

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VIII (NEW) EXAMINATION – WINTER 2017

Subject Code: 2180602

Date: 15/11/2017

Subject Name: Harbour & Airport Engineering(Departmental Elective - III)

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.

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