

True or False?

Informal Quiz 2

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- ☐ ☐ Given a 4-level signaling scheme, where each level represents 2 bits, the baud rate is 1/2 the bit rate, and the minimum bandwidth required as per Nyquist theorem is 1/4 the bit rate.
- ☐ ☐ The portions of the optical frequency spectrum most suitable for data transmission are those regions which have the highest attenuation.
- ☐ ☐ Assuming a framing delimiter of 01111110, the bit sequence 0111111111110, after bit stuffing appears as: 011111011111010
- ☐ ☐ The Hamming distance between two codewords can be calculated by XORing the code-words bit-by-bit and counting the number of 1s in the result.
- ☐ ☐ The number 723 goes through the check-digit procedure, and the resulting number with the check digit is: 7236
- ☐ ☐ An even parity bit value for the 8-bit string 01101010 is 0.
- ☐ ☐ Ideal flow control would implement a perfect “call-back” abstraction where the sender would send packets only when the receiver allows it to.

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- ☐ ☐ A sliding window protocol with window size N has utilization N-times that of a stop-and-wait protocol.
- ☐ ☐ A short link has a high α ($t_{\text{prop}}/t_{\text{trans}}$) and therefore, even a stop-and-wait flow control would be efficient on it: there is no need for complexity of larger windows.
- ☐ ☐ Go-back-N ARQ trades off a small loss in performance for simplicity, increased reliability and better use of sequence number space when compared to Selective-reject ARQ.
- ☐ ☐ SLIP provides framing, protocol multiplexing, and error detection capabilities.

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True or False?

T F

Informal Quiz 2: Solutions

- ✓ ☐ Given a 4-level signaling scheme, where each level represents 2 bits, the baud rate is 1/2 the bit rate, and the minimum bandwidth required as per Nyquist theorem is 1/4 the bit rate.
- ☐ ✓ The portions of the optical frequency spectrum most suitable for data transmission are those regions which have the highest attenuation.
- ☐ ✓ Assuming a framing delimiter of 01111110, the bit sequence 0111111111110, after bit stuffing appears as: 011111011111010
- ✓ ☐ The Hamming distance between two codewords can be calculated by XORing the code-words bit-by-bit and counting the number of 1s in the result.
- ✓ ☐ The number 723 goes through the check-digit procedure, and the resulting number with the check digit is: 7236
- ✓ ☐ An even parity bit value for the 8-bit string 01101010 is 0.
- ✓ ☐ Ideal flow control would implement a perfect “call-back” abstraction where the sender would send packets only when the receiver allows it to.

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- ☐ ✓ A sliding window protocol with window size N has utilization N-times that of a stop-and-wait protocol.
- ✓ ☐ A short link has a high α ($t_{\text{prop}}/t_{\text{trans}}$) and therefore, even a stop-and-wait flow control would be efficient on it: there is no need for complexity of larger windows.
- ✓ ☐ Go-back-N ARQ trades off a small loss in performance for simplicity, increased reliability and better use of sequence number space when compared to Selective-reject ARQ.
- ☐ ✓ SLIP provides framing, protocol multiplexing, and error detection capabilities.

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