Synchronous transmission:

|  |  |  |
| --- | --- | --- |
|  |  | is used to transmit a "frame" or "packet" of data at a time |
|  |  | cannot be used on multipoint circuits |
|  |  | uses stop bits after each character to be sent |
|  |  | uses start bits before each character to be sent |
|  |  | is used to send one character at a time |

A

Optical media \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:

|  |  |  |
| --- | --- | --- |
|  |  | has about the same likelihood of suffering from noise as electrical media |
|  |  | has about the same likelihood of suffering from noise as coaxial cable |
|  |  | is more likely to suffer from noise than electrical media |
|  |  | is more prone to noise than twisted pair media |
|  |  | is less likely to suffer from noise than electrical media |

\_\_\_\_\_\_\_\_ is the process of sending a signal to a client that gives its permission to transmit or asks it to receive.

|  |  |  |
| --- | --- | --- |
|  |  | Contention |
|  |  | Pooling |
|  |  | Polling |
|  |  | CRC |
|  |  | Carrier sense |

C

The loss of power a signal suffers as it travels from the transmitting computer to a receiving computer is:

|  |  |  |
| --- | --- | --- |
|  |  | echo |
|  |  | spiking |
|  |  | jitter |
|  |  | intermodulation noise |
|  |  | attenuation |

E

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is an effective way to deal with attenuation.

|  |  |  |
| --- | --- | --- |
|  |  | Shorting out a circuit |
|  |  | Adding fluorescent lights |
|  |  | Adding repeaters or amplifiers to a circuit |
|  |  | Changing multiplexing techniques |

C

\_\_\_\_\_\_\_ methods prevent collisions between two or more computers that want to send data at the same time.

|  |  |  |
| --- | --- | --- |
|  |  | Error Detection |
|  |  | Media access control |
|  |  | Error Correction |
|  |  | Flow control |
|  |  | Addressing |

When a network protocol utilizes Automatic Repeat Request (ARQ):

|  |  |  |
| --- | --- | --- |
|  |  | the common carrier Automatically Returns Queries to the subscriber upon receipt of such queries |
|  |  | a sender is using a parity scheme called Array Resource Quality |
|  |  | the common carrier Automatically Returns Queries to the subscriber upon receipt of such queries |
|  |  | a receiver that detects an error in a message simply asks the sender to retransmit the message |
|  |  | a fiber optic cable meets the American Registered Quality, a certification standard for use in high-quality data communication transmission lines |

In communication protocols, \_\_\_\_\_\_\_\_\_ are used to convey the user's meaning.

|  |  |  |
| --- | --- | --- |
|  |  | start bits |
|  |  | information bits |
|  |  | stop bits |
|  |  | overhead bits |
|  |  | flag bits |

B

Select all of the alternatives that are capabilities of the data link layer.

|  |  |  |
| --- | --- | --- |
|  |  | error detection and correction |
|  |  | flow control |
|  |  | Fragmentation |
|  |  | medium access control |
|  |  | congestion control |

A D B

A timer is set when \_\_\_\_\_\_\_ is sent out.

|  |  |  |
| --- | --- | --- |
|  |  | All of the other answers are correct |
|  |  | Control data |
|  |  | an ACK |
|  |  | a NAK |
|  |  | a frame |

E

With \_\_\_\_\_\_\_\_ routing, computers or routers count the number of hops along a route and periodically exchange information on the hop count with their neighbors.

|  |  |  |
| --- | --- | --- |
|  |  | distance vector |
|  |  | indirect |
|  |  | decentralized |
|  |  | circuitous |
|  |  | link state |

A

Select all of the alternatives below that describe an action taken to address IP address exhaustion.

|  |  |  |
| --- | --- | --- |
|  |  | Giving block A addresses to medium sized organizations |
|  |  | Changing routing protocols |
|  |  | Development of a new version of IP |
|  |  | When block of addresses were distributed, fewer were given out and some large class A blocks were re-claimed |
|  |  | The introduction of a private addressing scheme |

Routing between autonomous systems is called \_\_\_\_\_\_\_ routing.

|  |  |  |
| --- | --- | --- |
|  |  | anterior |
|  |  | posterior |
|  |  | intra |
|  |  | exterior |
|  |  | interior |

D

How many unique identifiers would a 12-bit address field provide? Include any broadcast and network addresses identifiers in your calculation.

|  |  |  |
| --- | --- | --- |
|  |  | 12 |
|  |  | None of the other answers are correct |
|  |  | 1,024 |
|  |  | 4,096 |
|  |  | 24 |

Assume that a network interface card is configured as follows:   
IP Address: 192.168.43.3   
Subnet Mask: 255.255.255.248   
Select the subnet-directed broadcast address from the alternatives below.

|  |  |  |
| --- | --- | --- |
|  |  | 192.168.43.255 |
|  |  | 192.168.43.7 |
|  |  | 192.168.43.0 |
|  |  | 192.168.43.248 |
|  |  | None of the other answers are correct |

Select all statements that correctly identify differences between TCP and UDP.

|  |  |  |
| --- | --- | --- |
|  |  | TCP has fields for source and destination ports and UDP does not. |
|  |  | TCP segments have bits for error detection, UDP does not have error detection. |
|  |  | TCP segments have bits to track sequences of packets, UDP datagrams to not track packet sequences. |
|  |  | UDP is connectionless while TCP is connection based. |
|  |  | TCP segments are typically faster than UDP datagrams. |