Endsem: Computer Programming Lab (MA512)

M.Sc. (M&C), Semester: Aug-Nov 2008-2009

Dept. of Mathematics, IIT Guwahati

Date: November 19, 2008 Time: 2:00PM - 5:00PM

Attempt all questions *Full Marks: 40*

1. Write a function that will create a linked list with integer keys entered by the user, then print the list from main. Now write a function that will remove all the nodes containing duplicate key values from the beginning and again print the modified list from main. [4+8]

2. Use appropriate data structure (array/linked list/tree) for storing a given set of integer data entered by the user then print in sorted (descending) order. Write a function in the same program for finding second maximum and second minimum among the given set of integer. [8+8]

3. Use two separate files (f11.c and f22.c) and combine them to solve the following problem: First file, f11.c passes two integers entered by the user through a function: int func22(int, int) to the second file, f22.c. In the function func22(int, int) of f22.c add two numbers and check the result if it is prime or composite. If the result is prime, return it's *nearest perfect square*, otherwise return its *nearest prime*; in both the cases, the returned value should not be less than the result. [12]
