

# C.U.SHAH UNIVERSITY

## Winter Examination-2015

Subject Name: Mobile Ad hoc Network

Subject Code: 5TE03MAN1

Branch: M. Tech (CE)

Semester: 3

Date: 22/12/2015

Time: 2:30 To 5:30

Marks : 70

### Instructions:

- (1) Use of Programmable calculator and any other electronic instrument is prohibited.
  - (2) Instructions written on main answer book are strictly to be obeyed.
  - (3) Draw neat diagrams and figures (if necessary) at right places.
  - (4) Assume suitable data if needed.
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### SECTION – I

**Q-1 Attempt the Following questions (07)**

- a. List characteristics of wireless channel.
- b. Define: Infrastructure less network
- c. Define: Denial of attack
- d. List the applications of mobile ad hoc networks.
- e. What is hybrid routing protocol?
- f. Give full names: GSM, GPRS
- g. What is handoff?

**Q-2 Attempt all questions (14)**

- a) Explain various challenges regarding routing in mobile ad hoc networks. Explain AODV routing protocol with its advantages as well as disadvantages. Give necessary examples by drawing tables and figures of topologies.

**OR**

**Q-2 Attempt all questions (10)**

- a) Write short note on secure routing. What are the security parameters to be considered over ad hoc channels? (10)
- b) Give differences between GPRS and GSM. (4)

**Q-3 Attempt all questions (7)**

- a) Explain generations of cellular networks. (7)
- b) Explain architecture and components of PRNET. (7)

**OR**

**Q-3 a) Compare table driven and demand driven routing protocols. (7)**



- b) How is cluster switch gateway routing different from destination sequenced distance vector routing? What is the range of a cluster node? What are the entries in a cluster table? (7)

## SECTION – II

Q-4 **Attempt the Following questions** (07)

- a. What is power aware routing?
- b. Give brief differences between Mobile ad hoc network and sensor network.
- c. Define: QoS frame work
- d. Define: Throughput
- e. Define: End to End Delay
- f. Give full names: DSR, ABR
- g. Packet radio was a technology that extended packet switching. Justify.

Q-5 **Attempt all questions** (14)

- a) Explain the different MAC protocols and issues behind supporting channel access for ad hoc wireless networks.

OR

- Q-5 a) Define hidden terminal problem and exposed terminal problem with an example. (7)  
b) List the problems and issues faced by mobile ad hoc networks using traditional TCP. What are the requirements to shift from traditional TCP to versions of TCP? (7)

Q-6 **Attempt all questions**

- a) What are the service discovery architectures for mobile ad hoc networks? Describe. (5)  
b) How is a sensor node different from an ad hoc node? Describe. (5)  
c) Shortest path based routing cannot be appropriately applied to wireless ad hoc networks. Why? (4)

OR

Q-6 **Attempt all Questions**

- a) Discuss the importance of TCP Reno, TCP Vegas and TCP Tahoe. (7)  
b) Classify the QoS solutions based on MAC layer and the network layer. (7)

