Seat No.:	Enrolment No.
Deat 110	

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER - I • EXAMINATION - SUMMER • 2013

Sul	bject	code: 710206N Date: 17-06-2013	
Tir	ne: 10	Name: Wireless Computer Networks 0.30 am – 01.00 pm Total Marks: 70 tions:	
1113		Attempt all questions. Make suitable assumptions wherever necessary.	
Q.1	(a) (b)	What is the difference between the 3G cellular networks and WLANs? What is information network infrastructure? Explain voice oriented networks and data oriented networks?	07 07
Q.2	(a)	Explain what path loss gradient means. Give some typical values of the path	07
	(b)	loss gradient in different environments. (i) Name the forward and reverse channels used in IS-95 (ii) Why is power control important in CDMA	04 03
	(b)	OR What is soft handoff and how does it compare with hard and seamless handoffs? Give one example system for each of these three handoff methods.	07
Q.3	(a)	Write short note on following	03
	(b)	I. Cell Splitting II. Lee Microcell method What you understand by Fixed, Dynamic and Hybrid Channel allocation schemes? Explain each case in detail.	04 07
0.3	()	OR	0.5
Q.3	(a)	What are the issues and actions that require handling an ongoing connection when a mobile terminal moves from the coverage of one point of access to another?	07
	(b)	Discuss the power control mechanisms in cellular systems.	07
Q.4	(a)	Draw the Reference Architecture of GSM. Explain in brief the function of every block. With diagrams, show the type of õBurstsö used to implement GSM.	07
	(b)	(i) In a radio ALOHA network, how does a terminal learn that its packet is collided?	04
		(ii) Explain How smart antennas can improve the capacity of a cellular network.	03
		OR	
Q.4	(a) (b)	Explain the following standards: (i) IEEE 802.11 (ii) IEEE 802.15.1 What is ad- hoc network? Compare the ad-hoc and infrastructure network Topologies	07 07
Q.5	(a)	Explain Mobile IP. Why do we need it? Explain how Location and Handoff management issues are usually implemented on mobile IP.	07
	(b)	What is wireless application protocol? Explain its programming architecture. OR	07
Q.5	(a)	Why are cellular service providers interested in location-dependent services?	07
	(b)	Give some examples of location-dependent services What is the difference between the MAC protocol of the Bluetooth and the IEEE802.11	07