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Grade 0.00 out of 100.00

Question 1

Not answered

Marked out of 2.00

What is the size of the EtherType field in the Ethernet frame header?

- ☐ a. 4 bytes (32 bits)
- ☐ b. 1 byte (8 bits)
- ☐ c. The size of the EtherType field varies depending on the specific Ethernet frame being used.
- ☐ d. 6 bytes (48 bits)
- ☐ e. 2 bytes (16 bits)
- ☐ f. 8 bytes (64 bits)

The correct answer is:

2 bytes (16 bits)

Question 2

Not answered

Marked out of 2.00

Which of the following protocols is used to provide secure remote access to a network?

- ☐ a. SMTP
- ☐ b. Telnet
- ☐ c. DNS
- ☐ d. HTTP
- ☐ e. SSH
- ☐ f. FTP

The correct answer is:

SSH

Question 3

Not answered

Marked out of 2.00

What is the subnet mask for the IP address 192.168.1.10 with a class C address?

- ☐ a. 192.168.0.0
- ☐ b. 255.0.0.0
- ☐ c. 255.255.0.0
- ☐ d. 192.168.1.0
- ☐ e. 255.255.255.255
- ☐ f. 255.255.255.0

The correct answer is:

255.255.255.0

Question 4

Not answered

Marked out of 2.00

Which cable type is used to connect a computer to a switch?

- ☐ a. Light optic cable
- ☐ b. RJ-45 cable
- ☐ c. RG-6 cable
- ☐ d. FTP cable
- ☐ e. UTP cable
- ☐ f. Coaxial cable

The correct answer is:

UTP cable

Question 5

Not answered

Marked out of 2.00

Which layer of the OSI model is responsible for routing and forwarding data between networks?

- ☐ a. Application layer
- ☐ b. Physical layer
- ☐ c. Network layer
- ☐ d. Data link layer
- ☐ e. Transport layer
- ☐ f. Presentation layer

The correct answer is:

Network layer

Question 6

Not answered

Marked out of 2.00

Which protocol is used to transfer files between computers on a network?

- ☐ a. DNS
- ☐ b. DHCP
- ☐ c. SMTP
- ☐ d. FTP
- ☐ e. SNMP
- ☐ f. HTTP

The correct answer is:

FTP

Question 7

Not answered

Marked out of 2.00

Which network topology connects all devices in a circular pattern?

- ☐ a. Hybrid
- ☐ b. Tree
- ☐ c. Star
- ☐ d. Ring
- ☐ e. Mesh
- ☐ f. Bus

The correct answer is:

Ring

Question 8

Not answered

Marked out of 2.00

Which of the following terms describes a communication technology that enables multiple nodes to transmit data simultaneously on the same medium?

- ☐ a. Collisions
- ☐ b. Duplexing
- ☐ c. Packet switching
- ☐ d. Circuit switching
- ☐ e. Broadcast switching
- ☐ f. Half-duplex

The correct answer is:

Duplexing

Question 9

Not answered

Marked out of 2.00

Which of the following routing protocols is classified as a link-state protocol? (choose two)

- ☐ a. RIPv2
- ☐ b. EIGRP
- ☐ c. BGP
- ☐ d. OSPF
- ☐ e. IS-IS
- ☐ f. RIP

The correct answers are:

OSPF,

IS-IS

Question 10

Not answered

Marked out of 2.00

Which of the following network devices operates at the Data Link layer of the OSI model?

- ☐ a. Gateway
- ☐ b. Switch
- ☐ c. Hub
- ☐ d. Firewall
- ☐ e. Load balancer
- ☐ f. Router

The correct answer is:

Switch

Question 11

Not answered

Marked out of 2.00

Which of the following protocols is used to synchronize clocks on network devices?

- ☐ a. DNS
- ☐ b. NTP
- ☐ c. ARP
- ☐ d. FTP
- ☐ e. SNMP
- ☐ f. DHCP

The correct answer is:

NTP

Question 12

Not answered

Marked out of 2.00

The fragment-free switching method reads the first [...] before forwarding

- ☐ a. 16 bytes
- ☐ b. 4 bytes
- ☐ c. 2 bytes
- ☐ d. 32 bytes
- ☐ e. 64 bytes
- ☐ f. 128 bytes

The correct answer is:

64 bytes

Question 13

Not answered

Marked out of 2.00

Which of the following statements best describes the purpose of the Transport layer of the OSI model?

- ☐ a. To provide physical connectivity to the network
- ☐ b. To ensure reliable data delivery
- ☐ c. To manage network access and security
- ☐ d. To route data between networks
- ☐ e. To encode and decode data for transmission
- ☐ f. To translate data between different formats

The correct answer is:

To ensure reliable data delivery

Question 14

Not answered

Marked out of 2.00

Which of the following routing metrics measures the number of routers a packet must pass through to reach its destination?

- ☐ a. Bandwidth
- ☐ b. Hop count
- ☐ c. MTU
- ☐ d. Reliability
- ☐ e. Delay
- ☐ f. Load

The correct answer is:

Hop count

Question 15

Not answered

Marked out of 2.00

Which of the following network topologies connects each node to a central point?

- ☐ a. Star
- ☐ b. Ring
- ☐ c. Mesh
- ☐ d. Hybrid
- ☐ e. Bus
- ☐ f. None of the above

The correct answer is:

Star

Question 16

Not answered

Marked out of 2.00

Which of the following IP addresses is a valid private address range that can be used on an internal network?

- ☐ a. 200.25.50.100
- ☐ b. 192.168.255.255
- ☐ c. 12.56.78.90
- ☐ d. 224.0.0.1
- ☐ e. 172.16.0.0
- ☐ f. 255.255.255.255

The correct answer is:

172.16.0.0

Question 17

Not answered

Marked out of 2.00

Which of the following commands is used to display the routing table on a Cisco router?

- ☐ a. ipconfig
- ☐ b. ping
- ☐ c. netstat
- ☐ d. traceroute
- ☐ e. show ip route
- ☐ f. ip route

The correct answer is:
show ip route

Question 18

Not answered

Marked out of 2.00

Which of the following network devices is used to filter traffic based on MAC addresses?

- ☐ a. Switch
- ☐ b. Gateway
- ☐ c. Load balancer
- ☐ d. Firewall
- ☐ e. Hub
- ☐ f. Router

The correct answer is:
Switch

Question 19

Not answered

Marked out of 2.00

What is the main purpose of VLANs?

- ☐ a. To improve network security
- ☐ b. To extend the network
- ☐ c. To reduce network congestion
- ☐ d. To increase network performance
- ☐ e. To connect devices wirelessly
- ☐ f. To isolate network traffic

The correct answer is:

To isolate network traffic

Question 20

Not answered

Marked out of 2.00

What is the main purpose of a router?

- ☐ a. To connect different networks
- ☐ b. To filter network traffic
- ☐ c. To connect devices on the same network
- ☐ d. To connect wireless devices
- ☐ e. To extend a network
- ☐ f. To share an Internet connection

The correct answer is:

To connect different networks

Question 21

Not answered

Marked out of 2.00

What is the default administrative distance for OSPF?

- ☐ a. 130
- ☐ b. 100
- ☐ c. 110
- ☐ d. 90
- ☐ e. 140
- ☐ f. 120

The correct answer is:
110

Question 22

Not answered

Marked out of 2.00

Which OSI layer is responsible for establishing, maintaining, and terminating sessions?

- ☐ a. Application layer
- ☐ b. Presentation layer
- ☐ c. Data link layer
- ☐ d. Transport layer
- ☐ e. Session layer
- ☐ f. Network layer

The correct answer is:
Session layer

Question 23

Not answered

Marked out of 2.00

What is the purpose of a crossover cable?

- ☐ a. To provide power over Ethernet (PoE) to a device
- ☐ b. To connect a computer to a switch or hub
- ☐ c. To extend the distance of a network connection
- ☐ d. A crossover cable serves no practical purpose in modern networking.
- ☐ e. To connect two different types of devices (e.g. Ethernet and Token Ring)
- ☐ f. To connect two computers directly together

The correct answer is:

To connect two computers directly together

Question 24

Not answered

Marked out of 2.00

What is the main purpose of a firewall?

- ☐ a. To improve network security
- ☐ b. To connect wireless devices
- ☐ c. To filter network traffic
- ☐ d. To connect devices on the same network
- ☐ e. To share an Internet connection
- ☐ f. To extend a network

The correct answer is:

To improve network security

Question 25

Not answered

Marked out of 2.00

What is the maximum length of a UTP cable segment in a LAN?

- ☐ a. 300 meters
- ☐ b. 150 meters
- ☐ c. 50 meters
- ☐ d. 250 meters
- ☐ e. 200 meters
- ☐ f. 100 meters

The correct answer is:
100 meters

Question 26

Not answered

Marked out of 2.00

Which protocol is used by email clients to retrieve messages from a mail server?

- ☐ a. SNMP
- ☐ b. SMTP
- ☐ c. HTTP
- ☐ d. FTP
- ☐ e. POP3
- ☐ f. Telnet

The correct answer is:
POP3

Question 27

Not answered

Marked out of 2.00

Which protocol is used by web servers to serve content to clients?

- ☐ a. NTP
- ☐ b. Telnet
- ☐ c. SMTP
- ☐ d. HTTP
- ☐ e. SNMP
- ☐ f. SSH

The correct answer is:

HTTP

Question 28

Not answered

Marked out of 2.00

What is the main purpose of EIGRP?

- ☐ a. To provide dynamic routing in large networks
- ☐ b. To improve network performance
- ☐ c. To provide access control for network resources
- ☐ d. To transmit voice and video over IP networks
- ☐ e. To manage network devices remotely
- ☐ f. To secure network traffic

The correct answer is:

To improve network performance

Question 29

Not answered

Marked out of 2.00

What is the maximum number of hosts that can be assigned to a subnet with a subnet mask of 255.255.255.224?

- ☐ a. 14
- ☐ b. 62
- ☐ c. 64
- ☐ d. 30
- ☐ e. 32
- ☐ f. 16

The correct answer is:

30

Question 30

Not answered

Marked out of 2.00

Which command is used to configure a switch port to operate as an access port?

- ☐ a. interface trunk vlan
- ☐ b. switchport access vlan
- ☐ c. interface access vlan
- ☐ d. switchport mode trunk
- ☐ e. switchport mode access
- ☐ f. switchport trunk vlan

The correct answer is:

switchport mode access

Question 31

Not answered

Marked out of 2.00

Which routing protocol uses link-state packets to share routing information between routers?

- ☐ a. VTP
- ☐ b. RIP
- ☐ c. OSPF
- ☐ d. IS-IS
- ☐ e. EIGRP
- ☐ f. BGP

The correct answer is:

OSPF

Question 32

Not answered

Marked out of 2.00

What is the main purpose of the Spanning Tree Protocol (STP)?

- ☐ a. To improve network performance by load balancing traffic
- ☐ b. To segment the network into multiple broadcast domains
- ☐ c. To prevent network loops in redundant switch topologies
- ☐ d. To provide secure remote access to the network
- ☐ e. To provide redundancy for critical network devices
- ☐ f. To configure VLANs on a switch

The correct answer is:

To prevent network loops in redundant switch topologies

Question 33

Not answered

Marked out of 2.00

Which protocol is used to translate private IP addresses to public IP addresses for communication over the Internet?

- ☐ a. DHCP
- ☐ b. SNMP
- ☐ c. SMTP
- ☐ d. DNS
- ☐ e. FTP
- ☐ f. NAT

The correct answer is:

NAT

Question 34

Not answered

Marked out of 2.00

What is the purpose of the Time-to-Live (TTL) field in the IPv4 header?

- ☐ a. To determine the maximum size of the packet in bytes
- ☐ b. To ensure that the packet is received by the correct recipient
- ☐ c. To specify the destination IP address of the packet
- ☐ d. To encrypt the contents of the packet for secure transmission
- ☐ e. To identify the source IP address of the packet
- ☐ f. To limit the number of hops a packet can take through a network

The correct answer is:

To limit the number of hops a packet can take through a network

Question 35

Not answered

Marked out of 2.00

Which OSI layer is responsible for error detection and recovery?

- ☐ a. Data link layer
- ☐ b. Session layer
- ☐ c. Presentation layer
- ☐ d. Network layer
- ☐ e. Transport layer
- ☐ f. Application layer

The correct answer is:

Transport layer

Question 36

Not answered

Marked out of 2.00

What is the main purpose of a subnet mask?

- ☐ a. To differentiate between public and private IP addresses
- ☐ b. To specify the network address of a device
- ☐ c. To identify the number of hosts in a network
- ☐ d. To specify the broadcast address of a device
- ☐ e. To identify the IP address of a device
- ☐ f. To identify the number of subnets in a network

The correct answer is:

To identify the number of hosts in a network

Question 37

Not answered

Marked out of 2.00

Which network topology connects all devices in a linear sequence?

- ☐ a. Point-to-Point topology
- ☐ b. Hybrid topology
- ☐ c. Bus topology
- ☐ d. Star topology
- ☐ e. Mesh topology
- ☐ f. Ring topology

The correct answer is:

Bus topology

Question 38

Not answered

Marked out of 2.00

Which command is used to configure a default gateway on a Cisco router?

- ☐ a. ip address
- ☐ b. router ip-address
- ☐ c. router default-gateway
- ☐ d. ip default-gateway
- ☐ e. ip route
- ☐ f. interface default-gateway

The correct answer is:

ip default-gateway

Question 39

Not answered

Marked out of 2.00

Which command is used to display information about the IP address, subnet mask, and default gateway of a Windows computer?

- ☐ a. ping
- ☐ b. tracert
- ☐ c. ipconfig
- ☐ d. nslookup
- ☐ e. route
- ☐ f. netstat

The correct answer is:

ipconfig

Question 40

Not answered

Marked out of 2.00

What is the purpose of DHCP (Dynamic Host Configuration Protocol)?

- ☐ a. To monitor network performance and troubleshoot issues
- ☐ b. To assign IP addresses to network devices dynamically
- ☐ c. To provide redundancy for critical network devices
- ☐ d. To segment a network into multiple broadcast domains
- ☐ e. To encrypt network traffic for secure communication
- ☐ f. To manage network devices remotely

The correct answer is:

To assign IP addresses to network devices dynamically

Question 41

Not answered

Marked out of 2.00

Which routing protocol is used in a single autonomous system?

- ☐ a. EIGRP
- ☐ b. OSPF
- ☐ c. BGP
- ☐ d. VTP
- ☐ e. IS-IS
- ☐ f. RIP

The correct answer is:

EIGRP

Question 42

Not answered

Marked out of 2.00

Which layer of the OSI model is responsible for routing packets between different networks?

- ☐ a. Presentation layer
- ☐ b. Physical layer
- ☐ c. Network layer
- ☐ d. Transport layer
- ☐ e. Application layer
- ☐ f. Data link layer

The correct answer is:

Network layer

Question 43

Not answered

Marked out of 2.00

Which routing protocol uses path vector algorithm to make routing decisions?

- ☐ a. OSPF
- ☐ b. BGP
- ☐ c. EIGRP
- ☐ d. RIP
- ☐ e. IS-IS
- ☐ f. VTP

The correct answer is:

BGP

Question 44

Not answered

Marked out of 2.00

Which protocol is used to resolve IP addresses to MAC addresses on a local network?

- ☐ a. SNMP
- ☐ b. ARP
- ☐ c. RARP
- ☐ d. DHCP
- ☐ e. DNS
- ☐ f. ICMP

The correct answer is:

ARP

Question 45

Not answered

Marked out of 2.00

Which of the following numbers cannot represent the number of available hosts on a network?

- ☐ a. 1022
- ☐ b. 510
- ☐ c. 254
- ☐ d. 2046
- ☐ e. 126
- ☐ f. 512

The correct answer is:
512

Question 46

Not answered

Marked out of 2.00

What is the purpose of ACLs (Access Control Lists)?

- ☐ a. To segment a network into multiple broadcast domains
- ☐ b. To monitor network performance and troubleshoot issues
- ☐ c. To assign IP addresses to network devices dynamically
- ☐ d. To manage network devices remotely
- ☐ e. To provide redundancy for critical network devices
- ☐ f. To filter network traffic based on source and/or destination IP addresses

The correct answer is:
To filter network traffic based on source and/or destination IP addresses

Question 47

Not answered

Marked out of 2.00

Which type of cable should be used to connect a router to a switch?

- ☐ a. None of the above
- ☐ b. RJ45 cable
- ☐ c. Rollover cable
- ☐ d. Straight-through cable
- ☐ e. Crossover cable
- ☐ f. Coaxial cable

The correct answer is:
Straight-through cable

Question 48

Not answered

Marked out of 2.00

Which of the following protocols is used to dynamically assign IP addresses to hosts on a network?

- ☐ a. DHCP
- ☐ b. HTTP
- ☐ c. FTP
- ☐ d. ICMP
- ☐ e. DNS
- ☐ f. TCP

The correct answer is:
DHCP

Question 49

Not answered

Marked out of 2.00

What is the difference between an access port and a trunk port on a switch, and when would you use each one?

- ☐ a. An access port is used to block unwanted traffic, while a trunk port is used to prioritize certain types of network traffic over others.
- ☐ b. An access port is used to connect an end device to the switch, while a trunk port is used to connect switches together.
- ☐ c. An access port is used to allow traffic for a specific VLAN, while a trunk port carries traffic for multiple VLANs.
- ☐ d. An access port is used to carry traffic for multiple VLANs over a single physical link, while a trunk port is used to connect end devices to the switch.
- ☐ e. An access port is used to forward traffic between VLANs, while a trunk port is used to separate broadcast domains.
- ☐ f. An access port is used to provide secure remote access to a network, while a trunk port is used for device authentication and authorization.

The correct answer is:

An access port is used to allow traffic for a specific VLAN, while a trunk port carries traffic for multiple VLANs.

Question 50

Not answered

Marked out of 2.00

Which statement is true?

- ☐ a. Both DHCPDISCOVER and DHCPREQUEST messages are sent as unicasts to the DHCP server.
- ☐ b. A DHCPDISCOVER message is sent as a unicast to the DHCP server, while a DHCPREQUEST message is sent as a broadcast.
- ☐ c. A DHCPDISCOVER message is sent by the DHCP server to offer an IP address to the client, while a DHCPREQUEST message is sent by the client to confirm acceptance of the offered IP address.
- ☐ d. A DHCPDISCOVER message is sent by the client as a broadcast, while a DHCPREQUEST message is sent as a unicast to the DHCP server.
- ☐ e. An access port is used to connect an end device" a) A DHCPDISCOVER message is sent by the client to release its current IP address, while a DHCPREQUEST message is sent to request a new IP address from the DHCP server.

The correct answer is:

A DHCPDISCOVER message is sent by the client as a broadcast, while a DHCPREQUEST message is sent as a unicast to the DHCP server.