

# Quiz on Jan 21

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13.

Which of the following can help determine the end of a frame? Select all that apply

Marks: 1

Type: MULTIPLE\_CHOICE

**Options:**

- 0) idle time
- 1) sentinel
- 2) very high voltage
- 3) byte count

**Answer:** [ [ 1, 3 ] ]

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13. A repetitive code with  $n = 4$  can detect how many errors? Format X (e.g. 2)

Marks: 1

Type: FLOAT\_TYPE

**Answer:** [ { "max\_val": "3", "min\_val": "3" } ]

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13.

When the number of redundant bits are same as number of message bits, what is the code rate? Format X.xx (0.20)

Marks: 1

Type: FLOAT\_TYPE

**Answer:** [ { "max\_val": "0.5", "min\_val": "0.5" } ]

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13. Which of the following is true of error control? Select all that apply

Marks: 1

Type: MULTIPLE\_CHOICE

**Options:**

- 0) Higher the data rate, the higher chances of bursty errors
- 1) All link layer protocols are mandated to implement mechanisms to recover from losses
- 2) Error correction requires lesser number of redundant bits than error detection
- 3) Wireless links often employ error correction

**Answer:** [ [ 0, 3 ] ]

13.

The hamming distance between code words 11001 and 11111 is? Format X (e.g. 1)

Marks: 1

Type: FLOAT\_TYPE

**Answer:** [ { "max\_val": "2", "min\_val": "2" } ]

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13.

Which among the services is NOT provided by the link layer? Select all that apply

Marks: 1

Type: MULTIPLE\_CHOICE

**Options:**

- 0) Framing
- 1) Demultiplexing
- 2) Error Recovery
- 3) Routing

**Answer:** [ [ 3 ] ]

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14. Which among the following is true of error detection codes? Select all that apply

Marks: 1

Type: MULTIPLE\_CHOICE

**Options:**

- 0) Even parity detects even number of errors
- 1) 2D parity can detect all 4 bit errors
- 2) In Internet checksum, the receiver compares the final result with ffff to detect errors
- 3) Internet checksum is a very strong error detection technique

**Answer:** [ [ 2 ] ]

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14.

In Bi-sync protocol employing 2D parity, if N ASCII characters are being transmitted, the amount of redundancy is  $N + x$ . What is x? Format X (e.g. 3)

Marks: 1

Type: FLOAT\_TYPE

**Answer:** [ { "max\_val": "8", "min\_val": "8" } ]

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14. Which of the following is true of CRC? Select all that apply.

Marks: 1

Type: MULTIPLE\_CHOICE

**Options:**

- 0) Transmitted message  $P(x)$  is not divisible by divisor polynomial  $C(x)$
- 1) Coefficients of the remainder polynomial are the redundant bits
- 2) One can detect errors if error polynomial  $E(x)$  is divisible by  $C(x)$
- 3) All odd number of bit errors can be detected if  $C(x)$  contains the factor  $(x + 1)$

**Answer:** [[ 1, 3 ]]

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14.

For a code with code word of size  $n (=m+k)$ , which among the following is true?  
Select all that apply.

Marks: 1

Type: MULTIPLE\_CHOICE

**Options:**

- 0) The number of legal code words are  $2^n$
- 1) The hamming distance is  $k$
- 2) One of the goals in designing the code is to increase  $k$
- 3) One of the goals in designing the code is to increase the hamming distance

**Answer:** [[ 3 ]]

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