

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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