Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME SEMESTER II EXAMINATION – SUMMER 2017

Subject Code :2720502 **Date: 26/05/2017**

Subject Name: Wireless & Mobile Communication

Time:02:30 PM to 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)**	Enlist all indoor and outdoor propagation models. Discuss Okumura's and Hata's prediction models with necessary equations.	**07**
	(b)	Explain first arrival delay, mean excess delay, maximum excess delay and coherence bandwidth in brief.	**07**
Q.2	**(a)**	Differentiate co-channel interference and adjacent channel interference.	**07**
	(b)	Explain security issues and quality of services in wireless networks.	**07**
		OR	
	(b)	Explain the concept of diversity. Also explain time, frequency and space diversity techniques.	**07**
Q.3	**(a)**	Explain types of space diversity reception methods.	**07**
	(b)	Explain MIMO diversity technique and its application in wireless communication system.	**07**
		OR	
Q.3	**(a)**	Write a short note on cognitive radio.	**07**
	(b)	Explain OFDM signal processing in detail.	**07**
Q.4	**(a)**	Explain Rayleigh and Rician distribution detail. What are the distinct applications of Rayleigh and Rician channel modeling in wireless communication?	**07**
	(b)	Compare cell splitting, sectoring and micro cell zone concepts.	**07**
		OR	
Q.4	**(a)**	Explain impulse response model of a multi path channel with necessary equations.	**07**
	(b)	Write a short note on features and challenges of MANET.	**07**
Q.5	**(a)**	What are the types of routing in Mobile Ad-hoc Network? Describe all proactive type of routing protocols in detail.	**07**
	(b)	Explain how hand-off takes place in GSM. Also explain prioritizing handoff and mobile assisted handoff in detail.	**07**
		OR	
Q.5	**(a)**	Explain MACA and MACAW protocols for MANATs.	**07**
	(b)	Write a short note on WiMAX technology.	**07**

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