

**R09**

Code No: 58039

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech IV Year II Semester Examinations, May - 2016****ADHOC AND SENSORS NETWORKS****(Common to CSE, IT)****Time: 3 Hours****Max. Marks: 75****Answer any Five Questions  
All Questions Carry Equal Marks**

- 1.a) List out the characteristics of MANET's.  
b) Briefly explain the major issues and challenges in ad-hoc wireless networks. [7+8]
- 2.a) What is flat routing? Explain the operation of DSR protocol.  
b) Explain the operation of location Aided routing protocol. [8+7]
- 3.a) Explain and compare Multicasting and Geo casting.  
b) What are the issues in designing a transport layer protocol for ad-hoc wireless networks? [8+7]
- 4.a) List out the applications of sensors.  
b) Explain the significance of clustering of sensors. [7+8]
5. Discuss CSMA-based MAC protocols of sensor networks and compare with hybrid TDMA/FDMA scheme. [15]
- 6.a) Explain LEAP key management protocol in sensor networks.  
b) Give various types of attacks that affect the routing protocols in sensor networks. [8+7]
- 7.a) Explain the functions of various components of sensor network hardware.  
b) What are the challenges of sensor network programming? [8+7]
8. Write a brief note on:  
a) Tiny OS  
b) TOSSIM. [8+7]

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