* **Question 1**

2.125 out of 2.5 points

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| --- | --- | --- | --- | --- |
|  |  | | | |
|  | Select all statements that are valid ways to improve security in WLANs. |  |  |  |
| |  |  | | --- | --- | | Selected Answers: | Correct  Provide a list of the MAC addresses of trusted devices to the wireless access points on the network, and instruct the access point to limit connections to only those trusted devices. | |  | Incorrect  Set the wireless access points on the network to periodically drop connections. | |  | Correct  Require that devices authenticate in order to connect to the wireless access points on the network. | |  | Correct  Encrypt the messages using encryption algorithms with long keys. | | Answers: | Correct  Provide a list of the MAC addresses of trusted devices to the wireless access points on the network, and instruct the access point to limit connections to only those trusted devices. | |  | Set the wireless access points on the network to periodically drop connections. | |  | Correct  Require that devices authenticate in order to connect to the wireless access points on the network. | |  | Correct  Encrypt the messages using encryption algorithms with long keys. | |  |  |  |

* **Question 2**

2.5 out of 2.5 points

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|  | The use of computer analysis techniques to gather evidence for criminal and/or civil trials is known as: |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correctb.  computer forensics | | Answers: | a.  misuse detection | |  | Correctb.  computer forensics | |  | c.  a Trojan horse | |  | d.  tunneling | |  | e.  sniffing | |  |  |  |

* **Question 3**

0 out of 2.5 points

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|  |  | | | |
|  | SONET and SDH are both Optical standards which : |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Incorrect  Both use the same basic Laser for transmission. | | Answers: | Are not compatible when connected together. | |  | Both use the same basic Laser for transmission. | |  | Are completely incompatible standards. | |  | Correct  None of the above. | |  |  |  |

* **Question 4**

1 out of 2.5 points

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|  |  | | | |
|  | Select all statements that correctly describe symmetric encryption. |  |  |  |
| |  |  | | --- | --- | | Selected Answers: | Correcta.  Symmetrically encrypting data is generally faster than assymetrically encrypting the data. | |  | Incorrectb.  In modern times, symmetric encryption is generally considered insecure and is avoided if possible. | |  | Incorrectc.  Symmetric encryption is not suitable for large quanitities of data. | |  | Incorrectd.  Symmetric encryption is not suitable for encrypting small quantities of data. | |  | Incorrecte.  Symmetric encryption makes use of a private and public key. | | Answers: | Correcta.  Symmetrically encrypting data is generally faster than assymetrically encrypting the data. | |  | b.  In modern times, symmetric encryption is generally considered insecure and is avoided if possible. | |  | c.  Symmetric encryption is not suitable for large quanitities of data. | |  | d.  Symmetric encryption is not suitable for encrypting small quantities of data. | |  | e.  Symmetric encryption makes use of a private and public key. | |  |  |  |

* **Question 5**

0 out of 2.5 points

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|  |  | | | |
|  | Ethernet is considered to be a Constant Bit Rate Service. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Incorrect  Yes | | Answers: | Yes | |  | Correct  No | |  | Not Really. | |  | Ethernet is Adaptive Bit Rate by design. | |  |  |  |

* **Question 6**

0 out of 2.5 points

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|  |  | | | |
|  | Select all of the Multiplexing statements that are true. |  |  |  |
| |  |  | | --- | --- | | Selected Answers: | Incorrect  DSL Requires Time Division Multiplexing to operate. | |  | Incorrect  fractional T-1 networks use 1.544 Mhz for multiplexing | | Answers: | DSL Requires Time Division Multiplexing to operate. | |  | Frequency division Multiplexing uses 5 Khz channels for each customer line. | |  | SONET = Synchronized Orthogonal NETworking | |  | Correct  FDM is better suited for Analog than TDM multiplexing. | |  | fractional T-1 networks use 1.544 Mhz for multiplexing | |  |  |  |

* **Question 7**

1 out of 2.5 points

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|  |  | | | |
|  | Select all statements that correctly describe contention on a network. |  |  |  |
| |  |  | | --- | --- | | Selected Answers: | Correcta.  Computers wait until the circuit is free before they send data. | |  | Incorrectb.  One computer starts the poll and passes it to the next computer on the multipoint circuit. | |  | Incorrectc.  There is never a chance for "collision," or two computers trying to send data at the same time. | |  | Incorrectd.  The front end processor must wait for a response from the polled client or terminal. | |  | Incorrecte.  The server or front end processor works consecutively through a list of clients to determine who should have access to the media. | | Answers: | Correcta.  Computers wait until the circuit is free before they send data. | |  | b.  One computer starts the poll and passes it to the next computer on the multipoint circuit. | |  | c.  There is never a chance for "collision," or two computers trying to send data at the same time. | |  | d.  The front end processor must wait for a response from the polled client or terminal. | |  | e.  The server or front end processor works consecutively through a list of clients to determine who should have access to the media. | |  |  |  |

* **Question 8**

2.5 out of 2.5 points

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|  |  | | | |
|  | \_\_\_\_\_\_\_\_\_\_\_\_ is a situation in which a hacker attempts to disrupt the network by sending messages to the network that prevents normal users' messages from being processed. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correct  A denial-of-service attack | | Answers: | Correct  A denial-of-service attack | |  | A service level agreement | |  | a Destructive Denial of Service Attack { DDOS } | |  | Spamming | |  | Scamming | |  |  |  |

* **Question 9**

2.5 out of 2.5 points

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|  | With a virtual private network, users create permanent virtual circuits through the Internet called: |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correct  tunnels. | | Answers: | Paths. | |  | Circuits. | |  | Correct  tunnels. | |  | clouds. | |  | rings. | |  |  |  |

* **Question 10**

2.5 out of 2.5 points

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|  | Select all statements that correctly describe switched backbone networks. |  |  |  |
| |  |  | | --- | --- | | Selected Answers: | Correct  Broadcast messages (such as ARP broadcasts) are sent to every single computer in the same collision domain. | |  | Correct  Switches are less expensive and require less management than routers. | | Answers: | Correct  Broadcast messages (such as ARP broadcasts) are sent to every single computer in the same collision domain. | |  | Switching takes more time than routing, so switched backbone networks can sometimes be slower than routed backbone networks. | |  | Switched backbones move packets along the backbone on the basis of their network link layer address (i.e., layer-3 address). | |  | Correct  Switches are less expensive and require less management than routers. | |  |  |  |

* **Question 11**

2.5 out of 2.5 points

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|  |  | | | |
|  | The ability to transmit in both directions, but only in one direction at a time is an example of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ transmission. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correct  half-duplex | | Answers: | simplex | |  | full-duplex | |  | Correct  half-duplex | |  | digital | |  | analog | |  |  |  |

* **Question 12**

0 out of 2.5 points

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|  |  | | | |
|  | Select all answers that are reasons why Fiber Optics might be the preferred transmission medium. |  |  |  |
| |  |  | | --- | --- | | Selected Answers: | Incorrect  Cost | | Answers: | Cost | |  | Simplicity of installation | |  | Low Data Rates. | |  | Flexible Wavelength manipulation. | |  | Correct  None of the above. | |  |  |  |

* **Question 13**

2.5 out of 2.5 points

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|  |  | | | |
|  | Select all statements that correctly describe routed backbones. |  |  |  |
| |  |  | | --- | --- | | Selected Answers: | Correct  Routed backbones break the network into separate subnets. | |  | Correct  Routed backbones move packets along the backbone on the basis of their network layer address (i.e., layer-3 address). | | Answers: | Broadcast messages are sent to every single computer in the network. | |  | Routers are less expensive and require less management than switches. | |  | Routing takes less time than switching, so routed backbone networks can sometimes be faster than switched backbone networks. | |  | Correct  Routed backbones break the network into separate subnets. | |  | Correct  Routed backbones move packets along the backbone on the basis of their network layer address (i.e., layer-3 address). | |  |  |  |

* **Question 14**

2.5 out of 2.5 points

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|  | SNMP is a protocol used between: |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correctc.  network management software tools and hardware devices. | | Answers: | a.  different ISPs. | |  | b.  the network layer and the transport layer. | |  | Correctc.  network management software tools and hardware devices. | |  | d.  None of the other answers are correct. | |  | e.  e-mail clients and servers. | |  |  |  |

* **Question 15**

2.5 out of 2.5 points

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| --- | --- | --- | --- | --- |
|  |  | | | |
|  | A high-latency device: |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correctc.  processes messages more slowly than low-latency devices. | | Answers: | a.  None of the other answers are correct. | |  | b.  typically runs at wire speed. | |  | Correctc.  processes messages more slowly than low-latency devices. | |  | d.  is generally more expensive than a low-latency device. | |  | e.  processes messages more quickly than low-latency devices. | |  |  |  |

* **Question 16**

1.25 out of 2.5 points

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|  | Select all statements that correctly apply: |  |  |  |
| |  |  | | --- | --- | | Selected Answers: | Correct  DWDM utilizes different wavelengths spaced on a grid for transmission. | | Answers: | Correct  Both MAN and WAN are often designed with Optical Circuits . | |  | Correct  DWDM utilizes different wavelengths spaced on a grid for transmission. | |  | Frame relay services are often deployed in WAN environments. | |  | T-carrier services are a type of packet-switched service used in MANs. | |  |  |  |

* **Question 17**

2.5 out of 2.5 points

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|  |  | | | |
|  | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is defined as the total number of information bits divided by the total number of bits in the transmission. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correctc.  Transmission efficiency | | Answers: | a.  Asynchronous rate | |  | b.  Protocol percentage | |  | Correctc.  Transmission efficiency | |  | d.  Throughput | |  | e.  Transmission Rate of Information Bits | |  |  |  |

* **Question 18**

2.5 out of 2.5 points

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|  | In a \_\_\_\_\_\_\_\_\_, more than one data bit is changed by the error-causing condition. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correctd.  burst error | | Answers: | a.  Trellis-coded modulation | |  | b.  uniform distribution | |  | c.  data rate shift | |  | Correctd.  burst error | |  | e.  amplitude key shift | |  |  |  |

* **Question 19**

2.5 out of 2.5 points

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|  |  | | | |
|  | DSL data traffic from a customer's premises is sent to a \_\_\_\_\_\_\_\_\_\_ which is located at the local carrier's end office. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correctd.  DSLAM | | Answers: | a.  modem | |  | b.  NIC | |  | c.  codec | |  | Correctd.  DSLAM | |  | e.  ATM | |  |  |  |

* **Question 20**

2.5 out of 2.5 points

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|  | If the highest frequency of a circuit is 10 kHz and the lowest frequency is 800 Hz, the bandwidth available for this circuit is: |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correcte.  9200 Hz | | Answers: | a.  8 kHz | |  | b.  790 kHz | |  | c.  790 Hz | |  | d.  4600 Hz | |  | Correcte.  9200 Hz | |  |  |  |

* **Question 21**

0.83332 out of 2.5 points

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|  | Select all statements that correctly describe switched Ethernet. |  |  |  |
| |  |  | | --- | --- | | Selected Answers: | Correctb.  Switched Ethernet networks essentially provide point-to-point connections between network devices/computers. | | Answers: | a.  Switched Ethernet has a higher probability of collisions when compared to shared-circuit (traditional) Ethernet. | |  | Correctb.  Switched Ethernet networks essentially provide point-to-point connections between network devices/computers. | |  | Correctc.  Switched Ethernet uses forwarding tables in which entries are learned over time. | |  | Correctd.  Switched Ethernet networks use a switches instead of hubs. | |  |  |  |

* **Question 22**

2.125 out of 2.5 points

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|  | Select all statements that correctly describe alarm storms as they relate to network management and design. |  |  |  |
| |  |  | | --- | --- | | Selected Answers: | Correct  Some system management software reduces or eliminates alarm storms by diagnosing patterns to determine the underlying source of the problem. | |  | Incorrect  Because a human being is more intelligent than software, it is usually better to allow the network manager to determine the root cause of a problem, than to have the software perform this same analysis. | |  | Correct  Alarm storms make it difficult to determine the underlying source of a problem. | |  | Correct  An example of an alarm storm is when the failure of one device causes warning messages regarding that device and all of the other devices which depend on that device. | | Answers: | Correct  Some system management software reduces or eliminates alarm storms by diagnosing patterns to determine the underlying source of the problem. | |  | Because a human being is more intelligent than software, it is usually better to allow the network manager to determine the root cause of a problem, than to have the software perform this same analysis. | |  | Correct  Alarm storms make it difficult to determine the underlying source of a problem. | |  | Correct  An example of an alarm storm is when the failure of one device causes warning messages regarding that device and all of the other devices which depend on that device. | |  |  |  |

* **Question 23**

2.5 out of 2.5 points

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|  |  | | | |
|  | If the bandwidth of a signal is doubled its corresponding data rate will be \_\_\_\_\_\_\_\_\_\_\_\_\_? |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correctd.  doubled | | Answers: | a.  the same | |  | b.  quadrupled | |  | c.  none of these | |  | Correctd.  doubled | |  | e.  cut in half | |  |  |  |

* **Question 24**

2.5 out of 2.5 points

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|  | A \_\_\_\_\_\_\_\_\_\_\_ assigns levels of risk to various threats to network security by comparing the nature of the threats to the controls designed to reduce them. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correctc.  risk assessment | | Answers: | a.  control test plan | |  | b.  backplane | |  | Correctc.  risk assessment | |  | d.  control verification worksheet | |  | e.  mitigating control factor analysis | |  |  |  |

* **Question 25**

2.5 out of 2.5 points

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| --- | --- | --- | --- | --- |
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|  | A "thick client" architecture approach: |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correctd.  places all or almost all of the application logic on the client. | | Answers: | a.  places all or almost all of the application logic on the server. | |  | b.  is always a two-tier network architecture. | |  | c.  is always an n-tiered architecture. | |  | Correctd.  places all or almost all of the application logic on the client. | |  | e.  refers to the size of the cable connecting the clients to the network. | |  |  |  |

* **Question 26**

2.5 out of 2.5 points

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|  | CSMA/CA is an acronym for: |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correcte.  Carrier Sense Multiple Access with Collision Avoidance. | | Answers: | a.  Carrier Sense Multiple Access with Collision Acknowledgment. | |  | b.  Carrier Sense Multiple Acknowledgment with Collision Avoidance. | |  | c.  Carrier Sensory Multiple Access without Collision Acknowledgment. | |  | d.  Carrier Sense Mode Access with Carrier Avoidance. | |  | Correcte.  Carrier Sense Multiple Access with Collision Avoidance. | |  |  |  |

* **Question 27**

2.5 out of 2.5 points

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|  | When a network is using dynamic addressing, network layer addresses are assigned automatically to each computer that connects to the network. The most common standard for dynamic addressing is: |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correctb.  DHCP | | Answers: | a.  UDP | |  | Correctb.  DHCP | |  | c.  TCP/IP | |  | d.  DNS | |  | e.  ARP | |  |  |  |

* **Question 28**

2.5 out of 2.5 points

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|  | When a computer inside an organization using a NAT firewall attempts to communicate with a computer on the Internet, the NAT firewall: |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correctc.  changes the organization's internal source IP address in the outgoing IP packet. | | Answers: | a.  None of the other answers are correct. | |  | b.  changes the destination IP address in the outgoing IP packet. | |  | Correctc.  changes the organization's internal source IP address in the outgoing IP packet. | |  | d.  changes only the port numbers in the outgoing IP packet. | |  | e.  changes both the source and the destination IP addresses in the outgoing IP packet. | |  |  |  |

* **Question 29**

0 out of 2.5 points

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| --- | --- | --- | --- | --- |
|  |  | | | |
|  | With Quality of Service (QoS) routing: |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Incorrectd.  e-mail messages would typically receive a higher priority than videoconferencing because people need to see their email immediately. | | Answers: | a.  a packet of videoconferencing images would be routed on a different circuit than an email message. | |  | Correctb.  different classes of services are defined, each with different priorities. | |  | c.  All of the other answers are correct. | |  | d.  e-mail messages would typically receive a higher priority than videoconferencing because people need to see their email immediately. | |  |  |  |

* **Question 30**

1.66675 out of 2.5 points

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| --- | --- | --- | --- | --- |
|  |  | | | |
|  | Select all statements that correctly describe Virtual Local Area Networks (VLANs). |  |  |  |
| |  |  | | --- | --- | | Selected Answers: | Correct  VLANs provide the ability to prioritize traffic through a priority code based on the IEEE 802.1q standard in the VLAN tag. | |  | Correct  VLANs allow designers to put computers from different geographic locations in the same subnet. | | Answers: | Managing broadcast traffic is more difficult with VLANs. | |  | Correct  VLANs provide the ability to prioritize traffic through a priority code based on the IEEE 802.1q standard in the VLAN tag. | |  | Correct  VLANs assign computers to subnets through special software on a VLAN switch. | |  | Correct  VLANs allow designers to put computers from different geographic locations in the same subnet. | |  |  |  |