

**Code No: D6107, D5507****JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****M.Tech II - SEMESTER EXAMINATIONS, APRIL/MAY 2012****ADHOC WIRELESS AND SENSOR NETWORKS****(COMMON TO COMMUNICATION SYSTEMS, EMBEDDED SYSTEMS)****Time: 3hours****Max. Marks: 60****Answer any five questions****All questions carry equal marks**

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- 1.a) Can we use CSMA/CD access mechanism in wireless local area network? If no, Why?
- b) What are the various approaches to improve TCP performance in the wireless domain?
- 2.a) Compare and contrast cellular with adhoc wireless networks.
- b) What are main issues that are to be considered to design a MAC protocol for adhoc wireless networks?
- 3.a) What are the advantages of MAC protocols with scheduling mechanisms? Explain.
- b) Channel quality estimation can be done both at the sender and the receiver. Which is more advantageous? Why?
- 4.a) What are the different challenges of routing protocol designed for adhoc wireless networks.
- b) What are the advantages of hierarchical topology based protocols? Explain.
- 5.a) Why does TCP not perform well in ad-hoc wireless networks? Explain.
- b) Classify the QoS solution in ad-hoc wireless and explain.
- 6.a) What are the various challenges in key management in Adhoc-wireless networks.
- b) Discuss the need for energy management in ad-hoc wireless networks.
- 7.a) What are the differences between ad-hoc wireless networks and sensor networks?
- b) Discuss the MAC protocols used in sensor network.
8. Write short notes on
  - a) Wireless Application Protocol
  - b) Battery management schemes in ad-hoc wireless network
  - c) Mobile IP

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