

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII (NEW) EXAMINATION – SUMMER 2022****Subject Code:3170623****Date:14/06/2022****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 a critical note on water transportation.	03
	(b) Distinguish between natural and artificial harbours.	04
	(c) Discuss the classification of harbour based on utility.	07
Q.2	(a) Explain the term: Cargo handling capacity of a port.	03
	(b) Explain the principles of seaport planning.	04
	(c) Describe the Surveys to be carried out for seaport planning.	07
	OR	
	(c) Explain dynamic effect of wave action in deep water and shallow water.	07
Q.3	(a) Explain the terms: Littoral drift, Neap tide, Spring tide.	03
	(b) Explain the phenomena of the breaking of waves.	04
	(c) What considerations govern the size and position of harbour entrances?	07
	OR	
Q.3	(a) Differentiate between Dry docks and Wet docks.	03
	(b) Explain the common terms used in connection with ship characteristics.	04
	(c) Explain with neat sketches how mound breakwaters are protected from wave action.	07
Q.4	(a) Explain the terms: Jetty, Fender.	03
	(b) State the construction requirements for a transit shed.	04
	(c) What are the moorings? Mention the accessories of fixed and floating types of the moorings.	07
	OR	
Q.4	(a) Draw a neat sketch of RCC warehouse having many floors.	03
	(b) Discuss the necessity of providing facilities like aprons, transit sheds and warehouses at the ports.	04
	(c) Describe various floating signals.	07
Q.5	(a) What is lighthouse? How is it constructed?	03
	(b) What is dredging? Classify different types of dredging works.	04
	(c) List various shore protection works and explain sea walls.	07
	OR	
Q.5	(a) Distinguish between Dipper dredge and grapple dredge.	03
	(b) Describe various indicators for economic evaluation of port project.	04
	(c) Discuss the environmental impacts of port activities.	07
