

Quiz on Jan 14

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13.

Which of the following is true of signals and bandwidth? Select all that apply.

Marks: 1

Type: MULTIPLE_CHOICE

Options:

- 0) The fundamental frequency is $2/\text{bit-duration}$
- 1) The effective bandwidth is smaller than absolute bandwidth
- 2) Nyquist rate considers the influence of noise
- 3) According to Shannon, $C = B \log_2 (1+S/N)$

Answer: [[1, 3]]

13. Which of the following is true of a node? Select all that apply.

Marks: 1

Type: MULTIPLE_CHOICE

Options:

- 0) The application processes run in the kernel space
- 1) In PIO, CPU moves data between adaptor and memory
- 2) The interface layer deals directly with the processes
- 3) Processes use system calls to leverage the services of the protocols

Answer: [[1, 3]]

13.

Which link supports data flow in either direction?

Marks: 1

Type: SINGLE_CORRECT_ANSWER

Options:

- 0) full duplex
- 1) half duplex
- 2) simplex
- 3) multiplex

Answer: [0]

13.

Which of the following is true of physical media? Select all that apply.

Marks: 1

Type: MULTIPLE_CHOICE

Options:

- 0) Attenuation is expressed in dB/km
- 1) All frequencies experience the same amount of loss
- 2) Thermal noise is caused due to interference from adjacent transmissions
- 3) Delay distortion is caused due to different frequencies experiencing different speeds

Answer: [[0, 3]]

13.

Which among the following links provides the lowest attenuation?

Marks: 1

Type: SINGLE_CORRECT_ANSWER

Options:

- 0) Cat 5
- 1) Cat 6
- 2) Coaxial
- 3) Fiber Optics

Answer: [3]

13. 3dB attenuation means, $P_2 = P_1 / a$. What is a? Format X (e.g. 4)

Marks: 1

Type: FLOAT_TYPE

Answer: [{ "max_val": "2", "min_val": "2" }]

14.

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

Marks: 1

Type: MULTIPLE_CHOICE

Options:

- 0) BER is a function only of SNR
- 1) Modulation schemes that provide higher data rates require low SNR for same BER
- 2) For a given modulation scheme, as you increase SNR, BER decreases
- 3) Wireless links have higher BER compared to wired links

Answer: [[3, 2]]

14.

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

Marks: 1

Type: MULTIPLE_CHOICE

Options:

- 0) Bandwidth of line-coded signals is rather large
- 1) Line coded signals are used in wireless links
- 2) Passband modulation is used in ADSL
- 3) BFSK is an example of Line code

Answer: [[0, 2]]

14.

Which encoding eliminates baseline wander? Select all that apply.

Marks: 1

Type: MULTIPLE_CHOICE

Options:

- 0) NRZ
- 1) NRZI
- 2) Manchester
- 3) 4B/5B

Answer: [[1, 2, 3]]

14.

What is the efficiency of Manchester encoding, expressed in percentage? Format X (e.g. 75)

Marks: 1

Type: FLOAT_TYPE

Answer: [{ "max_val": "50", "min_val": "50" }]
