Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER –IV • EXAMINATION – SUMMER • 2014

Subject code: 744301 **Date: 04-06-2014**

Subject Name: Offshore structures

Time: 02:30 pm - 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 neat sketch of wave with all symbols.	**04**
	(b)	Enlist wave theories and explain any one in detail.	**10**
Q.2	**(a)**	Enlist types of offshore structure.	**07**
	(b)	Give factors affecting material selection for offshore structure.	**07**
		OR	
	(b)	Give Morrision equation for effect of relative motion and effect of pile diameter.	**07**
Q.3		What do you understand ñDynamic modelò of offshore structure?	**14**
		OR	
Q.3		Explain about different types of piles used in the foundation of offshore structure.	**14**
Q.4		How will you install jacket tower? Explain about floor systems adopted on jacket tower.	**14**
		OR	
Q.4		Draw schematic diagrams for crossing pipelines. Enlist & explain installation methods of pipeline.	**14**
Q.5	**(a)**	Enlist the functions of mooring system.	**07**
	(b)	Enlist and explain principle components of mooring system.	**07**
		OR	
Q.5	**(a)**	Write a short note on ñAnalysis of Deck Structureò.	**07**
	(b)	Explain ñPoint to be considered for design basis document for offshore pipelineò.	**07**