

GUJARAT TECHNOLOGICAL UNIVERSITY**M. E. - SEMESTER – II • EXAMINATION – WINTER • 2014****Subject code: 1724102****Date: 03-12-2014****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) Define sensor network. Differentiate adhoc networks and sensor networks. **07**
(b) List the table driven protocols and explain AODV protocol with advantages and disadvantages. **07**
- Q.2** (a) Explain hardware and software components of WN. **07**
(b) List the table driven protocols and explain DSDV protocol with advantages and disadvantages. **07**
- OR**
- (b) List all challenges and design issues for wireless sensor networks and explain any two in detail. **07**
- Q.3** (a) Explain schedule selection and synchronization in SMAC. **07**
(b) Explain LEACH protocol in detail. **07**
- OR**
- Q.3** (a) Explain message passing in SMAC. **07**
(b) Explain sensor protocols for information via negotiation. **07**
- Q.4** (a) Explain PEGASIS protocol in detail. **07**
(b) Explain Localization Encryption and Authentication Protocol (LEAP) in detail. **07**
- OR**
- Q.4** (a) Explain design issues of transport protocol for WSNs. **07**
(b) Mention the network management requirements and explain any one traditional network management protocol. **07**
- Q.5** (a) Explain energy harvesting in sensor networks. **07**
(b) Briefly describe watermarking techniques in wireless sensor networks. **07**
- OR**
- Q.5** (a) Explain localization in sensor networks. **07**
(b) Discuss the security issues in wireless sensor networks. **07**
