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GUIDELINES FOR THE PRACTICE EXAM

- Practice exams should be taken without using any notes
- Try to complete the 90 questions in under 90 minutes
- Aim to achieve a score of 85% or higher on this exam
- 1) Patches have just need released by a third-party vendor to resolve a major vulnerability. There are over 100 critical devices that need to be updated. What action should be taken to ensure the patch is installed with minimal downtime?
 - a) Test the patch in a lab environment and then install it in the production network during the next scheduled maintenance
 - b) Download and install all patches in the production network during the next scheduled maintenance period
 - c) Configure end points to automatically download and install the patches
 - d) Deploy the patch in a lab environment and immediately install it in the production environment
- 2) A network administrator has set up a firewall and entered only three rules allowing traffic on ports 21, 110, and 25 to secure the network. Now, users are reporting they cannot access web pages using their URLs. What can the technician do to correct this?
 - a) Add a rule to the end allowing port 80 and 53
 - b) Add a rule to the end allowing port 143 and 22
 - c) Add a rule to the end allowing port 137 and 66
 - d) Add a rule to the end allowing port 445 and 173
- 3) A technician is looking at an issue with a computer connecting to the network. The technician determines wire 3 of a UTP Ethernet cable run has a break in it. This computer was previously connected to the switch at 1Gbps throughput. This PC is a kiosk and doesn't need anything faster than 55 Mbps of connection speed. What could the technician do to resolve this issue quickly?
 - a) Rewire both ends to have the wire on pin 6 remapped to pin 3. Force the duplex and speed to 100Mbps full duplex.
 - b) Rewire both ends to have the wire on pin 6 remapped to pin 3. Force the duplex and speed to 1000Mbps full duplex.
 - c) Rewire both ends to have the wire on pin 7 remapped to pin 3. Force the duplex and speed to 100Mbps full duplex.
 - d) Rewire both ends to have the wire on pin 7 remapped to pin 3. Force the duplex and speed to 1000Mbps full duplex.



- 4) A host has been assigned the address 169.254.0.1. This is an example of what kind of IPv4 address?
 - a) APIPA
 - b) MAC
 - c) Static
 - d) Public
- 5) A network administrator wants to deploy a wireless network in a location that has too much RF interference at 2.4 GHz. Which of the following standards requires the use of 5 GHz band wireless transmissions?
 - a) 802.11n
 - b) 802.11ac
 - c) 802.11b
 - d) 802.11g
- 6) Mark is setting up a DHCP server on a LAN segment. What option should he NOT configure in the DHCP scope, in order to allow hosts on that LAN segment using dynamic IP addresses, to be able to access the Internet and internal company servers?
 - a) Default gateway
 - b) Reservations
 - c) DNS servers
 - d) Subnet mask
- 7) What connection type is used to terminate DS3 connections in a telecommunications facility?
 - a) 66 block
 - b) BNC
 - c) F-connector
 - d) RJ-11
- 8) A company-wide audit revealed employees are using company laptops and desktops for personal gain. As a result, the company has incorporated the phrase ,ÄúCompany-owned IT assets are to be used to perform authorized company business only,Äô in what document?
 - a) MSA
 - b) MOU
 - c) SLA
 - d) AUP



- 9) A company is installing several APs for a new wireless system that requires users to authenticate to the domain. The network technician would like to authenticate to a central point. What solution would be BEST to achieve this?
 - a) TACACS+ device and RADIUS server
 - b) TACACS and proxy server
 - c) RADIUS server and access point
 - d) RADIUS server and network controller
- 10) What should be considered when determine the coverage for a new implementation of 802.11n WLAN?
 - a) Humidity
 - b) Temperature
 - c) Heatmap
 - d) Building material
- 11) Policies, procedures, and end-user training are effective ways to mitigate:
 - a) Zero-day attacks
 - b) Attempted DDoS attacks
 - c) Man-in-the-middle attacks
 - d) Social engineering attempts
- 12) A SQL server needs several terabytes of disk space available to do an uncompressed backup of a database. What device would be the MOST cost efficient to use for this backup?
 - a) iSCSI scan
 - b) FCoE SAN
 - c) NAS
 - d) USB flash drive
- 13) Andy is a network technician who is preparing to configure a network. He has installed a firewall to allow for an internal DMZ and external network. No hosts on the internal network should be directly accessible by their IP address from the internet, but they should be able to reach remote networks after receiving a proper IP address. What addressing solution would work for this network?
 - a) Teredo tunneling
 - b) Private
 - c) APIPA
 - d) Classless



- 14) A company is selecting a fire suppression system for their new datacenter and wants to minimize the IT system recovery period in the event of a fire. What is the best choice for their new fire suppression system?
 - a) Portable extinguishers
 - b) Wet Pipe
 - c) Clean Gas
 - d) Dry Pipe
- 15) An administrator notices an unused cable behind a cabinet that is terminated with a DB-9 connector. What protocol was MOST likely used on this cable?
 - a) RS-232
 - b) 802.3
 - c) ATM
 - d) Tonken Ring
- 16) A VLAN with a gateway offers no security without the addition of:
 - a) An ACL
 - b) 802.1w
 - c) A RADIUS server
 - d) 802.1d
- 17) An F-connector is used on which cable type?
 - a) CAT3
 - b) Single mode fiber
 - c) CAT5
 - d) RG6
- 18) A network technician is troubleshooting connectivity problems between switches but suspects the ports are not properly labeled. What option will help to quickly identify the switches connected to each port?
 - a) Configure TACACs+ on each network device
 - b) Enable a discovery protocol on the network devices.
 - c) Configure each uplink to send LACP discovery units.
 - d) Enable a packet sniffer on each network device's uplink port.



- 19) A network's design includes gateways connecting an assembly-line network. The assembly-line network users specialized cabling and interfaces to allow the assembly-line robots to communicate with one another. The IP is connecting the technician workstation with what type of network?
 - a) CSU/DSU
 - b) SCADA/ICS
 - c) IS-IS
 - d) LAN
- 20) There has been an increased amount of successful social engineering attacks at a corporate office. What would reduce this attack in the near future?
 - a) Helpdesk training
 - b) Appropriate use policy
 - c) User awareness training
 - d) Personal Identifiable Information
- 21) A technician is called to investigate a connectivity issue to a remote office that is connected by fiber optic cable. Using a light meter, it is determined that the Db loss is excessive. The installation has been working for several years. The switch was recently moved to the other side of the room and new patch cable installed. What is most likely the reason for this problem?
 - a) Distance limitations
 - b) Wavelength mismatch
 - c) Bend radius limitation
 - d) Dirty connectors
- 22) A project manager is tasked with the planning of a new network installation. The customer requires that everything discussed in the meetings will be installed and configured when a network engineer arrives onsite. What should the project manager provide the customer?
 - a) Acceptable Use Policy
 - b) Service Level Agreement
 - c) Statement of Work
 - d) Security Policy
- 23) During a high availability test of a system, a fiber interruption did not reroute traffic. This is an indication of what routing concept?
 - a) Static
 - b) Dynamic
 - c) Hybrid
 - d) Routing loops



- 24) A technician needs to limit the amount of broadcast traffic on a network and allow different segments to communicate with each other. What would satisfy these requirements?
 - a) Add a router and enable OSFP
 - b) Add a layer 3 switch and create a VLAN
 - c) Add a bridge between two switches
 - d) Add a firewall and implement proper ACL
- 25) A technician add memory to a router, but that memory is never recognized by the router. The router is then powered down, and the technician relocates all of the memory to different modules. On startup, the router does not boot and displays memory errors.
 - a) VTP
 - b) Driver update
 - c) ESD
 - d) Halon particles
- 26) An offsite backup company involved in an investigation is not recycling outdated tapes. This is MOST likely due to:
 - a) the process of Discovery
 - b) a chain of custody breach
 - c) a data transport request
 - d) the notice of a legal hold
- 27) What infrastructure implementation is used to connect various circuits between remote locations?
 - a) WAN
 - b) PAN
 - c) WLAN
 - d) LAN
- 28) An employee of a highly secure company needs to use facial recognition in addition to username/password to successfully establish a VPN. What BEST describes this methodology?
 - a) PKI
 - b) Federated identity
 - c) Two-factor authentication
 - d) Biometric authentication



- 29) What would provide the highest level of physical security for the client is they are concerned with theft of equipment from the datacenter?
 - a) Cipher lock
 - b) Proximity reader
 - c) Magnetic key swipe
 - d) Man trap
- 30) Exploiting a weakness in a user's wireless headset to compromise the mobile device is known as what?
 - a) Multiplexing
 - b) Zero-day attack
 - c) Smurfing
 - d) Bluejacking
- 31) OFDM, QAM and QPSK are all examples of what wireless technology?
 - a) Frequency
 - b) Modulation
 - c) RF interference
 - d) Spectrum
- 32) A company has implemented the capability to send all log files to a central location by utilizing an encrypted channel. The log files are sent to this location in order to be reviewed. A recent exploit has caused the company's encryption to become unsecure. What would be required to resolve the exploit?
 - a) Utilize a FTP service
 - b) Install recommended updates
 - c) Send all log files through SMTP
 - d) Configure the firewall to block port 22
- 33) What would be used in an IP-based video conferencing deployment?
 - a) RS-232
 - b) 56k modem
 - c) Bluetooth
 - d) Codec
- 34) A user is receiving certificate errors in other languages in their web browser when trying to access the company's main intranet site. What is MOST likely the cause?
 - a) DoS
 - b) Reflective DNS
 - c) Man-in-the-middle
 - d) ARP poisoning



- 35) A network technician has been tasked with connecting three 802.11a clients to an 802.11g access point that is configured for WEP and is within a (9m) line of sight from the client. The clients are unable to associate with the access point. What is MOST likely cause of this issue?
 - a) Interference
 - b) Wrong frequency
 - c) Signal loss
 - d) Wrong encryption
- 36) What is used to define how much bandwidth can be used by various protocols on the network?
 - a) Traffic shaping
 - b) High availability
 - c) Load balancing
 - d) Fault tolerance
- 37) How does a DHCP reservation work?
 - a) By leasing a set of reserved IP addresses according to their category
 - b) By letting the network switches assign IP addresses from a reserved pool
 - c) By assigning options to the computers on the network by priority
 - d) By matching a MAC address to an IP address within the DHCP scope
- 38) A network administrator is comparing several different wireless technologies. To calculate the effective maximum file transfer rate instead of the theoretical, what should be measured?
 - a) Throughput
 - b) Latency
 - c) Goodput
 - d) Bandwidth



- 39) A network engineer is designing a wireless network that uses multiple access point for complete coverage. What channel selection would result in the LEAST amount of interference between each access point?
 - a) Adjacent access point should be assigned channels 1, 6, and 11 with a 20MHz channel width
 - b) Adjacent access points should be assigned channels 2,6, and 10 with a 20MHz channel width.
 - c) Adjacent access points should be assigned channels 7 and 11 with a 40MHz channel width.
 - d) Adjacent access points should be assigned channels 8 and 11 with a 40MHz channel width
- 40) Sarah connects a pair of switches using redundant links. When she checks the status of the links, one of them is not active, even when she changes ports. What MOST likely disabled the redundant connection to the other switch?
 - a) Spanning tree
 - b) IGRP routing
 - c) SSID mismatch
 - d) Port Mirroring
- 41) A network administrator is following the best practices to implement firewalls, patch management and policies on his network. What should be performed to verify that the security controls in place?
 - a) Penetration testing
 - b) AAA authentication testing
 - c) Disaster recovery testing
 - d) Single point of failure testing
- 42) An administrator is told they need to set up a space in the break room where employees can relax. So, the administrator sets up several televisions with interconnected video game systems in the break room. What type of network did the administrator setup?
 - a) CAN
 - b) MAN
 - c) WAN
 - d) LAN



- 43) A technician is testing a new web-based tool capable of generating automatic teller machine (ATM) cash and service availability reports. The web-based tool was developed by a consortium of financial institutions. What cloud delivery models and technologies is the technician using?
 - a) SaaS
 - b) Public
 - c) Community
 - d) PaaS
- 44) When installing a network cable with multiple strands, a network technician pulled the cable past a sharp edge and exposes the copper conductor on several of the wire strands. These exposed wires come into contact with each other forming an electrical connection. What condition is created?
 - a) Short
 - b) Twisted Pair
 - c) Electrostatic discharge
 - d) Crosstalk
- 45) A technician needs to ensure wireless coverage in the green space near the center of the college campus. The antenna is being installed in the middle of the field on a pole. What type of antenna should be installed to ensure maximum coverage?
 - a) Omnidirectional
 - b) Yagi
 - c) Unidirectional
 - d) Directional
- 46) A network technician replaced a faulty Ethernet cable. The technician replaced one side of the patch in the incorrect part of the patch panel. Within a few minutes, the technician was informed that users were experiencing slow or no Internet connectivity all over the building. A broadcast storm has begun. After removing the replacement cable, what should the technician do next?
 - a) Replace the cable during the next maintenance window
 - b) Review labeling and logical network diagram documentation
 - c) Attempt to isolate the storm to the domain by rebooting the switch
 - d) Re-terminate all of the other Ethernet cables on the switch to isolate the issue



- 47) Company policies require that all network infrastructure devices send system level information to a centralized server. What should be implemented to ensure the network administrator can review device error information from one central location?
 - a) TACACS+ server
 - b) Single sign-on
 - c) SYSLOG server
 - d) Wi-Fi analyzer
- 48) A network administrator receives a call asking for assistance with connecting to the network. The person on the phone asks for the IP address, subnet class, and VLAN required to access the network. What type of attack might this be?
 - a) Social engineering
 - b) Spoofing
 - c) Zero-day attack
 - d) VLAN hopping
- 49) A technician wants to implement a network for testing remote devices before allowing them to connect to the corporate network. What could the technician implement to meet this requirement?
 - a) High availability
 - b) MAN network
 - c) Quarantine
 - d) Honeynet
- 50) Jason is the network manager and is leading a project to deploy a SAN. He is working with the vendor's support technician to properly set up and configure the SAN on the network. To begin SAN I/O optimization, what should Jason need to provide to the vendor support technician?
 - a) Network diagrams
 - b) Baseline documents
 - c) Asset management document
 - d) Access to the data center
- 51) A user reports slow computer performance. A technician troubleshooting the issue uses a performance monitoring tool and receives the following results:
 - a) Hard drive
 - b) Memory
 - c) Processor
 - d) NIC



- 52) What encryption type MOST likely is used for securing a client-to-server VPN connection?
 - a) TKIP
 - b) Kerberos
 - c) ISAKMP
 - d) AES
- 53) A network technician has received reports of an Internet-based application that has stopped functioning. Employees reported that after updating the Internet browsers, the application began to fail. Many users rolled back the update, but this did not correct the issue. What should the company do to reduce this type of action from causing network problems?
 - a) Implement a disaster recovery plan with a hot site to allow users to continue working
 - b) Segment the network and create a test lab for all updates before deployment
 - c) Verify the update hashes match those on the vendor's website.
 - d) Coordinate the Internet Server update to coincide with the users' updates
- 54) Several users at an adjacent office building report connectivity issues after a new building was built in between the two offices. The network technician has determined the adjacent office building is connected to the main office building via an 802.11ac bridge. The network technician logs into the AP and confirms the SSID, encryption and channels are all correct. What is MOST likely the cause of this issue?
 - a) Device saturation
 - b) Antenna type
 - c) Bandwidth saturation
 - d) Interference
- 55) Johnny installed an SFTP server behind a load-balancing router. He opened port 21 but was unable to establish a connection. What port should he have opened?
 - a) Port 20
 - b) Port 22
 - c) Port 162
 - d) Port 443
- 56) What network device uses ACLs to prevent unauthorized access into company systems?
 - a) IDS
 - b) Firewall
 - c) Content filter
 - d) Load balancer



- 57) When two or more links need to pass traffic as if they were one physical link, what could be used to satisfy the requirement?
 - a) Port mirroring
 - b) 802.1w
 - c) LACP
 - d) VTP
- 58) A system administrator wants to verify external IP addresses are unable to collect software versioning from servers on the network. What should the system administrator do to confirm the network is protected?
 - a) Analyze packet captures
 - b) Utilize netstat to locate active connections
 - c) Use nmap to query known ports
 - d) Review the ID3 logs on the network
- 59) A technician needs to set up uplink ports for multiple switches to communicate with one another. ALL VLANs should be transferred from the designed server switch. What should be set on the uplink ports if VLAN 1 is not the management VLAN?
 - a) STP
 - b) Port mirroring
 - c) Port security
 - d) 802.1x
- 60) In what type of attack does the potential intruder trick a user into providing sensitive information?
 - a) Social engineering
 - b) Bluesnarfing
 - c) Man-in-the-middle
 - d) Evil Twin
- 61) What network infrastructure implementations would be used to support files being transferred between Bluetooth-enabled smartphones?
 - a) PAN
 - b) LAN
 - c) WLAN
 - d) MAN



- 62) What cloud infrastructure designs includes on-premise servers utilizing a centralized syslog server that is hosted at a third-party organization for review of the logs?
 - a) Hybrid
 - b) Public
 - c) Community
 - d) Private
- 63) An area to which access is controlled by retina scan is protected by what type of security measure?
 - a) Two-factor authentication
 - b) Biometric
 - c) Cipher locks
 - d) Optical reader
- 64) What BEST describes the process of documenting everyone who has physical access or possession of evidence?
 - a) Legal hold
 - b) Chain of custody
 - c) Secure copy protocol
 - d) Financial responsibility
- 65) A network technician wants to create a network where consultants can access the Internet without disrupting the office's intranet. What type of network should be created?
 - a) Guest network
 - b) VLAN network
 - c) Security network
 - d) DMZ network
- 66) A network technician needs to set up two public facing web servers. The technician wants to ensure that an intruder cannot access the intranet even if those web servers have been compromised. What security technique should be utilized?
 - a) Place them behind honeypots
 - b) Place them in a separate subnet
 - c) Place them between two identical firewalls
 - d) Place them in the demilitarized zone



- 67) After a company rolls out software updates, a lab researcher is no longer able to use lab equipment connected to her PC. The technician contacts the vendor and determines there is an incompatibility with the latest IO drivers. What should the technician perform to get the researcher back to work as quickly as possible?
 - a) Roll back the drivers to the previous version
 - b) Reset Ann's equipment configuration from a backup
 - c) Downgrade the PC to a working patch level
 - d) Restore Ann's PC to the last known good configuration
- 68) A network technician must create a wireless link between two buildings in an office park utilizing the 802.11ac standard. The antenna chosen must have a small physical footprint and minimal weight as it will be mounted on the outside of the building. What kind of antenna should they choose?
 - a) Yagi
 - b) Omni-directional
 - c) Parabolic
 - d) Patch
- 69) A company is experiencing accessibility issues reaching services on a cloud-based system. What monitoring tools should be used to locate possible outages?
 - a) Network analyzer
 - b) Packet analyzer
 - c) Protocol analyzer
 - d) Network sniffer
- 70) A network technician has been asked to make the connections necessary to add video transported via fiber optics to the LAN within a building. What is the MOST common connector that will be used on the switch to connect the media converter?
 - a) FDDI
 - b) Fiber coupler
 - c) MT-RJ
 - d) ST
- 71) The Chief Information Officer (CIO) wants to improve the security of the company's data. What management control should be implemented to ensure employees are using encryption to transmit any sensitive information over the network?
 - a) Policies
 - b) VPN
 - c) HTTPS
 - d) Standards



- 72) What describes a design where traffic is shared between multiple network servers to provide greater throughput and reliability?
 - a) Load balancing
 - b) MPLS trunking
 - c) VLAN tagging
 - d) Multiplexing
- 73) What type of equipment should be used for telecommunications equipment and have an open design?
 - a) 2/4 post racks
 - b) Rail racks
 - c) Vertical frame
 - d) Ladder racks
- 74) What protocol is used to send email from one server to another server?
 - a) RTP
 - b) SNMP
 - c) POP
 - d) SMTP
- 75) A network technician has installed and configured a new wireless router. The clients and hosts can ping each other. The WAN is a 10Gbp/s cable connection. The wired clients have fast connections, but the wireless clients are slow to ping and browse the Internet. What could cause the slow wireless clients?
 - a) An access point experiencing RFI from fluorescent light bulbs
 - b) A router is on the incorrect LAN
 - c) A cable connection does not support wireless
 - d) A high signal-to-noise ratio on the wireless network
- 76) What port(s) does SIP use?
 - a) 443
 - b) 1720
 - c) 2427/27/27
 - d) 5060/5061
- 77) What tool would a network technician use to troubleshoot a span of single-mode fiber cable?
 - a) Punchdown tool
 - b) Spectrum analyzer
 - c) Ethernet tester
 - d) OTDR



- 78) A technician is troubleshooting a PC that is having intermittent connectivity issues. The technician notices that the STP cables pairs are not completely twisted near the connector. What might be the issue?
 - a) Cross-talk
 - b) 568A/568B mismatch
 - c) Tx/Rx reverse
 - d) Split Pairs
- 79) A technician troubleshooting an area that is having difficulty connecting to a WAP. After identifying the symptoms, what should the technician do NEXT?
 - a) Document findings
 - b) Resolve the issue
 - c) Establish the probable cause
 - d) Implement a solution
- 80) What is a network topology in which all nodes have point to point connections to all other nodes known as?
 - a) Mesh
 - b) Ring
 - c) Bus
 - d) Star
- 81) Michael is a system administrator that is troubleshooting an issue with remotely accessing a new server on the local area network. He is using an LMHOST file and the file contains the hostname and IP address of the new server. The server that he cannot remote to is located on the same LAN as another server that he can successfully remote to. What output from the command line would BEST resolve the issue?
 - a) C:\windows\system32>ipconfig /flushdns
 - b) C:\windows\system32>ipconfig /registerdns
 - c) C:\windows\system32>nslookup
 - d) C:\windows\system32>nbtstat -a
- 82) A company has a new offering to provide access to their product from a central location rather than clients internally hosting the product on the client network. The product contains sensitive corporate information that should not be accessible from one client to another. What is this an example of?
 - a) Public SaaS
 - b) Private SaaS
 - c) Hybrid IaaS
 - d) Community IaaS



- 83) Various hypervisor guests are configured to use different VLANs in the same virtualization environment through what device?
 - a) Virtual router
 - b) Virtual firewall
 - c) NIC teaming
 - d) Virtual switch
- 84) When troubleshooting a T1 connection, the service provider's technical support representative instructs a network technician to place a special device into the CSU/DSU. Using this device, the provider is able to verify that communications are reaching the CSU/DSU? What was used by the network technician?
 - a) Cable analyzer
 - b) Toner probe
 - c) OTDR
 - d) Loopback plug
- 85) A company has decided to upgrade its legacy phone system to VoIP. The new phones will download the configurations from a TFTP server each time they boot up. What firewall port must be opened to ensure the phones can communicate with the server?
 - a) 20
 - b) 53
 - c) 69
 - d) 161
- 86) What attack utilizes a wireless access point which has been made to look as if it belongs to the network in order to eavesdrop on the wireless traffic?
 - a) Evil twin
 - b) Rogue access point
 - c) WEP attack
 - d) War driving
- 87) An increased amount of web traffic to an e-commerce server is observed by a network administrator, but without an increase in the number of financial transactions. What kind of attack might the company be experiencing?
 - a) Bluejacking
 - b) ARP cache poisoning
 - c) Phishing
 - d) DoS



- 88) A small office has an Internet connection that drops out about two times per week. It often takes until the next day for the vendor to come out and fix the issue. What should the office implement to reduce this downtime?
 - a) EULA
 - b) SLA
 - c) SOW
 - d) MOU
- 89) What can be issued from the command line to find the layer 3 hops to a remote destination?
 - a) traceroute
 - b) nslookup
 - c) ping
 - d) netstat
- 90) What physical device provides the BEST security to a datacenter?
 - a) Cipher lock
 - b) Thumbprint reader
 - c) Video monitoring
 - d) Mantrap



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ANSWERS TO PRACTICE EXAM #1

As you check the answers to your Practice Exams #1, it is important to understand why each answer is correct. As you go over your practice exam results, ensure you pay close attention to the questions you missed and understand the explanation provided for their correct answers.

- 1) D Patches should always be tested first. Once successfully tested, then deployment to the production environment can be accomplished.
- 2) A Port 80 is used for HTTP traffic. It listens to the web client and port 53 is needed to reach the DNS servers to determine the IP address for a given URL or domain name.
- 3) D Ethernet uses pins 1-2-3-6 so you'll choose to use pin 7 since it's not normally what UTP depends on. Choosing the 1000Mpbs full duplex also still uses the full extent of the cable depending on what's being sent and received.
- 4) A APIPA stands for Automatic Private IP Addressing and is a feature of Windows operating systems. When a client computer is configured to use automatic addressing (DHCP), APIPA assigns a class B IP address from 169.254.0.0 to 169.254.255.255 to the client when a DHCP server is unavailable.
- 5) B 802.11ac wireless transmission channel uses the 5Ghz band. While 802.11n can operate in the 5 GHz band, it also operates in the 2.4 GHz band. Only 802.11ac and 802.11a operate exclusively in the 5 GHz band.
- 6) B In order to effectively access the internet, the DHCP must provide a default gateway, DNS server, and subnet mask to each client.
- 7) B Bayonet Neill-Concelman Connector (BNC connector) is a type of coaxial RF (Radio frequency) electrical connector that is used in place of coaxial connectors. A DS3 (Digital Signal 3) is also known as a T3 line with a maximum bandwidth of 44.736 Mbit/s. DS3 uses 75 ohm coaxial cable and BNC connectors.
- 8) D Acceptable Use Policy dictates what things an employee can or cannot do on company issued IT equipment.
- 9) C A Remote Authentication Dial-in User Service (RADIUS) server provides AAA management for users connecting to a wired or wireless network, which includes the ability to authenticate users. As servers inherently are not built with wireless access capabilities, an access point would have to be included in the setup for the RADIUS to work correctly with wireless clients.
- 10) D Some building materials are more dense than others, the denser the object, the more you will have a degradation of signal. For optimal signal, a LoS (Line of sight) of 25 feet or less is advised, as well.



- 11) D Social engineering attempts occur when someone uses something like: phishing (they are attempting to receive your personal information and look legitimate), pretexting (basically they give you a scenario and expect you to react quickly), tailgating (following too closely into a door they aren't allowed in) and many other situations. Educating your users on the dangers posed by social engineering could prevent them from becoming a victim of a phishing attack as well as many other attacks.
- 12) C A NAS is a Network Attached Storage device; typically a bunch of cheap hard disks, usually arranged in a Raid and consisting of either SAS (serial attached SCSI) or Sata disks just like the ones in most desktops.
- 13) B A private IP address is an IP address that is reserved for internal use behind a router or other Network Address Translation (NAT) device, apart from the public. Private IP addresses provide an entirely separate set of addresses that still allow access on a network but without taking up a public IP address space.
- 14) C Using a clean gas fire suppression system in datacenters are the best, since it minimizes the IT system recovery costs and prevents damage to the equipment. The clean gas extinguishes the fire faster and is more common in datacenter environments.
- 15) A RS-232 is a standard for serial communication transmission of data. It formally defines the signals connecting between a DTE (data terminal equipment) such as a computer terminal, and a DCE (data circuit-terminating equipment or data communication equipment).
- 16) A VLANs can be protected with an ACL. Without a properly configured ACL, there is not additional security provided by a VLAN.
- 17) D An F connector is a coaxial RF connector commonly used for cable television with a RG6 cable. RG6 is a type of coaxial cable used to transmit audio and video signals to devices such as television sets.
- 18) B By enabling a discovery protocol on the network devices, the technician will be able to get detail information such as the IP addresses, system version and the type of device information from supporting devices directly connected to the discovery protocol therefore providing information about the specific routers.
- 19) B SCADA/ICS is used in industrial control systems, such as assembly-line work.
- 20) C Users are the biggest vulnerabilities in a network, therefore providing good user awareness training is crucial to obtaining good network security.
- 21) D With Fiber Optic Connectors become dirty, the loss of signal can cause severe problems and performance issues. The technician will need to use appropriate cleaning cloths to clean the dirty connectors and restore the service.
- 22) C A Statement of work (SOW) is a document that outlines all work that is to be performed, deliverables and timelines to be agreed upon.
- 23) A Static routes must be configured and rerouted manually during an issue. Dynamic and Hybrid would reroute automatically.
- 24) B By adding a layer 3 switch to improve network routing performance and reducing broadcast traffic, a VLAN provides LAN segmentation within a network.



- 25) C The most likely cause is that the memory chips are bad, because they have suffered from electrostatic discharge (ESD) during the installation and movement of the chips.
- 26) D A legal hold is a process that an organization uses to preserve all forms of relevant information when litigation is reasonably anticipated.
- 27) A WAN because to connect various circuits between remote locations. A Wide Area is required. And Local can only be within a limited small area and PAN even smaller areas.
- 28) C This would classify best as two-factor authentication, since it requires "something you are" (face) and "something you know" (username/password) for successful authentication to occur.
- 29) D A man trap will ensure that only a single authorized person can get in or out of the building at time. It provides the highest level of physical security of the choices given.
- 30) D Bluejacking is the sending of unsolicited messages over Bluetooth to Bluetoothenabled devices such as mobile phones, PDAs or laptop computers or sending a vCard which typically contains a message in the name field (i.e., for bluedating or bluechat) to another.
- 31) B Common types of modulation include Orthogonal frequency-division multiplexing (OFDM), Quadrature Amplitude Modulation (QAM), and Quadrature Phase-shift keying (PSK).
- 32) B If the encryption is unsecure then we must look for encryption software updates or patches. If they are available we must install them.
- 33) D The term "codec" is a concatenation of "encoder" and "decoder". In video conferencing, a codec is software (or can be hardware) that compresses (encodes) raw video data before it is transmitted over the network.
- 34) C A man in the middle attack is a general term for when a perpetrator positions himself in a conversation between a user and an application either to eavesdrop or to impersonate one of the parties, making it appear as if a normal exchange of information is occurring.
- 35) B 802.11a operates in the 5GHz band while 802.11g operates in the 2.4GHz band. 802.11a clients cannot communicate to a 802.11b or 802.11g access point.
- 36) A Traffic shaping, also known as packet shaping, Quality of Service (QoS) or bandwidth management, is the manipulation and prioritization of network traffic to reduce the impact of heavy users or machines from affecting other users.
- 37) D The client requests an IP address by sending a message on the network to the DHCP server. This DHCP server will assign an IP from its DHCP scope to the client and reserve it based on the clients MAC address.
- 38) A Throughput is the measurement of the maximum amount of data being able to be sent over a transmission path.
- 39) A Because the overlapping signals are from access points that come from unrelated non-overlapping channels so as a result, the Access Points are least likely to interfere with each other. For Wireless B and G networks, you should always use channels 1, 6, and 11.



- 40) A The purpose of spanning tree is to verify no loops exist in the network. If something isn't working it's possibly because the switch detects that there's a loop in the redundant connections.
- 41) A Penetration testing (also called pen testing) is the practice of testing a computer system, network, or web application in order to find vulnerabilities that an attacker could exploit. It can be used to ensure all security controls are properly configured and in place.
- 42) A Since this gaming network is within one room, it is considered a LAN. All the other answers require a larger geographical area.
- 43) C A community or private delivery mode would work best. The community delivery mode sends out based on joint interests and limited enrollment. The private option is owned by the organization and they act as the provider and consumer equally.
- 44) A A short in electrical terms is an abbreviation for a short circuit. This generally means that there is an unintended connection between two points allowing current to flow where it should not. In your particular case, it means that a cable is damaged and that two or more of the conductors are connected together causing the cable to fail.
- 45) A Omnidirectional antennas send the signal out equally in all directions, therefore it will provide the best coverage since it is located in the center of the field.
- 46) B The technician will be able to see the domain architecture the, strength of user connections and the relationships in those connections therefore making it easy to reassign the patches. It is likely that something has been mislabeled, and his connection of that ethernet cable caused a loop.
- 47) C Syslog is a protocol designed to send log entries generated by a device or process called a facility across an IP network to a message collector, called a syslog server. A syslog message consists of an error code and the severity of the error. A syslog server would enable the network administrator to view device error information from a central location.
- 48) A Social engineering is a type of attack on a network using confidence and gullibility of users to gain access. It is the only type of attack on a network that is directed towards the human element. The human interaction with the network administrator makes the other three answers incorrect.
- 49) C Quarantine is where devices that do not meet the standards for the regular network can be placed. In this area, they can be checked before connecting to the main network.
- 50) A A network diagram is a visual representation of network architecture. It maps out the structure of a network with a variety of different symbols and line connections. This information will be important when deploying a Storage Area Network (SAN).
- 51) A Based on the results, the hard drive (disk queue) is causing the bottleneck, since the average processor is not over 50%, the pages/second (memory) is not heavily burdened, nor do we have any information on the NIC.
- 52) C ISAKMP is used in IPSec, which is commonly used in client-to-server VPN connections.



- 53) B Segmented networks would ensure every system isn't updated at the same time, they would be updated in groups. The test lab would ensure proper functionality prior to deployment or would allow you to work through the technical difficulties prior to deployment.
- 54) D The most likely reason is interference from the new building being placed between the signal path. By process of elimination: Device saturation is too many devices with too few sources, antenna type restricts the direction for the data to travel and the bandwidth saturation occurs if too many devices are on one WAN link.
- 55) B- FTP works off of 20/21 but it is known to be unsecured. Port 22 is SSH which can be added to secure telnet. Port 443 is HTTPS and port 162 is SNMP.
- 56) B A firewall is a network security device which is designed to prevent systems or traffic from unauthorized access. An ACL is a list that shows which traffic or devices should be allowed into or denied from accessing the network.
- 57) C The Link Aggregation Control Protocol (LACP) enables you to assign multiple physical links to a logical interface that will appears as a single link to a route processor.
- 58) A Captured packets show you the information that was travelling through certain files, etc. Packet sniffers detail the information they've received so working through those would show if the external network shows or details software versions.
- 59) A Setting STP on the uplink ports will ensure that loops are not created.
- 60) A Social engineering is the art of convincing people to reveal confidential information to the intruder.
- 61) A A personal area network (PAN) refers to the interconnection of information technology devices or gadgets within the environment of an individual user (typically within 10 meters).
- 62) A Since the admin network is hidden behind firewalls (surrounding the DMZ), SSH connections from the admin network are inherently secure and therefore should be allowed to communicate with the other three networks.
- 63) B Retina scans are considered a biometric control, facial recognition would be as well.
- 64) B Chain of custody refers to documentation that identifies all changes in the control, handling, possession, ownership, or custody of a piece of evidence.
- 65) A Guest network allow anyone to have access to the internet without having the rights to disrupt the intranet. This network should be logically isolated from the corporate intranet of the office.
- 66) D A demilitarized zone (DMZ) is a sub-network inside a network and acts as a semitrusted zone. It is used for servers that need to be public facing, such as web, mail, ftp, and VOIP servers, and doesn't provide trust between the DMZ and the intranet.
- 67) A By rolling back the drivers Ann would be able to use her lab equipment again. To roll back a driver in Windows means to return the driver to the version that was last installed for the device.



- 68) D A patch antenna is a type of radio antenna with a low profile, which can be mounted on a flat surface. A patch antenna is typically mounted to a wall or a mast and provides coverage in a limited angle pattern. A yagi antenna could also be used, but if the distance is smaller than about 300 feet between the buildings, using a Patch antenna would be sufficient. For longer distances, a Yagi would be utilized.
- 69) A A network analyzer is a useful tool, helping you do things like track traffic and malicious usage on the network. A software tool like Wireshark is a network analyzer and protocol analyzer.
- 70) D Straight Tip (ST) fiber connections are the most common ones used in fiber optic connections in LAN networking applications, therefore this is most likely the correct answer.
- 71) A Policies are plans that describe the goal of an established procedure (Acceptable use, Physical Security or VPN access), while the standards are the mechanisms implemented to achieve the goal. VPN and HTTPS are examples of standards.
- 72) A Load Balancing is a technique used to spread work across multiple computers, network links or other devices.
- 73) A The 2/4 post racks are open framed which are most common with telecommunication equipment. These are where servers and network equipment are mounted inside the IDF and MDF.
- 74) D Simple Mail Transfer Protocol (SMTP) is a well-known application that uses port 25 for sending email from one server to another server.
- 75) A If interference in the wireless spectrum is occurring, more retransmissions will be needed (and thereby slowing speeds experienced). All the other answers will not cause a slow down of only the wireless network. And a high signal to noise ratio is a good thing on wireless networks.
- 76) D SIP works with other protocols over 5060/5061. 443 is HTTPS, 2427 deals with TCP/UDP (wireshark) and ports 5004/5005 is RTP (real time transport).
- 77) D The other answers are used with copper cables (like CAT5). An optical time-domain reflectometer (OTDR) is an optoelectronic instrument used to characterize an optical fiber. An OTDR is the optical equivalent of an electronic time domain reflectometer.
- 78) A Cross-talk can occur if the twisted pairs are not twisted sufficiently. The cable should be trimmed down and reterminated to prevent this issue.
- 79) C Establishing a probable cause is the second step in the troubleshooting process which allows for the technician to list reasons from top to bottom beginning with the simplest and most obvious issues to the most complex.
- 80) A A mesh network is a network topology in which each node relays data for the network.
- 81) B Since he is using a local LMHOST file, it is bypassing the DNS of the machine and flushing the DNS will not solve the problem. In this case, registering the dns entries will fix the issue.



- 82) B SaaS stands for Software as a Service. This is a cloud model whereby a service provider provides a software service and makes the service available to customers over the Internet. Examples of SaaS include Microsoft Office 365, Microsoft Exchange Online, and Google Docs.
- 83) D Virtual switches can act like real switches, but are configured in the Hyper-V environment.
- 84) D A loopback plug, also known as a loopback adaptor or a loopback cable is a device used to test ports (such as serial, parallel USB and network ports) to identify network and network interface card (NIC) issues. Loopback plug equipment facilitates the testing of simple networking issues and is available at very low costs.
- 85) C TFTP uses port 69 to communicate.
- 86) A An Evil Twin is meant to mimic a legitimate hotspot provided by a nearby business, such as a coffee shop that provides free Wi-Fi access to its patrons.
- 87) D A DoS attack or Denial-of-Service attack works by overloading a server with multiple requests (more than it can handle) thus eventually knocking the server offline.
- 88) B A service level agreement (SLA) is a contract between a service provider (either internal or external) and the end user that defines the level of service expected from the service provider. SLAs are output-based in that their purpose is specifically to define what the customer will receive. If the customer requires faster response times, it should be in the SLA.
- 89) A Traceroute will determine every hop between the host and the destination using ICMP.
- 90) D A mantrap allows you to enter one door and wait for it to close before entering another door. Video monitoring is a passive security feature while the thumbprint reader can be tricked. A cipher lock is a good option, but it will not prevent piggybacking into the data center.