GUJARAT TECHNOLOGICAL UNIVERSITY

ME – SEMESTER II (NEW) – • EXAMINATION – SUMMER 2016				
Subject Code: 2722706 Date: 25/05/20 Subject Name: WIRELESS SIGNAL PROPAGATION & FADING Time:10:30 am to 01:00 pm Total Marks: Instructions:			5/2016	
			70	
11150	1. 2. 3.			
Q.1	(a) (b)	Explain the radio propagation and path loss model for free space. Explain various signal fading statistics.	07 07	
Q.2	(a)	What is an adaptive transmission system? Explain variable rate and variable power technique.	07	
	(b)	Describe the statistical multipath channel models for time varying channel. OR	07	
	(b)	Derive the capacity of AWGN channel and flat fading channel.	07	
Q.3	(a) (b)	Write short note on Okumura model. Explain various wide-band fading model. OR	07 07	
Q.3	(a) (b)	Write short note on Hata model. Explain hybrid techniques for adaptive systems.	07 07	
Q.4	(a) (b)	What is STC? Derive the channel capacity of STC MIMO channel. Write short note on receiver diversity. OR	07 07	
Q.4	(a) (b)	Explain frequency selective MIMO channel. Write short note on transmitter diversity.	07 07	
Q.5	(a) (b)	Write short note on OFDM. Write short note on smart antenna. OR	07 07	
Q.5	(a) (b)	Explain challenges in multicarrier modulation. Explain linear and adaptive equalizers.	07 07	
