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Exam Code: 220-1101

Exam Name: CompTIA A+ Certification Exam Core 1



Exam A

QUESTION 1

A home user has purchased a subscription for a service that blocks malicious sites by preventing them from resolving correctly. Which of the following settings MOST likely needs to be changed on the user's router to enable this functionality?

- A. DNS server
- B. Port forwarding
- C. Perimeter network
- D. Universal PnP
- E. DHCP server

Correct Answer: A

Section:

Explanation:

The Domain Name System (DNS) is responsible for translating domain names into IP addresses. By blocking malicious sites from resolving correctly, the DNS server is able to prevent the user from accessing those sites. Therefore, the DNS server setting on the user's router needs to be changed to enable this functionality.

QUESTION 2

Which of the following is the MAXIMUM power PoE+ provides?

- A. 15.4W
- B. 30W
- C. 60W
- D. 95W

Correct Answer: B

Section:

Explanation:

The earliest PoE switches from a few years ago generated 15 Watts per port (IEEE 802.3af). Today, most use the PoE+ standard (IEEE 802.3at), which generates up to 30 Watts per port. That's plenty for most devices that people want to connect.

QUESTION 3

A technician is preparing to set up a gaming computer with the following components:

A technician is preparing to set up a gaming computer with the following components:

Discrete, high-end graphics card

Video capture card

High-end processor

Multiple hard drives

USB 3.0 hub

Sound card

Which of the following options is the MOST important for the technician to consider before building the gaming computer?

- A. Redundant power supply
- B. Modular power supply

- C. 20-pin vs. 24-pin power adapter
- D. Power supply wattage rating

Correct Answer: D

Section:

Explanation:

This is because high-end graphics cards, processors, and multiple hard drives require a significant amount of power to operate. A power supply with insufficient wattage could cause stability issues or even damage the components. The CompTIA A+ Core1 certification guide emphasizes the importance of selecting an appropriate power supply for a computer build. In addition to wattage, other factors to consider when selecting a power supply include efficiency, modularity, and the number and type of connectors required to power the components. However, of the options listed, the wattage rating is the most critical consideration.

QUESTION 4

Which of the following cloud models maintains access, even when a local internet outage occurs?

- A. Private
- B. SaaS
- C. Community
- D. Public

Correct Answer: A

Section:

Explanation:

In a private cloud model, the cloud infrastructure is maintained within a company's own data center and is used exclusively by that company. Private clouds offer the advantage of maintaining access even when a local internet outage occurs, since the cloud infrastructure is not dependent on a public network connection.

Software as a Service (SaaS) is a cloud model in which software applications are hosted by a third-party provider and made available to customers over the internet. SaaS is not designed to maintain access in the event of a local internet outage.

A community cloud is a shared infrastructure that is used by multiple organizations, typically from the same industry or with similar requirements. Community clouds are not designed to maintain access in the event of a local internet outage.

A public cloud is a cloud infrastructure that is maintained by a third-party provider and is made available to the public over the internet. Public clouds are not designed to maintain access in the event of a local internet outage.

Reference: CompTIA A+ Core 1 Exam Guide, page 258.

QUESTION 5

A user is researching hard drives to upgrade a PC and has decided to purchase a NVMe drive. Which of the following Should the user confirm are available on the PC before making the purchase? (Select TWO).

- A. SATA
- B. M.2
- C. PCIe
- D. SAS
- E. SCSI
- F. DRAM

Correct Answer: B, C

Section:

Explanation:

NVMe (Non-Volatile Memory Express) drives are high-speed solid-state drives that utilize the PCIe (Peripheral Component Interconnect Express) interface to connect to the motherboard. Before purchasing an NVMe drive, the user should confirm that the PC has an available M.2 slot for the drive and that the PC has a PCIe interface for the M.2 slot.

SATA (Serial ATA) is an older interface for hard drives and is not compatible with NVMe drives. SAS (Serial Attached SCSI) is a newer interface for hard drives and is typically used for enterprise-level storage systems. SCSI (Small Computer System Interface) is a parallel interface for hard drives that is primarily used in high-end workstations and servers. DRAM (Dynamic Random Access Memory) is a type of memory commonly used in computers, but

it is not relevant to the storage of data on a hard drive.

Reference: CompTIA A+ Core 1 Exam Guide, page 267.

QUESTION 6

The Wi-Fi network in the office is experiencing slow connection speeds. Which of the following should the technician check first on the access point?

- A. Transmit power settings
- B. Security settings
- C. Firmware version
- D. Location

Correct Answer: A

Section:

Explanation:

The transmit power settings of the access point determine how strong the Wi-Fi signal is. If the transmit power is too low, the Wi-Fi network will have slow connection speeds and poor coverage. If the transmit power is too high, the Wi-Fi network will interfere with other nearby networks and devices, causing congestion and performance issues. Therefore, the technician should check the transmit power settings first and adjust them to an optimal level for the office environment.

Reference:

- 8 Reasons Why Your Internet is Slow (and How to Fix It), section "You have weak Wi-Fi signals".
- 6 Things Slowing Down Your Wi-Fi (And What to Do About Them) - How-To Geek, section "Channel Congestion Dings Wi-Fi Performance".

QUESTION 7

A user frequently edits large files and saves them locally on a laptop_ The user has recently begun experiencing performance issues and needs a cost-effective hardware upgrade.

Which of the following is the best way to meet the user's requirements?

- A. Upgrade the memory
- B. Upgrade to a larger GPU.
- C. Upgrade to an SSD.
- D. Upgrade to a faster CPU.

Correct Answer: C

Section:

Explanation:

Upgrading to an SSD (Solid State Drive) is the best way to meet the user's requirements because it will improve the performance and storage capacity of the laptop. SSDs are faster than HDDs (Hard Disk Drives) because they have no moving parts and can access data more quickly. SSDs also have lower power consumption, lower heat generation, and higher reliability than HDDs. Therefore, upgrading to an SSD will make the laptop more responsive, boot faster, and handle large files better.

According to some web sources, SSDs are the best hard drives for video editing because they can streamline the workflow and store masses of footage in one easy-to-access place¹. SSDs are also one of the most common PC upgrades that can make a dramatic difference, especially for aging systems².

Additionally, Adobe recommends using SSDs for Premiere Pro and After Effects because they can handle large media files and cache data more efficiently³.

Reference:

- The best hard drives for video editing in 2023, section "Best SSD overall".
- The Five Best PC Upgrades to Improve Performance, section "Add a Solid-State Drive".
- Hardware recommendations for Premiere Pro and After Effects, section "Storage".

QUESTION 8

Which of the following is the best example of when to use virtualization?

- A. To manage shared folders by user accounts

- B. To deploy software updates to user machines
- C. To enhance security by centralizing all user desktops
- D. To prevent users from circumventing password policies

Correct Answer: C

Section:

Explanation:

One of the benefits of virtualization is that it allows you to create and manage multiple virtual machines (VMs) on a single physical computer. This can be used to enhance security by centralizing all user desktops on a server, rather than storing them on individual user machines. This way, the user desktops can be isolated from each other and from the host machine, preventing malware infections, data breaches, and unauthorized access.

Additionally, the user desktops can be easily backed up, restored, updated, and monitored by the administrator, reducing the risk of data loss and downtime.

This type of virtualization is called desktop virtualization, and it separates the desktop environment from the physical hardware the user interacts with¹. The user can access their virtual desktop from any device, such as a laptop, tablet, or smartphone, using a remote display protocol. The user experience is similar to using a local desktop, but with improved security and manageability.

Reference:

- What Is Virtualization, and Why Should You Use it?, section "Desktop Virtualization".

QUESTION 9

A technician is installing the RAM for a graphs workstation. Which of the following is special purpose memory used by graphic controllers?

- A. SRAM
- B. MicroDIMM
- C. VRAM
- D. Unbuffered DIMM

Correct Answer: C

Section:

Explanation:

VRAM (Video Random Access Memory) is a special-purpose memory type used by graphics controllers to store image data that is displayed on the screen. VRAM is faster and more expensive than regular RAM, and it allows the graphics controller to access the image data directly without involving the CPU or the system memory. VRAM can improve the performance and quality of graphics-intensive applications, such as video editing, gaming, and 3D rendering.

Reference:

- Ram Flashcards | Quizlet, question "Which of the following is a special-purpose memory type used by graphics controllers?".
- Nvidia Unveils Big Accelerator Memory: Solid-State Storage for GPUs, paragraph 4.
- US5801706A - Special purpose memory for graphics and display apparatus ..., abstract.

QUESTION 10

A team is having Issues With paper jams on a printer that the team shares With other teams. The team that IS having Issues prints legal-sized documents, and the other teams print letter-sized documents. Which of the following is most likely the issue?

- A. Worn rollers
- B. Page orientation
- C. Tray settings
- D. Multipage misfeed

Correct Answer: C

Section:

Explanation:

The most likely issue is C. Tray settings.

Tray settings are the configuration options that tell the printer what type and size of paper is loaded in each tray. If the tray settings do not match the actual paper loaded, it can cause paper jams, misalignment, or incorrect

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printing. For example, if the printer expects letter-sized paper (8.5 x 11 inches) but the tray contains legal-sized paper (8.5 x 14 inches), the printer may try to pull more paper than it needs, resulting in a jam. To fix this issue, the team should check and adjust the tray settings according to the paper they are using. They should also make sure that the paper is loaded correctly and not overfilled or mixed with different sizes or types of paper. Some printers have a manual feed option that allows users to select the paper size and type before printing, which can prevent paper jams from occurring.

Reference:

- Fix Paper Jam Errors | HP® Support, section "Paper jams".
- Common Causes of Paper Jams and How to Fix Them - 1ink.com, section "Make Sure You're Loading the Paper Correctly".
- How to Fix a Paper Jam in a Printer - Computer Hope, section "Paper tray is overloaded or not loaded correctly".

QUESTION 11

A network technician has been tasked with creating a patch cable. The RJ45 connectors will not stay attached to the cable. Which of the following tools is needed to fix this issue?

- A. Cable tester
- B. Crimper
- C. Punchdown tool
- D. Loopback plug

Correct Answer: B

Section:

Explanation:

A crimper is a tool that is used to crimp (attach) an RJ45 connector onto the end of a patch cable. The crimper applies pressure to the connector to make a permanent connection between the connector and the cable, ensuring that the connector will stay attached to the cable.

A cable tester is used to test the connectivity of a network cable. A punchdown tool is used to terminate network cables in a patch panel or keystone jack. A loopback plug is a diagnostic tool that is used to test network interfaces by simulating network traffic.

Reference: CompTIA A+ Core 1 Exam Guide, page 92.

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QUESTION 12

Which of the following allows a switch to be divided into separate logical networks?

- A. VLAN
- B. SSL VPN
- C. NAT
- D. RADIUS

Answer: A

Correct Answer: A

Section:

Explanation:

A Virtual LAN (VLAN) is a network topology that allows a switch to be divided into separate logical networks. This allows for the creation of multiple broadcast domains within a single physical network, improving network segmentation and security. With VLANs, you can segment your network so that different departments, applications, or users are isolated from each other, improving network security and performance.

QUESTION 13

The IT department issued a corporate smartphone to a user, but the user returned the device stating it had connectivity issues. The user claimed the device functioned on Wi-Fi but all connectivity to cloud services was lost as soon as the device was taken off site. Which of the following issues was MOST likely affecting the device?

- A. MDM was never properly set up on the device.
- B. S/MIME certificates were corrupted and needed to be reloaded.
- C. Bluetooth on the device was disabled by mistake.
- D. The device never had a proper SIM card installed.

Correct Answer: D

Section:

Explanation:

A SIM card is needed for the device to use cellular network services, so without it, the device will be unable to connect to the cloud services when taken off site. MDM (Mobile Device Management) can be used to manage settings and access on a device, but it is not necessary for the device to be able to use cloud services. S/MIME (Secure/Multipurpose Internet Mail Extensions) certificates are used to encrypt and digitally sign emails, and are not related to device connectivity. Bluetooth can be used to connect devices together, but it is not necessary for the device to be able to use cloud services.

QUESTION 14

A technician is troubleshooting a smartphone that has a large dark area on the screen. The screen has no damage to indicate that it is cracked. Which of the following BEST describes why a blot is on the screen?

- A. Digitizer damage
- B. Improper charging
- C. Ambient light sensor damage
- D. Liquid damage

Correct Answer: A

Section:

Explanation:

A blot on the screen of a smartphone is most likely caused by damage to the digitizer, which is the part of the device responsible for interpreting touch input. Improper charging is unlikely to cause a blot on the screen, as is damage to the ambient light sensor. Liquid damage is a possibility, but it is more likely to cause discoloration or other physical damage to the screen.

QUESTION 15

A network administrator was notified that laptop users are unable to access or ping any network resources on the corporate network. Which of the following should the network administrator check FIRST?

- A. DHCP
- B. AAA
- C. DNS
- D. ARP

Correct Answer: C

Section:

Explanation:

Domain Name System (DNS) is an Internet service that translates domain names (e.g., its.umich.edu) into IP addresses. Dynamic Host Configuration Protocol (DHCP) is a protocol for automatically assigning IP addresses and other configurations to devices when they connect to a network.

QUESTION 16

Recently, an organization received a number of spam emails that passed through the spam gateway.

The emails contained generally the same information, but the sending domains were different. Which of the following solutions would BEST help mitigate the issue?

- A. Updating the keyword filtering
- B. Editing the sender policy framework
- C. Contacting the gateway vendor
- D. Verifying DMARC is enabled

Correct Answer: D

Section:

Explanation:

DMARC (Domain-based Message Authentication, Reporting and Conformance) is an email authentication protocol. It is designed to give email domain owners the ability to protect their domain from unauthorized use,

commonly known as email spoofing.

QUESTION 17

A technician is monitoring all outbound traffic in a SOHO. Which of the following is the MOST costeffective solution to monitor the traffic?

- A. Spectrum analyzer
- B. Network tap
- C. Lookback plug
- D. Toner probe

Correct Answer: B

Section:

Explanation:

A network tap is used to intercept the signals passing over a cable and send them to a packet or protocol analyzer. Taps are either powered or unpowered:

QUESTION 18

While implementing a non-carrier-grade wireless backhaul, a technician notices the current channel selection is externally polluted with various RF signals. Upon performing a spectral analysis, the technician discovers a channel containing almost no RF pollution. Unfortunately, the technician is unable to select that channel. Which of the following is the MOST likely reason for this issue?

- A. The channel is reserved for licensed band use.
- B. The channel selection is defective, contact the manufacturer.
- C. The channel must be unblocked by the vendor.
- D. The device requires a firmware update to unlock the channel.

Correct Answer: A

Section:

Explanation:

The 2. band is subdivided into up to 14 channels, spaced at 5 MHz intervals from 2412 MHz up to 2484 MHz. Wi-Fi requires bandwidth of approximately 20 MHz, not 5 MHz. Consequently, a site designer needs to choose the channels that do not overlap. On a WLAN where only the first 11 channels are available, channels 1, 6, and 11 can be selected as non-overlapping. Note: In the Americas, regulations permit the use of channels 1-11 only, while in Europe, channels 1-13 are permitted. In Japan, all 14 channels are permitted

QUESTION 19

A user submits a help desk ticket regarding a smartphone that will no longer accept its charging cable. The assigned technician notices the phone does not have a protective case, and the user constantly transport the phone in a pocket. The technician attempts to use a secondary charger, but the cable falls out of the phone. Which of the following is the MOST likely cause of the issue?

- A. The phone requires a firmware update to address charging issues.
- B. The charge port contains foreign objects, such as lint.
- C. The phone's battery has swelled, preventing the utilization of the charge port.
- D. The phone has experienced water damage, thus the battery is not charring.

Correct Answer: B

Section:

Explanation:

The symptoms suggest that the charging cable falls out of the phone, indicating that the charge port may contain foreign objects such as lint, which can interfere with the connection between the charging cable and the phone.

QUESTION 20

A user is trying to play a DVD on a projector. The user can hear the audio; however, the projector is showing an error message that states:

HDMI Blocked due to Copy Protection Which of the following is the MOST likely cause of the error?

- A. The HDMI cannot carry the signal from the DVD to the projector.
- B. The user needs to switch from HDMI to a cable standard such as DisplayPort.
- C. The projector does not support the necessary HDCP protocol.
- D. The user needs to enable cony-protected sources in the projector's settings.

Correct Answer: C

Section:

Explanation:

The Official CompTIA® A+® Core 1 and Core 2 Student Guide (Exams 220-1001 and 220-1002) | 193 Protected content. If you encounter an error that indicates unauthorized content or an HDCP error: • DVI, HDMI, DisplayPort, and Thunderbolt all provide support for the Digital Rights Management (DRM) mechanism High-bandwidth Digital Content Protection (HDCP). HDCP allows a content source (such as a Blu-ray disc) to disable itself if the display adapter and monitor and/or speaker system do not support HDCP and fail to authenticate themselves with the playback source. There have been various iterations of HDCP (at time of writing the current version is 2.2) and backward-compatibility can be problematic as authentication may fail between devices that support different versions of the standard.

QUESTION 21

A technician is troubleshooting an old desktop system that randomly shows a Windows BSOD or powers off unexpectedly. All system temperatures are within normal limits. Which of the following should the technician do NEXT?

- A. Visually inspect the motherboard capacitors.
- B. Verify all case fans are operational.
- C. Check that the BIOS version supports the installed CPU.
- D. Compare the software requirements with the installed RAM.

Correct Answer: A

Section:

Explanation:

BSODs can be caused by poorly written device drivers or malfunctioning hardware, such as faulty memory, power supply issues, overheating of components, or hardware running beyond its specification limits. In the Windows 9x era, incompatible DLLs or bugs in the operating system kernel could also cause BSODs.

QUESTION 22

A technician is investigating the output shown on a monitor. The output is clear, but it has a pink hue.

The technician has replaced the video card and updated the graphics drivers. Which of the following would be the MOST likely cause?

- A. Physical cabling issues
- B. Burned-out bulb
- C. Display burn-in
- D. Incorrect data source

Correct Answer: A

Section:

Explanation:

The pink hue is most likely caused by physical cabling issues the output on a monitor is clear but has a pink hue, it could be due to an issue with the physical cabling connecting the monitor to the computer. The video signal may be degraded or distorted due to a damaged or loose cable. The technician should check and replace the cable if necessary to resolve the issue.

QUESTION 23

A company needs to support a 10Gbps throughput. Which of the following is the MINIMUM cable category that could be used?

- A. Cat 5
- B. Cat 5e
- C. Cat 6
- D. Cat 6a

Correct Answer: D

Section:

Explanation:

The minimum cable category that could be used to support a 10Gbps throughput is Cat 6a. Cat 6a cable is required with 10 Gigabit Ethernet for reliable performance with cable lengths up to 100metres. However, lower-specification cables can often be successfully used, particularly with the shorter cable lengths required in a typical home¹²³.

QUESTION 24

A new employee has been issued a company laptop. The employee requests an accessory with a single power source that has wired network connectivity and supports a keyboard, mouse, speakers, and dual monitors. Which of the following accessories should the systems administrator deploy to BEST meet the new user's needs?

- A. PoE switch
- B. USB-C hub with power delivery
- C. Docking station with DisplayPort
- D. KVM switch with audio

Correct Answer: C

Section:

Explanation:

A docking station is a hardware accessory that allows laptops to connect to multiple peripherals and devices with a single connection. A docking station with DisplayPort would provide the necessary connectivity for the dual monitors, and it can also support the required peripherals such as the keyboard, mouse, and speakers. In addition, it will provide a wired network connectivity for faster and more reliable network access.

QUESTION 25

A technician is troubleshooting a computer that is not completing POST and gets stuck at the manufacturer logo screen. All internal, removable parts have been disconnected and only the minimum parts necessary to POST were reconnected. However, the symptoms remain the same.

Which of the following should the technician try NEXT?

- A. Test the RAM in different slots, one at a time.
- B. Remove and test the power supply.
- C. Replace the motherboard.
- D. Change the CMOS battery.

Correct Answer: A

Section:

Explanation:

QUESTION 26

A technician is replacing the RAM on an entry-level server with hot-swappable components. Which of the following should the technician do NEXT?

- A. Replace the RAM while the server is at a cool temperature
- B. Replace the RAM while the server is running

- C. Power down the server completely and then replace the RAM
- D. Verify that the OS supports hot swapping the RAM

Correct Answer: D

Section:

Explanation:

Verify that the OS supports hot swapping the RAM. Before replacing the RAM on an entry-level server with hot-swappable components, the technician should verify that the operating system supports hot swapping of RAM.

QUESTION 27

A user who works with sensitive data has a computer configured with hard drive encryption. The TPM is active and hosting the encrypted key. After an upgrade to the motherboard, RAM and video card, the hard drive is not booting and data cannot be accessed from the hard drive. Which of the following should the technician do to enable the system to boot again and get access to the stored data?

- A. Use data recovery software to find and recover the hard drive information
- B. Access the BIOS and select to rebuild the degraded RAID array
- C. Boot into the BIOS and enable the TPM on the new motherboard.
- D. Return the replaced motherboard back to the computer

Correct Answer: C

Section:

Explanation:

The technician should boot into the BIOS and enable the TPM on the new motherboard to enable the system to boot again and get access to the stored data. 1. Boot into the BIOS and enable the TPM on the new motherboard. After upgrading the motherboard, the TPM may need to be enabled in the BIOS in order to access the encrypted key and boot the system. Enabling the TPM on the new motherboard should allow the system to boot and provide access to the encrypted data. Reference: CompTIA A+ Certification Exam Guide, 220-1001, Chapter 13

QUESTION 28

Which of the following wireless technologies has the MOST range and wireless throughput?

- A. 802.11ac
- B. 802.11ax
- C. 802.11b/g/n
- D. 802.11g

Correct Answer: B

Section:

Explanation:

802.11ax, also known as Wi-Fi 6, has the longest range and the highest wireless throughput of all the wireless technologies listed. Reference: CompTIA A+ Certification Exam Guide, 220-1001, Chapter 3

QUESTION 29

A user reports issues with a smartphone after dropping it. The icons on the screen all look normal, but when the user touches the email icon, for example, nothing happens. Which of the following is MOST likely the cause?

- A. Digitizer issues
- B. Overheating
- C. Broken screen
- D. Malware

Correct Answer: A

Section:

Explanation:

Dropping a smartphone can damage the digitizer, which is the component responsible for sensing touch input. This can cause issues with tapping and swiping on the screen, as well as other touchscreen-related issues.

Reference: CompTIA A+ Certification Exam Core 1 Exam Objectives - 3.3 Given a scenario, troubleshoot mobile device issues

QUESTION 30

While using a popular videoconferencing program, the user selects a webcam, but the software is unable to open the webcam. The webcam was working the previous day. Which of the following should be done to address this issue?

- A. Close other video software and retry.
- B. Adjust the conference software to a compatible resolution.
- C. Switch the video from the webcam to "conference" mode.
- D. Reseat or replace the webcam.

Correct Answer: A

Section:

Explanation:

One possible solution to address the issue of a webcam not working with a videoconferencing program is to close other video software and retry (option A). It's possible that another video software program is currently using the webcam and preventing the videoconferencing program from accessing it. By closing any other video software that may be running on the computer, the user can ensure that the webcam is available for use by the videoconferencing program.

QUESTION 31

A small office has a wireless network with several access points for roaming laptop use. Users occasionally report that the wireless connection drops or becomes very slow. Users have confirmed that this issue only happens when connected to the office wireless network. Which of the following would MOST likely be the cause?

- A. Hidden SSID
- B. Device interference
- C. Ethernet port flapping
- D. High ISP latency

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Correct Answer: B

Section:

Explanation:

Device interference is the most likely cause of the wireless connection dropping or becoming slow. Interference can come from other wireless devices, microwave ovens, or physical barriers like walls and metal objects. Hidden SSID, Ethernet port flapping, and high ISP latency are not likely to cause this issue. Wireless interference from other devices can cause a drop in wireless connection speed and stability. In a small office environment, there may be several wireless devices competing for the same bandwidth, causing the issues described. Reference: CompTIA A+ Certification Exam Core 1 Exam Objectives - 3.7 Given a scenario, troubleshoot wired and wireless networks with appropriate tools

QUESTION 32

A developer is requesting permission to utilize client-side visualization. The developer would like to write code in a setting isolated from other infrastructure to avoid negative impacts of experimental code. Which of the following provides the BEST solution for the developer?

- A. Cross-platform functionality
- B. Software compatibility
- C. Test case development
- D. Sandbox environment

Correct Answer: D

Section:

Explanation:

A sandbox environment is an isolated testing environment where code can be written and tested without impacting other infrastructure. This provides a safe and controlled environment for experimentation and development. Reference:
CompTIA A+ Certification Exam Core 2 Exam Objectives - 5.5 Compare and contrast common workstation security best practices

QUESTION 33

A laptop PC user is reporting issues with the hard drive. A filesystem check shows that all files are accessible and the filesystem is clean. After the check, the PC still issues a hard drive error message. Which of the following is the MOST likely cause of the error?

- A. S.M.A.R.T failure
- B. IOPS failure
- C. DIMM failure
- D. RAID failure

Correct Answer: A

Section:

Explanation:

If the filesystem check shows that all files are accessible and the filesystem is clean, but a hard drive error message persists, it's possible that the hard drive is experiencing S.M.A.R.T. (Self-Monitoring, Analysis, and Reporting Technology) failure. This is a warning system built into hard drives to alert users of potential issues before they become critical. Reference: CompTIA A+ Certification Exam Core 1 Exam Objectives - 3.3 Given a scenario, troubleshoot mobile device issues

QUESTION 34

A user takes a tablet to a technician because the cursor on it keeps drifting. The technician notices the screen does not appear to be damaged. Which of the following is the MOST likely cause of the cursor issue?

- A. The screen is physically damaged.
- B. The screen rotation is incorrect.
- C. The touch-pen battery is depleted.
- D. The screen needs to be recalibrated.

Correct Answer: D

Section:

Explanation:

The most likely cause of the cursor issue is that the screen needs to be recalibrated. This can happen when the tablet is used for a long time or when the tablet is dropped or bumped. Recalibrating the screen will help the tablet recognize the touch input more accurately.

QUESTION 35

A laptop's external webcam software is running, but it shows no image or video. Which of the following should a technician perform FIRST?

- A. Research new webcam firmware.
- B. Restart the computer and run system diagnostics.
- C. Reseat the webcam.
- D. Reinstall the webcam software and drivers.

Correct Answer: C

Section:

Explanation:

<https://www.lifewire.com/fix-it-when-webcam-is-not-working-4588517> If a laptop's external webcam software is running, but it shows no image or video, the first step the technician should perform is to reseat the webcam. Reseating the webcam involves disconnecting it from the motherboard and then reconnecting it. If this doesn't work, the technician should then check the webcam drivers or software. Reference: CompTIA A+ Certification All-in-One Exam Guide, Tenth Edition by Mike Meyers (Page 502)

QUESTION 36

Which of the following describes the main difference between T568A and T568B cabling standards?

- A. The T568B data transfer rate is higher than T568A.
- B. The green and the orange cables are interchanged.
- C. T568A is used in blue cables, and T568B is used in green cables.
- D. The standards use different cable connectors.

Correct Answer: B

Section:

Explanation:

The main difference between T568A and T568B cabling standards is that the green and orange cables are interchanged¹². T568A is designed for backward compatibility with older telephone wires, while T568B is designed for better signal isolation and noise protection for newer networking systems and products³. T568A is used in blue cables, and T568B is used in green cables¹. The standards use the same cable connectors³.

QUESTION 37

A user reboots a machine. On rebooting, the user hears one beep, and then an error message is displayed. Which of the following are MOST likely causing this issue? (Select TWO).

- A. RAM module
- B. Graphics card
- C. CPU
- D. Boot order
- E. USB flash drive
- F. Power supply

Correct Answer: A, D

Section:

Explanation:

When a user hears one beep on rebooting a machine, and then an error message is displayed, it could indicate that there is a problem with the RAM module or the boot order. The beep sound indicates that the POST process was successful, and the error message indicates that the boot process was unsuccessful. The boot order determines the sequence in which the computer looks for bootable devices. Reference: CompTIA A+ Certification All-in-One Exam Guide, Tenth Edition by Mike Meyers (Page 693)

QUESTION 38

Which of the following describes metered utilization of cloud resources?

- A. Resources provisioned instantly
- B. Payments made only for resources that are used
- C. Resources pooled to increase computing power
- D. Implementation of rapid elasticity

Correct Answer: B

Section:

Explanation:

Metered utilization of cloud resources refers to payments made only for resources that are used. Cloud providers offer a pay-as-you-go model where customers are charged based on their usage of resources. Customers can easily scale up or down their usage of resources as per their needs and only pay for what they use. Reference: CompTIA A+ Certification All-in-One Exam Guide, Tenth Edition by Mike Meyers (Page 642)

QUESTION 39

A technician is receiving reports that the entire office sporadically loses network connectivity throughout the day. The technician determines the root cause to be EMI. Which of the cable mediums would be the MOST cost

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effective without sacrificing system performance?

- A. Coaxial
- B. Shielded Cat 6
- C. Plenum Cat 5e
- D. Multimode fiber

Correct Answer: B

Section:

Explanation:

Electromagnetic interference (EMI) is unwanted noise or interference in an electrical path or circuit caused by an outside source. Hence shielded Cat 6 is better. If a technician determines that the root cause of sporadic network connectivity issues is EMI, the most cost-effective cable medium that can be used without sacrificing system performance is shielded Cat 6 cable. Shielded cables protect against electromagnetic interference (EMI) and radio frequency interference (RFI). Reference: CompTIA A+ Certification All-in-One Exam Guide, Tenth Edition by Mike Meyers (Page 548)

QUESTION 40

A user reports that a PC occasionally fails to boot. The user reboots the PC, but the performance is degrading. The technician hears a strange, repetitive, ticking noise coming from the PC. Which of the following should the technician do FIRST?

- A. Try to extract data.
- B. Reseat the RAM modules.
- C. Inspect the fan.
- D. Check the CD tray.

Correct Answer: A

Section:

Explanation:

This is a safe and sensible option if you value your data more than anything else. You don't want to risk losing your data by trying other methods that may worsen the situation. You can use a software tool or a service provider to recover your data before attempting any repairs.

QUESTION 41

A technician is setting up a device to use two-factor authentication. Which of the following meets this requirement?

- A. Thumbprint/retinal scan
- B. Password/password
- C. Password/thumbprint
- D. Password/PIN

Correct Answer: C

Section:

Explanation:

Two-factor authentication (2FA) is a security process that requires users to provide two different authentication factors to verify their identity. This means that in addition to providing something they know (such as a password or PIN), they must also provide something they have (such as a smart card or token) or something they are (such as a fingerprint or retinal scan). In this case, the correct answer would be C. Password/thumbprint. This option meets the requirement for two-factor authentication because it combines two different types of authentication factors: something the user knows (the password) and something the user is (the thumbprint). The other options do not meet the requirement for 2FA because they either use only one type of authentication factor (A and D) or use two instances of the same type of factor (B).

QUESTION 42

A laptop has been returned for a screen repair. The owner insists the screen is broken, but occasionally a faded image is able to be seen in very bright settings on the desktop. Which of the following steps should the repair technician take FIRST?

- A. Replace the graphics card.
- B. Replace the screen, as the customer insists.
- C. Recommend the usage of an external display instead.
- D. Ensure the backlight is functioning as expected.

Correct Answer: D

Section:

Explanation:

If a laptop has been returned for a screen repair and the owner insists the screen is broken, but occasionally a faded image is able to be seen in very bright settings on the desktop, the first step the repair technician should take is to ensure the backlight is functioning as expected. If the backlight is faulty, the screen may appear to be broken, but it may only be dim or too dark to be visible

QUESTION 43

An online retailer wants to save money and is considering migrating to the public cloud so peak is over. Which of the following BEST describes this aspect of cloud computing?

- A. Rapid elasticity
- B. Metered utilization
- C. Shared resources
- D. High availability

Correct Answer: A

Section:

Explanation:

Rapid elasticity is only suitable for a domain whose resource requirements suddenly up and down for a specific time interval. Referring to the Qthe online retailer wants to migrate to public cloud services during peak season, then wants it to be removed "automatically" when the peak is over.

QUESTION 44

A colleague has a laptop that has been working as expected for several years wall outlet. The MOST likely component that needs to be replaced is the:

- A. power adapter.
- B. battery.
- C. system fan.
- D. hard drive.

Correct Answer: B

Section:

Explanation:

QUESTION 45

A technician is commissioning a workstation that is required to have mirrored storage, utilizing two 4TB drives that support one failure. Which of the following BEST meets these requirements?

- A. RAID 0
- B. RAID 1
- C. RAID 5
- D. RAID 10

Correct Answer: B

Section:

Explanation:

RAID 1 is a mirrored configuration that utilizes two drives and provides redundancy by allowing one drive to fail without data loss. This configuration meets the requirement of mirrored storage with two 4TB drives that support one failure.

Reference: CompTIA A+ Certification Exam Guide, Ninth Edition, Chapter 8

QUESTION 46

A technician is tasked with installing additional RAM in a desktop computer. Which of the following types of RAM is MOST likely to be used?

- A. SODIMM
- B. DDR3
- C. ECC
- D. VRAM

Correct Answer: B

Section:

Explanation:

DDR3 is the most commonly used RAM type in modern desktop computers. It is faster and more energy efficient than its predecessors, and offers larger capacity modules. Reference: CompTIA A+ Certification Exam Guide, Ninth Edition, Chapter 5

QUESTION 47

A technician is upgrading a faulty motherboard that was ordered by an end user for an old, high-end desktop computer. However, the technician is unable to install the CPU into the socket. Upon closer inspection, the technician notices the pins on the CPU do not line up with the socket. Which of the following would be the best course of action for the technician to take NEXT?

- A. Try to set as many pins as possible.
- B. Install an adaptor to create a universal socket.
- C. Verify the socket type and manufacturer.
- D. Find a compatible motherboard for the CPU.

Correct Answer: C

Section:

Explanation:

In this situation, the best course of action for the technician to take NEXT would be C. Verify the socket type and manufacturer. If the pins on the CPU do not line up with the socket on the motherboard, it is likely that there is a compatibility issue between the two components. The technician should verify that the socket type and manufacturer of the motherboard match those of the CPU to ensure that they are compatible.

QUESTION 48

Laura, a customer, has instructed you to configure her home office wireless access point.

She plans to use the wireless network for finances and has requested that the network be setup with the highest encryption possible.

Additionally, Laura knows that her neighbors have wireless networks and wants to ensure that her network is not being interfered with by the other networks.

She requests that the default settings be changed to the following.

Wireless Name: HomeWiFi

Shared Key: CompTIA

Router Password: Secure\$1

Finally, Laura wants to ensure that only her laptop and Smartphone can connect to the network.

Laptop: IP Address 192.168.1.100

Hardware Address: 00:0A:BF:03:C4:54

Smartphone: IP Address 192.168.1.101

Hardware Address: 09:2C:D0:22:3F:11

INSTRUCTIONS

Configure Laura's wireless network using the network adapter window.

If at any time you would like to bring back the initial state of the situation, please click the Reset All button.

Laura's Wireless Configuration

WIRELESS SETUP | **NETWORK FILTER** | **ADMINISTRATOR TOOLS**

Wireless Network Settings

Enable Wireless: ☒

Wireless Network Name: (Also called the SSID)

Wireless Channel:

Disable SSID Broadcast: ☐

802.11g Only Mode: ☐

Wireless Security Mode

Security Mode:


WPA2

Passphrase:

Confirmed Passphrase:

Laura's House



- 

Wireless Network Name: **Default**

Security Mode: **Open**

Wireless Channel: **11**
- 

Wireless Network Name: **MyWi**

Security Mode: **WEP**

Wireless Channel: **6**
- 

Wireless Network Name: **PatsWiFi**

Security Mode: **WEP**

Wireless Channel: **11**

Laura's Wireless Configuration

WIRELESS SETUP | **NETWORK FILTER** | **ADMINISTRATOR TOOLS**

Please enter the same password into both boxes for confirmation.

Password:

Verify Password:

Laura's Wireless Configuration

WIRELESS SETUP **NETWORK FILTER** **ADMINISTRATOR TOOLS**

Wireless Network Settings

Enable Wireless: ☐

Wireless Network Name: (Also called the SSID)

Wireless Channel:

Disable SSID Broadcast: ☐

802.11g Only Mode: ☐

Wireless Security Mode

Security Mode:

Laura's Wireless Configuration

WIRELESS SETUP **NETWORK FILTER** **ADMINISTRATOR TOOLS**

Turn MAC Filtering ON: ☐

Allow the following MAC Addresses

<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	

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A.

Correct Answer: A

Section:

Explanation:

Answer: A

Explanation:

solution as

Wireless Configuration

Wireless Setup Network Filter Administrator Tools

WIRELESS NETWORK SETTINGS:

Enable Wireless: ☒

Wireless Network Name: (Also called the SSID)

Wireless Channel:

Disable SSID Broadcast: ☐

802.11g Only Mode: ☐

WIRELESS SECURITY MODE:

Security Mode:

WPA2:

Passphrase:

Confirmed Passphrase:

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Wireless Configuration

Wireless Setup Network Filter Administrator Tools

☒ Turn MAC Filtering ON

Allow the following MAC Addresses ▼

	MAC Address
<input checked="" type="checkbox"/>	00:0A:BF:03:C4:54
<input checked="" type="checkbox"/>	09:2C:D0:22:3F:11
<input type="checkbox"/>	
<input type="checkbox"/>	

Save Settings

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The image shows a 'Wireless Configuration' window with three tabs: 'Wireless Setup', 'Network Filter', and 'Administrator Tools'. The 'Administrator Tools' tab is active, displaying the 'ADMIN PASSWORD' section. It instructs the user to 'Please enter the same password into both boxes for confirmation.' There are two input fields: 'Password:' and 'Verify Password:', both containing the text 'Secure\$1'. A 'Save Settings' button is located at the bottom right of the window.

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QUESTION 49

A small ISP has hired a new technician Joe, the new technician, is being trained to configure customers* home networks The trailing instructor gives me technician a starter kit with cables, cable ends, and other network equipment and asks mm to build a working network.

The computer should be connected to have internet connectivity and the phone should be connected to have a dial tone.

INSTRUCTIONS

Use the appropriate cables. cable ends, tools and equipment to configure the network ana connect an components accordingly

There are 3 steps and the simulation starts on step 1.



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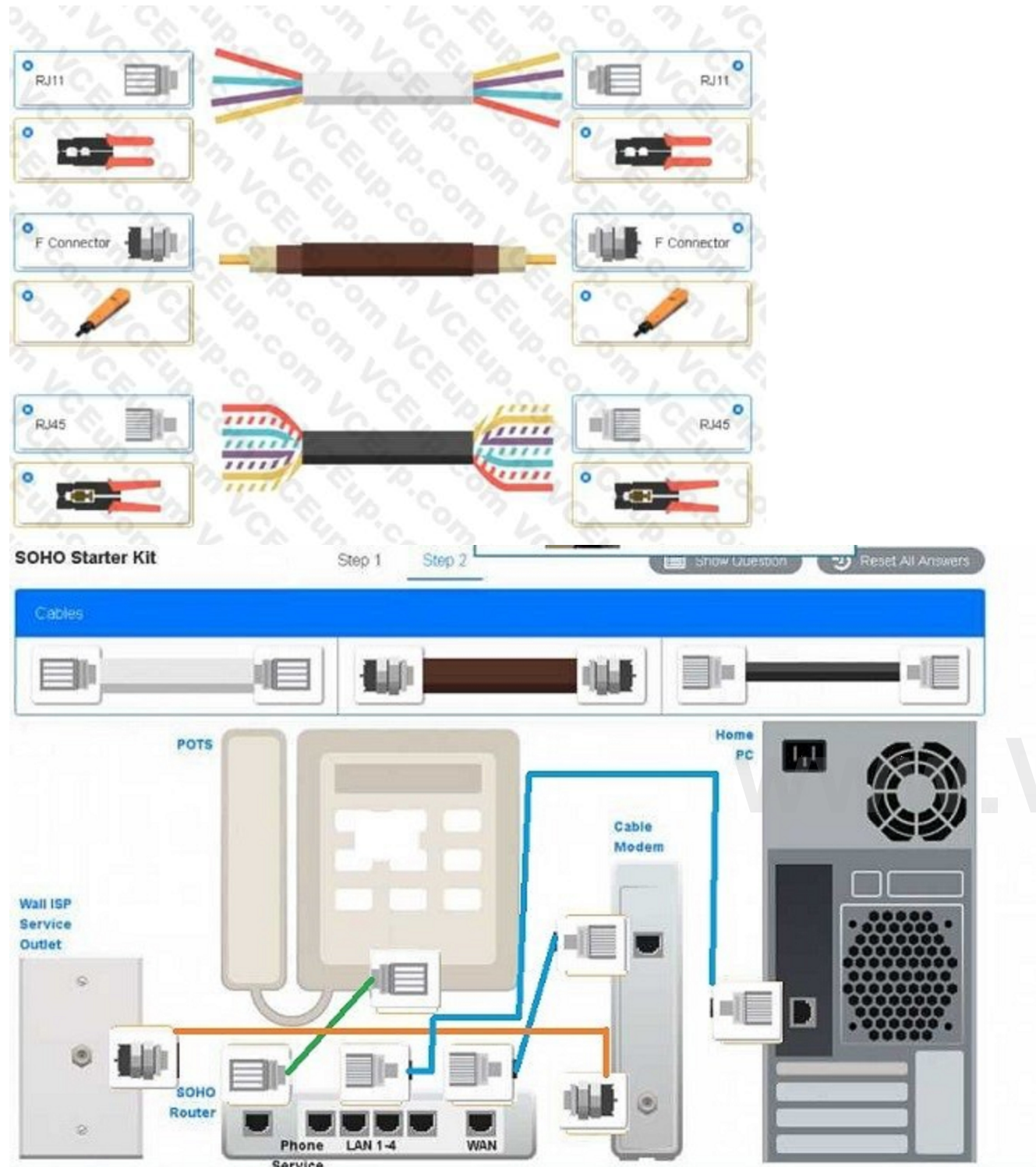
A. Answer of both steps below

Correct Answer: A

Section:

Explanation:

Answer of both steps below.



QUESTION 50

Which of the following would MOST likely be used to obtain electronic images of a large number of printed documents?

- A. NFC device
- B. ADF/flatbed scanner
- C. Camera/webcam
- D. QR scanner

Correct Answer: B

Section:

Explanation:

Explanation:

ADF/flatbed scanner would most likely be used to obtain electronic images of a large number of printed documents. Reference: CompTIA A+ Certification Exam Guide, Exam 220-1001, Page 351

QUESTION 51

A technician is upgrading a legacy wireless router for a home user. After installing the new router and configuring the SSID to be the same, none of the devices will connect to the network. Which of the following should the technician check NEXT?

- A. DHCP pool configuration
- B. MAC filtering list
- C. Wireless protocol settings
- D. DNS servers

Correct Answer: B

Section:

Explanation:

The technician should check the MAC filtering list next as the new router may have a different MAC address than the old router. Reference: CompTIA A+ Certification Exam Guide, Exam 220-1001, Page 332

QUESTION 52

DRAG DROP

An office manager reports that a printer is experiencing performance issues. Printouts are smudging when they are handled, and, recently, whenever the manager tries to print oversized documents, the paper jams before anything is printed on it.

Select and Place:



Correct Answer:



Section:

Explanation:

QUESTION 53

Which of the following concepts would be used by an online retailer to quickly add more web servers during peak sales times?

- A. Community cloud
- B. Rapid elasticity
- C. High availability
- D. Metered service

Correct Answer: B

Section:

Explanation:

Rapid elasticity would be used by an online retailer to quickly add more web servers during peak sales times. Reference: CompTIA A+ Certification Exam Guide, Exam 220-1001, Page 405

QUESTION 54

A company has a dot matrix printer that uses carbon paper. The company reports that the first page is printing too light, although the following pages are still legible. Which of the following MOST likely needs to be fixed?

- A. The print drum is worn and loose causing the printing to be light in places
- B. The ribbon is low on ink or missing and must be replaced to get proper output
- C. The heating element has failed, and a new one needs to be installed for proper transfer
- D. The wrong type of filament is loaded, preventing it from sticking correctly
- E. The fuser assembly is not calibrated properly, causing it to impact the paper too hard

Correct Answer: B

Section:

Explanation:

Dot Matrix printers do not use heat, they use a pin striking an inked ribbon (for the first copy, the subsequent copies are handled by the carbon paper) The ribbon is low on ink or missing and must be replaced to get proper output in a dot matrix printer that uses carbon paper. Reference: CompTIA A+ Certification Exam Guide, Exam 220-1001, Page 361

QUESTION 55

A technician needs to install a cost-effective storage device into a rackmount server that will be used as a VM host. This storage will be used for all VMs that run from the server. Which of the following should be used?

- A. Optical disk drive
- B. eMMC storage device
- C. 15,000rpm drive
- D. RAID 10 array

Correct Answer: D

Section:

Explanation:

RAID 10 array is often used for server virtualization as it provides both redundancy and performance benefits. It uses a combination of mirroring and striping to provide both fault tolerance and improved I/O performance. An optical disk drive or eMMC storage device would not provide enough storage or performance for a VM host server, while a 15,000rpm drive may provide good performance but would not provide redundancy for fault tolerance. Therefore, a RAID 10 array is the best option for cost-effective storage that will be used for all VMs that run from the server.

QUESTION 56

A technician installed new firmware on the company's laser printers and has since been receiving multiple calls that information is garbled and looks like code. Only printers with the new firmware are having this issue. Which of the following steps should the technician complete NEXT?

- A. Change the language settings on the printers
- B. Reboot all the machines having the issues
- C. Reboot all the printers.
- D. Install an updated printer driver on the print server

Correct Answer: D

Section:

Explanation:

The MOST efficient next step the technician should complete is to install an updated printer driver on the print server². The issue of information being garbled and looking like code could be related to a compatibility issue with the new firmware and the existing printer driver¹. The printer driver is responsible for converting the print job data into a format that the printer can understand and print².

QUESTION 57

Which of the following describes the operational difference between hubs and switches when transmitting data to a specific computer inside the network?

- A. Switches only send data to the specific computer, while hubs send data to all computers inside the network.
- B. Switches compress data while hubs send uncompressed data
- C. Switches receive data and route it to all computers inside the network while hubs receive data and do not route
- D. Switches scramble data, while hubs send data in the original form.

Correct Answer: A

Section:

Explanation:

Switches only send data to the specific computer, while hubs send data to all computers inside the network. Reference: CompTIA A+ Certification Exam Guide, Exam 220-1001, Page 323

QUESTION 58

A user working in the field reported the GPS stopped working on a phone. The user's older, in-car GPS continued to function. Later, the user reported that the phone's GPS started working again.

Which of the following MOST likely caused the phone's GPS to fail?

- A. The cell phone was in conservation mode
- B. The cell phone had lost service to the earner
- C. The eel phone received a firmware update
- D. The cell phone had overheated

Correct Answer: B

Section:

Explanation:

The phone's GPS may fail due to a loss of service from the carrier, which provides the phone with GPS location data. The fact that the in-car GPS continued to function suggests that the issue was related to the phone, not the GPS satellites. Reference: CompTIA A+ Certification Study Guide, Tenth Edition, pg. 372

QUESTION 59

A system administrator has been tasked with allowing SMTP traffic through the system's host-based firewall. Which of the following ports should the administrator enabled?

- A. 23
- B. 25
- C. 80
- D. 161

Correct Answer: B

Section:

Explanation:

SMTP (Simple Mail Transfer Protocol) uses port 25 to send email messages between servers. SMTP uses port 25 to send email messages between mail servers. Therefore, the system administrator should enable port 25 to allow SMTP traffic through the host-based firewall. Reference: CompTIA A+ Certification Study Guide, Tenth Edition, pg. 282

QUESTION 60

A Wi-Fi mesh network has been optimized to eliminate poor coverage areas, yet users still experience decreased bandwidth and connectivity issues. Which of the following actions should the technician take NEXT?

- A. Relocate any large, dense, solid, and metal objects, such as mirrors and file cabinets, in the mesh network coverage area to the perimeter so that wireless reflections, absorptions, and occlusions are minimized.
- B. Use a Wi-Fi analyzer to determine whether the channel in use is overcrowded and to identify which channel the mesh network should use for best performance.
- C. Use the signal strength indicator on a mobile device to roam the coverage area and generate a heat map to isolate zones with weak signals.
- D. Turn off broadcasting of the SSID on the mesh network so that other networks cannot see it.

Correct Answer: B

Section:

Explanation:

If users are experiencing decreased bandwidth and connectivity issues in a Wi-Fi mesh network, the technician should use a Wi-Fi analyzer to determine whether the channel in use is overcrowded and to identify which channel the mesh network should use for best performance. Reference: CompTIA A+ Certification Study Guide, Tenth Edition, pg. 308

QUESTION 61

A technician logs on to a PC and inserts an encrypted USB drive. When opening File Explorer, the technician cannot see the USB drive. Which of the following tools should the technician use to see all drives?

- A. DiskPart
- B. Diskmgmt
- C. Disk Cleanup

D. BitLocker

Correct Answer: B

Section:

Explanation:

he tool that the technician should use to see all drives is Diskmgmt. Diskmgmt is a Windows utility that allows you to manage disk drives and partitions on your computer. It can be used to view all drives, including USB drives, that are connected to the computer.

QUESTION 62

A computer that contains critical data has not been backed up and will not boot past a S. M.A.R. T, error that indicates imminent hard disk failure. Which of the following actions should the technician take FIRST?

- A. Run diagnostics on the faulty hard drive using a boot disk
- B. immediately replace the hard drive generating the SMART error
- C. Turn off S. M. A. R. T, monitoring in the computer's BIOS settings
- D. Attempt to boot the operating system in safe mode

Correct Answer: A

Section:

Explanation:

The technician should run diagnostics on the faulty hard drive using a boot disk first when a computer that contains critical data has not been backed up and will not boot past a S.M.A.R.T. error that indicates imminent hard disk failure.

Reference: CompTIA A+ Certification Exam Guide, Exam 220-1001, Page 376

QUESTION 63

A technician receives several error alerts on a server after an unexpected reboot. A message states that one or more disks are in a degraded state. When the technician advances to the next error message, it indicates the OS is missing.

Which of the following are the MOST likely causes of these errors? (Choose two.)

- A. Missing drives in the OS
- B. RAID failure
- C. Bootable device not found
- D. Data loss
- E. Controller failure
- F. CMOS corruption
- G. TPM malfunction

Correct Answer: B, C

Section:

Explanation:

The message stating that one or more disks are in a degraded state is a clear indication of a RAID failure. RAID stands for Redundant Array of Independent Disks, and it is a technology used to provide fault tolerance and improve performance by combining multiple hard drives into a single logical unit. The message indicating that the OS is missing is most likely caused by a bootable device not found. This means that the server is unable to boot from the designated boot device, which could be the hard drive, a CD/DVD drive, or a USB flash drive. This could be caused by a faulty boot device, a loose cable, or a misconfiguration in the BIOS or UEFI settings.

QUESTION 64

A technician is receiving reports that the entire office sporadically loses network connectivity throughout the day. The technician determines the root cause to be EMI. Which of the following cable mediums would be the MOST cost effective without sacrificing system performance?

- A. Coaxial

- B. Shielded Cat 6
- C. Plenum Cat 5e
- D. Multimode fiber

Correct Answer: B

Section:

Explanation:

In this situation, the MOST cost-effective cable medium that would not sacrifice system performance would be B. Shielded Cat 6. Electromagnetic interference (EMI) can disrupt network connectivity by interfering with the signals transmitted over network cables. Shielded Cat 6 cables are designed to provide protection against EMI by incorporating a layer of shielding material around the cable's conductors. This shielding helps to prevent EMI from interfering with the signals transmitted over the cable.

QUESTION 65

Which of the following would be BEST reason to use a virtual machine as a sandbox?

- A. To test new software in a safe environment
- B. To increase the efficient use of computing resources
- C. To run multiple machines on the same hardware
- D. To have dedicated hardware for a single system

Correct Answer: A

Section:

Explanation:

The main reason to use a virtual machine as a sandbox is to test new software in a safe environment without risking the integrity of the host operating system. Using a virtual machine enables the testing of software and allows for the isolation of the software from the host system. Reference: CompTIA A+ Certification Study Guide, Tenth Edition, pg. 409

QUESTION 66

A user visits the desk to report that a smartphone takes more than a day to fully charge. The user has already tested multiple wall outlets and swapped the charging cable, but the results are the same. Which of the following should the technician do FIRST?

- A. Verify the power rating of the charger.
- B. Ensure all unnecessary connectivity features are disabled.
- C. Check that all missing smartphone OS updates are applied.
- D. Complete a factory reset of the phone

Correct Answer: A

Section:

Explanation:

A smartphone that takes more than a day to fully charge may be due to a charger that is not powerful enough. The technician should verify that the charger is rated for the smartphone's battery capacity and that it is providing the correct voltage and amperage.

QUESTION 67

In which of the following places is a laptop's wireless antenna MOST likely located?

- A. Near the network interface card
- B. Underneath the battery
- C. Integrated into the motherboard
- D. In the bezel of the lid

Correct Answer: D

Section:

Explanation:

According to Dell Community, the Wi-Fi antenna is located in the top of the LCD display housing. It consists of two elements, fed by two cables, a white main designated on the Wi-Fi card by a white triangle, and a black auxiliary designated on the Wi-Fi card by a black triangle¹.

QUESTION 68

Vertical streaks are appearing on the output of a laser printer. Which of the following items is the MOST likely cause?

- A. Roller
- B. Drum
- C. Transfer belt
- D. Ribbon

Correct Answer: B

Section:

Explanation:

Vertical or horizontal lines—Marks that appear in the same place (referred to as repetitive defects) are often due to dirty feed rollers (note that there are rollers in the toner cartridge and fuser unit too) or a damaged or dirty photosensitive drum.

too) or a damaged or dirty photosensitive drum. Vertical streaks on a laser printer output are usually caused by a damaged or worn-out drum, which is responsible for transferring toner to the paper. If the drum is damaged, toner may accumulate on certain parts of the drum, leading to streaks on the printed output. Reference: CompTIA A+ Certification All-in-One Exam Guide, Tenth Edition, Chapter 15

QUESTION 69

A university student was able to boot from a live Linux CD on a computer in a shared space on campus. Which of the following will BEST prevent this type of action from occurring in the future?

- A. Require TPM security features.
- B. Set a boot password.
- C. Disable all media options.
- D. Enable secure boot.

Correct Answer: D

Section:

Explanation:

Enabling secure boot will verify the digital signature of the bootloader and operating system, ensuring that the system only boots from trusted and authorised sources. This can prevent booting from an unauthorised live CD or other external media. The best way to prevent booting from a live Linux CD on a computer in a shared space on campus is to enable secure boot. Secure boot is a feature that ensures that the system only runs software that is signed by an authorized party. This means that the system will not boot from any unauthorized media, including live Linux CDs. Secure Boot is a feature that ensures that the system only runs software that is signed by an authorized party. This means that the system will not boot from any unauthorized media, including live Linux CDs. Secure Boot is an important security feature designed to prevent malicious software from loading when your PC starts up (boots)¹. Booting from a live Linux CD is a process that allows you to run a Linux operating system from a CD or DVD without installing it on your hard drive. This can be useful for testing or troubleshooting purposes. To boot from a live Linux CD, you need to insert the CD or DVD into your computer's CD/DVD drive and restart your computer. Most systems are set up to automatically boot from the CD/DVD drive, but if your system is not set up this way, you may need to change a system setting to boot from a Linux CD/DVD²³.

QUESTION 70

A technician recently discovered the root cause of an application error that several users have been experiencing. The technician updated the configurations on the affected machines and verified full functionality was restored for all users, which of the following actions should the technician perform NEXT?

- A. Write a knowledge base article in the ticketing software to expedite future incidents.
- B. Submit a bug report to the developer of the application, along with the steps taken to resolve the issue.

- C. Work with the developer to proactively collect the application logs to identify future errors of this type.
- D. Send an email communication to the company about the issue and the steps taken to resolve it.

Correct Answer: A

Section:

Explanation:

CompTIA 6-Step Troubleshooting Process:

1. Identify the problem.
2. Establish a theory of probably cause. (Qthe obvious)
3. Test the theory to determine cause.
4. Establish a plan of action to resolve the problem and implement the solution.
5. Verify full system functionality and if applicable implement preventative measures.
6. Document findings, actions, and outcomes.

Writing a knowledge base article in the ticketing software would help document the root cause of the application error and the steps taken to resolve it, which can help other technicians resolve similar issues in the future.

This is an example of knowledge management best practices. Reference: CompTIA A+ Certification All-in-One Exam Guide, Tenth Edition, Chapter 6

QUESTION 71

A thermal punier that is used 10 print order buckets in a factory has been experiencing Issues following the failure of the alt conditioner during the summer. Each ticket has blank spots or is missing text. Which of the following would MOST likely solve these Issues?

- A. Restore function to the air conditioner.
- B. Clean the heating element.
- C. Replace the paper rolls.
- D. Install new toner.

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Correct Answer: A

Section:

Explanation:

it appears that option A, restoring function to the air conditioner, would most likely solve the thermal printer issue in the described scenario. The failure of the air conditioner during the summer could likely have caused high humidity or heat in the factory, which can affect the printing quality of thermal printers by causing blank spots or missing text. By restoring function to the air conditioner, the temperature and humidity in the factory can be controlled, which can help eliminate these printing issues. However, it is still possible that any of the other options listed could also potentially solve the issue, so it is best to assess the situation further and try different solutions if necessary.

QUESTION 72

A technician is troubleshooting a projector that will not display any Images. The technician has verified the computer output and cable are providing a good video signal. Which of the following should the technician do NEXT?

- A. Calibrate the image.
- B. Replace the bulb.
- C. Test the output resolution.
- D. Clean the fans.

Correct Answer: C

Section:

Explanation:

The MOST efficient next step the technician should do is to test the output resolution¹. The issue of a projector that will not display any images could be related to the output resolution¹. If the output resolution is not compatible with the projector, the projector will not display any images¹. Calibrating the image, replacing the bulb, or cleaning the fans may not be effective¹. If a projector is not displaying any images despite verifying that the computer output and cable are providing a good video signal, the technician should test the output resolution. The output resolution of the computer may not be compatible with the projector, which can cause the projector to not display any images.

QUESTION 73

A technician installed a new router at a small office. After the Installation, the technician notices that all devices have a 169.254.x.x IP address. Printers and fileshares are still working, but PCs cannot access the Internet. Which of the following should the technician configure on the router to enable devices to connect to the internet?

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

Correct Answer: C

Section:

Explanation:

To enable devices to connect to the internet after installing a new router at a small office, the technician should configure DHCP (Dynamic Host Configuration Protocol) on the router. DHCP is a network protocol that automatically assigns IP addresses and other network configuration parameters to devices on a network. By configuring DHCP on the router, the technician can ensure that all devices on the network are assigned a valid IP address that allows them to connect to the internet. If all devices have a 169.254.x.x IP address, this suggests that the router is not assigning IP addresses to the devices using DHCP (Dynamic Host Configuration Protocol). Configuring the DHCP settings on the router can enable the devices to receive IP addresses automatically and access the internet. Reference: CompTIA A+ Certification All-in-One Exam Guide, Tenth Edition, Chapter 14

QUESTION 74

A technician is installing new power supplies for the application engineering team's workstations.

The management team has not yet made a decision about installing dual graphics cards, but they want to proceed with the project anyway. Which of the following power supplies would provide the BEST solution?

- A. 1000W 24-pin modular power supply
- B. 220VAC 9000J surge protector
- C. 500W redundant power supply
- D. 2000VA uninterruptible power supply

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Correct Answer: A

Section:

Explanation:

A 1000W 24-pin modular power supply provides enough power to support a dual graphics card configuration, which requires a significant amount of power. A modular power supply allows the technician to connect only the cables that are necessary for the current configuration, reducing cable clutter and improving airflow inside the case. This makes it easier to install and maintain the power supply.

QUESTION 75

The help desk received a ticket regarding Issues with a laser printer. The printer has had repairs previously for scanning Issues. Currently, the printed text is not adhering properly to the paper.

Which of the following should be replaced to resolve this Issue?

- A. Fuser
- B. Waste container
- C. Roller
- D. Toner

Correct Answer: A

Section:

Explanation:

If the printed text is not adhering properly to the paper on a laser printer that has had repairs previously for scanning issues, the fuser should be replaced to resolve this issue. The fuser is a component of the printer that uses heat and pressure to fuse the toner onto the paper. If the fuser is not functioning properly, the toner may not adhere properly to the paper.

QUESTION 76

A help desk technician thinks a desktop PC has failed due to a defective power supply. Which of the following steps should the technician take NEXT?

- A. Inquire about environmental or infrastructure changes.
- B. Conduct external or internal research based on symptoms.
- C. Establish a plan of action to resolve the problem and implement the solution.
- D. Document the findings, actions, and outcomes.

Correct Answer: C

Section:

Explanation:

Once the technician has determined that the power supply is likely to be defective, they should establish a plan of action to resolve the problem. This may include replacing the power supply or further testing to confirm that it is indeed defective. After establishing a plan of action, the technician should implement the solution and verify that it has resolved the issue.

QUESTION 77

A salesperson is using a weather application on a mobile device. The application appears to be draining the device's battery very quickly. Which of the following is the BEST action for the salesperson to take in order to view weather forecasts while travelling?

- A. Enable the GPS service to ensure accurate location detection.
- B. Manually enter office locations in the weather application.
- C. Configure less frequent location checks using cellular location services.
- D. Use the offices' Wi-Fi IP addresses as the geolocation mechanism.

Correct Answer: C

Section:

Explanation:

Reducing the frequency of location checks using cellular location services will consume less battery power while still allowing the user to view weather forecasts while travelling. The other options may not solve the battery drain issue while using the weather application. Configuring less frequent location checks using cellular location services is the best option for the salesperson to view weather forecasts while traveling without draining the battery too quickly. Reference:

<https://www.makeuseof.com/tag/5-ways-improve-battery-life-android-phone/>

QUESTION 78

Which of the following is a method that can be used to securely connect a remote user's laptop to a corporate server?

- A. WAN
- B. VPN
- C. SSL
- D. DHCP

Correct Answer: B

Section:

Explanation:

A Virtual Private Network (VPN) is a secure method for connecting a remote user's laptop to a corporate server. VPNs use encryption to protect data transmitted over the internet.

QUESTION 79

A user creates a support ticket to report a conference room projector that does not work. The user says that even though the provided cables are being used, the projector screen shows the following error message: No signal input. Which of the following describes the FIRST action that should be taken?

- A. Verify that the projector is turned on.

- B. Verify that the user is using an approved OS.
- C. Replace the projector bulb.
- D. Check the video cable and replace it if necessary.

Correct Answer: D

Section:

Explanation:

The most common reasons you may be seeing the "No Signal" message: The projector and the source device are not connected correctly. The first action should be to check the video cable and replace it if necessary, as the error message suggests that the projector is not receiving a signal from the laptop. Verifying that the projector is turned on and checking the bulb would come after verifying the video cable.

QUESTION 80

Which of the following is the PRIMARY security concern with virtual machine escape?

- A. Cross-site scripting
- B. Compromising the hypervisor
- C. Overutilization of resources
- D. Rogue virtual machines installed on the hypervisor

Correct Answer: B

Section:

Explanation:

The primary security concern with virtual machine escape is compromising the hypervisor, which can allow attackers to gain access to other virtual machines or the host system. Virtual machine escape refers to an attack that allows a guest virtual machine to break out of its isolated environment and access other parts of the system.

QUESTION 81

Which of the following network services allows a networked device to always be assigned the same IP address based on the device's MAC address?

- A. DHCP
- B. LDAP
- C. UTM
- D. DNS

Correct Answer: A

Section:

Explanation:

Dynamic Host Configuration Protocol (DHCP) allows a networked device to always be assigned the same IP address based on the device's MAC address. DHCP can also assign other network configuration settings to devices automatically.

QUESTION 82

A startup is looking to immediately expand its data center but does not have the personnel or space to manage everything internally. The organization has multiple small offices and remote users with large computational and storage- solution requirements. Funding is not an issue for the company.

Which of the following can BEST accomplish the company's goals?

- A. SaaS
- B. IaaS
- C. ISP
- D. SON

Correct Answer: B

Section:

Explanation:

IaaS is a cloud computing model where a third-party provider hosts infrastructure components such as servers, storage, and networking on behalf of customers. This allows the startup to immediately expand its data center without the need for additional personnel or space to manage everything internally. Additionally, IaaS allows remote users to easily access the required computational and storage resources from multiple small offices. Infrastructure as a Service (IaaS) can provide the startup with the necessary computational and storage solutions without the need for internal management. IaaS allows organizations to rent computing resources from a third-party provider instead of owning and maintaining them in-house.

QUESTION 83

A technician is replacing a ribbon on a printer that produces faded text and Images when priming. Which of the following types of primers is the technician working on?

- A. Impact
- B. Inkjet
- C. Laser
- D. Thermal

Correct Answer: A

Section:

Explanation:

An impact printer is a type of printer that uses a ribbon to produce text and images on paper. If an impact printer is producing faded text and images when printing, it could be due to a worn-out ribbon that needs to be replaced. The technician would need to replace the ribbon on the impact printer to resolve the issue. A ribbon is a consumable component used in impact printers that uses a cloth or plastic strip coated with ink to produce text and images on paper.

Examples of impact printers include dot matrix printers and line printers. Reference: Study Guide Section 4.6 - Printer technologies

QUESTION 84

A user that works in sales is reporting that the output on each page printed from a laser has duplicate images. Which of the following should be performed FIRST to eliminate the ghost images?

- A. Change the paper weight setting.
- B. Replace the printer's fuser.
- C. Upgrade the printer firmware.
- D. Clean the toner drums and rollers

Correct Answer: D

Section:

Explanation:

If a laser printer is producing output with duplicate images (also known as ghost images), it could be due to an issue with the toner drums and rollers. The first step to eliminate the ghost images would be to clean the toner drums and rollers to remove any excess toner that may be causing the issue. Ghost images are a common issue in laser printers where an image or text from a previous page appears faintly on subsequent pages. The cause of this issue is usually due to toner residue on the drum or rollers, which can be removed by cleaning the toner drums and rollers. Reference: Study Guide Section 4.6 - Printer technologies

QUESTION 85

Which of the following is used to implement network security policies for an environment?

- A. Managed switch
- B. Repeater
- C. Firewall
- D. Gateway

Correct Answer: C

Section:

Explanation:

It is designed to protect an organization's network infrastructure and data from unauthorized access, while allowing legitimate traffic to pass through. Firewalls can be configured to enforce security policies that block certain types of traffic, limit access to specific network resources, and prevent attacks such as malware and phishing. A firewall is a network security system that monitors and controls incoming and outgoing network traffic based on predetermined security rules. It establishes a barrier between a trusted internal network and an untrusted external network, such as the Internet. Firewalls are used to implement network security policies for an environment by controlling access to the network and protecting it from unauthorized access. A firewall is used to implement network security policies. It monitors incoming and outgoing traffic based on predetermined security rules and can block traffic that does not meet the defined criteria. Reference: CompTIA A+ Certification All-in-One Exam Guide, Tenth Edition by Mike Meyers (Chapter 6, page 243)

QUESTION 86

A technician is troubleshooting a point-of-sale printer that is printing blank receipts. Which of the following should the technician do to resolve the issue?

- A. Verify the correct type of paper is loaded.
- B. Install the latest print driver.
- C. Check to see if the default printer has been changed.
- D. Ensure the printer is connected to power.

Correct Answer: A

Section:

Explanation:

Verifying the correct type of paper is loaded is the best solution for resolving the issue of blank receipts being printed by a point-of-sale printer. Some receipt printers require a specific type of paper, and using the wrong type can result in blank receipts. Reference: <https://www.techwalla.com/articles/what-are-the-causes-of-blank-receipts-from-a-printer>

Top of Form Verify the correct type of paper is loaded. If a point-of-sale printer is printing blank receipts, one possible cause could be that the wrong type of paper is loaded in the printer. Thermal printers require thermal paper to print properly. If regular paper is loaded instead of thermal paper, the printer will not be able to produce an image on the paper and will print blank receipts.

QUESTION 87

A technician wants to deploy a .msi package to a corporate network. The technician needs to verify the application deployment will not affect other legacy applications on the end users' computers. Which of the following would the technician consider the MOST appropriate for this situation?

- A. Virtual network
- B. Application virtualization
- C. Cross-platform virtualization
- D. Virtual sandbox
- E. Virtual desktop

Correct Answer: B

Section:

Explanation:

The most appropriate solution for the technician to consider in this situation is Application virtualization. Application virtualization is a technology that allows applications to run in a virtual environment, which isolates them from the underlying operating system and other applications. This ensures that the application deployment will not affect other legacy applications on the end users' computers.

QUESTION 88

A technician receives a ticket that states a mobile payment device is having issues with its contactless payment feature. The device is not detecting payment options. Which of the following is the MOST likely cause of the issue?

- A. NFC
- B. Bluetooth
- C. Wi-Fi

D. Lightning adapter

Correct Answer: A

Section:

Explanation:

NFC (Near Field Communication) is the technology used for contactless payment features on mobile payment devices. If a mobile payment device is having issues with its contactless payment feature and is not detecting payment options, it is most likely due to an issue with the NFC functionality of the device. The contactless payment feature on a mobile payment device uses NFC (Near Field Communication) to detect payment options. If the device is not detecting payment options, the issue may be related to a problem with the NFC feature. Reference: <https://www.techopedia.com/definition/31790/near-field-communication-nfc>

QUESTION 89

A user is unable to access the internet on a PC. A technician examines the PC and runs the following commands:

```
ipconfig /all
ping 8.8.8.8
ping compnia.org
```

Which of the following steps in the troubleshooting process does this series of commands represent?

- A. Establish a theory.
- B. Verify full system functionality.
- C. Establish a plan of action.
- D. Identify the problem.

Correct Answer: B

Section:

QUESTION 90

A client wants to connect an external keyboard to an Android tablet. Which of the following connection types are appropriate for this task? (Select TWO).

- A. DVI
- B. Infrared
- C. Lightning
- D. USB-C
- E. PS/2
- F. Bluetooth

Correct Answer: D, F

Section:

Explanation:

The appropriate connection types for connecting an external keyboard to an Android tablet are USB- C and Bluetooth123

QUESTION 91

A technician needs to install a printer on the network. Which of the following must the technician configure? (Select THREE).

- A. PCL
- B. Dots per inch
- C. Gateway
- D. Subnet mask
- E. MAC address

- F. MB
- G. IP address
- H. Drivers

Correct Answer: C, D, G

Section:

Explanation:

When installing a printer on a network, the technician needs to configure the network settings, which include the IP address, subnet mask, and gateway. These settings are used to ensure that the printer can communicate with other devices on the network. When installing a printer on a network, the technician must configure the network settings of the printer to ensure that it can communicate with other devices on the network. This includes configuring the gateway, subnet mask and IP address of the printer. The gateway is the device that connects the local network to other networks or the Internet. The subnet mask is used to determine which part of an IP address represents the network and which part represents individual hosts on that network. The IP address is a unique identifier for each device on a network.

QUESTION 92

A technician is adding one more line at the demarcation point. Which of the following tools would be MOST useful to accomplish this task?

- A. Toner
- B. Punchdown
- C. Network tap
- D. Crimper

Correct Answer: B

Section:

Explanation:

Punchdown tools are used to make connections between wires in a 66/110 block at the demarcation point. The tool is used to insert the wire into the appropriate holes in the block, and it can be used to add additional lines to the demarcation point. The other options are not the correct tools for adding lines to the demarcation point. A toner is used to identify cable pairs, a network tap is used to monitor network traffic, and a crimper is used to terminate cables.

QUESTION 93

Which of the following network devices would an administrator use to distribute traffic evenly throughout multiple nodes?

- A. Load balancer
- B. Bridge
- C. Proxy server
- D. Switch
- E. Firewall

Correct Answer: A

Section:

Explanation:

A load balancer is a network device that distributes network or application traffic across multiple servers to ensure that no single server bears too much of the load. Load balancing helps to improve application availability, increase scalability, and optimize resource utilization.

A bridge is used to connect two different networks, often to divide a larger network into smaller segments. A proxy server is used to forward client requests to other servers, and can also be used to cache frequently requested data. A switch is used to connect multiple devices within a network and to control the flow of network traffic. A firewall is used to secure a network by controlling incoming and outgoing traffic based on defined security rules.

Reference: CompTIA A+ Core 1 Exam Guide, page 244.

QUESTION 94

A technician is working on a help desk ticket for a user who wants the filament replaced in a 3-D printer. Which of the following should the technician do to remove the old filament and load the new one?

- A. Preheat the nozzle to melting temperature.
- B. Cut a sharp angle on the end of the strand.
- C. Push the filament along until resistance is felt.
- D. Withdraw the filament and remove the spool.

Correct Answer: A

Section:

Explanation:

A technician is working on a help desk ticket for a user who wants the filament replaced in a 3-D printer. To remove the old filament and load the new one, the technician should preheat the nozzle to melting temperature. After the nozzle is heated, the technician should withdraw the filament and remove the spool. Then, cut a sharp angle on the end of the new strand, and push it along until resistance is felt.

QUESTION 95

A user is unable to plug a USB 3.0 device into a USB port. Upon inspection, a technician notices the USB 3.0 port appears to be slightly smaller than the other connections. Which of the following is the MOST likely cause?

- A. A foreign object is stuck inside the port
- B. The cable connection utilized the wrong orientation.
- C. The USB cable is physically damaged.
- D. The USB port belongs to a different form factor.

Correct Answer: D

Section:

Explanation:

USB 3.0 ports are slightly smaller than other USB connections, so if the port appears to be the wrong size, it is likely that the port belongs to a different form factor. This can be caused by a number of factors, such as the device being too old to support USB 3.0, or the device not having a USB 3.0 port in the first place.

QUESTION 96

A technician has set up a new conference room with a TV and a video soundbar. The technician wants to test the system with a conference call. During the test, the TV speaker produces sound, but the soundbar does not. Which of the following is the MOST likely cause of the issue?

- A. The volume on the TV needs to be turned up.
- B. The conference call needs to be unmuted for audio.
- C. An incorrect HDMI cable is being used.
- D. The TV's HDMI-ARC port is not being used.

Correct Answer: D

Section:

Explanation:

HDMI-ARC (Audio Return Channel) is an HDMI connection that allows audio to be sent from the TV to an external sound system, such as a soundbar. If the TV's HDMI-ARC port is not being used, then the soundbar will not receive any audio from the TV and thus will not produce any sound. To resolve the issue, the technician should ensure that the TV's HDMI-ARC port is being used to connect the TV to the soundbar.

QUESTION 97

A technician is setting up a new laptop for a user who wants to be able to quickly pack up the laptop and leave if needed. The user has the following accessories:

- USB badge reader
- USB badge printer
- USB signature pad
- 3.5mm headset
- HDMI external monitor

- Mouse

Which of the following is the best way to meet the user's requirement?

- A. Directly connect all accessories to the laptop.
- B. Provide the user with a second laptop.
- C. Connect everything to a compatible docking station.
- D. Provide the user with a USB hub.

Correct Answer: C

Section:

Explanation:

The best way to meet the user's requirement is C. Connect everything to a compatible docking station.

A docking station is a device that allows a laptop to connect to multiple peripherals and accessories with a single connection. A docking station usually has ports for USB, HDMI, audio, Ethernet, and power, as well as slots for expansion cards. A docking station can enhance the functionality and convenience of a laptop by providing a desktop-like experience¹. A compatible docking station is one that matches the laptop's model, brand, and connector type².

A port replicator is a simpler device that only replicates the ports of the laptop, such as USB and HDMI, without providing additional features or power. A port replicator can also allow a laptop to connect to multiple peripherals and accessories with a single connection, but it does not offer the same benefits as a docking station¹.

Directly connecting all accessories to the laptop would not meet the user's requirement, as it would be cumbersome and time-consuming to pack up and leave if needed. The user would have to disconnect and reconnect multiple cables every time they want to use or move the laptop. This option would also limit the number of accessories that can be connected, as the laptop may not have enough ports for all of them.

Providing the user with a second laptop would not meet the user's requirement, as it would be expensive and impractical. The user would have to transfer data and settings between the two laptops, and keep them both updated and secure. This option would also create confusion and redundancy, as the user would have two identical devices.

Providing the user with a USB hub would not meet the user's requirement, as it would only allow the user to connect more USB devices to the laptop. A USB hub is a device that splits one USB port into multiple ports, but it does not support other types of connections, such as HDMI or audio. A USB hub would also require an external power source or drain the laptop's battery faster. This option would not help the user connect the HDMI external monitor or the 3.5mm headset.

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QUESTION 98

Which of the following cloud models allows an organization to retain data on site as well as in the cloud?

- A. Public
- B. Community
- C. Hybrid
- D. Private

Correct Answer: C

Section:

Explanation:

The correct answer is C. Hybrid.

A hybrid cloud model is a combination of two or more different cloud models, such as public, private, community, or on-premises. A hybrid cloud model allows an organization to retain data on site as well as in the cloud, depending on the security and performance requirements of the data. A hybrid cloud model can also provide flexibility, scalability, and cost-efficiency for the organization¹².

A public cloud model is a cloud service that is available to anyone over the internet. A public cloud model does not allow an organization to retain data on site, as the data is stored and managed by a third-party provider. A public cloud model can offer lower costs, higher availability, and easier access, but it may have less security and control over the data¹².

A community cloud model is a cloud service that is shared by a group of organizations that have similar needs or goals. A community cloud model does not allow an organization to retain data on site, as the data is stored and managed by a third-party provider or one of the participating organizations. A community cloud model can offer higher security, privacy, and compliance, but it may have higher costs and lower availability than a public cloud model¹².

A private cloud model is a cloud service that is exclusively used by a single organization. A private cloud model can allow an organization to retain data on site or in the cloud, depending on the configuration of the private cloud. A private cloud model can offer higher security, control, and customization, but it may have higher costs and lower scalability than a public cloud model¹².

QUESTION 99

Isolating email attachments in a safe place until the attachments can be scanned for malware is defined as:

- A. an approve listing.
- B. a screened subnet.
- C. cross-platform virtualization.
- D. sandboxing.

Correct Answer: D

Section:

Explanation:

The correct answer is D. Sandboxing.

Sandboxing is a security technique that isolates email attachments in a safe place until the attachments can be scanned for malware. A sandbox is a virtual environment that mimics the operating system and applications of the user, but prevents any changes or damage to the actual system. A sandbox can also monitor the behavior and activity of the attachments and detect any malicious code or actions¹².

An approve listing is a security technique that allows only trusted or authorized email senders or domains to be received by the user. An approve listing can help reduce spam and phishing emails, but it does not scan or isolate email attachments for malware³.

A screened subnet is a security technique that creates a buffer zone between the internal network and the internet. A screened subnet uses firewalls and routers to filter and control the traffic that enters and exits the network. A screened subnet can help protect the network from external attacks, but it does not scan or isolate email attachments for malware.

Cross-platform virtualization is a technology that allows running multiple operating systems and applications on the same physical machine. Cross-platform virtualization can help improve efficiency, flexibility, and compatibility, but it does not scan or isolate email attachments for malware.

QUESTION 100

A user calls the help desk about a 4K monitor that will not output an image from a desktop. The monitor was working previously but now shows a black screen with a message stating a signal is not detected. The desktop is connected via HDMI, and the monitor has an empty DVI port. Which of the following steps should the technician perform first?

(Select two).

- A. Check the version of the HDMI cable.
- B. Check the input source.
- C. Set up the desktop for DVI.
- D. Replace the HDMI cable.
- E. Install OS updates.
- F. Initiate a system restore.

Correct Answer: A, B

Section:

Explanation:

The first steps that the technician should perform are A. Check the version of the HDMI cable and B.

Check the input source.

A possible cause of the problem is that the HDMI cable is not compatible with the 4K resolution of the monitor. HDMI cables have different versions that support different features and bandwidths. For example, HDMI 1.4 supports up to 4K at 30 Hz, while HDMI 2.0 supports up to 4K at 60 Hz¹. The technician should check the version of the HDMI cable and make sure it matches the specifications of the monitor and the desktop.

Another possible cause of the problem is that the monitor is not set to the correct input source. The input source is the option that allows the monitor to switch between different video signals from different ports, such as HDMI, DVI, VGA, or DisplayPort². The technician should check the input source and make sure it is set to HDMI, since that is how the desktop is connected to the monitor.

The input source can usually be changed using the buttons or menu on the monitor itself².

QUESTION 101

A technician installed a Cat 5 UTP cable approximately 275ft (84m) from a network switch in an office to a workstation located on a factory floor. The technician sees both a flashing green LED and a flashing orange LED on the workstation's NIC. Which of the following should the technician do first?

- A. Check for loose connections, pinched bends, and physical damage.
- B. Install a powered hub as close as possible to the halfway point in the Cat 5 UTP cable run.

- C. Replace the entire run of Cat 5 UTP cable with Cat 5 STP cable.
- D. Upgrade the entire cable run to multimode fiber.

Correct Answer: B

Section:

Explanation:

The correct answer is B. Install a powered hub as close as possible to the halfway point in the Cat 5 UTP cable run.

The problem is most likely caused by the excessive length of the Cat 5 UTP cable, which exceeds the maximum limit of 100 meters (328 feet) for Ethernet over twisted pair¹². This can result in signal degradation, interference, and packet loss, which can affect the network performance and connectivity. The flashing green LED indicates that the NIC is receiving data, while the flashing orange LED indicates that the NIC is sending data³. However, these LEDs do not indicate the quality or speed of the data transmission, which may be poor due to the long cable run.

The best solution is to install a powered hub as close as possible to the halfway point in the Cat 5 UTP cable run. A powered hub is a device that can amplify and regenerate the signal, as well as provide additional ports for connecting more devices. A powered hub can extend the effective range of the cable and improve the network performance and connectivity¹.

The other options are not the best solutions for this problem. Checking for loose connections, pinched bends, and physical damage is a good troubleshooting step, but it is unlikely to solve the problem if the cable is too long.

Replacing the entire run of Cat 5 UTP cable with Cat 5 STP cable may reduce some interference, but it will not solve the problem of signal degradation due to the length.

Upgrading the entire cable run to multimode fiber may provide better performance and range, but it will also require replacing the NICs and switches, which will be costly and time-consuming.

QUESTION 102

When a page that was printed on a laser printer is touched. the image on the paper smears. Which of the following is most likely the cause of this issue?

- A. Duplexing assembly
- B. Fuser
- C. Toner
- D. Transfer belt

Correct Answer: B

Section:

Explanation:

The fuser is the part of a laser printer that uses heat and pressure to fuse the toner to the paper. If the fuser is defective or not hot enough, the toner may not adhere properly and smear when touched. The duplexing assembly, toner, and transfer belt are not related to this issue.

Reference: Official CompTIA learning resources CompTIA A+ Core 1 and Core 2, page 11.

QUESTION 103

An internet service provider is delivering service through a copper medium with shared customer bandwidth. Which of the following services has most likely been installed?

- A. Fiber
- B. Cable
- C. NIC
- D. DSL

Correct Answer: B

Section:

Explanation:

Cable internet service is delivered through coaxial cables that are shared among multiple customers in a neighborhood. This means that the bandwidth may vary depending on the network congestion.

Fiber, NIC, and DSL are not copper-based or shared mediums.

Reference: CompTIA A+ Core 1 (220-1101) Certification Study Guide, page 28.

QUESTION 104

A network technician needs to connect into the console of a switch. Which of the following connection types should the technician most likely utilize?

- A. Serial interface
- B. Bluetooth
- C. Near-field communication
- D. Port replicator

Correct Answer: A

Section:

Explanation:

A serial interface is a common way to connect to the console port of a switch using a rollover cable and a terminal emulator program. This allows the network technician to configure and troubleshoot the switch. Bluetooth, near-field communication, and port replicator are not used for console connections.

Reference: CompTIA A+ Core 1 (220-1101) Certification Study Guide, page 31.

QUESTION 105

A technician is working with a vendor to resolve an issue that a user reported. The vendor indicates that the technician's next step is to update the firmware. Which of the following is the most important step the technician should take before proceeding?

- A. Verify the device is fully charged and connected to a power supply.
- B. Ensure the device has adequate storage space for the update.
- C. Verify administrative access on the device.
- D. Export the users settings so they can be imported after the upgrade

Correct Answer: A

Section:

Explanation:

The most important step the technician should take before proceeding is A. Verify the device is fully charged and connected to a power supply.

Firmware is a type of software that controls the basic functions and operations of a device, such as a router, printer, or scanner. Firmware can be updated to fix bugs, improve performance, or add new features to the device.

However, updating firmware can also be risky, as it may cause the device to malfunction or become unusable if the update process is interrupted or corrupted.

One of the main causes of firmware update failure is power loss, which can occur if the device runs out of battery or is disconnected from the power source during the update. Power loss can damage the firmware and prevent the device from booting up or functioning properly. Therefore, it is essential to verify that the device is fully charged and connected to a power supply before updating the firmware. This can ensure that the device has enough power to complete the update process and avoid any interruptions or errors.

The other options are not as important as verifying the power status of the device. Ensuring the device has adequate storage space for the update is a good practice, but it is not likely to cause a major problem if the device does not have enough space. The update process will either fail to start or prompt the user to free up some space before proceeding. Verifying administrative access on the device is also a good practice, but it is not necessary for updating firmware. Administrative access is required for installing or uninstalling software applications, but not for updating firmware. Firmware updates are usually provided by the device manufacturer or vendor and do not require user authentication. Exporting the user settings so they can be imported after the upgrade is a precautionary measure, but it is not mandatory for updating firmware. Firmware updates do not usually affect the user settings or data on the device, unless they are incompatible or corrupted. Exporting the user settings can help restore them in case of any problems, but it does not prevent them from occurring.

QUESTION 106

A user takes a tablet to a technician because the cursor on it keeps drifting. The technician notices the screen does not appear to be damaged. Which of the following is the most likely cause of the cursor issue?

- A. The screen is physically damaged.
- B. The screen rotation is incorrect.
- C. The touch-pen battery is depleted.
- D. The screen needs to be recalibrated.

Correct Answer: D

Section:

Explanation:

The screen needs to be recalibrated. The cursor drift is a common symptom of a misaligned touch screen, which can be caused by physical shocks, temperature changes, or software updates. The screen can be recalibrated using the tablet's settings or a utility program. The screen is not physically damaged, as there is no visible crack or break. The screen rotation is not related to the cursor drift, as it only affects the orientation of the display. The touch-pen battery is not relevant, as the cursor drift occurs even without using the pen.

Reference: [CompTIA A+ Core 1 (220-1101) Certification Study Guide], page 15.

QUESTION 107

A customer's Windows tablet PC was dropped and is no longer responding to touch input on the left half of the screen. The screen protector has several scratches. but the glass is not broken. Which of the following should a technician do to diagnose the issue?

- A. Test the digitizer
- B. Update the device drivers.
- C. Replace the damaged screen protector
- D. Perform a factory reset.

Correct Answer: A

Section:

Explanation:

The digitizer is the component that converts the touch input into electrical signals that are processed by the tablet. If the digitizer is damaged or malfunctioning, it may not register the touch input correctly or at all. The technician can test the digitizer using a diagnostic tool or by replacing it with a known good one. Updating the device drivers, replacing the damaged screen protector, or performing a factory reset are unlikely to fix the issue, as they do not address the hardware problem.

Reference: [CompTIA A+ Core 1 (220-1101) Certification Study Guide], page 16.

QUESTION 108

A user would like a removable storage device that is secure, portable, and does not contain moving parts. Which of the following devices would be the most suitable?

- A. HDD
- B. NAS
- C. SSD
- D. SAN

Correct Answer: C

Section:

Explanation:

An SSD (solid state drive) is a removable storage device that uses flash memory to store data. It is secure, portable, and does not contain moving parts, which makes it more reliable and durable than other types of storage devices. An HDD (hard disk drive) is not suitable, as it contains spinning platters and read/write heads that are prone to damage and data loss. A NAS (network attached storage) and a SAN (storage area network) are not removable devices, as they are connected to a network and provide shared storage for multiple users.

Reference: [CompTIA A+ Core 1 (220-1101) Certification Study Guide], page 23.

QUESTION 109

Which of the following is the purpose of an IPv4 gateway?

- A. To distribute IP addresses
- B. To generate ARP traffic
- C. To assign APIPA addresses
- D. To route traffic to the next network

Correct Answer: D

Section:

Explanation:

To route traffic to the next network. An IPv4 gateway is a device that connects two or more networks and forwards packets based on their destination IP addresses. It acts as an intermediary between a host and the rest of the internet, allowing communication across different networks. A gateway does not distribute IP addresses, generate ARP traffic, or assign APIPA addresses, as these are functions of other network components.

Reference: [CompTIA A+ Core 1 (220-1101) Certification Study Guide], page 29.

QUESTION 110

A user has been unable to configure a smart device to play audio on a new Bluetooth speaker. A technician confirms that Bluetooth is enabled on both devices. Which of the following should the technician do to ensure the pairing is successful?

- A. Enable and configure MFA on the smart device.
- B. Synchronize all data to the cloud.
- C. Enable location services on the smart device to find the speaker.
- D. Enter the appropriate PIN code on the smart device.

Correct Answer: D

Section:

Explanation:

To pair a Bluetooth speaker with a smart device, the user needs to enter the PIN code that is provided by the speaker manufacturer or displayed on the speaker itself. This is a security measure to prevent unauthorized pairing and access. Enabling and configuring MFA, synchronizing data to the cloud, or enabling location services are not required for Bluetooth pairing.

Reference: [CompTIA A+ Core 1 (220-1101) Certification Study Guide], page 14.

QUESTION 111

Which of the following server types can dynamically assign primary and secondary DNS?

- A. DHCP server
- B. Global catalog server
- C. Web server
- D. Name server

Correct Answer: A

Section:

Explanation:

A DHCP (Dynamic Host Configuration Protocol) server is a server type that can dynamically assign IP addresses and other network configuration parameters to clients, such as primary and secondary DNS (Domain Name System) servers. DNS servers are responsible for resolving hostnames to IP addresses and vice versa. A global catalog server, a web server, and a name server are not involved in DHCP operations.

Reference: [CompTIA A+ Core 1 (220-1101) Certification Study Guide], page 30.

QUESTION 112

A user has been having issues charging a laptop after turning it on and has noticed the laptop screen is dim. Which of the following components most likely needs to be replaced?

- A. LCD
- B. Video card
- C. Digitizer
- D. inverter

Correct Answer: D

Section:

Explanation:

An inverter is a component that converts DC power to AC power for the backlight of an LCD (liquid crystal display) screen. If the inverter is faulty, the screen may appear dim or dark, even if the brightness settings are

adjusted. Replacing the inverter may fix the issue. The LCD itself, the video card, and the digitizer are not related to the screen brightness problem.

Reference: [CompTIA A+ Core 1 (220-1101) Certification Study Guide], page 17.

QUESTION 113

An administrator is replacing 15,000rpm hard drives in a server. Which of the following is the interface type the drives most likely use?

- A. IDE
- B. SAS
- C. eSATA
- D. SATA

Correct Answer: B

Section:

Explanation:

SAS (Serial Attached SCSI) is an interface type that supports high-speed data transfer and highperformance hard drives, such as 15,000rpm drives. SAS drives are commonly used in servers that require fast access and reliability. IDE (Integrated Drive Electronics), eSATA (external SATA), and SATA (Serial ATA) are not suitable for 15,000rpm drives, as they have lower speed and performance.

Reference: [CompTIA A+ Core 1 (220-1101) Certification Study Guide], page 22.

QUESTION 114

Several users report that a projector routinely turns off in the middle of meetings and does not turn back on immediately. Users have to wait several minutes before the projector will turn back on. When the projector is on, the picture is clear and bright. Which of the following is the most likely reason the projector is turning off?

- A. The video cable connecting the video source to the projector is failing.
- B. The bulb in the projector is failing.
- C. The projector is overheating and needs to be cleaned.
- D. The outlet that the projector is plugged into is faulty.

Correct Answer: C

Section:

Explanation:

The projector is overheating and needs to be cleaned. A common cause of projector shutdown is overheating, which can be triggered by dust accumulation, blocked vents, or faulty fans. The projector has a thermal protection circuit that turns it off when the temperature reaches a certain level, and it will not turn back on until it cools down. To prevent this issue, the projector needs to be cleaned regularly and placed in a well-ventilated area. The video cable, the bulb, and the outlet are not likely to cause the projector to turn off intermittently.

Reference: [CompTIA A+ Core 1 (220-1101) Certification Study Guide], page 18.

QUESTION 115

A technician configured a new SOHO router for a small business. The ISP gave the technician an IP address on the router's WAN port. Which of the following addresses did the technician most likely configure on the router?

- A. 10.1.50.30
- B. 19.45.7.28
- C. 169.254.168.10
- D. 172.22.40.6

Correct Answer: B

Section:

Explanation:

This is an example of a public IP address that can be assigned by an ISP to a router's WAN (Wide Area Network) port. A public IP address is a globally unique and routable address that allows a device to communicate with other devices on the internet. A private IP address, such as 10.1.50.30 or 172.22.40.6, is a non-routable address that is used within a local network and cannot be directly accessed from the internet. A link-local IP address,

such as 169.254.168.10, is a self-assigned address that is used when a device cannot obtain a valid IP address from a DHCP server.

Reference: [CompTIA A+ Core 1 (220-1101) Certification Study Guide], page 27.

QUESTION 116

A help desk technician receives a ticket regarding a non-functioning printer. The ticket states the printer is no longer producing legible prints, and everything that prints appears as symbols. Which of the following is the most likely cause of this issue?

- A. Driver
- B. Fuser
- C. Access control list
- D. Malware

Correct Answer: A

Section:

Explanation:

A driver is a software component that enables the communication between the operating system and a hardware device, such as a printer. If the driver is corrupted, outdated, or incompatible, the printer may not function properly and produce illegible prints or symbols. The driver can be reinstalled or updated to fix the issue. The fuser, the access control list, and the malware are not related to this issue.

Reference: [CompTIA A+ Core 1 (220-1101) Certification Study Guide], page 11.

QUESTION 117

Which of the following network devices should a technician install in order to isolate voice traffic on the network?

- A. Network tap
- B. Managed switch
- C. Hub
- D. DSL filter

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Correct Answer: B

Section:

Explanation:

A managed switch is a network device that can be configured to create VLANs (Virtual Local Area Networks), which are logical segments of a network that isolate traffic based on criteria such as function, security, or quality of service. A VLAN can be used to isolate voice traffic on the network, which can improve the performance and security of voice over IP (VoIP) applications. A network tap, a hub, and a DSL filter are not capable of creating VLANs.

Reference: [CompTIA A+ Core 1 (220-1101) Certification Study Guide], page 32.

QUESTION 118

A user needs to transfer files from an Apple phone to a workstation. Which of the following connection types should the user utilize?

- A. USB-C
- B. Serial
- C. Lightning
- D. NFC

Correct Answer: C

Section:

Explanation:

Lightning is a proprietary connection type that is used by Apple devices, such as iPhones, iPads, and iPods, to transfer data, charge, and connect to accessories. Lightning cables have a reversible 8-pin connector that can be plugged into a USB port on a workstation or a power adapter. USB-C, serial, and NFC are not compatible with Apple phones.

Reference: [CompTIA A+ Core 1 (220-1101) Certification Study Guide], page 13.

QUESTION 119

Which of the following services allows a remote user to access network resources?

- A. WLAN
- B. SAN
- C. DHCP
- D. VPN

Correct Answer: D

Section:

Explanation:

The correct answer is D. VPN.

A VPN (Virtual Private Network) is a service that allows a remote user to access network resources securely over the internet. A VPN creates an encrypted tunnel between the user's device and the VPN server, which acts as a gateway to the network. The user can then access the network resources as if they were directly connected to the network, without exposing their traffic to eavesdropping, interception, or censorship.

A VPN can provide remote users with access to various services on a company network, such as file and print services, client/server applications, and remote network administration¹. A VPN can also protect the user's privacy and identity online by masking their IP address and location.

Reference:

- Remote Access to a Network - NETWORK ENCYCLOPEDIA, section "Remote access typically gives remote users access to the following services on a company network".

QUESTION 120

Which of the following wireless standards can operate in the 6GHz frequency range?

- A. 802.11ac
- B. 802.11ax
- C. 802.11g
- D. 802.11n

Correct Answer: B

Section:

Explanation:

The correct answer is B. 802.11ax.

802.11ax, also known as Wi-Fi 6 or Wi-Fi 6E, is the latest wireless standard that can operate in the 6GHz frequency range. This standard was approved by the IEEE in February 2021 and offers higher throughput, lower latency, and improved efficiency compared to previous standards¹. The 6GHz frequency range spans from 5.925 GHz to 7.125 GHz and provides 1200 MHz of additional spectrum for Wi-Fi devices. This means that Wi-Fi 6E can support more channels, wider bandwidths, and less interference than the existing 2.4 GHz and 5 GHz bands. Wi-Fi 6E can access up to 59 20-MHz channels, 29 40-MHz channels, 14 80-MHz channels, or 7 160-MHz channels in the 6GHz band¹. 802.11ac, also known as Wi-Fi 5, is the previous wireless standard that can only operate in the 5GHz frequency range. It was approved by the IEEE in December 2013 and offers faster speeds and better performance than older standards. However, it cannot use the new spectrum in the 6GHz band and has limited channel availability and capacity in the crowded 5GHz band². 802.11g and 802.11n are older wireless standards that can only operate in the 2.4GHz frequency range. They were approved by the IEEE in June 2003 and October 2009, respectively, and offer lower speeds and performance than newer standards. They also suffer from more interference and congestion in the saturated 2.4GHz band, which is shared by many other devices and technologies^{3,2}.

QUESTION 121

After a required operating system upgrade on a mobile device, a user's external monitor no longer works. Which of the following should a technician do to fix this issue?

- A. Install the latest graphics drivers.
- B. Replace the monitor
- C. Restore the operating system to the previous version.
- D. Reseat the external video adapter.

Correct Answer: A

Section:

Explanation:

The correct answer is A. Install the latest graphics drivers.

The most likely cause of the external monitor not working after an operating system upgrade is that the graphics drivers are incompatible with the new version. Installing the latest graphics drivers from the manufacturer's website or using Windows Update can resolve this issue. Replacing the monitor, restoring the operating system to the previous version, or reseating the external video adapter are not effective solutions for this problem.

Reference: You can find more information about troubleshooting external monitor connections in Windows 101 and Windows 112. You can also learn how to update the display driver using Device Manager2.

QUESTION 122

A technician replaces a laptop hard drive with an M.2 SSD. When the technician reboots the laptop, the laptop does not detect the SSD. Which of the following should the technician configure for the system?

- A. HSM
- B. Boot options
- C. UEFI settings
- D. TPM

Correct Answer: C

Section:

Explanation:

UEFI stands for Unified Extensible Firmware Interface, and it is a type of firmware that controls the boot process of a computer. UEFI settings allow the technician to configure various aspects of the boot process, such as the boot order, the boot mode, and the security options. If the technician replaces a laptop hard drive with an M.2 SSD, they may need to adjust the UEFI settings to enable the system to detect and boot from the new drive.

QUESTION 123

The output from print jobs a user submitted to a laser printer is missing the color yellow. The user has already attempted a cleaning cycle. Which of the following parts most likely needs to be replaced?

- A. Fuser
- B. Ink cartridge
- C. Imaging drum
- D. Toner tank
- E. Resin

Correct Answer: C

Section:

Explanation:

An imaging drum is a component of a laser printer that transfers the toner to the paper. It is sensitive to light and can wear out over time, resulting in poor print quality or missing colors. If the cleaning cycle does not resolve the issue, the imaging drum may need to be replaced1.

A fuser is a component of a laser printer that heats and melts the toner onto the paper. It does not affect the color output of the printer, but it can cause paper jams, smudges, or wrinkles if it is defective2.

An ink cartridge is a component of an inkjet printer, not a laser printer. A laser printer uses toner, which is a dry powder, instead of ink, which is a liquid. An ink cartridge would not be compatible with a laser printer3.

A toner tank is a container that holds the toner for a laser printer. It can be either integrated with the imaging drum or separate from it. If the toner tank is empty or low, the printer will display a warning message and the print quality will deteriorate. However, if only one color is missing, the problem is more likely with the imaging drum than the toner tank4.

Resin is a material that is used in some types of 3D printers, not laser printers. Resin printers use a liquid resin that is cured by a light source to create solid objects. Resin has nothing to do with laser printing5.

QUESTION 124

Which of the following services checks whether the sender's IP address is associated with the sender's domain name when receiving email?

- A. DKIM
- B. MX
- C. SPF

D. DMARC

Correct Answer: C

Section:

Explanation:

The correct answer is C. SPF.

SPF stands for Sender Policy Framework, which is a protocol that allows domain owners to specify which IP addresses are authorized to send email on behalf of their domains¹. SPF helps prevent email spoofing and phishing by verifying the sender's identity and preventing unauthorized use of their domain name¹².

When an email is received, the receiving server checks the SPF record of the sender's domain, which is a DNS TXT record that lists the valid IP addresses for that domain¹². The server then compares the sender's IP address with the SPF record and determines if it matches or not. If it matches, the email passes the SPF check and is accepted; if it does not match, the email fails the SPF check and is rejected or marked as spam¹².

DKIM stands for DomainKeys Identified Mail, which is a protocol that allows domain owners to digitally sign their emails using a public-private key pair³. DKIM helps ensure the integrity and authenticity of email messages by verifying that they have not been tampered with or forged during transit³.

MX stands for Mail Exchange, which is a type of DNS record that specifies the mail servers that are responsible for receiving email for a domain. MX records help direct incoming email to the correct destination and prioritize them based on preference values.

DMARC stands for Domain-based Message Authentication, Reporting and Conformance, which is a protocol that builds on SPF and DKIM and allows domain owners to define how receivers should handle unauthenticated or suspicious emails from their domains. DMARC helps protect domains from email fraud and abuse by providing feedback and reports on email delivery and authentication status.

Therefore, SPF is the only service among the options that checks whether the sender's IP address is associated with the sender's domain name when receiving email.

QUESTION 125

A technician is preparing to set up a gaming computer with the following components:

- Discrete, high-end graphics card
- Video capture card
- High-end processor
- Multiple hard drives
- USB 3.0 hub
- Sound card

Which of the following options is the most important for the technician to consider before building the gaming computer?

- A. Redundant power supply
- B. Modular power supply
- C. 20-pin vs. 24-pin power adapter
- D. Power supply wattage rating

Correct Answer: D

Section:

Explanation:

The correct answer is D. Power supply wattage rating.

The power supply wattage rating is the most important factor to consider before building a gaming computer, as it determines how much power the system can draw from the wall and how much power the components can consume. A power supply with a low wattage rating may not be able to support the high-end graphics card, processor, and other devices, resulting in poor performance, instability, or damage¹².

To find the optimal power supply wattage rating for a gaming computer, the technician should calculate the total power consumption of all the components and add some headroom for future upgrades or overclocking. The technician can use online calculators such as Cooler Master Power Calculator or Seasonic Wattage Calculator to estimate the power requirements of the system³.

QUESTION 126

A network technician needs to provide better wireless connectivity throughout a SOHO location.

Which of the following should the technician deploy to best improve connectivity?

- A. Access point
- B. Managed switch
- C. POE hub

D. Wi-Fi router

Correct Answer: A

Section:

Explanation:

The correct answer is A. Access point.

An access point is a device that extends the wireless coverage of a network by creating a hotspot that allows wireless devices to connect to the network¹. An access point can be connected to a router or a switch via an Ethernet cable or a wireless bridge¹. By deploying one or more access points throughout a SOHO location, the technician can provide better wireless connectivity and eliminate dead zones or weak signals².

A managed switch is a device that allows multiple devices to communicate on a network by forwarding data packets based on their destination addresses³. A managed switch can also provide advanced features such as VLANs, QoS, security, and remote management³. However, a managed switch does not improve wireless connectivity, as it only works with wired devices.

A POE hub is a device that provides power and data over a single Ethernet cable to devices that support Power over Ethernet (PoE) technology, such as IP cameras, VoIP phones, and wireless access points⁴. A POE hub can simplify the installation and placement of these devices by eliminating the need for separate power adapters or outlets⁴. However, a POE hub does not improve wireless connectivity by itself, as it still requires an access point or a router to create a wireless network.

A Wi-Fi router is a device that combines the functions of a router and an access point, providing both wired and wireless connectivity to a network and the internet. A Wi-Fi router can be used to create a SOHO network, but it may not be sufficient to cover the entire location with a strong and reliable wireless signal. To improve wireless connectivity, the technician may need to add additional access points or use a mesh Wi-Fi system that consists of multiple routers that work together to create a seamless wireless network.

Therefore, an access point is the best option among the choices to improve wireless connectivity throughout a SOHO location.

QUESTION 127

Which of the following is used to define a range of IP addresses available to assign using DHCP?

- A. Scope
- B. Address
- C. Lease
- D. Reservation

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Correct Answer: A

Section:

Explanation:

A scope is a term used to define a range of IP addresses available to assign using DHCP. DHCP stands for Dynamic Host Configuration Protocol, and it is a protocol that automatically assigns IP addresses and other network configuration parameters to devices on a network. A scope defines the start and end IP addresses, as well as other options, such as subnet mask, default gateway, and DNS servers.

QUESTION 128

A printer displays an error message even after a paper jam is cleared. Which of the following should a technician do to fix the issue?

- A. Check the paper path for a blocked sensor.
- B. Verify the pickup roller is functioning.
- C. Change the duplex settings.
- D. Run internal printer diagnostics.

Correct Answer: A

Section:

Explanation:

A paper path is the route that paper takes through a printer from the input tray to the output tray. A blocked sensor is a sensor that detects paper jams or other errors in the paper path but fails to clear after the problem is resolved. A blocked sensor can cause a printer to display an error message even after a paper jam is cleared. The technician should check the paper path for any debris or obstructions that may trigger the sensor.

QUESTION 129

A technician wants to deploy a .msi package to a corporate network. The technician needs to verify the application deployment will not affect other legacy applications on the end users' computers.

Which of the following would the technician consider the most appropriate for this situation?

- A. Virtual network
- B. Application virtualization
- C. Cross-platform virtualization
- D. Virtual sandbox
- E. Virtual desktop

Correct Answer: B

Section:

Explanation:

Application virtualization is a technique that allows an application to run on a computer without being installed or affecting other applications on the system. Application virtualization creates a virtual environment for the application that isolates it from the underlying operating system and hardware. This way, the technician can verify the application deployment will not affect other legacy applications on the end users' computers.

QUESTION 130

A user reports that a display is slow to turn on, and the colors are distorted and discolored. Once the display turns on, it appears to have lines going through the image and intermittently goes blank. Which of the following is the most likely cause of the issue?

- A. Incorrect data source
- B. Incorrect resolution settings
- C. Physical cabling issues
- D. Incorrect refresh rate
- E. Display burn-in

Correct Answer: C

Section:

Explanation:

Physical cabling issues refer to any problems with the cables or connectors that connect a display to a computer or a power source. Physical cabling issues can cause various symptoms, such as slow to turn on, distorted and discolored images, lines going through the image, and intermittent blank screens. The technician should check the cables and connectors for any damage, looseness, or interference.

QUESTION 131

An administrator is responding to a network server outage. The administrator has logged in to the server to troubleshoot the outage. Which of the following is the first step the administrator should take when attempting to troubleshoot the issue?

- A. Document the results.
- B. Analyze the error logs.
- C. Check the physical connections.
- D. Upgrade the server firmware.

Correct Answer: B

Section:

Explanation:

The correct answer is B. Analyze the error logs.

Error logs are files that record the events and errors that occur on a server or a network device. They can provide valuable information about the cause and the time of the outage, as well as any warnings or alerts that preceded it. Analyzing the error logs can help the administrator narrow down the possible sources of the problem and identify the best course of action to resolve it.

The first step in troubleshooting a network is to identify the problem¹. As a part of this step, the administrator should gather information about the current state of the network using the network troubleshooting tools that are available¹. One of these tools is the error log viewer, which can be accessed through the server's operating system or a network monitoring software. The administrator should look for any entries that indicate a failure, a crash, a timeout, or an exception in the error logs. The administrator should also note the date and time of the entries, as well as the severity and the frequency of the errors.

The other options are less likely to be the first step in troubleshooting, because:

- Documenting the results is an important step in troubleshooting, but it should be done after identifying and resolving the problem, not before. Documenting the results can help the administrator keep track of the actions taken, the changes made, and the outcomes achieved. It can also help prevent future problems by providing a reference for best practices and lessons learned¹.
- Checking the physical connections is another important step in troubleshooting, but it should be done after analyzing the error logs, not before. Physical connections are the cables and ports that link the server to other devices on the network. They can affect the quality and stability of the network signal. If the error logs do not indicate any software or configuration issues, then checking the physical connections can help determine if there is any damage or interference in the hardware².
- Upgrading the server firmware is a possible solution for some network problems, but it should not be done as a first step in troubleshooting, unless there is a clear indication that the firmware is outdated or corrupted. Firmware is a type of software that controls the basic functions of a hardware device. Upgrading the firmware can improve performance, security, and compatibility, but it can also introduce new bugs or conflicts with other software or hardware components.

Therefore, upgrading the firmware should be done with caution and only after backing up data and settings³.

For more information and tips on how to troubleshoot network issues, you can visit these links:

- A Guide to Network Troubleshooting - CompTIA
- What is Network Troubleshooting? How to Fix Network Issues - SolarWinds
- Network Troubleshooting - Methodology, Steps & Techniques - DNSstuff

QUESTION 132

A user is experiencing an issue when trying to use a wireless headset with a mobile phone. The device was previously paired with the phone but is unable to connect when switched on. Which of the following should the user enable on the phone to remediate the issue?

- A. Bluetooth
- B. Near-field communication
- C. Tether
- D. Wi-Fi

Correct Answer: A

Section:

Explanation:

The correct answer is A. Bluetooth.

Bluetooth is a wireless technology that allows devices to communicate with each other over short distances. It is commonly used for connecting wireless headsets, speakers, keyboards, mice, and other peripherals to mobile phones, laptops, and other devices.

To use a Bluetooth device with a mobile phone, the user needs to enable Bluetooth on both devices and pair them together. Pairing is a process of exchanging security codes and creating a trusted connection between the devices. Once paired, the devices can automatically connect when they are in range and turned on.

If the user is experiencing an issue when trying to use a wireless headset with a mobile phone, the first thing to check is whether Bluetooth is enabled on both devices. If Bluetooth is turned off, the devices will not be able to connect or communicate with each other.

To enable Bluetooth on a mobile phone, the user can follow these steps:

- Check in quick settings: Select the Network, Sound, or Battery icons () on the right side of the taskbar, look for the Bluetooth quick setting, then select Bluetooth to turn it on. You'll see "Not connected" if your Windows 11 device isn't connected to any Bluetooth accessories.
- Check in Settings: Select Start > Settings > Bluetooth & devices . Make sure Bluetooth is turned on.

These steps are based on Windows 11 operating system¹. The exact steps may vary depending on the type and model of the mobile phone and its operating system.

If Bluetooth is enabled on both devices but they still cannot connect, the user can try some other troubleshooting steps, such as:

- Turn off your Bluetooth device, wait a few seconds, then turn it back on.
- Make sure your Bluetooth device is in range of your mobile phone.
- Remove the Bluetooth device from your mobile phone's list of paired devices, then add it again.
- Update the Bluetooth driver on your mobile phone or the firmware on your Bluetooth device.
- Restart your mobile phone or reset your Bluetooth device.

For more details and tips on how to fix Bluetooth problems in Windows 11² or other operating systems¹, you can visit the links provided.

QUESTION 133

A technician needs to test a new USB headset for videoconference calls. Audio playback is working as expected, but sound from the microphone is not being recorded. The Device Manager and Sound settings show the

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microphone is installed. Which of the following should the technician do next?

- A. Examine the application and device mute controls.
- B. Connect the headset to a different USB port.
- C. Check the device's driver release date.
- D. Increase the speaker volume setting.

Correct Answer: A

Section:

Explanation:

The correct answer is A. Examine the application and device mute controls.

One of the possible reasons for the USB headset microphone not working is that the microphone is muted in the application or device settings. The technician should check if the mute button on the headset or the microphone icon in the application is active. If so, the technician should disable them and try to record sound again.

Some applications may also have their own settings for the microphone input. The technician should make sure that the USB headset is selected as the input device and that the volume level is appropriate. The technician can also test the microphone in different applications to see if the problem is specific to one application or not.

The other options are less likely to solve the problem, because:

- Connecting the headset to a different USB port may not make any difference if the device is already installed and recognized by the system.
- Checking the device's driver release date may not be relevant if the microphone was working before and no updates were installed recently.
- Increasing the speaker volume setting may not affect the microphone input at all, and may only make the audio playback louder.

For more information and tips on how to fix USB headset problems, you can visit these links:

- USB Headset Mic Not Working? Here Are All Possible Fixes - TechNorms
- Fix microphone problems - Microsoft Support
- USB Headset Not Working? Try These Fixes - Tech News Today

QUESTION 134

A user reports that a display is slow to turn on, and the colors are distorted and discolored. Once the display turns on, it appears to have lines going through the image and intermittently goes blank. Which of the following is the most likely cause of the issue?

- A. Incorrect data source
- B. Incorrect resolution settings
- C. Physical cabling issues
- D. Incorrect refresh rate
- E. Display burn-in

Correct Answer: C

Section:

Explanation:

The most likely cause of the issue is C. Physical cabling issues.

Physical cabling issues can affect the quality and stability of the display signal. If the cable is loose, damaged, or bent, it may cause intermittent connection, interference, or signal loss. This can result in slow, distorted, discolored, or blank display.

To troubleshoot physical cabling issues, the user should check the following steps:

- Make sure the cable is firmly connected to both the display and the video adapter.
- Inspect the cable for any signs of damage, such as cuts, frays, kinks, or exposed wires.
- Check the cable connectors for any bent or broken pins.
- Try a different cable or a different port on the display or the video adapter.
- If possible, test the display with another device or test another display with the same device.

The other options are less likely to cause the issue, because:

- Incorrect data source may result in no display or an error message, but not slow or distorted display.

- Incorrect resolution settings may cause stretched, blurry, or cropped display, but not discolored or blank display.
- Incorrect refresh rate may cause flickering or tearing display, but not slow or distorted display.
- Display burn-in may cause permanent image retention or ghosting on the display, but not intermittent or blank display.

For more information and tips on how to fix common display problems, you can visit these links:

- How to Troubleshoot Display or Video Issues on a Dell Monitor
- Display Troubleshooting - iFixit
- How to Fix the Most Common Problems With LCD Monitors

QUESTION 135

A customer reports a network connectivity issue. A technician discovers that LAN ports have been damaged during remodeling. Which of the following tools should the technician use to fix the issue?

- A. Cable stripper
- B. Punchdown tool
- C. Crimper
- D. Network tap

Correct Answer: B

Section:

Explanation:

The correct answer is B. Punchdown tool.

A punchdown tool is a device that can connect wires to a patch panel or a network jack by inserting them into the appropriate slots and cutting off the excess. A punchdown tool can be used to fix the damaged LAN ports by replacing the wires or reconnecting them to the correct terminals.

A cable stripper is a device that can remove the insulation from a cable to expose the wires inside. A cable stripper is not useful for fixing the damaged LAN ports, unless the technician needs to strip new wires before punching them down.

A crimper is a device that can attach connectors to the ends of cables, such as RJ-45 or RJ-11. A crimper is not useful for fixing the damaged LAN ports, unless the technician needs to replace the connectors on the cables.

A network tap is a device that can monitor and capture network traffic by creating a copy of the data passing through a network link. A network tap is not useful for fixing the damaged LAN ports, as it does not affect the connectivity of the network devices.

Reference: CompTIA A+ Certification Exam Core 1 Objectives

QUESTION 136

A user with a self-configured, static IP address cannot connect to the internet. The technician runs an ipconfig command and receives the following output:

```
IPv4 Address.....192.168.1.20
Subnet Mask.....255.255.255.255
Default Gateway....192.168.1.1
DHCP Server.....192.168.1.1
```

Which of the following should the technician edit?

- A. IPv4 address
- B. Subnet mask
- C. DHCP server
- D. Default gateway

Correct Answer: D

Section:

Explanation:

The correct answer is D. Default gateway.

A default gateway is the device that connects a local network to other networks, such as the internet.

A default gateway is usually a router or a modem that has an IP address on the same subnet as the local network. A default gateway is necessary for a device to communicate with devices outside its local network.

In this case, the user has a self-configured, static IP address of 192.168.1.20, which belongs to the subnet 192.168.1.0/24 (with a subnet mask of 255.255.255.0). However, the default gateway is set to 192.168.0.1, which belongs to a different subnet (192.168.0.0/24). This means that the user's device cannot reach the default gateway, and therefore cannot connect to the internet.

The technician should edit the default gateway to match the correct subnet of the user's device, such as 192.168.1.1 or 192.168.1.254, depending on the configuration of the network.

Reference: CompTIA A+ Core 1 Sample Questions and Study Guide

QUESTION 137

A customer's phone no longer charges fully The phone only charges to 67% and then stops_ Which of the following should be replaced to resolve this issue?

- A. The phone
- B. The charger
- C. The battery
- D. The SD card

Correct Answer: C

Section:

Explanation:

The correct answer is C. The battery.

The battery is the component that stores and provides electrical power to the phone. The battery can degrade over time and lose its capacity to hold a full charge. This can cause the phone to stop charging at a certain percentage and run out of power faster. To resolve this issue, the battery should be replaced with a new one that is compatible with the phone model and manufacturer.

To replace the battery, the customer may need to follow different steps depending on the type of phone and battery. Some phones have removable batteries that can be easily accessed by opening the back cover of the phone and sliding out the old battery. Other phones have non-removable batteries that are sealed inside the phone and require special tools and skills to open the phone and disconnect the old battery. In this case, the customer may need to contact the phone manufacturer or a professional service center for assistance.

Reference: Troubleshooting Mobile Devices – CompTIA A+ 220-1101 – 5.5

QUESTION 138

A customer wants to archive a large number of photos and does not plan to retrieve them often. The customer wants a storage option that is the least expensive per gigabyte. Which of the following should the technician suggest?

- A. NVMe SSD
- B. SCSI RAID
- C. 15,000rpm SAS
- D. 5,400rpm HOD

Correct Answer: D

Section:

Explanation:

The correct answer is D. 5,400rpm HDD.

A 5,400rpm HDD (Hard Disk Drive) is a type of storage device that uses spinning magnetic disks to store data. A 5,400rpm HDD is the least expensive per gigabyte among the options given, as it has a lower rotational speed and performance than other types of HDDs or SSDs (Solid State Drives). A 5,400rpm

HDD is suitable for archiving a large number of photos that are not accessed frequently, as it can offer high capacity and reliability at a low cost.

the average cost per gigabyte of a 5,400rpm HDD is around \$0.02 to \$0.0312, while the average cost per gigabyte of the other options are:

NVMe SSD: \$0.10 to \$0.1534

SCSI RAID: \$0.20 to \$0.305

15,000rpm SAS: \$0.30 to \$0.40

Therefore, a 5,400rpm HDD is the cheapest option among the four.

Reference: CompTIA A+ Core 1: RAM & Storage Solutions Flashcards

QUESTION 139

A technician needs to fix a computer that received a non-specific error after a scheduled computer restart. Which of the following is the best way to start troubleshooting?

- A. Update all of the firmware.
- B. Roll back all of the recent updates.
- C. Review the system event log.
- D. Search for the error on the internet.

Correct Answer: C

Section:

Explanation:

The best way to start troubleshooting a non-specific error after a scheduled computer restart is to review the system event log. The system event log is a record of significant events that occur on the computer, such as errors, warnings, or information messages. The system event log can help identify the cause of the error and provide possible solutions. The answer is C.

To learn more about troubleshooting methods and tools, you can refer to the CompTIA A+ Certification Exam Core 1 Objectives¹ or the CompTIA A+ Core 1 (220-1101) Certification Study Guide². These resources cover the topics that are tested on the CompTIA A+ Core 1 exam, which is one of the two exams required to earn the CompTIA A+ certification. The CompTIA A+ certification validates your skills and knowledge as an entry-level IT professional.

QUESTION 140

A user needs to connect a laptop to the internet while traveling on a train. Which of the following features should be enabled on the user's phone?

- A. Bluetooth
- B. Near-field communication
- C. Hotspot
- D. Roaming

Correct Answer: C

Section:

Explanation:

A hotspot is a feature that allows a phone to share its cellular data connection with other devices via Wi-Fi, Bluetooth, or USB. This can be useful when traveling on a train, where Wi-Fi networks may not be available or reliable. A hotspot can provide internet access to a laptop or other devices that need to connect to the web.

Bluetooth is a wireless technology that allows devices to communicate over short distances, usually within 10 meters. It can be used to pair devices such as headphones, speakers, keyboards, mice, etc.

However, it cannot be used to share internet access from a phone to a laptop.

Near-field communication (NFC) is a wireless technology that allows devices to exchange data by touching or bringing them close together, usually within 4 cm. It can be used for applications such as contactless payments, smart cards, digital tickets, etc. However, it cannot be used to share internet access from a phone to a laptop.

Roaming is a feature that allows a phone to use another carrier's network when the home network is not available. This can be useful when traveling abroad, where the home network may not have coverage or agreements with local operators. However, roaming can incur additional charges and may not provide the same speed or quality of service as the home network. Roaming does not affect the ability of the phone to share internet access with other devices via hotspot.

QUESTION 141

A user with an older laptop is unable to connect to the office network after new access points were installed. The user confirms that from home the laptop can connect wirelessly to the network. Which of the following should the user do to quickly resolve the issue?

- A. Connect a new USB adapter.
- B. Install a new SSD
- C. Connect a new biometric device.
- D. Install a new Bluetooth card.

Correct Answer: A

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Section:**Explanation:**

A USB adapter is a device that can plug into a USB port on a laptop and provide wireless connectivity to a network. A USB adapter can support different wireless standards, such as 802.11a, 802.11b, 802.11g, 802.11n, or 802.11ac. A USB adapter can also support different wireless frequencies, such as 2.4 GHz or 5 GHz.

In this case, the user with an older laptop may not be able to connect to the office network after new access points were installed because the laptop's built-in wireless card does not support the same wireless standard or frequency as the new access points. For example, if the new access points use 802.11ac and 5 GHz, and the laptop's wireless card only supports 802.11g and 2.4 GHz, the laptop will not be able to communicate with the access points.

To quickly resolve this issue, the user should connect a new USB adapter that supports the same wireless standard and frequency as the new access points. This way, the user can bypass the laptop's wireless card and use the USB adapter to connect to the office network wirelessly.

Reference: CompTIA A+ Core 1: Cable Types & Connectors

QUESTION 142

A technician needs to upgrade the power supply of a workstation that contains a high-end graphics card, 16 hyperthreaded cores, and multiple hard drives. Which of the following should the technician use to determine the appropriate power supply for the workstation?

- A. The manufacturer's specifications for the components
- B. The wattage of the current power supply
- C. The wattage of the motherboard
- D. The capacity of the hard drives
- E. The number of hyperthreaded cores

Correct Answer: A

Section:**Explanation:**

The manufacturer's specifications for the components are the best source of information to determine the appropriate power supply for the workstation. The manufacturer's specifications will list the power requirements and recommendations for each component, such as the graphics card, the CPU, the hard drives, and the motherboard. By adding up the power consumption of each component, the technician can estimate the total wattage needed for the workstation. The technician should also consider some extra headroom for future upgrades or peak loads. The technician can then choose a power supply that meets or exceeds the total wattage and has the right connectors and form factor for the workstation.

QUESTION 143

A technician is configuring the settings on a multifunction printer so the device can be shared across the LAN_ Which of the following should the technician do to enable the printer to be shared across the network?

- A. Install the correct print driver
- B. Configure the IP settings.
- C. Enable the web services.
- D. Enable the network scanning feature.

Correct Answer: B

Section:**Explanation:**

To enable the printer to be shared across the network, the technician should configure the IP settings of the printer. The IP settings include the IP address, subnet mask, default gateway, and DNS server of the printer. The IP settings allow the printer to communicate with other devices on the network and access network resources such as print servers or cloud services.

The technician can configure the IP settings of the printer in different ways, such as:

Using the printer's control panel or web interface to manually enter the IP settings or obtain them automatically from a DHCP server.

Using the printer's software or driver to assign a static or dynamic IP address to the printer.

Using a network discovery tool to find and configure the printer on the network.

The technician should also make sure that the IP settings of the printer are compatible with the network configuration and do not cause any conflicts or errors.

QUESTION 144

An administrator notices that on an intermittent basis the virtual machines are running slowly. The virtual machines are correctly sized, and the hardware has enough free resources to cope with demand Which of the following is most likely the cause?

- A. The physical servers are not able to draw enough power
- B. The physical servers do not have enough network bandwidth.
- C. The physical servers are throttling due to overheating
- D. The physical servers are contending for resources

Correct Answer: C

Section:

Explanation:

The physical servers are throttling due to overheating. This means that the servers are reducing their performance to prevent damage from excessive heat. This can cause the virtual machines to run slowly, as they depend on the physical servers' resources. To avoid this, the servers need adequate cooling and ventilation, as well as monitoring of their temperature and fan speed. According to the CompTIA Core1 objectives, one of the environmental factors that can affect system performance is overheating. A research paper on thermal management of servers also states that overheating can lead to performance degradation, reliability issues, and energy inefficiency.

QUESTION 145

Which of the following explains how using a cloud infrastructure can provide rapid elasticity?

- A. Shared resources can reduce overhead.
- B. Customers can limit the use of a resource
- C. High availability of services can be provided
- D. Systems can be provisioned according to demand.

Correct Answer: D

Section:

Explanation:

Systems can be provisioned according to demand. This is the essence of rapid elasticity, which is one of the essential characteristics of cloud computing. Rapid elasticity means that cloud services can be scaled up or down quickly and automatically, depending on the changing needs of the customers. This provides flexibility, efficiency, and cost-effectiveness for both the customers and the providers. According to the CompTIA Core1 objectives, one of the benefits of cloud computing is rapid elasticity. A research paper on cloud elasticity also defines it as the ability to dynamically adjust the amount of resources allocated to a service in response to its workload variation.

QUESTION 146

A technician is creating a new RAID array for a customer After interviewing the customer, the technician decides to implement a RAID array of striping without parity. Which of the following reasons would lead the technician to choose striping without parity instead of striping with parity?

- A. Uptime is the customer's biggest concern
- B. Speed is the most important consideration.
- C. Redundancy and speed are equally important
- D. Available storage space needs to be maximized

Correct Answer: B

Section:

Explanation:

Speed is the most important consideration. Striping without parity, also known as RAID 0, is a RAID configuration that splits data across multiple disks without any redundancy. This improves the performance of read and write operations, as multiple disks can work in parallel. However, this also increases the risk of data loss, as any disk failure will result in losing all data on the array. Therefore, striping without parity is suitable for situations where speed is prioritized over reliability. According to the CompTIA Core1 objectives, one of the advantages of RAID 0 is increased speed. A research paper on RAID performance also confirms that RAID 0 has the highest

throughput among all RAID levels.

QUESTION 147

A technician needs to configure a firewall to enable network printing. Which of the following network ports should be opened? (Select two)

- A. 21 (FTP)
- B. 22 (Telnet)
- C. 25 (SMTP)
- D. 515 (LDP)
- E. 631 (IPP)
- F. LPT1

Correct Answer: D, E

Section:

Explanation:

To enable network printing, the firewall needs to open the ports that are used by the network printers and the print servers. Two common ports for network printing are 515 (LDP) and 631 (IPP). LDP stands for Line Printer Daemon Protocol, which is a TCP-based protocol for sending print jobs to a remote printer. IPP stands for Internet Printing Protocol, which is a HTTP-based protocol for managing and monitoring print jobs over the Internet. According to the CompTIA Core1 objectives, one of the network ports that is related to printing is 515. A research paper on network printing also mentions that LDP and IPP are widely used protocols for network printing.

QUESTION 148

A technician is setting up a projector for a videoconferencing system. When the user attempts to connect a laptop to the system, the system displays the following error message:

no source found

The user tries multiple cables and inputs on the projector. Which of the following should the user try next?

- A. Check the bulb in the projector and replace it with a new one.
- B. Check the display settings on the computer and set them to extend/duplicate.
- C. Replace the projector with another known-good one and try again.
- D. Replace the video card on the machine that is plugged in to the projector, as it has gone bad.

Correct Answer: B

Section:

Explanation:

The user should check the display settings on the computer and set them to extend/duplicate. This will allow the computer to send the video signal to both the laptop screen and the projector. If the display settings are set to only show on one screen, then the projector may not detect any source. According to the CompTIA Core1 objectives, one of the common display issues is no image on screen. A troubleshooting guide for projectors also suggests checking the display settings as a possible solution for no source found error.

QUESTION 149

After a company upgraded its network infrastructure, a user's desktop has been experiencing slow network speeds. Which of the following should a technician do first to improve desktop connectivity performance?

- A. Update the NIC drivers
- B. update the BIOS firmware.
- C. Replace the motherboard
- D. Replace the patch cable

Correct Answer: D

Section:

Explanation:

The technician should replace the patch cable that connects the desktop to the network switch or outlet. The patch cable may be damaged or incompatible with the upgraded network infrastructure, which can cause slow network speeds. According to the CompTIA Core1 objectives, one of the common symptoms of a bad cable is slow transfer speeds. A research paper on network performance also states that cable quality and length can affect network speed.

QUESTION 150

A user added a heater underneath a desk, now an external monitor not working. A technician wanted the monitor gets power. Which of the following should the technician do next?

- A. Have the user unplug the heater
- B. Replace the monitor.
- C. Open the display settings on the computer
- D. Ensure a VGA cable is connected properly

Correct Answer: D

Section:

Explanation:

The technician should ensure that a VGA cable is connected properly between the monitor and the computer. A VGA cable is a type of video cable that carries analog signals. If the cable is loose, damaged, or not plugged in correctly, it can cause the monitor to not display any image or show distorted colors. According to the CompTIA Core1 objectives, one of the common display issues is no image on screen. A troubleshooting guide for monitors also recommends checking the VGA cable connection as a possible solution for no signal or blank screen problems.

QUESTION 151

Which of the following is a characteristic of cloud computing that prioritizes reliability?

- A. Shared resources
- B. High availability
- C. Rapid elasticity
- D. Hybrid

Correct Answer: B

Section:

Explanation:

High availability is a characteristic of cloud computing that prioritizes reliability. High availability means that cloud services can be accessed without interruption or failure, even in the event of a disaster or a hardware malfunction. This is achieved by using redundant components, backup systems, load balancing, and failover mechanisms. According to the CompTIA Core1 objectives, one of the benefits of cloud computing is high availability. A research paper on cloud reliability also defines high availability as the ability to provide continuous service despite faults or failures.

QUESTION 152

Which of the following internet connection types would be the most readily available for users located on unimproved land that lacks infrastructure?

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

Correct Answer: D

Section:

Explanation:

Satellite internet is the most widely available internet connection type, as it does not depend on cables or wires. It can reach remote areas that lack infrastructure for other types of internet connections. Reference: Satellite Internet

QUESTION 153

Which of the following is the SAFEST way to replace RAM on a server that has a redundant power supply?

- A. Unplug one power cable.
- B. Verify the RAM temperature.
- C. Utilize a grounding strap.
- D. Replace the RAM while the server is running.

Correct Answer: C

Section:

Explanation:

Utilizing a grounding strap is the safest way to replace RAM on a server that has a redundant power supply. This ensures that no static electricity is transferred to any of the server components, which could cause permanent damage. The other options are not the correct methods for replacing RAM.

Unplugging one power cable is not recommended, as it could cause the server to go offline and disrupt any services that are running. Verifying the RAM temperature is not necessary and does not provide any additional safety measures, and replacing the RAM while the server is running is not recommended, as it could cause system instability.

QUESTION 154

To control costs a company provides a limited number of users with company phones. One of these users opens a support ticket because the phone no longer allows internet browsing over a cellular connection. The user acknowledges that the phone worked before the user's child streamed several movies using the device. Which of the following describes why the phone cannot browse the Internet?

- A. The child accidentally connected to a neighbor's WLAN
- B. The company's group policy disabled the device
- C. The device has a data cap and has reached that limit
- D. The device's plan has been unpaid

Correct Answer: C

Section:

Explanation:

It is common for companies to place a data cap on the devices they provide to their employees, to control costs. If a user has exceeded the data cap, the phone may no longer allow internet browsing over a cellular connection. This is usually because the cellular data usage has exceeded the allotted amount for the particular plan the device is on, and the service provider has temporarily suspended the data connection.

It is unlikely that the child accidentally connected to a neighbor's WLAN because this would not affect the cellular data connection. Similarly, it is unlikely that the company's group policy has disabled the device, as this would likely affect all devices under the same policy. If the device's plan has been unpaid, the service provider would likely temporarily suspend all services, not just the cellular data connection.

Reference: CompTIA A+ Core 1 Exam Guide, page 329.

QUESTION 155

A user is installing a new display on a desktop computer that only has a single DVI port for video input and a single HDMI port for video output. Which of the following does the technician need to complete the setup?

- A. Digital-to-analog converter
- B. A/V switcher
- C. DisplayPort to HDMI adapter
- D. DVI to HDMI cable

Correct Answer: D

Section:

Explanation:

The technician will need to connect the DVI port on the computer to the new display's HDMI port. To do this, a DVI to HDMI cable will be needed. This type of cable will allow the computer's DVI video signal to be transmitted to the new display's HDMI port.

A digital-to-analog converter (DAC) is used to convert a digital signal to an analog signal. An A/V switcher is used to switch between multiple audio and video sources and display them on a single monitor or display. A

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DisplayPort to HDMI adapter is used to convert a DisplayPort signal to an HDMI signal, but it is not necessary in this scenario as the computer has a DVI port and not a DisplayPort.

Reference: CompTIA A+ Core 1 Exam Guide, page 199.

QUESTION 156

A technician just finished assembling a new PC for a client. Upon POST, the device presents an unspecified beep code and turns off automatically after five seconds. The technician double-checks the bill of materials for the new build and confirms all items have been installed. Which of the following should the technician do NEXT?

- A. Ensure thermal paste is being used on the CPU.
- B. Check to make sure that any video cards have auxiliary power cabling connected.
- C. Verify the header panel connector is properly connected.
- D. Spot-check that the I/O shield for the motherboard is properly installed.

Correct Answer: C

Section:

Explanation:

The technician should verify the header panel connector is properly connected. A beep code is a diagnostic tool used by motherboards to indicate issues with hardware components. This beep code may be indicating an issue with the connection between the motherboard and the case's header panel connector. This connector is responsible for providing power to the system and any connected peripherals. Therefore, the technician should verify the connection is secure and properly connected before attempting any other troubleshooting steps.

QUESTION 157

A company is designing a data center environment where a critical requirement is highly available computing. Which of the following types of memory should an administrator choose to install in the servers?

- A. DDR5
- B. ECC
- C. DDR4
- D. Dual-channel

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Correct Answer: B

Section:

Explanation:

ECC (Error Correcting Code) memory is a type of memory that can detect and correct errors that may occur during data transmission or storage. ECC memory is essential for high-availability computing, as it prevents data corruption and system crashes.

QUESTION 158

Which of the following is the best way to protect the data of a virtual machine in the event of hardware failure?

- A. Redundant hardware
- B. UPS
- C. Cloud-based backup
- D. RAID

Correct Answer: C

Section:

Explanation:

Cloud-based backup is the best way to protect the data of a virtual machine, as it allows the data to be stored in a remote location that is accessible from anywhere. Cloud-based backup also provides scalability, security, and reliability for data protection. Reference: [Cloud Backup]

QUESTION 159

A customer reports that a printer is only printing misaligned images. Which of the following should the technician do to correct the issue?

- A. Clean the print heads.
- B. Perform a calibration.
- C. Replace the ink cartridge.
- D. Scan the document.

Correct Answer: B

Section:

Explanation:

Calibration is the process of adjusting the printer settings to ensure that the printed output matches the original document. Calibration can fix issues such as misaligned images, color accuracy, and print quality. Reference: [Printer Calibration]

QUESTION 160

A technician is troubleshooting a wireless network issue. The users are all connected to the network, but the throughput is slow, and connections often drop. Which of the following should the technician check first?

- A. Encryption cipher
- B. Channel interference
- C. Number of connected devices
- D. Antenna type

Correct Answer: B

Section:

Explanation:

The first thing that the technician should check when troubleshooting a wireless network issue with slow throughput and frequent connection drops is the channel interference. Channel interference is a common cause of poor Wi-Fi performance, as it occurs when multiple wireless networks or devices use the same or overlapping frequency bands, resulting in signal degradation, congestion, or collision. Channel interference can affect both 2.4 GHz and 5 GHz networks, but it is more likely to happen on the 2.4 GHz band, as it has fewer and narrower channels than the 5 GHz band.

To check for channel interference, the technician can use a Wi-Fi analyzer tool, such as the ones found in the web search results¹²³, to scan the wireless environment and identify the best channel to use for the network. A Wi-Fi analyzer tool can display various information, such as the network name (SSID), signal strength (RSSI), channel number, frequency, bandwidth, and security type. The technician can look for the following indicators of channel interference:

High network density: If there are many wireless networks or devices in the vicinity, they may compete for the same or adjacent channels, causing interference and congestion. The technician can look for the number of networks or devices on each channel and avoid the crowded ones.

Channel overlap: If there are wireless networks or devices that use the same or partially overlapping channels, they may interfere with each other and degrade the signal quality. The technician can look for the channel width and frequency of each network and avoid the overlapping ones. For example, on the 2.4 GHz band, the technician should use only the non-overlapping channels 1, 6, and 11, and avoid the channels in between.

Signal interference: If there are other sources of electromagnetic radiation or noise that operate on the same or similar frequency bands as the wireless network, they may interfere with the wireless signals and cause distortion or loss. The technician can look for the signal strength and quality of each network and avoid the ones that are weak or noisy. For example, some common sources of signal interference are microwave ovens, cordless phones, Bluetooth devices, or baby monitors.

To fix the channel interference issue, the technician can try the following solutions:

Change the channel of the wireless network: The technician can use the Wi-Fi analyzer tool to find the least congested and most optimal channel for the network, and then change the channel settings on the router or the access point. The technician should also consider using the 5 GHz band instead of the 2.4 GHz band, as it offers more and wider channels and less interference.

Relocate the router or the access point: The technician can move the router or the access point to a different location, away from potential sources of interference or obstacles that may block or weaken the wireless signals, such as walls, furniture, or metal objects. The technician should also place the router or the access point in a central and elevated position, to provide better coverage and signal quality for the network.

Upgrade the router or the access point: The technician can replace the router or the access point with a newer and more advanced model, that supports the latest Wi-Fi standards, such as Wi-Fi 6 (802.11ax) or Wi-Fi 5 (802.11ac). These standards offer higher data rates, lower latency, and better performance in dense and noisy environments, compared to the older standards, such as Wi-Fi 4 (802.11n) or Wi-Fi 3 (802.11g).

How to Fix Wi-Fi Connection Drops - Lifewire⁴

How to Fix When Wi-Fi Keeps Disconnecting on Windows ¹¹⁵

How to Fix Wi-Fi Connection Drops - Lifewire⁶

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QUESTION 161

A user's mobile phone is constantly running hot and has a short battery life. A technician replaces the battery in the phone, but the issue persists. Which of the following steps should the technician take next?

- A. Check the device for updates.
- B. Check the device for malware.
- C. Check the device for liquid damage.
- D. Check the device's charging adapter.

Correct Answer: B

Section:

Explanation:

The next step that the technician should take after replacing the battery in the phone is to check the device for malware. Malware is a malicious software that can infect the phone and cause various problems, such as overheating, battery drain, data theft, pop-up ads, or performance slowdowns. Malware can enter the phone through various sources, such as downloading apps from untrusted sources, clicking on suspicious links or attachments, or connecting to insecure Wi-Fi networks.

To check the device for malware, the technician can use a reputable antivirus or anti-malware app, such as the ones found in the web search results¹²³. The technician can follow these steps:

Download and install the antivirus or anti-malware app from a trusted source, such as the Google Play Store or the Apple App Store.

Launch the app and grant it the necessary permissions to scan the device.

Run a full scan of the device and wait for the results.

If the app detects any malware, follow the app's instructions to remove or quarantine it.

Restart the device and check if the overheating and battery drain issues are resolved.

Other steps, such as checking the device for updates, checking the device for liquid damage, or checking the device's charging adapter, may not be relevant or effective for solving the overheating and battery drain issues caused by malware. Checking the device for updates may improve the security and performance of the device, but it may not remove the existing malware. Checking the device for liquid damage may reveal physical damage to the device, but it may not explain the constant overheating and battery drain. Checking the device's charging adapter may ensure the proper charging of the device, but it may not affect the device's temperature or battery life when it is not plugged in.

Best Android antivirus apps of 2023 | Tom's Guide¹

Best iPhone antivirus apps in 2023 | TechRadar²

The best antivirus software for Android - AV-TEST³

QUESTION 162

Users have been reporting slow network traffic in a branch office, and the technician needs to determine if packet loss is occurring on the network. Which of the following would the technician most likely use to passively assess the network traffic issue?

- A. Cable tester
- B. Network tap
- C. Wi-Fi analyzer
- D. Toner probe

Correct Answer: B

Section:

Explanation:

A network tap (Test Access Point) is a device used for monitoring network traffic. It allows the technician to passively observe the traffic between two network nodes in real-time without introducing latency or affecting the network's performance. By using a network tap, the technician can analyze the data packets flowing through the network to identify if packet loss is occurring, which could be contributing to the slow network traffic in the branch office.

QUESTION 163

Which of the following cloud service models is most likely to provide application patching?

- A. PaaS
- B. DaaS
- C. IaaS
- D. SaaS

Correct Answer: D

Section:

Explanation:

In the SaaS (Software as a Service) model, the service provider manages the infrastructure, platforms, and software applications, including maintenance tasks such as application patching. Users access the applications over the internet, and the provider is responsible for ensuring the software is up to date, secure, and performing optimally. This model contrasts with IaaS (Infrastructure as a Service) and PaaS (Platform as a Service), where the customer has more control and responsibility over the environment and may need to manage patching for applications they develop or install.

QUESTION 164

A field technician is responding to a ticket about an animated sign with double images. One image is stationary, and the other image is live. Which of the following is the cause of the issue?

- A. Bad display cable
- B. Burned out bulbs
- C. Display burn-in
- D. Incorrect color settings

Correct Answer: C

Section:

Explanation:

Display burn-in occurs when a static image is left on a screen for a long time, causing the pixels to wear out unevenly and retain a ghost image even when new content is displayed. This issue can result in double images, where the 'burned-in' stationary image persists alongside new, live content. This problem is more common in older displays or those used for static signage. Replacing the display cable or adjusting color settings would not address the underlying cause of uneven pixel wear, and burned-out bulbs would likely result in a loss of image clarity or brightness, not double images.

QUESTION 165

Which of the following DNS records is used to point to a mail server?

- A. TXT
- B. AAA
- C. A
- D. MX

Correct Answer: D

Section:

Explanation:

An MX (Mail Exchange) record in DNS specifies the mail server responsible for accepting email messages on behalf of a domain. It is a vital component of the email delivery process, directing email to the correct server based on the domain part of the email address. Without properly configured MX records, a domain's email system cannot function correctly.

QUESTION 166

A user connects a laptop to a conference room audiovisual system using a VGA cable. The TV displays the image correctly, but the audio is not working. Which of the following will most likely resolve the issue?

- A. Replacing the VGA cable

- B. Switching inputs
- C. Using HDMI to connect
- D. Restarting the audiovisual system

Correct Answer: C

Section:

Explanation:

VGA (Video Graphics Array) cables transmit analog video signals only and do not carry audio signals. When a user connects a laptop to an audiovisual system using a VGA cable, the lack of audio is due to VGA's inability to transmit sound. Switching to an HDMI (High-Definition Multimedia Interface) cable, which supports both audio and video signals, will most likely resolve the issue by enabling the transmission of sound to the audiovisual system alongside the video.

CompTIA A+ Core 1 (220-1101) Exam Objectives, specifically sections related to peripherals and connectors, which would cover the capabilities of different types of cables and connectors, including VGA and HDMI.

Basic understanding of the functionality of common video and audio cables and connectors, emphasizing the distinction between VGA cables, which only support video signals, and HDMI cables, which support both video and audio signals.

QUESTION 167

A user complains that print jobs remain in the printer queue. A technician sends a ping command to the printer, and the printer replies successfully. The paper trays are full, and toner levels are okay. Which of the following is a reason the print jobs are getting stuck in the queue?

- A. The printer is disconnected from the network.
- B. The first job in the queue is waiting for paper in the manual feed tray.
- C. The paper size for the last job in the queue is not available.
- D. The print queue is unable to locate the printer.

Correct Answer: B

Section:

Explanation:

When print jobs remain stuck in the printer queue despite successful network communication (indicated by successful ping replies) and no issues with paper supply or toner levels, a common reason can be that the first job in the queue requires manual intervention, such as paper to be fed into a manual feed tray. Printers often pause the entire print queue if the first job requires a specific type of paper or manual insertion that hasn't been addressed, preventing subsequent jobs from processing.

CompTIA A+ Core 1 (220-1101) Exam Objectives, specifically the sections on troubleshooting printers, which include understanding various reasons why print jobs might get stuck in the print queue.

Knowledge of printer operation and common print job issues, with an emphasis on how printers handle manual feed tray requirements and the impact on the print queue.

QUESTION 168

A user plugs in a laptop to the corporate network and the laptop is automatically assigned an IP address. Which of the following server types was used to assign the IP address?

- A. DNS
- B. AAA
- C. DHCP
- D. Web

Correct Answer: C

Section:

Explanation:

When a device such as a laptop is connected to a network and automatically assigned an IP address, it is typically done through DHCP (Dynamic Host Configuration Protocol). DHCP servers are responsible for dynamically assigning IP addresses to devices on a network, ensuring that each device has a unique IP address and can communicate on the network without IP conflicts.

CompTIA A+ Core 1 (220-1101) Exam Objectives, especially sections dealing with networking fundamentals and configurations, which would include the role and function of DHCP in managing IP address allocation on networks.

Understanding of basic networking protocols and services, highlighting DHCP's role in dynamically allocating IP addresses to devices on a network to facilitate communication.

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