ⓘ Students have either already taken or started taking this quiz, so be careful about editing it. If you change any quiz questions in a significant way, you may want to consider regrading students who took the old version of the quiz.

Points 100 Published

Details | Questions | Mastery Paths

Question 5 pts

Chapter 3 Physical Layer and Chapter 4 Data Link Layer

Smith, Smith, Smith, and Smith is a regional accounting firm that is building a new headquarters building. The building will have a backbone network that connects eight LANs (two on each floor). They are very concerned with network errors. What advice would you give them in the design of the building and network cable planning that would help reduce network errors?

(Hints: Think about media (physical matter) that we discussed in the physical layer (i.e., characteristics of different media) and also think about the mechanisms used to prevent and check network errors we discussed in the data link layer)

Question 10 pts

Chapter 3 Physical Layer

Draw four separate sketches depicting the "multiplexing and demultiplexing" process for each of the four types of multiplexing processes discussed in the text. Make note that our text depicts these processes as separated but keep in mind they are occurring simultaneously. Provide a very short description with each sketch. Feel free to utilize your imagination in creating the sketches to demonstrate how they work.

Question 10 pts

Chapter 3 Physical Layer

Using ASCII (7) scheming code choose two of the five signaling techniques and create a sketch depicting the signals for your first name.

Question 10 pts

Chapter 4 Data Link Layer

Briefly describe the approaches to detecting errors and how errors can be corrected. Sketch how a series of four separate messages would be successfully sent from one computer to another if the first message were transferred without error, the second were initially transmitted with an error, the third were initially lost, and the fourth message was transferred without error.

Question 10 pts

Chapter 4 Data Link Layer

Using the ASCII (7) coding schema demonstrate what the checksum check value may look like for your first name. Using "101" as the "preset number" demonstrate what the CRC check value may look like for your first name and how that is calculated by the sender. Assume and use the very basic algorithmic functions discussed in class to calculate these values.

Question 10 pts

Chapter 4 Data Link Layer

Using the ASCII (7) coding schema sketch the SDLC frame and Ethernet II frame based on your first name then calculate the transmission efficiency and the throughput assuming an old school 56Kbps modem (throughput can be calculated using effective data rate in lieu of TRIB). Discuss additional pieces of information you would need to calculate the more formal TRIB measurement.

Question 5 pts

Chapter 5 Network and Transport Layer

How does TCP/IP perform address resolution for network layer addresses?

Question 5 pts

Chapter 5 Network and Transport Layer

Find the required network addressing information for your personal computer and another personal computing device such as your cellphone or tablet. Include details of the following and briefly describe what the information means as well as comparing and contrasting any differences. Please feel free to anonymize what you consider to be personal information.

1.Device's own IP address (not Mac Address)

2.Subnet mask

3.IP address of default gateway (most commonly the router)

4. MAC address

5.IP address of at least one DNS server

Question 5 pts

Chapter 2 Application Layers

Dears-R-Us Brokers has decided to install a new e-mail package. One vendor is offering an SMTP-based two-tier client server architecture. The second vendor is offering a Web-based e-mail architecture. The manager of Dears-R-Us Brokers doesn't understand either one, but thinks the Web-based one should be better because, in his words "the Web is the future."

a) Briefly explain to the manager of Dears-R-Us Brokers, in layman's terms, the differences between the two.

b) Outline the pros and cons of the two alternatives and make a recommendation to the manager about which is better.

Question 10 pts

Chapter 2 Application Layer & Chapter 5 Transport Layer

Thinking about the activities that you may do on your favorite website or a website that you visit most frequently. Sketch out what a request from your client to the server(s) may look like. Be sure to depict the TCP ports and make note of the specific activity.

Question 10 pts

Chapters 3, 4, 5, and 2

Thinking about the internet model and your thoughts on what you know thus far create a mind/concept map detailing the internet model and what each of the five layers do. Anyway that you choose to organize the concepts are fine. Be sure to include examples of at least three standards for each layer. Once you have completed this, generate 2-5 questions on any areas that maybe unclear, muddy, or that you may simply want to explore a bit more and include these questions in your submission. Please ensure this submission is no larger than one page.

Question 10 pts

Chapters 3, 4, 5, and 2

Combine your LAN and broadband technology diagrams from Module 1 into one single diagram. Based on your mind/conceptual map of the internet model update the description of the diagram to include additional details. Feel free to include additional diagrams/figures. Please ensure this submission is no larger than two pages.