

Network Architectures 3329 (5503)
Spring 2018
04/25/18

Name: _____

Quiz 12-2

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	1	
2	1	
3	1	
4	1	
5	1	
Total:	5	

1. (1 point) What applies only to slotted ALOHA but not pure ALOHA protocol?
 - A. nodes are synchronized**
 - B. fair
 - C. best used when the traffic is low
 - D. nodes can send at full rate of the link (when not busy)

2. (1 point) With pure ALOHA, what is the probability a given node successfully send a packet? Suppose we have a total number of N nodes sharing the link, each transmits with a probability of p .
 - A. $p(1 - p)^{2(N-1)}$**
 - B. $p(1 - p)^{(N-1)}$
 - C. $Np(1 - p)^{(N-1)}$
 - D. $p(1 - p)$

3. (1 point) For both slotted and pure ALOHA, we achieve the maximum efficiency by setting p — probability of a node sending packets — to a value that maximizes the probability of a given node's successful transmission.
 - A. True** B. False

4. (1 point) If all nodes perform carrier sensing — listen to the channel first, transmit only when no other transmissions detected, collision will not happen.
 - A. True **B. False**

5. (1 point) Which of the following applies to MAC address, but not IP address
 - A. universally unique
 - B. hierarchical
 - C. portable**
 - D. associated with every NIC (adapter)