Seat No.:	Enrolment No.	
	GUJARAT TECHNOLOGICAL UNIVERSITY	
M	E – SEMESTER II (NEW) – • EXAMINATION – SUMMER 2016	

Subject Code: 2724311 Date: 31/05/2016 **Subject Name: Offshore structures** Time: 10:30 am to 01:00 pm **Total Marks: 70 Instructions:** 1. Attempt all questions. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks. **Q.1** (a) Enlist types of offshore structure. **07** Give Morrision equation for effect of relative motion and effect of pile 07 diameter. (a) What is the effect of wave forces on vertical piles? **07 Q.2 (b)** Give factors affecting material selection for offshore structure. **07** OR **(b)** Write a note on floor systems adopted on jacket towers. 07 **Q.3** How will you install pile as a foundation of offshore structure? Explain step by step. OR What do you mean by "Dynamic model" in offshore structure? **Q.3** 14 **Q.4** Explain installation method for crossing pipeline with neat schematic diagram. OR **Q.4** Enlist wave theories and explain any TWO in detail. 14 **Q.5** (a) What are the functions of mooring system. 07 **(b)** Explain in detail the analysis of "Deck Structure". 07 OR Q.5 (a) What do you mean by "Preliminary member sizing" in offshore structure. **07**

(b) Explain "Point to be considered for design basis document for offshore 07

pipeline".