Turn in all numbered problems

1) (5 pts) Chapter 3 Text Book Problem 1. The statement "a VCI is consumed for both directions of a virtual circuit" means that on a port an incoming packet and an outgoing packet will not have the same VCI. For example if an incoming packet on port 1 of a switch has a VCI of 2, then there will not be a table entry for outgoing packets on port 1 with a VCI of 2. Normally, outgoing and incoming packets on a port can have the same VCI.

Create a table to hold your work after all of the transmissions (a through f) have taken place, and then create the virtual circuit tables for the four switches from that information. The following example shows the start of the work if first transmission were host A to host G:

Sample table format for each of the transmissions made in parts a through f

		Incoming		Outgoing	
Transmission	Switch	Port	VCI	Port	VCI
	1	2	0	1	0
A to G	2	3	0	1	0
	4	3	0	1	0

For each switch use the following table format

Switch 1			
Incoming		**Outgoing**	
Port	**VCI**	**Port**	**VCI**
2	0	1	0

2) (5 pts) Chapter 3 Text Book Problem 5. List the three endpoint to endpoint connections only. These connections are determined from the table information given. For the answer, list which node is transmitting and which is receiving. Use entries in the virtual circuit tables to determine which incoming ports listed are connected to hosts(i.e. for switch 2, if host C is transmitting, then there will be an entry for an incoming port of 2).   Use a table similar to that below to indicate the path taken by the packets. i.e. **if A transmits to E, then the answer is: A for source node and E for Destination, S1(out port, out VCI), S2(out port, out VCI), S3(out port, out VCI)** where out port and out VCI indicate which output port and output VCI the switch indicated uses to forward the packet towards its destination. Not all switches will be used in all of the transmissions. **Note incoming port and VCI are on the left side of the virtual circuit tables provided and the outgoing port and VCI are on the right side of the table.**

Source Node	Switch 1 (Out port, Out VCI)	Switch 2 (Out port, Out VCI)	Switch 3 (Out port, Out VCI)	Destination Node

The following problems are extra problems that you should consider working.

A) Chapter 3 Text Book Problem 2
B) Chapter 3 Text Book Problem 14
C) Chapter 3 Text Book Problem 16
D) Chapter 3 Text Book Problem 37 – note on this problem, the description is provided in problem 36. Note: problem 36 specifies the MTU as the maximum size for the entire packet (header + data)