

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER–VIII(NEW) EXAMINATION – SUMMER 2019****Subject Code:2180602****Date:13/05/2019****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.

- Q.1** (a) What is the significance of water transportation? **03**
 (b) Describe aeroplane component parts with neat sketch. **04**
 (c) Discuss basic patterns or configuration of the runways with neat sketches. **07**
- Q.2** (a) Discuss airport master planning process as per ICAO recommendations. **03**
 (b) Explain different characteristics of an aircraft. **04**
 (c) Explain wind rose diagram showing direction, duration and intensity of wind. **07**
- OR**
- (c) Discuss classification of harbour based on different criteria. **07**
- Q.3** (a) Write short note on littoral drift. **03**
 (b) Explain aircraft parking systems with neat sketches. **04**
 (c) Enlist and explain corrections to be applied to basic runway length. **07**
- OR**
- Q.3** (a) Discuss importance of grading and drainage in airport. **03**
 (b) Explain in brief: (1) Exit taxiway (2) Holding apron. **04**
 (c) What are the facilities provided in terminal building? Also draw typical layout of airport terminal building. **07**
- Q.4** (a) Discuss harbour maintenance. **03**
 (b) Enlist different types of dolphins. Explain any one. **04**
 (c) What is dredging? Enlist the different types of dredgers and explain any one. **07**
- OR**
- Q.4** (a) Compare mound type and wall type breakwaters. **03**
 (b) Enlist different types of locks and explain any one. **04**
 (c) Discuss buoys, beacons and light house. **07**
- Q.5** (a) Discuss transit shed in brief. **03**
 (b) Write a note on visual aids and runway lighting. **04**
 (c) Explain by drawing sketch shallow waves and deep waves. **07**
- OR**
- Q.5** (a) Distinguish between Jetty and Wharves. **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**
