**CSCI 367 - Computer Networks I**

Signal Encoding Techniques

Error Detection and Correction

Data Link Control Protocols

1. Digital signaling takes a digital or analog data signal and encodes it into a \_\_\_\_\_\_\_\_ signal. (digital)
2. Analog signaling uses a \_\_\_\_\_\_\_\_\_\_ signal. (carrier)
3. Digital or analog data is transmitted via analog signaling using \_\_\_\_\_\_\_\_\_\_ techniques. (modulation)
4. Data signal modulation encodes source data (digital or analog) onto a carrier signal using \_\_\_\_\_\_\_\_\_ modulation. (amplitude, frequency, and phase)
5. A digital signal is a sequence of \_\_\_\_\_\_\_\_ voltage pulses. (discrete)
6. Binary data is a type of \_\_\_\_\_\_\_\_\_\_\_ data. (digital)
7. Data signaling rates are given in \_\_\_\_\_\_\_. (bits per second)
8. The \_\_\_\_\_\_ of a signal used to transmit a bit is the time it takes the transmitter to emit the bit. (duration)
9. Higher digital data transmission rates require \_\_\_\_\_ bit durations. (shorter)
10. Digital data can be converted to analog data via a \_\_\_\_\_\_\_\_\_\_\_\_. (modem)
11. Analog data can be converted to digital data via a \_\_\_\_\_\_\_\_\_\_\_\_. (modem)
12. Amplitude Shift Keying (ASK) is a type of carrier frequency \_\_\_\_\_\_\_\_\_ (modulation).
13. Frequency Shift Keying (FSK) is a type of carrier frequency \_\_\_\_\_\_\_\_\_ (modulation).
14. Phase Shift Keying (PSK) is a type of carrier frequency \_\_\_\_\_\_\_\_\_ (modulation).
15. ASK, FSK, and PSK frequency modulation techniques modulate the signal \_\_\_\_\_\_\_\_\_ frequency. (carrier)
16. A \_\_\_\_\_\_\_\_\_\_ bit is the simplest error-detection method. (parity)
17. TCP/IP uses \_\_\_\_\_\_\_\_\_\_ for error-detecting. (checksums)
18. The time it takes for a data frame to be sent and received is a combination of the \_\_\_\_\_\_\_\_\_\_\_ time and the \_\_\_\_\_\_\_\_\_\_\_\_ time. (transmission, propagation)
19. The \_\_\_\_\_\_\_\_ time is proportional to the length of the data frame. (transmission)
20. \_\_\_\_\_ frames are sent by the receiving device to the sending device to acknowledge the receipt of a data frame. (Acknowledge (ACK))
21. Sliding-Window Flow Control utilizes \_\_\_\_\_\_\_\_\_\_\_ numbers for each data frame. (sequence)