

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