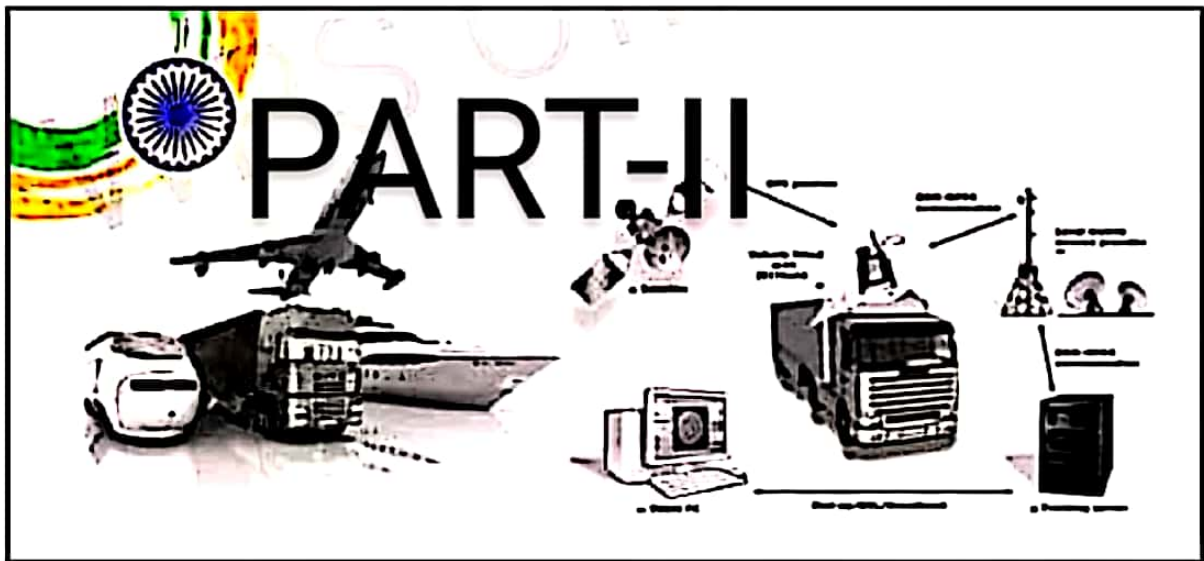


Chapter 17

TRANSPORT AND COMMUNICATION



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PART II: COMMUNICATION

- Communication involves transmission of words, messages and ideas through spoken words, common signal systems written messages and more recently, telecommunications.
- It is different from transport which involves physical carriage of passengers and goods from one place to another.

Importance of Communication

- i. Contributes to economic development
- ii. Strengthens social relationships
- iii. Promotes cultural unity
- iv. Brings diverse people from all over the world close together.
- v. In the event of any impending calamity, accident of emergency, instant means of communication flash the news across the globe, so that relief can be rushed to the spot immediately.

TYPES OF COMMUNICATION

PERSONAL COMMUNICATION

- i) Postal Network
- ii) Telecommunications like telephone, telegraph, telex, cellular mobile phones, Internet based e-mail and messages.

MASS COMMUNICATION

- i) Telecommunications like television, radio, Internet based websites and portals
- ii) Press and Print media like newspapers, magazines, etc.
- iii) Cinema

POSTAL SERVICES

- Postal services in India were started in 1837. The postal department was set up in 1854.
- Three categories of Post Offices:
 - Head Post Office
 - Branch Post Office
 - Extra-departmental Post Office



India has the largest Postal Network in the world with over 1,54,939 Post Offices.



Importance of Postal Services:

- Postal services play an important role in distant rural areas.
- Postal services are the most popular means of communication, establishing link between business units. Correspondence is written form of formal communication and works as documentary evidence of transmitting and receiving messages.
- Messages can be transmitted through post cards, inland letters, envelopes. Important messages can be sent through registered envelopes. Valuable documents and even cash and drafts can be sent under insured cover.

Mail System (Railway Mail and Air Mail)

- First class mail (Post cards, Inland letters, envelopes) given air lift without any surcharge between stations connected by air.
- Second class mail (Book Packets, Registered newspapers and periodicals) carried by surface transport (Trains, buses

Postal Index Number (PIN) was introduced to modernise the handling of growing volume of mail. The code has six digits which help identify and locate every departmental delivery office.

Quick Mail Service (QMS) was a new scheme introduced in 1973.

Speed Post Service has been introduced since 1986. With the help of it, the articles are delivered within definite time period with money back guarantee against any service defect.

COURIER SERVICES:

A number of private Courier Service Networks also operate between cities which ensure quick and sure delivery of envelopes and parcels.

Modernisation of Mail Transmission and Processing:

- **Satellite Networks:** High Speed Very Small Aperture Terminals (VSAT) networks link post offices to handle money orders and other financial transactions.
- **Automatic Mail Processing Centers:** Installed at Mumbai, Chennai, Delhi and Kolkata. Based on the address, a sorting machine automatically sorts the letters and collects it in a specified bin in a single run.
- **Computerisation and Networking of Post Office:** Computers, along with associated scanners, modems and weighing scales have been supplied to all Head Post Offices and many Sub Post Offices.

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TELECOMMUNICATIONS

- Modern device for communication at individual (telephone, telegraph, fax, mobile phones, e-mail, etc.) and mass level (television, radio, internet based websites, etc.).
- Linked with the advancement of electrical technology.



Importance of Telecommunications:

- *Telecommunications brought about a revolution in communication system-* Due to the *high speed* with which messages could be conveyed. Telegraphs could send messages within a couple of minutes. With further improvements, messages can be received instantaneously through telephones, television, radio, mobile phones, internet etc.
- Development of telecommunications provide a helpful foundation for other technologies related to war, weather, health and trade sectors. Provision of world-class telecommunications is the key to rapid socio-economic development of the country.

Telecommunications in India began with the introduction of the *Telegraph* in 1850. *Telegrams* were initially sent over cable lines, but the system later went wireless. With the advent of better technologies like SMS, Fax and E-mail, the telegraph lost its relevance, and was shut down in India in 2006.

Telephones and Mobile Phones

- Invention of telephones by Alexander Graham Bell in 1875 made possible direct and instantaneous links from one part of the world to another through a close network of telephone wires and undersea cables. Telephone service was introduced in Kolkata in 1882.
- Now *STD (Subscriber Trunk Dialing)* for national dialing is available to almost all connections. *ISD (International Subscriber Dialing)* is available for most countries.
- The Indian telecom sector, including landline phones and mobile phones has shown remarkable growth following *key reforms* like spectrum management, Bharat net programme and schemes like 'Digital India'.
- The telephone services and operations are managed by *Bharat Sanchar Nigam Limited (BSNL)* and *Mahanagar Telephone Nigam Limited (MTNL)* along with several private operators.
- *Telecom Regulatory Authority of India (TRAI)* has been set up to regulate tariff and competition in the telecommunications sector.
 - Can be carried anywhere.
 - Apart from *voice calling*, new-age smart phones also incorporate various other modern communication tools like *SMS text messaging, Internet based social media messaging apps (Whatsapp, Facebook messenger etc.), Voice messages, Video calling* and even *E-mail*.

Fax (Telex) is an equipment that transmits a digitised and exact image of a document over telephone lines.



MASS COMMUNICATIONS

Importance:

- Plays a vital role in spreading awareness among the masses in a vast country like India, providing information, education as well as healthy entertainment.

Two components:

- i. Electronic media (Film and Television, Radio, Internet)
- ii. Print Media (Newspapers and periodicals)

Telecommunications as a tool for Mass Communication:

Prasar Bharati:

The public service broadcaster in the country. Includes All India Radio and Doordarshan

Main Objectives:

- i. Promotes national integration
- ii. Safeguards citizens' right to be informed on all matters of public interest.
- iii. Educates the masses through spread of literacy, agriculture and rural development, health and family welfare and science and technology.
- iv. Creates awareness about women's issues and other vulnerable sections of the society
- v. Promotes social justice, safeguards rights of working classes, minorities and tribal communities.
- vi. Provides adequate coverage to diverse cultures, sports and games and youth affairs

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Radio



- Radio broadcasting in India began in early 1920s.
- **All India Radio (AIR)**, officially known since 1956 as **Akashvani** ("Voice from the Sky"), is the national public radio broadcaster of India.
- It is the one of the largest radio broadcasting services in the world, with 225 broadcasting stations reaching nearly 92% of the country's area and almost the entire population. It broadcasts in 24 languages and 146 dialects.
- AIR operates through *five channels*:
 - i. Primary channel
 - ii. National channel
 - iii. Commercial Broadcasting Service (Vividh Bharti)
 - iv. FM channels
 - v. External Services channels
- The **FM broadcasting** in India boomed after 2001 when the *privatisation* of FM broadcasting began, indicated by a spur in the number of radio sets in the country.

Importance of Radio:

Although radio listenership has declined in cities with the advent of satellite and cable television, it continues to be *an important, and sometimes the only source of entertainment and information in rural areas and remote places.*

Television

Doordarshan is the national public service broadcaster in India



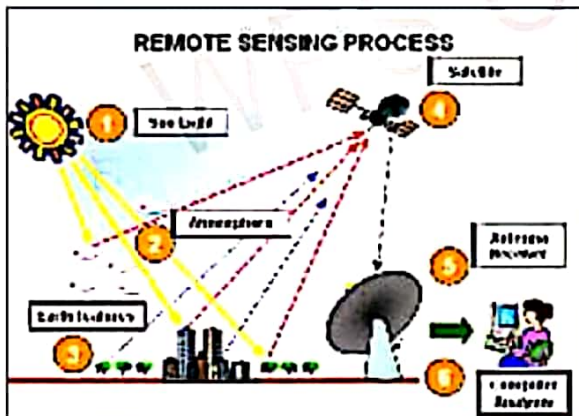
- The channel began modestly as an experimental broadcaster in 1959, with a small transmitter and a makeshift studio of Akashvani Bhawan, Delhi.
- **Satellite Instructional Television Experiment or SITE** was an experimental satellite communications project launched in India in 1975. It was the first attempt in the world to use satellite broadcasting for social education.
- In 1982, Doordarshan became a *national broadcaster*. *Colour television* began in India with the telecast of the 1982 Asian Games in Delhi. DD Metro channel launched in 1984.
- Doordarshan presently operates 30 channels under a *three-tier programme service* - National, Regional and Local. DD Bharati, a new entertainment channel was launched in 2002.
- The broadcasts include *news, current affairs, science, cultural programmes, serials, films and documentaries*.
- Several channels on television have been made available to *private entrepreneurs*, which has promoted a keen and healthy competition to improve the quality of programmes.

Importance of Television Broadcasting:

- It is of tremendous importance for a developing country like India with low literacy rate, diverse cultures and multiple languages, most efficient way to disseminate information and educate the masses.

Satellite Networks

- Artificial satellites have revolutionised both personal and mass communication systems in India.
- **National Remote Sensing Agency (NRSA)**, established in 1972 in Balanagar near Hyderabad.
- **Indian Space Research Organisation (ISRO)**, at Bengaluru is the space agency of the Government of India. ISRO made satellites collect ground data and transmit them to ground stations for various uses.*



Two main groups of Indian Satellite Systems

(based on configuration and purpose)

i) **Indian National Satellite System (INSAT)** - Established in 1983

*Applications: *Telecommunications, Meteorological observations*

ii) **Indian Remote Sensing Satellite (IRS)** - Commissioned in 1988

*Applications: *Land Use mapping, Forest Survey, Drought and Flood monitoring, Urban Planning, Disaster management, Mineral Prospecting etc.*

- **GSAT** series of *geosynchronous satellites* is a system developed by ISRO with an objective to make India self-reliant in broadcasting services.
- India has also developed her own *Polar Satellite launch vehicle (PSLV)* and *Geosynchronous Satellite Launch Vehicle (GSLV)*

Computers and Internet

Definition: *Computer is an electronic device which is used for electronic data processing. It accepts the data, processes the data and converts it into meaningful information. It is also used to perform mathematical and logical operations.*

Functions of a Computer

- i. Accepts the data
- ii. Stores data in its memory, and recalls them as an when required.
- iii. Processes data according to instructions given to get required information
- iv. Communicates the information as output.

- **The Internet** is the *global system of interconnected computer networks that carries a vast range of information resources and services. The early 1990s saw the emergence of household Internet use.*

Importance of Computers in Communication

- The versatile use of computers in many different fields is due to its speed, accuracy, consistency, storage capacity and automation. It plays an important role in the fields of education and transfer of knowledge.
- The internet based World Wide Web, E-mail, Social networking, along with voice and video calling facilities have revolutionized the way individuals communicate with each other. It has transformed how people share information and conduct business based on the speed and flexibility it offers.



Geographical Information System (GIS)

● According to U.S. Geological Survey (2005), *GIS is a system of hardware, software and procedures designed to support the capture, management, manipulation, analysis, modeling and display of spatially referenced data for solving complex planning and management problems.*

● Characteristics of GIS

- i) A branch of information technology
- ii) A computer assisted mapping
- iii) A cartographic application
- iv) A set of spatial analysis tools
- v) A type of data based system



Other forms of Mass Communication:

Cinema

- Feature films being produced in India since 1912-13. Initial films were *silent films*. 1931 marked the advent of the *talkie-era* with the film *Alam Ara*.
- India now *leads the world in the annual output of feature films*.
- In India, films can be publicly exhibited only after being certified by the *Central Board of Film Certification (CBFC)*.
- Cinema has lost much of its viewership with the advent of television and internet.

Importance of Cinema:

- Powerful means of mass communication. Entertains millions of people throughout the country. Can also be used to convey important social messages to the people.

Press and Print Media



- The first Indian newspaper was published in 1780 – *the Bengal Gazette*.
- The publications of newspapers and periodicals are in 16 different languages, with Hindi the number one language and English number two.
- Newspapers are not only *news carriers*, but also *creators and instructors of public opinion*. In democracies, the role of the press has been vital in this sense.
- Globally, the print media industry has been on a decline, in terms of business. However in India, with newspapers still widely read, especially for *local content*, and being *cost-effective*, print media is still thriving.

