

**Advanced Computer Networks
Final Exam
General Topic Areas**

{ The first two groupings are background concepts for the papers. }

TCP Congestion Control Mechanisms

**Slow Start
Fast Retransmit
Fast Recovery**

Measures of Performance

**Throughput, goodput
Utilization
Response time, delay
Fairness
Other performance measures in papers**

Congestion Control Algorithms

{ For each algorithm you want to have a basic idea of the algorithm, the goals of the algorithm and the advantages and disadvantages. }

**RED
RIO-PS
CSFQ
AVQ
XCP
SFC
TCP Friendly Concept**

Wireless versus Ad-Hoc Mobile Networks

{ Wireless implies an AP and immobile nodes. Ad-Hoc Mobile implies motion and routing. }

Explain issues for both types of networks.

MANETconf

Issues in integrating GSM with SIP

DSDV, TORA, DSR, AODV

Issues with:

Buffers at wireless access point

Hidden terminal problem

LRED and Adaptive Pacing

Network Security Issues

{ Generally, here you wish to know the nature of various types of attacks and be able to talk about the proposed solutions in these papers. }

Wormhole and Leashes
SYN Attacks and Denial of Service Attacks
SAVE Protocol
Detecting Network Intrusions
Honeynet Project