

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
