Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER IV (NEW) – EXAMINATION – SUMMER - 2017

Subject Code: 2744402 **Date:03/05/2017**

Subject Name: Wireless Sensor Networks & Its Energy Management

Time:02:30PM-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.**

1.

Q.1	**(a)**	Compare Mobile Adhoc Networks and wireless Sensor Networks.	**04**
	(b)	Discuss briefly challenges in WSNs.	**04**
	(c)	Mention Design principles for WSNs.	**03**
	(d)	Explain briefly the basic Architecture of wireless Sensor Networks with neat sketch.	**03**
Q.2	**(a)**	Write short notes on IEEE802.15.4 MAC Protocols in WSN.	**07**
	(b)	Discuss briefly Error Control in WSNs.	**07**
		OR	
	(b)	Discuss briefly Link Management for WSNs.	**07**
Q.3	**(a)**	Briefly Explain Gossiping and agent based unicast forwarding in WSNs.	**05**
	(b)	Briefly Explain Engegy-efficient unicast in WSNs.	**05**
	(c)	Mention issues in designing a multicast routing protocols.	**04**
		OR	
Q.3	**(a)**	Briefly Explain the concept of Geographic routing in WSNs.	**05**
	(b)	Mention the advantages of hierarchical topology based protocols over protocols that use flat topologies.	**05**
	(c)	Briefly discuss localization in wireless sensor N/Ws.	**04**
Q.4	**(a)**	Explain congestion control in wireless sensor Networks.	**07**
	(b)	Briefly describe various methods to reduce collision in wireless sensor networks.	**07**
		OR	
Q.4	**(a)**	Discuss briefly the QoS wireless Sensor Networks.	**07**
Q.4	**(b)**	Describe PSFQ protocol with reference to wireless sensor Networks.	**07**
Q.5	**(a)**	Briefly describe any one Transport Control protocol in wireless sensor Networks.	**07**
	(b)	Discuss briefly block delivery in wireless sensor networks.	**07**
		OR	
Q.5	**(a)**	Discuss briefly node level energy optimization with anyone suitable example in WSN.	**07**
	(b)	Write short note on applications of Ad Hoc Wireless N/W and sensor Networks.	**07**

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