COP 3502 Exam #2 Review
Test Date/Time: March 23 (Thursday) 4:30-6:00 pm
CB1-121

Exam Format/Aids
25 Multiple Choice questions

NO EXAM AIDS ALLOWED
NO CALCULATOR, NO NOTES

PLEASE BRING A PINK SCANTRON
(PICTURE POSTED ON WEBCOURSES)

Material Covered
I. Linked Lists
   a. iterating through an existing list
   b. inserting (front, in order, back)
   c. deletion
   d. use of recursion
   e. circular linked list
   f. doubly linked list

II. Stacks and Queues
   a. Stacks - Array Implementation, Run Times
   b. Stacks - Linked List Implementation, Run Times
   c. Queues - Array Implementation, Run Times
   d. Queues - Linked List Implementation, Run Times
   e. Evaluating Postfix Expressions with an operand stack
   f. Converting Infix Expressions to Postfix with an operator stack
   g. Use of a Queue in a Breadth First Search

III. Binary Trees/Binary Search Trees
   a. Traversals
   b. Use of Recursion
   c. Searching for an item
   d. Insertion
   e. Deletion
   f. Finding the height of a node
   g. Finding the number of items in a binary tree
   h. Finding the sum of items in a binary tree
   i. Other functions - counting leaf nodes, etc.

IV. Miscellaneous
   a. Related to Linked Lists, Stacks, Queues, Binary Trees
   b. Tests specific items that occurred in class (may not be online)

How to Study
1) Look over the notes.
2) Look over example code.
3) Look over your code.
4) Look for general patterns.

Don't try to just memorize each algorithm, though you should remember the steps in each algorithm. Instead, try to understand the underlying reason the algorithm works so that you can apply those ideas to problems that may call for slightly different algorithms.

General Exam Advice
Two sets of questions will involve filling in code related to the exam material. When working on these questions, rather than looking at the choices, go ahead and fill in what you think should go in each slot, THEN look at the choices. Also, since there are no exam aids, please review the C functions strcmp, strlen and strcpy and know what these functions do precisely. Finally, there is no penalty for guessing, so _PLEASE answer each of the 25 questions!!!_