

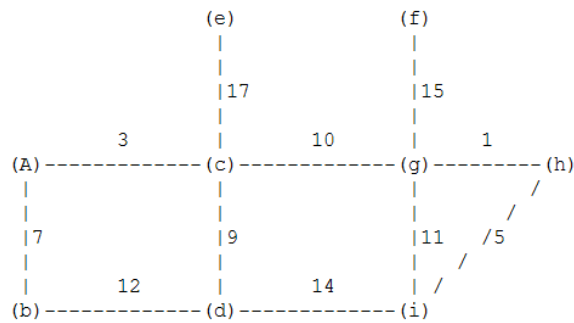
# CS 477/677 Analysis of Algorithms

## Homework 7

Due May 5, 2014

### 1. [20 points] (U&G-required)

Answer the questions below regarding the following graph:



a) [5 points] In what order are edges added to the Minimum Spanning Tree (MST) using Kruskal's Algorithm? List the edges by giving their endpoints.

b) [5 points] In what order are edges added to the MST using Prim's Algorithm starting from vertex A? List the edges by giving their endpoints.

2. [30 points] (U&G-required) Exercise 22.2-9 (page 602).

3. [30 points] (U&G-required) Exercise 22.5-6 (page 621).

4. [20 points] (U&G-required) Exercise 24.3-2 (page 663).

5. [20 points] (G-required) Exercise 25.1-6 (page 692).

6. [20 points] (Extra credit) Exercise 24.3-6 (page 663).