Test 3

Information:
• Thursday 4/20, 9:50-10:50 (I will lecture from 9:30-9:50).
• In class, closed book, closed notes, clean desk
• 10% of your final grade
• 60 minutes to complete it:
• Bring your ID card!
• NO: calculators or cell phones.
• NO: headphones/earbuds.

Test format:
100 points total:
• 12 multiple choice questions (4 points each)
• 2 questions: implement some linked list tasks and some stack/queue functions (~26 pts ea)
Probably 4 total pages (2 pages front+back), maybe extra blank sheet for answers.

Content:
These lectures (see also the outlines):
• Unit 5: Linked Lists
• Unit 6: Stacks & Queues

Sample questions:

Multiple choice:

See Top Hat:
1. Unit 5: PointersToStruct Questions (1-2)
2. Unit 5: Chapter 17 Questions (1-14)
3. Unit 6 Reading Quiz Questions (18.1, 18.4, 18.2+5)
4. Unit 6 Peer Instruction Questions (18.1, 18.4, 18.2+5)

Sample coding questions:

1. Given the definitions of a Node struct and head pointer, write C++ statements to perform the following tasks:
   a. add a new node with value 10 to the front of the list (it may or may not be empty)
   b. compute the sum of the nodes in the list (it may be of any length)
   c. make p point to the node containing 99 and make n point to the node previous to that node.

2. Given the class declaration (from a .h file) for a stack (or queue) implemented as a static array (or linked list), implement the functions from the class declaration (push, pop, enqueue, dequeue, isFull, isEmpty, constructor, destructor).