CS 3516 (A18) – Quiz 5 – September 14, Fri, 2018
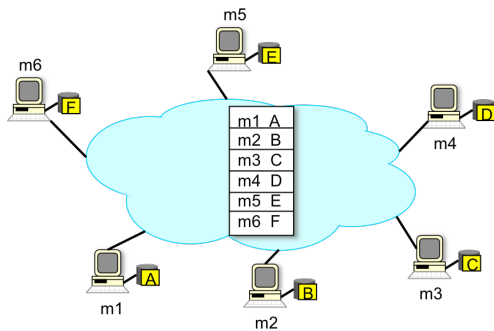
Student Name: _____

WPI Username: _____

Please answer the following questions using only the front side of this sheet of paper. **This quiz is closed book/notes. One page cheat-sheet is allowed**. _We will not grade the backside or any additional sheets of paper._ We will scan the quiz and return it electronically. To ensure it is properly scanned, please avoid wrinkling, folding, or otherwise distorting the paper. _You can use the back of the paper for any calculations you might have to perform._ Please mark exactly which question/sub-question you are answering. **(6 points in total.)**

1. Alice optimistically un-chokes Bob and provides file chunks to him for a 30 seconds interval. Will Bob necessarily return the favor and provide chunks to Alice in this same interval? Yes or No? Give reasons. (3 points)

No. It is **not necessary** that Bob will also provide chunks to Alice (1 point). Alice has to be in the top 4 neighbors of Bob for Bob to send out chunks to her; **this might not occur even if Alice provides chunks to Bob throughout a 30-second interval** (2 points).

2. Given a Napster network as shown in the figure below, with six peers and one centralized server maintaining the content list. When peer m4 looks for a content _A_, describe the process how m4 searches and downloads the content _A_. (3 points)

1. m4 sends a request to the centralized server for content A. (1 point)
2. From server's response, m4 knows that m1 is the owner of content A. (1 point)
3. m4 downloads content A directly from peer m1. (1 point)