

GUJARAT TECHNOLOGICAL UNIVERSITY**M. E. - SEMESTER – II • EXAMINATION – WINTER • 2013****Subject code: 1724102****Date: 27-12-2013****Subject Name: Wireless Adhoc and Sensor Networks****Time: 10.30 am – 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) Compare Wireless ad hoc Network and Sensor Networks. **04**
(b) Briefly Describe the Architectural Elements of Wireless Sensor Networks. **04**
(c) List the assumptions made by the LEAP security protocol for Wireless Sensor N/W. **03**
(d) Mention security issues in WSN. **03**
- Q.2** (a) Describe the Sybil attack and the sinkhole attack on sensor networks. **07**
(b) Explain the AODV routing protocol for Wireless Ad hoc Networks. **07**
OR
(b) Explain DSR routing protocol for wireless Ad hoc Networks. **07**
- Q.3** (a) Write short note on MAC protocol for sensor networks. **05**
(b) Explain LEACH protocol for sensor Networks. **05**
(c) Briefly discuss the parameters affecting Quality of Sensor Networks. **04**
OR
- Q.3** (a) Write short note on Energy Harvesting in Sensor networks. **05**
(b) Discuss the issues and challenges in designing a sensor networks. **05**
(c) What do you mean by location discovery in sensor networks.? **04**
- Q.4** (a) Briefly describe various methods to reduce collision in wireless sensor networks. **07**
(b) Discuss SPIN-BC protocol in wireless sensor networks.. **07**
OR
- Q.4** (a) Describe PSFQ protocol with reference to wireless sensor Networks. **07**
Q.4 (b) Discuss problems of bootstrapping security in wireless sensor Networks. **07**
- Q.5** (a) Briefly explain Predictive Congestion Control. **07**
(b) Explain admission control in wireless sensor Networks. **07**
OR
- Q.5** (a) Describe briefly watermarking techniques in wireless Sensor Networks. **07**
(b) Write short note on applications of Wireless sensor Networks. **07**
