

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER-VII EXAMINATION – WINTER 2025

Subject Code:3170623

Date:13-11-2025

Subject Name:Port and Harbour Engineering

Time:10:30 AM TO 01:00 PM

Total Marks:70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

MARKS

Q.1	(a) Compare Water Transportation and Land Transportation.	03
	(b) Explain the modern trends in water transportation in India.	04
	(c) Discuss the site selection and planning criteria for seaports.	07
Q.2	(a) Enlist and write the functions of bodies dealing with port administration in India.	03
	(b) What are the surveys to be carried out for harbour planning.	04
	(c) Draw the diagram of harbour layout showing all components of it.	07
	OR	
	(c) Explain with sketch the different types of breakwaters.	07
Q.3	(a) Define: Spring Tide, Neap Tide and Lunar Day.	03
	(b) Explain ship characteristics: Bow, Keel, Port side, starboard side	04
	(c) What are the different wind characteristics? Also explain wind rose diagram with its uses.	07
	OR	
Q.3	(a) Define: Tidal Range, Tidal Bore and Clapotis.	03
	(b) Explain ship characteristics: Displacement Tonnage, Dead Weight Tonnage, Displacement light, Load line	04
	(c) How are waves generated? Explain shallow and deep waves with sketches.	07
Q.4	(a) What are the advantages and disadvantages of floating dry docks.	03
	(b) Enlist the different types of locks and explain anyone.	04
	(c) Discuss buoys, beacons, and light house.	07
	OR	
Q.4	(a) Compare dry docks and wet docks.	03
	(b) Briefly explain the types of moorings.	04
	(c) Enumerate the different types of lock and explain any one.	07
Q.5	(a) Write a short note on transfer bridge.	03
	(b) What are the function of LORAN and RADAR.	04
	(c) What is dredging? Enlist the different types of dredgers and explain any one.	07
	OR	
Q.5	(a) What is a transit shed? What are purposes of it?	03
	(b) What are the different types of buoys?	04
	(c) Explain the different coastal protection works.	07
