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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech IV Year II Semester Examinations, April - 2014
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) Draw a neat sketch to explain the scope of various wireless technologies.
 b) List and explain any four challenges of mobile adhoc networks (MANETS).

2.a) Compare and contrast between proactive, reactive and hybrid routing approaches.
 b) Explain in detail about signal stability routing.

3.a) List and describe various protocols used in multicast routing.
 b) With an example, explain Round-Trip Time Estimation in TCP.

4.a) How energy consumption is performed in wireless sensor networks(WSN).
 b) List and explain any four applications of WSN.

5.a) Explain the design issues in MAC layer of sensor networks.
 b) With an example, explain location based routing.

6.a) Describe in detail about Security in Ad Hoc Networks.
 b) Discuss briefly about The Burmester and Desmedt Protocol.

7.a) List and explain the programming challenges in sensor networks.
 b) What are the components at node level simulator? Explain.

8.a) Explain in detail the semantics of TinyOS components.
 b) Briefly discuss about dataflow style language.

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1.a) With a neat diagram, explain the architecture of mobile Adhoc network (MANET).
  b) List and describe the characteristics of MANETS.

2.a) Compare and contrast the *topology-based* and *position-based* routing algorithms for Ad hoc networks.
  b) Describe in detail about QoS routing.

3.a) Discuss redundancy analysis in broadcasting storm.
  b) What are the Solutions for TCP over Ad Hoc? Explain

4.a) Describe the various challenges in wireless sensor networks(WSN).
  b) Briefly discuss about heterogeneous WSN.

5.a) Explain the classification of WSN.
  b) With an example, explain multipath based routing.

6.a) Describe in detail about IDS Architecture for Ad Hoc Networks.
  b) Discuss briefly about Key Distribution and Management in WSN.

7.a) Draw a neat diagram to explain MICA mote architecture.
  b) Briefly explain the working of Simulator TOSSIM.

8. Explain in detail about nesC language constructs and restrictions to implement TinyOS components and applications.

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