

* Transportation \Rightarrow design, manage, plan & build for moving people & goods from $\textcircled{1} \rightarrow \textcircled{2}$

Goods

great infrastructure

safe, efficient &

Industrialisation.

fast, affordable

massive production

eco-friendly.

Basic need, development of human,
 \rightarrow growth of social, economic & culture of country
 \rightarrow Mobility for food, leisure.

Importance \Rightarrow Availability of raw material.

Availability of goods to customer
enhance living standard.

during emergencies, natural disaster.

Help for employment.

Connect two country.

[Based on human demands & production & supply.]

Modes of Transportation

(1) Road way

Car, bus, trucks, Auto,
bikes etc.

movement of good &
people. Cheaper.

\rightarrow door to door service

\rightarrow Short to medium
distance

\rightarrow Suitable for
urban & rural.

\rightarrow slower for long
distance.

(2) Rail way

trains on railway tracks
(station for trains).

\rightarrow Fast & suitable for long
distance

fixed routes & schedules.

\rightarrow Safe & reliable.

\rightarrow No door to door service.

(3) Water way * (in good weather)

uses boats, ships, marine
by river, canals, lakes or
sea (Ocean)

Used for heavy & bulky
cargo for trade.

\rightarrow slow, requires ports.

(4) Airways

used for human & good transport.
uses → Airplane, helicopter
→ fastest but expensive.
depend on weather.
need airports.

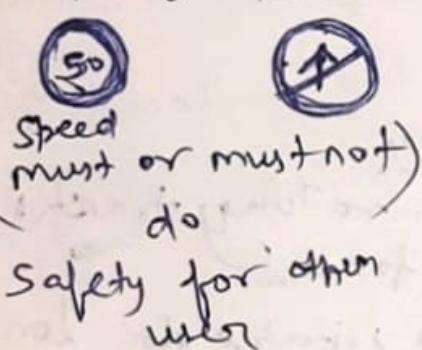
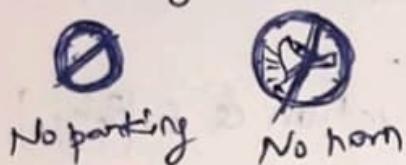
(5) Pipeline

for fluid like water, oil etc. gases etc.
for long distance.
continuous, efficient, safe,
No traffic congestion.
High installation cost.

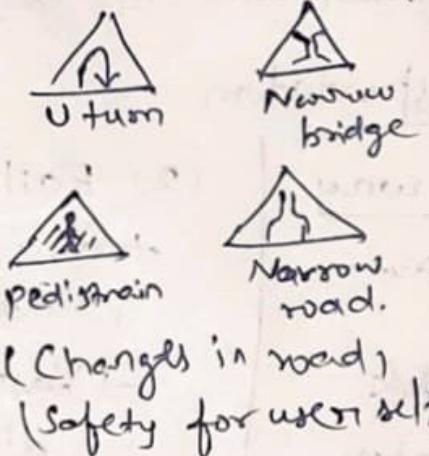
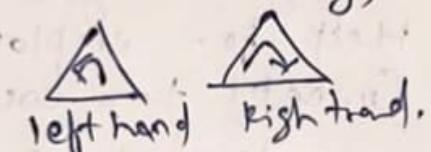
Traffic & road safety

(A) Traffic signs → Communication b/w traffic engs. & road user.

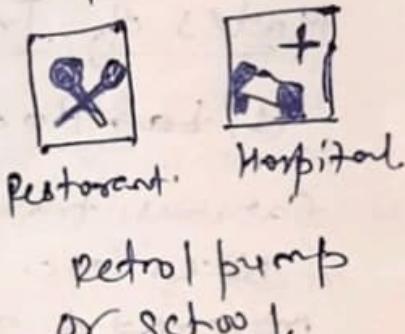
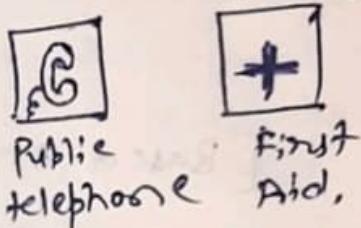
(i) Mandatory (Regulatory)



(ii) Cautionary (warning)



(iii) Informative Give useful info.



Petrol pump
or school.

* Causes of road accidents

- (1) Over speeding
- (2) Distracted driving
- (3) Drunken driving

- (4) Poor road condition.
- (5) Weather condition.
- (6) Vehicle defects.
- (7) Lack of road safety awareness.

* How to control road accidents

- (1) Strict Enforcements of traffic laws.
- (2) Awareness campaigns through media, schools & community programs.
- (3) Improving in road infrastructure.
- (4) Regular maintenance of vehicles.
- (5) Use of technology.
- (6) Stricter licensing process.
- (7) Promote use of Helmets & seat belt.
- (8) Availability of emergency services.