

Department of Electrical Engineering

EEL 858

Mobile Computing Major Examination

Date: November 21, 2008

(Closed Notes/Book)

Time: 2 Hours

Max Marks: 120

Note: This examination has TWO parts. Attempt as much as you can

Part-1

Time: 60 Minutes

Max Marks: 60

Q1. Classify the following in communication infrastructure, mobility and portability categories. Give appropriate reasons. [8]

Bandwidth variability, Disconnection, Location-dependent information, Low power terminals, Heterogeneous networks, Address migration, Risk to data, Risk to transaction, Small storage capacity.

Q2 A MAC layer uses two values of DIFS viz. DIFS (L) and DIFS(H) and their respective contention windows CW (L) and CW (H); where L and H mean low and high priority classes. It is claimed that it will provide required QoS. If you agree write the appropriate relationship, if no give reason(s). [8]

Q3. Under what condition(s) CTS-RTS exchanges in IEEE 802.11 are not useful, hence need not be used. [5]

Q 4. Show a typical transmission indication map over two CFP repetition intervals (CRIs) in PCF when a service needs twice the bandwidth of others. [5]

Q5. What are the features of the standard TCP which are not adequate for mobile computing applications? [5]

Q6 What are the functions of *probe* packets in WTCP? [5]

Q7. Make a flow diagram for rate control in WTCP. [8]

Q8. How are broadcast disks used in data dissemination? What are the strategies for scaling in hybrid push-pull data transfer? [8]

Q9. What is the purpose of indexing in air in data management? Illustrate trade-off between data access time and tuning time using an example. [8]