

**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.

IP addresses:

Server X:        201.64.107.12

Client A:        128.193.51.213

Client B:        128.193.35.127

(See next page for questions)

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

	IP address	Port #
On Client A		
On Server X		

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

	IP address	Port #
On Client B		
On Server X		

- 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:

	IP address	Port #
On Client A		
On Server X		

- 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?