

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.E. - SEMESTER – VIII EXAMINATION – OCTOBER 2012**

**Subject code: 180602****Date: 29/10/2012****Subject Name: Dock Harbour & Airport Engineering****Time: 02.30pm - 05.00pm****Total Marks: 70****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Define the following terms **07**  
 (1) Harbour, (2) Port, (3) Neap tides, (4) Waves,  
 (5) Clapotis, (6) Fenders, (7) Tidal Basin
- (b) What is the basic unit of wind speed? Give its relation with mile. Explain Beaufort scale and wind rose diagram in brief. **07**
- Q.2** (a) What is the function of a hanger? Explain the Nose hangers and T hangers with neat sketch. **07**
- (b) Differentiate between mound type breakwater and wall type breakwater. **07**
- OR**
- (b) What is dredging? Classify the different types of dredging works. List the different types of dredgers. **07**
- Q.3** (a) Explain transit shed with neat sketch. **07**
- (b) Draw neat sketch showing the general features of a harbour. Describe piers and wharf in detail. **07**
- OR**
- Q.3** (a) Differentiate between a jetty and a wharf. State the conditions under which you will prefer their construction. **07**
- (b) Discuss the necessity of dry docks. Write advantages and disadvantages of floating dry docks. **07**
- Q.4** (a) Explain airport architecture covering various important points. **07**
- (b) An Airport is proposed at an elevation of 410 m above mean sea level where the mean of maximum and mean of average daily temperatures of the hottest month are 45°C and 26°C respectively. The maximum elevation difference along the proposed profile of runway is 6.5 m. If the basic length of runway is 1270 m, determine the actual length of runway to be provided. **07**
- OR**
- Q.4** (a) Explain in brief about different runway patterns with neat sketches. **07**
- Q.4** (b) Write short note on – 1) Environmental impact assessment (EIA) **07**  
 2) Environmental impact statement (EIS)
- Q.5** (a) Explain runway marking of airport markings for the assistance of pilot to guide the aircraft on runway. **07**
- (b) Give the classification of aerodromes and airports. **07**
- OR**
- Q.5** (a) Explain various geometric standards for Taxiway in brief. **07**
- (b) Explain the general requirements of grading. **07**

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