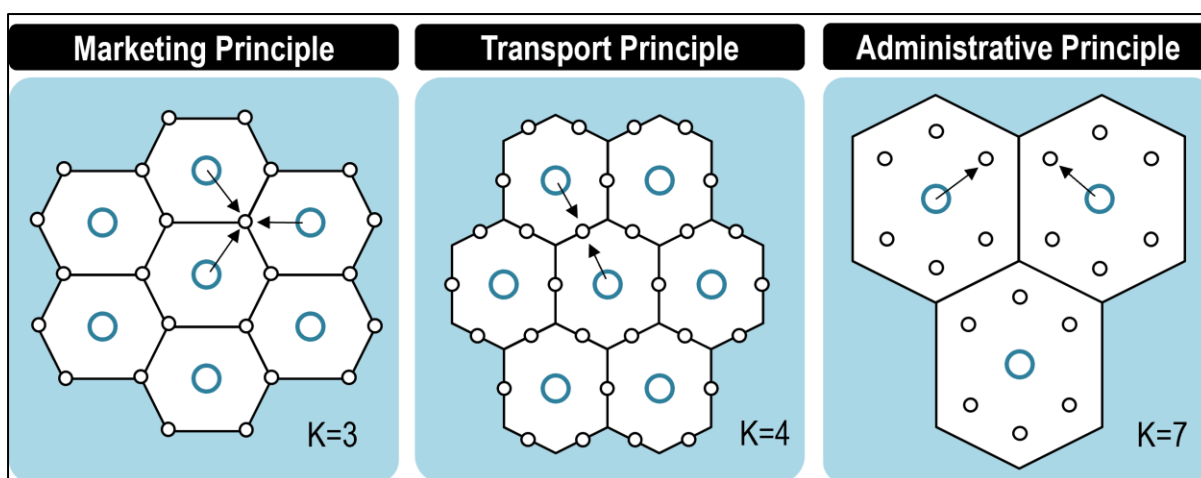
1. Central business district
2. Wholesale trade and light manufacturing industry
3. Lower residential category
4. Medium residential category
5. Higher residential category
6. Heavy manufacturing area
7. Outer business area
8. Residential suburb
9. Industrial suburb

Based on the above categories, the form of a city is formed which does not spread around a centre but settles in different directions which are the suburbs of that main city.

**4. Combined growth theory**-Based on urban settlement location, Garrison propounded this theory in 1962 after studying Kolkata city of India and revealed urban morphology like the above theories.

### 5. Central location theory

This theory also explains the settlement of population in urban morphology which was propounded by Christaller based on urban settlements of South Germany. Theoretically, the business area of a central place is not circular but hexagonal which is based on a geometric principle which explains the urban population and land use in the entire area of a city. He had given three types of rules in city planning.



Source: [www.bing.com](http://www.bing.com)

1. Market rule K-3 2. Traffic rule K-4 3. Administrative rule K-7

Therefore, urban morphology is mainly focused on the city structure in which work is done on the past, present and plans of the city, along with this efforts are made to improve the unorganized and distorted forms of the cities and the city should be developed from an environmental point of view as well as a detailed study of the settled cities by the long-term plan is a part of urban morphology. Along with this, it also analyzes the social, cultural and economic parameters of the city, due to which a model is prepared for the solution of urban complexities, which makes the historical stages of land use useful for humans in the process of urban development. Therefore, urban morphology is the analysis of the physical structure of the city, its construction, development and adjustment of the changes taking place over time, which includes the study of the city's buildings, streets, parks and other urban elements, historical development of cities, changes in the urban structure over time, redevelopment, distribution of local urban areas, study of social, economic and cultural aspects, functional

relations of cities such as residential, commercial, industrial and recreational areas, city planning, map making for new city establishment etc. are the elements mainly included in urban morphology. Thus, in the study of urban morphology, it is found that urban morphology is represented in different forms.

### **15.3.3 Functions of cities**

The functions of cities depend on the population structure of a city. Based on the urban population in the world, many types of functions have emerged and are linked to the functions of cities. From the history of the world urban population, it is known that the burden of the urban population in the world is at its highest level every decade as it was 33 per cent in the year 1960, 38 percent in 1971, 48 percent in 2001, and 56.9 percent in 2023. Due to the rapid increase in population, the working area of cities is also increasing. Based on facilities available in cities, migration from rural areas is transforming cities as well as Nagarmals satellite towns and small cities. This period started in the last decades of the 18th century i.e. with mechanization, in which due to a reduction in physical labour, rural migration started taking place in urban towns, cities and other urban areas and due to increased dependence on industries, industrial towns and commercial towns developed. With the establishment of commercial centres, offices of administrative work, banks, county courts and other essential urban sub-areas started developing here.

City functions refer to the use and functions of various urban areas, which include social, residential, administrative and productive activities, as well as temporary movement of daily workers. Generally, urban functions are classified based on the work done in a city. At the global level, the functions of the city mainly include the economic, social shelter, education, health services, transportation, cultural, religious, employment and innovation etc. Urban geographers need to analyze urban functions because the most important fact of the internal aspect of cities is the function of cities. These works are located in different areas of the cities, and the most impact on the works of the cities is the settlement condition of the city. Along with this, the people whom the city serves through these works also have an impact on the city, because these works are the forces that run the urban life. Through the analysis of the works of the city, the social, economic and political structures and systems of the city are observed. The population living in the city is related to the works of the city. With the increase in the population of the city, the number of works also increases and a mixture of many types of works is found in it.

The functional classification of cities is a complicated subject. People with many types of economic occupations live in a city, for example, some people of Uttarakhand are engaged in business activities, some are engaged in construction industries, some in administrative work, and some in transport and trade work, but still, the development of a city is taking place based on the work or business that is dominant in that city. In this way, the functional structure of cities expands based on the functional characteristics of the city. Therefore, the functional classification of cities is used by a region and nation to divide cities based on their economic and social functions. Which helps in understanding the functional role of cities.

**History of functional classification of cities-** The functional classification of cities started at the beginning of the 20th century when cities were becoming a major aspect of economic and social development. Along with this, urban geographers helped in understanding the dynamics of urban development and organisation patterns with the concept of functional classification and since then till the present, all the work has been done in a planned manner in the city. In India, New Delhi, Chandigarh Gandhinagar, Greater Noida, and Bangalore are the latest examples of smart cities of every state which are being established based on pre-determined plans and priority of work. Classification of the functions of cities is divided into many ways in which the main functions are divided into two parts (primary and secondary functions).

**1. Primary functions of the city** - The secondary functions of the city include those functions which a city provides to its citizens in the form of daily services. Apart from this, it also provides useful goods and services to other areas which are located many kilometres away from the rural environment or the city. Secondary works mainly include milk, vegetables, fruits, grains, health services, schools and parking, playgrounds, street lights and means of communication and transport etc. These facilities are provided by people engaged in different works in the city.

**2. Secondary works of the city-** The main works of the city include works related to city development, administration and economic works which are based on some special planning, which are described as follows.

**1. Administrative work-** As administrative work, whether it is a town, city, metropolis or any urban unit, they all work as administrative centres in their respective areas



in which government offices, courts and administrative institutions are built which provide city services to its citizens.

**2. Industrial work-** To get work done at the administrative level for industrial development and establishment of new units in the urban area and its surroundings for employment in the city and to provide facilities to the industries established in the city.

**3. Commercial work-** Due to the abundance of non-agricultural work in the city, trade and related works which are wholesale and retail trade such as trade of agricultural grains, fruit and vegetable markets, market cloth, food grains and other daily use items etc.

**4. Cultural work-** In cultural works, the city provides facilities to the citizens from time to time in festivals, fairs and other religious ceremonies celebrated by people of different castes and religions. That facility is provided in the form of economic, administrative and security work.

**5. City planning works-** Under city planning works, all those works are done which solve the problems occurring in the city and are environmentally friendly and work to settle new cities according to a prescribed outline and special attention is given to the works of research and innovation for the development of cities. Apart from this, urban land use is done according to the scientific method. The functional classification of cities has been divided in different ways by many scholars in the world, among which M. Orosseau, Harris and Howard Nelson are prominent.

### **Classification of functions of cities by M. Orosseau**

**1. M. Orosseau** in 1921 divided the city into 6 main categories and 28 sub-categories based on its functions, administrative, defense, cultural, production-city, communication and entertainment etc.

**2. Harris's classification** - Harris divided the functions of cities based on multi-angle functional urban activities, taking the cities of the United States as the basis, into nine categories - manufacturing, retail, miscellaneous, wholesale, transportation, mining, educational, resort and others, which use metropolitan cities as functional units.

**3. Nelson's Classification**-Nelson published the functional classification of cities in 1955 in the Geography magazine through a study called Service Classification of American Cities, which considered industrial groups as the basis for the division of functions. Apart

from this, the population of 1950 in metropolitan areas was also listed and the functions of cities were divided into 9 parts like Harris, in which manufacturing, retail, professional, wholesale, personal service, public administration, transport, communication, finance, insurance, real estate and mining were described as the main functions.

**Functional Division of Indian Cities-** Functions have been divided not based on Indian cities and their functions but based on urban population, which includes administrative towns, industrial functions, transport functions, commercial functions, retail and mining.

In conclusion, the functions of cities are not considered to be stable because they keep changing based on time and place. Due to the dynamic nature of cities, changes keep coming in urban functions as per the situation. For example, when small cities grow in a big form, then along with the population change, there are changes in industry, business, administration, transport and other functions because it is necessary to bring changes in other functions to meet the needs of the increased population. The main function of the city is to develop the city holistically and to make it distinct from the rural areas, which also includes the development and expansion of the city.

### **Methods of functional classification of cities**

With the 18th and 19th centuries, city development and planning work started moving towards the path of progress, and the need for new methods along with a functional classification of cities started being felt for which many geographers and architects gave their suggestions. After many attempts in the functional classification of cities, mainly three methods started being adopted.

1. Supervision method or traditional method
2. Supervision and statistical method
3. Pure statistical method

**1. Supervision or traditional method-** This method is also called the qualitative method. In this method, supervision is based on feeling and assessment and supervises the city's work.

**2. Supervision and statistical method-** This method divides the city's work by a mixture of both qualitative and quantitative methods, through which correct information of functional analysis is also obtained.

**3. Pure statistical method-** This method is completely based on data. Many arithmetical parameters are determined for each work. These parameters are fixed, definite, reliable and easily understood.

### 15.3.3 BUSINESS & COMPOSITIONS

#### Classification of Cities

Generally, cities are classified based on the characteristics of the city, such as the settlement location and status of the city. Apart from this, some such variable facts like size of population, access to cities, number of people living in the city, ethnic structure and functions of cities are mainly made the basis of division. At present, various criteria are being adopted for the classification of cities, such as population, economic activity, administrative importance, location of cities predominance of business and functions etc. Because there is no national and international standard for morphological division of the city. Although the stages of urban development are divided into different forms in different countries based on population, there is no universally accepted global standard for the classification of cities at present, yet for the convenience of study, cities are divided as follows.

**1. On the basis of population-** It is divided into towns, Nagar Panchayat, Nagar Parishad, Nagar Nigam, metropolitan area metropolis etc.

**1. Town-** It shows the transformation of a rural area into an urban area. In which more importance is given to the work rather than the population.

**2. Nagar Panchayat-** Nagar Panchayat is the second largest administrative unit of the city division whose population is found between 10,000 to 20,000.

**3. Nagar Parishad-** The population in this city is between 20,000 to 1 lakh which shows the nature of urbanization.

**4. Nagar Nigam-** This urban area is formed when the population is more than 1 lakh, in which excessive crowding and planned-unplanned settlements start developing at a rapid pace.

**5. Metropolis-** When the population of a city exceeds 10 lakh, it is known as a metropolis and the urban area gets divided into many sub-cities. 2. Cities based on economic activities.

People engaged in business in cities who are engaged in secondary, tertiary and quaternary jobs are divided into different areas such as industrial cities, commercial cities, agriculture-based cities and tourist cities.

**1. Industrial cities** - Those cities which have developed after industrial development, for example, Jamshedpur, Bhilai and Bokaro cities have developed after the establishment of industries in India.

**2. Commercial cities** - Those cities which develop through commercial activities are called commercial cities, such as Mumbai, Chennai, Ahmedabad, etc.

**3. Agriculture-based cities** - When a city develops through agriculture and agriculture-based raw materials, especially cities built around vegetable and grain markets are included in this category.

**4. Tourist cities** - Those urban areas which have developed based on tourism activities, such as Nainital, Kullu-Manali, Shimla, Darjeeling Agra, Jerusalem, Mecca Medina, Gaya, Haridwar, etc.

**3. City based on administrative importance-** Capital City- The cities developed as the capital of a state or a nation, district headquarters and tehsil complexes are included in this category.

## 5. Classification of cities based on location

This classification is done not based on the physical features of cities but based on the place of settlement of cities, that is, in which geographical region the cities are physically located. The description of the main types of cities is as follows.

**1. Lake coastal cities-** These cities are located around most of the lakes in the world, for example, the lake region of the United States of America, Chicago, Gary Cleveland, Buffalo Detroit and Winnipeg Lake in Canada, Kashmir Lake, cities located near lakes in Nainital district etc.

**2. Port cities-** The cities built based on facilities for ships to stop and unload goods on the seashore and employment activities are called port cities, for example, Mumbai, Kolkata, Chennai, Tokyo, London, New York, and Shanghai in India have developed as cities due to the establishment of ports.

**3. Plain cities-** The cities formed by the settlement of humans in the plains and river banks formed by the rivers are known as plain cities, such as Berlin, Asas, Tashkent, Jaipur, Ludhiana, Meerut Hyderabad etc.

**4. Riverside cities-** The cities situated on various river banks of the world are called riverside cities. New York, Paris, London, Haridwar, Hyderabad, Kanpur, Varanasi, Patna and Howrah are examples of major riverside cities.

**5. Plateau cities-** Due to the plateau being a storehouse of mining, many cities of the world have developed on plateaus, such as Bangalore, Pune, Hyderabad, Kyoto, Nagpur etc.

**6. Mountain towns-** The towns situated at the meeting point of mountains and plains are known as mountain towns. It is spread in both plains and mountains like Kathgodam, Kotdwar, Dehradun, Tanakpur, Atlanta, Greenville, Charlotte, Hoshiarpur, Chandigarh, Jammu and Kashmir, Pilibhit etc.

**7. Waterfall towns-** The towns settled based on waterfalls, which are mainly situated near the waterfalls emerging in mountains and plateaus are called waterfall towns, like Trenton, Newark, and Philadelphia etc. are examples of waterfall towns.

**8. Oasis towns-** These towns develop in deserts in areas having water availability like Bajema, Beni Abbas, Bikaner, Barmer, Jaisalmer etc.

**9. Mountain towns-** The towns settled due to the climate, physical structure and natural beauty found in some special mountains are called hilly towns. Srinagar, Shimla, Nainital, Darjeeling, Zurich, Verne and Geneva etc.

## **6. Classification of cities based on business and work**

This classification of cities on a global level is currently the biggest basis for division, which is the biggest aspect of the internal side of any city. On this basis, cities are divided into different categories.

**1. Industrial cities -** The cities in the world which have developed as a result of the establishment of industrial units and all types of industries, big and small, are located in the cities. The cities spread around them or settled as their satellites are of industrial background where the population is engaged in various types of construction work. Mumbai, Bangalore, Ahmedabad, Ghaziabad, Pune, Sholapur, Detroit, Boston, Glasgow, Liverpool, Moscow, Gorki, Tokyo and Osaka are examples of industrial cities.

**2. Business Towns-** Where cities develop due to business and commercial activities, the working population there is engaged in wholesale and retail trade, such cities are known as business towns, for example, New York, Winnipeg, London, Hong Kong, Kolkata, Singapore, Mumbai, Ahmedabad etc. are considered to have developed due to business activities.

**3. Administrative Towns-** Capitals of countries, state capitals, district headquarters and central places of cities are known as administrative towns. Mostly administrative offices and residences of politicians are established here. For example, New Delhi, Dehradun, Lucknow, Washington, Moscow, Tokyo, Vienna, Canberra and Kathmandu etc.

**4. Mining Towns-** The cities in the world which develop near the availability of some mineral substance are called mining towns, for example, Kalgurli, Mesabi, Dhanbad, Kimberley, Raniganj, Jharia and Bokaro etc.

**5. Military Towns-** These towns are settled in the places, residences and strategically important places used for military work by the soldiers engaged in the security of the country, which is also called Sainik Towns. Cities like Gibraltar, Singapore, Port Blair, Ambala, Panama, Port Said, Meerut, Jodhpur, Chakrata, Surat Delhi Cantt etc. have been developed for security and military work.

**6. Fisheries Towns-** Many towns in the world have developed in coastal areas due to the abundance of fisheries, where only fish business is done.

**7. Educational Towns-** Towns that have emerged due to the abundance of education and training institutes, where educational and training activities are abundant, such as Oxford, Cambridge, Harvard, Paris, Moscow, Varanasi, Pune, Allahabad, Pantnagar, Roorkee and Dehradun are known as Educational Towns.

**8. Religious Towns-** These towns develop due to some religious places, temples, mosques, churches, Gurudwara and church etc., like Mecca-Medina, Prayag, Kashi, Mathura, Haridwar and Bodh Gaya etc. in Arabia.

**9. Tourist Towns-** Tourist towns have developed in those parts of the world which have been found suitable from the viewpoint of health and natural tourism, whether it is mountainous, plain, valley or plateau regions like Shimla, Dalhousie, Mussoorie, Nainital, Goa and Kullu Manali etc. in India.

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## 15.4 SUMMARY

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Urban morphology is generally the study of the processes of urban settlements which is a journey of change from a village to a metropolitan area. In general terms, urban morphology is the geomorphology of the city, which includes the study of the elements that shape the urban landscape, urban infrastructure development studies, urban land use patterns and stages of urban development. Urban morphology was first studied in the late 19th century for urban development in Central Europe, while geographers expressed their concern for urban development in the first decades of the 20th century. In urban morphology, the word morphology means the science that studies urban shape. In geography, this word was originally derived from the study of urban settlements on the surface of the earth. Thus urban morphology is urban structure that analyzes the shape of cities, their development, and the characteristics of the physical structure, which includes the study of city buildings, roads, public places and other urban elements. A long time has passed in the development of urban morphology. Just as an embryo is born and attains old age, similarly, the city also gives its final shape to its urban morphology from its embryonic stage to old age.

So, urban morphology is mainly focused on the urban structure in which work is done on the past, present and plans of the city. Along with this, it also analyzes the social, cultural and economic parameters of the city, from which a model is prepared to solve the urban complexities. Thus, in the study of urban morphology, it is found that urban morphology is replaced in different forms. The functions of cities depend on the population structure of a city. In the world, based on urban population, the emergence of many types of works is linked to the functions of cities. Based on the facilities available in the cities, migration from rural areas is transforming into cities as well as Nagarmals, satellite towns and small cities. With the establishment of commercial centres, offices for administrative work, banks, county courts and other essential urban sub-areas began to develop here. City functions refer to the use and functions of various urban areas, which include social & residential.

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## 15.5 GLOSSARY

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Urban morphology-	The visible profile of the cities established by humans is called urban morphology.
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City Location-	The geographical location of the city is latitudinal-longitudinal and politically situated. It can be anywhere in the mountains, plains, plateaus and river banks.
Urban pattern-	The pattern formed by the houses built in the city such as radial, linear, circular etc.
Architecture-	The traditional technique used to build houses in ancient times.
City-	The urban unit which is engaged in secondary and tertiary works.
Village-	Town- The residential area which is assimilating both rural and urban works and cultures.
Metropolis-	The urban area whose population is more than 10 lakhs.
Industrial city-	Those urban areas which are developed by industrial units and people working in industry. For example, Rourkela, Bhilai and Bokaro.
Commercial city-	Those places where import-export and trade of goods is done.
Tourist cities-	Nainital, Mussoorie, Shimla and Kullu Manali which have developed as tourist places.
Religious cities-	Haridwar, Kashi, Gaya, Jerusalem, Mecca-Medina and Rishikesh which have established themselves as religious cities.
City physical elements-	The structure of the land is the main physical element in the establishment of a city.
City cultural elements-	The city cultural elements are taken from the effects of human society, caste, religion, culture, customs and thoughts on the formation of a city.



Planned morphology-	The plan made before the establishment of a city unit in which the city is built by paying special attention to roads, water flow, drains, parks, sewage and recreational places.
Unplanned morphology-	The cities which have been settled without any planning like Old Delhi, Jaipur etc.
Concentric ring theory-	The theory of urban morphology given by Varghese is called concentric ring theory.

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### **15.6 ANSWER TO CHECK YOUR PROGRESS**

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- Urban morphology is generally the study of urban settlements.
- Urban morphology was first studied during the 19th century in Central Europe.
- Urban morphology is the science of principles, concepts and methods that address the physical form of the city.
- Generally, cities are classified based on their size, population and economic activities.
- The word morphology is derived from the Greek language.
- Goethe was the first to start writing on urban morphology in 1790.
- Urban morphology was systematically studied by Lewis Mumford, James Baines and Sam Wass.
- Urban morphology is divided into two parts: unplanned and planned.
- The central model was propounded by Burgess in 1923 after studying the city of Chicago.
- Block theory was given by Mandel Homer Hoyt in 1939.
- Harris and Ullman have divided urban morphology into nine parts.
- The era of mechanization in cities began in the last decade of the 18th century.
- Oroso in 1921 divided the functions of cities into 6 main and 28 sub-categories.

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### **15.7 REFERENCES**

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## 15.8 TERMINAL QUESTIONS

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### (A) Long Type Question

- Q.1. Giving the meaning and definition of urban morphology, describe in detail the various principles of urban morphology?
- Q. 2. What do you understand by urban morphology? While classifying cities, explain the functions of a city?

### (B) Short Answer Questions

- Q 1. Explain the literal meaning of urban morphology.
- Q-2. Explain the meaning of city and define cities.
- Q 3. Explain the importance of physical and cultural factors in urban morphology.
- Q 4. Describe the main types of urban morphology.
- Q 5. Explain Burgess's force theory of urban morphology with a diagram.
- Q 6. What is the block sector theory?
- Q 7. What is called a tourist city?
- Q 8. What are the main functions of cities?
- Q 9. What is included in the secondary functions of cities?
- Q 10. What are the characteristics of planned cities?
- Q 11. Classify towns based on location?
- Q 12. Differentiate between recreational and mining towns?

### (C) Multiple Choice Questions

- Q 1. The term Urban Morphology is derived from which language?
- a) Arabic
  - b) Greek
  - c) Roman

d) French

**Answer: B**

**Q 2.** Urban morphology studies what?

- a) Rural settlement
- b) Urban settlement
- c) Functions of the city
- d) All of the above

**Answer: B**

**Q 3.** When did urban morphology first begin?

- a) Mid-18th century
- b) End of 18th century
- c) Beginning of 18th century
- d) Mid-19th century

**Answer: B**

**Q-4.** Urban morphology is known physically as?

- a) Science of principles
- b) Science of concepts
- c) Science of methods
- d) All of the above

**Answer: D**

**Q 5.** Generally, cities are classified based on?

- a) Size of cities
- b) Population of cities
- c) Economic activities of cities
- d) All of the above

**Answer: D**

**Q 6.** Who first studied urban morphology?

- a) Goethe
- b) Lewis Mumford
- c) James Baines
- d) Samwas

**Answer: A**

**Q 7.** Into how many parts has urban morphology been divided?

- a) 2
- b) 4
- c) 3
- d) 5

**Answer: A**

**Q 8.** The concentric force model of urban morphology was given by?

- a) Homer Hoyt
- b) Harris Ullman
- c) Burgess
- d) None of the above

**Answer: C**

**Q 9.** The polynuclear theory was propounded by?

- a) Mumford
- b) Harris and Ullman
- c) Hyatt
- d) None of the above

**Answer: B**

**Q 10.** What are the main methods of functional classification of cities?

- a) 1
- b) 2
- c) 3
- d) 4

**Answer: C**

**Q 11.** Which of the following is not included in the category of educational city?

- a) Varanasi
- b) Oxford
- c) Cambridge
- d) Delhi

**Answer: D**

**Q-12.** Which city is known as a mining city?

- a) Kalgurli
- b) Dhanbad
- c) Kimberley
- d) All of the above

**Answer: D**

**Q 13.** Which is included as a hill station city?

- a) Kashi
- b) Meerut
- c) Kolkata
- d) Kathgodam

**Answer: D**



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