Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. IST Semester–Remedial Examination – July- 2011

Subject code: 712702N

Subject Name: 3G Mobile Communication

Date:08/07/2011 **Time: 10:30 am – 01:00 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)**	Compare 3G mobile services with 2G mobile services	**07**
	(b)	Describe features of CDMA and TDMA methods	**07**
Q.2	**(a)**	Describe Observed Time Difference of Arrival method	**07**
	(b)	Describe Forward Error Correction Encoding/Decoding	**07**
		OR	
	(b)	Write note on RAKE receiver	**07**
Q.3	**(a)**	Explain the concept of direct sequence spread spectrum	**07**
	(b)	Describe in detail how network planning is done in 3G	**07**
		OR	
Q.3	**(a)**	Name various spreading code and explain them	**07**
	(b)	Draw the UMTS architecture and explain it. Exclusively describe the function of RNC-Radio network controller	**07**
Q.4	**(a)**	What is handover? Compare soft handover and handover	**07**
	(b)	Justify "3G network management is important"	**07**
		OR	
Q.4	**(a)**	Describe air interfaces used in 3G communications	**07**
	(b)	Write note on various applications of 3G	**07**
Q.5	**(a)**	Enumerate various 3G channels and explain traffic channel.	**07**
	(b)	Describe PN code sequence generator	**07**
		OR	
Q.5	**(a)**	Explain evolution of 3G	**07**
	(b)	What are RLC services? Explain them	**07**

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