

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER – II • EXAMINATION – SUMMER • 2014

Subject code: 2725303

Date: 20-06-2014

Subject Name: Mobile Ad Hoc Networks

Time: 02:30 pm - 05:00 pm

Total Marks: 70

Instructions:

1. Attempt question 1, which is compulsory and answer any four from the rest questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right hand indicate the marks.

Q. No. 1

- a. What is an Ad hoc network? Why ad hoc networks are needed? [7 Marks]
- b. What are the challenging issues in ad hoc network maintenance? Discuss briefly. [7 Marks]

Q. No. 2

- a. How scalability improved in Ad hoc wireless network. Discuss about it. [7 Marks]
- b. Describe in detail about the contention based MAC protocol with distributed packet reservation multiple access mechanism. [7 Marks]

OR

- b. Discuss various issues with service discovery & energy management in MANET. [7 Marks]

Q. No. 3

- a. Briefly describe DSDV routing protocol. [7 Marks]
- b. Discuss evolution & technology strategies from 1st generation cellular system to 3rd generation cellular system (in terms of application, spectrum, speed, modulation techniques). [7 Marks]

OR

Q. No. 3

- a. Explain working strategy of DSDV protocol in detail. [7 Marks]
- b. Why MANET protocols like AODV are not suitable for VAN ET? Explain various modifications needed in MANET protocols to make it suitable for VANET. [7 Marks]

Q. No. 4

- a. Explain cluster formation in CBRP and discuss various issues involved in hierarchical routing. [7 Marks]
- b. List and discuss any two needs of real- time MAC protocol. [7 Marks]

OR

Q. No. 4

- a. Compare the efficiency of the packet queuing mechanism adopted in MACA and MACAW. [7 Marks]
- b. List the benefits when deployment of a commercial Ad hoc wireless networks compared to wired network. [7 Marks]

Q. No. 5

- a. Compare in detail about Ad-hoc Networks and Wireless LAN. [7 Marks]
- b. Explain the applications areas of Ad hoc networks. [7 Marks]

OR

Q. No. 5

- a. List and discuss the issues of designing a MAC protocol for Ad hoc networks. [7 Marks]
- b. What are the effects of exposed terminal problem in wireless networks? Explain briefly. [7 Marks]
