Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER – II • EXAMINATION – WINTER • 2014

Subject code: 1724102 **Date: 03-12-2014**

Subject Name: Wireless Ad-hoc and Sensor Networks

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)**	Define sensor network. Differentiate adhoc networks and sensor networks.	**07**
	(b)	List the table driven protocols and explain AODV protocol with advantages and disadvantages.	**07**
Q.2	**(a)**	Explain hardware and software components of WN.	**07**
	(b)	List the table driven protocols and explain DSDV protocol with advantages and disadvantages.	**07**
		OR	
	(b)	List all challenges and design issues for wireless sensor networks and explain any two in detail.	**07**
Q.3	**(a)**	Explain schedule selection and synchronization in SMAC.	**07**
	(b)	Explain LEACH protocol in detail.	**07**
		OR	
Q.3	**(a)**	Explain message passing in SMAC.	**07**
	(b)	Explain sensor protocols for information via negotiation.	**07**
Q.4	**(a)**	Explain PEGASIS protocol in detail.	**07**
	(b)	Explain Localization Encryption and Authentication Protocol (LEAP) in detail.	**07**
		OR	
Q.4	**(a)**	Explain design issues of transport protocol for WSNs.	**07**
	(b)	Mention the network management requirements and explain any one traditional network management protocol.	**07**
Q.5	**(a)**	Explain energy harvesting in sensor networks.	**07**
	(b)	Briefly describe watermarking techniques in wireless sensor networks.	**07**
		OR	
Q.5	**(a)**	Explain localization in sensor networks.	**07**
	(b)	Discuss the security issues in wireless sensor networks.	**07**

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