Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
ME - SEMESTER–I • EXAMINATION – SUMMER 2014

Subject Code: 2715303 **Date: 21-06-2014**
Subject Name: Wireless Networks and Mobile Computing
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)**	Explain how hidden node and exposed node problem can be solved by using RTS/CTS.	**07**
	(b)	What are the design goals WLAN?	**07**
Q.2	**(a)**	Explain multi-slot packet transmission in Bluetooth with diagram.	**07**
	(b)	Explain basic access mechanisms of IEEE802.11 in detail.	**07**
		OR	
	(b)	Draw IEEE 802.11 MAC state transition diagram.	**07**
Q.3	**(a)**	Discuss goals, assumptions and requirements of mobile IP?	**07**
	(b)	Show how Bluetooth offers asymmetric data rate in either direction.	**07**
		OR	
Q.3	**(a)**	Explain WAP architecture.	**07**
	(b)	Explain timing synchronization function in Infrastructure mode of Wireless LAN.	**07**
Q.4	**(a)**	Explain how WLAN supports differential handling of frames in IEEE802.11e	**07**
	(b)	In the IEEE 802.11 standard, explain the purpose of the SIFS, PIFS, DIFS intervals. Use a diagram to show the relationship among the intervals.	**07**
		OR	
Q.4	**(a)**	How power saving is achieved by IEEE 802.11 standard?	**07**
	(b)	Explain how packets intended for mobile host is intercepted by Home Agent in Mobile IP.	**07**
Q.5	**(a)**	Explain how hidden node and exposed node problem can be solved by using RTS/CTS.	**07**
	(b)	Explain Proxy ARP. How Gratuitous ARP works?	**07**
		OR	
Q.5	**(a)**	Explain PUSH model.	**07**
	(b)	Discuss Fundamental Challenges in Mobile Computing	**07**

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