

Name: _____

Homework 2

- **Print** your name.

Problem	Points	Score
1	4	
2	6	
Total:	10	

1. (4 points) Suppose you can access the caches in the local DNS servers of your department. Can you propose a way to roughly determine the Web servers (outside your department) that are most popular among the users in your department? Explain.
2. **Written questions (essay, computational)** Consider distributing a file of $F = 15Gbits$ to N peers. The server has an upload rate of $u_s = 30Mbps$, and each peer has a download rate of $d_i = 2Mbps$ and an upload rate of u .

- (a) (2 points) For $N = 100$ and $u = 700Kbps$, find the minimum distribution time for client-server distribution.

- (b) (2 points) For $N = 100$ and $u = 700Kbps$, find the minimum distribution time for client-server distribution, find the minimum distribution time for P2P distribution

- (c) (2 points) Suppose the number of peers increases to $N = 1000$, find the minimum distribution time for both client-server and P2P distribution.