**CS 372 Introduction to Computer Networks**

**Self-Check for Week #2**

**Solutions are posted**

1. Communication via guided media is complex enough by itself, but communication via unguided (wireless) media is even more complicated. What are some of the problems that wireless networking adds (beyond the problems of cabled networking).

*Wireless networking is particularly susceptible to interference and can only be transmitted a short distance. In addition, the amount of bandwidth required is a hinderance to speeds.*

1. Why is it important that any layer of the internet protocol stack may interact only with neighboring layers immediately above/below?

*The stack is responsible for transferring data between layers. By restricting to the neighboring layers, the stack allows structure to encapsulate required details at each junction.*

1. As a packet is being constructed and passed “down” to the next layer of the internet protocol stack, a new “header” is added. This process is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

*Encapsulation*

1. What is “packet sniffing”?

*Reading the contents of a packet.*

1. Viruses and spyware both infect a host computer by being (usually accidentally) downloaded. How is a computer virus different from spyware?

*Viruses self-replicate and execute an object or a program. Spyware works by recording keystrokes and websites visited.*

1. How is client-server architecture different from peer-to-peer (P2P) architecture?

*A P2P network integrates both portions of a client-server architecture. A client-server architecture works by having a server, perputually in a wait status, receive calls from a client that intermittently “speaks” with the server. The server provides responses to the client.*

1. What internet service uses default (“well-known”) port #606 ? (Hint: This is quite deeply buried in RFC #1700.)

*urm – Cray Unified Resource Manager*

1. Application layer protocols manage communication from \_\_\_\_\_\_\_\_\_ to \_\_\_\_\_\_\_\_\_.
2. Application layer protocols must specify transport requirement by selecting a transport protocol from the transport layer.
   1. Give an example of an application that uses TCP, and explain why it uses TCP.

*Email and irc both use TCP. It it used to ensure that the integrity of the data is maintained. It Is important that messages are receveid intact.*

* 1. Give an example of an application that uses UDP, and explain why it uses UDP.

*DNS uses UDP. A DNS must always have an open connection and therefore requires a UDP connection.*