Seat No.: _____ Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER–VIII (OLD) EXAMINATION – WINTER 2020

Subject Code:180602 **Date:19/01/2021**

Subject Name:Dock Harbour & Airport Engineering

Time:02:00 PM TO 04:00 PM **Total Marks: 56**

Instructions:

1. **Attempt any FOUR questions out of EIGHT questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	Compare the road, air and water transport.	**07**
	(b)	Describe the function of key components of an aircraft with neatly labeled sketch.	**07**
Q.2	**(a)**	Write short notes on i) Dredging ii) Air Traffic Control	**07**
	(b)	Discuss the role of navigational aids. Highlight the navigational aids used in air and sea transport with their suitability.	**07**
Q.3	**(a)**	Compare the following: repair docks, floating docks. Describe the operation of lock gates.	**07**
	(b)	Write the Airport classification and list the air airport authorities in India.	**07**
Q.4	**(a)**	Discuss the function and types of breakwaters.	**07**
	(b)	Write notes on: i) effect of waves and tides on marine structures ii) Coastal protection.	**07**
Q.5	**(a)**	Write a short note on port amenities with sketch.	**07**
	(b)	Describe wind rose diagram and its application in runway design.	**07**
Q.6	**(a)**	Describe the following: i) ware house ii) tidal basin iii) wet dock iv) fender v) jetty vi) dolphin vii) littoral drift	**07**
	(b)	Describe the elements of airport terminal and functions of terminal building.	**07**
Q.7	**(a)**	Explain briefly various factors affecting site selection of an airport.	**07**
	(b)	Discuss the methods for deciding runway length.	**07**
Q.8	**(a)**	Write short note on: i) Instrument Landing System (ILS) ii) Apron and Hangar	**07**
	(b)	The length of runway under standard condition is 1600mt. The airport site has an elevation of 275mt and its reference temperature is 32.4ºC. If the runway is to be constructed with an effective gradient of 0.20%, calculate corrected length of runway.	**07**

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