

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER- VII EXAMINATION – SUMMER 2026

Subject Code:3170623

Date:20-05-2026

Subject Name: Port and Harbour Engineering

Time: 02:30 PM TO 05:00 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) Write advantages and disadvantages of water transportation.	03
(b) Define: (1) Wharf (2) Jetty (3) Break water (4) Dolphins	04
(c) Draw the schematic diagram of harbour layout showing all components and briefly write each component.	07
Q.2 (a) Differentiate between wharf and jetty.	03
(b) Give the classification of harbour with the examples.	04
(c) Briefly explain the necessary additional information required after preliminary layout of the port and before starting the final design.	07
OR	
(c) Explain the various ship features and important ship characteristics for the planning and designing of harbour.	07
Q.3 (a) How the water waves are formed and generated?	03
(b) Write short note on tidal datum.	04
(c) Explain various types of break water with the help of neat sketch.	07
OR	
Q.3 (a) Write short note on littoral drift.	03
(b) Briefly explain wave breaking and wave defection.	04
(c) Give comparison between mound type and vertical wall type breakwater.	07
Q.4 (a) Differentiate between quay and pier.	03
(b) Write short note on floating dock.	04
(c) Explain various types of wharves with the help on neat sketch.	07
OR	
Q.4 (a) Differentiate between dry dock and wet dock.	03
(b) Enlist and draw the sketch of different types of lock gates.	04
(c) Write short notes on: (1) Piers (2) Fenders	07
Q.5 (a) Differentiate between ware house and transit shed.	03
(b) Write short note on light house.	04
(c) Explain various floating type navigational aids used for water transportation.	07
OR	
Q.5 (a) Discuss the various causes of beach erosion.	03
(b) Write short note on economic evaluation of port project by B/C method.	04
(c) Explain various types of dredgers used for removal of materials from the sea bed.	07
