

CompTIA

Exam JK0-023

CompTIA Network+ certification

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[Total Questions: 1112]

Topic break down

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Topic 1, Network Architecture

Question No : 1 - (Topic 1)

Which of the following OSI model layers is used for logical addressing?

- A. Physical
- **B.** Transport
- C. Network
- **D.** Data link

Answer: C

Question No : 2 - (Topic 1)

Which of the following protocols uses port 3389?

- A. IMAP
- B. DHCP
- C. SSH
- D. RDP

Answer: D

Question No: 3 - (Topic 1)

Which of the following is a public class C IP address?

- **A.** 4.2.2.2
- **B.** 194.178.12.54
- **C.** 175.35.46.60
- **D.** 192.168.1.34

Answer: B

Question No: 4 - (Topic 1)

How many collision domains and broadcast domains are present on a 24-port switch with no VLAN assignments?

- A. 1 collision domain, 1 broadcast domain
- B. 1 collision domain, 24 broadcast domains
- C. 24 collision domains, 1 broadcast domain
- D. 24 collision domains, 24 broadcast domains

Answer: C

Question No:5 - (Topic 1)

Lisa, an administrator, attempts to open a web page and sees the following error: 'Error 404: Page not found'. She then uses the ping command and finds that the default gateway cannot be pinged. At which of the following layers does the problem MOST likely reside?

- A. Layer 1
- B. Layer 4
- C. Layer 5
- **D.** Layer 7

Answer: A

Question No : 6 - (Topic 1)

Which of the following is the broadcast address for a network defined as 192.168.0.0/24?

- **A.** 192.168.0.255
- **B.** 192.168.0.1
- **C.** 192.168.0.0
- **D.** 192.168.0.253

Answer: A

Question No: 7 - (Topic 1)

Which of the following DNS records would a web browser access to determine the IP address of an Internet web page?

A. CNAME

- B. A
- C. MX
- D. PTR

Answer: B

Question No:8 - (Topic 1)

Which of the following protocols is MOST commonly associated with VoIP?

- A. LDAP
- **B.** HTTPS
- C. SIP
- D. SCP

Answer: C

Question No: 9 - (Topic 1)

Which of the following should be used when throughput to the destination network is a priority?

- A. MTU
- B. Hop count
- C. Reliability of the path
- **D.** Bandwidth

Answer: D

Question No: 10 - (Topic 1)

An administrator is using a packet sniffer to try to determine what is causing the traffic on the network. The administrator sees a lot of packets on port 25. Which of the following traffic types is MOST likely using port 25?

- A. SMTP
- B. SSH
- C. DNS
- D. TELNET

Answer: A

Question No: 11 - (Topic 1)

A technician finds that the network card is no longer functioning. At which of the following OSI layers is the problem occurring?

- A. Layer 1
- B. Layer 3
- C. Layer 5
- D. Layer 7

Answer: A

Question No: 12 - (Topic 1)

Which of the following TCP/IP model layers combines four OSI model layers?

- A. Application Layer
- **B.** Internet Layer
- C. Transport Layer
- D. Network Interface Layer

Answer: A

Question No: 13 - (Topic 1)

A network administrator notices that load balancing is not working properly on the web cluster as previously configured. In speaking with management, a change to the IP addressing scheme was made yesterday which possibly affected one member of the cluster. Due to the timing of the events, the administrator theorizes that this change caused the problem. Which of the following should the administrator do NEXT?

- **A.** Escalate to the management team
- B. Change the IP address back to its previous state
- C. Test the theory by analyzing logs
- **D.** Create a plan of action to present to management

Answer: C

Question No: 14 - (Topic 1)

Which of the following services are affected by closing the default ports of 80 and 21 via ACL on a company router?

- A. FTP and basic Internet traffic
- B. HTTPS and IMAP traffic
- C. DNS and TELNET traffic
- D. VPN and RDP traffic

Answer: A

Question No: 15 - (Topic 1)

At which of the following layers does HTML operate?

- A. Layer 2
- B. Layer 3
- C. Layer 5
- D. Layer 7

Answer: D

Question No: 16 - (Topic 1)

In order for switching loops to be automatically disabled, which of the following needs to be implemented?

- A. Routing tables
- B. Collision domains
- **C.** Port mirroring
- **D.** Spanning-tree protocol

Answer: D

Question No: 17 - (Topic 1)

Which of the following allows for groups of ports on the same switch to operate as a part of different segmented networks?

- A. RIP
- B. STP
- C. VLAN
- D. MTU

Answer: C

Question No: 18 - (Topic 1)

Which of the following is a Class A private IP address?

- A. 4.2.2.2
- **B.** 10.1.1.45
- **C.** 169.254.9.15
- **D.** 192.168.0.100

Answer: B

Question No: 19 - (Topic 1)

The MAC address of a network device is used to communicate at which of the following OSI layers?

- A. Layer 1
- B. Layer 2
- C. Layer 4
- D. Layer 5

Answer: B

Question No: 20 - (Topic 1)

Which of the following DNS records is used in conjunction with 192:168::1:10?

- A. AAAA
- B. MX
- C. TXT
- D. PTR

Answer: A

Question No: 21 - (Topic 1)

Which of the following would be considered a Class C private address?

- **A.** 10.0.0.125
- **B.** 192.168.50.125
- **C.** 192.169.0.132
- **D.** 255.255.255.0

Answer: B

Question No: 22 - (Topic 1)

Lisa, a network technician, has determined that the initial theory of probable cause was incorrect. Which of the following would be the NEXT step in the troubleshooting process?

- **A.** Implement the solution
- B. Establish a plan
- C. Document findings
- **D.** Escalate the issue

Answer: D

Question No: 23 - (Topic 1)

Which of the following routing protocols utilizes the DUAL algorithm for determining best path?

- A. EIGRP
- **B.** RIPv2
- C. OSPF
- D. RIP

Answer: A

Question No: 24 - (Topic 1)

Which of the following would Joe, a technician, use for a service that needs fast communication and is unaffected by packet loss?

- A. UDP
- B. ARP
- C. ICMP
- D. TCP

Answer: A

Question No: 25 - (Topic 1)

IP address based routing occurs on which of the following layers of the OSI model?

- A. Layer 2
- B. Layer 3
- C. Layer 4
- D. Layer 5

Answer: B

Question No: 26 - (Topic 1)

A technician is developing a shortcut sheet for the network to be able to assist in future troubleshooting scenarios. Which of the following should the network devices have to ease manageability efforts?

- A. MAC spoofing
- B. Dynamic IPs
- C. MAC filtering
- **D.** Static IPs

Answer: D

Question No: 27 - (Topic 1)

Zach, a network administrator, is responding to a support ticket. The ticket does not have enough information to determine the problem. Which of the following should Zach perform FIRST before responding to the ticket?

- **A.** Determine if anything has changed.
- **B.** Test a theory to determine a cause.
- **C.** Establish a plan of action to resolve the problem.
- **D.** Escalate the problem if necessary.

Answer: A

Question No: 28 - (Topic 1)

An administrator has added QoS settings to the LAN switches prioritizing RTP. Which of the following systems is the Administrator MOST concerned with in this scenario?

- A. Phone communications
- B. Web site downloads
- **C.** Streaming video clients
- D. Client bittorrent abilities

Answer: A

Question No: 29 - (Topic 1)

A technician has resolved a ticket to fix a user's printer and has verified that the user is able to print with no issues. Which of the following action steps should the technician perform FIRST?

- A. Document findings and outcomes
- **B.** Establish a theory of probably cause
- **C.** Upgrade the printer drivers
- **D.** Close out the service ticket

Answer: A

Question No: 30 - (Topic 1)

Which of the following network devices builds a table of ports to MAC addresses to forward packets only to necessary ports?

- A. Switch
- B. Hub
- C. Router
- **D.** Repeater

Answer: A

Question No: 31 - (Topic 1)

Which of the following is the MOST appropriate to use when routing Internet traffic through multiple ISP connections?

- A. BGP
- B. SNAT
- C. RIP
- D. GPG

Answer: A

Question No: 32 - (Topic 1)

A network technician is troubleshooting a user's connectivity problem, and has determined a probable cause. The technician is at which step in the troubleshooting methodology?

- A. Verify full system functionality
- **B.** Identify the problem
- C. Establish a theory
- **D.** Implement the solution

Answer: C

Question No: 33 - (Topic 1)

Which of the following is a link state routing protocol?

- **A.** RIPv2
- B. BGP
- C. IS-IS
- D. RIP

Answer: C

Question No: 34 - (Topic 1)

A web server that provides shopping cart capabilities for external end users will likely function with which of the following protocols?

- A. HTTPS
- B. POP3
- C. SSH
- D. SMTP

Answer: A

Question No: 35 - (Topic 1)

Which of the following subnet masks would allow for 192.168.0.3 and 192.168.0.240 to be in the same subnet?

- **A.** 255.255.255.0
- **B.** 255.255.255.128
- **C.** 255.255.255.192
- **D.** 255.255.258

Answer: A

Question No : 36 - (Topic 1)

Which of the following is used to prevent Layer 2 switching loops within a local area network?

- A. STP
- B. MTU
- C. EGP

D. IGP

Answer: A

Question No: 37 - (Topic 1)

A user reports they are unable to access a file on a mapped network drive. A technician discovers the server where the file is located did not come back online after last night's power outage and manually powers the server back online. The technician then verifies the user can connect to their file. Which of the following troubleshooting steps should the technician do NEXT?

- **A.** Escalate by following change procedures
- **B.** Establish a plan of action to resolve the problem
- C. Document findings, actions, and outcomes
- D. Question the user

Answer: C

Question No: 38 - (Topic 1)

A network consultant arrives at a customer's site to troubleshoot their email server. The server is running a Linux operating system, but the consultant is only familiar with Windows operating systems. Which of the following troubleshooting steps should the consultant take?

- A. Document findings
- **B.** Identify the problem
- C. Escalate the problem
- D. Establish a plan of action

Answer: C

Question No: 39 - (Topic 1)

Which of the following uses classless subnet masks across a network?

- A. Subnetting
- B. CIDR

- C. Supernetting
- **D.** Summarization

Answer: B

Question No: 40 - (Topic 1)

Kim, a network technician, is troubleshooting a problem and has just established a plan of action to resolve the problem. Which of the following is the NEXT step in the troubleshooting methodology?

- **A.** Verify full system functionality and if applicable implement preventative measures.
- **B.** Implement the solution or escalate as necessary.
- **C.** Document findings, actions, and outcomes.
- **D.** Establish a theory of probable cause (e.g. question the obvious).

Answer: B

Question No: 41 - (Topic 1)

Frame relay occurs at which of the following layers of the OSI model?

- A. Layer 1
- B. Layer 2
- C. Layer 4
- D. Layer 6

Answer: B

Question No: 42 - (Topic 1)

Hubs are differentiated from switches in that between the two, only hubs have:

- A. A single collision domain.
- **B.** A single broadcast domain.
- C. Multiple collision domains.
- **D.** Multiple broadcast domains.

Answer: A

Question No: 43 - (Topic 1)

At which of the following layers of the OSI model does ASCII work?

- A. Session
- **B.** Transport
- **C.** Presentation
- **D.** Application

Answer: C

Question No: 44 - (Topic 1)

Which of the following is the definition of a DNS server?

- **A.** Hosts proprietary business applications
- B. Translates FQDN's to IP addresses
- **C.** Provides network IDS/IPS security
- **D.** Assigns IP addresses to network devices

Answer: B

Question No: 45 - (Topic 1)

Which of the following DNS record types provides the hostname to IP address mapping?

- A. A record
- B. NS record
- C. CNAME record
- D. MX record

Answer: A

Question No: 46 - (Topic 1)

Which of the following is the MAXIMUM hop count for RIP before the network is considered

converged?

A. 1

B. 5

C. 10

D. 15

Answer: D

Question No: 47 - (Topic 1)

A bridge handles frames at which of the following layers of the OSI model?

- A. Network
- B. Session
- C. Transport
- D. Data Link

Answer: D

Question No: 48 - (Topic 1)

Joe, a technician, has identified a problem, established and confirmed a theory, and has attempted to resolve the problem. Joe, however, does not appear to have the rights to make the needed changes. Which of the following should he do NEXT?

- **A.** Re-establish a new theory.
- **B.** Gather more information.
- **C.** Establish a plan of action.
- **D.** Escalate the problem.

Answer: D

Question No: 49 - (Topic 1)

Lisa, a network technician, is attempting to map a FQDN to an internal server at the address of 10.0.0.15 without NAT/PAT. Which of the following is the reason this will ultimately not work?

A. This is a private address which cannot be seen by external users.

- **B.** The address does not have the appropriate subnet mask assigned.
- **C.** This is a public address which can only be seen by internal users.
- **D.** This is a private address which can only be seen by external users.

Answer: A

Question No: 50 - (Topic 1)

Which of the following BEST describes a switch port?

- A. Broadcast domain
- **B.** Distance vector
- C. Link state
- D. Collision domain

Answer: D

Question No: 51 - (Topic 1)

Which of the following uses a 128-bit addressing scheme?

- A. MAC
- B. DHCP
- **C.** IPv4
- **D.** IPv6

Answer: D

Question No: 52 - (Topic 1)

Which of the following would be used to run an instance of a Layer 2 device within an application?

- A. Virtual switch
- **B.** Virtual router
- C. Virtual PBX
- D. NaaS

Answer: A

Question No: 53 - (Topic 1)

Which of the following differentiates a layer 3 switch from a layer 2 switch?

- A. Routing
- **B.** Bridging
- C. Switching
- D. Repeating

Answer: A

Question No: 54 - (Topic 1)

Which of the following are valid hosts for the Private IP Address range 172.16.0.x /23? (Select TWO).

- **A.** 172.16.0.255
- **B.** 172.16.0.0
- **C.** 172.16.1.1
- **D.** 172.16.8.0
- **E.** 172.16.256.255

Answer: A,C

Question No: 55 - (Topic 1)

Which of the following BEST describes how a layer 2 switch functions?

- **A.** Switches packets within the same subnet based on MAC addresses
- **B.** Switches packets between different subnets based on IP addresses
- C. Switches packets between different subnets based on MAC addresses
- **D.** Switches packets within the same subnet based on IP addresses

Answer: A

Question No: 56 - (Topic 1)

Which of the following protocols resolves IP addresses to MAC addresses?

- A. DNS
- B. ARP
- C. RARP
- D. NTP

Answer: B

Question No: 57 - (Topic 1)

Which of the following is the minimum subnet mask to allow 172.16.1.5 and 172.16.4.3 to be on the same subnet?

- **A.** /19
- **B.** /21
- **C**. /22
- **D.** /24

Answer: B

Question No: 58 - (Topic 1)

Multiple networked devices running on the same physical hardware that provide central access to applications and files, where each device runs as a piece of software are known as:

- A. Virtual desktops.
- **B.** Switches.
- C. PBXs.
- **D.** Virtual servers.

Answer: D

Question No: 59 - (Topic 1)

Which of the following protocols are used to view and send mail from a local host off of a remote server? (Select TWO).

- A. TFTP
- **B.** SNMP
- **C.** POP3
- D. IMAP4
- E. SFTP

Answer: C,D

Question No: 60 - (Topic 1)

In which of the following layers of the OSI model would MAC addressing be found?

- A. Network
- **B.** Application
- C. Data Link
- D. Transport

Answer: C

Question No: 61 - (Topic 1)

Which of the following represents the physical address of a network access card?

- **A.** FF01:D2:C4:87::11
- **B.** 00-30-48-83-9B-C8
- C. 08-9D-35-22-L2-34-FF-21
- **D.** 2D1A:C3:0:1C3B:2AD:FF:FEBE:9D3A

Answer: B

Question No: 62 - (Topic 1)

Which of the following virtual components maintains a MAC-to-port forwarding table?

- A. Virtual PBX
- **B.** Virtual desktop
- C. Virtual switch

D. Virtual server

Answer: C

Question No: 63 - (Topic 1)

Which of the following protocols uses port 3389 by default?

- A. RDP
- B. TFTP
- C. IMAP
- **D.** DNS

Answer: A

Question No: 64 - (Topic 1)

DHCP uses which of the following ports by default?

- **A.** 21
- **B**. 23
- **C.** 68
- **D**. 443

Answer: C

Question No: 65 - (Topic 1)

Jeff, a network technician, is concerned about the environmental effects of power consumption and heat from network resources. Limited space is also a concern. Which of the following technologies should be implemented?

- A. Circuit switching
- B. Network address translation
- C. Power over Ethernet
- **D.** Virtual servers

Answer: D

Question No: 66 - (Topic 1)

A company would like their technicians to be able to connect to employee desktops remotely via RDP. Which of the following default port numbers need to be opened on the firewall to support this?

- **A.** 143
- **B.** 443
- **C.** 3389
- **D.** 8080

Answer: C

Question No: 67 - (Topic 1)

Which of the following uses distance vector algorithms to determine the BEST network route to a destination address?

- A. IS-IS
- B. OSPF
- C. BGP
- D. RIP

Answer: D

Question No: 68 - (Topic 1)

A user is unable to open up websites on the Internet from a browser. The administrator determines that the workstation can ping its local gateway, but not the remote web server. At which of the following layers of the OSI model does the problem MOST likely exist?

- A. Data link
- **B.** Network
- C. Session
- **D.** Physical

Answer: B

Question No: 69 - (Topic 1)

A home user states during a basement remodel, one of the workers cut the network cable that goes from the modem to the WAP and nothing else has changed. According to the network troubleshooting methodology, which of the following is the NEXT step?

- **A.** Identify the problem
- B. Question the user
- **C.** Establish a plan of action
- **D.** Establish a theory of probable cause

Answer: C

Question No: 70 - (Topic 1)

Which of the following DNS records would allow for a website to have more than one FQDN?

- A. TXT
- B. PTR
- C. MX
- D. CNAME

Answer: D

Question No: 71 - (Topic 1)

Joe has a small office and is looking to replace his phone system with a lower cost solution that requires minimal in-house support. Which of the following is the BEST choice?

- A. Wide Area Network
- B. NAT
- C. Virtual PBX
- D. Virtual LAN

Answer: C

Question No: 72 - (Topic 1)

Creating a uniform user environment throughout the network can BEST be achieved by using which of the following?

- A. Honeypots
- B. Virtual switches
- C. Virtual PBX
- **D.** Virtual desktops

Answer: D

Question No: 73 - (Topic 1)

If a NIC does not have a link light, there is a failure at which of the following OSI layers?

- A. Physical
- B. Session
- C. Data link
- **D.** Presentation

Answer: A

Question No: 74 - (Topic 1)

Which of the following protocols is used to send time synchronization updates on a given network?

- A. NTP
- B. POP3
- C. DNS
- D. IMAP

Answer: A

Question No: 75 - (Topic 1)

Which of the following is the common port used for IMAP?

- **A.** 25
- **B.** 53
- **C.** 143
- **D.** 443

Answer: C

Question No: 76 - (Topic 1)

Which of the following ports should be allowed through a firewall to allow DNS resolution to occur to an outside DNS server?

- **A.** 20
- **B.** 53
- **C.** 80
- **D.** 3389

Answer: B

Question No: 77 - (Topic 1)

Which of the following protocols is the BEST choice for retrieving email on multiple devices?

- A. IMAP4
- B. SMTP
- C. FTP
- D. SNMPv3

Answer: A

Question No: 78 - (Topic 1)

Which of the following is an example of a Class C address?

- **A.** 10.19.0.79
- **B.** 127.34.8.197
- **C.** 176.96.1.222
- **D.** 192.168.1.105

Answer: D

Question No: 79 - (Topic 1)

Which of the following is an invalid MAC address?

A. AA:CE:58:FD:90:08B. 44:98:3E:F8:33:23C. 56:AD:BX:89:55:54D. 94:9E:FE:EE:8C:DF

Answer: C

Question No: 80 - (Topic 1)

Which of the following are considered unsecure access methods? (Select TWO).

A. FTP

B. IPSec

C. RCP

D. SCP

E. SFTP

Answer: A,C

Question No: 81 - (Topic 1)

Which of the following protocols would Kurt, a technician, use to synchronize local date and time of a client workstation to that of a server?

A. RTP

B. NTP

C. TFTP

D. ARP

Answer: B

Question No: 82 - (Topic 1)

Which of the following protocols resolves IP addresses to MAC addresses?

- A. DNS
- B. ARP
- C. RARP
- D. NTP

Answer: B

Question No: 83 - (Topic 1)

A firewall that operates at Layer 7 of the OSI model is known as a(n):

- A. Circuit gateway.
- **B.** Packet filter.
- C. Application level.
- **D.** Redundant firewall.

Answer: C

Question No: 84 - (Topic 1)

The address 6FFE:FFFF:0000:2F3B:04AC:00FF:FEBE:5C4A is an example of which of the following?

- A. APIPA
- B. MAC
- **C.** IPv4
- D. IPv6

Answer: D

Question No: 85 - (Topic 1)

Which of the following OSI layers BEST describes where an HTTP proxy operates?

A. Transport

- **B.** Application
- **C.** Presentation
- **D.** Session

Answer: B

Question No: 86 - (Topic 1)

Kurt, a user, cannot access any network resources. The technician has determined that the problem is isolated to Kurt, and that there have not been any changes to his workstation or switch port recently. Which of the following steps in the troubleshooting methodology should the technician do NEXT?

- **A.** Establish a plan of action to resolve the problem.
- **B.** Implement preventative measures.
- **C.** Implement the solution or escalate as necessary.
- **D.** Establish a theory of probable cause.

Answer: D

Question No: 87 - (Topic 1)

Which of the following protocols would Lisa, a technician, use to disable switch ports automatically to prevent switching loops?

- A. RIP
- B. OSPF
- C. STP
- D. EGP

Answer: C

Question No: 88 - (Topic 1)

In which of the following layers of the OSI model does the TCP protocol operate?

- A. Session
- **B.** Network
- C. Data link

D. 7	Fransport
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Answer: D

Question No: 89 - (Topic 1)

Which of the following operates at OSI layer 2 to forward traffic based on the MAC address?

- A. Switch
- **B.** Proxy Server
- C. Router
- D. VPN Concentrator

Answer: A

Question No: 90 - (Topic 1)

Which of the following exterior routing protocols uses an algorithm to determine the quickest route to a destination?

- A. RIP
- B. OSPF
- C. BGP
- D. RIPv2

Answer: C

Question No: 91 - (Topic 1)

Data arranged into packets would be on which of the following layers of the OSI model?

- A. Datagram
- **B.** Transport
- **C.** Presentation
- **D.** Network

Answer: D

Question No: 92 - (Topic 1)

Which of the following is used to embed the MAC address of an Ethernet interface in a corresponding IPv6 address?

- A. Subnet
- **B.** IANA prefix
- **C.** EUI-64
- **D.** Site-local

Answer: C

Question No: 93 - (Topic 1)

Which of the following ports are MOST commonly used to interactively configure a networking device? (Select TWO).

- **A.** 21
- **B**. 22
- **C.** 23
- **D.** 53
- **E.** 67

Answer: B,C

Question No: 94 - (Topic 1)

Which of the following uses port 23 by default?

- A. TELNET
- **B.** IMAP
- C. FTP
- D. SNMP

Answer: A

Question No: 95 - (Topic 1)

Which of the following default ports are used with DHCP? (Select TWO).

- **A.** 22
- **B.** 23
- **C.** 53
- **D.** 67
- **E.** 68

Answer: D,E

Question No: 96 - (Topic 1)

Which of the following services do TCP connections provide to application layer protocols? (Select TWO).

- A. Transport services without error recovery
- **B.** Large data size manageability using segmentation
- C. Secure Kerberos password encryption on data
- **D.** Delivery through error recovery
- E. Proxy server authentication

Answer: B,D

Question No: 97 - (Topic 1)

Which of the following is considered a routing metric?

- A. Hop count
- B. QoS
- C. Subnet size
- D. IP address

Answer: A

Question No: 98 - (Topic 1)

Which of the following TCP/IP and OSI model layers retransmits a TCP packet if it is not received successfully at its destination?

- A. The transport OSI model layer and the transport TCP/IP model layer.
- B. The transport OSI model layer and the Internet TCP/IP model layer.
- C. The network OSI model layer and the transport TCP/IP model layer.
- D. The network OSI model layer and the Internet TCP/IP model layer.

Answer: A

Question No: 99 - (Topic 1)

Which of the following protocols is commonly used for VoIP technology?

- A. Telnet
- B. SMTP
- C. SIP
- D. SNMP

Answer: C

Question No: 100 - (Topic 1)

Standards such as JPEG and ASCII operate at which of the following OSI model layers?

- A. Presentation
- B. Data link
- C. Session
- **D.** Application

Answer: A

Question No: 101 - (Topic 1)

A layer 3 switch can move packets between subnets based on which of the following criteria?

- **A.** 802.1q tag
- **B.** Port
- C. Application
- D. IP address

Answer: D

Question No: 102 - (Topic 1)

Which of the following is a reason to use dynamic DNS?

- **A.** The host IP address is not listed in the firewall.
- **B.** The host IP address is assigned by DHCP.
- **C.** Static routes cannot be used on the host network.
- **D.** A third-party certificate is being used.

Answer: B

Question No: 103 - (Topic 1)

A company has been given a Class C address to be utilized for all devices. The company has several subnets and the largest subnet has 15 hosts. Which of the following represents the MINIMUM CIDR notation of this subnet mask?

- **A.** /26
- **B.** /27
- **C.** /28
- **D.** /29

Answer: B

Question No: 104 - (Topic 1)

Which of the following protocols does DNS utilize on port 53?

- A. TCP
- B. FTP
- C. RTP
- D. ICMP

Answer: A

Question No: 105 - (Topic 1)

Which of the following layers of the OSI model maps to the Network Interface layer of the TCP stack? (Select TWO).

- A. Physical
- B. Session
- C. Data Link
- **D.** Network
- **E.** Transport

Answer: A,C

Question No: 106 - (Topic 1)

An administrator has set up a NIPS and connected it to the same switch as the internal firewall interface and the internal router. The device, however, only detects traffic from itself to the firewall or router. Which of the following explains why additional corporate traffic cannot be detected?

- A. The spanning tree protocol is preventing the traffic.
- **B.** Port Mirroring is set up incorrectly.
- **C.** The switch needs to be a layer 3 switch.
- **D.** The traffic is in a classless IP range and not classful IP range.

Answer: B

Question No: 107 - (Topic 1)

Which of the following STP states indicates an inactivated port due to a loop?

- A. Disabled
- **B.** Learning
- **C.** Blocking
- **D.** Forwarding

Answer: C

Question No: 108 - (Topic 1)

A company's database software runs in the cloud. The device hosting the software is an

example of which of the following?

- A. Virtual server
- **B.** Virtual switch
- **C.** Virtual desktop
- **D.** Virtual PBX

Answer: A

Question No: 109 - (Topic 1)

Which of the following ports would have to be allowed through a firewall to allow SNMP traffic to pass on its default port? (Select TWO).

- **A.** 22
- **B**. 23
- **C.** 143
- **D.** 161
- **E.** 162
- **F.** 8080

Answer: D,E

Question No: 110 - (Topic 1)

The protocols that use a three way handshake to transfer information can be found within which layer of the OSI model?

- A. Layer 2
- B. Layer 3
- C. Layer 4
- **D.** Layer 5

Answer: C

Question No: 111 - (Topic 1)

A company is about to install a second network connection with a new ISP. Which of the following routing protocols is the BEST choice?

- A. IS-IS
- B. BGP
- C. OSPF
- D. RIP

Answer: B

Question No: 112 - (Topic 1)

Which of the following ports is the default telnet port?

- **A.** 20
- **B**. 21
- **C**. 22
- **D**. 23

Answer: D

Question No: 113 - (Topic 1)

An administrator has created several virtual machines on the same host server and requires them to each be on separate VLANs. Which of the following should the administrator configure to meet this goal?

- A. Set the VLAN preferences on the host's NIC
- B. Create each VLAN on the host's virtual switch
- C. Change the virtual machine NIC settings from private to bridged
- D. Create each VLAN on the host's gateway router

Answer: B

Question No: 114 - (Topic 1)

For which of the following reasons could a single server's NIC transmit packets from multiple MAC address sources?

- **A.** The server contains several virtual machines and the MAC addresses are from the virtual machines.
- B. The server is hosting a web server and the MAC addresses are from connected

browsers.

- **C.** The server is hosting a proxy server and the MAC addresses are from the connected clients.
- **D.** The server NIC is starting to fail and should be replaced.

Answer: A

Question No: 115 - (Topic 1)

Which of the following network protocols is used to resolve FQDNs to IP addresses?

- A. DNS
- B. FTP
- C. DHCP
- D. APIPA

Answer: A

Question No: 116 - (Topic 1)

Which of the following layers of the OSI model make up the Network Interface layer of the TCP/IP model? (Select TWO).

- A. Application
- **B.** Physical
- C. Presentation
- D. Transport
- E. Data Link
- F. Network

Answer: B,E

Question No: 117 - (Topic 1)

Which of the following DNS records would be queried to locate a company's mail server?

- **A.** A
- B. MX
- C. AAAA

D. CNAME

Answer: B

Question No: 118 - (Topic 1)

The TCP/IP application layer contains which of the following OSI layers?

- **A.** Layers 1,5,6,7
- B. Layers 4,7
- C. Layers 5,6,7
- **D.** Layer 7

Answer: C

Question No: 119 - (Topic 1)

Which of the following DNS record types will be used for mail transfer if the MX record is not found?

- A. CNAME
- B. A
- C. PTR
- D. AAAA

Answer: B

Question No: 120 - (Topic 1)

An IP address is encapsulated at which of the following layers of the OSI model?

- A. Transport
- B. Data link
- C. Network
- **D.** Application

Answer: C

Question No: 121 - (Topic 1)

A technician has narrowed down the cause of a problem to two possible sources. Which of the following should the technician do NEXT?

- **A.** Implement a solution for both causes to be sure all possibilities are covered.
- **B.** Choose the more likely cause and test to confirm.
- C. Establish a plan of action for each.
- **D.** Choose the less likely cause and test to eliminate.

Answer: B

Question No: 122 - (Topic 1)

Which of the following OSI layers performs error detection using a Frame Check Sequence?

- A. Session
- **B.** Transport
- C. Physical
- **D.** Data link

Answer: D

Question No: 123 - (Topic 1)

An administrator notices SMTP traffic is being blocked by the company firewall. Which of the following ports should be opened?

A. 25

B. 53

C. 110

D. 443

Answer: A

Question No: 124 - (Topic 1)

The application layer in the TCP/IP model is comparable to which of the following layers in the OSI model?

- A. Layer 2
- B. Layer 5
- C. Layer 6
- D. Layer 7

Answer: D

Question No: 125 - (Topic 1)

Which of the following is the usual number of bits for the host identifier part of an IPv6 address?

- **A.** 16
- **B.** 32
- **C.** 48
- **D.** 64

Answer: D

Question No: 126 - (Topic 1)

A crossover cable is MOST commonly associated with which of the following layers of the OSI model?

- A. Session
- **B.** Application
- C. Network
- D. Physical

Answer: D

Question No: 127 - (Topic 1)

A user is having difficulty connecting a laptop to the company's network via a wireless connection. The user can connect to the network via a wired NIC. The technician thinks the user's wireless NIC has failed. Which of the following network troubleshooting methodology

steps should the technician perform NEXT?

- **A.** Test the theory to determine the cause.
- **B.** Implement the solution or escalate as necessary.
- **C.** Establish a plan of action to resolve the problem.
- **D.** Re-establish new theory or escalate.

Answer: A

Question No: 128 - (Topic 1)

After Kurt, a technician, has established a plan of action to resolve the problem, which of the following steps should he perform NEXT?

- **A.** Establish a theory of probable cause.
- **B.** Implement preventative measures.
- **C.** Verify full system functionality.
- **D.** Implement the solution or escalate as necessary.

Answer: D

Question No: 129 - (Topic 1)

Which of the following ports would Zach, a technician, need to open on a firewall to allow SSH on the default port?

A. 20

B. 21

C. 22

D. 23

Answer: C

Question No: 130 - (Topic 1)

The APIPA address 169.254.10.123 falls into which of the following class of addresses?

A. A

B. B

C.C

D. D

Answer: B

Question No: 131 - (Topic 1)

Which protocol is represented by the packet capture below?

UDP 0.0.0.0:68 -> 255.255.255.255:67

- A. DHCP
- B. FTP
- C. SNMP
- D. DNS

Answer: A

Question No: 132 - (Topic 1)

A forward lookup zone converts which of the following?

- A. IP addresses to hostnames
- B. Hostnames to IP addresses
- C. MAC addresses to IP addresses
- **D.** IP Addresses to MAC addresses

Answer: B

Question No: 133 - (Topic 1)

A user reports that they are unable to connect to the network. Upon further investigation, a technician notices that the user has an IP address/subnet mask combination of 192.168.204.255/24. The default gateway for the network is 192.168.204.254. Which of the following could the user's IP address be changed to so that they could connect to the network?

- **A.** 192.168.204.0/27
- **B.** 192.168.204.1/27

C. 192.168.204.112/24 **D.** 192.168.204.254/24

Answer: C

Question No: 134 - (Topic 1)

Zach, a network administrator, wants to separate the network into broadcast domains. Which of the following can he use? (Select TWO).

- A. WAPs
- **B.** Routers
- C. Patch panels
- D. Hubs
- E. Bridges
- F. VLANs

Answer: B,F

Question No: 135 - (Topic 1)

At which of the following layers of the OSI model does an unmanaged switch operate?

- A. Layer 1
- B. Layer 2
- C. Layer 3
- D. Layer 4

Answer: B

Question No: 136 - (Topic 1)

A technician has spent most of the day replacing a server running DHCP. Some of the users have begun to call the help desk stating that Internet connection stopped working even after rebooting. Upon investigation, the users' PCs with issues all have IP addresses that start with 169.254.x.x. The technician completes the replacement and powers on the new DHCP server. Which of the following is the BEST way to provide the PCs with issues a new IP address?

- A. Statically assign a legitimate IP address, and then set the PCs' NICs to DHCP
- B. Inform each user to replace 169.254 with 192.168
- **C.** Wait five minutes until the PC resends a DHCP request
- **D.** Run netstat on each PC and then reboot into safe mode

Answer: C

Question No: 137 - (Topic 1)

A user reports intermittent network connectivity from their desktop PC. A technician determines the cause to be a bad wall jack and fixes the jack. Which of the following should the technician do NEXT?

- **A.** Test the theory
- B. Question the user
- **C.** Document the outcome
- **D.** Verify functionality

Answer: D

Question No: 138 - (Topic 1)

Which of the following networking devices can exist at several layers of the OSI model at the same time? (Select TWO).

- A. Switch
- **B.** Cable
- C. Repeater
- **D.** Router
- E. Bridge
- F. Hub

Answer: A,D

Question No: 139 - (Topic 1)

Layers 5, 6, and 7 from the OSI model correspond to which of the following layers of the TCP/IP model?

- A. Transport
- **B.** Application
- C. Internet
- D. Network Interface

Answer: B

Question No: 140 - (Topic 1)

Which of the following port numbers is used for SNMP?

- **A.** 61
- **B.** 151
- **C.** 161
- **D.** 1611

Answer: C

Question No: 141 - (Topic 1)

Which of the following routing protocols can be utilized as both an IGP and EGP?

- A. EIGRP
- B. RIP
- C. IGRP
- D. RIPv2

Answer: A

Question No: 142 - (Topic 1)

After the technician has established a theory of probable cause of a user reported problem, which of the following should the technician do NEXT in the troubleshooting process?

- **A.** Implement the solution to the problem.
- **B.** Establish a plan of action.
- **C.** Identify the problem.
- **D.** Implement preventative measures.

Answer: B

Question No: 143 - (Topic 1)

Which of the following uses types and codes rather than ports?

- A. EIGRP
- B. ICMP
- C. UDP
- D. IPv6

Answer: B

Question No: 144 - (Topic 1)

Which of the following exist at layer three of the OSI model? (Select TWO).

- A. NIC
- B. Switch
- C. Frame
- D. Packet
- E. Router
- F. Cable

Answer: D,E

Question No: 145 - (Topic 1)

At which of the following layers of the OSI model do packets exist?

- A. Network
- B. Session
- C. Data Link
- **D.** Transport

Answer: A

Question No: 146 - (Topic 1)

Which of the following has the LEAST amount of collisions in a domain?

- A. Bridge
- **B.** Hub
- C. Repeater
- D. Switch

Answer: D

Question No: 147 - (Topic 1)

At which layer of the OSI model do MAC addresses operate?

- A. Data Link
- **B.** Network
- **C.** Application
- D. Physical

Answer: A

Question No: 148 - (Topic 1)

Which of the following services would have assigned the IP address 169.254.1.89?

- A. DHCP
- B. APIPA
- C. IDS
- D. DNS

Answer: B

Question No: 149 - (Topic 1)

Which of the following OSI layers is responsible for encrypting HTTPS traffic?

- **A.** 3
- **B**. 4

C. 5 **D.** 6

Answer: D

Question No: 150 - (Topic 1)

When a packet that is entering a switch port is encapsulated, which of the following is the switch performing?

- **A.** 802.1q
- B. Collision avoidance
- **C.** Port mirroring
- D. STP

Answer: A

Question No: 151 - (Topic 1)

Which two layers of the OSI model make up the TCP/IP model Network Interface layer?

- **A.** Application and Transport
- **B.** Transport and Session
- C. Physical and Data Link
- D. Session and Presentation

Answer: C

Question No: 152 - (Topic 1)

Multiprotocol Label Switching (MPLS) operates at which of the following layers of the OSI model? (Select TWO).

- A. Layer 1
- B. Layer 2
- C. Layer 3
- D. Layer 4
- E. Layer 5

Answer: B,C

Question No: 153 - (Topic 1)

Which TCP/IP model layer does the OSI model layer named 'session' respond to?

- A. Application
- **B.** Presentation
- C. Internet
- D. Transport

Answer: A

Question No: 154 - (Topic 1)

Which of the following records allows for reverse DNS lookups?

- A. AAAA
- B. A
- C. PTR
- **D.** CNAME

Answer: C

Question No: 155 - (Topic 1)

Which of the following uses eight groups of characters for addressing?

- A. MAC
- **B.** IPv4
- C. IPv6
- D. DHCP

Answer: C

Question No: 156 - (Topic 1)

Which of the following protocols is Kim, a user, utilizing if no handshake or data reliability are required?

- A. TCP
- B. FTP
- C. TFTP
- D. UDP

Answer: D

Question No: 157 - (Topic 1)

At which layer of the OSI and TCP/IP model would HTTP and FTP be found?

- **A.** Application
- **B.** Network
- C. Session
- D. Data Link

Answer: A

Question No: 158 - (Topic 1)

A technician receives a work order that a user can no longer access any external websites. The user is the only one affected, but can still access websites by IP address. Which of the following is the MOST likely cause?

- **A.** The workstation has been removed from the domain and needs to be re-added in directory services.
- **B.** The workstation is configured to use the IPv4 protocol instead of IPv6.
- C. The workstation is configured with an incorrect IP address of the DNS server.
- **D.** The workstation's DHCP IP address has expired and has assigned itself an APIPA address.

Answer: C

Question No: 159 - (Topic 1)

Which of the following describes the amount of time it takes for a packet to transmit from

one switch to another?

- A. Hop count
- **B.** Latency
- C. MTU limit
- **D.** Distance vector

Answer: B

Question No: 160 - (Topic 1)

Logically separating the ports on a switch without physically separating them can be done using which of the following?

- **A.** Routing tables
- **B.** Hub logic
- **C.** Spanning tree protocol
- D. VLANs

Answer: D

Question No: 161 - (Topic 1)

Which of the following protocols is used by the ping command?

- A. SMTP
- B. ICMP
- C. TFTP
- D. ARP

Answer: B

Question No: 162 - (Topic 1)

Which of the following is used to describe trunking VLANs on a network?

- **A.** 802.11a
- **B.** 802.11i

C. 802.1q **D.** 802.1x

Answer: C

Question No: 163 - (Topic 1)

Which of the following protocols are used to provide accurate time to network devices?

- A. SMTP
- B. FTP
- C. TLS
- D. NTP

Answer: D

Question No: 164 - (Topic 1)

Which of the following protocols would the network administrator use to protect login credentials when accessing a router terminal session?

- A. SCP
- **B.** SNMPv3
- C. SSL
- D. SSH

Answer: D

Question No: 165 - (Topic 1)

Frames are the Protocol Data Unit for which of the following layers of the OSI model?

- A. Layer 1
- B. Layer 2
- C. Layer 3
- D. Layer 4

Answer: B

Question No: 166 - (Topic 1)

STP prevents which of the following problems?

- A. Collision domains
- **B.** Switching loops
- C. Broadcast storms
- **D.** Routing loops

Answer: B

Question No: 167 - (Topic 1)

Which of the following ports would have to be allowed through a firewall for NTP to pass on its default port?

- **A.** 123
- **B.** 143
- **C.** 153
- **D.** 163

Answer: A

Question No: 168 - (Topic 1)

An organization is considering migrating a datacenter to a different operating system. Which of the following could the organization use to try out the new OS before making a wide-scale deployment?

- A. Virtual PBXs
- **B.** Virtual Switches
- C. Virtual Servers
- **D.** Virtual Desktops

Answer: C

Question No: 169 - (Topic 1)

Jeff, a user, can no longer access the accounting file share, but others are still able to access the share. Which of the following would be the FIRST step in troubleshooting the issue?

- **A.** Notify senior management of the issue.
- B. Develop a probable cause theory.
- C. Ask Jeff if anything has changed on the system.
- **D.** Escalate the issue to the vendor.

Answer: C

Question No: 170 - (Topic 1)

The network interface layer of the TCP/IP model corresponds with which of the following layers of the OSI model? (Select TWO).

- A. Transport layer
- **B.** Network layer
- C. Session layer
- D. Physical layer
- E. Presentation layer
- F. Data link layer

Answer: D,F

Question No: 171 - (Topic 1)

Which of the following reside at a minimum of Layer 3 of the OSI model? (Select TWO).

- A. Hub
- B. Switch
- C. MAC address
- D. IP address
- E. Router

Answer: D,E

Question No: 172 - (Topic 1)

A network technician has determined a managed network switch has failed. The technician knows how to install a new switch, but not how to properly configure it. Which of the following troubleshooting steps should the technician take NEXT?

- A. Escalate the problem
- B. Identify potential effects
- C. Test the theory to determine cause
- **D.** Establish a plan of action to resolve the problem

Answer: A

Question No: 173 - (Topic 1)

Which IEEE protocol is used with VLAN technology?

- **A.** 802.11a
- **B.** 802.11b
- **C.** 802.1m
- **D.** 802.1q

Answer: D

Question No: 174 - (Topic 1)

Which of the following is a purpose of a VLAN?

- **A.** Decreases bandwidth on a network
- B. Segments broadcast traffic
- C. Increases port speed
- **D.** Allows another connection to the router

Answer: B

Question No: 175 - (Topic 1)

At which of the following layers do IP addresses exist?

- A. TCP/IP model Internet layer
- B. OSI model Data Link layer
- C. TCP/IP model Transport layer
- D. OSI model Physical layer

Answer: A

Question No: 176 - (Topic 1)

Which of the following defines an IP address that is NOT routed on the Internet?

- A. Multicast
- **B.** Public
- C. Private
- D. Classful

Answer: C

Question No: 177 - (Topic 1)

Which of the following layers of the OSI model is responsible for stripping the TCP port information before sending the packet up to the next layer?

- **A**. 2
- **B.** 3
- **C.** 4
- **D**. 5

Answer: C

Question No: 178 - (Topic 1)

Which of the following assists a network administrator in reverse engineering malware and viruses?

- A. Virtual switches
- B. Virtual machines
- C. VLANs

D. IDS

Answer: B

Question No: 179 - (Topic 1)

At which of the following layers do frames exist? (Select TWO).

- A. OSI model Data link layer
- B. TCP/IP model Network Interface layer
- C. OSI model Physical layer
- D. OSI model Network layer
- E. TCP/IP model Internet layer

Answer: A,B

Question No: 180 - (Topic 1)

Which of the following would Kim, a technician, use in voice over IP communications?

- A. SNTP
- B. SCP
- C. SMTP
- D. SIP

Answer: D

Question No: 181 - (Topic 1)

The BEST way to determine the next hop of a packet is to check the:

- A. link state
- B. routing table
- C. routing metrics
- D. convergence

Answer: B

Question No: 182 - (Topic 1)

Kurt, a network technician, has been troubleshooting a connectivity problem in the LAN room. He has diagnosed the problem and implemented a solution. Which of the following would be Kurt's NEXT step?

- **A.** Test the theory
- B. Establish a plan of action
- **C.** Establish a theory
- **D.** Document findings

Answer: D

Question No: 183 - (Topic 1)

After a new firewall is installed, users report that they do not have connectivity to the Internet. The output of the ipconfig command shows an IP address of 169.254.0.101. Which of the following ports would need to be opened on the firewall to allow the users to obtain an IP address? (Select TWO).

- **A.** UDP 53
- **B.** UDP 67
- **C.** UDP 68
- **D.** TCP 53
- **E.** TCP 67
- **F.** TCP 68

Answer: B,C

Topic 3, Troubleshooting

Question No: 184 - (Topic 3)

Which of the following wireless standards operates on the same frequency as 802.11a?

- A. Compatible with 802.11b wireless networks
- B. Compatible with 802.11g wireless networks
- C. Compatible with 802.11i wireless networks
- **D.** Compatible with 802.11n wireless networks

Answer: D

Question No: 185 - (Topic 3)

Sandy, an administrator, needs to install a wireless network that will allow legacy devices to connect to the network and also offer both 5GHz and 2.4GHz frequencies. Which of the following would BEST describe the type of WAP needed?

- **A.** 802.11a
- **B.** 802.11b
- **C.** 802.11g
- **D.** 802.11n

Answer: D

Question No: 186 - (Topic 3)

Which of the following connectors would Kim, a technician, use only for RG-6 cables?

- A. F-connector
- **B.** MTRJ
- **C.** RJ-45
- **D.** RS-232

Answer: A

Question No: 187 - (Topic 3)

Which of the following could be installed to allow a home user with one desktop computer to economically have Internet access in every room in the house?

- A. Fiber optic
- B. CAT6
- C. Broadband over powerline
- D. CAT5

Answer: C

Question No: 188 - (Topic 3)

Kurt, a user, is unable to logon to his domain from his desktop PC. A cable certifier is used and shows a high value of NEXT. Which of the following represents the cause?

- A. Crosstalk
- B. TX/RX reversed
- C. Split cables
- D. DB loss

Answer: A

Question No: 189 - (Topic 3)

Which of the following technologies can change channel widths?

- **A.** 802.11a
- **B.** 802.11b
- **C.** 802.11n
- **D.** Bluetooth

Answer: C

Question No: 190 - (Topic 3)

Which of the following is the MAXIMUM distance a single 1000BaseT segment can cover?

- A. 100 kilometers (62 miles)
- B. 10 kilometers (6 miles)
- **C.** 1000 meters (3281 feet)
- **D.** 100 meters (328 feet)

Answer: D

Question No: 191 - (Topic 3)

Which of the following connector types would require a punch down tool to attach a network cable to it?

Question No: 192 - (Topic 3) Which of the following supports faster wireless broadband speeds? A. Satellite B. WiMAX C. ISDN D. OC-3 Answer: B Question No: 193 - (Topic 3) Which of the following network topologies is MOST likely used in remote access VPN? A. Point to Point B. Bus C. Ring D. Mesh Answer: A Question No: 194 - (Topic 3)	A. F-connector B. ST C. 110 block D. RJ-45
Which of the following supports faster wireless broadband speeds? A. Satellite B. WiMAX C. ISDN D. OC-3 Answer: B Question No: 193 - (Topic 3) Which of the following network topologies is MOST likely used in remote access VPN? A. Point to Point B. Bus C. Ring D. Mesh Answer: A	Answer: C
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A. Satellite B. WiMAX C. ISDN D. OC-3 Answer: B Question No: 193 - (Topic 3) Which of the following network topologies is MOST likely used in remote access VPN? A. Point to Point B. Bus C. Ring D. Mesh Answer: A	Question No: 192 - (Topic 3)
B. WiMAX C. ISDN D. OC-3 Answer: B Question No: 193 - (Topic 3) Which of the following network topologies is MOST likely used in remote access VPN? A. Point to Point B. Bus C. Ring D. Mesh Answer: A	Which of the following supports faster wireless broadband speeds?
Question No: 193 - (Topic 3) Which of the following network topologies is MOST likely used in remote access VPN? A. Point to Point B. Bus C. Ring D. Mesh Answer: A	B. WiMAX C. ISDN
Which of the following network topologies is MOST likely used in remote access VPN? A. Point to Point B. Bus C. Ring D. Mesh Answer: A	Answer: B
Which of the following network topologies is MOST likely used in remote access VPN? A. Point to Point B. Bus C. Ring D. Mesh Answer: A	Question No: 193 - (Topic 3)
B. Bus C. Ring D. Mesh Answer: A	
	B. Bus C. Ring
Question No : 194 - (Topic 3)	Answer: A
Question No : 194 - (Topic 3)	
	Question No : 194 - (Topic 3)
Which of the following is a common connector used on a coaxial cable?	Which of the following is a common connector used on a coaxial cable?
A. RJ-45 B. DB-25 C. BNC D. LC	B. DB-25 C. BNC

Answer: C

Question No: 195 - (Topic 3)

A patch cable terminated with one end as T568A and the other as T568B will create which of the following cable types?

- A. Crossover
- **B.** Serial
- C. Roll over
- **D.** Straight through

Answer: A

Question No: 196 - (Topic 3)

Which of the following WAN technologies has a MAXIMUM speed of 155.52Mbps?

- **A.** OC-3
- **B**. T3
- **C.** OC-12
- **D**. E1

Answer: A

Question No: 197 - (Topic 3)

A user does not have network connectivity. While testing the cable the technician receives the below reading on the cable tester:

11
22
33
44
55

6-----6

77	
88	

Which of the following should the technician do NEXT?

- A. Cable is a crossover, continue troubleshooting
- B. Pin 3 is not used for data, continue troubleshooting
- C. Pin 3 is not used for data, replace the NIC
- D. Redo the cable's connectors

Answer: D

Question No: 198 - (Topic 3)

Which of the following is similar to MIMO?

- A. WPA
- B. SSID
- C. PoE
- **D.** Diversity

Answer: D

Question No: 199 - (Topic 3)

Which of the following components of wiring distribution is referred to as the core communications closet for an organization?

- A. MDF
- **B.** Smart jack
- C. IDF
- D. Demarc extension

Answer: A

Question No: 200 - (Topic 3)

Joe, a network technician, needs to connect to a computer in a factory environment 250 meters (820 feet) from the IDF. Which of the following LAN technologies would be BEST to use?

- A. 100BaseFX
- B. 10GBaseT
- C. MPLS
- D. Coaxial

Answer: A

Question No: 201 - (Topic 3)

A network administrator has just been notified about the loss of Internet connectivity. Another technician had just performed non-scheduled maintenance and mentioned that some cabling may have been moved. Which of the following MOST likely caused the loss of Internet connectivity?

- A. Broadcast storm
- B. TX/RX cables reversed
- C. Mismatched MTU
- **D.** Incorrect routing table

Answer: B

Question No: 202 - (Topic 3)

Which of the following cable types allows for the LONGEST distance of a Gigabit Ethernet connection?

- A. Multimode fiber
- **B.** CAT6a
- C. Single mode fiber
- **D.** Coaxial

Answer: C

Question No: 203 - (Topic 3)

Which of the following would be considered a Demarc extension?

- A. A patch cable connecting a cable modem with a wireless router
- B. Patch panel wiring
- C. Punch down block wiring
- **D.** Copper wire connecting the main PSTN point of entry to a wall data outlet

Answer: D

Question No: 204 - (Topic 3)

Which of the following is MOST likely used with RG-6 media?

- A. MTRJ
- **B.** RJ-11
- **C.** RJ-45
- D. F-connector

Answer: D

Question No: 205 - (Topic 3)

The phone company has provided a channelized T1 line. Which of the following should this line be connected to?

- A. Switch
- B. CSU/DSU
- C. IDF
- D. MDF

Answer: B

Question No : 206 - (Topic 3)

Which of the following improves wireless performance by allowing only one wireless transmission on the network at a time?

- A. CSMA/CA
- B. CSMA/CD
- C. Wireless encryption

D. Wireless bonding

Answer: A

Question No: 207 - (Topic 3)

At which of the following locations does the responsibility of a Telco provider cease?

- A. IDF
- B. CSU
- C. Demarc
- D. MDF

Answer: C

Question No: 208 - (Topic 3)

A technician is tasked with replacing some older RS-232 serial printers. Which of the following ports would the technician most likely find on these printers?

- A. BNC
- **B.** DB-9
- C. LC
- **D.** RJ-11

Answer: B

Question No: 209 - (Topic 3)

Joe, a technician, is troubleshooting connectivity issues with a new data circuit. Joe verifies that the ST fiber jumper is good. Which of the following is the problem?

- A. TX/RX reversed
- **B.** Interference
- C. Cable length
- D. Bad connectors

Answer: A

Question No: 210 - (Topic 3)

The ISP needs to terminate the WAN connection. The connection should be located in the network server room where the company LAN equipment resides. Which of the following identifies the location?

- A. Smart jack
- B. MDF
- C. VPN
- **D.** 66 block

Answer: B

Question No: 211 - (Topic 3)

In the 2.4GHz range, which of the following channel combinations are non-overlapping?

- **A.** 1, 6, 11
- **B.** 2, 7, 10
- **C.** 2, 8, 13
- **D.** 3, 6, 9

Answer: A

Question No: 212 - (Topic 3)

Karen, a technician, is installing network cables for an office building. Some of the cables are not showing active on the switch even when moved to different ports. Which of the following is MOST likely the cause?

- **A.** Port speed mismatch
- **B.** Faulty F-connectors
- **C.** Bad wiring
- **D.** Bad switch

Answer: C

Question No: 213 - (Topic 3)

CAT6 Ethernet cabling has a rated maximum transmission capability of:

- A. 10Mbps
- **B.** 100Mbps
- C. 20,000Mbps
- **D.** 10,000Mbps

Answer: D

Question No: 214 - (Topic 3)

Users notice a problem with their network connectivity when additional lights are turned on. Which of the following would be the cause for this problem?

- A. DDOS
- B. Cross talk
- C. Open short
- D. EMI

Answer: D

Question No: 215 - (Topic 3)

802.11n can operate at which of the following frequencies? (Select TWO).

- **A.** 2.4Mhz
- **B.** 2.5Mhz
- C. 5Mhz
- **D.** 2.4Ghz
- **E.** 2.5Ghz
- F. 5Ghz

Answer: D,F

Question No: 216 - (Topic 3)

MIMO technology in the 802.11n standard provides for which of the following benefits?

- A. Channel expansion
- B. Gigabit wireless bandwidth

- C. Multipath support
- D. Channel bonding

Answer: C

Question No: 217 - (Topic 3)

Which of the following fiber types is MOST often used indoors?

- A. Plenum
- B. Modal conditioning
- C. Multimode
- D. Singlemode

Answer: C

Question No: 218 - (Topic 3)

Which of the following technologies is used on cellular networks?

- A. Ethernet
- B. CDMA
- C. CSMA/CA
- D. POTS

Answer: B

Question No: 219 - (Topic 3)

Which of the following spreads out each of the individual wires of a UTP cable onto their own metal connector?

- A. BNC connection
- **B.** 110 block
- C. Plenum
- D. LC connector

Answer: B

Question No: 220 - (Topic 3)

Which of the following connector types would Sandy, a network technician, use to connect a serial cable?

- **A.** RJ-11
- B. BNC
- C. LC
- **D.** DB-9

Answer: D

Question No: 221 - (Topic 3)

Which of the following can operate on BOTH the 2.4GHz and 5.8GHz frequencies?

- **A.** 802.11a
- **B.** 802.11b
- **C.** 802.11g
- **D.** 802.11n

Answer: D

Question No: 222 - (Topic 3)

Which of the following is the FASTEST Ethernet technology?

- A. 10GBaseSR
- B. 10BaseT
- C. 100BaseFX
- **D.** 1000BaseT

Answer: A

Question No: 223 - (Topic 3)

Which of the following is the radio frequency and data rate for 802.11g as specified by the IEEE standards?

- **A.** 2.0 GHz at 33 Mbps
- **B.** 2.4 GHz at 54 Mbps
- **C.** 2.4 GHz at 128 Mbps
- **D.** 5.0 GHz at 54 Mbps

Answer: B

Question No: 224 - (Topic 3)

The wireless network inside a large training room has been saturated with client requests. Most of the client requests are coming from smartphones and laptops. The network technician has been tasked with increasing the performance of the wireless access point. Which of the following would BEST accomplish this?

- **A.** Switch the channel
- B. Change frequencies
- C. Channel bonding
- **D.** Increase the signal

Answer: C

Question No: 225 - (Topic 3)

Which of the following cable types use pins 1 and 2 to transmit and 3 and 6 to receive?

- A. Coaxial
- B. Crossover
- C. Multimode fiber
- **D.** Straight-though

Answer: D

Question No: 226 - (Topic 3)

Which of the following 802.3 classifications has a MAXIMUM segment distance of 984 feet (300 meters)?

- **A.** 1000Base
- B. 100BaseFX

- C. 1000BaseSX
- **D.** 1000BaseT

Answer: C

Question No: 227 - (Topic 3)

Which of the following is used for SONET connections and requires a wavelength of 1310nm?

- A. 10GBASECX4
- B. 10GBASELX4
- C. 10GBASELW
- D. 10GBASESR

Answer: C

Question No: 228 - (Topic 3)

Which of the following cables covers the LONGEST distance?

- A. 10GBaseT
- B. 10GBaseFR
- C. 100BaseTX
- **D.** 1000BaseX

Answer: B

Question No: 229 - (Topic 3)

Ann, a technician, is installing network cables for an office building. Some of the cables are not showing active on the switch even when moved to different ports. Which of the following is MOST likely the cause?

- **A.** Port speed mismatch
- **B.** Faulty F-connectors
- C. Bad wiring
- **D.** Bad switch

Answer: C

Question No: 230 - (Topic 3)

Which of the following WAN technologies has synchronous up/down speeds?

- **A.** T1
- B. ADSL
- C. Satellite
- D. Cable broadband

Answer: A

Question No: 231 - (Topic 3)

Which wireless standard works at a MAXIMUM data rate of up to 54Mbps?

- **A.** 802.11b
- **B.** 802.11q
- **C.** 802.11n
- **D.** 802.1q

Answer: B

Question No: 232 - (Topic 3)

The network technician is troubleshooting a connectivity issue on a CAT5 cable with a wire map and notices that only pins 1, 3, and 6 are mapping correctly. Which of the following pins are open and keeping traffic from flowing correctly?

- **A.** 2
- **B**. 4
- **C.** 5
- **D.** 8

Answer: A

Question No: 233 - (Topic 3)

Which of the following would be used to connect a singlemode fiber cable to a CAT6 connection?

- A. Media converter
- **B.** T1-crossover
- C. Multimode cable
- **D.** Coaxial

Answer: A

Question No: 234 - (Topic 3)

A user's network connection is slow. After testing the cabling, the cable tester shows that only pins 1, 2, 3 and 6 are being used. After accurately terminating both ends, the tester displays the same results. Which of the following is the MOST likely cause?

- A. DB loss on the cable
- **B.** Interference
- **C.** Split cable
- D. Distance limitations

Answer: C

Question No: 235 - (Topic 3)

Which of the following cables supports 10Gbps throughput and 100 meters as the maximum distance?

- A. T1 crossover
- **B.** Singlemode fiber
- C. CAT6a
- D. Coaxial

Answer: C

Question No: 236 - (Topic 3)

An organization currently has CAT5e cabling throughout its office. Kim, the network technician, is troubleshooting a new CAT6 run that supports network traffic, but does not

meet specification when tested with a TDR. Which of the following is MOST likely the cause?

- A. Improper grounding
- B. TXRX reversed
- **C.** Incorrect termination
- D. Outdated NIC drivers

Answer: C

Question No: 237 - (Topic 3)

The network technician needs to install fiber cabling to connect two buildings less than 984 feet (300 meters) apart. Which of the following fiber types should be installed?

- A. Singlemode
- **B.** Multimode
- C. Crossover
- D. F-Connector

Answer: B

Question No: 238 - (Topic 3)

Which of the following defines a rack located in an office building between the main rack and other office equipment?

- A. DSU
- B. MDF
- C. CSU
- D. IDF

Answer: D

Question No: 239 - (Topic 3)

Which of the following WAN technologies utilizes an optical SONET carrier and has a maximum bandwidth of 155.54Mbps?

A. DS3

- **B.** E3
- **C.** OC3
- **D.** T3

Answer: C

Question No: 240 - (Topic 3)

In which of the following would Sandy, a technician, find the LARGEST number of 110 block patch panels?

- A. MDF
- B. Caching engines
- C. Demarc
- D. IDF

Answer: A

Question No: 241 - (Topic 3)

In which of the following wireless standards is MIMO used?

- **A.** 802.11a
- **B.** 802.11b
- **C.** 802.11g
- **D.** 802.11n

Answer: D

Question No: 242 - (Topic 3)

Which of the following connectors push and twist-on?

- A. LC
- B. SC
- C. ST
- **D.** RJ-45

Answer: C

Question No: 243 - (Topic 3)

Lisa, an administrator, has been tasked with running cables from one office to another neighboring office by running cables over the light fixtures in the ceiling that connects them. To prevent interference, which of the following cable types should Lisa use?

- A. CAT5e
- B. CAT6
- C. Coaxial
- D. Multimode fiber

Answer: D

Question No: 244 - (Topic 3)

A network administrator tests a multimode fiber cable from end-to-end on a new link that is down and notices that the dB loss is -.09. Which of the following is the MOST likely cause?

- A. TXRX reversed
- B. dB loss too high
- C. dB loss too low
- D. Bad connectors

Answer: A

Question No: 245 - (Topic 3)

Which of the following cable types is employed to protect against interference in the physical environment or when security is a concern?

- A. STP
- **B.** RG-6
- C. Fiber
- **D.** RG-59

Answer: C

Question No: 246 - (Topic 3)

Which of the following is a fiber connector type?

- A. F-connector
- **B.** RJ-11
- **C.** RS-232
- D. MTRJ

Answer: D

Question No: 247 - (Topic 3)

Which of the following technologies can cause interference for 802.11g?

- A. RADAR
- **B.** 802.11a
- C. IrDA
- **D.** Bluetooth

Answer: D

Question No: 248 - (Topic 3)

Kurt, a technician, notices a newly installed CAT5 cable is longer than the standard maximum length. Which of the following problems would this MOST likely cause?

- A. Split cable
- B. EMI
- C. DB loss
- D. Crosstalk

Answer: C

Question No: 249 - (Topic 3)

Jeff, an administrator, is using a punch-down tool to connect a cable. To which of the following is Jeff MOST likely connecting?

- **A.** A 110 block
- B. A demarc
- **C.** A DB-9
- D. A smart jack

Answer: A

Question No: 250 - (Topic 3)

Which of the following uses copper wiring?

- A. 10GBaseER
- B. 10GBaseLW
- C. 100BaseFX
- **D.** 1000BaseT

Answer: D

Question No: 251 - (Topic 3)

Which of the following WAN technologies has the highest latency?

- A. POTS
- B. Cable
- C. Satellite
- D. DSL

Answer: C

Question No: 252 - (Topic 3)

In a small office environment, one computer is set up to provide Internet access to three other computers that are not interconnected. This is an example of which of the following topology types?

- A. Peer-to-peer
- B. Point-to-multipoint
- **C.** Hybrid
- D. Point-to-point

Answer: B

Question No: 253 - (Topic 3)

Which of the following network topologies would be separated into two networks if a client in the middle is removed or the cable is cut?

- A. Mesh
- B. Ring
- C. Bus
- D. Star

Answer: C

Question No: 254 - (Topic 3)

Which of the following connectors is usable in SFP modules?

- A. ST
- B. LC
- C. LX
- D. SX

Answer: B

Question No: 255 - (Topic 3)

Which of the following allows 802.11n higher transfer speeds than the previous wireless standards?

- **A.** Dual frequency
- **B.** Enhanced encryption
- C. MIMO technology
- D. Backwards compatibility

Answer: C

Question No: 256 - (Topic 3)

Which of the following is rated for speeds over 800Mbps?

- A. Coaxial
- **B.** DB-9
- C. CAT6
- D. CAT5e

Answer: C

Question No: 257 - (Topic 3)

Which of the following network topologies describes a network where each node is connected to multiple devices?

- A. Mesh
- **B.** Bus
- C. Star
- **D.** Ring

Answer: A

Question No: 258 - (Topic 3)

Which of the following would the telecommunications carrier use to segregate customer traffic over long fiber links?

- A. VLAN
- B. MPLS
- C. VPN
- D. PSTN

Answer: B

Question No: 259 - (Topic 3)

After running a CAT6 cable from the maintenance office 80 floors above the network closet, users are reporting lack of connectivity. Which of the following is the MOST likely cause?

- A. Cable placement
- B. Crosstalk

- **C.** Bad wiring
- **D.** Cable length

Answer: D

Question No: 260 - (Topic 3)

Which of the following is an example of a CSMA/CD medium?

- A. WEP
- **B.** SONET
- C. Token ring
- **D.** Ethernet

Answer: D

Question No: 261 - (Topic 3)

Which of the following technologies is used to connect public networks using POTS lines?

- A. OC3
- **B.** OC12
- C. PSTN
- D. Cable

Answer: C

Question No: 262 - (Topic 3)

Which of the following cable types is required to run through an air duct?

- A. UTP
- B. Fiber
- C. PVC
- **D.** Plenum

Answer: D

Question No: 263 - (Topic 3)

Which of the following is the MAXIMUM data transmission rate of 802.11a?

- A. 8Mbps
- B. 11Mbps
- C. 54Mbps
- **D.** 107Mbps

Answer: C

Question No: 264 - (Topic 3)

Which of the following is true of a client/server topology?

- A. Virtual servers are used to stream data to other remote servers
- **B.** Servers are used to connect to centralized clients
- **C.** Remote clients connect to a centralized server
- D. Remote clients connect to each other via a virtual server

Answer: C

Question No : 265 - (Topic 3)

Which of the following types of technologies should be used to provide a MAXIMUM 10 GB speed to a multi-mode fiber network?

- A. 10GBaseER
- B. 10GBaseSR
- C. 10GBaseTX
- D. 10GBaseT

Answer: B

Question No: 266 - (Topic 3)

After a new user moves furniture into a cubicle, the computer does not connect to the network any longer. Which of the following would be the MOST likely reason? (Select TWO).

- A. Bad Ethernet switch port
- B. TX/RX reversed
- C. Bad connectors
- D. Bad patch cable
- E. Mismatched MTU

Answer: C,D

Question No: 267 - (Topic 3)

Which of the following sizes is the fixed cell length in ATM?

- A. 8 bytes
- **B.** 53 bytes
- C. 64 kilobytes
- D. 128 kilobytes

Answer: B

Question No: 268 - (Topic 3)

Which of the following are standard fiber cable connector types? (Select TWO).

- **A.** RJ-11
- **B.** F-connector
- C. MTRJ
- **D.** DB-9
- E. ST

Answer: C,E

Question No: 269 - (Topic 3)

Kim, a technician, is asked to run new cabling for an office that is 350 feet (107 meters) away from the networking equipment. The type of cable being run is CAT6. Kim purchases and installs a 500 foot (152 meters) CAT6 cable, but after installation, notices a weak signal between the office and the networking equipment. Which of the following would have been the BEST to install instead of the CAT6 cable?

- A. Install two CAT6 cables with a repeater.
- B. Install a 500 foot (152 meter) CAT5 cable.
- C. Install a 500 foot (152 meter) CAT5e cable.
- **D.** Install three CAT6 cables with a repeater.

Answer: A

Question No: 270 - (Topic 3)

Which of the following is MOST likely used with RG-6 media?

- A. MTRJ
- **B.** RJ-11
- **C.** RJ-45
- **D.** F-connector

Answer: D

Question No: 271 - (Topic 3)

Lisa, a technician, is reporting wireless transmission speeds of 300Mbps. Which of the following wireless standards is being used?

- **A.** 802.11a
- **B.** 802.11b
- C. 802.11g
- **D.** 802.11n

Answer: D

Question No: 272 - (Topic 3)

The location where the Telco wiring stops and the clients wiring starts is known as the:

- A. MDF.
- **B.** demarc.
- C. IDF.
- **D.** 66 block.

Answer: B

Question No: 273 - (Topic 3)

An administrator has added four switches to a campus network. The switch in wiring closet A is only connected to the switch in wiring closet C. The switch in wiring closet B is connected to the switch in wiring closet C as well as wiring closet D. The switch in wiring closet D is only connected to the switch in wiring closet B. Which of the following topologies is represented in this design?

- A. Ring
- B. Star
- C. Bus
- D. Mesh

Answer: C

Question No: 274 - (Topic 3)

A user's new computer is not able to connect to the network at all. Upon further investigation, Karen, the administrator, finds that the wall jack is terminated with a 568B configuration. After locating the correct cable in the IDF, which of the following is the MOST likely cause of the problem?

- **A.** Other end of the cable is terminated with a 568B configuration
- **B.** Trunk port on the switch is disabled
- **C.** Other end of the cable is terminated with a 568A configuration
- **D.** Wall jack needs to be replaced with a smart jack

Answer: C

Question No: 275 - (Topic 3)

Which of the following connectors is used for coaxial copper cable?

- A. BNC
- **B.** DB-9
- **C.** RJ-11
- D. ST

Answer: A

Question No: 276 - (Topic 3)

A technician has been called about intermittent connectivity near IDF 2. Multiple cables were recently pulled through a common conduit. Which of the following is MOST likely the cause of the problem?

- A. Crosstalk
- B. Bad connectors
- C. Wrong DNS
- D. Duplicate IP address

Answer: A

Question No: 277 - (Topic 3)

Which of the following connector types will MOST likely be located on a serial cable?

- **A.** DB-9
- B. LC
- C. ST
- D. BNC

Answer: A

Question No: 278 - (Topic 3)

A technician notices a newly installed CAT5 cable is longer than the standard maximum length. Which of the following problems would this MOST likely cause?

- A. Split cable
- B. EMI
- C. DB loss
- **D.** Crosstalk

Answer: C

Question No: 279 - (Topic 3)

Which of the following wireless technologies only uses the 5GHz spectrum but reaches a theoretical throughput of only 54Mbps?

- **A.** A
- **B.** B
- C. G
- D. N

Answer: A

Question No: 280 - (Topic 3)

Which wireless standard works at a MAXIMUM data rate of up to 11Mbps?

- **A.** 802.11a
- **B.** 802.11b
- **C.** 802.11g
- **D.** 802.1q

Answer: B

Question No: 281 - (Topic 3)

Which of the following colors represents the outer leads on a connector head of a 568B patch cable? (Select TWO).

- A. Blue, brown/white
- B. Green/white, blue
- C. Orange/white, orange
- D. Blue, blue/white
- E. Brown/white, brown

Answer: C,E

Question No: 282 - (Topic 3)

A technician is trying to add another switch to the network with multiple VLANs. Which of

the following should the technician configure on the interface to allow multiple VLANs?

- A. Mirroring
- **B.** Trunking
- C. Authenticating
- D. Bonding

Answer: B

Question No: 283 - (Topic 3)

In contrast to earlier Wi-Fi speeds, which of the following BEST describes the antenna and channelization properties used in 802.11n?

- A. MIMO, DSSS
- B. MIMO, OFDM
- C. CSMA, DSSS
- D. CSMA, CDMA

Answer: B

Question No: 284 - (Topic 3)

Which of the following can MOST likely cause intermittent connection problems with a CAT5 network cable?

- A. Cable has been looped too many times.
- **B.** Cable has a twist tie attached too close to the connector.
- C. Cable is too warm.
- **D.** Cable is run too close to a fluorescent light.

Answer: D

Question No: 285 - (Topic 3)

Which of the following is a packet switching WAN technology?

- A. Frame relay
- **B.** T1
- C. Asynchronous transfer mode

D. ISDN

Answer: A

Question No: 286 - (Topic 3)

Which of the following standards can operate at either 20MHz or 40MHz channel spacing?

- **A.** 802.11a
- **B.** 802.11b
- C. 802.11g
- **D.** 802.11n

Answer: D

Question No: 287 - (Topic 3)

T568B wiring scheme is typically found on which of the following components?

- A. Demarc extension
- **B.** 66 block
- C. Patch panel
- **D.** Vertical cross connect

Answer: C

Question No: 288 - (Topic 3)

Which of the following connectors would be found on a fiber optic cable?

- A. BNC
- **B.** RJ-11
- **C.** RS-232
- D. MTRJ

Answer: D

Question No: 289 - (Topic 3)

Which of the following wireless standards can operate on the same frequency but are not compatible?

A. 802.11a / 802.11b

B. 802.11a / 802.11n

C. 802.11b / 802.11g

D. 802.11g / 802.11n

Answer: B

Question No: 290 - (Topic 3)

Which of the following WAN technologies uses four wires for digital and a 66 block?

A. Cable

B. ATM

C. T3

D. POTS

Answer: D

Question No: 291 - (Topic 3)

Which of the following connectors are MOST commonly used on a POTS line?

A. RJ-45

B. MTRJ

C. DB-9

D. RJ-11

Answer: D

Question No: 292 - (Topic 3)

Which of the following is the MAXIMUM rated speed for CAT5 cabling?

A. 10Mbps

B. 100Mbps

C. 1000Mbps

D. 10Gbps

Answer: B

Question No: 293 - (Topic 3)

When examining a suspected faulty copper network cable, Kim, the administrator, notices that some of the pairs are untwisted too much. This is MOST likely causing which of the following?

- A. DB loss
- **B.** Dispersion
- C. Collisions
- D. Cross-talk

Answer: D

Question No: 294 - (Topic 3)

A large corporate office is looking to place smaller network closets around campus to handle switching for remote workstations. To which of the following is this referring?

- A. MDF
- B. VPN
- C. RDP
- D. IDF

Answer: D

Question No: 295 - (Topic 3)

Kim, a technician, is connecting a new desktop computer to a switch. She was only able to locate one cable in the office for the installation. The wires at each end are color coded as follows:

End A: orange-white, orange, green-white, blue, blue-white, green, brown-white, brown

End B: green-white, green, orange-white, blue, blue-white, orange, brown-white, brown

Which of the following should Kim do to complete the installation?

A. Re-end the provided cable, keeping the wiring the same.

- **B.** Use the provided cable.
- C. Purchase a crossover cable.
- **D.** Purchase a straight-through cable.

Answer: D

Question No: 296 - (Topic 3)

A small office needs to connect one new system to their network in a distant office, but does not have the resources to install a new Ethernet wall jack, and does not want to use wireless. Which of the following is a simple, cost effective option for providing connectivity?

- A. SONET
- B. Multimode fiber
- **C.** 802.11n
- D. Broadband over Power Line

Answer: D

Question No: 297 - (Topic 3)

1000BaseT has a MAXIMUM run distance of:

- **A.** 25 meters (82 feet).
- **B.** 100 meters (328 feet).
- **C.** 500 meters (1640 feet).
- **D.** 1000 meters (3280 feet).

Answer: B

Question No: 298 - (Topic 3)

CAT6 has how many twisted copper pairs?

- **A**. 2
- **B**. 4
- **C.** 6
- **D.** 8
- **E.** 16

Answer: B

Question No: 299 - (Topic 3)

Which of the following uses a ring topology?

- A. DSL
- B. Ethernet
- C. DOCSIS
- D. SONET

Answer: D

Question No: 300 - (Topic 3)

Which of the following is the difference between 802.11b and 802.11g?

- A. Distance
- **B.** Frequency
- C. Speed
- D. Transmission power

Answer: C

Question No: 301 - (Topic 3)

Which of the following has the HIGHEST data rate speed?

- **A.** T1
- B. ADSL
- C. SDSL
- **D.** OC-3

Answer: D

Question No: 302 - (Topic 3)

Horizontal cable is terminated on which device in the wiring closet?

- A. Demarc
- **B.** Switch
- C. Punch down tool
- **D.** Patch panel

Answer: D

Question No: 303 - (Topic 3)

Which of the following has a DB-9 connector?

- A. SC
- **B.** RS-232
- C. LC
- **D.** RJ-45

Answer: B

Question No: 304 - (Topic 3)

Which of the following wireless standards is the only one capable of operating in either of the 802.11 wireless spectrums?

- **A.** A
- **B.** B
- C. G
- D. N

Answer: D

Question No: 305 - (Topic 3)

Which of the following 802.11 standards transmits the signals the GREATEST distance?

- **A.** a
- **B.** b
- **C.** g
- **D.** n

Answer: D

Question No: 306 - (Topic 3)

Which of the following defines the pinout of an 8P8C eight pin modular jack for a CAT6a cable?

- **A.** 568B
- **B.** RJ-11
- C. RJ-45
- **D.** RS-232

Answer: A

Question No: 307 - (Topic 3)

Zach, a network administrator, is checking work on some new CAT5 LAN network cabling installed at an organization. Multiple lines are receiving poor signals, and Zach finds the lengths of the runs to be sometimes over 350 feet (107 meters). Which of the following is the cause of the issue?

- A. CAT5 cable runs over 330 feet (100 meters) need to utilize STP instead of UTP.
- **B.** CAT5 cabling is limited to single-run lines of 330 feet (100 meters).
- **C.** CAT5 cabling is limited to single-run lines of 250 feet (76 meters).
- **D.** CAT5 cabling needs to have terminators installed at each end for runs over 330 feet (100 meters).

Answer: B

Question No: 308 - (Topic 3)

In the event of a fire in an office building, which of the following cable types should be installed to prevent toxic gas from burning PVC cable coatings?

- A. CAT6a
- B. Plenum
- C. Crossover
- D. STP

Answer: B

Question No: 309 - (Topic 3)

Which of the following are standard fiber cable connector types? (Select TWO).

- **A.** RJ-11
- B. F-connector
- C. MTRJ
- **D.** DB-9
- E. ST

Answer: C,E

Question No: 310 - (Topic 3)

An 802.11b wireless network has a maximum data rate of:

- **A.** 11 Mbps.
- **B.** 20 Mbps.
- **C.** 28 Mbps.
- **D.** 54 Mbps.

Answer: A

Question No: 311 - (Topic 3)

Which of the following network topologies describes a network where each node is connected to every other node?

- A. Bus
- B. Star
- C. Mesh
- **D.** Ring

Answer: C

Question No: 312 - (Topic 3)

Which of the following standards can operate at 40MHz channel spacing?

- **A.** 802.11a
- **B.** 802.11b
- **C.** 802.11g
- **D.** 802.11n

Answer: D

Question No: 313 - (Topic 3)

An administrator would like to get more speed out of a wireless network. The administrator decides to configure the AP with a frequency width of 40MHz. Which of the following features is the administrator MOST likely using?

- A. MIMO
- B. AP isolation
- C. Channel bonding
- D. Burst mode

Answer: C

Question No: 314 - (Topic 3)

A user would like to connect two laptops together and transfer files via the Ethernet ports. Which of the following should MOST likely be provided to the user to accomplish this?

- A. Crossover
- **B.** Rollover
- C. Loopback
- D. Straight cable

Answer: A

Question No: 315 - (Topic 3)

A technician has been dispatched to investigate connectivity problems of a recently renovated office. The technician has found that the cubicles were wired so that the network cables were run inside the conduit with the electrical cabling. Which of the following would

MOST likely resolve the connectivity issue?

- **A.** Power-cycle the computers and switches to re-establish the network connection.
- **B.** Re-run the network cabling through the ceiling alongside the lights to prevent interference.
- **C.** Test the wiring in the network jacks for faults using a cable verifier.
- **D.** Re-run the network cabling so that they are 12 inches or more away from the electrical lines.

Answer: D

Question No: 316 - (Topic 3)

Kim, an administrator, is attempting to connect a laptop to a server via RJ-45 ports on both a device and a CAT5 patch cable. All of the IP settings have been verified to be correct, yet there is a connectivity problem. Which of the following would MOST likely fix the IP connectivity problem?

- **A.** Wires 1, 2 and 3, 6 need to be swapped on one end of the connecting cable.
- **B.** Use the DB-9 port with a DB-9 to RJ-45 adapter on the server.
- **C.** Manually adjust the duplex mode on the server's link.
- **D.** Configure the laptop to receive a DHCP address from the server, rather than manually setting one.

Answer: A

Question No: 317 - (Topic 3)

Which of the following cable types is MOST commonly used with POTS?

- A. CAT3
- **B.** Multimode
- **C.** CAT6
- **D.** Coaxial

Answer: A

Question No: 318 - (Topic 3)

The unit responsible for the successful shaping and transmission of a digital signal is called:

- A. demarc.
- **B.** T1 hub.
- C. smart jack.
- D. CSU/DSU.

Answer: D

Question No: 319 - (Topic 3)

Zach, an administrator, needs to install a new 100 foot (30 meter) cable run from an IDF switch to the MDF, through a room that has a large number of motors. Which of the following would be the BEST cable type to choose?

- A. CAT3
- B. STP
- C. Coaxial
- D. Fiber

Answer: D

Question No: 320 - (Topic 3)

Which of the following cable types would have the LEAST amount of EMI?

- A. CAT3
- B. CAT5
- C. STP CAT6
- D. Plenum CAT6

Answer: C

Question No: 321 - (Topic 3)

Which of the following BEST describes the point at which an ISP's responsibility for an Internet connection ends?

A. Router

- B. MDF
- C. IDF
- D. Demarc

Answer: D

Question No: 322 - (Topic 3)

Which of the following technologies allows more than two transceivers with an access point?

- A. MIMO
- B. FIFO
- **C.** 802.1x
- D. WPA

Answer: A

Question No: 323 - (Topic 3)

After Karen, a new user, moves furniture into a cubicle, the computer does not connect to the network any longer. Which of the following would be the MOST likely reason? (Select TWO).

- A. Bad Ethernet switch port
- B. TX/RX reversed
- C. Bad connectors
- D. Bad patch cable
- E. Mismatched MTU

Answer: C,D

Topic 4, Network Management

Question No: 324 - (Topic 4)

Which of the following is used to ensure traffic flows efficiently on multiple T-1 circuits?

A. DNS server

- B. Content filter
- C. Proxy server
- D. Load balancer

Answer: D

Question No: 325 - (Topic 4)

Which of the following commands can a network technician use to check whether the DNS server for a given domain is reachable?

- A. nmap
- **B.** nbtstat
- C. dig
- D. arp

Answer: C

Question No: 326 - (Topic 4)

Which of the following devices will allow Lisa, a user, to see a cached copy of websites?

- A. Content switch
- B. DNS server
- C. Proxy server
- D. Load balancer

Answer: C

Question No: 327 - (Topic 4)

Users report that an internal web server is not responding. Which of the following commands could be used on the server to confirm that the web service is running?

- A. nbtstat
- **B.** traceroute
- C. nslookup
- **D.** netstat

Answer: D

Question No: 328 - (Topic 4)

A network administrator wants to see what ports are open on a server. Which of the following commands will show open ports?

- A. netstat
- B. tracert
- C. nbtstat
- D. nslookup

Answer: A

Question No: 329 - (Topic 4)

An administrator is attempting to troubleshoot a program that is unable to resolve IP addresses from FQDNs. Which of the following commands is used to check reverse DNS settings?

- A. dig
- B. ifconfig
- C. nbtstat
- D. route

Answer: A

Question No: 330 - (Topic 4)

A technician is unable to easily trace physical connections within a network rack. Which of the following practices would save time in the future?

- A. Change management
- B. Cable management
- C. Asset management
- **D.** Setting baselines

Answer: B

Question No: 331 - (Topic 4)

Users are reporting that some Internet websites are not accessible anymore. Which of the following will allow the network administrator to quickly isolate the remote router that is causing the network communication issue, so that the problem can be reported to the appropriate responsible party?

- A. Ping
- B. Protocol analyzer
- C. Tracert
- **D.** Dig

Answer: C

Question No: 332 - (Topic 4)

Jeff, a network technician, arrives to work and discovers users are having a problem connecting the company server. The server operator was working on upgrades the night before. Which of the following documents should Jeff use to attempt to discover the problem?

- A. Network maps
- **B.** Change management
- C. Baselines
- **D.** Cable management

Answer: B

Question No: 333 - (Topic 4)

When troubleshooting a connectivity issue, which of the following commands will give Joe, the technician, a list of the host names connected to the network?

- A. ping
- **B.** nbstat
- C. arp
- **D.** msconfig

Answer: B

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