

CS251 Data Structures – Fall 2011
Exam 2 – Review

1. Linked Lists
 - (a) Abstract Data Types
 - (b) Linked list operations and header nodes
 - (c) Linked list variants
 - i. double linked lists
 - ii. circular linked lists
 - iii. sorted lists
2. Templates
 - (a) Template functions
 - (b) Template classes
3. Inheritance and Polymorphism
 - (a) syntax
 - (b) function overriding
4. Algorithm Analysis
 - (a) Big Oh notation - definition, meaning
 - (b) Non-recursive code analysis
 - (c) Recursive code analysis
 - i. Divide and Conquer
 - ii. Linear homogeneous and non-homogeneous
 - iii. Full history and telescoping techniques
5. Recursion
 - (a) Divide and Conquer
 - i. fast multiply
 - ii. mergesort and quicksort
 - (b) Backtracking and Branch-and-Bound
 - i. n-queens
 - ii. string problem
6. Projects and Labs