Comp3721 A#4

# DUE: April 11 at 5pm

1. A group of n stations share a 56-kbps pure ALOHA channel. Each station outputs a 1000-bit frame on an average of once every 100 s, even if the previous one has not yet been sent (e.g. the stations can buffer outgoing frames). What is the maximum value of N?
2. Consider building a CSMA/CD network running at 1 Gbps over a 1-km cable with no repeaters. The signal speed in the cable is 200,000 km/s. What is the minimum frame size?
3. Consider the subnet shown below. Distance vector routing is used, and the following vectors have just come in to router C: from B: (5,0,8,12,6,2); from D: (16,12,6,0,9,10); and from E (7,6,3,9,0,4). The measured delays to B, D, and E are 6, 3, and 5, respectively. What is C’s routing table? Give both the outgoing line to use and the expected delay.

B C

A

E F

3

D

1. Chpt15: Q12,14,18
2. Chpt 19 Q20,22,26
3. Chpt20 Q12,18,23
4. Chpt22 Q18,19,24