INST 346: Technologies, Infrastructure and Architecture
Quiz 6, October 19, 2017

Standard Instructions (unchanged from the last quiz):
This is a 5 minute quiz, starting promptly at 5:00 and ending promptly at 5:05. You may use any resources (Web, readings, class notes, class slides) that existed before the start of this quiz. You may not communicate with any other person (including the instructor) during the quiz. If you have difficulty interpreting a question, briefly describe that difficulty and any assumptions that you have made to allow you to answer the question and we will consider what you have written when grading your quiz. Answer all questions. A maximum of 1 point is available.

0. (0 points) What is your name?

1. Answer <u>only one</u> of the following two questions. If you answer both, only the first will be graded.

    a. (1 point) Give one example of a situation in which performing error correction using a Cyclic Redundancy Check (CRC) would be a better choice in a link layer protocol than using an automatic error correction technique in that link layer protocol would be. Then give a different example of a situation in which using an error correction technique in a link layer protocol would be a better choice than using error detection method such as CRC.

    b. (1 point) Explain why Dijkstra's shortest path algorithm is used to discover optimal routing paths only at the scale of Autonomous Systems (AS's) and not at the scale of the entire Internet.

Please **hand write and sign** the honor pledge on this quiz. (For reference, the honor pledge (described at http://osc.umd.edu/Uploads/OSC/Honor%20Pledge.pdf) is: "I pledge on my honor that I have not given or received any unauthorized assistance on this quiz.")