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GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER-VIII (OLD) - EXAMINATION - SUMMER 2017 Subject Code: 180602 Date:29/04/2017 Subject Name: Dock Harbour & 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. (a) What is harbour? Classify the harbour. Also write the requirement of good Q-1 07 harbour. Describe air craft and its characteristics. 07 (b) Explain wind coverage and crosswind components. Draw the sketch Q-2 07 showing aero plane components. What is the function of a hanger? Explain the Nose hangers and T hangers 07 with neat sketch. OR What is the purpose of the navigation aids? Explain any one type of 07 navigation aids. Enlist different types of breakwater and describe anyone with a neat Q-3 07 sketch. Calculate the actual length of the runway from the following data: 07 (b) Airport elevation: 150m RL Airport reference temperature: 16° C Basic length of runway: 800 m Highest point along the length: 99.2m RL Lowest point along the length: 95.2m RL. OR Define the terms :- (i) Turning Basin (ii) Marine terminal (iii) Off-shore 07 Q-3 moorings (iv) Gross Registered Tonnage (v) Jetty or pier (vi) fenders (vii) anchorage area Define airport capacity. What are the points to be considered in the 07 selection of a site for an airport? What are dry docks? Draw sketch of dry graving dry dock. 07 **O-4** (a) Draw the neat sketches for different aircraft parking system and also write (b) 07 suitability of each system. OR Explain with neat diagram the action of various forces under the influence Q-4 of the wave. Write the advantages and disadvantages of aviation. (b) 07 07

- 07
- Write short note on harbour maintenance. Q-5 (a)
  - Write a short note on runway lighting and visual aids. 07

OR

- Write short note (any one): (i) Instrument landing system (ii) An airport Q-5 07 (a) drainage system.
  - Explain exit taxiway and holding apron. (b)

07