IEOR 4106, Midterm Exam-Information. 75 Minutes.
Points Total. Professor K. Sigman

Open Notes (anything on the course website plus your notes from class), but no books and
no electronic devices of any kind.

No Talking Allowed, and No Asking Questions (to Professor or Proctors or each other)
During The Exam. (If you do not understand something, do the best you can).

There will be 3-4 problems, each will cover some aspect of what is listed (not all):

1. Markov chain (Discrete-time): gambler’s ruin problem, simple random walks, hitting probabilities,
maximum, minimum of such random walks.

2. Markov chain (Discrete-time): communication classes, transient states and $S = (I - P_T)^{-1}$, $n$-step
transition probabilities $P^{(n)} = P^n$, positive recurrence, null recurrence and $\pi = \pi P$.

3. Stopping times, Wald’s equation.

4. Poisson Process: independent stationary increments, partitioning, order statistics, superposition,
$M/G/\infty$ queue.

Nothing on option pricing will be asked.