**NETW360 Project: Part 3**

(9 points) Include a two-page research paper on 802.11ac. Use single-spacing, font size 12, normal margins. Make sure to include your sources (at least three sources).

(3 points) Go back to the predictive site survey from Part 2 of the project. Select at least four of the APs that are available from the pull-down menu and find their prices.

(2 points) How many users can an individual, SOHO grade, AP support? What about an Enterprise grade AP? Present your findings (make sure to include with sources).

(2 points) Go back to the predictive site survey from Part 2 of the project. Select the 2.4 GHz band and use the Automatic Placement option for the APs. Manually add a few additional APs (3–5 APs). Reposition all the APs as you desire. Select the SNR display option. Include a screen capture.

(2 points) Remove all the APs. Select the 5 GHz band. Use the Automatic Placement option for the APs. Manually add a few additional APs (3–5 APs). Reposition all the APs as you desire. Select the SNR display option. Include a screen capture.

(6) What are your conclusions, findings, or observations about co-channel and adjacent channel interference for the two cases?

**Answer the following questions after reading the technical document, available in Doc Sharing, by the title: “Wireless LAN Design Guide - CISCO”.**

(2 points) What is clear channel assessment (CCA)?

(2 points) What is the value of the CCA threshold?

(2 points) A coverage model describes the achievable data rates based on distance and frequency band. Based on the paper, what is the achievable throughput in the 2.4 GHz band at 440 feet? What is the maximum distance for a throughput of 18 Mbps in the 5.0 GHz band?

(2 points) With reference to the previous question, does the coverage model in the paper use an indoor or outdoor model? Explain the reasoning behind the choice.

(2 points) As far as the 5 GHz band is concerned, what is the major problem as far as the AP/client interaction is concerned?

(2 points) What is the default behavior of a laptop that tries to connect to a WLAN?

(2 points) What is the default behavior of a tablet or smartphone that tries to connect to a WLAN?

(2 points) Describe the various options that are available to a WLAN designer if it is necessary to maximize a 2.4 GHz connection in a high-density client environment.