

## TRANSPORT

Transport is a system in which passengers and goods move from one place to another. Development of cheap and efficient means of transport is necessary for the progress of a large and developing country like India. Transport system is a very important link between production and consumption. Transport routes are basic economic arteries of the country.

## MODES OF TRANSPORTATION

Transportation is generally divided into three modes-land, water and air. The land transport in turn consists of roads and railways. Water transport is divided into two types: (a) River or inland transport, (b) Sea or Oceanic transport the latest and the fastest mode of transport is air transport.

## ROADS

Roads are important for transport of goods and passengers for short and medium distances. They are relatively cheap and easy, both in construction and maintenance. Roads are built even in mountainous terrain. They connect fields with markets, factories with farms, and provide door-to-door service. For transport of perishable commodities, roads provide better services than the railways.

## TYPES OF ROADS

Depending upon their strength and make up, roads are of the following two types:

- 1) **Surfaced or Metalled Roads:** Surfaced roads are made of cement, concrete or even bitumen or tar. Therefore, they are the best roads and are all weather roads. In the year 1998-99 India had 25.26 lakh kilometers of total road length out of which 14.59 lakh kilometers i.e., a little over 57 percent were surfaced and state highways are also surfaced to the tune of 97 percent.
- 2) **Unsurfaced Roads:** These are also known as unmetalled or kucha roads. They are mainly made of mud, soil and rocks and primarily serve the rural areas. These roads become muddy and are difficult to use during the rainy season. However, their importance cannot be minimized because they provide a vital link between villages and their neighbouring towns and cities.

## CLASSIFICATION OF ROADS

Indian roads can be classified into following five categories:

- 1) **National Highways:** The main roads which are constructed and maintained by the Central Government are known as the National Highways. These roads connect the state capitals, big cities and important ports. There was a road length of 57.7 thousands Km designated as National Highways in 2001-02. National Highways form the lifeline of road transport and constitute less than 2 percent of the total road length of India; they carry nearly 40 percent of the road traffic of the country. India has a large number of National Highways. The longest is National Highway No. 7 which connects Varanasi with Kanyakumari. National Highway No. 1 is the most important and the busiest road of India.
- 2) **State Highways:** These are constructed and maintained by the state governments join the state capitals with district headquarters and other important towns. These roads are also connected to the national highways. There were 1.38 lakh kilometers of state highways in 1998-99 out of which 1.35 lakh kilometers were surfaced.

- 3) **District Roadways:** These roads join the district headquarters with the other places of the district. Their total length is nearly 6 lakh kilometers.
- 4) **Village Roads:** The village roads connect the villages with the neighbouring towns and cities. These are generally dusty tracks. Efforts have been made in the recent past to connect the villages with Metalled roads.
- 5) **Border Roads:** In addition to National Highways, the Central Government has undertaken the construction and maintenance of border roads. Our borders are located on the harshest terrains consisting of high and inaccessible Himalayan Mountains. Thar Desert of Rajasthan, Marshy areas of Rann of Kuch and dense forested areas in the north-eastern states.

### EXPRESS WAY NATIONAL HIGHWAYS

The Express way national highways have been planned to meet the requirement for fast moving traffic. A massive programme for 4/6 planning of about 14,546 kilometers of national highways has been taken up since 1999 under the National Highways Development Project (NHDP) and is targeted to be completed by December 2007 and an estimated cost of Rs. 54,000 crore (at 1999 prices). These roads are named as:

1. **Golden Quadrilateral:** Comprising the National Highways connecting four metro cities viz. Delhi, Mumbai, Chennai and Kolkata. This component has a total length of 5846 kilometers.
2. **North-South Corridor:** Comprising the National Highways connecting Srinagar to Kanniyakumari including Kochi-Salem Spur and East-West Corridor comprising the National Highways connecting Silchar to Porbandar. The project has a total length of 7,300 kilometers and is scheduled for completion by December 2007.
3. **Connectivity to 10 major ports:** Namely Kandla, Jawaharlal Nehru Port, Mormugao, Tuticorin, Chennai, Ennore, Vishakapatnam, Paradip and Haldia (Kolkata) will have a length of 363 kilometers.

### PROBLEMS OF ROAD TRANSPORTATION

Road transportation in India faces a number of problems as described below:

- 1) The road network is inadequate keeping in view the increasing number of passengers and volume of traffic.
- 2) Nearly 47 percent of the total roads are unsurfaced. These become muddy during the rainy season and are not much useful for transportation.
- 3) The national highways are also inadequate and are highly congested in cities.
- 4) The bridges and culverts are weak and narrow.
- 5) The roadside amenities like telephone, emergency health services and police protection on national highways are poor and need improvement.

**Why has the Great Plains more railways than the Himalayan Mountains?**

North Indian Plain has a very dense network of railways from Amritsar to Hooara .this is a Plain area which is very much suitable for the construction of railways. This densely populated region has highly developed agriculture and industry. Large-scale urbanization has also o helped in the development of the railways. The density of railway network is closely related to the agricultural and industrial and industrial development.

Railways are practically absent in the Himalayan region. The rugged terrain, hill and valley topography, backward economy and sparse population are the factors responsible for the sparse rail network in this region. The only railway lines are narrow-guage. Some of the railway lines are narrow-guage. Some of the important rail links are Kalka-Shmila, Patankot-Kangra and Siliguri-Darjeeling. There is practically no railway line in the north-eastern states of Meghalaya, Tripura, Arunachal Pradesh, Mizoram, Manipur and Nagaland; These areas have rough terrain covered with thick forests. The population is sparse and the economy is in a backward state. Construction of railways under these conditions is a difficult and a costly affair.

### INDIA'S RAIL TRANSPORT

Indian railway system is the main artery of the country's inland transport. Indian railways virtually form the life-line of the country, catering to its needs for large-scale movement of traffic, both freight and passenger, thereby contributing to economic growth and also promoting national integration. The first rail in India was started in 1853 between Mumbai and Thane over a distance of 34 kilometers. At present, Indian railway network is the biggest in Asia and the sixth largest of the world after USA, Russia, Canada, Germany and China. It is the largest public undertaking in India. In 2000-01, the total route length of India railways was 63,028 kilometers out of which 14,856 kilometers route length was electrified. Running track was 81,865 kilometers long. With a fleet of 756 locomotives, 42,327 lakh passengers and 5, 042 lakh tones of goods. They travel a distance of 14 lakh kilometers everyday.

### NEW RAILWAY ZONES OF INDIA

NAME OF THE ZONE	HEADQUARTERS
1. East Cost	Bhubaneshwar
2. East Central	Hajipur
3. North Central	Allahabad
4. North Western	Jaipur
5. South Western	Bangalore
6. West Central	Jabalpur
7. Bilaspur	Bilaspur

### PROBLEMS OF IDIAN RAILWAYS

Indian railways suffer from a number of problems:

1. Many passengers travel without ticket causing loss to the railways.
2. They pull chains unnecessarily which leads to late running of trains.
3. People stop trains which cause heavy losses to the railways.
4. Thefts and damage of railway property have not yet been stopped.

## **WATERWAYS**

The water ways are comprised of oceans, seas, lakes, canals, backwaters, creeks, etc. waterways are used by ships and boats of varied types and sizes to transport men and material. Waterways are fuel efficient, environment friendly and provide the cheapest mode of transportation due to following reasons:

1. They are natural routes and don not involve any cost of construction as is the case with roadways and railways.
2. The crafts suffer little friction during traction which saves a lot of fuel.
3. The wear and tear of the craft is negligible due to low friction as a result of which the maintenance cost is minimal.

*The government has declared the following waterways as National Waterways:*

- i. The Ganga river between Allhabad and Haldia (1620 Km).
- ii. The Brahmaputra river, between Sadiya and Dhubri (891 Km).
- iii. The West coast canal, between Kollam and Kottayam (168 Km).

## **AIRPORTS**

There are two types of airports in India. International and Domestic. International airports are at Delhi, Mumbai, Kolkata, Chennai, thruvananthapuram, Bangalore, Amritsar, Hyderabad, Ahmadabad, Punaji, Guwahati and Kochi. There are 63 Domestic airports are managed by airports Authority of India.

## **MAJOR PORTS**

India's long coast is dotted by a large number of ports of different sizes. There are twelve major ports and 181 minor ports along the coast of India. Six major ports are on the west coast while the remaining six major ports Kochi. The east coast ports include Tuticorin, Ennore, Chennai, Vishakapatnam, Paradip and Kolkata/Haldi.

## **COMMUNICATION**

Communication refers to the systems of conveyance or exchange of ideas, information, message, etc. instant communication is a pre-requisite for economic growth, cultural exchange, social interaction, national integration and international understanding. The real significance of communication comes to the fore in the event of accidents, natural calamities like cyclones, storms, floods, earthquakes, etc. and flare up of human conflicts. There are two types of communications viz. personal communications and mass communications.

## **PERSONAL COMMUNICATIONS**

Personal communications are handled by Indian postal network. Indian postal Network is the largest in the world. The country has 1, 54,919 post offices, out of which 1, 38,443 are in rural areas and 16,476 are in urban area. First class mail viz. cards inland letter, cards and envelopes are given air lift, without any surcharge, between stations connected by air. Second class mail, viz., Book packets, registered newspapers and periodicals are carried by delivery of mails in cities and large towns.

## MASS COMMUNICATIONS

Plays vital role in creating awareness and providing healthy entertainment to the masses important means of mass communication are radio, television, and newspapers including magazines, books and films.

### ALL INDIA RADIO

(Akashwani) has currently 200 radio stations and 327 transmitters. It broadcasts a variety of programmes in national and regional languages for various categories of people.

### DOORDARSHAN

Is one of the largest terrestrial networks in the world? It serves over 87 percent of the country and has a variety of programmes for different categories of people, ranging from entertainment to educational and sports programmes. A large number of private channels have been introduced recently.

### PRINT MEDIA

Has a vital role to play. India produces over five lakh newspapers and periodicals every year. Newspapers are published in about 100 languages and dialects. The largest numbers of newspapers published are in Hindi followed by English and Urdu.

## INTERNATIONAL TRADE

Exchange of goods and services between different countries is known as international trade. The place where exchange is carried on is called Market. Like transport and communications, trade also forms a part of tertiary section of economy. This is because these activities render valuable services to the people. A well developed trade leads to the economic prosperity. This is the reason that international trade of a country is considered as its Economic Barometer.

### TYPES OF TRADE

India is three types of trade depending upon the area of operation.

1. **Local Trade** : It is carried at the local level in cities and towns and villages.
2. **Regional Trade or Social Level Trade** : This trade is carried between two or more states.
3. **International Trade** : Trade between two countries is called international trade. It may take place through sea routes and air routes.

## INDIA'S ITEMS OF EXPORT

*India exports the following items to other countries:*

Jute manufactures, cotton fabrics, coir yarn, iron ore, oil cakes, leather, engineering goods, chemicals, iron and steel, tobacco, cashew kernels, tea, coffee, mica, manganese ore, art – silk fabrics, footwear, vegetable oils, pearls and precious and semi-precious stones.

### PRINCIPAL COUNTRIES TO WHICH INDIAN GOODS ARE EXPORTED

Russia, Britain, Japan, New Zealand, West Germany, France, Sri Lanka, Bangladesh, etc.

### INDIA'S TIEMS OF IMPORT

*India imports the following commodities from other countries:*

Cereals and cereal preparations, copra, crude, rubber, raw wool, raw cotton, raw jute, crude oil and lubricants, animal and vegetable oil fates, fertilizers, chemical elements and compounds, medical and pharmaceuticals products, plastic materials, paper, iron and steel machinery, transport equipments, defense equipments, etc.

### PRINCIPAL COUNTRIES FROM WHICH IMPORTS ARE MADE (More than 100 millions rupees)

U.S.A, Russia, U.K., West Germany, Iran, Saudi Arabia, France, Canada, Belgium, Malaysia, Italy, Netherlands, Singapore and Australia.

### TOURISM

*Tourism is an invisible trade because:*

1. It promotes national integration.
2. It helps develop international understandings.
3. It supports local handicrafts and cultural pursuits.
4. About 2.54 million foreign tourists visited India in the Year 2001. It helped the country to earn over 14, 244 crores of rupees in the same year. This how it promotes invisible trade of the country.
5. About 16.45 million people were directly in the tourism industry in 2000-01.

### PIPELINE TRANSPORTATION

New mode of transportation used to carry petroleum, petroleum products, natural gas, water, milk, etc. from one place to the other.

It is very convenient mode of transportation oil and natural gas. Pipelines provide a vital link between oil fields, oil refineries, markets, and ports. Pipeline transportation is fast, safe, and convenient clean, continues and is free from delays and bottlenecks. There are no chances of any pilage and adulteration. Although the initial cost of laying pipelines is high, it is more than compensated by the minimal subsequent operational expenditure. Such facilities of pipeline transportation have made it viable to establish oil refineries at far inland locations like Barauni, Mathura and Panipat and gas based fertilizer plants at Jagdishpur, Babrala and Sawai Madhopur.

What is meant by favourable balance of trade/whether India's foreign trade is favourable?

The difference between exports and imports is known as the balance of trade. If value of exports is more than the value of imports. It is called favourable balance of trade.

In 2000 - 01, India had a foreign trade of Rs 43 lakh crore: of this, import constituted 53 percent and export 47 percent. The import is higher than export and, therefore, India's international trade is favourable. It has remained so throughout the last decade of the twentieth century.

Name the important locations enroute Jammu to Srinagar National Highway.

*The important stations enroute the Jammu and Srinagar highway are:*

Udhampur, Kud, Pantop, Batote, Ramban, Ramsoo, Banihal, Qazigund, Khanabal, Bijbehara, Sangam, Awantipora, Pampore.

Which important towns figure on the proposed railway line from Jammu to Baramulla?

*The important towns are:*

Udhampur, Qazigund, Islamabad, Pulwama, Nowgam, Ompora, Zainakot, Pattan, Sopore, Baramulla.

## FACTS AND FIGURES

### ROADWAYS

- Length of roads

1. Total 25.26 lakh Km In 1998 - 99

2. Surfaced 14.49 lakh Km in 1998 - 99

3. Unsurfaced 10.77 lakh Km in 1998 - 99

Percentage of surfaced roads to total road length (57 %)

- Length of National Highways 57.7 thousand Km in 2001.02

- Length of State Highways

1. Total 1.38 lakh Km in 1998 - 99

2. Surfaced 1.35 lakh Km in 1998 - 99

- Length of Golden quadrilateral 5846 Km
- Length of north - South and east -west

Corridors of the golden quadrilateral (7300 Km)

### RAILWAYS (All figures pertain to the year 2000 - 01)

- Route Length (Kilometer)

1. Electrified 14,856

2. Non - Electrified 48,172

3. Total 63,028

4. Running track	81,865
• Passengers originating	48,327 lakh
• Total goods originating	5,042 lakh tones
• Number of Locomotives	

1. Steam	54
2. Diesel	4702
3. Electric	2810
Total	7566
• Number of coaching vehicles	42,570
• Number of Wagons	2,22,147
• Gauges	

1. Broad gauge	71.04% of total
2. Metre guage	23.78 % of total
3. Narrow gauge	5.18 % of total

### WATERWAYS

• Length of inland navigable waterways	14500 Km
• Navigable by mechanized boats	3700 Km
• Ganga waterway between Akkagabad and Haldi	1620 Km
• Brahmaputra waterway between Sadiya and Dhubri	891 Km
• West – Coast canal between Kollan and Kottayam	168 Km

### AIRWAYS

• Number of International Airports	12
• Number of Domestic Airports	63

### SEAPORTS

• Number of major ports	12
• Number of medium and minor ports	18
• Foreign trade handled by major ports	90 %



**COMMUNICATION**

- Number of post offices 1,54,919 in 2000 - 01
- Number of post offices in rural areas 1,38,443 in 2000 - 01
- Number of post offices in urban areas 16, 476 in 2000 - 01
- Number of telephone exchanges 35, 023 (as on 3 March 2002)
- Total switching capacity 44. 96 million fixed lines

**INTERNATIONAL TRADE (2001 - 02)**

- Total Rs. 4.51 lakh crore
- Imports Rs. 2.43 lakh crore (53.9 % of the total)
- Exports Rs. 2.08 lakh crore (46.1 % of the total)

**TOURISM (2001)**

- Number of foreign tourists 2.54 million
- Foreign exchange earnings Rs. 14,344 crores
- Direct employment 16.45 million people

**End.....**