GUJARAT TECHNOLOGICAL UNIVERSITY
ME – SEMESTER IV (OLD) – • EXAMINATION – SUMMER 2016

Subject Code: 740401   **Date:04/05/2016**
Subject Name: Wireless and Mobile Network Architectures
Time:10:30 am to 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)**	What is handoff? Explain the procedure of Inter-BS and Intersystem handoff.	**07**
	(b)	Describe four different channel assignment schemes.	**07**
Q.2	**(a)**	Why is SS7 classified as common channel signaling protocol? Describe the main elements in the SS7 architecture. Explain the SS7 signaling protocol layers.	**07**
	(b)	What is soft handoff? Describe the procedures for adding and removing BSs with MAHO soft handoff.	**07**
		OR	
	(b)	Draw and explain the GSM system architecture.	**07**
Q.3	**(a)**	Explain Without-sharing (WS) and Sharing (S) schemes for authentication in IS-41.	**07**
	(b)	Describe the PACS network elements and PACS network interfaces.	**07**
		OR	
Q.3	**(a)**	Explain the main architecture entities in a CDPD network. Describe planned hop, emergency hop, dwell time and layoff time with respect to radio resource allocation in CDPD.	**07**
	(b)	What is VLR overflow? Explain VLR overflow control algorithms.	**07**
Q.4	**(a)**	Draw and explain the SMS protocol hierarchy.	**07**
	(b)	What is TMN? Draw and explain TMN architecture.	**07**
		OR	
Q.4	**(a)**	Describe the different GPRS interfaces.	**07**
	(b)	Describe the WAP protocol stack. In which situation is WTP not used?	**07**
Q.5	**(a)**	Discuss quality of service in 3G. Describe wireless operating system for 3G handset.	**07**
	(b)	Describe the different terminology used in the mobile IP documents.	**07**
		OR	
Q.5	**(a)**	Draw and explain WLL architecture in detail.	**07**
	(b)	Explain the operation and message formats of mobile IP.	**07**

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