

Network Architectures 3329
Spring 2018
02/09/18

Name: _____

Quiz 4-2

Time Limit: 5 minutes

- **Print your name.**
- Close-book policy: You may not use the text, my class notes and/or any notes and study guides you have created. You may use a calculator. You may not use a cell phone or computer.

Problem	Points	Score
1	2	
2	1	
3	1	
4	1	
Total:	5	

1. Consider file distribution in a network of 1 server and N peers: the server owns a file, the task is to get every peer a copy. Suppose the upload rate of the server is u_s , the download and upload rate of i th peer is d_i and u_i . The size of the file is F .
 - (a) (1 point) In a client-server architecture, the time it takes the server to upload the file is at least $\mathbf{NF}/\mathbf{u_s}$
 - (b) (1 point) In a P2P architecture, the total upload capacity is $\mathbf{u_s} + \mathbf{u_i} + \dots + \mathbf{u_N}$
2. (1 point) In a proprietary network application, the client and server programs running on different end hosts are developed by the same developer (team).

A. True B. False
3. (1 point) Which of the following is *not* true for a BitTorrent peer
 - A. Always knows which neighboring peer possesses the chunk it needs
 - B. Always sends chunks (returning favor) to peers that are currently supplying her data at the highest rate**
 - C. Can selfishly leave when it acquires the entire file
 - D. Always requests rarest chunk — the chunks that have the fewest repeated copies among her peers — first
4. (1 point) Which line of code can appear in *both* a TCP socket program and a UDP program
 - A. `connectSocket, addr = serverSocekt.accept()`
 - B. `clientSocket.connect((serverName, serverPort))`
 - C. `serverSocekt.bind('', serverPort)`
 - D. `serverSocekt.listen(3)`