Name: **Section:** **Activity No. 22**

TCP/IP – TCP Segment

Objective : In this lab, you are going identify the different part of a TCP segment and describe what's the purpose for each of this part (you could use the textbook, slides and the Internet as your resource). Then you will see and inspect an actual TCP segment using WireShark open source software.

Activity 1 : Identify the Parts of a TCP Segment

Look at the figure below and supply the missing parts that I intentionally left-out for a TCP segment.

TCP Segment

<table>
<tr><td colspan="5">Source Port</td><td colspan="4"></td></tr>
<tr><td colspan="9"></td></tr>
<tr><td colspan="9"></td></tr>
<tr><td>Header Length</td><td></td><td>URG</td><td>ACK</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="5"></td><td colspan="4"></td></tr>
<tr><td colspan="8"></td><td></td></tr>
<tr><td colspan="9">Data</td></tr>
</table>

Activity 2 : Describe TCP Segment parts

Write on the left column on the table below the part of a TCP segment and on the right column the description of that part.

TCP Segment Part name	Description

Activity 3 : Inspecting a TCP segment on WireShark

Instruction: Run your WireShark at Start→All Programs→WireShark. And on the screen one of its part has the heading **Capture**. Click then the network card that is shown under the phrase "Start capture on interface" and it will take you to the main screen of WireShark. Once you are in on the **Filter** under the tool box and inside a Textbox write the word **tcp** (make sure it is in lower case) and then press Enter. Provide information of at least of 5 entries based on the heading of the table below. Of the five entries it should have the combination of 1) SYN 2) ACK 3) RST, ACK 4) PSH, ACK and 5) FIN, ACK as data inside **Info** header.

Source IP Address	**Destination IP Address**	**Length**	**Info (use only SYN, ACK, RST, FIN as entry)**	**Source and Destination Port Number**	**Window Size**	**SEQ Number and ACK Number**	**Header Checksum**
				Src= Dst=		SEQ = ACK =	
				Src= Dst=		SEQ = ACK =	
				Src= Dst=		SEQ = ACK =	
				Src= Dst=		SEQ = ACK =	
				Src= Dst=		SEQ = ACK =	