

Question 3

- a) At a given instant, the *unchoked* peers are the top 4 peers that supply data with the highest rate during some prior measurement interval. Each peer calculates its unchoked peers every 10 seconds. An *optimistically unchoked* peer is a randomly chosen peer (selected every 30 seconds).
- b) Yes, Bob can receive a complete copy of the file through optimistic unchoking by other peers, as long as there are enough peers staying in the swarm for a long enough time.
- c) Assuming each peer tracks its immediate predecessor and successor peers, the steps taken are:
- Peer 6 sends peer 15 a message to determine its future predecessor and successor.
 - The message is forwarded through the DHT until it reaches peer 5, who realizes that it will be 6's predecessor, and that its current successor, peer 8, will become 6's successor.
 - Peer 5 sends this predecessor and successor information to peer 6.
 - Peer 6 can now join the DHT by making peer 8 its successor and by notifying peer 5 that it should change its immediate successor to 6.
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