

EECS 428
Web Computing
2003 Fall Semester

Midterm

October 17, 2003

Write your name and SSN on your paper.
The test is 50 minutes, 100 points. It contributes 10% to your grade.
Closed books and notes.

1. (35 points) Give the definition of stochastic process, of stochastic process with independent increments, and of stochastic process with stationary increments. Give an example of each (you can use the same example for multiple categories).
2. (30 points) Define the autocorrelation function. Suppose that $X(t)$ is a stationary stochastic process and that $X(t+L)$ is independent of $X(t)$. Compute the autocorrelation function $R(\tau)$ of X for values of τ larger than L .
3. (20 points) Explain the difference between Reno and NewReno.
4. (15 points) Explain Ethernet's backoff algorithm.

(over)