

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).