Hwk3.ans

Chapter 6:

1. KR, #R4
   There will be a collision in the sense that while a node is transmitting it will start to receive a packet from the other node.

2. KR, #R10
   C's adapter will process the frames, but the adapter will not pass the datagrams up the protocol stack. If the LAN broadcast address is used, then C's adapter will both process the frames and pass the datagrams up the protocol stack.

3. KR, #R13
   The three Ethernet technologies have identical frame structures.

4. KR, #R15
   In 802.1Q there is a 12- bit VLAN identifier. Thus 2_{12} = 4,096 VLANs can be supported.

5. KR, #P23
   If all the 11=9+2 nodes send out data at the maximum possible rate of 100 Mbps, a total aggregate throughput of 11*100 = 1100 Mbps is possible.

6. KR, #P24
   Each departmental hub is a single collision domain that can have a maximum throughput of 100 Mbps. The links connecting the web server and the mail server has a maximum throughput of 100 Mbps. Hence, if the three collision domains and the web server and mail server send out data at their maximum possible rates of 100 Mbps each, a maximum total aggregate throughput of 500 Mbps can be achieved among the 11 end systems.