

HARBOUR ENGINEERING

Explain history of water transportation.

Write down national level water transportation development policy.

Enlist classification of Harbors.

Explain natural & artificial harbor.

Define various harbour components.

Explain characteristics of good harbour.

What are the various principles of harbour planning? Explain it.

Describe site selection criteria for harbour.

Enlist various survey carried out during harbour planning.

Explain general design aspects of marine structure.

What are the functions of wharves , quays & pier heads?

Explain characteristics of dolphin & fenders.

What are the mooring accessories?

What are the purposes for wet docks?

What is tidal basin? Describe it.

Explain design consideration of docks.

Define : repair dock, graving dock, float dock.

1. What are the basic amenities required at port?
2. Describe cargo handling equipment.
3. Describe light house.
4. What are the various communication devices used at harbour?
5. What is coastal protection? & its purposes.
6. What is dredging? Explain it purposes.
7. Explain mechanical & hydraulic dredgers.

AIRPORT ENGINEERING

Explain history of air transportation.
What is air crafts & its characteristics? Explain it.
Describe airport classification as per ICAO.
Explain regional planning. &Its concept.
Describe planning of airport as per ICAO & FAA.
Enlist various airport elements. Describe air field, terminal area, & zoning laws.
Describe airport size & various site selection factors.
Explain requirements of an ideal airport.
What are the factors which effects runway length? Explain it.
Define : basic runway length & its geometrics.
Explain wind rose diagram.
Explain taxiway geometric design.
Define Apron.
Explain various factors which decides apron size , locations etc.
Explain various methods of aircraft parking.
What are the terminal area elements & its requirements?
What are the factors which effects during location planning of terminal?
Enlist various facilities which required for terminal.
What is airport drainage? Explain its requirements.
Functions & aims grading & drainage.
What is surface & subsurface drainage system?
What are the objectives of the air traffic control?
What is control system?
Explain network-visual aids required for landing information system.
What is airport marking? Describe it.
Describe airport lighting.