Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E –IIst SEMESTER–EXAMINATION – JULY- 2012

Subject code: 725303 **Date: 10/07/2012**

Subject Name: Mobile Ad Hoc Networks

Time: 10:30 am – 13:00 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 indicate full marks.**

Q. No. 1

a. Describe in detail about the contention based MAC protocol with distributed packet reservation multiple access mechanism. [7 Marks]

b. List out the various issues related to MAC in Wireless Ad Hoc Network. [7 Marks]

Q. No. 2

a. Explain in detail about link based routing protocol with flooding mechanisms. [7 Marks]

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

Q. No. 3

a. Discuss in detail about table driven cluster head gateway switch routing protocol. [7 Marks]

b. List out the various issues related to routing in Wireless Ad Hoc Network. [7 Marks]

Q. No. 4

a. Explain reference model architecture for multicast routing protocol. [7 Marks]

b. Compare AODV and DSR protocols. [7 Marks]

Q. No. 5

a. Explain temporally ordered routing protocol. [7 Marks]

b. Briefly describe DSDV routing protocol. [7 Marks]

Q. No. 6

a. List out the various issues related to transport layer protocols in Wireless Ad Hoc Network. [7 Marks]

b. Describe briefly about MACA protocol. [7 Marks]

Q. No. 7

a. Describe in detail about the contention based MAC protocol with collision avoidance time allocation mechanism. [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]

Q. No. 8

a. State the basic operation of following multiple access techniques: [6 Marks]

   I. Time Division Multiple Access (TDMA)

   II. Frequency Division Multiple Access

   III. Code Division Multiple Access

b. What are the advantages and disadvantages of MAC protocols using directional antennas? [4 Marks]

c. List out the advantages of MCN architecture. [4 Marks]

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