

PORTS AND HARBOURS

- ⌚ These are simply the terminal facilities for the water mode.
- ⌚ **Harbour** is a partially enclosed area of water which serves as a place of refuge for ships while loading, unloading or being serviced. It provides a safe anchorage and protects ships from waves of the open seas.
- ⌚ **Features for Harbour sites**
- ⌚ **Port-** is that portion of the harbour which serves as a base for commercial activities.
- ⌚ **Planning & design of port facilities**

HIGHWAY

⌚ **Pavement Structure**

∅ Sub grade: is usually the natural material located along the horizontal alignment of pavement and serves as the foundation of the pavement structure.

∅ Sub base: located immediately above the sub grade

∅ Base course: lies immediately above the sub base

⌚ **Functions/ Standard requirement**

RAIL ROAD'S SIGNAL & TRAFFIC CONTROL

- ⌚ At all times, rail locomotives remain under a high degree of control- since their paths are restricted by the tracks.
- ⌚ Definitions of Side-tracks, turn-out, switch, etc.
- ⌚ Types of switch- Stub switch, split switch
- ⌚ Railroad signal system- the two principal signals used for control are- semaphore blades & light signals
- ⌚ Train control system can be categorised into the following classes: Time table/ train order; Automatic block system & Centralized traffic control
- ⌚ Yard: receiving, classification & departure

AIR TERMINAL

These include portions of airports other than the landing and take-off areas i.e. car-parking lots, aircraft parking aprons, terminal buildings and facilities required for inter-terminal as well as intra-terminal transportation.

§ Functional elements that can be identified in airport passenger terminals- **airside, terminal building & landside**

§ Layout concepts

§ Vehicle parking needs

§ Aircraft parking needs

§ Space Requirement for Terminal building