CS 372 Introduction to Computer Networks
Self-Check Exercises: Lecture 17

1) For TCP, please select whether the service is implemented, and indicate how it is implemented.
   Connection-Oriented?
   Full Duplex Service?
   In-order delivery?
   Pipelining?
   Flow Control?

   Congestion Control?

   Bandwidth Guarantee?
   Reliable Delivery(mostly)?
   Jitter Threshold?

2) For UDP, please select whether the service is implemented, and indicate how it is implemented.
   Connection-Oriented?
   Full Duplex Service?
   In-order delivery?
   Pipelining?
   Flow Control?
   Congestion Control?
   Bandwidth Guarantee?
   Reliable delivery(mostly)?
   Jitter Threshold?

3) What are the minimum and maximum sizes (in bytes) of a TCP header?

4) A UDP segment has a "length" field the gives the size (in bytes) of the entire UDP segment, so the receiver can easily calculate the number of bytes of data in the "application data" section. A TCP segment has no "length" indicator. How can the receiver determine how many bytes of data are in the "application data" section of a TCP segment?

5) How is the sequence number for a given TCP segment (from sender to receiver) derived? Give an example.

6) How is the acknowledgement number for a given TCP segment (from receiver to sender) derived? Give an example.

7) How does TCP handle dropped segments? What additional complexity does this add?