

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER – IV • EXAMINATION – SUMMER • 2013

Subject code: 744301

Date: 14-05-2013

Subject Name: Off-shore structures

Time: 10.30 am – 01.00 pm

Total Marks: 70

Instructions:

1. Question 1 is compulsory. Attempt any four questions from Q.2 to Q.7.
2. Draw neat sketches with details where necessary.
3. Make suitable assumptions.
4. Figures to the right indicate full marks.

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|------------|------------|------------------------------------------------------------------------------|-----------|
| Q.1 | (a) | Explain about floor systems adopted on jacket tower. | 14 |
| Q.2 | (a) | Draw neat sketch of wave with all symbols. | 07 |
| | (b) | Briefly explain effect of wave forces on vertical pile. | 07 |
| Q.3 | (a) | Explain about design of foundation of off-shore structures. | 07 |
| | (b) | Give factors affecting material selection for off-shore structures. | 07 |
| Q.4 | (a) | Briefly explain joint loads from wave forces. | 07 |
| | (b) | Explain different types of piles used in foundation of off-shore structures. | 07 |
| Q.5 | (a) | Explain analytical modeling of off-shore structures. | 14 |
| Q.6 | (a) | Draw schematic diagrams for crossing pipelines. | 07 |
| | (b) | Enlist methods of installation of pipeline and explain any one in detail. | 07 |
| Q.7 | | Briefly write about Analysis of Deck structure. | 14 |
