CSE 461 Homework 2
Due Friday October 20, 2000

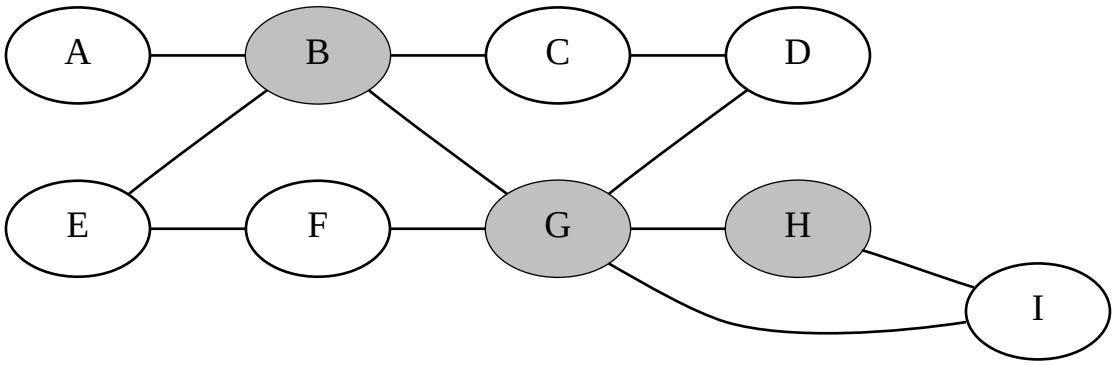
1. What is the (15,11) hamming codeword for the 11 user data bits: 1011 1110 001? Hint: your answer should be 15 bits long.

2. On an 8 port banyan: (From S. Keshav *An Engineering Approach to Computer Networking*)

   - Do packets destined for output ports 000 and 001 at input ports 1 and 2 collide?
   - Do packets destined for output ports 001 and 000 at input ports 1 and 7 collide?

3. Also from Keshav, How many addresses are spanned by the CIDR address 205.12.192.0/20 and what range do they span (i.e what are the lowest and tighest address addresses)?.

4. It's up to you to manually configure the forwarding table of each of the nodes in the following diagram:



   Show the forwarding tables for B, G, and H. You may use default routes or wildcards, but the route to each host should follow the *shortest path*. That is, it may be otherwise valid to send traffic from I to H via G, but it is more efficient for I to send to H directly. Local delivery is implicit - assume I is smart enough to deliver packets destined for I without looking at the forwarding table.

   The forwarding table for I is:

Destination	Next Hop
H	H
*	G

5. On a fictitious token ring with a total fiber length of N meters, one station transmits continuously. What happens to that station's throughput if the fiber length is doubled to $2 \times N$ and the number of machines is also doubled?

6. Page 235 #1 (a) (b) and (c), only. Complete (d) (e) and (f) only if you don't get it after the first three.

7. Page 163 #35

8. Page 164 #37