

# CS447-003 - Network and Data Communication

## Possible Quiz Questions for Quiz #5 on February 8th, 2024

The following is a list of possible questions for our Quiz #5 on February 8th. Some of the questions will not be asked in the quiz. All the questions that will appear in the quiz will appear exactly as shown below (however, parameters may be changed). The quiz is closed textbook, closed notes and closed neighbors. Note that the questions, which did not appear in this quiz, still may appear in the exams.

- #1: HTTP is a stateless application-layer protocol. What does “stateless” mean?
- #2: Show the message pattern expected for downloading a webpage using HTTP (assume that most of the websites consist of multiple other “component files”).
- #3: What is the difference between “fierwalls” and “(security) proxies”?
- #4: Which socket API uses “sockaddr\_in” structure? What is that data structure for (describe its primary purpose)?
- #5: Explain why multiple threads are needed at a proxy for handling HTTP network traffic?
- #6: Show the message structure of HTTP responses.
- #7: What are “parity bits”? How do parity bits detect transmission errors (explain)?
- #8: Explain how “undetectable errors” are possible using a parity bit.
- #9: Can a parity bit correct transmission errors? If yes, show it by an example. If not, explain why not.
- #10: Explain how “framing errors” are possible using parity bits?
- #11: How do CRC detect transmission errors (explain)?
- #12: Is “undetectable errors” possible using CRC? If yes, show it by an example. If not, explain why not.
- #13: Can a CRC code correct transmission errors? If yes, show it by an example. If not, explain why not.