

# UNIT 19 MAP AND CHART WORK

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## 19.0 OBJECTIVES

Dear learner the objective of this Unit is to familiarise you with working on maps and charts. But we would like to begin with a suggestion. All that you are going to read here about maps and chart work will become extremely meaningful if you apply these details in reading maps given in an atlas and charts culled from any new features magazine. We suggest that you buy a school atlas available in the local book shops. It will be of use to you in many ways.

What we are going to tell in this Unit will enable you to:

- get a brief idea about the history and development of maps,
- understand the different types of maps and charts used in tourist trade and how could they be put into application for specific needs,
- analyse and read the various informations, symbols and markings, given on maps, and
- learn using charts for tourism purposes.

## 19.1 INTRODUCTION

The earth we live on is so large that it becomes difficult to comprehend it as a whole. Even if one views it from space, its details are not very clear. It is here that maps come to our aid. A map is a graphical representation of a part or all of the earth's surface, in miniature. While a globe represents the whole surface of the earth in its correct spherical shape, maps portray parts, or the whole surface of the earth on a flat sheet. With the use of lines, words, symbols and colours maps show the arrangement and distribution of different features of the earth's surface.

This unit starts with a discussion on the relevance of maps and charts. After briefly tracing the history of maps it explains to you different types of maps you are likely to come across. Map reading has its own language and terminology and an attempt has been made to introduce you to that along with telling you how to read a map. You might be wondering as to why we are loading you with all this information. Well, it is important for a tourism professional, be it a travel agent, tour operator, waiter in a restaurant or the managing director of an airlines, to know about the location of destinations, their physical features, the air connection or road routes to it etc. For example, a tourist asks the travel agent: "Well you have booked me to Bangalore. But what other places do I get to see nearby?" And here it is with the help of a map of Bangalore and its neighbouring areas that the travel agent will be able to explain the details to the tourist. Remember, you cannot tell the tourist: "I have booked your journey, go to Bangalore and ask there." Not only will you lose this customer but his friends who could be your future customers.

It is because of such necessity that we also have for you in this Unit certain useful maps and charts. The Unit provides you with a perspective about maps and charts and it is for you to apply that in practice.

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## 19.2 MAPS AND CHARTS: RELEVANCE

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Maps help us understand the world around us, and with proper illustrations and interpretations, one can almost get an idea of the country or the place as if one has actually visited it. Maps are used by everyone at one time or the other. For example, vacationers use it to plan vacation trips, while businessmen use it to find the right place for selling their products. Defence forces use it for planning their defence strategies. There are specific maps in use for specific purposes. For example, a wall map may give us a general idea about a country or continent, while another map may bring to us the details of population distribution in different parts of the world. Similarly, climatic types, and vegetation growth are some of the other features about which we can get information from the maps.

A modern world map performs several significant functions:

- Firstly, it brings this vast, spatial world in comprehensible form, onto our table-tops.
- Secondly, it is an efficient device for storage of information.
- It also acts as a research tool permitting an understanding of distribution and relationship of geographic features, otherwise not clearly understood today.

The map is a communication media, without which, modern developments in the world would hardly have taken place.

The charts are geometrical designs used for illustrating a variety of themes in such manner that the relativity of their constituent components is clearly established. The charts are a very effective modern device used for multifarious purposes because of the economy of space they provide and the clarity with which the subject can be made intelligible even to a mixed non-specialist audience. In tourism charts can be utilised in many ways and for different purposes. By way of random illustration, we give below some of the themes which can be depicted in chart form:

- a) Rainfall and temperature variations at a place, month-wise.
- b) Distance travelled, the cost involved in travel and the time taken, by a group of travellers.
- c) Share of foreign tourists in the total traffic in a given period of a year.

It is these very aspects that signify the relevance of maps and charts in a course on tourism.

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## 19.3 HISTORY OF MAPS

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Viewed in its development through time, the map is an indicator of the changing thought of man, reflecting his cultural activity as well as his perception of the world in different periods. It is believed that like art, cartography also pre-dates writing. Primitive men had learnt the use of maps ever since they moved about the earth, either to indicate hunting or gathering sites, or for purposes of trading or conquering territories. Among the different mediums and techniques used in the making of such maps were wooden boards, barks of trees, skin leather and fabric, metal, stone, and clay, marked with simple instruments and tools. A small fraction of these maps have survived, while others have been lost either because of the perishable nature of materials used or destroyed in wars, fires or due to such other causes. Perhaps, the oldest surviving map today belongs to about 2300 B.C. and is in the form of a clay tablet showing an estate. Egyptians made maps about 1300 B.C. showing the route from Nile Valley to the Nubion gold mines. The Greeks, who discovered that the earth is round, were perhaps the first to design the projection of the earth, developing longitudes and latitudes. Then came the Romans, pioneered the use of road maps.

The contribution of Ptolemy, an Egyptian scholar, to the science of geography, is considered most valuable. In his book **GEOGRAPHIA** he included a world map, instructions for making

map projections and about 26 sectional maps of Asia, Africa and Europe. Ptolemy lived in the 2nd century A.D., but his maps came to light only in A.D. 1400. By this time probably, the importance of maps for trading purposes had become established, and sailors had begun to use maps as aids in navigation.

Overseas geographical discoveries of the period of Renaissance led to a great progress in map-making. The discovery of America and the voyages around the Cape of Good Hope discovered new routes.

In India, maps in one or the other form were in use right from the ancient times. The ancient text of Salva Sutra and Kautilya's Arthashastra describe the art of surveying and techniques for measuring area. Arya Bhatt's Surya Siddhanta described the earth's circumference. Chinese travellers, who came to India, contributed to Indian geography. In medieval time we had Sher Shah's and Raja Todar Mal's revenue maps based on regular land survey systems.

In 1767, the Survey of India was established to assist the East India Company in conducting topographical surveys of the areas under their possession. This laid the foundation of systematic cartography in India. By the end of the 19th Century most of our country was mapped. Over a period of time, mapping techniques greatly advanced and adopted the depiction of various features by appropriate symbols and colours. Improved printing techniques helped in the production of superior quality maps.

#### Check Your Progress 1

1) What is a map?

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2) Write four sentences on Ptolemy's contribution to the science of geography.

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3) What is the importance of Salva Sutra and Arthashastra in the history of map making in India?

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## 19.4 TYPES OF MAPS

Maps, you must know, are of various kinds. From the point of view of convenience these can be broadly classified into the following two categories:

- a) General Reference Maps, and
- b) Special or Thematic Maps

**General Reference Maps** give us general information about continents, countries, rivers, cities and other features. Students use these general reference maps in the form of a book

called atlas. An atlas is a collection of maps, of the world, continents, and selected countries. They generally answer questions about the world as a whole, or of specific regions.

**Special Maps or Thematic Maps** emphasize on particular aspects such as rainfall, population distribution, climatic conditions or mines and industries distribution. Thematic maps can be further sub-divided under several headings. Some of the important ones that may concern you have been described here briefly:

i) **Political Maps** — These maps give us information about political boundaries, the relative size of countries and arrangement etc. The depictions in such maps are generally in colour making the identification of political boundaries easier. By way of an example you may have a look at the political map of India which shows political divisions of India, by using different colours. The main features in this map are: international and state boundaries, main rivers, lakes, sea, capital cities, major industrial and commercial centres, and administrative boundaries and headquarters etc.

Such a map can help you explain to a tourist the country where his destination is located, through how many countries he would be crossing or flying over. In fact, explaining destinations through a map is a lucid exercise and a lot depends on your ability to use the maps for such details.

ii) **Physical Maps** — Physical Maps emphasize the elevation of land features on the earth's surface. These are generally obtained through shading of these features in different colours. Often, darker colours indicate higher elevations while lighter indicates low elevations for the physical contours of land forms. Unlike this, however, for the aqueous features they use light blue for shallow portions & deep blue for indicating deep waters. These maps give us information about the topography of the place i.e. showing physical features like mountains, hills, main rivers, and heights of important peaks, etc.

iii) **Tourist Maps** — Tourist Maps, obviously, are of great importance to you. These maps are published to show all types of information that a tourist needs regarding destinations i.e., monuments, religious places, hill stations, wild life sanctuaries, parks, and other places of tourist interest. They also show important rivers, lakes and the location of significant towns. It should, however, be noted that all these features may be integrated in one single map or may be depicted on different maps. Today every country publishes its tourist maps. This is done for the whole country as well as for local destinations. At a tourist information centre you may see, for example, the tourist map of U.P. as well as a map of Agra and its neighbourhood.

iv) **Road Maps** — In the manner of tourist maps, the road maps too are of great value to you. These show all the different kinds of roads and the state of each such road from the point of view of their motorability in fair as well as bad weather conditions. Along with this, they also show the distance between road segments between cities and towns, important tourist centre, & industrial points. Notings on these maps also indicate the location of highway petrol pumps, boarding/lodging facilities along the roads and places of assistance e.g. police stations etc. With the help of such a map you can plan for a tourist travelling in his car as to the next filling of his petrol tank, place to have tea or food on the way and also the station for night-halt.

v) **Railway Map** — The purpose of railway map is to provide information about railway networks of a country or group of countries. The railway map of India generally provides the following information:

- a) Nature of gauges in use in different sections.
- b) The route-lengths of each such gauge.
- c) The types of traction in use on respective gauges, e.g. electric traction or dieseltraction.
- d) The condition of tracks on various sections e.g. the track under construction, single/double track, track under gauge conversion.

The map is helpful to you for determining the nature or mode of transport to a destination. For example, you will find no railway in the map for Khajuraho. Hence, to a tourist travelling from Delhi to Khajuraho, you can suggest:

- travel by road, or



- by train up to Gwalior, the nearest railway station, and from there by road.
- vi) **Air-route Map** — The air-route map contains the following information,
- a) Major international and national airports.
  - b) All the air-routes under operation along with the aerodromes enroute.
  - c) Air-linkages between different places and the availability of connecting flights.

You can see from the above that air-route maps are quite useful in planning tours.

## 19.5 MAP LANGUAGE AND TERMINOLOGY

In order to use a map so as to get maximum information from it, one has to learn to read it first. For example, Ms. Nilanjana has bought a road map to help her in going to Varanasi from Calcutta. But in order to reach her destination she should be able to follow the map, decode the signs, symbols and landmarks. She also has to know the actual distance to her destination, alignment of the road to follow, and the landmarks along the route. For all this she has to depend on the scales and symbols that are used on that particular map. Let us now consider the various languages or modes that a map uses in order to encompass so much information in such a wonderful manner.

### SCALE:

Maps are usually drawn to scale, in order to be accurate. A scale is the ratio of the distance between any two points on the map, corresponding to the actual distance on the ground. It shows how much of the actual earth's surface is represented by a given measurement on the page of a map.

Map scales may be expressed by one of the following three methods: (a) by words and figures, (b) a graphical or linear scale, or (c) numerical or representative fraction.

- a) **Words and Figures** — By this method the scale is expressed in words stating how many units on the map equal how much on the ground. Thus, 1 cm = 4 km means 1 cm on the map corresponds to 4 km on actual ground surface. This is particularly important for road maps where a person travelling from point A to B which are say 3 cm apart on the map, would have to travel a distance of 12 kms.
- b) **Graphical or Linear Scale** — This scale is shown by means of a straight line, which is divided and sub-divided so that distances can be directly measured and read from the map. Each unit represents a certain number of miles or kilometers on the earth's surface.
- c) **Numerical or Representative Fraction** — This is the most common method of expressing scale, giving the proportion between the distance on the map and the corresponding distance on the earth's surface, by means of a fraction.

$$\text{Representative Fraction} = \frac{\text{Distance on the Map}}{\text{Distance on the Ground}}$$

It may be written as 1:57,000 or 1/57,000.

Thus, it means one unit on the map represents 57,000 of the same units on the ground. This method is independent of any particular unit of measurement and thus can be converted to any unit, thereby having a universal application. For example, for an American this map scale may mean 1 inch on the map is equal to 57,000 units, while for an Indian 1 cm of the same map is equal to 57,000 cm in actuality.

### SYMBOLS:

The use of symbols makes it possible to put a variety of information on a single map. These symbols may represent cultural features, highways, railroads, dams, cities, mountains, lakes, forests etc. There need not be any resemblance between the symbol and the feature represented. The symbols can be deciphered by means of a 'legend' or 'key' which explains what each symbol represents. Some of the more commonly used symbols and their actual meanings have been listed below in tabular form:

Legend	Meaning	Legend	Meaning
	Church		Railway Station
	Temple		Roads
	Hospital		School
	Police Station		Airport
	Post Office		

### COLOUR:

Colours used on maps are also a part of map language. A political map has different colours for different countries. On a physical map, different shades of colour are used to indicate the elevation of different places. Rivers and bodies of water are generally shown in blue while higher altitudes are shown in brown and its shades. Thus orange colour is used for elevation of 5000 ft. - 7500 ft. above sea level, tan for 7500 ft. - 10,000 ft. and dark brown for 10,000 ft. and above. Now, if you are familiar with these colour shades and what they represent, a quick glance at the map will enable you to tell your client: Well if you want to go this high visit hill station X and another height for hill station Z.

### GEOGRAPHIC GRIDS:

Maps are generally used to find the exact location of a place. This system of location of a place on the map surface necessitates the requirement of grid lines. These grid lines, in geographic terms, are called longitudes and latitudes. Longitudes are imaginary lines running from pole to pole, passing through the equator at perpendiculars. They run halfway around the globe, connecting the North Pole to South Pole. The 0° longitude is otherwise called the Prime Meridian. All the other meridians run east or west of the Prime Meridian with the 180° meridian falling exactly opposite the 0° meridian or longitude. These two lines i.e. 0° and 180° meridian divide the earth into two hemispheres (–)–eastern and western. All meridians running west of the Prime Meridian up to 180° are known as 1° W, 2° W and so on while all lines running east from the Prime Meridian are 1° E, 2° E and so on up to 180°. The 180° line is known as the International Date Line.

Latitudes or Parallels are lines drawn around the globe with each point of the same line, equidistant from the pole. The equator is parallel with all its points equidistant from either of the poles. It is otherwise called the 0° latitude. The equator divides the earth into Northern and Southern hemispheres. Thus all latitudes North of the equator are said to be in the Northern hemisphere and all in the South are in Southern hemisphere.

All latitudes are shown as x° N or x° S while all longitudes are shown as y° E or y° W.

### Check Your Progress 2

- 1) What information do you get from a political map?

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- 2) A physical map uses colour shades. What do these shades represent?

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3) What is Representative Fraction?

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## 19.6 HOW TO READ A MAP

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Both longitudes as well as latitudes are essential in locating a place, be it on a globe or a map. A place at 80°E can be anywhere along the 80°E meridian extending from pole to pole. But if we know that the latitude of the place is 30°N, then we can easily locate it, as there can be but only one place at that point. For example, looking into a map we know that the actual place having 80° E, 30° N position is Madras.

Similarly, if we know the name of a place and would like to know where it is located, we could take the help of an 'index'. Every atlas or map provides an index, which is an alphabetical listing of all the places on that map. It is with the help of the two symbols following it, that we locate a place. For example, if we would like to know where Lucknow is, the index shows **Lucknow 26.55N 80.59E**. We have seen earlier that letter N and S follow latitudes while E & W follow longitudes. Thus we look into the 26.55° North latitude and the line which intersects it at 80.59° Eastern longitude gives us the location of Lucknow. Lucknow is 26.55° North of 0° Equator and 80.59° East of the Prime Meridian.

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## 19.7 TYPES OF CHART

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The common type of charts which are used frequently fall into the following four categories:

- a) **Pie Chart** — The pie chart takes its name from Pie. It follows the pattern of representation where relative quantities are shown by areas of sectors of circle. The entire circle represents 100%. It is divided up to represent **percentage shares** of the total.
- b) **Bar Chart** — The bar chart is in the form of rectangular bars. It can be used in a number of formats to show **totals** or show **percentage shares**.
- c) **Climate Graph** — The climate graph, as is evident from its nomenclature, show conditions of weather. Normally in such depictions the rainfall is shown by a **bar graph** and temperature by a **line graph**.
- d) **Radial Graph** — The radial graph is a presentation of data in the form of concentric circles of varying radii. These circles can be used to represent several features at one go.

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## 19.8 SOME USEFUL MAPS AND CHARTS

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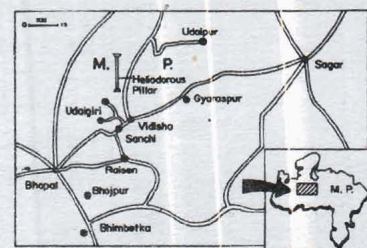
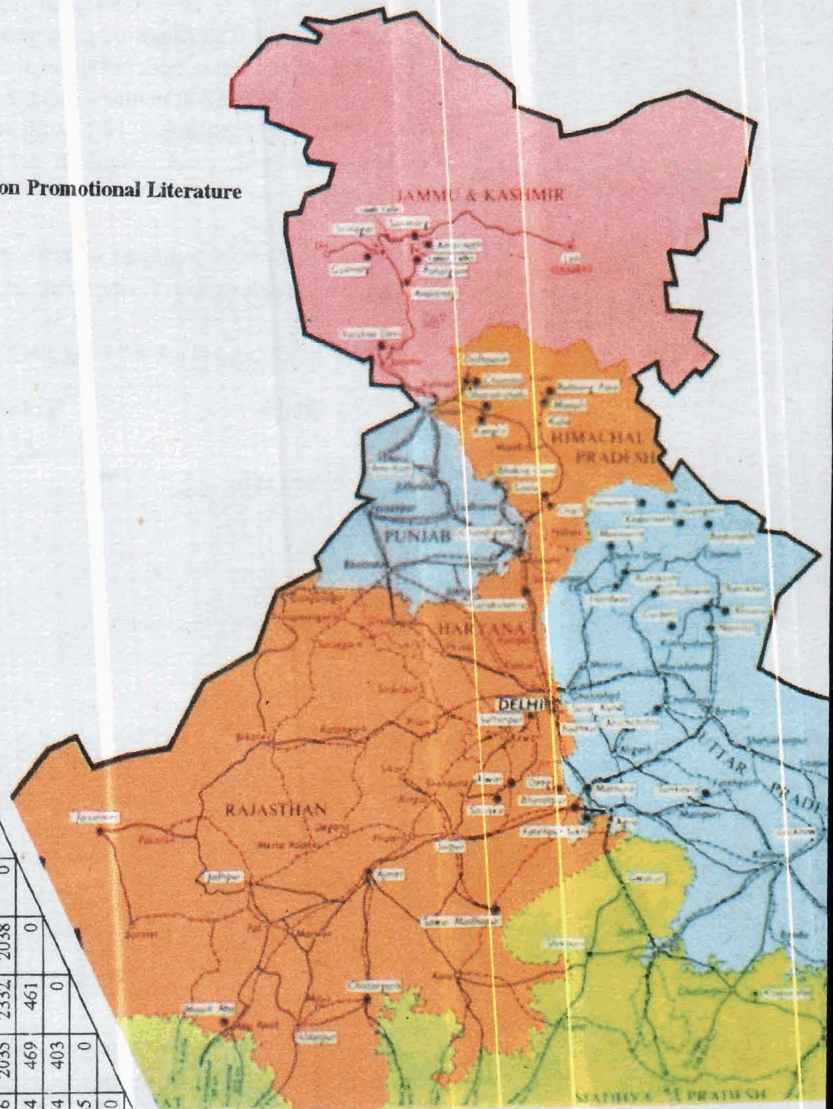
By now, we are sure, you have become easy with map and chart reading and have also come to realise their importance in your trade/profession. In this section, therefore, we are providing you some useful information relevant to tourism enterprise. This information is only a random sample and by no means exhaustive. Our intention is to prompt you to collect for yourself such information as is relevant for your trade, in the form of maps and charts (so as to become space saving and readily available to you).



# A: ROAD DISTANCES

Map and Chart Work

Road Map on Promotional Literature



Madhya Pradesh State Tourism  
Development Corporation Limited,  
Gangotri, 4th Floor, T.T. Nagar, Bhopal.

	Ahmedabad	Amritsar	Bangalore	Bhopal	Bhubaneswar	Bombay	Calcutta	Cochin	Darjeeling	Delhi	Gangtok	Guwahati	Hyderabad	Indore	Jaipur	Lucknow	Madras	Madurai	Mysore	Panaji	Patna	Pondicherry	Shillong	Shimla	Srinagar	Trichy	Trivandrum	Udaipur	Varanasi	Visakhapatnam
Agr	855	646	1819	541	1556	1208	1242	2365	1371	200	1407	1834	1253	606	230	369	1957	2251	1954	1704	811	2119	1834	568	1091	2188	2580	604	565	1051
Ahmedabad	0	1332	1514	1187	1854	1208	1888	1832	866	2171	2171	2598	1220	384	625	1133	1848	1946	1649	1063	1575	1817	2698	1254	1777	1883	2504	251	1329	1857
Amritsar	0	0	2465	1379	2202	1208	2006	1832	2135	446	2033	2899	1369	1252	707	945	2603	2897	2600	2350	1457	2765	3580	342	519	3226	1081	1211	1211	2307
Bangalore	0	0	0	0	1430	1208	1888	1832	2017	3011	2593	3020	566	1369	2049	1900	2603	2897	2600	2350	1457	2765	3580	342	519	3226	1081	1211	1211	2307
Bhopal	0	0	0	0	1175	1208	1888	1832	2017	3011	2593	3020	566	1369	2049	1900	2603	2897	2600	2350	1457	2765	3580	342	519	3226	1081	1211	1211	2307
Bhubaneswar	0	0	0	0	0	1691	1208	1832	1168	1745	1204	1631	739	1275	1176	1370	1469	1680	1694	1661	901	1387	1731	2116	2299	1568	802	1568	802	1568
Bombay	0	0	0	0	0	0	2081	1894	2384	2402	2402	2847	1601	602	1176	1370	1469	1680	1694	1661	901	1387	1731	2116	2299	1568	802	1568	802	1568
Calcutta	0	0	0	0	0	0	0	2347	688	1442	1442	2034	1772	1792	1472	1643	2157	2451	2451	2114	2147	1840	1251	1610	1997	1755	1755	1755	1755	1755
Cochin	0	0	0	0	0	0	0	0	3103	2565	3139	3566	1112	1792	1472	1643	2157	2451	2451	2114	2147	1840	1251	1610	1997	1755	1755	1755	1755	1755
Darjeeling	0	0	0	0	0	0	0	0	0	1571	93	627	1772	1792	1472	1643	2157	2451	2451	2114	2147	1840	1251	1610	1997	1755	1755	1755	1755	1755
Delhi	0	0	0	0	0	0	0	0	0	0	625	2034	1808	1792	1472	1643	2157	2451	2451	2114	2147	1840	1251	1610	1997	1755	1755	1755	1755	1755
Gangtok	0	0	0	0	0	0	0	0	0	0	0	625	2034	1808	1792	1472	1643	2157	2451	2451	2114	2147	1840	1251	1610	1997	1755	1755	1755	1755
Guwahati	0	0	0	0	0	0	0	0	0	0	0	0	2454	2034	1808	1792	1472	1643	2157	2451	2451	2114	2147	1840	1251	1610	1997	1755	1755	1755
Hyderabad	0	0	0	0	0	0	0	0	0	0	0	0	0	2034	1808	1792	1472	1643	2157	2451	2451	2114	2147	1840	1251	1610	1997	1755	1755	1755
Indore	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jaipur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lucknow	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Madras	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Madurai	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mysore	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Panaji	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patna	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pondicherry	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Shillong	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Shimla	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Srinagar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trichy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trivandrum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Udaipur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Varanasi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Visakhapatnam	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



## B. CONFERENCING FACILITIES

India can match any country in fulfilling the most exacting demands of international conferences. The range of conference facilities leave little to desire and there is a wide choice of locations depending on the needs of the conventions. One could opt for beach resorts, metropolitan centres, industrial cities, academic/research centres or quick retreats. Conference equipment like audio-visual systems, simultaneous translation, foreign language guides, media centres, radio and TV control rooms and production centres are all on hand.

For a conference organiser with his eyes on the bottom line, India is price friendly indeed. The dollar goes much further here making it a less expensive destination comparatively.

Given below is a chart showing such facilities at important cities at a glance.

Place	Total Number of Rooms	Total Conference Capacity
New Delhi	7040	15472
Bangalore	743	4181
Bombay	4542	7250
Calcutta	1340	1725
Madras	1893	7190
Agra	287	490
Bhubaneswar	134	435
	866	4799
Hyderabad	939	2040
Jaipur	513	1150
Khajuraho	140	180
Srinagar	705	1805
Varanasi	187	340

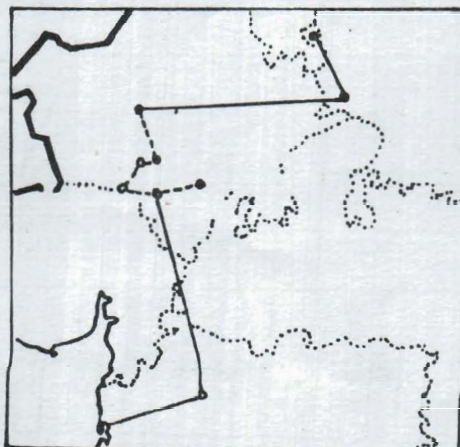
## C. TOUR/TRAVEL CIRCUITS

India is a vast country with a number of places of tourist interest. Each place is unique in itself — a tourist has to decide what he wants to see—architectural wonders or spots of scenic beauty; places of historical interests or wild life sanctuaries rich in flora and fauna? A tourist unfamiliar with the geography of India and a limited time on hand will find it difficult to plan out a tour programme which would fit into his time schedule and cater to his interests.

To help you to discover India the Department of Tourism, Government of India has outlined eighteen itineraries which cover all the regions of India. These itineraries, with suggestions for detours or extension tours will help you to make your visit to India a unique experience.

### CIRCUIT-1

#### Maharashtra/Rajasthan/UP



Arrive in Bombay. After a sightseeing tour of the city, fly to Aurangabad, reminiscent of an ancient Deccan civilization. An ideal base for a visit to Ajanta and Ellora caves. Fly to Udaipur, a city surrounded by five jewel-like lakes. From Udaipur take a 7-day extension tour to Jodhpur. Enroute visit Chittaurgarh, the powerful bastion of Mewar of yore. Back to Udaipur. Also visit Mount Abu, a pleasant hill-resort famous for its Dilwara temples; Ranakpur, a Jain pilgrimage with its beautifully ornamented temples; Kumbhalgarh with its ancient fort perched on a hill, and then to Jodhpur, the

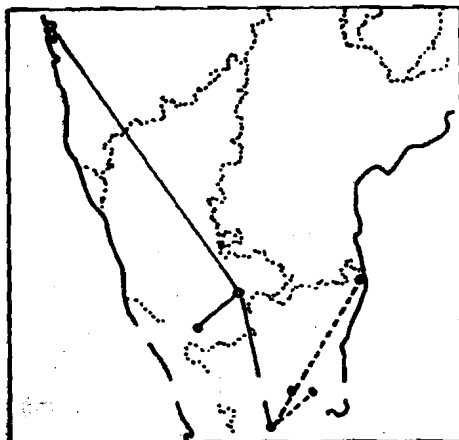
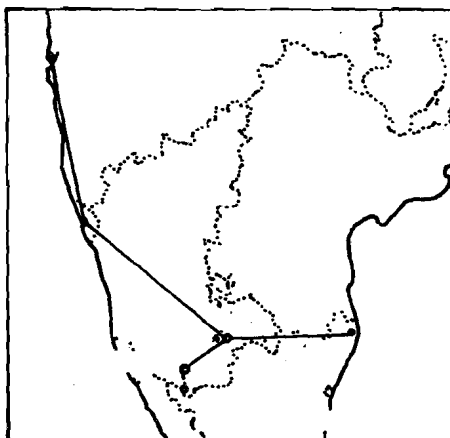


jewel of Rajasthan. Departure by surface transport to Agra, famous for the Taj Mahal, Red Fort and Fatehpur Sikri. Tour ends at Delhi.

## CIRCUIT-2

### Tamil Nadu/Karnataka/Maharashtra

Arrive in Madras, the gateway to the south. Take a 4-day trip to Tiruchirapalli, Madurai and Thanjavur, famous for temples and handicrafts. Or follow the side itinerary in reverse from Tiruchirapalli up to Madurai. Fly to Bangalore, year-round resort. Proceed by surface transport to Mysore. back to the garden city, Bangalore. Fly to Bombay where the tour ends.



## CIRCUIT-3

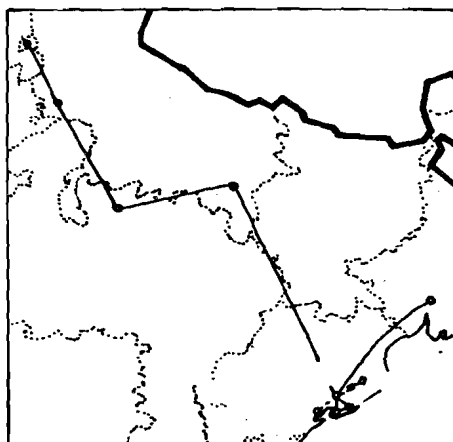
### Maharashtra/Goa/Karnataka/Tamil Nadu

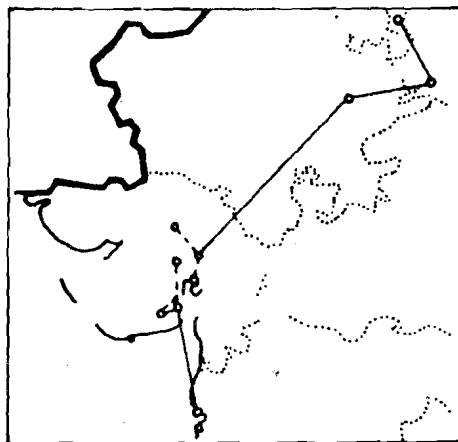
Arrive in Bombay. Fly to Goa and enjoy its palm-fringed beaches and lovely countryside and then to Bangalore. Proceed by surface transport to Mysore. Undertake a 5-day wildlife excursion tour of Bandipur National Park, Kabini River adjacent to the Nagarhole National Park offering fishing and Wildlife viewing. Back to Mysore. Proceed by road to Bangalore. Tour ends at Madras.

## CIRCUIT-4

### Delhi/UP/MP/Orissa/West Bengal

Arrive in Delhi. Go around sightseeing and proceed to Agra. After a tour of the city, visit Khajuraho, known for 85 ancient temples built 10 centuries ago. On to Varanasi, city of a thousand temples and innumerable shrines. Proceed to Puri, the great pilgrim-centre and abode of Lord Jagannath via Bhubaneswar. Reach Konark, famous for its magnificent Sun Temple in the form of a colossal chariot on 24 wheels drawn by seven horses. On to Bhubaneswar, the Cathedral city. A three-day excursion can be arranged from here to Chilika Lake, a paradise for bird watchers, and Lalitgiri and Ratnagiri where lie remains of Jain and Buddhist shrines of 2nd and 3rd centuries BC. Back to Bhubaneswar. Fly to Calcutta where the tour ends.





### CIRCUIT-5

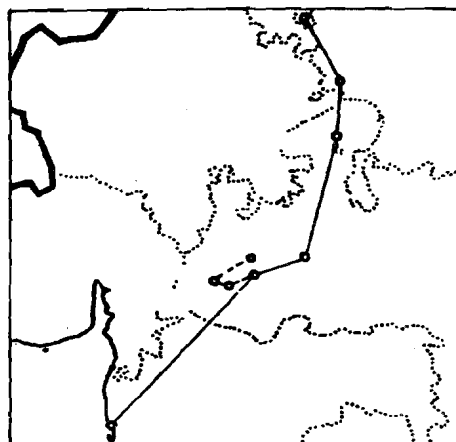
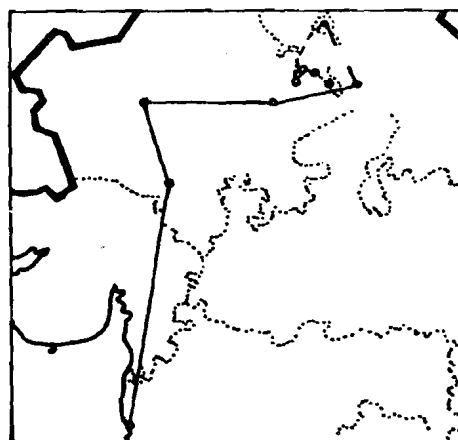
#### Maharashtra/Gujarat/Rajasthan

Arrive in Bombay. On to Bhavnagar. A 4-day tour from here can be arranged to Palitana, the seat of Jain faith; Lothal, the excavated port site of Indus Valley Civilization; on to Ahmedabad. Visit Modhera, famous for its Sun Temple. Tour the Vela Vadar National Park in Bhavnagar and Nalsarovar National Park for wildlife viewing, proceed to Ahmedabad by road. Fly to Jaipur, the pink city. Visit Agra and Delhi by surface transport.

### CIRCUIT-6

#### Maharashtra/MP/UP/Delhi

From Bombay, after sightseeing, fly to Indore, the capital of erstwhile princely state. Follow the side itinerary to Mandu, reminiscent of glory and romance, Bagh Caves and Ujjain, one of the oldest and holiest cities of India. Return to Indore. Fly to Bhopal. Visit Gwalior, famous for its imposing fort. On to Agra by surface transport proceed to Delhi.



### CIRCUIT-7

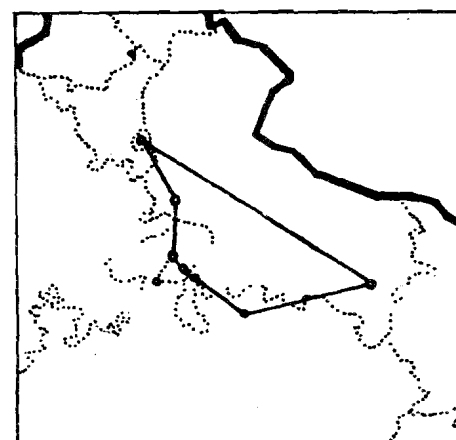
#### Delhi/UP/Rajasthan/Maharashtra

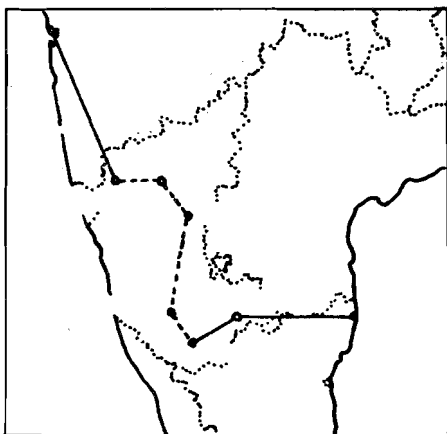
Arrive in Delhi. Proceed to Agra, the capital of the Mughals. Enroute visit Sariska Sanctuary, a Project Tiger Reserve; Alwar, Deeg and Bharatpur Bird Sanctuary. From Agra, fly to Jaipur, the pink city. Visit Jodhpur and Udaipur, described as one of the most romantic places. Fly to Bombay, where the tour ends.

### CIRCUIT-8

#### Delhi/UP/MP

Arrive in Delhi. Visit Varanasi and then fly to Khajuraho, famous for its ancient temples. Proceed to Jhansi by surface transport. A 3-day excursion from here to the Shivpuri National Park, Gwalior and Datia can be arranged. From Gwalior visit, by surface transport or train Agra the city of the Taj and return to Delhi.

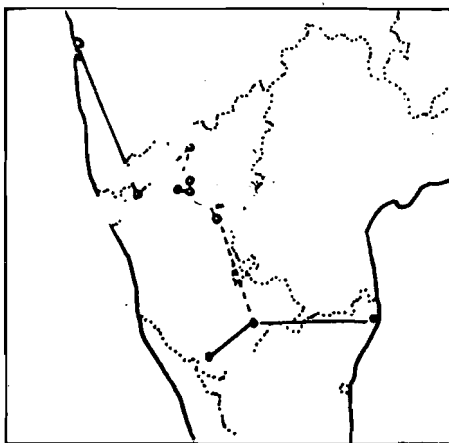


**CIRCUIT-9**

Arrive in Bombay. Fly to Belgaum. Take an extension tour to Badami, famous for its cave temples. On to Hospet. Proceed to Hassan, base for visiting the fabulous temples of Halebid and Belur. Proceed to Bangalore via Mysore. Fly to Madras, where the tour ends.

**CIRCUIT-10****Tamil Nadu/Karnataka/Maharashtra**

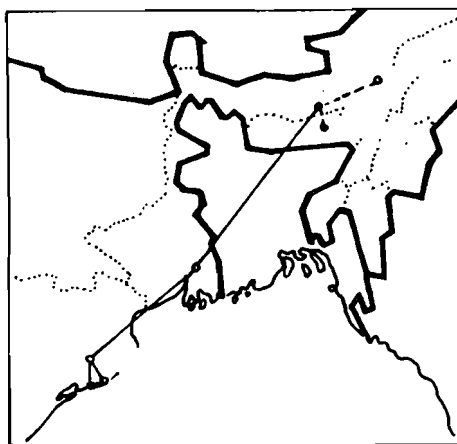
Arrive in Madras. Fly to Bangalore. On to Mysore by surface transport. Return to Bangalore. Follow the side itinerary to Hampi, Aihole, Pattadakal, Badami, Bijapur. Proceed to Belgaum by road. Fly to Bombay.

**CIRCUIT-11****West Bengal/Orissa/Assam**

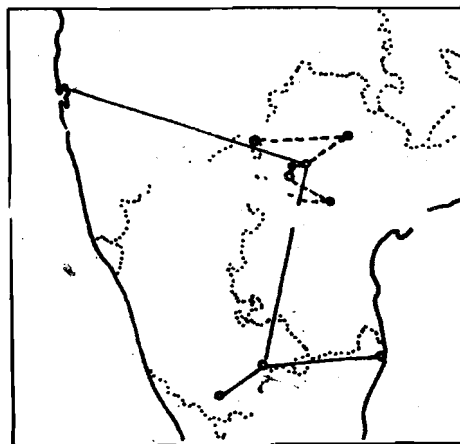
Arrive in Calcutta. Proceed to the temple-town of Bhubaneswar. Visit Puri and Konark by surface transport. Back to Bhubaneswar. Fly to Calcutta, to experience an old world charm and then on to Guwahati. Return to Calcutta.

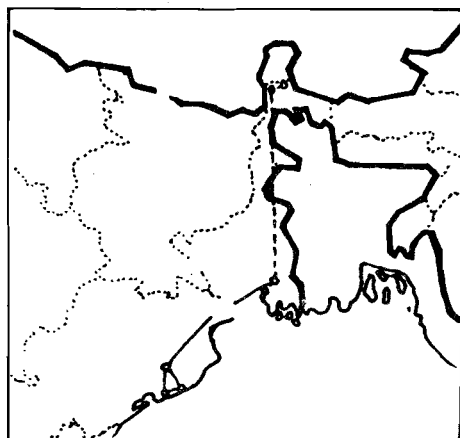
A side itinerary from Guwahati would take you to the rhino sanctuary of India—the Kaziranga National Park. Back to Guwahati. Visit Shillong and then return to Guwahati.

Foreigners require an entry permit.

**CIRCUIT-12****Maharashtra/AP/Karnataka/Tamil Nadu**

Arrive in Bombay. Fly to Hyderabad, the city of the Nizams. A 6-day excursion from Hyderabad city takes you to the Golconda Fort, Osman Sagar, Nagarjunakonda Dam where a number of excavations have been made, the fort-town of Bidar and Warangal. Back to Hyderabad and then fly to Bangalore. By surface transport, visit Mysore. Return to Bangalore. Tour ends at Madras.





### CIRCUIT-13

#### West Bengal/Orissa

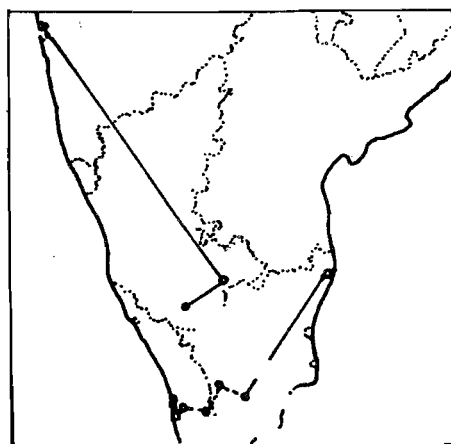
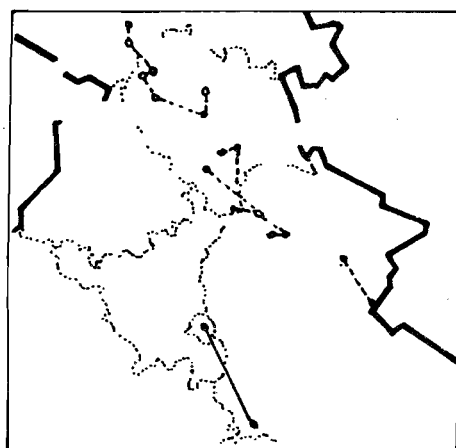
Arrive in Calcutta or Bhubaneswar. Visit Puri and Konark by surface transport. On to Bhubaneswar and Calcutta. From Calcutta, visit the Darjeeling hill station, noted for its spectacular sunrise. On to Kalimpong, surrounded by picturesque tea gardens. Return to Darjeeling and Calcutta. Visit the beautiful and secluded Diamond Harbour. Return to Calcutta where the tour ends.

### CIRCUIT-14

#### Delhi/UP

Arrive in Delhi. After sightseeing, visit the erstwhile Mughal capital of Agra. Return to Delhi. The side itinerary includes trek in and around Kullu and Manali in Himachal Pradesh, also known as the valley of the gods. Suggested winter treks:

- i) Paonta-Rampur Bushir to Narkanda
- ii) Paonta-Mussoorie-Shivpuri-Rishikesh
- iii) Tanakpur-Kosani in Kumaon
- iv) Kishtwar-Bhadarwah-Chamba-Dalhousie-Dharamsala
- v) Dharamsala-Kullu-Manali
- vi) Shimla-Mussoorie



### CIRCUIT-15

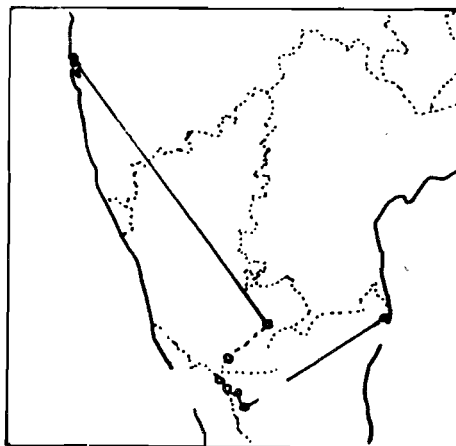
#### Maharashtra/Karnataka/Tamil Nadu

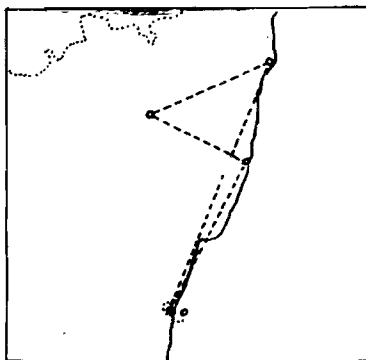
Arrive in Bombay. Proceed to Bangalore. After sightseeing, reach Mysore by surface transport. Return to Bangalore. Follow the side itinerary up to Madurai and Madras. You can go to Cochin, Alleppey, Kottayam, Thekkady, Kodaikanal, Madurai.

### CIRCUIT-16

#### Tamil Nadu/Karnataka/Maharashtra

Arrive in Madras. Fly to Coimbatore and then to Bangalore. Enroute visit Coimbatore, Coonoor, Ooty, Mudumalai, Mysore, Bangalore. Fly to Bombay where the tour ends.



**CIRCUIT-17****Tamil Nadu/Pondicherry**

Arrive in Madras. Proceed to Kanchipuram, a city dotted with beautiful temples via Mamallapuram or Mahabalipuram, famous for its magnificent shore temples. On to Pondicherry. Return to Madras.

Some other circuits and destinations recommended by the Department of Tourism are:

**Circuits**

- 1) Kullu-Manali-Leh
- 2) Gwalior-Shivpuri-Orchha-Khajuraho
- 3) Bagdogra-Sikkim-Darjeeling-Kalimpong
- 4) Bhubaneswar-Puri-Konark
- 5) Hyderabad-Nagarjunasagar-Tirupati
- 6) Madras-Mamallapuram-Pondicherry
- 7) Rishikesh-Narendernagar-Gangotri-Badrinath
- 8) Indore-Ujjain-Maheshwar-Omkareshwar-Mandu
- 9) Jaisalmer-Jodhpur-Bikaner-Barmer

**Destinations**

- 1) Lakshadweep Islands
- 2) Andaman Islands
- 3) Manali (Solang-Nalah)
- 4) Bekal Beach
- 5) Muttukadu Beach
- 6) Kangra (Pong Dam)

**Check Your Progress 3**

- 1) What is the relevance of a map for a tourist professional?

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- 2) Find out from the chart and write the road distance between:

- a) Delhi and Udaipur,
- b) Bhubaneswar and Pondicherry,
- c) Dispur and Vishakhapatnam.

- 3) Which of the following places have the maximum and minimum number of rooms?

Maximum	Minimum
Varanasi	Bhubaneswar
Hyderabad	Varanasi
Madras	Agra
New Delhi	Khajuraho

**19.9 LET US SUM UP**

It is assumed that maps, like art, pre-date writing. A map represents the earth's surface, in miniature. With the help of symbols, scales and shading, it represents the varied features on the earth's surface. Map-reading is the interpretation of the symbols, scale into its original form. It is a fundamental tool used in the process of planning, containing a variety of valuable information which can be used differently for different purposes. While a general map gives an overall idea of national, international boundaries, important cities, mountains and rivers a special map gives specific information. In the modern day world, the map has become a



communication media which permits us an understanding of relationships and distributions of various geographical factors.

The charts are geometrical depiction of themes establishing relativity among the component parts. They economise on space and incorporate a whole lot of information on particular subjects. The maps and charts can thus be used to store a variety of information for ready reference.

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## 19.10 KEY WORDS

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<b>Atlas</b>	:	An atlas is a collection of maps, usually in the form of a book.
<b>Latitudes</b>	:	These are imaginary lines running a full circle along the earth, parallel to the equator.
<b>Longitudes</b>	:	These are imaginary lines drawn on the earth's surface from pole to pole, intersecting the equator at right angles.
<b>Map</b>	:	A map is a graphical representation of the earth's surface in miniature form.
<b>Scale</b>	:	A scale is the ratio of the distance between any two points on a map to the actual distance of these points on the earth's surface.
<b>Symbolic Representation</b>	:	These are the features on the earth's surface represented on a map by means of symbols.

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## 19.11 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

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### Check Your Progress 1

- 1) See Sec. 19.2
- 2) See Sec. 19.3
- 3) See Sec. 19.4

### Check Your Progress 2

- 1) See Sec. 19.5
- 2) See Sec. 19.5
- 3) See Sec. 19.5

### Check Your Progress 3

- 1) See Sec. 19.6
- 2) a) 635 Km.  
b) 1387 Km.
- 3) 2037 Km.

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## SOME USEFUL BOOKS FOR THE BLOCK

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**A Social and Economic Atlas of India**, Oxford University Press, Delhi, 1987.

David Collins and the Diagram Group, **The Travel & Tourism Resource Pack**, Cambridge University Press, 1991.

**General Geography of India**, NCERT, New Delhi.

Salim Ali, **The Book of Indian Birds**, Oxford University Press, Reprint, 1990.

S.H. Prater, *The Book of Indian Animals*, Oxford University Press, 1990.

K.K. Gupta & V.C. Tyagi, *Working with Maps*, Survey of India, Dehradun, 1992.

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## ACTIVITIES FOR THE BLOCK

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### Activity-1

- 1) Plan a visit to any such place in your town which has dense trees or bushes. Prepare the following inventory:

- i) Local names of the most commonly sighted birds in all seasons.
- ii) Local names of birds visiting your area in particular seasons.

Afterwards find out the scientific names of the birds in both inventories with the help of Salim Ali's book, *Indian Birds*.

- 2) Visit the veterinary hospital of your area and collect information on the following:

- i) Venomous snakes, their habitat and the season when they are most active.
- ii) Non-Venomous snakes, their habitat and the season when they are most commonly seen.

Also find out the availability of an antidote for the snakebite by the venomous snakes of your area in the local dispensary/hospital.

### Activity-2

- 1) Try to collect tourist literature of your state (available at state tourism offices). With its help make a list of all the tourist destinations and major attractions within a periphery of 200 kms from your town.
- 2) In the above you made a list of tourist destinations. Now divide this list into two columns. Include in column 1 those destinations which are preferred by tourists during the winter months (October to February). Column 2 will have destinations visited by tourists during the Summers (March to June).

### Activity-3

- 1) With the help of the school atlas you have procured, write the longitudes and latitudes of capital town of your state.
- 2) Obtain a map of your district and mark on it the following:
  - i) All-weather motorable roads and their total length within the boundary of your district.
  - ii) Fair-weather motorable roads and their total length within the boundary of your district.

Chart — I Weather Chart

City	January		February		March		April		May		June		July		August		September		October		November		December	
	°C	mm	°C	mm	°C	mm	°C	mm	°C	mm	°C	mm	°C	mm	°C	mm	°C	mm	°C	mm	°C	mm	°C	mm
Agra	14.8	16.2	18.0	8.8	23.8	10.9	29.7	5.3	34.5	0.0	35.0	60.0	30.9	210.2	29.3	263.2	28.8	151.5	16.2	23.5	20.6	2.1	16.1	37
Ahmedabad	20.3	3.9	22.7	0.3	27.1	0.9	31.3	1.9	33.5	4.5	32.7	100.0	29.5	316.3	28.2	213.3	28.7	162.8	28.4	13.1	24.5	5.4	21.1	0.7
Ajmer	15.0	11.7	17.2	6.1	22.8	5.9	27.8	3.0	32.1	9.3	31.9	66.5	30.4	187.4	28.7	174.6	27.8	71.0	23.9	16.5	19.4	3.7	15.7	1.7
Allahabad	16.4	20.2	19.1	22.2	25.1	14.3	30.7	4.8	34.7	8.2	34.3	101.7	30.1	274.8	29.1	333.1	29.0	195.1	26.5	39.7	21.1	6.9	17.1	6.3
Bangalore	20.9	3.3	23.1	10.2	25.7	6.1	27.3	45.7	26.9	116.5	24.3	80.1	23.2	116.6	23.3	147.1	23.3	142.7	23.2	184.9	21.7	54.3	20.5	16.2
Baroda	20.5	2.0	22.5	2.4	26.6	0.7	30.8	2.9	33.4	4.1	32.1	114.8	28.9	365.8	28.1	263.5	28.3	185.5	27.5	34.5	23.9	9.0	21.2	0.2
Bombay	24.3	2.0	24.9	1.1	26.9	0.4	28.7	2.8	30.1	16.0	29.1	520.3	27.5	709.5	27.1	439.3	27.4	297.0	28.3	88.0	27.5	20.6	25.9	2.2
Calcutta	20.2	13.8	23.0	24.2	27.9	26.5	30.7	42.7	31.1	120.6	30.4	259.1	29.1	300.6	29.1	306.3	29.2	289.7	27.9	160.2	23.9	34.9	20.6	3.2
Darjeeling	6.1	21.7	7.7	26.7	11.3	52.4	14.4	109.0	15.7	117.1	17.0	522.3	17.6	712.9	17.6	572.5	17.3	418.5	15.1	116.1	11.3	14.2	8.1	5.0
Gauhati	17.5	11.4	19.5	13.3	23.3	53.4	25.9	125.9	26.9	273.6	28.1	293.4	28.9	301.5	29.0	163.0	28.7	190.1	26.3	90.1	22.3	11.5	18.7	5.0
Hyderabad	21.6	1.7	23.9	11.4	27.4	13.4	30.3	24.1	32.5	30.0	29.1	107.4	26.1	165.0	25.8	146.9	25.7	163.3	25.1	70.8	22.3	24.9	20.6	5.5
Jaipur	15.1	14.0	18.1	8.4	23.2	8.6	28.7	4.2	33.2	10.0	33.3	54.0	29.9	193.2	28.1	239.0	28.1	89.8	25.7	19.3	20.5	3.4	16.7	4.2
Janmu	13.3	71.3	15.8	59.4	20.6	57.0	26.8	25.2	32.4	17.0	34.1	60.9	30.7	320.7	29.1	319.1	28.6	150.8	25.4	29.5	19.8	7.9	15.2	29.5
Jodhpur	17.0	7.3	19.8	5.1	25.0	1.9	29.8	22.2	34.0	6.4	33.9	30.9	32.4	121.8	30.5	145.5	30.3	47.4	27.0	6.8	22.4	3.3	18.4	1.5
Kalimpong	11.9	13.6	13.2	18.7	16.3	34.3	18.8	71.3	20.4	146.0	21.8	405.3	22.3	635.0	22.3	488.7	21.9	343.7	19.0	87.6	16.0	13.2	13.5	4.9
Kanpur	16.2	23.1	18.8	15.9	25.0	9.0	30.2	4.5	33.8	6.2	34.3	67.6	31.5	207.6	29.8	285.6	29.4	201.8	25.5	42.7	20.6	7.5	16.8	7.9
Lucknow	16.1	23.7	18.9	17.2	24.6	9.2	30.1	6.4	33.3	11.7	33.7	93.9	30.1	299.0	29.3	301.8	29.1	181.7	26.3	40.3	21.0	1.4	16.9	6.1
Madras	24.5	23.8	25.9	6.8	27.9	15.1	32.5	24.7	32.7	51.7	32.5	52.6	20.7	83.5	30.1	124.3	29.7	118.0	28.1	267.0	25.9	308.7	24.6	139.1
Mussoorie	6.3	66.4	7.8	66.9	11.7	63.5	16.5	29.5	19.9	45.1	20.3	180.5	18.3	726.5	17.9	754.7	17.1	323.2	14.9	64.8	11.6	7.7	8.5	31.3
Mysore	22.3	2.8	24.7	5.5	26.9	12.0	27.7	67.6	33.5	156.9	24.5	60.5	23.5	71.9	23.7	80.1	24.0	116.3	24.0	179.9	22.9	66.6	21.7	14.7
Nagpur	19.6	15.4	22.8	1.9	27.3	24.5	31.3	20.2	34.5	9.9	33.2	174.3	28.9	351.5	27.8	277.1	27.6	180.5	24.2	61.6	22.2	8.7	19.6	1.7
New Delhi	14.3	24.9	16.9	21.8	22.7	16.5	28.6	6.8	32.5	7.9	34.3	65.0	31.3	211.1	29.9	172.9	29.3	148.7	25.9	31.2	20.3	1.2	15.7	5.2
Ooty	12.0	25.8	12.9	12.0	14.4	29.5	15.9	108.5	16.7	172.6	15.5	139.2	14.6	176.6	14.4	128.2	14.3	109.7	13.5	213.3	12.4	126.5	12.2	59.2
Pata	17.3	21.1	19.9	20.2	25.7	6.7	30.5	8.2	29.9	28.3	31.5	139.0	29.8	265.8	29.3	307.1	29.3	242.5	27.5	62.8	22.5	5.7	18.3	2.4
Poona	21.3	1.9	23.1	0.3	26.5	3.1	29.3	17.6	19.6	34.7	27.5	102.8	24.9	186.8	24.6	106.4	25.0	127.3	25.5	91.9	22.9	37.0	21.1	4.9
Shillong	9.5	15.2	11.7	28.5	16.0	59.4	18.9	136.4	17.9	325.4	20.5	544.6	21.1	394.9	20.9	334.6	20.1	314.9	17.3	220.2	13.3	34.9	10.5	6.3
Shimla	15.5	65.2	6.7	47.6	10.1	58.1	14.2	37.6	18.2	53.7	19.4	147.5	18.8	414.5	18.3	385.4	16.7	195.2	14.1	45.4	11.1	6.7	8.3	23.7
Srinagar	1.1	72.8	3.5	72.3	8.5	104.1	13.3	78.1	28.3	63.4	21.7	35.6	24.6	61.0	23.9	62.8	20.5	31.8	14.1	28.7	7.7	17.5	3.5	25.9
Trivandrum	26.8	20.1	27.3	20.3	28.3	43.5	28.7	122.1	26.9	248.6	26.5	331.2	26.1	215.4	26.3	164.0	26.6	122.9	26.7	271.2	26.6	206.9	26.7	73.1
Udaipur	16.0	9.0	18.7	4.4	23.7	3.5	28.1	2.6	31.7	4.6	30.6	87.0	27.3	197.3	26.1	206.9	26.5	120.4	25.5	16.1	20.1	5.7	17.3	2.5

°C = Temperature

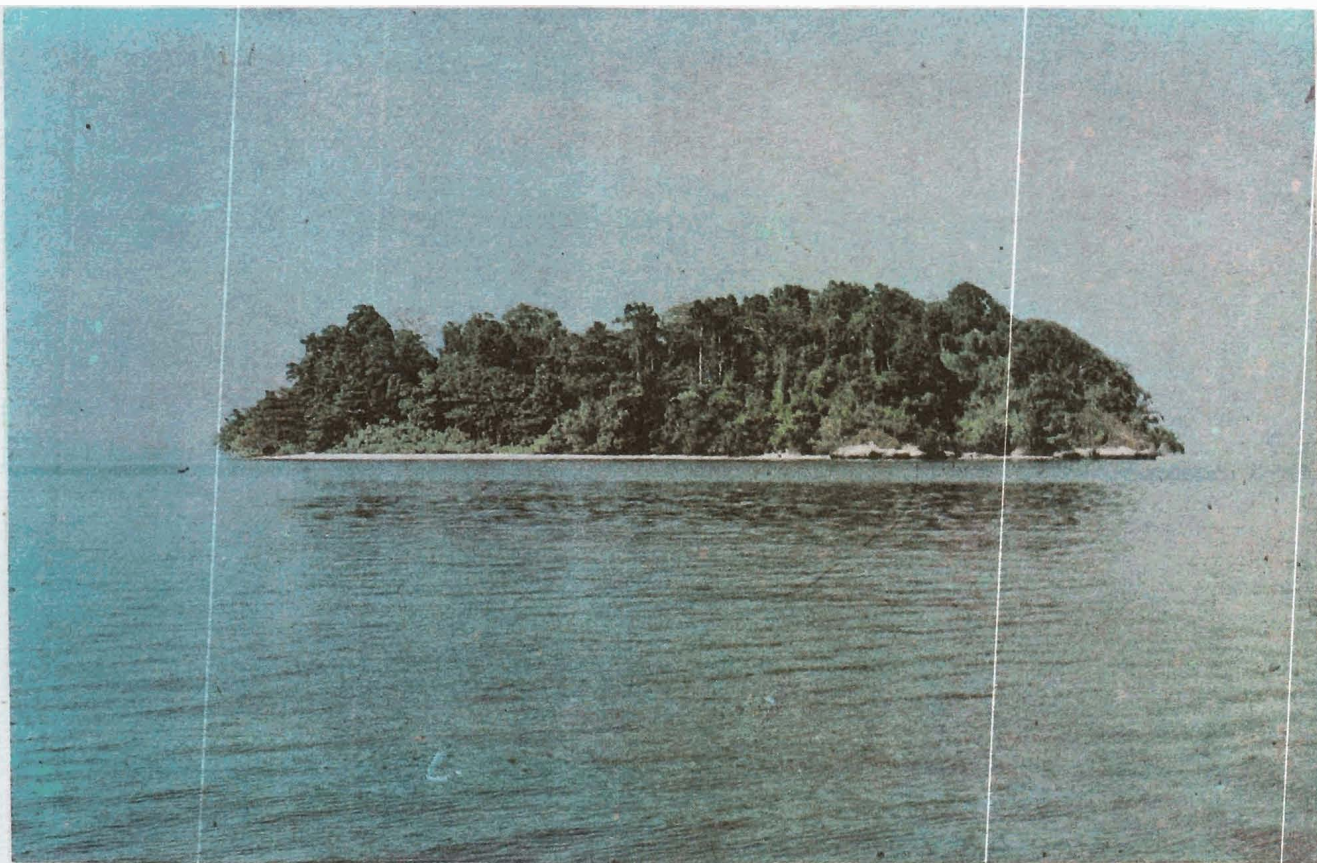
mm = Rainfall

\*In this chart we have provided you with information regarding the temperature and rainfall at important tourist destinations in India.





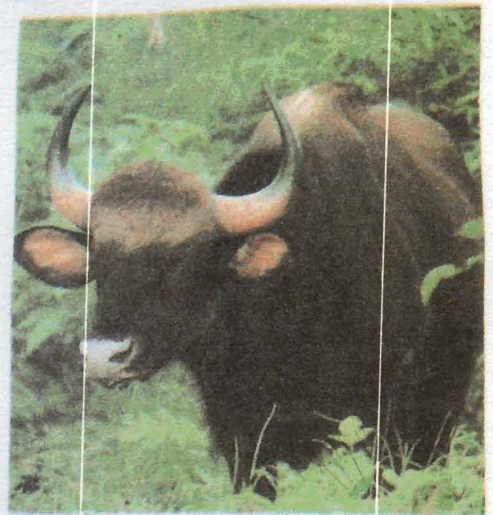
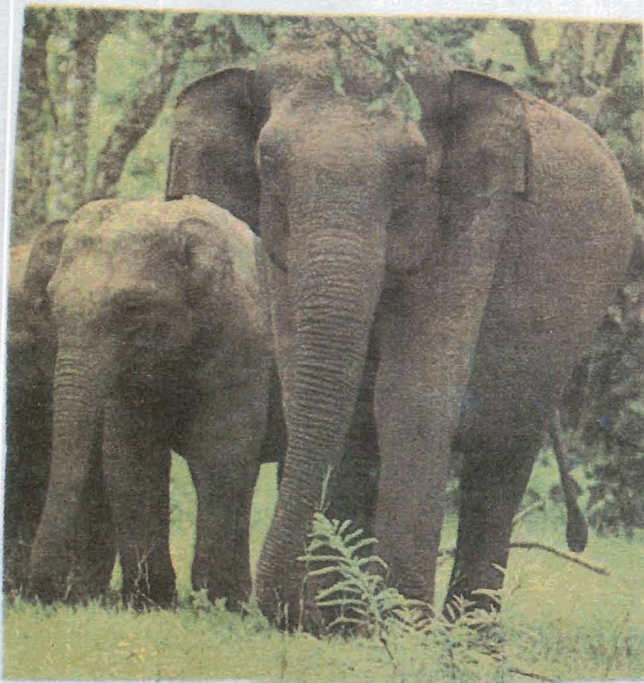














## PERCENTAGE BAR GRAPH



## BAR GRAPH



Global tourist arrivals 1991

## MAP SYMBOLS

Boundary: international, state, dist.

Roads: national, state, district

Railway: broad gauge, meter gauge

River, stream, reservoir

Police stn., telegraph office, post office, hospital

Temple, church, museum

Capital, local

Height above m.s.l., depth below m.s.l.  $\Delta$  3567  $\nabla$  2566

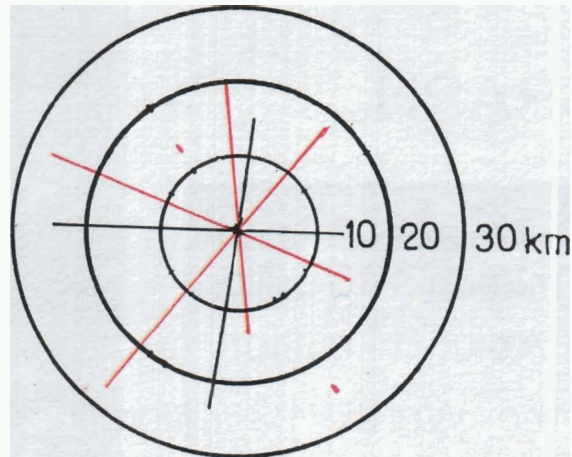


PS TO PO +

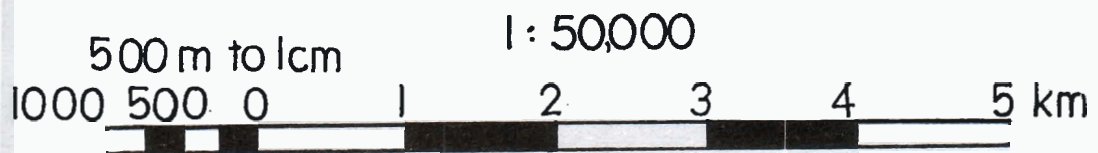


DELHI GAYA

## RADIAL GRAPH

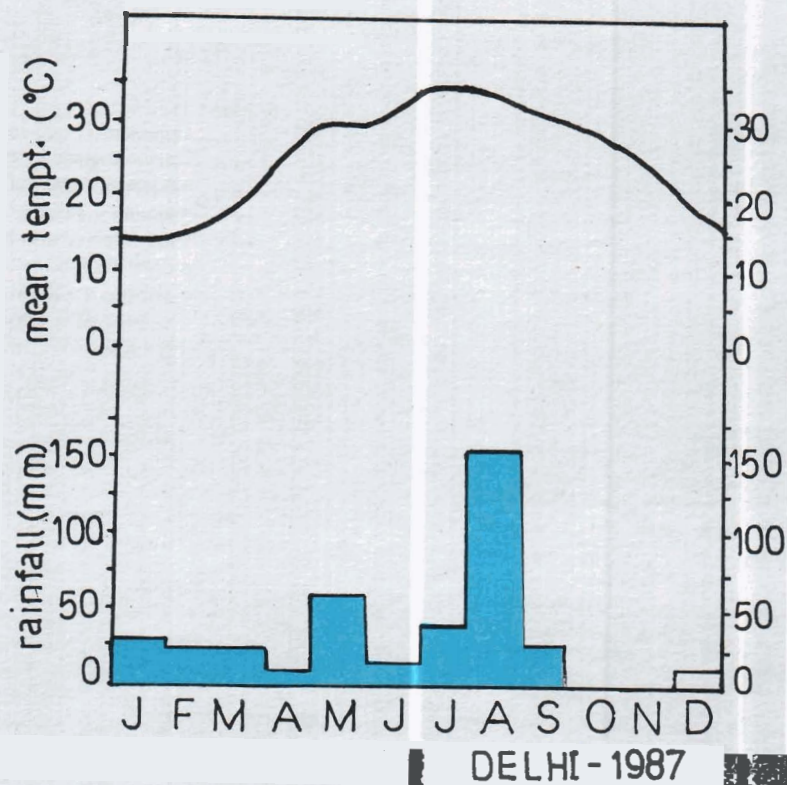


## LINEAR SCALE

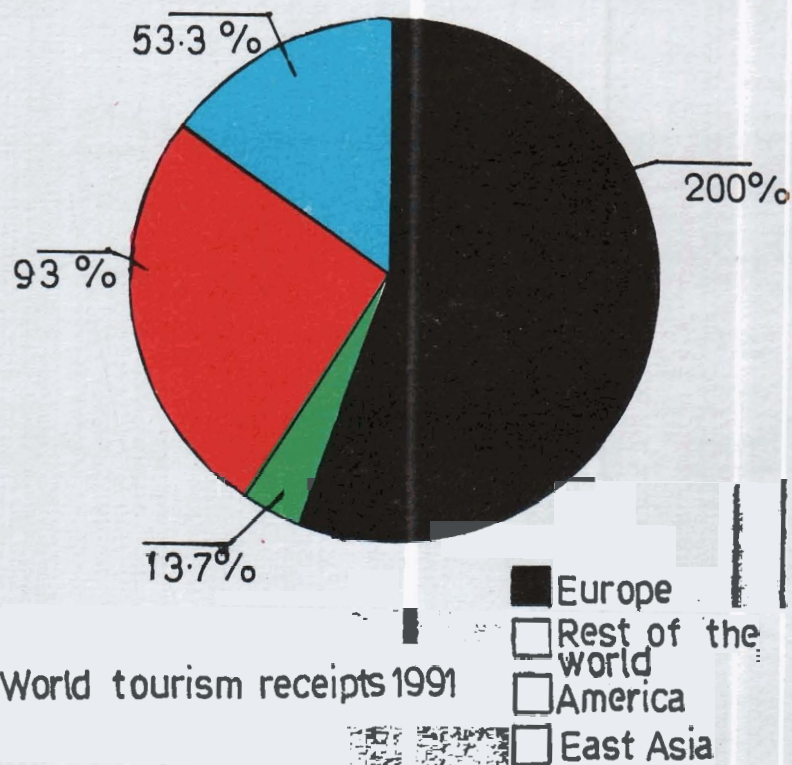




## CLIMATE GRAPH



## PIE DIAGRAM



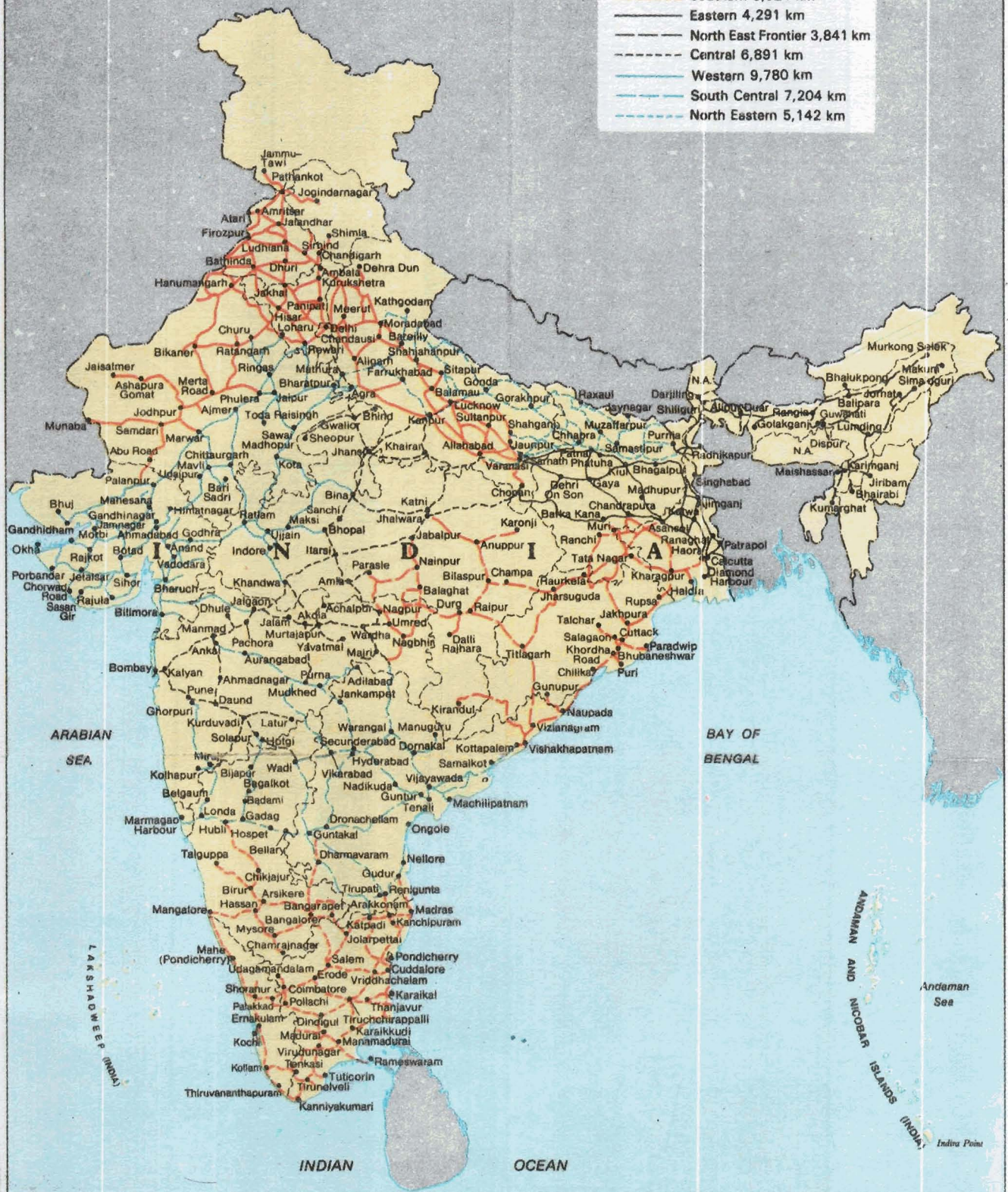




## RAIL ROUTES

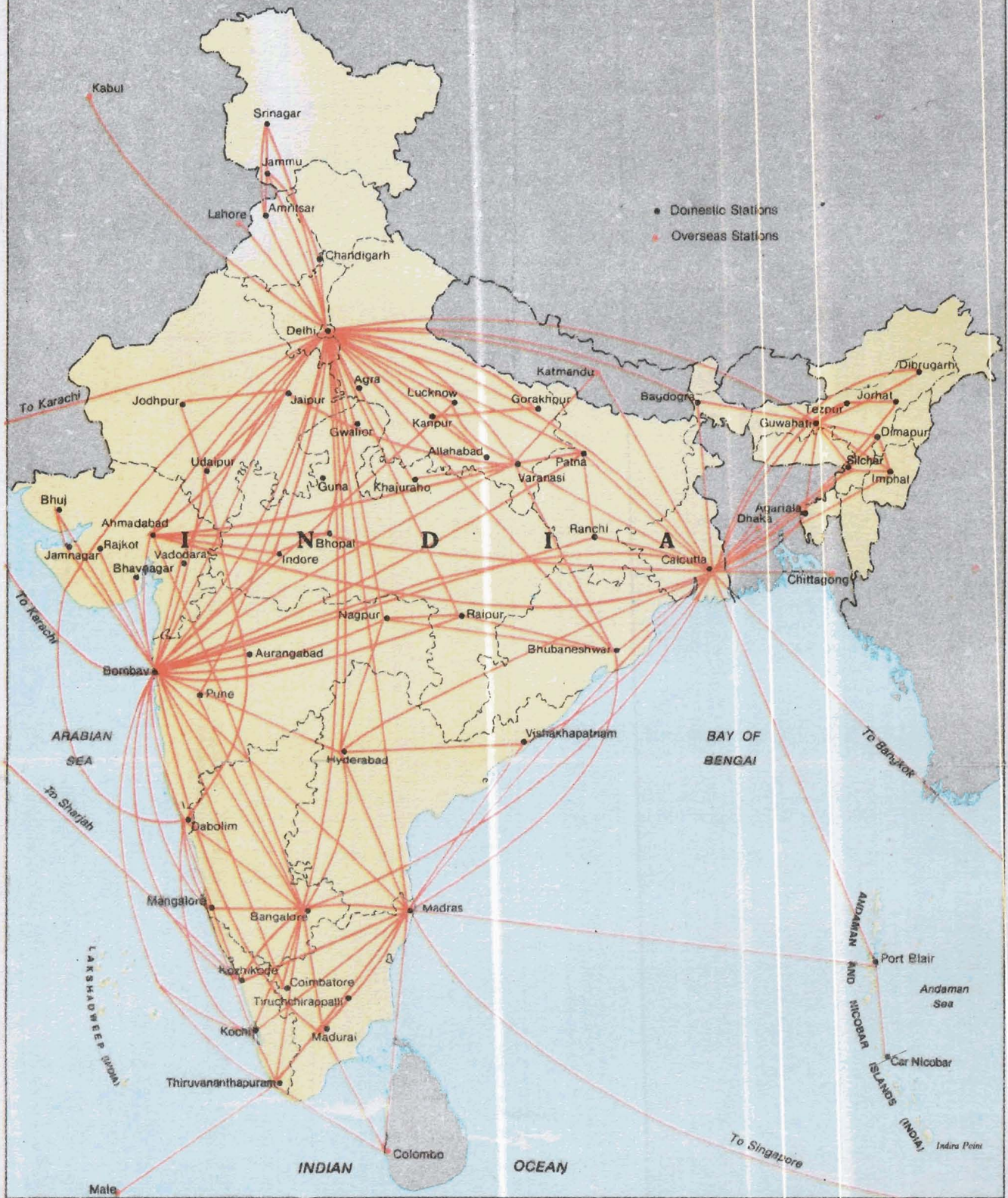
### RAILWAY ZONES

- Northern 11,003 km
- - - South Eastern 7,135 km
- - - Southern 6,924 km
- Eastern 4,291 km
- - - North East Frontier 3,841 km
- - - Central 6,891 km
- Western 9,780 km
- - - South Central 7,204 km
- - - North Eastern 5,142 km





**इंडियन एयरलाइन्स**  
**Indian Airlines**  
**AIR ROUTES**



1: 15,000,000