

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER- VIII(OLD) – EXAMINATION – WINTER 2017

Subject Code:180602
Date: 02-11-2017
Subject Name: Dock Harbour & Airport Engineering
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) Draw a schematic diagram of harbour layout showing all components. **07**
- (b) Explain silting, erosion and littoral drift. **07**
- Q.2** (a) Write short note on **07**
- (i) Runway marking
- (ii) Airport Capacity
- (b) Explain in brief important wind characteristics? Also briefly explain the Beaufort scale and wind rose diagram. **07**
- OR**
- (b) Find out the actual runway length for an airport located at 450 m above mean sea level and having a basic runway length of 1800m. The monthly mean of maximum and mean daily temperatures of the hottest month are 27°C and 18°C respectively. The runway effective gradient is 0.5%. **07**
- Q.3** (a) Give classification of break water and explain any one in detail. **07**
- (b) Draw the neat sketches for different aircraft parking system and also write suitability of each system. **07**
- OR**
- Q.3** (a) Differentiate between wet docks and dry docks. Draw a neat sketch of floating buoy. **07**
- (b) Explain in detail the functions of taxiway in airport with a neat sketch showing all components. **07**
- Q.4** (a) Explain how the water waves are generated? Discuss shallow waves and deep waves with neat sketches. **07**
- (b) What is necessity of dredging? Classify the different types of dredging works. **07**
- OR**
- Q.4** (a) Classify various types of navigational aids and explain briefly light house. **07**
- (b) Write a short note on transit shed with neat sketch. **07**
- Q.5** (a) Write a short note on design and construction features of mooring accessories. **07**
- (b) What are the main components of a terminal building? Explain each in brief. **07**
- OR**
- Q.5** (a) Explain in brief about different runway patterns with neat sketches. **07**
- (b) Explain exit taxiway and holding apron. **07**
