

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-VIII • EXAMINATION – SUMMER 2013

Subject Code: 180602**Date: 13/05/2013****Subject Name: Dock, Harbour and 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 are the requirements of a good harbour? Enumerate eight major ports of India. 07
(b) Enlist the constituents of harbour. Draw the sketch of a typical artificial harbour. 07
- Q.2** (a) What facilities are necessary for a major port? Describe each in detail. 07
(b) Define harbour. What are the points to be kept in mind while designing a harbour? 07
OR
(b) How the characteristics of a ship affect the design of harbour. Draw a typical layout of harbour. 07
- Q.3** (a) Explain the terms: 07
i) Littoral drift ii) lock and passages iii) Wharves & fenders iv) Quays & Jetties
(b) Describe the types of signals used for navigation. What are the different types of dredging devices? 07
OR
- Q.3** (a) Enumerate different types of breakwater. What factors would guide the selection of a particular type? 07
(b) Discuss the points to be considered in the geometric design of a runway. 07
- Q.4** (a) What are the main requirements for airport pavements? 07
(b) Discuss the measures adopted to control noise at airport. 07
OR
- Q.4** (a) Classify airports according to I.C.A.O. And write the aircraft characteristics which are useful in the design of runways. 07
(b) Define airport capacity. What are the points to be considered in the selection of a site for an airport? 07
- Q.5** (a) Discuss the functions of airport drainage. Describe surface and sub-surface drainage systems. 07
(b) What are the main components of a terminal building? Explain each in brief. 07
OR
- Q.5** (a) What are the passenger requirements of the terminal building? 07
(b) Explain the terms: 07
i) Orientation of runway
ii) fuel storage area
iii) Holding apron
