Seat No.:	Enrolment No.

## **GUJARAT TECHNOLOGICAL UNIVERSITY**

M. E. - SEMESTER - II • EXAMINATION - SUMMER • 2014

Subject code: 1724102 Date: 18-06-2014 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) (b) (c) (d)	Compare Cellular Network and Wireless ad hoc Network.  Discuss briefly Watermarking techniques in WSN.  Give the classification of Energy management schemes for Ad hoc Wireless Networks.  Explain briefly the basic Architecture of wireless Sensors Networks with neat sketch.	04 04 03 03
Q.2	(a) (b)	Write short notes on energy harvesting in WSN. Discuss DSR routing algorithm for Ad Hoc N/W with its limitations.  OR	07 07
	<b>(b)</b>	Discuss briefly MAC Protocols for WSN.	07
Q.3	(a) (b)	Briefly Explain AODV routing protocol.  Describe two basic approaches for maintenance of multicast tree in bandwidth efficient multicast protocol(BEMRP).	05 05
	(c)	Mention issues in designing a multicast routing protocols.  OR	04
Q.3	(a) (b)	Briefly Explain WRP.  Mention the advantages of hierarchical topology based protocols over protocols that use flat topologies.  Briefly discuss security issues in wireless sensor N/Ws.	05 05 04
Q.4	(a)	Briefly describe various methods to reduce collision in wireless sensor networks.	07
	(b)	Explain admission control in wireless sensor Networks.  OR	07
Q.4	(a)	Describe PSFQ protocol with reference to wireless sensor Networks.	07
Q.4	<b>(b)</b>	Discuss problems of bootstrapping security in wireless sensor Networks.	07
Q.5	(a)	Briefly explain Predictive Congestion Control.	07
	<b>(b)</b>	Discuss SPIN-BC protocol in wireless sensor networks.  OR	07
Q.5	(a) (b)	Discuss briefly Dissemination protocol for large sensor N/Ws.  Write short note on applications of Ad Hoc Wireless N/W and sensor Networks.	07 07

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