Seat No.:	Enrolment No.
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GUJARAT TECHNOLOGICAL UNIVERSITY

		ME – SEMESTER I (NEW) – • EXAMINATION – SUMMER 2016	
Sul	bject	Code: 2712702 Date:16/05/20	16
Sul	bject i	Name: 3G AND 4G MOBILE COMMUNICATION	
		:30 pm to 05:00 pm Total Marks:	70
Inst	ruction		
	1. 2.	Attempt all questions. Make suitable assumptions wherever necessary.	
	3.	Figures to the right indicate full marks.	
Q.1	(a)	What is fading? What are the different type of fading? Explain Rayleigh and Ricean fading channels in detail.	07
	(b)	Describe 4G standard in detail.	07
Q.2	(a) (b)	Explain Teletraffic theory in detail. What is diversity? What are the types of diversity? How diversity improve BER performance?	07 07
		OR	
	(b)	Explain CDMA technology in detail.	07
Q.3	(a) (b)	Write short note on broadband wireless channel modeling. Write short note on CDMA receiver synchronization. OR	07 07
Q.3	(a) (b)	Write short note on cellular processes. What is rake receiver? Can we use rake receiver in GSM? Why?	07 07
Q.4	(a) (b)	Explain concept of OFDM technology. Describe MIMO Spatial Multiplexing – BLAST OR	07 07
Q.4	(a) (b)	Explain MIMO-OFDM. What is UWB? Compare UWB and OFDM.	07 07
Q.5	(a) (b)	Discuss the implementation issues in OFDM. Explain UWB data modulation and BER performance of UWB. OR	07 07
Q.5	(a) (b)	Write short note on MIMO diversity. Write short note on 3G standard.	07 07
