

St. 13.1.2020

INTRODUCTION :- CHAPTER-1

→ Communication is a means of conveying men, materials and information.

→ Modes of transportation can be classified into three types.

1. Land transportation → Highway, Cable way, Railway, Ropeway
2. Water transportation → River way, Canal way, Ocean way.
3. Air transportation → Air way

HISTORY

→ The railway system of India is biggest in Asia and 2nd largest in the world.

1844 → 1st proposal for the construction of railway in India were submitted to East India Company by Jerges Stephenson.

1849 → A contract to construct and experimental line of 160 km from Kolkata to Mirzapur.

1850 → A contract was undertaken by Indian railway for construction of a line Mumbai to Kalyan.

1853 → 1st railway line between Mumbai to Thane 32 km, 14 coaches, 3 engines.

1854 → A train between ~~Kharakh~~ ^{Howrah} to Hooghly was run of 39 km.

ZONAL RAILWAYS :-

<u>ZONE</u>	<u>HEADQUARTER</u>
East coast zone	Bhubaneswar
East Central	Hajipur
Northern railway	Delhi
North-eastern railway	Gorakhpur
North-east frontier railway	Guwahati
Eastern railway	Kolkata
South-eastern railway	Kolkata
South central railway	Secunderabad

<u>ZONE</u>	<u>HEADQUARTER</u>
Southern railway	Chennai
Western railway	Mumbai
Central railway	Mumbai
North-western railway	Jaypur
West-central railway	Jabalpur
North-central railway	Alhabad
South-east central railway	Bilashpur

PRODUCTION UNIT :-

Sl	Manufacturing unit	Headquarters	Function
1.	Chittaranjan locomotive work	Chittaranjan	Manufacturing of electric locomotive
2.	Diesel locomotive work	Baranasi	Manufacture of diesel locomotive
3.	Integral coach factory	Chennai	Manufacture of coaches
4.	Diesel component works	Patiala	Manufacture of diesel component
5.	Rail coach factory	Kapurthala	Manufacture of coaches
6.	Wheel and axle	Banglore	Manufacture of wheel and axle

ADVANTAGES OF RAILWAY :-

1. It facilitates long distance travel and transports of goods.
2. It is a quick and more regular form of transport.
3. It helps in industrialization process of a country by easy transportation of coal and raw materials at a cheaper rate.
4. It helps in quick movement of goods from one place to another at the time of emergency.
5. It encourages mobility of labour, thereby provides a great scope for employment.

6. Railway is the safest form of transport.
7. The chances of accident of railway is minimum as compared to ~~another~~ other modes of transport.
8. The carrying capacity of railway is extremely large.
9. It is the largest public undertaking in the country.

DISADVANTAGES OF RAILWAY :-

1. Railway requires a large investment of fund or capital.
2. It is inflexibility means it's route and timing can not be adjusted to the individual requirements.
3. Railway transport is unsuitable and uneconomical for short distance.

COMPARISON BETWEEN ROADWAY AND RAILWAY :-

Sl No.	Item	Roadway	Railway
1.	Accident	More	Less
2.	Construction cost and maintenance cost	Low	High
3.	Cost of transport	More	Cheap
4.	Maintenance	Occasionally repair required.	Require constant maintenance
5.	Operation control	No rigid control.	Essential in signaling and inter-locking.
6.	Right of way	Requires greater width of railway	Required lesser width of right of way.
7.	Suitability	Suitable as per need of customer.	Suitable for specific service only.
8.	Use	Used by different types of vehicles.	Reserve only movement of train.

21.17.01.2020

Classification of Railway :-

Railway board are classified the Indian railway line on the basis of foot, traffic and permissible speed.

On the basis of foot it divided into three types.

1. Trunk foot
2. Main line
3. Branch line

1. Trunk foot :-

The following 6 foot of BG and 3 foot of MG have classified into trunk foot.

6 BG foot :- (1.76 m)

- I. Delhi - Mughalgarai - Howard
- II. Delhi - Kota - Mumbai
- III. Delhi - Jhansi - Nagpur - Chennai
- IV. Howard - Bagpur - Mumbai
- V. Howard - Bijaybada - Chennai
- VI. Mumbai - Guntakul - Chennai

3 MG foot :- (1 m)

- I. Lucknow - Gorakhpur - Guwahaty
- II. Delhi - Jaypur - Ahmedbad
- III. Chennai - Madurai - Trivandrum

2. Main line :-

All the lines carrying 10 gross million ton (GMT) per annum or more for BG and 2.5 GMT or more for MG. Maximum permissible speed allowed is 100 km/hr for BG and 75 km/hr for MG.

3. Branch line :-

→ All the lines carrying 10 gross million ton (GMT) per annum or less for BG and 2.5 GMT or less for MG.

→ Maximum permissible speed is less than ~~allowed~~ 100 km/hr for BG and 75 km/hr for MG.

According to this method BG railway lines can be divided into 5 types.

All the BG routes are classified based on the

Group - A line

Group - B line

Group - C line

Group - D line

Group - E line

Group - A line :-

They consist of those trunk routes on which the trains are running at a speed of 150 km/hr or more.

ex - Howrah to Mumbai (via Vava - Nagpur)

Group - B line :-

They consist of trunk routes on which the trains are running at a speed of 130 km/hr.

ex - Khadagpur to Vijaybada

Group - C line :-

They consist of sub-urban routes.

ex - Delhi, Kolkata, Mumbai

Group - D line :-

They consist of other routes on which the trains are running at a speed of 100 km/hr.

Group - E line :-

They consist of other routes on which the trains are running at a speed less than 100 km/hr.