

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**

**BE - SEMESTER– VIII (NEW) EXAMINATION – WINTER 2021**

**Subject Code:2180602**

**Date:25/11/2021**

**Subject Name:Harbour & Airport 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

		<b>Marks</b>
<b>Q.1</b>	(a) What are the important wind characteristics	<b>03</b>
	(b) Describe aero plane component parts with neat sketch	<b>04</b>
	(c) Explain wind rose diagram showing direction, duration and intensity of wind.	<b>07</b>
<b>Q.2</b>	(a) Write a note on Instrument Landing System	<b>03</b>
	(b) Write classification of Harbour	<b>04</b>
	(c) What is breakwater? Write functions of it. Discuss about types of it.	<b>07</b>
<b>OR</b>		
	(c) Discuss basic patterns or configuration of the runways with neat sketches	<b>07</b>
<b>Q.3</b>	(a) Explain littoral drift	<b>03</b>
	(b) Explain aircraft parking systems with neat sketches	<b>04</b>
	(c) What are the facilities provided in terminal building? Also draw typical layout of airport terminal building	<b>07</b>
<b>OR</b>		
<b>Q.3</b>	(a) Discuss importance of grading and drainage in airport	<b>03</b>
	(b) Write airport classification as per ICAO	<b>04</b>
	(c) Give the outline as per ICAO master planning process for planning of airports.	<b>07</b>
<b>Q.4</b>	(a) Discuss harbour maintenance	<b>03</b>
	(b) Explain in brief: (1) Exit taxiway (2) Holding apron.	<b>04</b>
	(c) What are the types of marine structures? Write functions of each	<b>07</b>
<b>OR</b>		
<b>Q.4</b>	(a) Distinguish between Jetty and Wharves.	<b>03</b>
	(b) Write in brief about airport drainage system	<b>04</b>
	(c) Write a note on visual aids and runway lighting	<b>07</b>

- Q.5** (a) Explain LORAN and RADAR **03**
- (b) What is the function of a hanger? Explain the Nose hangers and T hangers with neat sketch **04**
- (c) What is floating dock? Give its advantages and disadvantages. **07**

**OR**

- Q.5** (a) Compare Mound type and Vertical wall breakwater **03**
- (b) Discuss in brief : Dolphins **04**
- (c) Discuss buoys, beacons and light house **07**

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