Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER – I • EXAMINATION – WINTER 2012

Subject code: 712304N Date: 16-01-2013

Subject Name: Ubiquitous Computing

Time: 02.30 pm – 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)**	Explain the evolution of cellular communication from 1G to 3G.	**07**
	(b)	State and explain the advantages and disadvantages of cellular system.	**07**
Q.2	**(a)**	Draw and explain UMTS system architecture.	**07**
	(b)	Draw neat sketch of mobile originated call sequence for GSM. Explain each sequence.	**07**
		OR	
	(b)	Classify and explain the channel structure of GSM.	**07**
Q.3	**(a)**	Write short note on : Infrastructure and ad-hoc network.	**07**
	(b)	Explain mobile operating system in detail.	**07**
		OR	
Q.3	**(a)**	Draw and explain the system architecture of infrastructure based IEEE 802.11.	**07**
	(b)	Explain mobile file system in detail.	**07**
Q.4	**(a)**	Explain agent discovery in mobile IP.	**07**
	(b)	Explain snooping TCP.	**07**
		OR	
Q.4	**(a)**	Write short note on : DHCP.	**07**
Q.4	**(b)**	Explain wireless transport layer security.	**07**
Q.5	**(a)**	Explain routing in mobile ad-hoc network.	**07**
	(b)	Draw wireless telephony application logical architecture. Explain each block in detail.	**07**
		OR	
Q.5	**(a)**	List advantages and disadvantages of various classical enhancements to TCP for mobility.	**07**
	(b)	Explain WAP 2.0 architecture in detail.	**07**

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