

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE- SEMESTER–VIII (NEW) EXAMINATION – WINTER 2020**

**Subject Code:2180602****Date:21/01/2021****Subject Name: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) Discuss advantages of water transportation. **03**  
(b) What are the requirements of a good harbour? **04**  
(c) Enlist various factors affecting for site selection of an airport and explain them. **07**
- Q.2** (a) Explain three principal controls of an aeroplane. **03**  
(b) Write short note on wave breaking. **04**  
(c) Draw the schematic diagram of harbour layout showing all components. **07**
- Q.3** (a) Define: Apron, Runway and Taxiway. **03**  
(b) Discuss various runway patterns. **04**  
(c) What is breakwater? Give classification of breakwater and explain any one. **07**
- Q.4** (a) What do you mean by littoral drift? **03**  
(b) Define: Wharf, Jetty, Dolphin and Fender. **04**  
(c) Describe various airport parking systems with neat sketches. **07**
- Q.5** (a) What is runway orientation? **03**  
(b) Write short note on exit taxiways. **04**  
(c) Explain operation of lock gates. **07**
- Q.6** (a) Explain trestle with figure. **03**  
(b) What is transit shed? What are its purposes? **04**  
(c) What do you understand by terminal building? Draw layout of airport terminal building. **07**
- Q.7** (a) What is airport grading? What is its importance? **03**  
(b) Explain briefly the requirements of airport drainage system. **04**  
(c) What are the purposes of navigation aids? Enlist navigation aids and explain lightships. **07**
- Q.8** (a) Differentiate between dry dock and wet dock. **03**  
(b) What is dredging? Why it is necessary? **04**  
(c) Which are the purposes of air traffic control? Explain air traffic control network. **07**

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