Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
ME – SEMESTER –I-(New) EXAMINATION – SUMMER 2019

Subject Code: 3710217   **Date: 10/05/2019**
Subject Name: Wireless Sensor Networks
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)**	Define wireless sensor network. Discuss various challenges and applications of wireless sensor network.	**07**
	(b)	Explain architecture of wireless sensor node.	**07**
Q.2	**(a)**	Differentiate TinyOS and Contiki.	**07**
	(b)	Explain various types of mobility.	**07**
		OR	
	(b)	Explain pulse code modulation and binary symmetric channel in detail.	**07**
Q.3	**(a)**	Discuss intermediate checksum schemes for link layer protocols.	**07**
	(b)	Explain S-MAC low duty cycle approach in detail.	**07**
		OR	
Q.3	**(a)**	What is Geographic addressing? Explain one way matching algorithm for content based addressing.	**07**
	(b)	Explain LEACH protocol in detail.	**07**
Q.4	**(a)**	Briefly explain Broadcast Increment Power algorithm.	**07**
	(b)	Explain energy efficient unicast routing.	**07**
		OR	
Q.4	**(a)**	Discuss Data Aggregation with different matrices for judging efficacy.	**07**
	(b)	Explain Greedy Perimeter Stateless Routing (GPSR) protocol in detail	**07**
Q.5	**(a)**	Explain PSFQ protocol in detail.	**07**
	(b)	Explain Lightweight Time Synchronization protocol. Discuss need of localization for WSN.	**07**
		OR	
Q.5	**(a)**	Explain ZigBee. Discuss challenges of security in WSN.	**07**
	(b)	Discuss the security attacks on WSN.	**07**

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