CS 372 Introduction to Computer Networks
Self-Check Exercises: Lecture 14

1) The transport layer resides on/in the network (**edge** / **core** - circle one or both) and manages communications from _____ to _____.

2) The network layer resides on/in the network (**edge** / **core** - circle one or both) and manages communications from _____ to _____.

3) What is the purpose of transport-layer multiplexing?

4) What is the process of transport-layer de-multiplexing?

5) For de-multiplexing, how is a TCP socket identified?

6) For de-multiplexing, how is a UDP socket identified?

7) Server X is running *enigma* services on port #2100. Client A is running an application that uses port #437 to request an *enigma* TCP connection to server X. Client B is running an application that uses port #1296 to request an *enigma* TCP connection to server X.

   Server X IP Address: 201.64.107.12
   Client A IP Address: 128.193.51.213
   Client B IP Address: 128.193.35.127

   a. The connection created for Client A is identified by the sockets at the endpoints as follows:

On Client A	IP address	Port #
Destination		
Source		

Server X	IP address	Port #
Destination		
Source		

b. The connection created for Client B is identified by the sockets at the endpoints as follows:

On Client B	IP address	Port #
Destination		
Source		

Server X	IP address	Port #
Destination		
Source		

c. Client A starts a second application (running at the same time as the first application) that uses port #213 to request an *enigma* TCP connection to server X. The connection created for Client A is identified by the sockets at the endpoints as follows:

On Client A	IP address	Port #
Destination		
Source		

Server X	IP address	Port #
Destination		
Source		

d. Is it OK for Client B to start a second application (running at the same time as the first application) that uses port #213 to request an *enigma* TCP connection to server X? Why or why not?

e. Is it OK for Client A to start a third application (running at the same time as the first and second applications) that uses port #213 to request an *enigma* TCP connection to server X? Why or why not?