

CHAPTER - 3

Region and Regional Geography of The World

3.01 Concept of Region and Regional Geography :

Regional Geography is very important among many branches of the discipline Geography. This branch has been receiving special importance from the inception of the discipline. Regional Geography presents the overall geographical picture of any region, country or a continent. A detailed account of physical, social and economic condition and transport- communication, etc. of a country or region can be found through such study. Regional Geography also gives an idea about spatial variation within a region concerned. In addition, it also brings out the nature of geographical relationship that exists between the concerned region and its neighboring region. In short, Regional Geography is the complete geography of world regions.

Regional Geography is associated with a region. Naturally, a question comes here- what is meant by a region? Although the term 'region' is used by all in simple sense, its actual meaning and underlying concept are somewhat different in geography. It can be said that since the beginning of the advancement of modern geography the regional concept and the debates associated with it have kept the geography related thinking vibrant. Many geographers in the world have done regional geographic study, or associated themselves with regional planning and put forward views about region from their own experience and perspective.

We have already learnt that our earth is full of diversities. Every region or every place has its own existence and characteristics. There are also environmental differences. Due to

a variety of reasons including the earth's position in the solar system, earth's shape and structure, its rotation-revolution, etc. the physical environment is different in different locations of the earth's surface. The status and characteristics of resources are found to be different in different natural environment. Naturally, the economic progress resulted from such a situation would also be different. In social contexts, social practices and norms, language aspirations, dress habit, food habit, etc. also, there exists differences in different environments. Although economic and cultural exchange between two countries through globalisation has increased in contemporary period, the trend of regional and class-based differences is still continuing in the world. Even in some situations the differences are found to have increased, particularly in respect of standard of living. Hence, it is seen that, there exists environmental, historical, socio-economic, political differences in our same planet earth.

In order to more clearly understand the geographical diversities on the earth it is necessary to divide the large earth into a number of smaller divisions. Then only it becomes possible to determine the real nature of each part. On the basis of some distinct objectives the geographers divide the earth so as to study the earth's surface conveniently. Generally such division is done in two different ways - (1) on the basis of homogeneity of geographical elements and (2) on the basis of functional inter relationship of the elements. Each part or division identified based on homogeneity is called Homogeneous Region. On the other hand, if such identification is done based on functional relationship; it is known as Functional Region.

Homogeneous Region : The homogenous region is identified on the basis of homogeneity of the selected elements. For this purpose an example of Natural Region can be cited here. A Natural region is identified on the basis of homogeneity among the physical elements like soil, climate, vegetation, etc. The monsoon region is a natural region. There exists significant

similarities among the elements like climate, soil and vegetation belonging to this region. On the basis of such similarities the Brahmaputra Valley of Assam can be considered as a small natural region.

Some times based on only one element also a region can be determined, for example - Linguistic Region. A part of the world where similar language is

spoken that part can be named as linguistic region after the name of the language. Thus, from the point of language the Hindi linguistic region, Assamese linguistic region, Bodo linguistic region, Bengali linguistic region, etc. are Homogeneous Regions (Fig. 3.01).

Functional Region : Such region is determined based on functional relationship among the different elements. Generally, a functional region is identified centering around a town or market centre. Every town or market centre has its own

region, whose functional activities are mainly directed by centering the concerned town. In other words, the areas around a town are linked with the town in such a way that these areas cannot survive without the town. Similarly, without these interlinked areas also

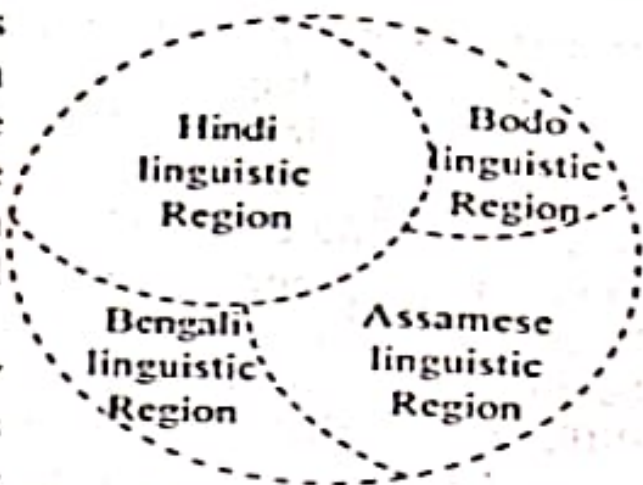


Fig.- 3.01: Homogenous Region (Based on Single Element)

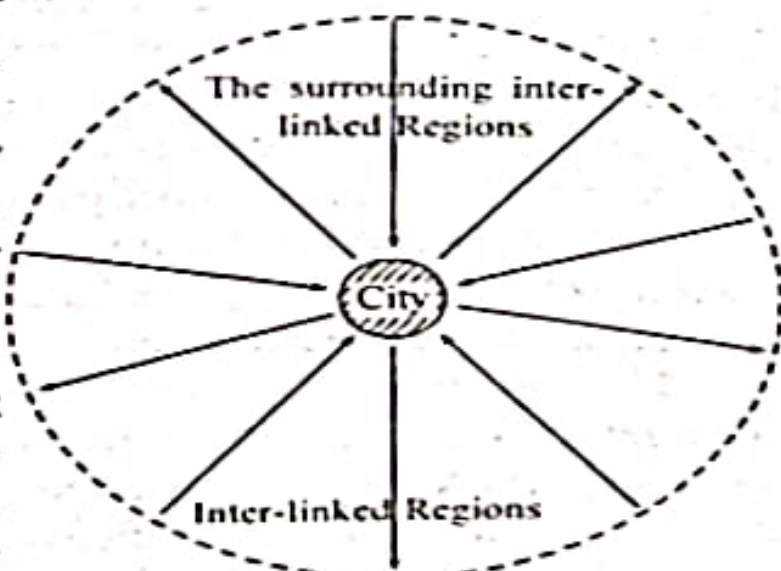


Fig.- 3.02 : Functional Region

the town cannot sustain. The surrounding region is functionally interlinked through interdependent activities with the town. In this way boundary of the region linked with the town can be easily determined. Even though the internal elements of this region are not similar to one another, they are inseparably interlinked through interdependent relationship. The regions identified based on the central places like town, market, etc. are known as functional regions (Fig. 3.02).

Every town has a functional region. The functional region is very closely associated through roads and transport-communication systems of the town. Every day there is movement of large number of people from the region. The commodities produced in the region also come to the centre of the town. In the same way various services and commodities move to the region from the town. On the basis of these phenomena the boundary of a functional region can be determined. Guwahati city has a large functional region. Within the functional region of Guwahati city again there are many small and large towns and market centres. It is notable that there is also exchange of various services, commodities and languages among the functional regions. In this way innumerable functional regions cover the whole earth like a net.

Region is the basis for regional geographic study. There can be a good study of regional geography on a region. If the study of a number of regions is done at a time, it comes out which region is advanced and which one is backward. It can also be determined through regional geographic study as to why one region is lagging behind. In this way regional geography also helps in regional development planning. Hence, what is region, how it can be determined, how regional development can be made possible, etc. are some of the important questions associated with geography, especially regional geography.

3.02 Regional Geography of the World :

Brief introduction of the world :

We know that about 149 million sq km of the earth's surface (i.e. 29%) is covered by land and the remaining 361 million sq km (i.e. 71%) is covered by water. The land portion of the earth consists of the continents like Asia, Africa, Europe, North America, South America, Oceania and Antarctica. On the other hand, the water portion of the earth is mainly formed by the Pacific, Atlantic, Indian, Northern and Southern Oceans (Fig 3.03) It is worth mentioning that the Asia and the Pacific are the largest among the continents and oceans respectively. The continent of Asia covers about 30 % of the earth's land surface area. On the other side, of the 662 crore world population (as per 2007 estimate), the continent of Asia alone has 60.50 %. Moreover, about 90 % of the world's population is living in only northern hemisphere. It is notable that the characteristics of topography, climate, soil, plants, animals, etc. are different in different places on the earth. It is due to such variations of different elements of the natural environment, the population distribution and the man's ways of living are not the same in different places on the earth. Even the socio-economic advancement of different places on the earth greatly depends on the prevailing characteristics of the natural environment. That is why the areas having favourable natural environment and rich in natural resources are generally economically advanced. On the other hand, many areas on the earth having unfavourable natural environment and devoid of necessary natural resources are economically lagging behind.

It may be mentioned that being dependent largely on natural environment some areas of the world have emerged mainly as agricultural regions and some others as industrial regions. In this way such regional differences in the physical and socio-economic characteristics are very much observed

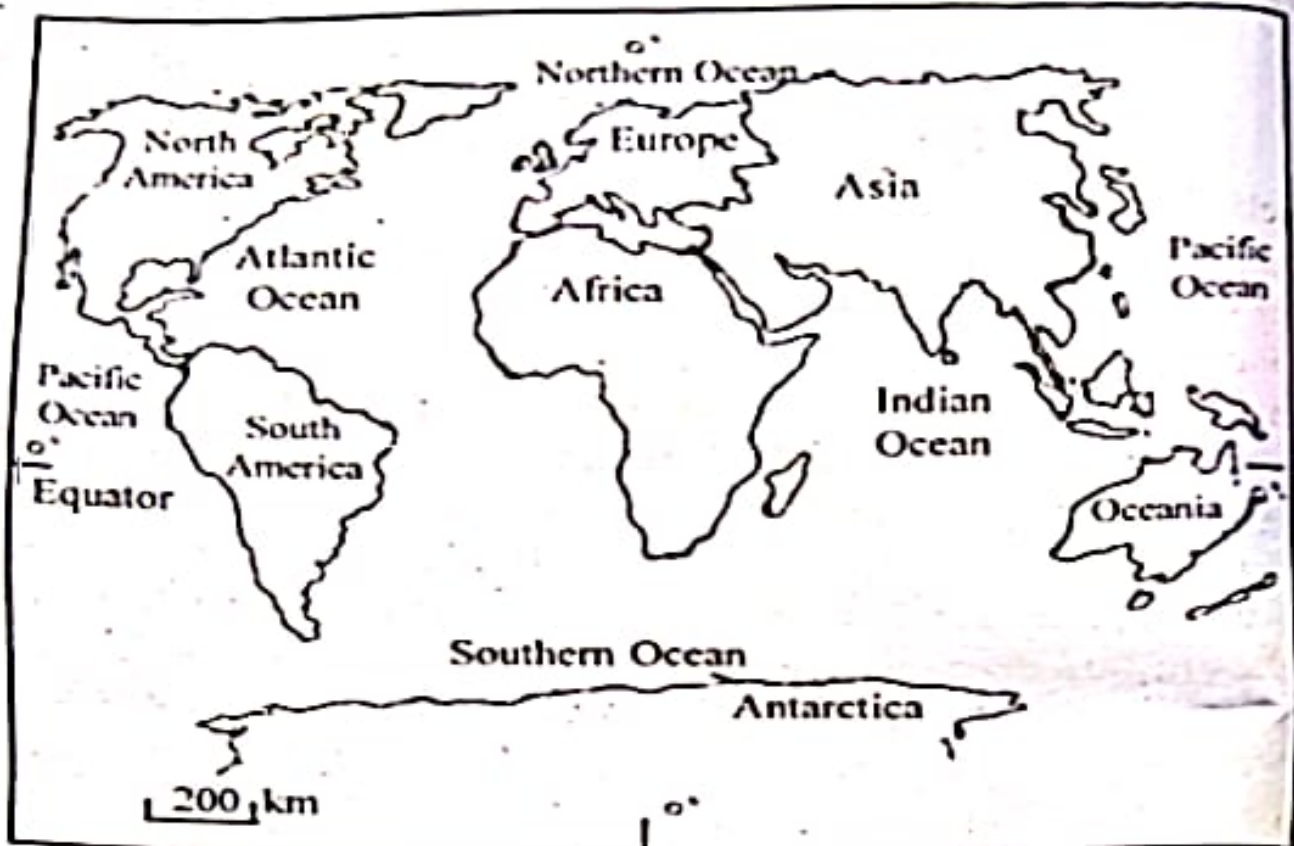


Fig.- 3.03: Continents and Oceans of the Earth.

within a continent, country or state. That is why in order to know the overall condition of a continent or its any part it is necessary to properly study all the elements of the physical and human environments and the inter-relationship among them. It is through such regional studies one can learn many things about the socio economic progress of a country or any region and various problems associated with it.

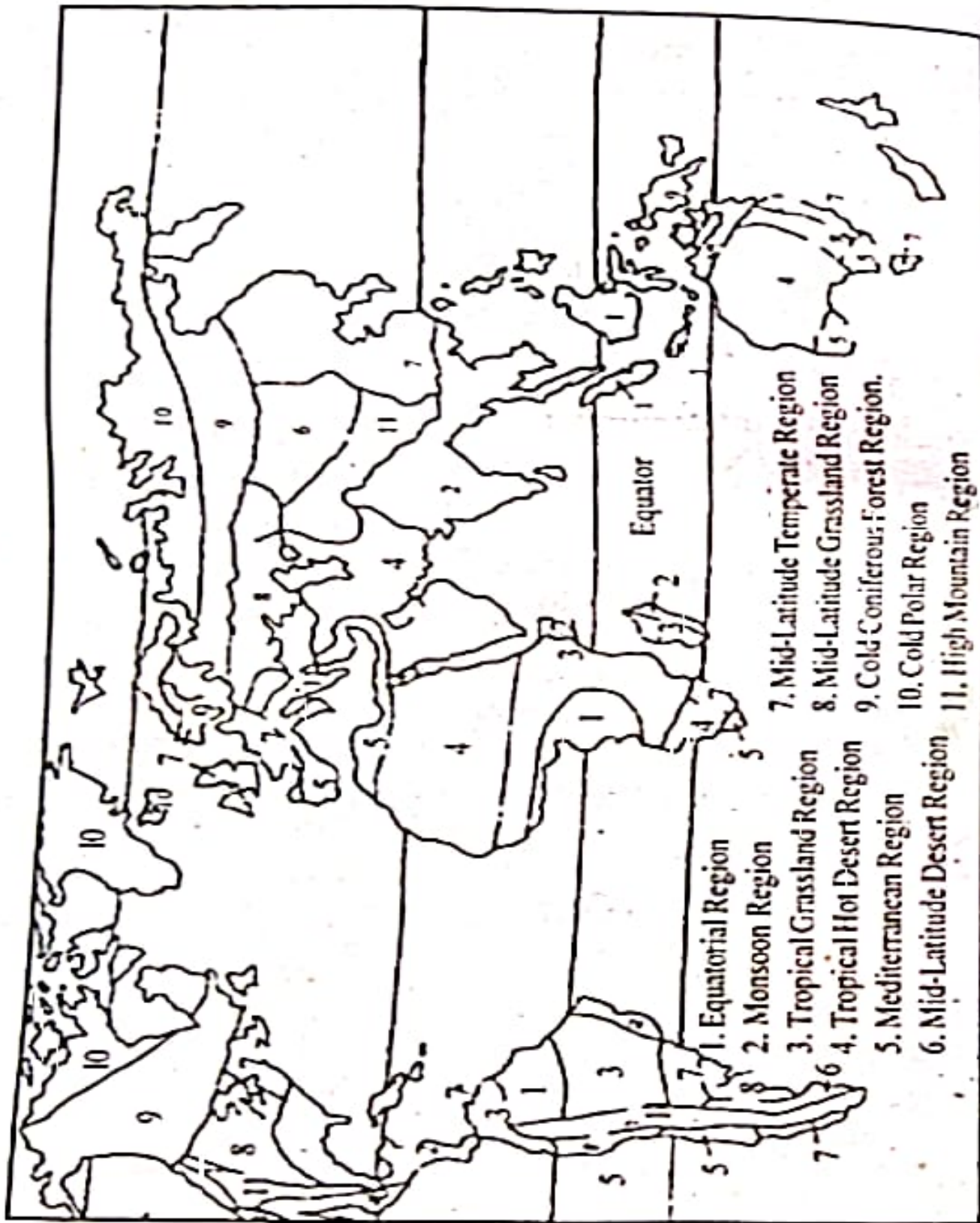
It is notable that there are similarities too on regional basis in respect of physical elements on the earth's surface. On the basis of such similarities in physical environments some natural regions have been identified on the earth. It is on the basis of geographical studies of the physical and socio-economic characteristics of such natural regions necessary development plans are prepared. That is why regional geographic study of the world is still important. Apart from

the continent, country, etc the natural regions may also be taken as the basis for world regional geographic study.

3.03 Natural regions of the world :

The parts of the earth's surface which have almost similar relief, climate, natural vegetation and soil characteristics are together broadly known as Natural Regions. It is on the basis of some of such characteristics of the physical environment one region can be separated from the other. In fact, the natural environment and human life-style system do not have marked difference among the areas within such a natural region. The definition of 'Natural Region' as given by the geographer A.J. Harbertson in this context is notable. According to him "The portion of the earth's surface in which the influence of same type of physical systems is felt and accordingly human activities are moulded is known as a Natural Region". Of course, it is not easy to determine a boundary between two natural regions as there is no significant difference in the characteristics of the elements in the middle portion of the two adjoining regions. It is notable that some characteristics of both the regions appear in middle portion of the area lying between the two natural regions.

It may be mentioned that the whole earth is divided into a number of natural regions primarily based on climate. The climate of a place greatly influences the formation and structure of natural vegetation, soil and animals. The human life style is also determined to a great extent by the climate. It is due to the prevailing differences in rainfall and temperature that some area of the earth either comes under the influence of snow or heavy rain, or even drought. It is notable that such an impact of climate is clearly visible in natural vegetation. Hence, the natural regions in the earth are named especially based on the characteristics of climate and natural vegetation.



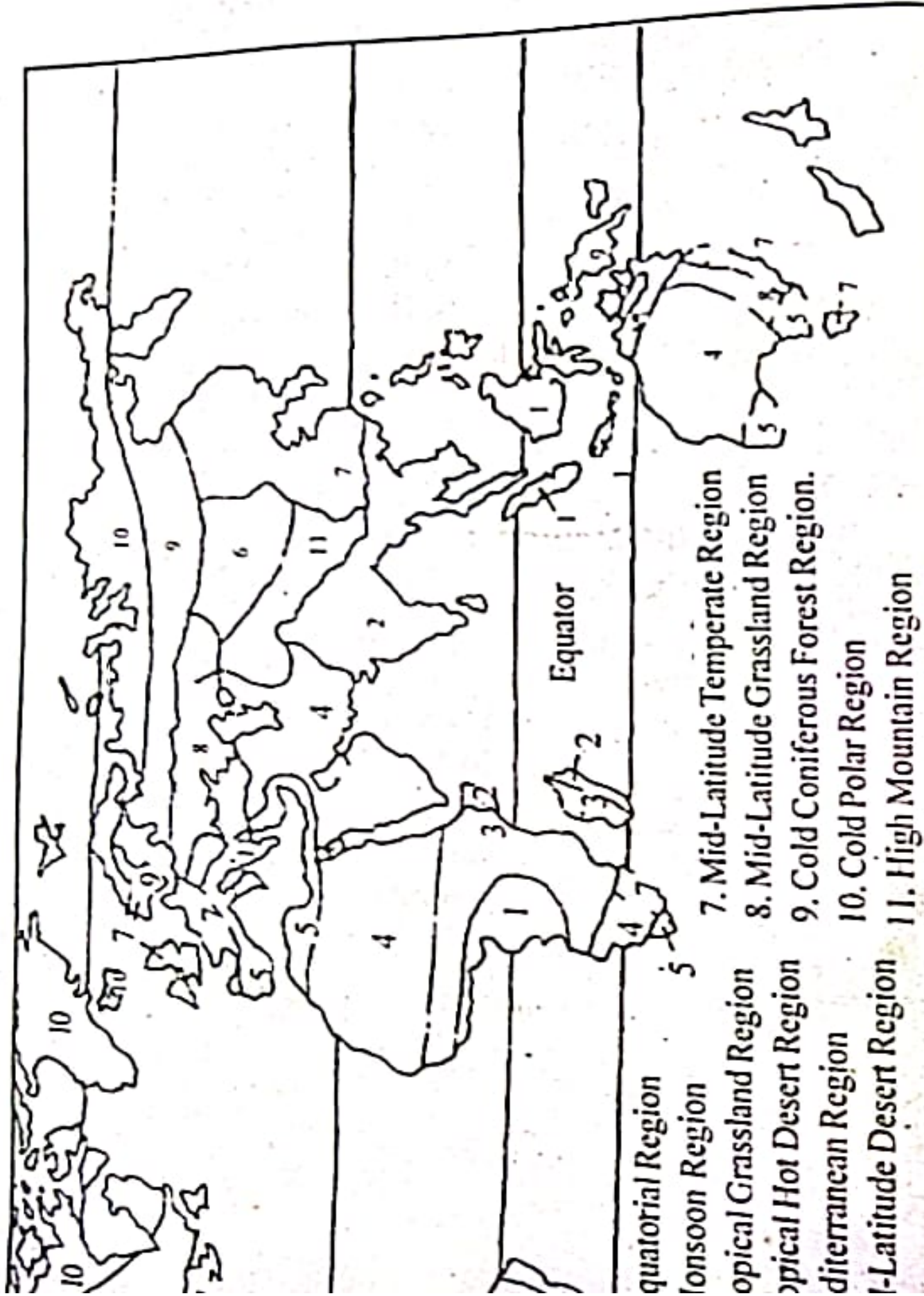
The major natural regions of the world are-

1. Equatorial Region
2. Monsoon Region
3. Tropical Grassland Region
4. Tropical Hot Desert Region
5. Mediterranean Region
6. Mid-Latitude Desert Region
7. Mid-Latitude Temperate Region
8. Mid-Latitude Grassland Region
9. Cold Coniferous Forest Region.
10. Cold Polar Region
11. High Mountain Region (Fig-3.04)

1. Equatorial Region :

The Equatorial Region is located on both sides of the equator between 10° north and 10° south latitudes . The climate of this region is hot and wet. Due to vertical sun rays the temperature difference between day and night, and summer and winter is very low in this region. Its average annual temperature is 27° C. Well known for heavy rainfall this equatorial region experiences average annual rainfall of 200 cm. Almost the entire equatorial region is covered with dense evergreen forests. Besides, there are innumerable small shrubs and variety of climbers. Due to dense forest cover and prevalence of very high temperature and rainfall throughout the year the natural environment of this region is not suitable for human habitation.

The Amazon river basin of South America, Congo river basin (presently called Zaire basin) of Africa, Guinea coast of west Africa, and the Malaysian peninsula and Indonesian and Philippines islands of south-east Asia are included in this equatorial region. It may be mentioned that both the Amazon and Congo basins still witness same physical environment as prevalent in the past. Of course, the physical environment of Malayasia and Indonesia has changed significantly.



The major natural regions of the world are-

1. Equatorial Region
2. Monsoon Region
3. Tropical Grassland Region
4. Tropical Hot Desert Region
5. Mediterranean Region
6. Mid-Latitude Desert Region
7. Mid-Latitude Temperate Region
8. Mid-Latitude Grassland Region
9. Cold Coniferous Forest Region.
10. Cold Polar Region
11. High Mountain Region (Fig-3.04)

1. Equatorial Region :

The Equatorial Region is located on both sides of the equator between 10° north and 10° south latitudes . The climate of this region is hot and wet. Due to vertical sun rays the temperature difference between day and night, and summer and winter is very low in this region. Its average annual temperature is 27° C. Well known for heavy rainfall this equatorial region experiences average annual rainfall of 200 cm. Almost the entire equatorial region is covered with dense evergreen forests. Besides, there are innumerable small shrubs and variety of climbers. Due to dense forest cover and prevalence of very high temperature and rainfall throughout the year the natural environment of this region is not suitable for human habitation.

The Amazon river basin of South America, Congo river basin (presently called Zaire basin) of Africa, Guinea coast of west Africa, and the Malaysian peninsula and Indonesian and Philippines islands of south-east Asia are included in this equatorial region. It may be mentioned that both the Amazon and Congo basins still witness same physical environment as prevalent in the past. Of course, the physical environment of Malayasia and Indonesia has changed significantly.

A large part of the Amazon and Congo basin is covered with dense forests. Such a forest is known as Selvas in the Amazon river basin. Different types of animal live here. Many areas are again filled with low-lying marshy lands. Hence, such an environment is not suitable for human habitation. This region is highly infested with various types of mosquito and insect. The incidence of different types of disease is also very high. Such unfavourable conditions have made human living in this region very difficult. It is very thinly populated. This region is largely inhabited by the homeless aborigines. This type of people living in the Congo basin area is known as Pygmy. These people make their living through hunting, fishing and gathering food from the forests. In some areas potato-type of crops and banana are produced through shifting cultivation. The transport system of this region is very backward. The rivers are the important means of transportation. This region does not have communication with the developed areas of the world. Most parts of the region are still socio-economically very backward. Its natural resources have also not been adequately exploited.

Though located in the equatorial region the conditions in Indonesia and Malaysia are completely different from that of the Congo and Amazon regions, as discussed above. Due to availability of fertile soil derived from the lavas, the people living in the Java islands of Indonesia and some areas of the Philippines have been carrying out permanent agriculture for livelihood for the last several centuries. The farmers of this region cultivate the land by clearing forests and constructing terraces on the hill slopes. A large variety of crops are also cultivated in the low-lying areas. Rice is the main crop of this region. On the other hand, Malaysia, Indonesia and a large part of Sri Lanka have advanced especially through plantation agriculture. Initially the British began the production of rubber, tea and coffee in this region through plantation

method of farming. Most of the production used to be exported to Great Britain and other countries of Europe. Notably, most of the areas of the Malaysian peninsula are covered with rows of rubber plantations. The transport system of the whole region is developed through a dense network of roads and railways. Hence, this region now does not have the very natural environment of the equatorial forest. It is very densely populated (above 1000 persons per km²). The entire region has witnessed economic progress through rubber plantation along with tea and coffee cultivation. The man's standard of living has improved. The modern facilities have also expanded in the region.

2. Monsoon Region :

The monsoon region generally lies between 10° N to 30° N latitudes in the northern hemisphere and 10° S to 30° S latitudes in the southern hemisphere. In fact, the areas influenced by the monsoon wind fall under this region. The main climatic character of the monsoon region is seasonal change—warm and wet summer season, and cold and dry winter season. The temperature difference between summer and winter seasons is 15°C. The average annual rainfall is 200 cm. As the change of season results in variation of rainfall, the importance of deciduous vegetation is quite high. These trees shed their leaves in winter due to shortage of moisture.

The monsoon region extends up to tropical and sub-tropical latitudes. South Asia including India, south-east Asia, north-eastern part of Australia, eastern part of Africa, eastern part of Brazil, central America, etc fall under the monsoon natural region.

Agriculture is the primary economic activity of the people of monsoon region. The highlands of this region contain lateritic soil, while fertile alluvial soil is found in the river valleys including the low-lying areas. That is why agricultural productivity is very high in the river valleys. Due

to the prevalence of hot and wet climate and seasonal changes, this region is suitable for production of a variety of crops. Besides the main crop rice, the other crops like wheat, sugarcane, cotton, jute, oilseeds, tea, etc are cultivated in this region. This region is also rich in natural resources. Its population density is also very high. About as high as 40% of the world's population live in this monsoon region. Considerable economic development has also taken place in this region as a consequence of the advancement in science and technology. Of course, this region has faced significant degradation of the natural environment in recent time.

3. Tropical Grassland Region :

Generally tropical grasslands are seen in the interior of the continents located in the tropical zone. This region is spread within 10° - 25° north and south latitudes of the continents of South America, Africa and Australia. Some special type of physical condition prevails in such grasslands which is transitional between equatorial region and tropical desert region. The climate of the tropical grassland region is characterised by short warm summer season and long dry winter season. The diurnal and seasonal range of temperature in this region is quite high. The amount of annual rainfall is moderate (25-100 cm). It is due to such a climatic character the grass variety plants with height up to 3 meters have created vast grasslands in this region. Such grassland of the tropical region is known as Savannah. The grasslands of Brazil highlands of South America and the Orinico river basin located in Venezuela, northern and southern parts of the Zaire basin in Africa, highlands of the eastern Africa and some parts of South Africa, and northern part of Australia are under the tropical grassland region. It may be mentioned that the grasslands of Venezuela and Brazil are locally known as Llanos and Campos respectively.

The tropical grassland region is very suitable for livestock rearing. In most parts of this region rearing of cattle, horse, buffalo, sheep and goat is done on commercial basis. Such grasslands are habitats of various wild animals including tiger, lion, elephant, rhino, zebra, giraffe, deer, etc. That is why many primitive people of this region are still making their living through animal rearing and hunting. Of course, cultivation of the crops like jowar, cotton, groundnut, etc is also done in small-scale in some parts of the region. The human habitation is very thin in this region. Due to backward transport system and lack of necessary production system most parts of the tropical grassland region are socio-economically lagging behind.

4. Tropical Hot Desert Region :

The tropical hot desert region is generally located on the western fringes of the continents. This desert region is spread up to the neighbouring areas of the tropic of cancer ($23\frac{1}{2}^{\circ}$ North) and tropic of capricorn ($23\frac{1}{2}^{\circ}$ south). The climate of this region is almost always hot and dry. The difference of day and night temperature is high. The day-time temperature increases up to 45° Celsius during summer. On the other hand, the amount of rainfall is very negligible. The amount of average annual rainfall is 20-25 cm. Due to paucity of rainfall only short grass and thorny vegetation grow in some areas of such desert region. A large part of this region remains covered with sand. Of course, apart from the growth of date palm, variety of plants, some amount of cultivation is also seen in the scattered patches of oasis in the desert.

Arab, Iran, Afghanistan and Indian Thar desert of Asia, Sahara and Kalahari of Africa, Atacama of South America, Great desert of Australia, etc fall under the tropical hot desert region. It is due to the expansion of desertification in the tropical region there has been gradual increase in the size of deserts. Most of

the areas of this desert region are uninhabited. Some areas are only inhabited by the nomads pastoral.

The Bushmens of Kalahari desert and the aborigines of the great desert of Australia make their living by gathering food from nature and hunting wild animals. The homeless Bedouins living in Sahara and Arabian region are making their livelihood by rearing of camel, horse, sheep, goat, etc. Of course, the valley and delta regions of the Nile river have made progress in agriculture through irrigation. The human settlement in this region is permanent and dense. On the other hand, despite located in the desert region the occupation and economic conditions of the people of petroleum-rich Kuwait, Saudi Arabia, Iran, Iraq, etc are completely different .

5. Mediterranean Region :

The mediterranean type of climate is generally prevalent in the places located in the western margins of the continents and also in the northern part of tropical desert region. This natural region is characterised by hot and dry summer and cold and wet winter. It means that rainfall occurs in winter in this region. The summer season is little longer in this region. The average temperature of the whole year is 8° - 25° celsius. The amount of average annual rainfall is 25-75 cm. The evergreen short trees and shrubs are the major natural vegetation of this region. As such a natural condition generally prevails in the peripheral areas of the Mediterranean sea, it is known as Mediterranean region. The Mediterranean region is largely formed by the neighbouring areas of Mediterranean sea including southern Europe, south-western Asia and northern Africa. Besides, the coastal California of North America, central Chile of South America, Cape coast of South Africa and south-west coast of Australia also belong to the Mediterranean natural region.

The main occupation of the people of the Mediterranean region is agriculture. Depending on winter rainfall and irrigation

facility wheat, barley, maize, cotton, tobacco, etc are mainly cultivated in the plains of this region. On the other hand, a variety of fruits including grapes and apples are cultivated on the hill slopes of the region. Export of various food items produced from the fruits to different foreign countries is an important commercial activity of the people of this region. Moreover, different types of wine are prepared from the variety of fruits produced in this region. In this way this region has become world famous for its fruits-based large-scale industrial production. That is why this entire region is economically very advanced. Besides, due to the prevalence of mild climate and healthy environment, it is somewhat densely populated.

6. Mid-Latitude Desert Region :

The natural condition of some parts of the plateau and basin areas located within the continents of Asia and North America is desertic. Such a natural region is surrounded by high mountains from almost all sides. As it is located far away from the sea and surrounded by high mountains, the amount of rainfall is very low here. Moreover, due to its continental location the summer and winter difference of temperature is quite high. Similarly, day-night temperature difference is also notable. Some amount of snowfall also occurs in the region during winter.

Almost located in the central part of Asia the Tibetan plateau and Gobi desert mainly belong to this mid-latitude desert region. Besides, the basins surrounded by the Rocky mountain ranges of North America and the Patagonia plateau located in the east of Andes mountain ranges of South America also have similar type of desertic natural environment.

Some pastoral nomadic groups of people largely inhabit the Tibetan and Patagonia plateaus and some parts of Gobi desert. As these people often change their place in search of food for animals, they do not have permanent settlements. Of course, a

small amount of agriculture has been made possible in the river valleys of the region through irrigation. Some economic progress has also taken place in the region due to exploitation of mineral resources and industrialisation. The entire region is very thinly populated. Only few areas of the region are somewhat densely populated due to progress of agriculture and industry.

7. Mid-Latitude Temperate Region : The temperate natural region is located in a large portion of the mid-latitudes of both the hemispheres of the world. This natural region is generally seen in a large part of the area between tropic of cancer ($23\frac{1}{2}^{\circ}$ North) and 50° North latitude in the northern hemisphere, and some parts of the area between tropic of capricorn ($23\frac{1}{2}^{\circ}$ south) and 50° south latitude in the southern hemisphere. The intensity of summer and winter is less in this region. The average temperature stands at 15°C in summer and 5°C – 10°C in winter. The climate of the coastal areas is of equitable nature. The average annual rainfall varies between 75 cm and 150 cm. The amount of rainfall decreases with the increase in the distance from the sea. The winter season is very dry in this region. Quite different types of natural vegetation are seen to grow in this region due to variation in the occurrence of rainfall. Of course, deciduous vegetation is largely found in this region. On the other hand, evergreen vegetation is seen in the areas receiving considerably high rainfall, and coniferous vegetation largely in the hill slopes. The forests of this region are not very dense.

The temperate natural region covers a large part of the northern hemisphere. Apart from northern and eastern parts of China, some portion of southern Canada and England, this natural region also mainly includes north-western part of Europe, south-eastern part of Brazil, Uruguay, southern part of Chile, eastern coast of South Africa, eastern coast of Australia and New Zealand.

The agricultural practices are done through modern techniques in most parts of the temperate natural region. Due to very high population density intensive cultivation is done in north-west Europe and north-eastern part of China. Here wheat and rice are cultivated on large-scale. As the United States of America is thinly populated, extensive cultivation is done there. Cotton, tobacco, barley and potato are produced in large quantities there. The east coastal region of South Africa is famous for sugarcane cultivation. In many areas of western Europe livestock rearing is done on commercial basis along with agriculture. Besides, meat industry is also developed in the coastal regions of China, Japan and western Europe. Some parts of the U.S.A., western Europe and Japan are rich in mineral resources. Moreover, development of human resources and expansion of transport facilities have brought about significant industrial advancement in the whole region. That is why natural vegetation is gradually getting almost exhausted in such areas.

8. Mid-Latitude Grassland Region : The mid-latitude grassland region is located between 30° - 50° latitudes in the northern hemisphere and south of the tropic of capricorn ($23\frac{1}{2}^{\circ}$ South) in the southern hemisphere. Actually, due to considerably low amount of rainfall in the interior of the continents these areas have been converted into grasslands. The difference of summer and winter temperature has become more in this region due to its inland or continental location. Only a small amount of rainfall occurs in summer in this region. The average annual rainfall is only 15-50 cm. Due to shortage of rainfall and severity of cold the vegetation cover is almost absent in this region. Of course, the soil of this region is quite fertile owing to its rich organic matter content.

The areas like the central part of North America, eastern part of Europe, central part of Asia, Argentina, some part of South Africa and some part of Australia fall in this

mid-latitude grassland region. The grasslands located in this region are known by different names. Such grassland regions are known as Steppes in Asia and Europe, Prairies in North America, Pampas in Argentina of South America, Veld in the South Africa and Downs in Australia.

Most of the people inhabiting the grassland region of central Asia are homeless aborigines. The livestock rearing is their main economic activity for livelihood. But, large-scale agricultural production is done in such grassland region of the United States, Canada, Argentina, Australia and Russia. The major crop of this region is wheat. It is produced in this region on commercial basis. Presently the wheat is exported mainly from these continents only. Moreover, livestock rearing on commercial basis is done in the grassland region located in Australia, New Zealand and Argentina. Dairy milk industries have also been developed in this region based on domestic cattle-buffaloes. In addition, meat produced from cattle-buffalo and sheep-goat, and wool derived from sheep are exported to different countries. Despite making some progress in economic front, the population density of such grassland region has still remained thin.

9. Cold Coniferous Forest Region : The cold coniferous forest region is confined to 50° - 70° latitudes of the northern hemisphere. The tundra region is located to its north and the mid-latitude grassland region to the south. The climate of this region is somewhat dry and cold. The average temperature in summer increases up to 15°C . There is occurrence of snowfall in winter due to fall in the temperature. The length of summer season is shorter than that of the winter in this region. There is occurrence of some amount of rainfall in summer. Due to the prevalence of cold and dry climate this region is covered with evergreen coniferous forests. Such type of soft-wood forestland being covered with coniferous trees is known as **Taiga**.

This region is spread from Scandinavia of Europe to the Pacific coast in the east and from Alaska of North America to the Atlantic coast in the east. A large portion of Europe, Asia and North America falls under this region.

This region is not at all suitable for agriculture and livestock rearing. That is why this region is very thinly populated. Most of its inhabitants make their living through animal hunting and wood collection. The European countries like Norway, Finland, Sweden, etc are famous for pulp and the paper produced from it. After discovery of various minerals in Canada, Alaska and Siberia, a number of industrial centres have come up in many places of this region. As a result these places have advanced significantly in economic front. At present some amount of agriculture and sheep rearing has been taken up in southern part of the Taiga region.

10. Cold Polar Region : The region around the north and south poles and having covered with snow for almost whole year is called polar region. This region is generally located in the north of arctic circle ($66\frac{1}{2}^{\circ}$ North latitude) in the northern hemisphere. Prevalence of extreme cold is the main climatic character of this natural region. Here, the summer season is short and the winter is long. The dry temperature ranges between 0°C and 10°C in summer season. On the other hand, the temperature decreases up to -18°C in winter. Here, there is almost no rainfall. Rather, there is occurrence of heavy snowfall in winter. As most part of the year remains covered with snow, almost no vegetation can grow in this region. Only some grass, moss, fern, etc grow in the areas which witness melting of ice with little rise of temperature in summer. The animals like deer, white fox, bear, etc which can withstand extreme cold live in this region. On the other hand, having permanently covered with thick ice, the Antarctica of south polar region is mainly a habitat

of penguins. The natural region of the north pole area is known as Tundra Region.

The marginal areas around pole of Asia, Europe and North America including Greenland in the northern hemisphere, and Antarctica of the southern hemisphere fall under this natural region. It may be mentioned that a large area of Siberia also falls under the tundra region.

Due to the prevalence of extreme cold climate the human living in this natural region is very difficult. Permanent habitation is not possible here. Population density is even lower than 1 person per km² in this region. The aborigines of this region make some kind of nomadic living. These people somehow make their livelihood through hunting of animals and catching of sea fish. The aborigines living in Alaska, northern Canada and Greenland are known as Eskimo and Lapps, in northern Europe as Lapps and Fins, and in Siberia as Samuyad and Yakut. In winter the Eskimos live in some kind of house made of ice called Igloo. In summer, of course, they take shelter in a tent made of hide. Such tent-house is known as Tupik. In summer, the Eskimos do fish catching and animal hunting using boats named Kayak and Umiyak made of animal skin. The Sledge vehicle pulled by reindeer is the most important means of transportation among these people.

There has been significant change in the living condition of the aborigines of this region due to gradual expansion of its communication with the developed countries like Canada, United States of America, Russia, etc. Nowadays many people of this region have started living in permanently built wooden houses having modern facilities. For catching fish and animal hunting also they use modern tools. In Siberia reindeer is being scientifically reared on commercial basis. The temperature and sunlight controlled glass house is constructed to produce vegetables. Besides, there has been growth of many permanent settlements

due to the discovery of petroleum and gold in Alaska, iron in Labrador, and nickel in Siberia. That is why the tundra region of the northern hemisphere has presently become economically very important. Enough expectations have also been made through various scientific experiments for possible exploitation of various types of mineral resources in Antarctica.

11. High Mountainous Region : With the increase in altitude a special kind of natural condition is found to prevail in the mountainous region. The mountain ranges of the Himalayas of Asia, the Alps of Europe, the Rockies of North America and the Andes of South America are covering large areas of the earth. With rise in altitude of places there is marked decrease in temperature. For instance, although equatorial forest region is located in the low-lands of the Andes mountain ranges, its high altitude peaks remain always covered with snow. The characteristics of climate and natural vegetation of the mountainous region also change depending on the direction of wind. There is growth of dense forest in the southern slopes of the Himalayan ranges as it receives heavy rainfall due to monsoon wind. On the other hand, the northern part of the Himalayas towards Tibetan plateau is devoid of vegetation due to lack of rainfall. In this way different types of climate and natural vegetation are seen within a very small distance.

As the way of living is very difficult in the mountainous region, it is very thinly populated. Livestock rearing and lumbering are the main occupations of the people of this region. Cultivation is done mainly in the river valleys. Of course, the inhabitants of the mountainous region practise a primitive type of cultivation. This type of agriculture is called shifting cultivation or jhum cultivation. The tribal people of the mountainous region of north east India have been practising jhum cultivation since very long period. Again exploration of some minerals has also been done in some areas of the mountain region. Moreover, many places of the mountain region have grown as hill stations and tourist centres

owing to their natural beauty and healthy environment. The places like Darjeeling, Mussoorie, Nainital, Shimla, Shillong, etc have grown in this way as tourist centres of India.

3.04 : Brief Geographical Introduction of the Continents :

Among the world's seven continents in total, the snow-covered Antarctica continent, which is centering around the south pole, does not have any permanent human settlements. Hence, a brief geographical introduction of the remaining six continents is presented below.

The continent of Asia :

Asia is the largest of all the continents in the world. Its geographical area (44.4 million km²) constitutes about 30% of the earth's land surface area. The continent of Asia is mainly located in the northern hemisphere. It spreads from 1° north latitude in the south to 78° north latitude in the north and from 25° east longitude in the west to 170° west longitude in the east (Fig.- 3.05). Broadly, the continent of Asia is surrounded by the Northern Ocean in the north; Bering strait and the Pacific ocean in the east; Indian Ocean in the south; and Red Sea, Suez canal, Mediterranean Sea, Caucasus Mountains, Caspian Sea, Ural River and Ural Mountain ranges in the west. This continent is about 8,400 km in north-south direction and about 9,600 km in east-west direction. The length of its coast is about 58,000 km.

The continent of Asia is covered with high mountain ranges, plateaus, river valleys, low-lands, coastal plains, islands, deserts, etc. Its central part is full of mountains and plateaus. Among the mountain ranges, the north-south Ural mountain ranges running along the western boundary of the continent, the world's highest east-west running Himalayan mountain ranges and the offshoots in the middle, Karakoram mountain ranges, Aravalli mountain, etc are worth mentioning. The world's highest peak Everest (8,848 m) belonging to the Himalayan mountain system and the second highest peak Godwin Austin or Mount K₂ (8,611 m)

belonging to the Karakoram mountain system are both located in the continent of Asia. On the other hand, among the plateaus, the Tibetan plateau, the world's highest Pamir plateau, Siberian plateau, Mongolian plateau, Deccan plateau, Iranian plateau, etc. are important. Many large rivers being originated from such highland region flow to the oceans and seas in north, south and east direction and have formed a number of fertile plains and deltas. Among them the Indus, Ganges and Brahmaputra river plain of south-central Asia; Ob, Yenisei and Lena river plain in the northern part; Amur, Hwang-ho, Yangtze, Si kiang and Mekong river plain in the eastern part; and Mahanadi, Godavari, Krishna, Kaveri, Menam, Irawati and Mekong river plain in the south and south-east are worth mentioning. Besides, the oceans and seas along the north-east and southern boundaries of the continent have also formed a number of coastal plains. Among the islands of Asia being located in the Pacific and Indian Ocean, Japan, Taiwan, Phillippines, Java, Sumatra, Borneo, Celebes, Andaman Nicobar, Sri Lanka, Laksha Dweep, Maldives, Bahrain, etc are worth mentioning. Further, the deserts like Gobi, Thar and Arabia are also located in this continent.

Having spread from the equator to almost the north polar region, the continent of Asia experiences a marked variation in its climate. The major types of climate as prevalent here include equatorial climate, tropical monsoon climate, tropical desert climate, temperate climate and polar climate. Verkhoyansk, the coldest place of the world, is located in the Siberian region of Asia.

The continent of Asia is rich in natural resources. Among the natural resources, forest, agricultural and mineral resources are worth mentioning. The economy of the continent of Asia is still mainly dependent on agriculture. Its main crops are rice, wheat, sugarcane, tobacco, cotton, tea, rubber, coffee, etc. Among the major mineral resources of Asia, petroleum of Saudi Arabia and other parts of south-west

owing to their natural beauty and healthy environment. The places like Darjeeling, Mussoorie, Nainital, Shimla, Shillong, etc have grown in this way as tourist centres of India.

3.04 : Brief Geographical Introduction of the Continents :

Among the world's seven continents in total, the snow-covered Antarctica continent, which is centering around the south pole, does not have any permanent human settlements. Hence, a brief geographical introduction of the remaining six continents is presented below.

The continent of Asia :

Asia is the largest of all the continents in the world. Its geographical area (44.4 million km²) constitutes about 30% of the earth's land surface area. The continent of Asia is mainly located in the northern hemisphere. It spreads from 1^o north latitude in the south to 78^o north latitude in the north and from 25^o east longitude in the west to 170^o west longitude in the east (Fig.- 3.05). Broadly, the continent of Asia is surrounded by the Northern Ocean in the north; Bering strait and the Pacific ocean in the east; Indian Ocean in the south; and Red Sea, Suez canal, Mediterranean Sea, Caucasus Mountains, Caspian Sea, Ural River and Ural Mountain ranges in the west. This continent is about 8,400 km in north-south direction and about 9,600 km in east-west direction. The length of its coast is about 58,000 km.

The continent of Asia is covered with high mountain ranges, plateaus, river valleys, low-lands, coastal plains, islands, deserts, etc. Its central part is full of mountains and plateaus. Among the mountain ranges, the north-south Ural mountain ranges running along the western boundary of the continent, the world's highest east-west running Himalayan mountain ranges and the offshoots in the middle, Karakoram mountain ranges, Aravalli mountain, etc are worth mentioning. The world's highest peak Everest (8,848 m) belonging to the Himalayan mountain system and the second highest peak Godwin Austin or Mount K₂ (8,611 m)

belonging to the Karakoram mountain system are both located in the continent of Asia. On the other hand, among the plateaus, the Tibetan plateau, the world's highest Pamir plateau, Siberian plateau, Mongolian plateau, Deccan plateau, Iranian plateau, etc. are important. Many large rivers being originated from such highland region flow to the oceans and seas in north, south and east direction and have formed a number of fertile plains and deltas. Among them the Indus, Ganges and Brahmaputra river plain of south-central Asia; Ob, Yenisei and Lena river plain in the northern part; Amur, Hwang-ho, Yangtze, Si kiang and Mekong river plain in the eastern part; and Mahanadi, Godavari, Krishna, Kaveri, Menam, Irawati and Mekong river plain in the south and south-east are worth mentioning. Besides, the oceans and seas along the north-east and southern boundaries of the continent have also formed a number of coastal plains. Among the islands of Asia being located in the Pacific and Indian Ocean, Japan, Taiwan, Phillippines, Java, Sumatra, Borneo, Celebes, Andaman Nicobar, Sri Lanka, Laksha Dweep, Maldives, Bahrain, etc are worth mentioning. Further, the deserts like Gobi, Thar and Arabia are also located in this continent.

Having spread from the equator to almost the north polar region, the continent of Asia experiences a marked variation in its climate. The major types of climate as prevalent here include equatorial climate, tropical monsoon climate, tropical desert climate, temperate climate and polar climate. Verkhoyansk, the coldest place of the world, is located in the Siberian region of Asia.

The continent of Asia is rich in natural resources. Among the natural resources, forest, agricultural and mineral resources are worth mentioning. The economy of the continent of Asia is still mainly dependent on agriculture. Its main crops are rice, wheat, sugarcane, tobacco, cotton, tea, rubber, coffee, etc. Among the major mineral resources of Asia, petroleum of Saudi Arabia and other parts of south-west

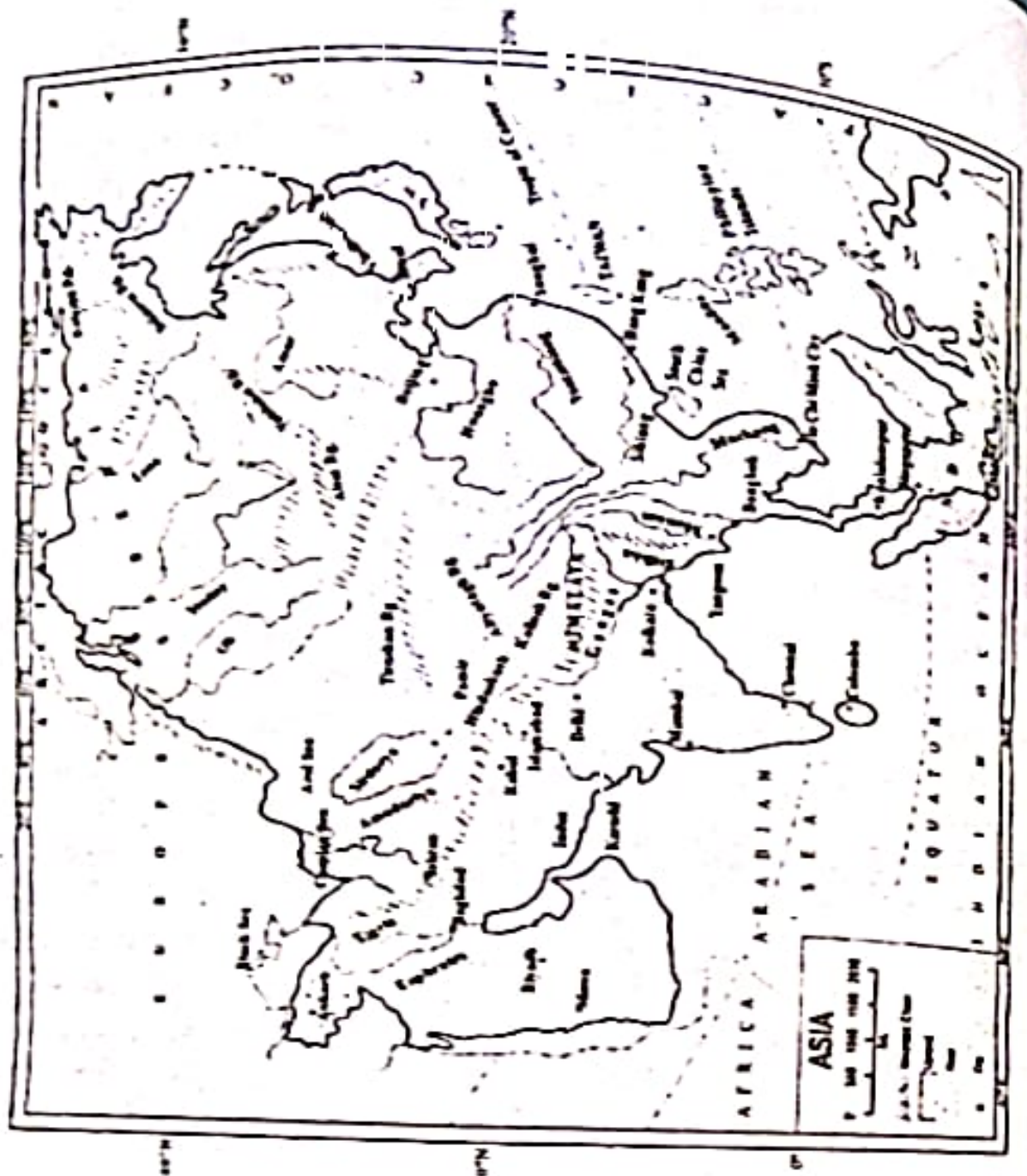


Fig.- 3.05 : Asia

Asia, India, Myanmar, Indonesia, China and Siberia; coal and natural gas of India, Myanmar, China and Siberia; iron ore of India, China, Siberia, Indonesia and Philippines; and manganese of India and Siberia are worth mentioning .

It may be mentioned that the world's largest continent Asia is also the largest in population. As per estimate for the year 2007 its population is 401 crores, i.e. three-fifth of the world's

population. Due to variation in physiographic characteristics its population distribution is also very uneven. About three-fourth of its population live in south, south-east and eastern tropical and sub-tropical monsoon region. For instance, 61 % of the total population of 49 countries of Asia is concentrated only in two countries (China and India). It is worth mentioning that Tokyo, the capital city of Japan, with 34 million population, is the largest city not only in Asia, but also in the whole world. Some other big cities of the continent are Beijing, Mumbai, Delhi, Kolkata, Singapore, Seoul, Shanghai, Hongkong, Bangkok, Kuala Lumpur, Taipei, etc. 41 % of the people of Asia are urban dwellers. Its average per capita gross national income is US dollar 6,630.

The Continent of Africa :

Africa is the second largest continent of the world. With an area of slightly more than 30 million km² the continent of Africa covers about 20 % of the world's total land area. The equator which passes almost through middle of the continent divides it into two parts. The continent is located between 37° north latitude in the North to 34° south latitude in the South and 51° east longitude in the East to 17° west longitude in the West. It is surrounded by the Mediterranean sea in the north; the Southern Ocean in the south; the Indian Ocean in the east; and the Atlantic Ocean in the west. Its length of the coastline is about 30 thousand km. With an area of 2.5 million km² Sudan is the largest country of the continent.

Excluding the narrow coastal plains, the major part of the continent is a large plateau. It may be mentioned that Africa does not have high mountain ranges like that of the Himalayas in Asia and the Andes in South America. Of course, the small highlands scattered throughout the continent have made its topography rugged. The Kilimanjaro Peak (5,895 meter high) is the highest place of the continent. Among the highlands of Africa, the Atlas of northern fringe, the Ethiopian highland of north-eastern Fringe, the Adamawa highland of western fringe, Drakenberg highland

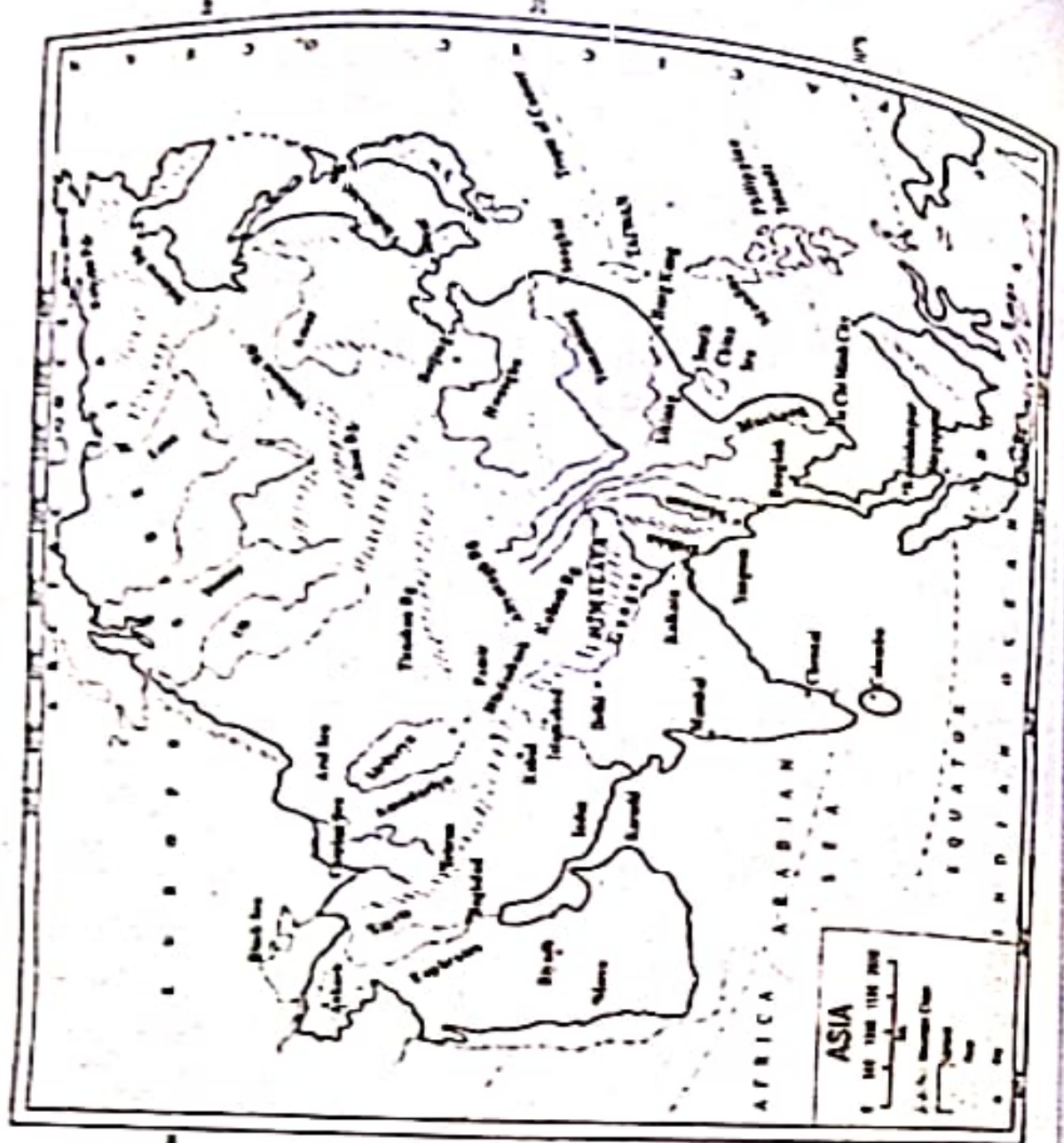


Fig.- 3.05 : Asia

Asia, India, Myanmar, Indonesia, China and Siberia; coal and natural gas of India, Myanmar, China and Siberia; iron ore of India, China, Siberia, Indonesia and Philippines; and manganese of India and Siberia are worth mentioning .

It may be mentioned that the world's largest continent Asia is also the largest in population. As per estimate for the year 2007 its population is 401 crores, i.e. three-fifth of the world's

population. Due to variation in physiographic characteristics its population distribution is also very uneven. About three-fourth of its population live in south, south-east and eastern tropical and sub-tropical monsoon region. For instance, 61 % of the total population of 49 countries of Asia is concentrated only in two countries (China and India). It is worth mentioning that Tokyo, the capital city of Japan, with 34 million population, is the largest city not only in Asia, but also in the whole world. Some other big cities of the continent are Beijing, Mumbai, Delhi, Kolkata, Singapore, Seoul, Shanghai, Hongkong, Bangkok, Kuala Lumpur, Taipei, etc. 41 % of the people of Asia are urban dwellers. Its average per capita gross national income is US dollar 6,630.

The Continent of Africa :

Africa is the second largest continent of the world. With an area of slightly more than 30 million km² the continent of Africa covers about 20 % of the world's total land area. The equator which passes almost through middle of the continent divides it into two parts. The continent is located between 37° north latitude in the North to 34° south latitude in the South and 51° east longitude in the East to 17° west longitude in the West. It is surrounded by the Mediterranean sea in the north; the Southern Ocean in the south; the Indian Ocean in the east; and the Atlantic Ocean in the west. Its length of the coastline is about 30 thousand km. With an area of 2.5 million km² Sudan is the largest country of the continent.

Excluding the narrow coastal plains, the major part of the continent is a large plateau. It may be mentioned that Africa does not have high mountain ranges like that of the Himalayas in Asia and the Andes in South America. Of course, the small highlands scattered throughout the continent have made its topography rugged. The Kilimanjaro Peak (5,895 meter high) is the highest place of the continent. Among the highlands of Africa, the Atlas of northern fringe, the Ethiopian highland of north-eastern Fringe, the Adamawa highland of western fringe, Drakenberg highland



Fig.- 3.06 : Africa

of South Africa, etc. are worth mentioning. The continent is full of rivers and lakes. Apart from the world's longest river Nile, its other main rivers include Congo (Zaire), Niger, Zambezi, Orange, Limpopo, Volta, Senegal, etc. Among the lakes, the Victoria, Albert Tanganyika, Chad, Volta, Nyacha, etc. are notable (Fig. 3.06). It is due to the widespread rivers and lakes in the continent of Africa, its hydro-power potential is the highest in the whole

world. Actually, its amount of hydropower potential is about 40 % of the world total.

A large part of the continent of Africa is mainly under tropical climate. Only its northern and southern margins experience sub-tropical and temperate climate. The amount of rainfall is very high in the plains and coastal areas of the equatorial region of the continent. But, the amount of annual rainfall is even lower than 15cm in the desert regions of Sahara, Kalahari and Namibia. That is why many areas of Africa are gradually getting dry.

The continent of Africa is rich in water, forest and mineral resources. The economy of most of its countries is agro-based. About one-third of the total international earning comes from agriculture and its 70 % people depend on agriculture. The important agro-based produces include maize, jowar, bajra, rice, sweet potato, groundnut, cotton, coffee, tea, sugarcane, tobacco, banana, etc. Among the mineral resources, petroleum, natural gas, iron, copper, gold, diamond, Uranium, etc. are worth mentioning.

According to many anthropologists and other scientists, about 4.5 million years ago there was formation of human species in the continent of Africa, and from there only the human population gradually spread to other parts of the world. As per estimate of 2007, the total population of Africa is 944 million. Its population density is only 31 persons per km². It may be mentioned that its population distribution is not uniform. The main densely populated regions of the continent are Guinea coast, lower part of the Nile river, highlands of eastern Africa and Madagascar, coastal lands of the northern fringe and South Africa, and the urban areas and mineral resource producing regions of Zimbabwe and Zaire. But the population density is very low (less than 15 persons per km²) in the countries like Libya, Algeria, etc. located in the Sahara desert. With a population of about 145 million Nigeria is the most populous country of the continent. About 37 % population of Africa lives in the urban

areas. The average per capita national income of Africa is about US dollar 2,550.

Some of the important places of Africa are Nigeria's capital Abuja, Zaire's capital Kinshasa, Sudan's capital Khartoum, Ethiopia's capital Addis Ababa, Kenya's capital Nairobi, Zimbabwe's capital Harare, South Africa's cities Capetown, Pretoria, Johannesburg and Durban, Egypt's capital Cairo, Libya's capital Tripoli, Tanzania's capital Dodoma, etc. At present, in total there are 52 independent countries in Africa.

The Continent of Europe :

The continent of Europe is situated along the north-eastern boundary of Asia. It is completely located in the northern hemisphere. This continent is spread from 36° North latitude in the south to 71° North latitude in the north, and 10° West longitude in the west to 65° East longitude in the east (Fig. 3.07). Its geographical area is 10.9 million km^2 , that is 7.3 % of the world's land area and three times the land area of India. Europe is surrounded by the continent of Asia on the east, the Atlantic Ocean on the west, the Northern Ocean on the north, and the Mediterranean Sea, Caspian Sea and Black Sea on the South. Physically the Ural mountain range and the Ural river have separated the continent of Europe from Asia. Europe is surrounded by the oceans and seas from three sides. The coastal length of its mainland is 38 thousand km. The world's largest country Russia is located in Europe. Of course, a large part of Russia falls in Asia. The total number of independent countries of Europe is 44.

The physiographic structure of Europe is very complex and diverse. In respect of physiography Europe can be broadly divided into two parts. Its northern part which stretches from the coastal France on the west to the Ural mountain ranges on the east is almost a plain land. But, the southern part (from Spain to the Black Sea) having covered with hills, mountains and plateaus is highly rugged. The northern frontier region and the southern

highland region of the continent are very much under the influence of glacier. Among the mountain ranges of the southern Europe, the Alps, Pyrenees, Carpathian and Caucasus are worth mentioning. The 'Mount Elbrus' peak (5,633m) under Caucasus mountain range is the highest place of Europe. On the other hand, the highest peak of the Alps is 'Mount Blanc' (4,807m). This continent is full of rivers, lakes and islands. Among the rivers Elbro of Spain, Rhone and Seine of France, Rhine and Elbe of Germany, Oder and Vistula of Poland, Danube of Austria, Hungary and Romania, Dnieper of Belarus and Ukraine, Po of Italy, Thames of Great Britain, Don, Volga and Ural of Russia, etc. are worth mentioning. On the other hand, the major islands of the continent include the British Isles, Ireland, Iceland and Setland of the Atlantic Ocean; Crete, Sycei, Malta, Sardinia, Corcika and Beliaric islands of the Mediterranean Sea; and Gotland, Aland, Novaya, Jemlya, Svelbird and Greenland of the Northern Ocean. Among the lakes Onega, Ladoga, Sudskowe, Venarn, etc. are worth mentioning.

A major part of Europe is under temperate climate. But polar climate is prevalent in Greenland, Iceland, Scandinavian region and northern Siberian region located in the extreme northern part of the continent. This region remains under ice cover for about 9 months of the year. On the other hand, the west and south coastal areas of the continent remain comfortable even during winter due to oceanic influence. The average temperature of the continent varies from 0°C in winter to 20°C in summer. The annual average rainfall is about 100cm. It may be mentioned that the northern and eastern parts of the continent experience heavy snowfall during winter. On the other hand, the southern part of the Mediterranean region is hot and dry in summer and cold and wet in winter. There is abundance of coniferous trees in major part of Europe.

The topography, soil and climate of Europe is suitable for agriculture. Cultivation is done in about 50% land of most of the

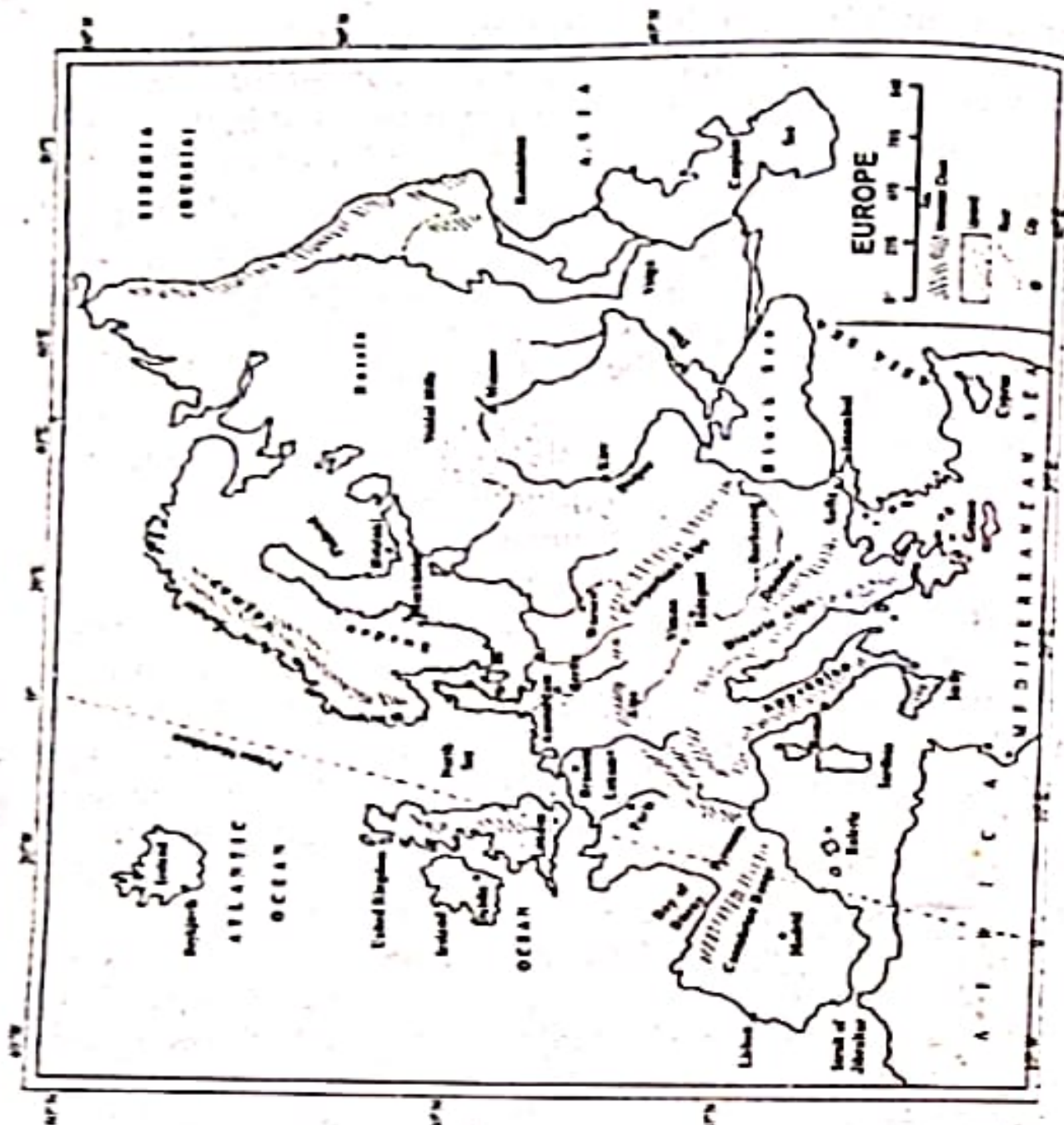


Fig- 3.07 : Europe

countries of the continent. The agricultural method is also modern and commercial. Barley, rye, grass, etc. are produced in the cold regions of Europe except the Tundra region experiencing north polar climate. On the other hand, wheat, barley, potato, maize, sugar beet, rye, sunflower, vegetables, etc. are produced in varying quantities in most other parts of the continent. Europe is

very rich in the major mineral resources—coal and iron. It is worth mentioning that Europe produces about one-third of the total production of Anthracite and Bituminous coal in the world. Besides, 40% of the world's total production of iron ore takes place only in Europe. At present hydro-electricity is generated by using river water of the mountainous regions of the continent. But, although petroleum and natural gas are produced in some quantity, Europe is quite backward in this respect. Hence, apart from coal and iron, due to the availability of many other mineral resources and working skills of the Europeans, industrialisation has been possible in most of the countries of the continent. Actually, the industrial revolution first started in Europe in the whole world centering the countries like England, Germany, France, Sweden, Belgium, Italy, etc.

The people of Europe basically belongs to the caucasus racial group. But due to the prevailing differences among different smaller caste and ethnic groups, many small countries have been formed in this continent. According to the estimate for 2007, the total population of Europe is 733 million, that is 11% of the world's total population. Its density of population is only 32 persons per km^2 . Of course, the population density becomes 77 persons per km^2 if Russia is excluded. Similarly, if Russia is excluded, Germany is the most populous (82.3 million) country of Europe. The population density is quite high in most parts of the continent except in northern and eastern parts. For instance, Danube valley of Austria and Hungary, Rome region of Italy, Rhone valley of France, northern part of Switzerland and Catalonia of Spain are very densely populated (above 250 persons per km^2). About 72% people of the continent are urban dwellers. Its per capita gross national income is about US dollar 22 thousand.

Some of the important places of Europe are United Kingdom's capital London, France's capital Paris, Germany's

capital Berlin, Switzerland's capital Bern, Austria's capital Vienna, Hungary's capital Budapest, Italy's capital Rome, Spain's capital Madrid, Denmark's capital Copenhagen, Russia's capital Moscow, Poland's capital Warsaw, etc.

The Continent of North America :

North America is the third biggest continent in the world after Asia and Africa. Its land area is 24.3 million km², that is 16.3% of the world's land area. As this continent of America is located in the northern hemisphere, it is known as North America. This continent is spread from 7° North latitude in the South to 83° North latitude in the north and 50° West longitude (Fig. 3.08). North America is 4,960 km from east to west and 9,600 km from north to south. It is worth mentioning that the continent of North America is spread from the cold north polar region to the hot equatorial region. It is surrounded by the Northern Ocean in the north, South America, Gulf of Mexico and the Pacific Ocean in the south, the Atlantic Ocean in the east and the Bering Sea, Bering strait and Pacific Ocean in the west. It means besides Canada, United States and Mexico, Guatemala, Costa Rica, Panama, etc. of the central America and Cuba, Jamaica, Bahamas, Dominican Republic, etc. of the Caribbean islands are all belonging to North America. Among these countries, Canada with an area of 9.2 million km² is the largest country in the continent and third largest country in the world.

Physiographically North America is highly diverse in character. Its highest place is McKinley Peak (6,194 m) and lowest place is Death Valley (86 m below sea level). The western and eastern parts of the continent are hilly and mountainous in north-south direction. On the other hand, the remaining part of the continent is covered with high and low land plains. Thus, on the basis of such physiographic character, North America can be mainly divided into four divisions—(1) Rocky mountainous region, (2) Great upland plain region, (3) Appalachian Highland region and (4) Coastal Plain region. The Rocky mountainous region consisting of the lofty young

folded mountain ranges is located in the western part of North America from Alaska to Mexico in north-south direction. This region consists of many mountain ranges like Brooks range, Alaska mountain system, Mackenzie, Coast range, Cascade, Sierra Nevada, Sierra Madre, etc. Of course, basically this region is formed by two north-south parallel mountain ranges - (1) Rocky mountain system of the east and (2) Coastal mountain ranges of the west like Cascade, Sierra Nevada and Coast range. On the other hand, a wide area located on the east of Rocky mountain region and west of Appalachian highland and stretching from northern part of Canada to the Gulf of Mexico is known as the Great Plain. It consists of erosional plateaus and fertile plains. The southern part of this region is converted into fertile levelled land by the great rivers like Mississippi, Missouri, Ohio, etc. That is why this region of the United States is very suitable for agriculture. The rugged region in the eastern part of North America stretching from Newfoundland in the north to Florida in the south and consisting of hills and mountains, narrow river valleys, fragmented plateaus, etc. is known as the Appalachian highlands. The elevation of the highest part of this region is only 1917m (Mount Washington). The Allegheny and Blue Ridge mountains are located in the southern part of this region. This region is highly advanced in mineral resources and economic development. On the other hand, the plain land of the Atlantic Ocean coast located on the east of Appalachian highlands and stretching from Nova Scotia in the north to Panama in the south is called the coastal plain region. Apart from the estuaries of many large rivers this region is covered with swamps and forests. This region is rich in resources like mineral oil, natural gas, salt, etc. Except the narrow coastal plain of California there is no wide plain area in the west coast of the continent. The northern coastal land stretching from Alaska in the west to Newfoundland in the east is highly fragmented. Besides, there are innumerable small and large islands in the north and south-eastern parts of the continent.

- There are many rivers and lakes in North America. Among the rivers, Missouri, Mississippi, Yukon, Mackenzie, Rio Grande, Red,



Fig.- 3.08 : North America

Arkansas, Colorado, Colombia, Snake, Ohio, Tennessee, Hudson, St. Lawrence, etc. are worth mentioning. On the other hand, the major lakes of the continent include Superior, Huron, Michigan, Erie, Ontario, Great Bear, Great Slave, Winnipeg and Great Salt.

The climate of North America is quite diverse due to its latitudinal extent and altitude variation. It is notable that while hot and wet equatorial and tropical climate is prevalent in the southern

part of the continent, it is extremely cold polar climate in the northern part. For instance, due to the prevalence of Tundra climate the occurrence of snowfall is more than that of rainfall in the northern part of Canada. The amount of annual rainfall in the north-east and south-east coasts of the continent varies from 150 cm to 250 cm. But the amount of rainfall is very low in the western mountainous region.

North America is very rich in natural resources. There is large scale production of food crops like wheat, maize, barley, etc. in the wide plains of the central North America. Cotton cultivation is done in the flat plain of the southern part of USA. On the other hand, livestock rearing is done in the Rocky mountain region and sheep rearing and fruits production in west coastal plain region. Apart from the production of mineral resources like iron, nickel, cobalt, mica, etc. in the continent, coal, petroleum and natural gas are produced in large quantities in Canada, USA and Mexico. North America, especially Canada, has progressed significantly in production of hydro-power.

Although the Red Indians are the primitive settlers of America, their number in Canada and USA is quite small. It is because most of its people are from Europe. According to the estimate for the year 2007, the population of North America is about 523 million. Its population distribution is very uneven. About 58% of the total population of North America lives alone in the USA. It may be mentioned that against the average population density for the continent (15 persons per km²), it is as high as 31 in the USA, 60 in central America and 171 in Caribbean islands. Of course, due to rapid industrialisation and urbanisation the population density in the Appalachian highlands and east coastal region of the continent has increased significantly. About 77% people of the continent are urban dwellers. Among the major cities of North America, Boston, New York, Philadelphia,

Baltimore, Washington, Los Angeles, Atlanta, Quebec, San Francisco, Montreal, Ottawa, Toronto, Winnipeg, Mexico city, Minneapolis, Chicago, Havana, St. Louis, Houston, etc. are worth mentioning. Among these cities, in terms of population Mexico city is the second largest in the world (22.8 million), New York fourth largest (21.9 million) and Los Angeles sixth largest (13.2 million).

The Continent of South America :

The continent located on the South of North America is South America. It spreads from 12° North latitude in the north to 55° South latitude in the south and 35° West longitude in the east to 81° West longitude in the west (Fig. 3.9). The shape of the continent is like a reversed triangle. It means its northern part is very wide and southern part is very narrow. Its length is about 7,500 km from north to south and about 5,100 km from east to west. The total geographical area of the continent is about 18 million km^2 , that is 12.2% of the world's land area. The continent of South America is surrounded by North America, Caribbean Sea and Atlantic Ocean on the north; Southern Ocean on the South; Pacific Ocean on the west and Atlantic Ocean on the east. Among the countries of South America, Colombia, Venezuela, Brazil, Ecuador, Peru, Bolivia, Argentina, Chile, etc. are worth mentioning. Of course, with an area of 8.54 million km^2 (47% of the continent) Brazil is the largest country of the continent and fifth largest in the world.

The physiographic character of South America is very diverse. It contains almost all the landforms including high mountains, riverine plains, plateaus, coastal plains, islands, desert, etc. The western part of South America is covered by high Andes folded mountain ranges in north-south direction from Panama canal to Cape of Horn. It is worth mentioning that with a length of about 8,000 km it is the largest mountain system in the world. In respect of altitude also the position of Andes is just next to the

Himalayas. Its highest peak is Aconcagua (7020 m). The great Brazilian plateau is located in the central eastern part of the continent. On the other hand, Ecuador plateau and Parana-Patagonia plateau are located respectively on the northern and southern fringe areas of the Andes mountain system. Both the Pacific and Atlantic coastal plains of South America are narrow. On the other hand, the rivers like Orinico, Amazon, Parana, Paraguay and Uruguay and their tributaries have created very large plains almost covering the whole continent. A number of grasslands are located in this plain region like the Llanos of Orinico basin in its northern part, the Selvas dense forest in the Amazon basin under equatorial climate in the middle, and the world famous Campos, Granchaco and Pampas temperate grassland regions in the Paraguay-Parana-Uruguay basin of the south. The Atacama hot desert and Patagonia temperate desert are located in the extremely dry and rainless parts of the Andes mountain ranges. It is worth mentioning that the world's highest lake Titicaca is also located in this continent.

Like physiography the climate of South America is also diverse. In fact, most of the climate types starting from hot and wet equatorial climate, tropical climate, mediterranean climate to dry desert climate, cold temperate climate in the south, cold climate in the highest ranges of the Andes, etc. prevail here in this continent. It is due to the prevalence of equatorial and tropical climate that about 40% of the continent is covered with forests.

South America is rich in agriculture and natural resources. The crops like cotton, sugarcane, tobacco, coffee, cocoa, etc. are produced in large quantities in north-central part of the continent, particularly Brazil. It is worth mentioning that Brazil occupies first position in the world in sugarcane and coffee production. Large scale cultivation of wheat, barley, maize and best quality grass for cattle is done in the fertile soils of Argentina. That is why this part of South America is very famous in cattle rearing and production of beef in the world. It is also somewhat



Fig.- 3.09 : South America

rich in mineral resources like petroleum, tin, coal, chromite, graphite, manganese, gold, silver, diamond, platinum, copper, etc. Of course, it has still remained backward in respect of industrialisation.

Most of the people of South America are of primitive Red Indian and European origin. The socio-economically backward Red Indians still make their living through hunting and gathering fruits in the dense jungles of the Amazon basin. South America is

very sparsely populated. Of course, population density is somewhat dense in the coastal region. According to the estimated data for the year 2007, the total population of South America is 381 million, that is 5.75% of the world's population. Its population density is only 21 persons per km². With 189 million people (50% of the continent) Brazil is the most populous country of South America. The ports and industrial centres located along the east coast, viz. Recife, Salvador, Rio de Janeiro, Sao Paulo, Montevideo, Buenos Aires, Bahia Blanca, Porto Alegre, etc. are some important cities of the continent. With about 20 million population Sao Paulo of Brazil is the largest city of South America and fifth largest city of the world. Among the cities located along the west coast of the continent, Guayaquil, Lima, Santiago, etc. are worth mentioning. About 80% of the continent's people live in the urban areas. The average per capita gross national income of South America is US dollar 8790.

The Continent of Oceania :

The continent of Oceania is formed by the great island of Australia and many other islands of varying size located in the south-west Pacific Ocean including New Zealand, Tasmania, New Guinea, etc. Located on the south of Asia this continent is completely a part of southern hemisphere. It spreads from 0° equator on the north to 48° South latitude on the south, and 113° East longitude on the west to 180° longitude on the east (Fig. 3.10). With an area of 7.7 million km² Australia is the largest country of Oceania and the sixth largest country in the world. Its length of the coastline is about 10,000 km. The total land area of Oceania consisting of Australia, New Zealand, Tasmania, New Guinea and many other islands is about 9 million km². Accordingly, Oceania is the world's smallest continent. It is surrounded by Java-Sumatra-Celebes islands of the South-East Asia and Pacific Ocean on the north, Southern Ocean and Antarctica on the south, the Pacific Ocean on the east and the Indian Ocean on the west. It means Australia, the mainland of Oceania, and other islands

are surrounded by the Pacific Ocean. Besides the major countries of the Pacific Ocean region, viz. Australia, New Zealand and Tasmania, the other islands are broadly grouped under Micronesia (the islands located on the north of Indonesia and Papua New Guinea including north Mariana islands, Marshall islands, Guam, Caroline islands, Gilbert, etc.), Melanesia (the islands located on the east of Indonesia including Papua New Guinea, Solomon, New Caledonia, New Hebrides, etc.) and Polynesia (the islands like Hawaii, Cook, American Samoa, Society, French Polynesia, Marquesas, Tokelau, etc.).

Australia, the main land of Oceania, is an ancient plateau. It has narrow coastal plains all around. Of course, the northern coast is considerably wide. There is a wide desert region from its central part towards west. The eastern part of Australia is a highland region formed by the Great Dividing Range and Snowy mountain. This region is also known as the Australian Alps. But the central-eastern part of Australia is covered with semi-desertic flat-land. From the northern Carpentaria plain it is connected with the south coast passing through Simpson desert, Stuart desert and Murray-Darling plain towards west. The Carpentaria region is densely forested. On the other hand, the Murray-Darling plain is famous for sheep grazing and cultivation of wheat, maize and vegetables. There are also some scattered salt-water lakes in the midst of desert region located in the central western part of Australia. Among such lakes, Berly, Camezi, Makay, Yiere, etc. are worth mentioning. The number of rivers is very small in Australia. Its two largest rivers are Murray and Darling. Among other rivers, Baliandu, Fitzroy, Flinders, Victoria, Sowan, etc. are important. As Australia is completely located in the southern hemisphere, the summer season prevails here from November to February and the winter season from May to August. The south-east and south-western parts of the country receive winter rainfall due to the prevalence of Mediterranean climate. Of course, a rainless desert condition prevails in the central and western

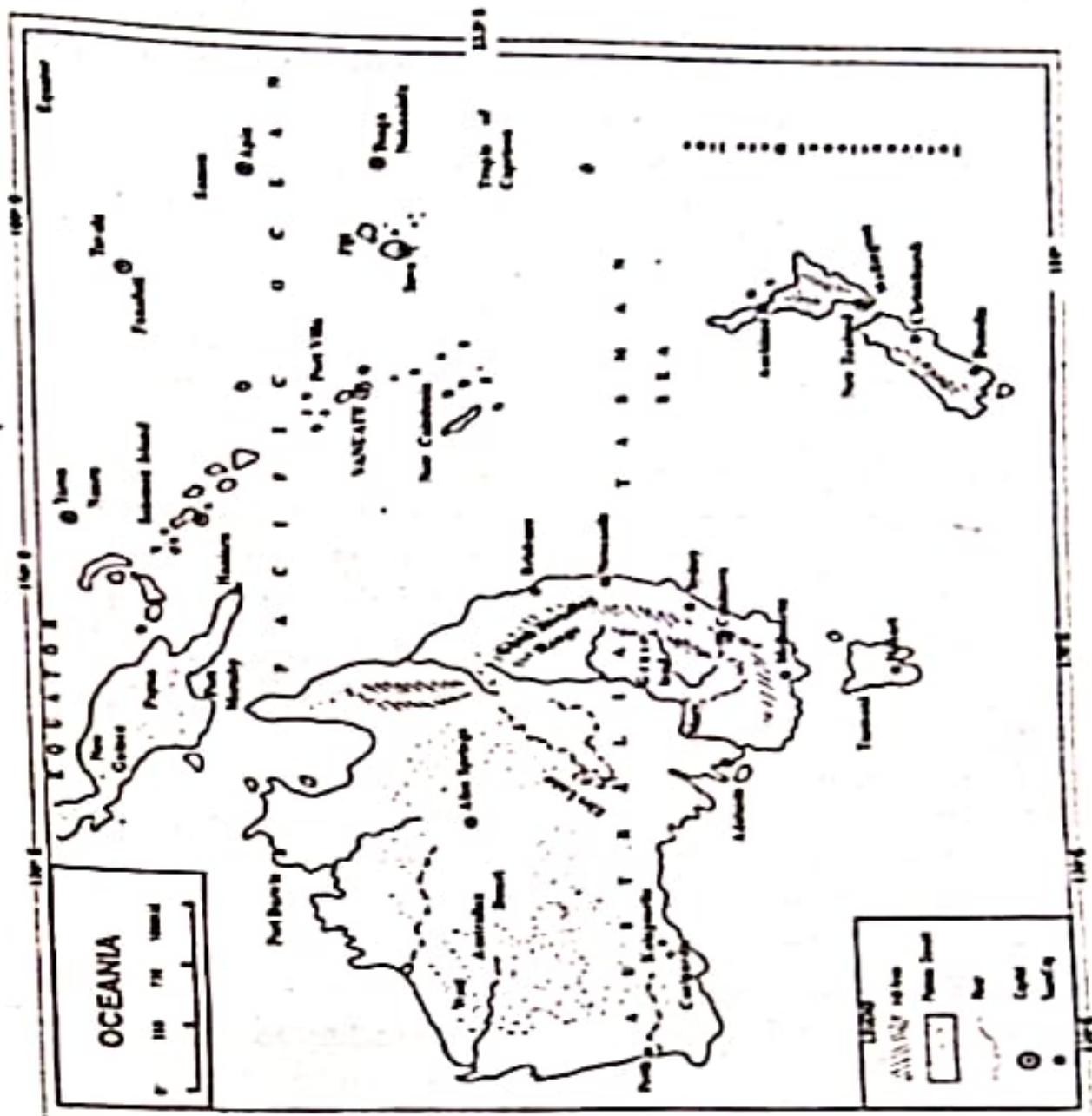


Fig.- 3.10 : Oceania

parts of the country. Due to equatorial influence the northern part of Australia receives rainfall almost throughout the year.

As Australia is completely separate from the other main land-units of the earth, its flora and fauna are somewhat different from the others. Due to occurrence of average annual rainfall of 80 cm in the country's south-east and east coastal areas, wheat

cultivation is done there. The other major crops of this region include sugarcane, maize, rice, potato and tobacco. But large quantities of vegetables and fruits are produced in the areas under the influence of Mediterranean climate. Cultivation of grass is done in the Downs grassland by using scientific methods. The beef and wool produced in large quantities here through sheep and cattle rearing on commercial basis are exported throughout the world. The position of Australia in this respect is the first in the world. The mineral resources like coal, iron, aluminium, gold, silver, nickel, petroleum and natural gas are also produced in some quantity in Australia. Based on these mineral resources a number of industries on steel, oil refinery, ship building, cotton garments, etc have also been established in Australia.

Among the other islands of Oceania, New Zealand, Papua-New Guinea, Solomon, Fiji and Hawaii are important. Papua-New Guinea, located in the equatorial region to the north of Australia, is the second largest country of Oceania. It is characterised by mountainous topography and hot and wet climate. Most of its inhabitants do shifting cultivation and make almost a nomadic living. New Zealand is the third largest country of Oceania. Located on the south-east of Australia it mainly consists of two islands named North Island and South Island. Both these islands are covered with hills and mountains. Of course, as the North Island is characterised by low mountain ranges, here sheep and cattle rearing is done on commercial basis like that of Australia. But the high mountain ranges named Southern Alps located on the South Island remain covered with ice almost throughout the year. Although the economy of New Zealand is agro-based, a number of industries have grown here. Solomon islands located under the Melanesia region is an agriculture dependent country. In its Bougainville island the mineral resources like copper, silver, gold, zinc, lead, etc are found in large quantities. Fiji islands which is composed of two big and about one hundred small islands is located on the eastern part of

Melanesia. Here many people of Indian origin are making their living through cultivation of sugarcane and many other crops. The Hawaii island, located under Polynesia but 50th state of the United States, is characterised by highly rugged hilly topography.

The people of Oceania belong to different ethnic groups. But most of them are of European origin. According to the estimated data for 2007, the total population of Oceania is about 35 million. Out of this about 21 million people (that is about 60% of Oceania's population) live in Australia alone. But the distribution of population is not uniform in all parts of the continent. The population density of Oceania is only 4 persons per km². Among the countries of Oceania, the population density per km² is 3 persons in Australia, 14 persons in Papua New Guinea, 47 persons in Fiji and 667 persons in Nauru. Among the urban areas of Oceania, Brisbane, Sidney (largest city), Canberra (capital city), Melbourne, Adelaide and Perth of Australia; Auckland (largest city), Hamilton and Wellington (capital city) of New Zealand; Port Moresby of Papua New Guinea (capital city); Suva of Fiji island (capital town); Honolulu of Hawaii islands (capital city); etc are worth mentioning. About 72% people of the continent live in the urban areas. The proportion of urban dwellers is still higher in Australia (91%). On the other hand, it is 100% in Nauru. The average per capita national income of Oceania is about US dollar 23,320.

Questions

1. What do you mean by a region? Explain the importance of region in geographical study.
2. Explain how a region can be identified on the earth's surface.
3. Bring out the differences between the homogeneous region and the functional region.
4. What do you mean by regional geography of the world? What is the importance of this study?

5. What do you mean by 'Natural Region'? To how many natural regions the whole earth can be divided? Write their names and show in the map.
6. How can the regional geography of the world be understood through the study of natural regions? Write in brief.
7. Write about the physical environment of each of the natural regions of the world.
8. Discuss about the climate and vegetation as found in different natural regions of the world.
9. Give a description of the life styles of the people living in different natural regions of the world.
10. How many and what are the continents in the world? Give a brief geographical introduction of each of the continents.
11. Which is the largest continent in the world? Write briefly about the physiographic character of the continent.
12. Which is the most populous continent in the world? Write in brief about the population and economic characteristics of that continent.
13. Mention the geographical characteristics of the continent of Europe.
14. Write briefly about the topography and mineral resources of the continent of North America.
15. Write in brief about the drainage and vegetation of the continent of South America.
16. Mention the major mountain systems and rivers of the world and show them in the map.
17. Write in brief about the climate and mode of living in the continent of Africa.
18. Which is the smallest continent in the world? Write briefly about the geographical situation of that continent.
19. Write short notes :
 - (a) Major Grassland regions of the world
 - (b) Equatorial natural region

- (c) Mediterranean natural region
- (d) Monsoon region
- (e) Topography and climate of Asia
- (f) Tundra region
- (g) World population and its distribution
- (h) Tropical Grassland region
- (i) Tropical Hot Desert region
- (j) Cold coniferous forest region.

...