

CompTIA

220-1101 Exam

CompTIA A+ Certification Exam: Core 1

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Question: 1

A technician is using a PAN to connect a group of users on a field project. Which of the following services should the technician activate on the mobile device to share the internet data connection?

- A. Tethering
- B. Pairing
- C. Bluetooth
- D. Hotspot

Answer: A

Explanation:

The correct answer is

A) Tethering.

Tethering is the process of sharing a mobile device's internet data connection with other devices, such as laptops, tablets, or other phones. Tethering can be done by using a Wi-Fi hotspot, a Bluetooth connection, or a USB cable. A Wi-Fi hotspot creates a wireless network that other devices can join, a Bluetooth connection pairs the devices and allows data transfer, and a USB cable connects the devices physically and enables data sharing.

A PAN, or personal area network, is a type of network that connects devices within a short range, usually up to 10 meters. A PAN can be used for various purposes, such as transferring files, printing documents, or accessing the internet. A PAN can be created by using Bluetooth, Wi-Fi, or infrared technologies.

A technician can use a PAN to connect a group of users on a field project by using tethering on a mobile device. The technician can activate the tethering service on the mobile device and choose the preferred method of sharing the internet data connection. The other devices can then connect to the mobile device and access the internet through it.

The other options are incorrect because they are not services that can share the internet data connection on a mobile device. Pairing is the process of establishing a connection between two Bluetooth devices, but it does not necessarily share the internet data connection. Bluetooth is a technology that can create a PAN and enable tethering, but it is not a service that can be activated on a mobile device. Hotspot is a term that can refer to a Wi-Fi hotspot created by tethering on a mobile device, but it is not a service that can be activated on its own.

[Share a mobile connection by hotspot or tethering on Android](#)

[How to share a mobile connection by tethering or hotspot on Android](#)

[How to Share Mobile Internet to PC or Other devices](#)

Question: 2

Every time a user tries to print a multipage document, the user is unable to print on both sides of the page. Which of the following settings will most likely resolve this issue?

- A . Orientation
- B . Duplex
- C . Quality
- D . Print tray

Answer: B

Explanation:

The correct answer is B. Duplex.

Duplex printing is the process of printing on both sides of a sheet of paper automatically or manually. Duplex printing can save paper, reduce clutter, and create professional-looking documents. To print on both sides of the paper, the printer must support duplex printing or the user must manually reinsert the pages to print the second side.

Orientation is the direction in which the paper is printed, either portrait (vertical) or landscape (horizontal). Orientation does not affect the ability to print on both sides of the paper.

Quality is the resolution or sharpness of the printed image, measured in dots per inch (dpi). Quality does not affect the ability to print on both sides of the paper.

Print tray is the part of the printer that holds and feeds the paper into the printer. Print tray does not affect the ability to print on both sides of the paper.

[To enable duplex printing on a Windows PC, follow these steps1:](#)

Open the document for printing, then select File > Print.

In Settings, select Manually Print on Both Sides, then Print.

Follow the instructions on the screen to flip and reinsert the pages.

[To enable duplex printing on a Mac, follow these steps2:](#)

Open the document for printing, then select File > Print.

In Layout, select Two-Sided, then Long-Edge binding or Short-Edge binding.

Click Print.

[Print on both sides of the paper \(duplex printing\) in Word](#)

[How to Print Double-Sided on a Windows PC or Mac Computer](#)

Question: 3

A restaurant calls the support line about its 3in (2.5cm) point-of-sale printer that is only printing fully black receipts. Which of the following should the technician check in order to resolve the issue? (Select two).

- A . Power supply
- B . Humidity
- C . Rollers
- D . Fuser
- E . Heating element
- F . Room temperature

Answer: C, E

Explanation:

The correct answers are C. Rollers and E. Heating element.

A 3in (2.5cm) point-of-sale printer is a type of thermal printer that uses heat to print receipts on special thermal paper. The printer has a heating element that heats up the paper as it passes through the rollers, creating black marks on the paper where the heat is applied. The heating element and the rollers are two critical components of the thermal printer that can affect the quality of the printout.

If the printer is only printing fully black receipts, it means that the heating element is overheating or malfunctioning, causing the entire paper to turn black. The heating element may need to be replaced or repaired by a technician. Alternatively, the rollers may be dirty or damaged, causing the paper to stick to the heating element and get burned. The rollers may need to be cleaned or replaced by a technician.

The other options are not likely to cause the printer to print fully black receipts. The power supply may affect the printer's performance, but it would not cause the heating element to overheat or the rollers to malfunction. The humidity and room temperature may affect the quality of the thermal paper, but they would not cause the entire paper to turn black. The fuser is a component of a laser printer, not a thermal printer, and it has no effect on the point-of-sale printer.

[Basic Printer Troubleshooting -- Individual Point of Sale](#)

[5 Common Issues With Any POS System and How To Fix Them](#)

[Printer Troubleshooting | Square Support Center - US](#)

[Resolve receipt printer issues and cash drawer will not open - QuickBooks](#)

Question: 4

Which of the following cables should be used when connecting a cable modem to a SOHO router?

- A . FireWire
- B . Fiber
- C . Ethernet
- D . Coaxial

Explanation:

The correct answer is C. Ethernet.

An Ethernet cable is a type of network cable that is used to connect devices on a local area network (LAN), such as computers, routers, switches, and modems. Ethernet cables have RJ-45 connectors at both ends, which are similar to telephone jacks but larger. Ethernet cables can carry data signals at speeds ranging from 10 Mbps to 10 Gbps, depending on the type and quality of the cable.

A cable modem is a device that connects to a coaxial cable from a cable service provider and provides high-speed internet access. A SOHO router is a small office/home office router that connects to a cable modem or DSL modem and provides network and internet access to multiple devices on a LAN. A SOHO router typically has one WAN port and four LAN ports. The WAN port is used to connect to the cable modem or DSL modem, while the LAN ports are used to connect to computers or other devices on the LAN.

To connect a cable modem to a SOHO router, an Ethernet cable is needed. The Ethernet cable is plugged into the WAN port of the SOHO router and the Ethernet port of the cable modem. This allows the SOHO router to receive an IP address from the cable service provider and share it with the devices on the LAN using network address translation (NAT). The SOHO router also provides firewall and wireless features for the LAN.

The other options are incorrect because they are not suitable for connecting a cable modem to a SOHO router. FireWire is a type of serial bus that is used to connect devices such as digital cameras, external hard drives, and audio interfaces. FireWire cables have different connectors than Ethernet cables and cannot be used for network communication. Fiber is a type of optical cable that uses light signals to transmit data over long distances. Fiber cables have special connectors that are not compatible with Ethernet ports. Coaxial is a type of copper cable that has a central conductor surrounded by an insulating layer and a braided shield. Coaxial cables are used for cable TV and internet services, but they cannot be directly connected to Ethernet ports without an adapter.

[CompTIA A+ Certification Exam: Core 1 Objectives \(220-1101\)](#)

[Installing and Configuring a Cable Modem/DSL Router](#)

[Cisco 831 Router and SOHO 91 Router Cabling and Setup Quick Start Guide](#)

Question: 5

A technician is troubleshooting a PC that has been experiencing random system crashes. The technician has already checked the hard drive and the RAM, and both were in good working order. Which of the following steps should the technician take next to troubleshoot the system crashes?

- A . Test the fan speed.
- B . Disable the USB ports
- C . Replace the PSU
- D . Decrease the RAM timings.

Answer: C

Explanation:

A PSU (power supply unit) is a component that converts the AC power from the wall outlet into DC power that the PC components can use. A faulty or failing PSU can cause random system crashes, as well as other problems such as noise, overheating, or no power at all. A PSU can fail due to various reasons, such as age, dust, power surges, or poor quality.

To troubleshoot a PSU, the technician can use a multimeter to measure the voltage output of the PSU connectors. The voltage should be within the acceptable range of the specifications. For example, the 12V rail should be between 11.4V and 12.6V. If the voltage is too low or too high, the PSU is likely defective and needs to be replaced.

Alternatively, the technician can try swapping the PSU with a known good one and see if the system crashes persist. If the system works fine with a different PSU, then the original PSU is the problem and should be replaced.

The other options are not likely to fix the random system crashes. Testing the fan speed may help to diagnose overheating issues, but it is not related to the PSU. Disabling the USB ports may help to eliminate potential conflicts with USB devices, but it is not related to the PSU. Decreasing the RAM timings may help to improve performance and stability, but it is not related to the PSU.

[Fix Random PC Crashes: 10 Steps to Identify and Fix Issues](#)

[Why Does Windows Crash? The 9 Most Common Reasons](#)

Question: 6

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

Answer: C

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: 7

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.

Answer: C

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 Objectives1or 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: 8

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 HDD

Answer: D

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. 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.

Question: 9

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

Answer: C

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.

Question: 10

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.

Answer: B

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: 11

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

Answer: A

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: 12

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.

Answer: A

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.

Question: 13

A user reports that a printer pulls multiple sheets of paper from the paper tray instead of a single sheet. Which of the following should a technician investigate to resolve this issue? (Select two).

- A . Toner cartridge
- B . Tractor feed
- C . Pickup roller
- D . Separation pad
- E . Duplexer
- F . Fuser

Answer: C, D

Explanation:

The correct answers are C. Pickup roller and D. Separation pad.

A pickup roller is a rubber wheel that grabs the paper from the paper tray and feeds it into the printer. A separation pad is a small piece of cork or rubber that prevents more than one sheet of paper from being fed at a time. If the pickup roller or the separation pad is worn out, dirty, or damaged, it can cause the printer to pull multiple sheets of paper instead of a single sheet. This can lead to paper jams, misprints, or wasted paper.

To resolve this issue, a technician should investigate the condition of the pickup roller and the separation pad and replace them if necessary. The technician should also clean the paper tray and make sure the paper is loaded correctly and not stuck together.

A toner cartridge is a component that contains the toner powder used to create the printout on a laser printer. A tractor feed is a mechanism that uses sprockets to move continuous paper through a dot matrix printer. A duplexer is a device that allows a printer to print on both sides of the paper automatically. A fuser is a part of a laser printer that melts the toner onto the paper using heat and pressure. None of these components are related to the issue of pulling multiple sheets of paper from the paper tray.

Question: 14

Which of the following twisted pair cables supports 10GBASE-T data transmission speed?

- A . Cat 3
- B . Cat 5
- C . Cat 5e
- D . Cat 6a

Answer: D

Explanation:

The correct answer is D. Cat 6a.

Cat 6a (augmented) is a type of twisted pair cable that supports 10GBASE-T data transmission speed. 10GBASE-T is an Ethernet standard that can deliver 10 gigabits per second (Gbps) over copper cables. Cat 6a can support this speed up to a distance of 100 meters, which is the same as Cat 5e and Cat 6 for lower speeds. Cat 6a has better shielding and crosstalk prevention than Cat 6, which makes it more suitable for high-frequency signals.

Cat 3, Cat 5, and Cat 5e are not capable of supporting 10GBASE-T data transmission speed. Cat 3 can only support up to 10 Mbps, Cat 5 can only support up to 100 Mbps, and Cat 5e can only support up to 1 Gbps. These cables have lower bandwidth, higher attenuation, and more interference than Cat 6a.

Question: 15

A user reports that a laptop correctly connects to the internet when docked at the office but is unable to access the internet when at home. Which of the following should the technician do first?

- A . Contact the user's home ISP
- B . Give the user a dock to use at home.
- C . Disable network security settings.
- D . Enable the wireless adapter.

Answer: D

Explanation:

A wireless adapter is a device that allows a laptop to connect to a wireless network, such as a home Wi-Fi router. A wireless adapter can be either internal or external, and it can be enabled or disabled by the user or the operating system. If the wireless adapter is disabled, the laptop will not be able to access the internet when it is not connected to a wired network, such as the office dock.

The technician should do the following steps to enable the wireless adapter:

Check the physical switch or button on the laptop that controls the wireless adapter. Some laptops have a switch or button on the side, front, or keyboard that can turn on or off the wireless adapter. Make sure the switch or button is in the on position.

Check the software settings for the wireless adapter. In Windows 10, you can do this by clicking on the network icon in the system tray, and then clicking on the Wi-Fi icon. Make sure the Wi-Fi is turned on. You can also go to Settings > Network & Internet > Wi-Fi and make sure the Wi-Fi is turned on.

Check the device manager for the wireless adapter. In Windows 10, you can do this by right-clicking on the Start menu and selecting Device Manager. Expand the Network adapters category and look for your wireless adapter. Make sure it is enabled and has no errors. You can right-click on it and select Enable device or Update driver if needed.

If none of these steps work, there may be a hardware or software problem with the wireless adapter that requires further troubleshooting or replacement.

Question: 16

A user's laptop has been slow to respond for the past few days. The user has run a virus scan, deleted temporary files, closed unnecessary programs, and rebooted the laptop, but the issue persists. Which of the following steps should the technician take next?

- A . Perform a RAM upgrade.
- B . Replace the laptop's hard drive.
- C . Bench test the laptop.
- D . Run a firmware update.

Answer: D

Explanation:

Firmware is a type of software that controls the hardware components of a device, such as the motherboard, hard drive, or keyboard. Firmware updates can improve the performance, stability, and compatibility of the device, as well as fix bugs and security issues. Running a firmware update can help to resolve the issue of a slow laptop, especially if the firmware is outdated or corrupted.

Question: 17

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

Answer: D

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.

Question: 18

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

Answer: B

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.

Question: 19

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.

Answer: B

Explanation:

According to the CompTIA troubleshooting methodology, the next step after establishing a theory of probable cause is to test the theory to determine the cause. However, before testing the theory, the technician may need to conduct some research based on the symptoms and the possible cause. This may involve consulting online resources, manuals, documentation, or colleagues to find out more information about the power supply and how to test it. Research can help the technician confirm or eliminate the theory and avoid unnecessary actions or damage.

Answer A is incorrect because inquiring about environmental or infrastructure changes is part of identifying the problem, which is the first step of the troubleshooting methodology. The technician should have already done this before establishing a theory of probable cause.

Answer C is incorrect because establishing a plan of action to resolve the problem and implement the solution is the fourth step of the troubleshooting methodology. The technician should not jump to this step without testing the theory and verifying the cause.

Answer D is incorrect because documenting the findings, actions, and outcomes is the last step of the troubleshooting methodology. The technician should not do this until the problem is resolved and verified.

Question: 20

A technician needs to determine where a printer is connected on a patch panel. Which of the following is the best tool for the technician to use to locate the port?

- A . Toner probe
- B . Loopback plug
- C . Cable tester
- D . Wi-Fi analyzer

Answer: A

Explanation:

The correct answer is A. Toner probe.

A toner probe is an electronic test instrument that can help trace wires and locate the port where a printer is connected on a patch panel. A toner probe consists of two parts: a tone generator and a tone detector. The tone

generator sends a signal through the cable, and the tone detector picks up the signal at the other end. By using a toner probe, a technician can identify which port on the patch panel corresponds to the printer cable.

A loopback plug is a device that can test the functionality of a network port by sending and receiving signals from the same port. A loopback plug is not useful for locating ports on a patch panel.

A cable tester is a device that can verify the integrity and continuity of a cable by checking for open, short, or miswired connections. A cable tester can also measure the length and resistance of a cable. A cable tester is not useful for locating ports on a patch panel.

A Wi-Fi analyzer is a software or hardware tool that can monitor and analyze wireless networks by scanning for available channels, signal strength, security settings, and other parameters. A Wi-Fi analyzer is not useful for locating ports on a patch panel.

Question: 21

A printer's output is producing solid black sheets without distinct lettering. A technician adjusted multiple settings, but the issue persists. Which of the following parts is most likely causing this issue?

- A . Imaging drum
- B . Heating element
- C . Fuser assembly
- D . Feed assembly

Answer: A

Explanation:

The correct answer is

A) Imaging drum.

An imaging drum is a part of a laser printer that transfers the toner to the paper. The imaging drum is coated with a photosensitive material that reacts to light and creates an electrostatic charge. The charge attracts the toner particles from the cartridge and forms an image on the drum. The image is then transferred to the paper by heat and pressure from the fuser assembly.

If the imaging drum is defective or damaged, it can cause various printing problems, such as solid black pages, blank pages, streaks, spots, or faded prints. A solid black page can occur when the imaging drum is unable to create a charge pattern on its surface, and instead attracts all the toner from the cartridge. This can happen due to a faulty laser unit, a dirty or scratched drum surface, or a worn-out drum.

[To fix this issue, the technician should replace the imaging drum with a new one. The imaging drum usually has a limited lifespan and needs to be replaced periodically. The technician should also check the toner cartridge and the fuser assembly for any signs of damage or leakage123](#)

Question: 22

Which of the following is considered a connectionless protocol?

- A . SSH
- B . TCP
- C . HTTPS
- D . UDP

Answer: D

Explanation:

The correct answer is D. UDP.

UDP (User Datagram Protocol) is a connectionless protocol that does not establish a connection before sending or receiving data. UDP simply sends datagrams to the destination without checking if the receiver is ready or not. UDP does not guarantee reliable delivery, error correction, or in-order arrival of the data. UDP is faster and more efficient than connection-oriented protocols for applications that do not require reliability, such as streaming audio or video1

A) SSH (Secure Shell) is not a correct answer. SSH is a connection-oriented protocol that uses TCP (Transmission Control Protocol) as its transport layer. SSH establishes a secure and encrypted connection between two network endpoints before exchanging data. SSH provides authentication, confidentiality, and integrity for remote login and command execution2

B) TCP (Transmission Control Protocol) is not a correct answer. TCP is a connection-oriented protocol that establishes a connection before sending or receiving data. TCP ensures reliable delivery, error correction, and in-order arrival of the data. TCP is slower and more complex than connectionless protocols, but it provides more reliability and quality of service for applications that require it, such as web browsing or email1

C) HTTPS (Hypertext Transfer Protocol Secure) is not a correct answer. HTTPS is a connection-oriented protocol that uses TCP as its transport layer and SSL/TLS as its security layer. HTTPS establishes a secure and encrypted connection between a web browser and a web server before exchanging data. HTTPS provides authentication, confidentiality, and integrity for web transactions, such as online banking or shopping1

Question: 23

A user needs to upgrade a PC in order to run the latest 3-D design software. Which of the following components should the user upgrade to best meet this requirement?

- A . Motherboard
- B . CPU
- C . Power supply
- D . Graphics card
- E . Memory

Answer: D

Explanation:

The correct answer is D. Graphics card.

A graphics card is a component that handles the processing and rendering of 3D graphics on a PC. A graphics card can significantly improve the performance and quality of 3D design software, as it can handle complex calculations and display high-resolution images faster than the CPU. A graphics card can also support features such as ray tracing, anti-aliasing, and texture mapping, which can enhance the realism and detail of 3D models.

A) Motherboard. This is not a correct answer. A motherboard is a component that connects and communicates with all the other components in a PC. A motherboard does not directly affect the performance or quality of 3D design software, unless it is incompatible or outdated with the other components.

B) CPU. This is not a correct answer. A CPU is a component that executes instructions and calculations for various programs on a PC. A CPU can affect the performance and quality of 3D design software, but not as much as a graphics card. A CPU is more important for tasks such as compiling, encoding, or multitasking, which are not specific to 3D design.

C) Power supply. This is not a correct answer. A power supply is a component that converts AC power from the wall outlet to DC power for the PC components. A power supply does not directly affect the performance or quality of 3D design software, unless it is insufficient or faulty to provide enough power for the other components.

E) Memory. This is not a correct answer. Memory is a component that stores data temporarily for fast access by the CPU and other components. Memory can affect the performance and quality of 3D design software, but not as much as a graphics card. Memory is more important for tasks such as loading, saving, or switching between programs, which are not specific to 3D design.

Question: 24

A technician is replacing the motherboard of a workstation for a user who runs multiple large applications at the same time. Which of the following motherboard specifications would provide the most significant improvement in performance?

- A . Number of DIMM slots
- B . Number of HDMI ports
- C . Number of PCI slots
- D . Number of USB ports

Answer: A

Explanation:

The correct answer is A. Number of DIMM slots.

The number of DIMM slots on a motherboard determines how much RAM can be installed on the system. RAM is a crucial component for running multiple large applications at the same time, as it allows the CPU to access data faster and avoid swapping to the hard drive. Having more DIMM slots means that more RAM can be added, which can improve the performance and responsiveness of the system.

B) Number of HDMI ports. This is not a correct answer. The number of HDMI ports on a motherboard determines how many monitors can be connected to the system. HDMI ports are used for video and audio output, but they do not affect the performance of the system when running multiple large applications.

C) Number of PCI slots. This is not a correct answer. The number of PCI slots on a motherboard determines how many expansion cards can be installed on the system. PCI slots are used for adding devices such as sound cards, network cards, or graphics cards, but they do not affect the performance of the system when running multiple large applications.

D) Number of USB ports. This is not a correct answer. The number of USB ports on a motherboard determines how many peripherals can be connected to the system. USB ports are used for connecting devices such as keyboards, mice, printers, or external drives, but they do not affect the performance of the system when running multiple large applications.

Question: 25

Which of the following best describes the primary function of a spam gateway?

- A . Serves as a repository for email routing logs
- B . Blocks unrequested ICMP packets from external networks
- C . Categorizes incoming network messages
- D . Mitigates DDoS attacks

Answer: C

Explanation:

A spam gateway is a software solution that filters email messages based on various criteria, such as sender, recipient, subject, content, attachments, and URLs. A spam gateway categorizes incoming network messages as spam or non-spam, and either blocks, quarantines, or delivers them accordingly. A spam gateway can help protect email servers and users from malicious or unwanted emails, such as phishing, malware, or advertising.

A) Serves as a repository for email routing logs. This is not the primary function of a spam gateway. Email routing logs are records of the path and status of email messages as they travel through the network. Email routing logs can help troubleshoot email delivery issues, but they do not filter or categorize email messages.

B) Blocks unrequested ICMP packets from external networks. This is not the primary function of a spam gateway. ICMP (Internet Control Message Protocol) packets are used to communicate network information, such as errors, requests, or replies. Blocking unrequested ICMP packets from external networks can help prevent network scanning or denial-of-service attacks, but it does not filter or categorize email messages.

D) Mitigates DDoS attacks. This is not the primary function of a spam gateway. DDoS (Distributed Denial-of-Service) attacks are attempts to overwhelm a network or server with a large amount of traffic from multiple

sources. Mitigating DDoS attacks can help maintain network availability and performance, but it does not filter or categorize email messages.

Question: 26

Which of the following technologies can be used to harden guest virtual machines?

- A . Containerization
- B . Network isolation
- C . Resource reservation
- D . vTPM

Answer: D

Explanation:

A virtual Trusted Platform Module (vTPM) is a technology that can be used to harden guest virtual machines by providing them with a secure cryptographic device. A vTPM can store encryption keys, certificates, and passwords, and can perform integrity checks on the guest operating system and applications. A vTPM can also enable features such as BitLocker and Credential Guard in Windows 10 virtual machines.

- A) Containerization is a technology that can be used to isolate applications from the underlying operating system and hardware resources. Containerization does not directly harden guest virtual machines, but rather provides a lightweight alternative to virtualization.
- B) Network isolation is a technology that can be used to separate network traffic between different virtual machines or groups of virtual machines. Network isolation can help prevent unauthorized access or attacks on guest virtual machines, but it does not harden them internally.
- C) Resource reservation is a technology that can be used to guarantee a minimum amount of CPU, memory, disk, or network resources for a virtual machine or a group of virtual machines. Resource reservation can help improve the performance and availability of guest virtual machines, but it does not harden them against security threats.
- D) vTPM is a technology that can be used to harden guest virtual machines by providing them with a secure cryptographic device. A vTPM can store encryption keys, certificates, and passwords, and can perform integrity checks on the guest operating system and applications.

Question: 27

A technician is upgrading a desktop's storage with the fastest option available. The desktop's motherboard is equipped with SATA III, NVMe, and IDE. Which of the following should the technician choose for the best performance?

- A . PCIe SSD connected via NVMe interface
- B . 3.5in (8.9cm) 10,000rpm HDD connected via IDE interface

- C . M.2 SSD connected via SATA interface
D . 2.5in (6.35cm) SSD connected via SATA interface

Answer: A

Explanation:

The best option that the technician should choose for the best performance is

A) PCIe SSD connected via NVMe interface. This option means that the technician should install a solid state drive (SSD) that uses the PCIe (Peripheral Component Interconnect Express) bus and the NVMe (Non-Volatile Memory Express) protocol to communicate with the motherboard. This option can offer the following advantages:

Faster speed: PCIe SSDs can transfer data faster than SATA or IDE SSDs, as they use more lanes and have higher bandwidth. PCIe SSDs can reach speeds of up to 7,000 MB/s, while SATA SSDs are limited to 600 MB/s and IDE SSDs are even slower.¹² NVMe is a protocol that is designed specifically for SSDs and can optimize their performance by reducing latency and increasing parallelism.³

Smaller size: PCIe SSDs can be smaller than SATA or IDE SSDs, as they do not require additional cables or connectors. PCIe SSDs can come in different form factors, such as M.2 or U.2, which can fit in different slots on the motherboard.¹²

Higher reliability: PCIe SSDs can be more reliable than SATA or IDE SSDs, as they have less moving parts and are less prone to mechanical failures or data corruption. PCIe SSDs can also support features such as error correction and wear leveling, which can enhance their durability and lifespan.¹²

Question: 28

A technician is selecting RAM for a new high-end workstation. The motherboard has eight slots that support DDR5 memory. Which of the following should the technician do to optimize performance?

- A . Use the minimum number of modules.
B . Increase the virtual RAM.
C . Increase memory timings.
D . Utilize all channels.

Answer: D

Explanation:

The best option that the technician should do to optimize performance is D. Utilize all channels. This option means that the technician should install the RAM modules in a way that maximizes the number of memory channels that are used by the motherboard. Memory channels are pathways that connect the memory controller to the RAM modules, and they allow data to be transferred between them. The more memory channels that are used, the higher the memory bandwidth and performance.¹

DDR5 memory supports up to eight memory channels per module, which is twice as many as DDR42. However, not all motherboards can support eight channels per module, and some may only support four or two channels per module. Therefore, the technician should check the motherboard specifications and manual to determine how many memory channels it supports and how to install the RAM modules accordingly.

For example, if the motherboard supports four channels per module, then the technician should install four RAM modules in slots 1, 3, 5, and 7 to use all 16 available channels. If the motherboard supports two channels per module, then the technician should install eight RAM modules in all slots to use all 16 available channels. If the technician installs fewer modules than the number of slots, then some channels will be left unused and the performance will be lower1.

Question: 29

Which of the following best describes the type of cloud a healthcare company should use for a patient record portal?

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

Answer: D

Explanation:

A patient record portal is a web-based application that allows patients to access their health information, such as medical history, test results, prescriptions, and appointments. A patient record portal needs to be secure, reliable, and compliant with the health data regulations of the country or region where it operates1.

The type of cloud that best describes the type of cloud a healthcare company should use for a patient record portal is D. Private. A private cloud is a cloud computing model that is dedicated to a single organization and provides exclusive access and control over its resources and data2. A private cloud can offer the following benefits for a patient record portal:

Enhanced security and privacy: A private cloud can protect the sensitive health data from unauthorized access or breaches by using encryption, firewalls, authentication, and other security measures. A private cloud can also comply with the health data regulations, such as HIPAA in the US or GDPR in the EU, by ensuring that the data is stored and processed within the jurisdiction of the organization3.

Improved performance and reliability: A private cloud can optimize the speed and availability of the patient record portal by using dedicated servers, network bandwidth, and storage capacity. A private cloud can also ensure that the patient record portal can handle high demand and traffic without compromising its quality or functionality3.

Greater customization and flexibility: A private cloud can tailor the patient record portal to the specific needs and preferences of the organization and its patients by using customized applications, interfaces, and features. A private cloud can also scale up or down the resources and services of the patient record portal as needed without affecting its performance or cost3.

Question: 30

A technician is troubleshooting a PC that makes grinding noises and eventually shuts down. The technician determines the PC is overheating. Which of the following is most likely failing?

- A . RAM
- B . Motherboard
- C . SSD
- D . CPU fan

Answer: D

Explanation:

The most likely component that is failing and causing the PC to overheat is D. CPU fan. The CPU fan is a vital part of the cooling system that prevents the CPU from overheating by blowing air over the heatsink and dissipating the heat. If the CPU fan is faulty, noisy, or clogged with dust, it can reduce the airflow and cause the CPU temperature to rise¹². This can result in poor performance, instability, or shutdowns of the PC.

The other components are less likely to be the cause of overheating. RAM, motherboard, and SSD do not generate as much heat as the CPU and usually do not require fans to cool them down¹. They may overheat if there is poor ventilation in the case or if they are defective, but they are not as common as a failing CPU fan.

Therefore, the correct answer is D. CPU fan. This is the most likely component that is failing and causing the PC to overheat.

Question: 31

A laptop is experiencing slow performance writing data

a. Which of the following is the best component for a technician to upgrade to fix the issue?

- A . RAM
- B . HDD
- C . TPM
- D . CPU

Answer: B

Explanation:

The best component for a technician to upgrade to fix the issue of slow performance writing data is B. HDD. HDD stands for hard disk drive, which is a type of storage device that uses physical disks to store data. HDDs have

moving parts that can slow down the read and write operations, especially when the data is fragmented or the disk is full12.

A better alternative to HDDs is SSDs, which stands for solid state drives. SSDs use flash memory and do not have any moving parts. SSDs can read and write data faster and use less power, which can improve the performance and battery life of the laptop13. Upgrading to an SSD can provide a significant improvement in performance2.

The other components are not as relevant or effective as upgrading the HDD. RAM stands for random access memory, which is a type of memory that stores temporary data for the CPU to process. RAM can affect the overall speed of the laptop, but it does not directly affect the writing performance of the storage device1. TPM stands for trusted platform module, which is a security chip that encrypts and protects data on the laptop. TPM does not affect the performance of the laptop, but rather its security1. CPU stands for central processing unit, which is the main processor of the laptop that executes instructions and calculations. CPU can affect the performance of the laptop, but it is not as easy or cost-effective to upgrade as the HDD1.

Question: 32

A technician is asked to purchase and install a line-of-sight wireless system that provides a stable network connection between two buildings. Which of the following needs to be considered prior to purchasing the system?

- A . IP address range
- B . SSID broadcast
- C . Firewall rules
- D . Regulatory power limits

Answer: D

Explanation:

A line-of-sight wireless system is a type of wireless communication that requires a clear and unobstructed path between the transmitter and the receiver. This can be achieved by using directional antennas that focus the radio signals in a narrow beam. A line-of-sight wireless system can provide a stable network connection between two buildings that are within the range and visibility of each other.

However, before purchasing and installing a line-of-sight wireless system, one of the factors that needs to be considered is the regulatory power limits. The power limit is the maximum amount of radio frequency (RF) energy that a transmitter can emit. Different countries and regions have different regulations and standards for the allowable power levels of wireless devices. Exceeding the power limit can cause interference with other wireless services, such as aviation, radio, television, etc. It can also pose health and safety risks to humans and animals.

Therefore, a technician should check the local laws and regulations for the power limits of the wireless system before buying and installing it. The technician should also use a proper tool to measure the actual power output of the transmitter and adjust it accordingly. The technician should also ensure that the transmitter and receiver are aligned properly and have a clear line of sight without any obstacles.

The other options are not relevant to the line-of-sight wireless system. The IP address range is a set of numerical identifiers that are assigned to devices on a network. It does not affect the physical transmission of wireless

signals. The SSID broadcast is a feature that allows a wireless network to announce its name and availability to nearby devices. It does not affect the stability of the network connection between two buildings. The firewall rules are a set of policies that control the incoming and outgoing traffic on a network. They do not affect the line-of-sight wireless system.

[Wireless line-of-sight, non-line-of-sight, beyond-line-of-sight propagation](#)

[Point-to-point Wi-Fi bridging between buildings---the cheap and easy way.](#)

[How Does Wireless Internet, or Line of Sight Internet Work?](#)

[Line-of-Sight Transmission - Engineering LibreTexts](#)

[What is Line of Sight \(LoS\)? - Definition from Techopedia](#)

Question: 33

A systems administrator needs to set up a multifunction printer for the legal department. The legal department deals with sensitive documents and requires a secure method of releasing print jobs. Which of the following should the systems administrator configure to meet the department's security requirements?

- A . SMB settings
- B . User authentication
- C . Audit logging
- D . Wired connection

Answer: B

Explanation:

This option requires the user to enter a PIN code or swipe a smart card before the printer releases their print job. This way, the user can verify their identity and ensure that no one else can access their sensitive documents.

The other options are not as secure or effective as user authentication. SMB settings are used to share files and printers over a network, but they do not provide a secure method of releasing print jobs. Audit logging records the details of each print job, but it does not prevent unauthorized access to the printed documents. Wired connection reduces the risk of wireless interference or hacking, but it does not guarantee that the print jobs are only retrieved by the intended recipient.

Question: 34

A user tripped on an Ethernet cable and disconnected it from the wall jack. A technician visually inspects the cable and notices that the plastic prong on the connector of the cable is completely missing.

Which of the following tools should the technician use to resolve this issue? (Select two).

- A . Cable stripper
- B . Network crimper
- C . Toner probe
- D . Punchdown tool
- E . Multimeter
- F . Loopback plug

Answer: A, B

Explanation:

[According to the CompTIA A+ Core 1 \(220-1101\) Certification Study Guide1, a network crimper and a cable stripper are the tools that a technician should use to resolve this issue. A network crimper is used to attach a new RJ-45 connector to the end of the cable, and a cable stripper is used to remove the outer insulation of the cable and expose the twisted pairs of wires. A toner probe, a punchdown tool, a multimeter, and a loopback plug are not needed for this task.](#)

Here are some web resources that explain how to repair an Ethernet cable:

[Ethernet Cable Repair - iFixit: This guide provides step-by-step instructions and pictures on how to fix a broken Ethernet cable.](#)

[How to Repair a Cut Cat5e Ethernet Cable - wikiHow: This article shows how to solder the wires of a cut Ethernet cable and use shrink tube to cover the joints.](#)

[Amazon.com: Ethernet Cable Repair Kit: This page lists some products that can be used to repair an Ethernet cable, such as crimping tools, connectors, testers, and strippers.](#)

Question: 35

A technician wants to stress test multiple applications while maintaining the ability to easily reset those environments back to the initial state. Which of the following is the best way to accomplish this task?

- A . Honeypot
- B . Hybrid cloud
- C . Sandbox
- D . Production network

Answer: C

Explanation:

A sandbox is a virtual environment that allows testing or running applications without affecting the main system. A sandbox can isolate the applications from the rest of the system, preventing any unwanted changes, errors, or security risks. A sandbox can also be easily reset to the initial state, discarding any modifications or data generated by the applications12.

A sandbox is a useful tool for stress testing multiple applications, as it can:

- * Simulate different scenarios and conditions for the applications, such as high load, low memory, network latency, etc.
- * Monitor and measure the performance, stability, and resource consumption of the applications under stress.
- * Compare and analyze the results of different applications or different versions of the same application.
- * Identify and fix any bugs, errors, or vulnerabilities in the applications before deploying them to the main system.

Question: 36

An online retailer is working to support increased sales and boost server capacity by installing additional servers. Which of the following should be

used to ensure each new server will be properly utilized?

- A . Virtualization
- B . DNS
- C . Clustering
- D . Load balancer

Answer: A

Explanation:

Virtualization is a technology that allows creating multiple virtual machines (VMs) on a single physical server. Each VM can run its own operating system and applications, and share the resources of the physical server, such as CPU, memory, disk, and network1. Virtualization can help improve server utilization and management in several ways, such as:

- * Reducing the number of physical servers needed to run the same workload, which can lower the costs of hardware, power, cooling, and maintenance1.
- * Increasing the flexibility and scalability of the server infrastructure, as VMs can be created, deleted, moved, or resized on demand without affecting the other VMs or the physical server1.
- * Enhancing the availability and reliability of the server applications, as VMs can be backed up, restored, or migrated to another physical server in case of failure or maintenance1.
- * Improving the security and isolation of the server data, as VMs can be configured with different levels of access and protection, and separated from each other and the physical server1.

Question: 37

A technician is troubleshooting a burning smell on a desktop computer. The technician determines that the odor is coming from inside the device.

Which of the following should the technician do first?

- A . Unplug the computer.
- B . Locate a fire extinguisher.
- C . Call the fire department.
- D . Remove the desktop cover.

Answer: A

Explanation:

A burning smell on a desktop computer is a serious issue that indicates a hardware malfunction or failure. It can be caused by overheating, a faulty power supply, a malfunctioning motherboard, or a short circuit¹². If left unchecked, it can damage the components, cause a fire, or harm the user.

The first thing the technician should do when troubleshooting a burning smell on a desktop computer is to unplug the computer from the power source. This will stop the flow of electricity and prevent further damage or fire. The technician should also wear protective gloves and eye wear to avoid contact with any hot or hazardous parts.

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

- * Locating a fire extinguisher is a good precaution, but it should not be done before unplugging the computer. The fire extinguisher should only be used if there is visible smoke or flames coming from the computer, and only after unplugging it and ensuring that it is safe to do so.
- * Calling the fire department is an extreme measure that should only be done if there is an actual fire that cannot be controlled by the fire extinguisher. It should not be done before unplugging the computer and trying to identify and fix the problem.
- * Removing the desktop cover is a necessary step to inspect the internal components and find the source of the burning smell. However, it should not be done before unplugging the computer, as it can expose the technician to live wires and electric shocks.

For more information and tips on how to troubleshoot a burning smell on a desktop computer, you can visit these links:

- * How to find the source of a burning smell in my computer?
- * Burning Smell From PC? 10 Reasons Why It Could Happen

Question: 38

A user is printing a part with a thermoplastic polyurethane (TPU) filament on a 3-D printer. The first layer on every print job is not adhering properly.

Which of the following should the user do to improve adherence on the first layer?

- A . Lower the print bed temperature.
- B . Adjust the RPM of the cooling fan.
- C . Increase the print speed.
- D . Raise the filament flow amount.

Answer: D

Explanation:

The correct answer is D. Raise the filament flow amount.

Filament flow amount, also known as extrusion multiplier or flow rate, is the setting that controls how much filament is extruded by the nozzle during 3D printing. It is usually expressed as a percentage of the default value, which is 100%. Increasing the filament flow amount means extruding more filament than usual, while decreasing it means extruding less¹.

The filament flow amount can affect the quality and adhesion of the first layer, which is crucial for a successful 3D print. If the filament flow amount is too low, the nozzle may not extrude enough filament to fill the gaps between the lines and create a smooth and solid first layer. This can result in poor adhesion, curling, warping, or detachment of the print from the bed¹².

To improve adherence on the first layer, the user should raise the filament flow amount slightly, such as 105% or 110%, to ensure that enough filament is extruded to create a strong bond with the bed. The user should also make sure that the nozzle height, bed leveling, and bed temperature are properly calibrated for optimal first layer adhesion¹².

The other options are less likely to improve adherence on the first layer, because:

- * Lowering the print bed temperature may reduce the adhesion of the TPU filament to the bed, as TPU usually requires a bed temperature between 20-60C for the best results³. Lowering the bed temperature may also increase the risk of warping or curling of the print⁴.
- * Adjusting the RPM of the cooling fan may not have a significant effect on the first layer adhesion, as cooling fans are not required with TPU³. In fact, using a cooling fan with TPU may cause cracking or delamination of the print, as TPU needs to cool down slowly and evenly⁴.
- * Increasing the print speed may worsen the first layer adhesion, as TPU is a flexible and elastic filament that needs to be printed slowly and consistently. A recommended print speed for TPU is 15-30mm/s³. Increasing the print speed may cause clogging, stringing, blobs, or under-extrusion of the filament⁴.

For more information and tips on how to 3D print TPU filament like a pro, you can visit these links:

- * How to 3D Print TPU Filament Like a Pro -- Ultimate Guide & FAQ
- * The Complete TPU Filament 3D Printing Guide - 3DSourced
- * TPU Filament 3D Printing Material -- The Complete Guide
- * TPU filament - learn everything about the TPU material for 3D printing

Question: 39

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.

Answer: B

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: 40

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

Answer: C

Explanation:

The most likely issue is C. Tray settings.

Tray settings are the configuration options that tell the printer what size and type of paper is loaded in each tray. If the tray settings do not match the actual paper size and type, the printer may not be able to feed the paper correctly and cause paper jams.

In this scenario, the team that is having issues prints legal-sized documents, which are 8.5 x 14 inches, while the other teams print letter-sized documents, which are 8.5 x 11 inches. If the printer's tray settings are set to letter size by default, the printer may not recognize the legal-sized paper and try to pull it as if it were letter-sized paper. This can result in paper jams or misaligned printing.

To fix this issue, the team should check and adjust the tray settings on the printer to match the paper size and type they are using. They can also use a separate tray for legal-sized paper and another tray for letter-sized paper, and make sure to select the correct tray when printing.

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

* Worn rollers are the rubber parts that grip and move the paper through the printer. They can wear out over time and lose their traction, causing paper jams or misfeeds. However, worn rollers would affect all teams and all paper sizes, not just one team and one paper size.

* Page orientation is the direction of the paper, either portrait or landscape. It can affect how the document is printed on the paper, but not how the paper is fed into the printer. Page orientation can be changed in the print settings or in the document itself, but it would not cause paper jams unless the paper size is also incorrect.

* Multipage misfeed is when more than one sheet of paper is pulled into the printer at once, causing a jam. This can happen if the paper is too thin, too thick, or too slippery, or if there is too much or too little paper in the tray.

However, multipage misfeed would also affect all teams and all paper sizes, not just one team and one paper size.

For more information and tips on how to prevent and fix paper jams, you can visit these links:

- * [Fix Paper Jam Errors | HP Support](#)
- * [Common Causes of Paper Jams and How to Fix Them - 1ink.com](#)

Question: 41

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

Answer: C

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: 42

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 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.

Answer: A

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: 43

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

Answer: A

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: 44

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

Answer: C

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: 45

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

Answer: B

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: 46

Which of the following wireless technologies would a company most likely implement for inventory management?

- A . NFC
- B . 5G
- C . Bluetooth
- D . RFID

Answer: D

Explanation:

RFD stands for Radio Frequency Identification, which is a technology that uses radio waves to identify and track objects that have RFID tags attached to them. RFID tags are small devices that store information and can be read by RFID readers without direct contact or line of sight. RFID can be used for inventory management, as it can provide real-time visibility and accuracy of the location, quantity, and status of the items in a warehouse, store, or supply chain .

Question: 47

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.

Answer: A

Explanation:

If a user reports that a PC occasionally fails to boot and makes a strange, repetitive, ticking noise, it indicates that the hard drive is suffering from a mechanical failure, also known as the click of death. This means that the hard drive is likely to fail completely soon and lose all the data stored on it. Therefore, the technician should try to extract or backup the data as soon as possible before replacing the hard drive with a new one.

Question: 48

A technician is installing a WAP in the company break room. The new access point should have a rating of higher than 50Mbps and minimal range to avoid interference with other access points. Which of the following 802.11 standards should the technician select?

- A . Ac
- B . B
- C . G
- D . n

Answer: A

Explanation:

Ac stands for 802.11ac, which is a wireless networking standard that operates in the 5 GHz frequency band and offers a maximum data rate of 1.3 Gbps. 802.11ac is also backward compatible with 802.11a, 802.11b, 802.11g, and 802.11n standards. If a technician wants to install a WAP (wireless access point) in the company break room that has a rating of higher than 50 Mbps and minimal range to avoid interference with other access points, they should select the 802.11ac standard.

Question: 49

Which of the following server roles does RADIUS perform?

- A . DNS
- B . AAA
- C . Mail server
- D . Syslog

Answer: B

Explanation:

AAA stands for Authentication, Authorization, and Accounting, and it is a framework that provides security services for network access control. Authentication verifies the identity of a user or device that requests access to a network resource. Authorization determines what level of access or privileges are granted to a user or device based on their identity or role. Accounting tracks and records the usage of network resources by users or devices

for billing or auditing purposes. RADIUS (Remote Authentication Dial-In User Service) is a protocol that implements AAA functions by communicating with a central server that stores user credentials and policies.

Question: 50

Which of the following devices is capable of dynamically distributing an IP address?

- A . Hub
- B . Switch
- C . Injector
- D . Router

Answer: D

Explanation:

A router is a device that connects multiple networks and forwards packets between them based on their destination IP addresses. A router can also perform DHCP (Dynamic Host Configuration Protocol) function, which means it can dynamically distribute IP addresses to devices on its network. A router can also provide other features, such as firewall, NAT (Network Address Translation), VPN (Virtual Private Network), and QoS (Quality of Service).

Question: 51

A customer's laptop is making clicking sounds in the area where non-volatile storage is installed. A technician examines the laptop and confirms the issue. Which of the following is the most appropriate replacement part?

- A . 7,200rpm HDD
- B . NVMe SSD
- C . M.2 SATA SSD
- D . SCSI 15,000rpm HDD

Answer: B

Explanation:

NVMe stands for Non-Volatile Memory Express, and it is a type of SSD (solid state drive) that uses PCIe (Peripheral Component Interconnect Express) interface to connect to a computer. NVMe SSDs offer faster performance and lower latency than other types of SSDs, such as SATA (Serial ATA) or M.2 SAT

A) If a user reports that a PC occasionally fails to boot and makes clicking sounds in the area where non-volatile storage is installed, it indicates that the hard drive is failing and needs to be replaced with an NVMe SSD.

Question: 52

A technician is configuring the BIOS of a new workstation. The machine will be used for data analytics, and the technician would like to maximize the performance of the CPU. Which of the following BIOS settings should the technician verify?

- A . Virtualization technology
- B . GPU settings
- C . BIOS update
- D . Hyperthreading

Answer: D

Explanation:

Hyperthreading is a feature of some CPUs that allows them to execute two threads (sequences of instructions) simultaneously on each core. Hyperthreading can improve the performance of CPU-intensive tasks, such as data analytics, by increasing the utilization of CPU resources and reducing idle time. The technician should verify that hyperthreading is enabled in the BIOS settings of the workstation.

Question: 53

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.

Answer: A

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: 54

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

Answer: A

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: 55

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

Answer: A

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: 56

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

Answer: D

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: 57

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

Answer: C

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: 58

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

Answer: C

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: 59

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

Answer: C

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: 60

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.

Answer: A

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.

Question: 61

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

Answer: B

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 technologies³²

Question: 62

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

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

Answer: D

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.

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

Question: 63

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

Answer: C

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 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.

* 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: 64

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

Answer: C

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.

* 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: 65

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

Answer: C

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.

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

Question: 66

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.

Answer: C

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.

* 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: 67

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

Answer: A

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.

* 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: 68

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

Answer: C

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.

Question: 69

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

Answer: B

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.

Question: 70

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

Answer: A

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.

Question: 71

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

Answer: B

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.

Question: 72

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.

Answer: C

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.

- a. The video cable, the bulb, and the outlet are not likely to cause the projector to turn off intermittently.

Question: 73

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

Answer: B

Explanation:

SAS (Serial Attached SCSI) is an interface type that supports high-speed data transfer and high-performance 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.

Question: 74

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

Answer: D

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.

Question: 75

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

Answer: A

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. A global catalog server, a web server, and a name server are not involved in DHCP operations.

Question: 76

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.

Answer: D

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.

Question: 77

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

Answer: D

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.

Question: 78

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

Answer: C

Explanation:

An SSD (solid state drive) is a removable storage device that uses flash memory to store data.

- a. 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.

Question: 79

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.

Answer: A

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.

Question: 80

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.

Answer: D

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.

Question: 81

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

Answer: A

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: 82

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

Answer: A

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.

Question: 83

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

Answer: B

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.

Question: 84

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

Answer: B

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.

Question: 85

Which of the following delivers internet over a copper medium?

- A . ONT
- B . SDN
- C . DSL
- D . WISP

Answer: C

Explanation:

The correct answer is C. DSL.

DSL stands for Digital Subscriber Line, which is a technology that delivers internet over a copper medium, such as a telephone line. DSL uses different frequencies than voice calls, so it can provide both internet and phone service simultaneously. DSL can offer faster speeds than dial-up, but it depends on the distance from the service provider and the quality of the copper line .

The other options are not technologies that deliver internet over a copper medium. ONT stands for Optical Network Terminal, which is a device that converts optical signals from a fiber optic cable to electrical signals for a copper cable or a wireless router. ONT is used for fiber-to-the-home (FTTH) internet service, which delivers internet over a fiber optic medium. SDN stands for Software Defined Networking, which is a technology that allows network administrators to manage and control network resources and traffic using software applications. SDN is not related to the physical medium of internet delivery, but rather to the logical layer of network configuration and optimization. WISP stands for Wireless Internet Service Provider, which is a company that delivers internet over a wireless medium, such as radio waves or microwaves. WISP can provide internet access to rural or remote areas where wired connections are not available or feasible.

Question: 86

A technician installed a high-end graphics card in a desktop, and now, the desktop randomly shuts down during operations. Which of the following should the technician do next?

- A . Confirm the power supply is grounded.
- B . Check the power supply wattage rating.
- C . Check whether the power supply is redundant.
- D . Confirm the power cables are well connected.

Answer: B

Explanation:

The correct answer is B. Check the power supply wattage rating.

A possible cause of the desktop randomly shutting down during operations is that the power supply is not able to provide enough power for the high-end graphics card. The power consumption of today's graphics cards has increased a lot, and the top models demand between 110 and 270 watts from the power supply1. Therefore, the technician should check the power supply wattage rating and make sure it is sufficient for the graphics card and the rest of the components. Confirming the power supply is grounded, checking whether the power supply is redundant, or confirming the power cables are well connected are not likely to solve this problem.

Question: 87

A user purchased a new smartphone and headset and is trying to connect them. Which of the following is the best way to connect the devices?

- A . Enable pairing.
- B . Use a hotspot.
- C . Use NFC.
- D . Enable synchronization.

Answer: A

Explanation:

The best way to connect the devices is A. Enable pairing.

Pairing is a process that allows two Bluetooth devices, such as a smartphone and a headset, to communicate with each other wirelessly. Pairing creates a secure connection between the devices and allows them to exchange data and audio signals. To pair the devices, the user needs to enable Bluetooth on both devices, make them discoverable, and select the desired device from the list of available devices. The user may also need to enter a PIN code or confirm a passkey to complete the pairing process .

The other options are not the best ways to connect the devices. A hotspot is a feature that allows a smartphone to share its cellular data connection with other devices via Wi-Fi, Bluetooth, or USB. A hotspot can provide internet access to other devices, but it does not allow them to communicate with each other directly. NFC stands for Near Field Communication, which is a technology that allows two devices to exchange data by bringing them close together (usually within 4 cm). NFC can be used to initiate pairing between two Bluetooth devices, but it cannot establish a connection by itself. Synchronization is a process that allows two devices to update and match their data, such as contacts, calendars, photos, or music. Synchronization can be done via Wi-Fi, Bluetooth, USB, or cloud services, but it requires an existing connection between the devices.

Question: 88

A systems administrator is working to ensure access to corporate laptops is limited to authorized users. The administrator has already implemented a password policy. Which of the following would be the best option to help the administrator secure the corporate resources?

- A . Trusted Platform Module
- B . Biometric scanner
- C . Laptop lock
- D . Encryption

Answer: B

Explanation:

The best option to help the administrator secure the corporate resources is B. Biometric scanner.

A biometric scanner is a device that can authenticate a user's identity based on their physical or behavioral characteristics, such as fingerprint, iris, face, voice, or signature. A biometric scanner can provide a high level of security and convenience for accessing corporate laptops, as it can prevent unauthorized users from accessing the devices and eliminate the need to remember passwords .

The other options are not the best options for this scenario. A Trusted Platform Module (TPM) is a chip that can store encryption keys and other sensitive data on a laptop. A TPM can enhance the security of data and devices, but it does not limit access to authorized users by itself. A TPM can work with a password or a biometric scanner to provide multifactor authentication . A laptop lock is a device that can physically secure a laptop to a desk or other object using a cable and a lock. A laptop lock can deter theft or tampering, but it does not prevent unauthorized users from accessing the laptop if they have the password or the key. Encryption is a process that can protect data on a laptop by transforming it into an unreadable format using a key. Encryption can prevent unauthorized users from accessing or modifying the data, but it does not prevent them from accessing the laptop itself.

Question: 89

In a SOHO environment, a user wants to make sensitive, scanned documents available to other users on the domain. The logs need to indicate who accessed the documents and at what time they were accessed. Which of the following settings should a technician set up on the MFP device?

- A . Scan to email
- B . ADF tray
- C . PCL
- D . SMB share

Answer: D

Explanation:

The correct answer is D. SMB share.

SMB stands for Server Message Block, which is a network protocol that allows file and printer sharing among different devices on a local area network (LAN). An SMB share is a folder or drive that is shared using the SMB protocol and can be accessed by authorized users on the network. An MFP device is a multifunction printer that can perform multiple tasks, such as printing, scanning, copying, and faxing.

In a SOHO (small office/home office) environment, a user who wants to make sensitive, scanned documents available to other users on the domain can set up an SMB share on the MFP device. This way, the user can scan the documents to the SMB share and grant access permissions to the other users who need to view or edit them. The SMB share can also enable logging, which can record who accessed the documents and at what time they were accessed .

The other options are not the best settings for this scenario. Scan to email is a feature that allows the user to scan a document and send it as an email attachment to a recipient. This option may not be secure or convenient for sharing sensitive documents with multiple users on the domain. ADF tray stands for automatic document feeder tray, which is a component of an MFP device that can feed multiple pages of a document into the scanner or copier without manual intervention. This option is not related to sharing or logging scanned documents. PCL stands for Printer Command Language, which is a page description language that controls the layout and printing of documents. This option is not related to sharing or logging scanned documents either.

Question: 90

Multiple users contact the help desk to report issues with the network fileshares. Files are accessible, but performance is very slow. Which of the following should a technician perform first?

- A . Defragment the files on the network share.
- B . Ask the users to perform a network speed test.
- C . Check the RAID drive status LEDs.
- D . Start the process of rebuilding the array.

Answer: C

Explanation:

The correct answer is C. Check the RAID drive status LEDs.

RAID stands for Redundant Array of Independent Disks, which is a technology that combines multiple physical disks into a logical unit that provides improved performance, reliability, or both1. RAID can be implemented using hardware or software, and there are different levels of RAID that use different methods of data distribution and redundancy1.

One of the common issues with RAID is disk failure, which means that one or more of the disks in the array stop working properly. Disk failure can affect the performance and availability of the network fileshares, depending on the RAID level and the number of failed disks2. For example, RAID 0, which uses striping to split data across multiple disks, has no redundancy and will lose all data if any disk fails. RAID 1, which uses mirroring to duplicate data on two disks, can tolerate one disk failure and still function. RAID 5, which uses striping with parity to

distribute data and error correction information across three or more disks, can also tolerate one disk failure and still function1.

One of the ways to detect disk failure is to check the RAID drive status LEDs, which are lights that indicate the health and activity of each disk in the array. Different RAID controllers may have different LED patterns and colors, but generally, a green LED means that the disk is working normally, a red LED means that the disk has failed or is offline, an amber LED means that the disk is degraded or rebuilding, and a blinking LED means that the disk is active or busy34.

The first step that a technician should perform when troubleshooting network fileshare issues is to check the RAID drive status LEDs to see if any disk has failed or is degraded. This can help identify the cause of the problem and determine the appropriate solution. For example, if a disk has failed in a RAID 1 or RAID 5 array, the technician can replace the failed disk and rebuild the array to restore performance and redundancy. If a disk has failed in a RAID 0 array, the technician will need to restore the data from a backup2.

The other options are not the best steps to perform first. Defragmenting the files on the network share may improve performance by reducing fragmentation, but it will not solve the problem if there is a disk failure in the RAID array. Asking the users to perform a network speed test may help diagnose network issues, but it will not help identify disk issues in the RAID array. Starting the process of rebuilding the array may be necessary after replacing a failed disk, but it should not be done before checking the RAID drive status LEDs.

Question: 91

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.

Answer: B

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: 92

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 . nstall OS updates.

Initiate a system restore.

Answer: A, B

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: 93

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.

Answer: D

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: 94

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

Answer: C

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. 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: 95

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.

Answer: C

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.

Question: 96

After a corporate office upgraded its Ethernet wiring, a number of users are unable to access the internet. A technician establishes a theory for troubleshooting the issue and tests it, but the theory is incorrect. Which of the following should the technician do next?

- A . Document the findings.
- B . Gather additional details.
- C . Escalate the problem.
- D . Identify user changes.

Answer: B

Explanation:

The correct answer is B. Gather additional details.

According to the CompTIA troubleshooting process for the A+ certification exams¹, the technician should gather additional details after testing a theory that is incorrect. This step helps to identify the problem more accurately and establish a new theory of probable cause. The other options are not appropriate for this stage of the troubleshooting process. Documenting the findings, escalating the problem, and identifying user changes are steps that should be done later in the process, after determining the cause and implementing a solution¹.

Question: 97

Which of the following devices is capable of dynamically distributing an IP address?

- A . Hub
- B . Switch
- C . Injector
- D . Router

Answer: D

Explanation:

A router is a device that can dynamically distribute an IP address to the devices connected to its network using a protocol called DHCP (Dynamic Host Configuration Protocol). DHCP allows a router to automatically assign an IP address and other network configuration information to a device when it joins the network, without requiring manual intervention from the administrator. A router can also act as a gateway between different networks, such as a local area network (LAN) and the internet1.

A hub is a device that connects multiple devices on a network and forwards data packets between them. However, a hub does not assign IP addresses or perform any routing functions. A hub operates at the physical layer of the OSI model and does not understand IP addresses or other network protocols.

A switch is a device that connects multiple devices on a network and forwards data packets between them based on their MAC addresses. A switch can improve the performance and security of a network by reducing collisions and isolating traffic. However, a switch does not assign IP addresses or perform any routing functions. A switch operates at the data link layer of the OSI model and does not understand IP addresses or other network protocols.

An injector is a device that provides power to another device over an Ethernet cable, such as a wireless access point or a security camera. This is also known as Power over Ethernet (PoE). An injector does not assign IP addresses or perform any routing functions. An injector operates at the physical layer of the OSI model and does not understand IP addresses or other network protocols.

Question: 98

Which of the following controls the flow of users connecting to web server farms and prevents overutilization on any individual server?

- A . Firewall
- B . Honeypot
- C . Load balancer
- D . Spam gateway

Answer: C

Explanation:

A load balancer is a device or software that distributes network traffic across multiple servers or resources, such as web server farms, to optimize performance, reliability, and scalability. A load balancer controls the flow of users connecting to web server farms and prevents overutilization on any individual server by using various algorithms, such as round robin, least connections, or weighted distribution. A load balancer can also provide health checks, failover, caching, compression, encryption, and other features to enhance the user experience and security.

Question: 99

An administrator wants to replace a fiber-optic cable. Which of the following should the administrator most likely use?

- A . LC
- B . Bayonet Neill Concelman
- C . RJ45
- D . DB9

Answer: A

Explanation:

LC stands for Lucent Connector, which is a type of fiber-optic connector that uses a push-pull mechanism to connect and disconnect the cable. LC connectors are small, compact, and widely used for high-density applications, such as data centers, servers, and networks. LC connectors have a 1.25 mm ferrule that can support both single-mode and multimode fibers.

Question: 100

An engineer is installing a 500W power supply in a server that requires continuous availability. Which of the following is the most suitable type of power supply for the application?

- A . Redundant
- B . Modular
- C . Switched-mode
- D . Semi-modular

Answer: A

Explanation:

A redundant power supply is a type of power supply that consists of two or more independent units that can provide power to the same device or system. A redundant power supply can increase the reliability and availability of the device or system, because if one unit fails, the other unit can take over and continue to provide power without interruption. A redundant power supply is often used in servers that require continuous availability, such as web servers, database servers, or file servers.

Question: 101

A technician is troubleshooting a user's laptop that randomly turns off. The technician disassembles the laptop and notices that various pieces of small sticker paper within the device have changed color from red to blue. Which of the following is the most likely cause of the laptop's issues?

- A . Broken screen
- B . Liquid damage
- C . Swollen battery
- D . Overheating

Answer: B

Explanation:

One of the possible causes of a laptop randomly turning off is liquid damage, which can cause short circuits, corrosion, and overheating of the internal components1. Liquid damage can be hard to detect, especially if the laptop has been dried or cleaned after the spill2. However, one of the indicators of liquid damage is the presence of small sticker paper within the device that changes color from red to blue3.

These stickers are called liquid contact indicators (LCIs), and they are designed to show if a device has been exposed to water or other liquids3. LCIs are usually red when dry, but they turn blue or purple when wet3. LCIs are often placed near the ports, battery, keyboard, and motherboard of laptops and other electronic devices3. LCIs can help technicians diagnose liquid damage and determine if the device is covered by warranty or not3.

Question: 102

A technician is configuring a SOHO network. During testing, the technician receives the IP address 169.254.2.2, but the router is assigned the address scope of 192.168.1.254/24. Which of the following is most likely the cause?

- A . DHCP
- B . Ipv6
- C . DNS
- D . Ipv4

Answer: A

Explanation:

DHCP stands for Dynamic Host Configuration Protocol, which is a protocol that provides quick, automatic, and central management for the distribution of IP addresses within a network¹. A DHCP server can assign IP addresses and other network information to devices that request them, such as computers, smartphones, and routers².

The IP address 169.254.2.2 is an example of an APIPA (Automatic Private IP Addressing) address, which is a special type of IP address that devices use when they cannot obtain a valid IP address from a DHCP server³. APIPA addresses are in the range of 169.254.0.1 to 169.254.255.254, with a subnet mask of 255.255.0.03. Devices that use APIPA addresses can only communicate with other devices on the same local network that also use APIPA addresses³.

The router in the question is assigned the address scope of 192.168.1.254/24, which means it has an IP address of 192.168.1.254 and a subnet mask of 255.255.255.04. This address scope belongs to the private IP address range of 192.168.0.0 to 192.168.255.255, which is commonly used for local networks⁴. Devices that use private IP addresses can communicate with other devices on the same local network or across different networks through NAT (Network Address Translation)⁴.

The most likely cause of the technician receiving the IP address 169.254.2.2 is that the DHCP server on the router is not working properly or is not configured correctly³. This could be due to various reasons, such as a misconfigured router, a faulty cable, a firewall blocking DHCP traffic, or an exhausted pool of IP addresses³. As a result, the technician's device cannot obtain a valid IP address from the DHCP server and resorts to using an APIPA address instead³.

To fix this issue, the technician should check the router settings and make sure that the DHCP server is enabled and has enough available IP addresses to assign to devices². The technician should also check the physical cabling and make sure it is properly connected and secured². If the issue persists, the technician should try rebooting the router or resetting it to factory defaults². Alternatively, the technician could manually assign a static IP address to the device that matches the router's address scope, such as 192.168.1.x/24².

Question: 103

Which of the following is the best reason to set up a virtual sandbox?

- A . To run a test application that communicates with the test environment
- B . To analyze the effects of malware in a safe manner
- C . To host an application that multiple remote users can access
- D . To test an application in Windows and Linux concurrently

Answer: B

Explanation:

A virtual sandbox is an isolated environment that mimics the characteristics of a real system, but does not affect or interact with it¹. A virtual sandbox can be used to run potentially unsafe or malicious code and observe its behavior without risking harm to the host machine or network². This is useful for cybersecurity researchers who want to test and analyze malware samples, such as viruses, worms, ransomware, etc., and understand how they work and how to prevent or mitigate them³.

Question: 104

A technician is preparing a redesigned conference room for a presentation. The presenter connects a laptop to the LCD projector, but a 'No input source' error message is displayed on the LCD projector's screen. However, the presentation is working on the laptop's LCD screen when in mirroring mode on the docking station. Which of the following troubleshooting steps should the technician take first?

- A . Replace the LCD projector.
- B . Reboot the laptop.
- C . Update the display drivers.
- D . Check the physical cabling.

Answer: D

Explanation:

One of the possible causes of the error message "No input source" is that the LCD projector is not receiving any signal from the connected device, such as a laptop1. This could be due to a loose or faulty cable or connector, or an incorrect input source selected on the projector2. Therefore, the first troubleshooting step that the technician should take is to check the physical cabling and make sure it is properly connected and secured12.

Question: 105

A user reports that a projector was previously working, but the screen now displays the following error message: No Source Found. Which of the

following actions should the technician take first? (Select two).

- A . Check the projector bulb and replace it with a new one.
- B . Verify the projector settings and make sure the correct input is selected.
- C . Replace the video cable and check the laptop settings.
- D . Check the laptop display settings and set them to extend/duplicate.
- E . Verify the projector is turned on.
- F . Check the projector settings and the laptop for the correct resolution.

Answer: B, D

Explanation:

One of the possible causes of the error message "No Source Found" is that the projector is not receiving any signal from the connected device, such as a laptop1. This could be due to an incorrect input source selected on the projector or an improper display setting on the laptop. Therefore, the first actions that the technician should take are to verify the projector settings and make sure the correct input is selected, and to check the laptop display settings and set them to extend/duplicate23.

Question: 106

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

Answer: B

Explanation:

[SAS stands for Serial Attached SCSI, which is a bit serial interface successor to SCSI sponsored by ANSI and introduced in 20041.SAS is the most common interface for enterprise HDDs, especially those with high performance and high reliability requirements, such as 15,000rpm drives23.SAS offers faster data transfer speeds, lower power consumption, and better scalability than other interfaces1.](#)

Question: 107

A technician is troubleshooting Wi-Fi connection issues on a customer's laptop. The laptop connects but intermittently disconnects. The technician has already confirmed the wireless card is properly installed, the router settings are correct, and the wireless signal strength is normal. Which of the following should the technician investigate next?

- A . Firewall settings
- B . MAC address filter
- C . Number of connected devices
- D . Radio frequency

Answer: D

Explanation:

The next thing that the technician should investigate is D. Radio frequency.

Radio frequency is the range of electromagnetic waves that are used to transmit wireless signals. Different devices and networks use different radio frequencies, such as 2.4 GHz or 5 GHz, to communicate with each other. If there are multiple devices or networks using the same or overlapping radio frequencies, they can interfere with each other and cause Wi-Fi connection issues, such as intermittent disconnections, slow speeds, or poor quality .

To fix this issue, the technician can try changing the radio frequency or channel of the router or the laptop, to avoid interference from other sources. The technician can also use a tool such as Wi-Fi Analyzer to scan the nearby wireless networks and find the best frequency or channel to use. Alternatively, the technician can move

the router or the laptop to a different location, away from potential sources of interference, such as cordless phones, microwaves, Bluetooth devices, or other routers .

The other options are less likely to be the reason for the issue. Firewall settings are software configurations that control the network traffic and security of a device. They may block some websites or applications from accessing the internet, but they should not affect the Wi-Fi connection itself. MAC address filter is a feature that allows the router to restrict access to specific devices based on their MAC addresses, which are unique identifiers for network interfaces. If the MAC address filter is enabled and the laptop's MAC address is not on the allowed list, it will not be able to connect to the Wi-Fi network at all, not intermittently. Number of connected devices is the amount of devices that are using the same Wi-Fi network at the same time. This may affect the network performance or bandwidth, but it should not cause intermittent disconnections, unless the network is overloaded or unstable.

: How To Fix WiFi Connection Problems - Help Desk Geek

: How to Fix Your WiFi Connection Problems - Lifewire

: Wi-Fi Analyzer - Apps on Google Play

Question: 108

After moving a user's legacy workstation into a new private office that does not have a LAN connection, the technician is unable to connect to a wireless network. Which of the following is the most likely reason?

- A . Missing Wi-Fi adapter
- B . Wi-Fi AP replacement
- C . Hidden Wi-Fi SSID
- D . Incorrect Wi-Fi channel

Answer: A

Explanation:

The most likely reason is A. Missing Wi-Fi adapter.

A Wi-Fi adapter is a device that allows a computer to connect to a wireless network. A legacy workstation may not have a built-in Wi-Fi adapter, or it may have an outdated or incompatible one. If the workstation does not have a Wi-Fi adapter, it will not be able to detect or access any wireless networks, regardless of the location, signal strength, or configuration of the network.

To fix this issue, the technician can install a Wi-Fi adapter on the workstation, either internally or externally. An internal Wi-Fi adapter is a card that fits into a slot on the motherboard, while an external Wi-Fi adapter is a device that plugs into a USB port. The technician should choose a Wi-Fi adapter that is compatible with the workstation's operating system, hardware, and wireless standards .

The other options are less likely to be the reason for the issue. A Wi-Fi AP replacement means changing the wireless access point that provides the network connection. This may affect the network name, password, or settings, but it should not prevent the workstation from detecting any wireless networks. A hidden Wi-Fi SSID

means that the network name is not broadcasted publicly, but it can still be accessed by entering the name manually. A hidden Wi-Fi SSID may make it harder to find the network, but it should not prevent the workstation from detecting other wireless networks. An incorrect Wi-Fi channel means that the network is using a frequency band that is crowded or interfered by other devices. This may affect the network performance or stability, but it should not prevent the workstation from detecting any wireless networks.

: How to Add Wi-Fi to a Desktop Computer - How-To Geek

: How to Choose a Wireless Adapter for Your Computer - Lifewire

: Troubleshooting Wireless Network Connections - Intel

Question: 109

A user's laptop keyboard is not working properly. A technician notices that when the keys for special characters are pressed, other characters appear instead. Which of the following should the technician do first to diagnose the issue?

- A . Check the keyboard layout.
- B . Replace the keyboard.
- C . Update the keyboard drivers.
- D . Change the keyboard language.

Answer: A

Explanation:

The first thing that the technician should do to diagnose the issue is

- A) Check the keyboard layout.

The keyboard layout is the arrangement of the keys and symbols on the keyboard, which can vary depending on the language, region, or standard. If the keyboard layout is not set correctly, it can cause the keys to produce different characters than expected. For example, if the keyboard layout is set to French, pressing the key for @ will produce instead.

To check and change the keyboard layout, the technician can follow these steps:

- * On Windows 10, click on the Start menu and select Settings.
- * Click on Time & Language and then on Language.
- * Under Preferred languages, click on the current language and then on Options.
- * Under Keyboards, check if the keyboard layout matches the physical keyboard. If not, click on Add a keyboard and select the correct layout. Alternatively, click on Remove to delete any unwanted layouts.
- * To switch between keyboard layouts, use the shortcut Windows key + Space bar.

Checking the keyboard layout can help identify and fix the issue quickly and easily, without requiring any hardware or software changes. Therefore, it is the best first step to diagnose the issue.

: How to change your keyboard layout on Windows 10 PC | Windows Central

: How to type French accents on a PC - FrenchCrazy

Question: 110

A developer is requesting permission to utilize client-side virtualization. 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

Answer: D

Explanation:

The best solution for the developer is D. Sandbox environment.

Client-side virtualization is a technology that allows users to run multiple operating systems and applications on the same device, without affecting the host system or the network¹. A sandbox environment is a type of client-side virtualization that creates a secure and isolated space for testing, debugging, or experimenting with code, without risking any damage or interference to the rest of the system².

A sandbox environment can provide several benefits for the developer, such as²³:

- * It can simulate different scenarios and conditions for the code, such as different operating systems, browsers, devices, network settings, etc.
- * It can protect the code from external threats, such as malware, hackers, or unauthorized access.
- * It can prevent the code from affecting other applications or processes on the device or the network, such as consuming resources, causing errors, or leaking data.
- * It can allow the developer to easily revert any changes or restore the original state of the system, if something goes wrong.

Therefore, a sandbox environment can provide the best solution for the developer who wants to write code in a setting isolated from other infrastructure to avoid negative impacts of experimental code.

2: What is a Sandbox Environment? | VMware Glossary

3: What is Sandbox Testing? - Definition from Techopedia

Question: 111

Which of the following are benefits of application virtualization? (Select two).

- A . The network works more quickly.
- B . Applications are easier to learn.
- C . RAM works more efficiently.
- D . The overall IT cost goes down.
- E . OS performance is superior.
- F . Upgrading applications is easier.

Answer: D, F

Explanation:

The correct answers are D. The overall IT cost goes down and F. Upgrading applications is easier.

Application virtualization is a technology that allows users to run applications without installing them on their devices. The applications are stored and executed on a remote server, and the users can access them through a network connection. Application virtualization has several benefits, such as¹²:

- * The overall IT cost goes down: Application virtualization reduces the need for hardware, software, and maintenance costs, as the applications are centralized and managed on the server side. This also saves energy and space, as fewer physical machines are required to run the applications. Additionally, application virtualization can reduce licensing costs, as the applications can be delivered on-demand and based on usage.
- * Upgrading applications is easier: Application virtualization simplifies the process of updating and patching applications, as the changes can be made on the server side and pushed to the users instantly. This eliminates the need for manual installation and configuration on each device, and ensures that all users have the latest version of the applications.

Other benefits of application virtualization include¹²³:

- * Allows the running of legacy apps: Application virtualization can enable users to run applications that are developed for older or incompatible operating systems, such as Windows 7 or XP. This can extend the lifespan of legacy applications and avoid compatibility issues.
- * Enables cross-platform operations: Application virtualization can allow users to run applications that are designed for different platforms, such as Windows apps on iOS, Android, macOS, or Chrome OS. This can increase the accessibility and mobility of the applications and enhance the user experience.
- * Improves security and compliance: Application virtualization can isolate the applications from the underlying operating system and hardware, preventing malware or unauthorized access from affecting them. This can also protect the data and settings of the applications from being tampered with or lost. Furthermore, application virtualization can help enforce compliance policies and regulations, as the applications can be controlled and monitored by the server.

1: 5 Benefits of Virtualization - IBM Blog

2: Benefits of Application Virtualization - AppsAnywhere

3: What is Application Virtualization? | VMware Glossary

Question: 112

A customer purchased an active touch pen for a tablet PC. After the customer used the pen for a few days, it stopped working. Which of the following is most likely causing the issue?

- A . The tablet screen is scratched.
- B . The pen software is out of date.
- C . The pen batteries need recharging.
- D . Software updates disabled the pen.

Answer: C

Explanation:

The most likely answer is C. The pen batteries need recharging.

An active touch pen is a stylus that uses a battery to power features such as pressure sensitivity, buttons, or Bluetooth connectivity. If the pen batteries are low or depleted, the pen may stop working or become inaccurate¹. To fix this issue, you should recharge the pen batteries using the provided charger or cable, or replace them with new ones if they are not rechargeable¹.

The other options are less likely to cause the issue. A scratched tablet screen may affect the touch sensitivity, but it should not affect the pen functionality. The pen software may need updating to improve performance or compatibility, but it should not stop the pen from working altogether. Software updates may disable the pen if they change the settings or drivers, but this can be fixed by re-enabling the pen or reinstalling the drivers².

1: Troubleshoot your Surface Pen - Microsoft Support

2: Windows 10 touch screen: active pen works, finger does not - Super User

Question: 113

Which of the following display types is available for laptops?

- A . OLED
- B . CRT
- C . DLP
- D . Plasma

Answer: A

Explanation:

The correct answer is

A) OLED.

OLED stands for Organic Light-emitting Diode, and it is one of the three display types available for laptops, along with TN (Twisted Nematic) and IPS (In-Plane Switching) panels¹. OLED displays use organic compounds that emit light when an electric current is applied, unlike LCD displays that use a backlight to illuminate the pixels. OLED displays have several advantages over LCD displays, such as higher contrast, wider viewing angles, faster response times, and lower power consumption². However, OLED displays are also more expensive, less common, and more prone to burn-in than LCD displays².

CRT (Cathode Ray Tube), DLP (Digital Light Processing), and Plasma are not display types for laptops. CRT is an old technology that uses a vacuum tube to project an image on a phosphor screen. CRT monitors are bulky, heavy, and consume a lot of power³. DLP is a technology that uses a digital micromirror device and a light source to project an image on a screen or a wall. DLP is mainly used for projectors, not laptops⁴. Plasma is a technology that uses gas-filled cells that emit light when an electric current is applied. Plasma displays are mainly used for large-screen TVs, not laptops.

1: Laptop Display 101: Display Types (TN, IPS, or OLED)

2: OLED vs LCD: which screen tech should you choose for your next laptop? | TechRadar

3: What is a CRT Monitor? - Definition from Techopedia

4: What is DLP (Digital Light Processing)? - Definition from WhatIs.com

: What is plasma display? - Definition from WhatIs.com

Question: 114

A company laptop uses a docking station with an integrated NIC and is unable to access a wired SOHO network using DHCP. A technician runs ipconfig and discovers the laptop has an IPv4 assignment of 169.254.0.9. The NIC does not have any link or activity lights on. Which of the following should the technician do next?

- A . Restart the laptop in safe mode.
- B . Reboot the DHCP server.
- C . Reset the network adapter.
- D . Replace the laptop.
- E . Reseat the laptop in the docking station.

Answer: E

Explanation:

The most likely answer is E. Reseat the laptop in the docking station.

The IPv4 address of 169.254.0.9 indicates that the laptop is using an Automatic Private IP Address (APIPA), which means that it could not obtain a valid IP address from the DHCP server on the network¹. This could be caused by a physical or logical problem with the network adapter, the cable, the docking station, or the network itself².

One of the possible solutions is to reseat the laptop in the docking station, which means to remove it and insert it again, making sure that it is properly aligned and connected. This can help fix any loose or faulty connections between the laptop and the docking station, and between the docking station and the network cable³. Reseating the laptop can also trigger a new DHCP request and renew the IP address⁴.

Other possible solutions include resetting the network adapter, replacing the network cable, rebooting the DHCP server, or restarting the laptop in safe mode. However, these are less likely to be effective than reseating the laptop, as they involve more steps and may not address the root cause of the problem²³⁴. Replacing the laptop is an extreme and unnecessary measure, as there is no evidence that the laptop itself is faulty.

Question: 115

A user attempts to connect a laptop to a projector but receives the following message from the projector: Out of Range. Which of the following needs to be addressed first?

- A . Change the resolution settings.
- B . Check the video cable and replace it if necessary.
- C . Set the computer's display settings to extend/duplicate.
- D . Verify that the laptop video card driver is the most up-to-date version.

Answer: A

Explanation:

The most likely answer is

A) Change the resolution settings.

The error "Out of Range" normally means that the resolution being output by the computer is not compatible with the projector. The resolution is the number of pixels that are displayed on the screen. If the resolution is too high for the projector, it may not be able to display the image correctly or at all¹².

To resolve this issue, you should try lowering the resolution settings on your laptop to match the native resolution of the projector or a lower one. You can do this by following these steps¹:

* Right-click on an empty area of your desktop and select Display settings.

* Under Scale and layout, click on Display resolution and choose a lower option from the drop-down menu.

* Click Apply and then Keep changes.

* Reconnect your laptop to the projector and check if the image is displayed properly.

If changing the resolution settings does not help, you may need to check other factors, such as the video cable, the display settings, or the video card driver. However, these are less likely to cause the "Out of Range" error than the resolution settings.

Question: 116

A laser printer is making humming and grinding noises, and the printouts have ghost images on the pages. Which of the following should be replaced?

- A . Cartridge
- B . Paper
- C . Fuser
- D . Rollers

Answer: C

Explanation:

The most likely answer is C. Fuser.

A fuser is a component in a laser printer that uses heat and pressure to fuse the toner powder onto the paper. If the fuser is damaged or worn out, it can cause humming and grinding noises, as well as ghost images on the printouts. Ghost images are faint copies of previous images that appear on the same page. They are caused by the fuser not heating the toner properly, or by the toner sticking to the fuser roller and transferring to the next page¹².

To fix this problem, you should replace the fuser unit with a new one. You can check your printer manual for instructions on how to remove and install the fuser unit. You can also use a diagnostic ruler to measure the distance between the ghost images and determine if the fuser is the source of the problem². If the ghost images are far apart (between 4cm and 5cm), then the fuser is likely to be faulty.

1: Solved: "Ghost Images" When Printing - HP Support Community

2: How to Fix Ghosting When Using a Laser Printer and Toner Cartridges -- Inksaver

Question: 117

A user's brand new phone froze while information was being transferred from the old phone. When a technician reset the new phone, it functioned properly when a data transfer was not being attempted. When the technician tested the old phone, it did not appear to have any functionality issues and passed all forms of device testing. Which of the following is the most likely reason the data transfer failed?

- A . The older phone had a different OS version.

- B . The older phone had a corrupted OS.
- C . The older phone had different hardware.
- D . The older phone utilized different wireless protocols.

Answer: D

Explanation:

The most likely reason the data transfer failed is D. The older phone utilized different wireless protocols.

Wireless protocols are the standards that devices use to communicate with each other over a wireless network. Different wireless protocols have different features, such as speed, range, security, and compatibility. If the older phone and the new phone use different wireless protocols, they may not be able to transfer data smoothly or at all. For example, if the older phone uses Wi-Fi Direct and the new phone uses Bluetooth, they may not be able to connect or recognize each other.

To avoid this problem, you should make sure that both devices support the same wireless protocol and that they are in range of each other. You can also use a third-party app or service that can transfer data between different devices, such as Smart Switch1 or Move to iOS2. These apps can help you transfer data such as contacts, photos, messages, and more from your old phone to your new phone.

2: Failure of data transfer from android to ... - Apple Community

1: Smart Switch Transfer Issues - Samsung Electronics America

Question: 118

A technician is installing a storage solution for a computer that requires data redundancy with the fewest drives possible. Which of the following would best meet this requirement?

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

Answer: B

Question: 119

A technician assembled a new PC. After a few minutes, the computer slows down and then shuts itself off. Which of the following is the most likely cause of the failure?

- A . Thermal paste was not used.
- B . The GPU needs additional power.
- C . The memory is insufficient.
- D . The motherboard is incompatible.

Explanation:

The most likely cause of the failure is

A) Thermal paste was not used.

Thermal paste, also known as thermal grease or thermal compound, is a substance that is applied between the CPU and the heat sink to improve the heat transfer and cooling of the CPU. Thermal paste fills the gaps and irregularities between the CPU and the heat sink, creating a better contact and reducing the thermal resistance .

According to some web search results , some signs and symptoms of not using thermal paste or using it incorrectly are:

- * The CPU overheats and slows down or shuts down to prevent damage
- * The CPU fan spins faster and louder to try to cool down the CPU
- * The PC performance drops or becomes unstable
- * The PC crashes or displays errors or blue screens

To fix this issue, the technician should apply thermal paste properly between the CPU and the heat sink, following these steps :

- * Turn off the PC and unplug it from the power source
- * Open the PC case and locate the CPU fan and heat sink
- * Remove the CPU fan and heat sink from the motherboard
- * Clean the surfaces of the CPU and heat sink with a lint-free cloth and alcohol
- * Apply a small amount of thermal paste (about the size of a grain of rice) in the center of the CPU
- * Reattach the heat sink and CPU fan to the motherboard, making sure they are aligned and secured
- * Close the PC case and plug it back to the power source

The GPU needs additional power, the memory is insufficient, or the motherboard is incompatible are not likely causes of the failure, since they would not cause the PC to overheat and shut down after a few minutes. The GPU needs additional power if it has a high power consumption that exceeds the capacity of the power supply or the PCIe slot. The memory is insufficient if it cannot handle the applications or tasks that are running on the PC. The motherboard is incompatible if it does not support the CPU, RAM, or other components that are installed on it. These issues may cause poor performance, errors, or crashes, but not overheating and shutting down.

A user's laptop will not turn on for a meeting in a conference room. However, the laptop turns on correctly when connected to the external monitor, mouse, and keyboard at the user's desk. Which of the following should a technician do to ensure that the laptop functions everywhere in the office?

- A . Reinstall the laptop's operating system.
- B . Enable a remote desktop account.
- C . Issue a peripheral set for use in the conference room.
- D . Replace the laptop's battery.

Answer: D

Explanation:

A laptop's battery is the component that provides power to the laptop when it is not connected to an external power source, such as a wall outlet or a docking station. A laptop's battery can wear out over time, losing its capacity and ability to hold a charge. This can cause the laptop to not turn on or shut down unexpectedly when it is not plugged in .

According to some web search results , some signs and symptoms of a failing laptop battery are:

- * The laptop does not turn on or turns off suddenly when it is not connected to an external power source
- * The laptop shows a low battery warning or a red X over the battery icon even when it is fully charged
- * The laptop takes longer to charge or does not charge at all
- * The laptop feels hot or the battery bulges or leaks

To fix this issue, the technician should replace the laptop's battery with a new one that is compatible with the laptop model and specifications. The technician should also dispose of the old battery properly, following the environmental and safety guidelines .

Reinstalling the laptop's operating system, enabling a remote desktop account, or issuing a peripheral set for use in the conference room are not effective solutions for this issue, since they do not address the root cause of the problem, which is the faulty battery. Reinstalling the operating system may erase the user's data and settings, and it may not improve the laptop's performance or power management. Enabling a remote desktop account may allow the user to access their files and applications from another device, but it does not solve the problem of the laptop not turning on. Issuing a peripheral set for use in the conference room may provide the user with an external monitor, mouse, and keyboard, but it does not guarantee that the laptop will work without an external power source.

Question: 121

A technician is installing a power supply in a workstation that contains a high-end graphics card, a 3GHz processor, and two cooling fans. Which of the following specifications should the technician verify before installing the new power supply?

- A . The wattage

- B . The chassis ventilation
- C . The motherboard's firmware
- D . The cables' color coding

Answer: A

Explanation:

The most important specification that the technician should verify before installing the new power supply is

A) The wattage.

The wattage of a power supply is the measure of how much power it can deliver to the components of a computer. The wattage of a power supply should match or exceed the total power consumption of the computer, otherwise the computer may not function properly or may experience instability, overheating, or damage¹².

To calculate the total power consumption of a computer, the technician can use a tool such as a power supply calculator, which can estimate the required wattage based on the components and features of the computer. For example, using one of the web search results³, I entered the following information:

- * CPU: 3 GHz processor
- * GPU: High-end graphics card
- * RAM: 16 GB DDR4
- * SSD: 1 x 500 GB
- * HDD: 1 x 1 TB
- * Optical Drive: 1 x DVD-RW
- * Fans: 2 x 120 mm
- * Other Devices: Keyboard, Mouse, Monitor

The tool estimated that the recommended PSU wattage for this computer is 550 W. Therefore, the technician should verify that the new power supply has at least this wattage before installing it.

The chassis ventilation, the motherboard's firmware, and the cables' color coding are not as important as the wattage for installing a new power supply. The chassis ventilation is related to the airflow and cooling of the computer, which can affect the performance and lifespan of the components. The motherboard's firmware is the software that controls the basic functions of the motherboard, such as booting, input/output, and memory management. The cables' color coding is a standard way of identifying the function and polarity of the wires in a power supply. However, none of these specifications are directly related to the power delivery or compatibility of the new power supply.

Question: 122

A user reports intermittent connectivity. The technician checks the network logs and sees the following output:

Interface 0/1 Status Up

Interface 0/1 Status Down

Interface 0/1 Status Up 13:03:20

Interface 0/1 Status Down 13:04:10

Switch elected as Root bridge

Interface 0/1 Status Up 13:05:40

Which of the following is the most likely reason for this issue?

- A . External interference
- B . High latency
- C . Jitter
- D . Port flapping

Answer: D

Explanation:

Port flapping, also known as link flapping, is a situation in which a physical interface on the switch continually goes up and down, causing intermittent connectivity for the devices connected to that port¹²³. Port flapping can be caused by various factors, such as faulty or incompatible cables, hardware issues, configuration errors, or other network problems¹²³.

The network logs show that interface 0/1 on the switch changes its status from up to down and vice versa several times within a short period of time. This indicates that the port is flapping and affecting the network connectivity. The log also shows that the switch was elected as the root bridge, which means that it is the central point of a spanning tree protocol (STP) network. STP is a protocol that prevents loops in a network by blocking some ports and creating a tree-like topology. Port flapping can cause STP to recalculate the topology and change the status of the ports, which can further disrupt the network performance².

To troubleshoot port flapping, the technician should check the physical and hardware aspects of the device, such as cables, SFPs, gigabit interface converters, and power supplies. The technician should also check the configuration settings of the port, such as auto-negotiation, duplex mode, speed, power-saving features, and smartport. The technician should also check for other network issues that may cause port flapping, such as link synchronization and spanning tree issues¹²³.

Question: 123

A user is unable to use a drawing stylus on a smartphone. The smartphone did not originally come with a stylus. Which of the following is the most likely cause of this issue?

- A . The phone needs to be updated to the latest OS.

- B . The drawing stylus only works with a special digitizer.
- C . The stylus must be re-paired to this new device.
- D . The phone's screen only supports resistive styluses.

Answer: B

Explanation:

A digitizer is a device that converts analog signals, such as touch or pressure, into digital signals that can be processed by a computer. A digitizer is usually embedded in the screen of a smartphone or tablet, and it works with a compatible stylus to enable drawing and writing on the screen1.

There are different types of digitizers and styluses, such as capacitive, resistive, active, and passive. Capacitive digitizers and styluses work by detecting changes in the electric field on the screen when the stylus touches it. Resistive digitizers and styluses work by detecting changes in the resistance on the screen when the stylus presses it. Active digitizers and styluses work by using an electromagnetic field to communicate between the stylus and the screen. Passive digitizers and styluses work by using a special material on the tip of the stylus that mimics the human finger2.

Not all digitizers and styluses are compatible with each other. For example, an active stylus will not work with a capacitive or resistive digitizer, and vice versa

- a. A passive stylus will work with any digitizer, but it will not have any advanced features, such as pressure sensitivity or tilt control2.

Question: 124

A user reports the following:

1. When accessing large images, PC performance is degraded.
2. When accessing small text files, PC performance is as expected.

Which of the following is the most likely cause of the performance issues?

- A . HDD fragmentation
- B . RAID controller failure
- C . RAID array configuration errors
- D . Insufficient power supply

Answer: A

Explanation:

HDD fragmentation is a condition where the data on a hard disk drive (HDD) is not stored in contiguous clusters, but scattered across different physical locations on the disk. This happens when files are created, modified, or

deleted over time, leaving gaps and fragments of data on the disk. HDD fragmentation can affect the performance of the PC, especially when accessing large files that require more disk operations to read or write¹².

According to some web search results¹²³, some signs and symptoms of a heavily fragmented HDD are:

- * Longer load times for files and programs
- * Graphics-heavy apps and games take too long to load new windows or process new environments
- * Reduced disk space and efficiency
- * Increased disk noise and temperature
- * Accelerated disk wear and failure

To fix this issue, the user can use a tool called Disk Defragmenter, which is built-in in Windows. Disk Defragmenter rearranges the fragmented data on the HDD so that it is stored in contiguous clusters, improving the disk performance and reliability¹. Disk Defragmenter can run on a schedule or manually by following these steps¹:

- * Open Disk Defragmenter by clicking the Start button. In the search box, type Disk Defragmenter, and then, in the list of results, click Disk Defragmenter.
- * Under Current status, select the disk you want to defragment.
- * To determine if the disk needs to be defragmented or not, click Analyze disk. If you're prompted for an administrator password or confirmation, type the password or provide confirmation.
- * Once Windows is finished analyzing the disk, you can check the percentage of fragmentation on the disk in the Last Run column. If the number is above 10%, you should defragment the disk.
- * Click Defragment disk. If you're prompted for an administrator password or confirmation, type the password or provide confirmation.
- * Disk Defragmenter might take from several minutes to a few hours to finish, depending on the size and degree of fragmentation of your hard disk. You can still use your computer during the defragmentation process.

Question: 125

An administrator is using an RJ45 connector to terminate a network cable. Which of the following cables is the administrator terminating?

- A . Optical
- B . Serial
- C . Cat 6
- D . USB

Answer: C

Explanation:

The correct answer is C. Cat 6.

An RJ45 connector is a standard type of physical connector for network cables. RJ45 connectors are used almost exclusively with Ethernet cables and networking1. Ethernet cables are twisted pair cables that carry data signals between devices on a network, such as computers, routers, switches, and servers2.

There are different categories of Ethernet cables, such as Cat 5, Cat 5e, Cat 6, and Cat 7, that have different specifications and performance levels. Cat 6 is one of the most common types of Ethernet cables, which supports data transfer speeds up to 10 Gbps and bandwidth up to 250 MHz3. Cat 6 cables have four pairs of copper wires, each with a plastic insulation and a foil or braided shield. The wires are twisted together to reduce crosstalk and interference4.

To terminate a Cat 6 cable, an administrator needs to use an RJ45 connector that matches the wiring scheme of the cable. There are two common wiring schemes for Ethernet cables: T568A and T568B. The administrator needs to strip the cable jacket, untwist the wires, arrange them in the correct order according to the chosen scheme, trim the excess wire, and insert them into the RJ45 connector. Then, the administrator needs to use a crimping tool to secure the wires and the connector4.

Optical cables are not terminated with RJ45 connectors, but with different types of connectors that can transmit light signals, such as SC, ST, LC, or MTRJ connectors. Optical cables are used for fiber-optic networks that can carry data over long distances at high speeds.

Serial cables are not terminated with RJ45 connectors, but with different types of connectors that can transmit serial data signals, such as DB9, DB25, or DE9 connectors. Serial cables are used for connecting devices that use serial communication protocols, such as modems, printers, scanners, or keyboards.

USB cables are not terminated with RJ45 connectors, but with different types of connectors that can transmit universal serial bus data signals, such as USB-A, USB-B, USB-C, or Micro-USB connectors. USB cables are used for connecting devices that use USB communication protocols, such as flash drives, cameras, mice, or chargers.

Question: 126

A technician is upgrading the memory on a server that processes payment information online. Which of the following types of memory would the technician most likely install?

- A . DDR4
- B . VRAM
- C . SODIMM
- D . ECC

Answer: D

Explanation:

ECC stands for Error Correction Code, which is a type of memory that can detect and correct data errors that may occur during processing or transmission. ECC memory is commonly used in servers that handle sensitive or critical information, such as payment information online, because it can reduce the risk of data corruption, system crashes, or security breaches12.

DDR4 is a generation of DDR technology, which stands for Double Data Rate. DDR4 memory is faster and more power-efficient than its predecessors, but it does not necessarily have ECC functionality. DDR4 memory can be either ECC or non-ECC1.

VRAM is Video RAM, which is a type of memory that is dedicated to storing graphics data for display. VRAM is usually found on graphics cards or integrated graphics processors, not on servers3.

SODIMM is Small Outline DIMM, which is a type of memory module that has a smaller size and lower profile than regular DIMMs. SODIMMs are typically used in laptops, notebooks, or other compact devices, not on servers3.

Question: 127

A technician tries installing different toners to fix a printer that is printing blank pages, but the issue persists. Which of the following is most likely causing the issue?

- A . Printer drum
- B . Printer ink
- C . Environmental temperature
- D . Corrupted printer drivers

Answer: A

Explanation:

A printer drum is a component of a laser printer that transfers the toner to the paper. It is a cylindrical metal or plastic piece that is coated with a photosensitive material. The drum is charged by a laser beam, which creates an electrostatic image of the document to be printed. The toner then sticks to the charged areas of the drum, and the drum rolls over the paper, transferring the toner to the paper and creating the printout1.

If the printer drum is damaged, worn out, or dirty, it may not be able to transfer the toner properly, resulting in blank pages. According to some web search results23, some signs that a printer drum needs to be replaced are:

- * Faint, light, faded, or blank printed pages
- * Streaks, spots, or lines on the printed pages
- * Error messages indicating a drum problem

To fix this issue, the technician may need to clean or replace the printer drum. Some web search results12 provide instructions on how to perform a manual drum cleaning or replacement.

Printer ink is not a likely cause of the issue, since the user has already tried installing different toners and the issue persists. Toner is the powder used by laser printers, while ink is the liquid used by inkjet printers. They are not interchangeable4.

Environmental temperature is not a likely cause of the issue, since most printers can operate in a wide range of temperatures. However, extreme temperatures may affect the quality and performance of some printers. For

example, high temperatures may cause ink to dry out or toner to clump, while low temperatures may cause ink to freeze or toner to become brittle.

Corrupted printer drivers are not a likely cause of the issue, since they would affect the communication between the printer and the computer, not the printing process itself. Corrupted printer drivers may cause errors, delays, or incorrect outputs, but not blank pages.

Question: 128

A new VoIP solution is being implemented at a corporate office for more than 200 users. The new VoIP devices do not require AC adapters at the users' desks. Which of the following network devices should a technician purchase?

- A . Firewall
- B . Power injector
- C . PoE switch
- D . Router

Answer: C

Explanation:

The correct answer is C. PoE switch.

A PoE switch is a network device that can provide both data and power to other devices over an Ethernet cable. PoE stands for Power over Ethernet, which is a technology that allows electrical power to be transmitted along with data on twisted pair Ethernet cabling. This eliminates the need for separate power supplies or AC adapters at the users' desks, as the VoIP devices can receive power from the PoE switch¹².

A firewall is a network device that monitors and controls incoming and outgoing network traffic based on predefined security rules. It does not provide power to other devices¹.

A power injector is a device that adds electrical power to an Ethernet cable for a single device. It is not suitable for a large number of devices, as it would require one power injector per device¹.

A router is a network device that connects multiple networks and forwards data packets between them. It does not provide power to other devices¹.

Question: 129

An analyst has replaced the motherboard in a desktop computer that previously overheated. The analyst presses the power button, hears three beeps, and sees the screen is black.

Which of the following is the best action for the analyst to take to fix this issue?

- A . Replace the power supply.

- B . Reseat the RAM.
- C . Reattach the hard drive.
- D . Flash the BIOS.

Answer: B

Explanation:

three beeps and a black screen indicate a memory error of some sort¹²³. This means that the RAM may not be properly installed or connected to the motherboard. Reseating the RAM means removing each stick and re-inserting it, making sure it clicks into place. This can sometimes solve the problem by ensuring a good contact between the RAM and the motherboard.

Replacing the power supply, reattaching the hard drive, or flashing the BIOS are unlikely to fix this issue, since they are not related to the memory error. The power supply provides power to the whole system, the hard drive stores data, and the BIOS is the firmware that controls the boot process. None of these components would cause three beeps and a black screen if they were faulty.

Question: 130

A technician is installing a wireless access point and is required to run all cabling and make patch cords if necessary.

INSTRUCTIONS

Part 1

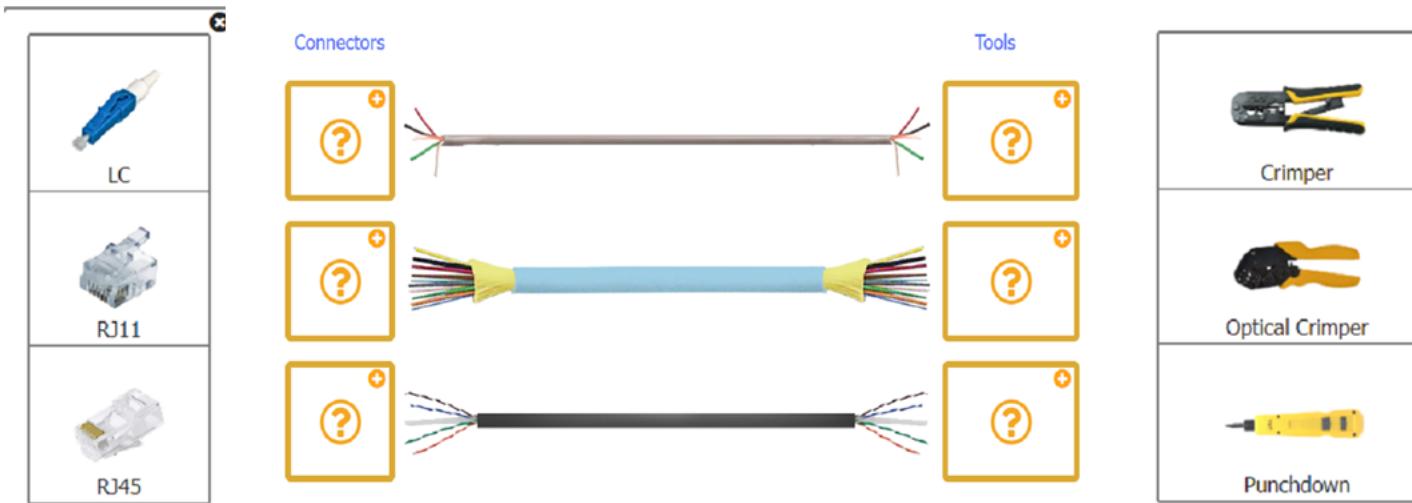
For each cable type, click the (+) to select the appropriate connector and tool.

part 2

An access point was moved and no longer has connectivity. Connect the access point, patch panel, and switch by clicking the (+) to select the appropriate cable end for each corresponding location to create a link.

The link will be visible after making the second selection of each pair.

Cable ends may be used multiple times, and all placeholders will be filled.



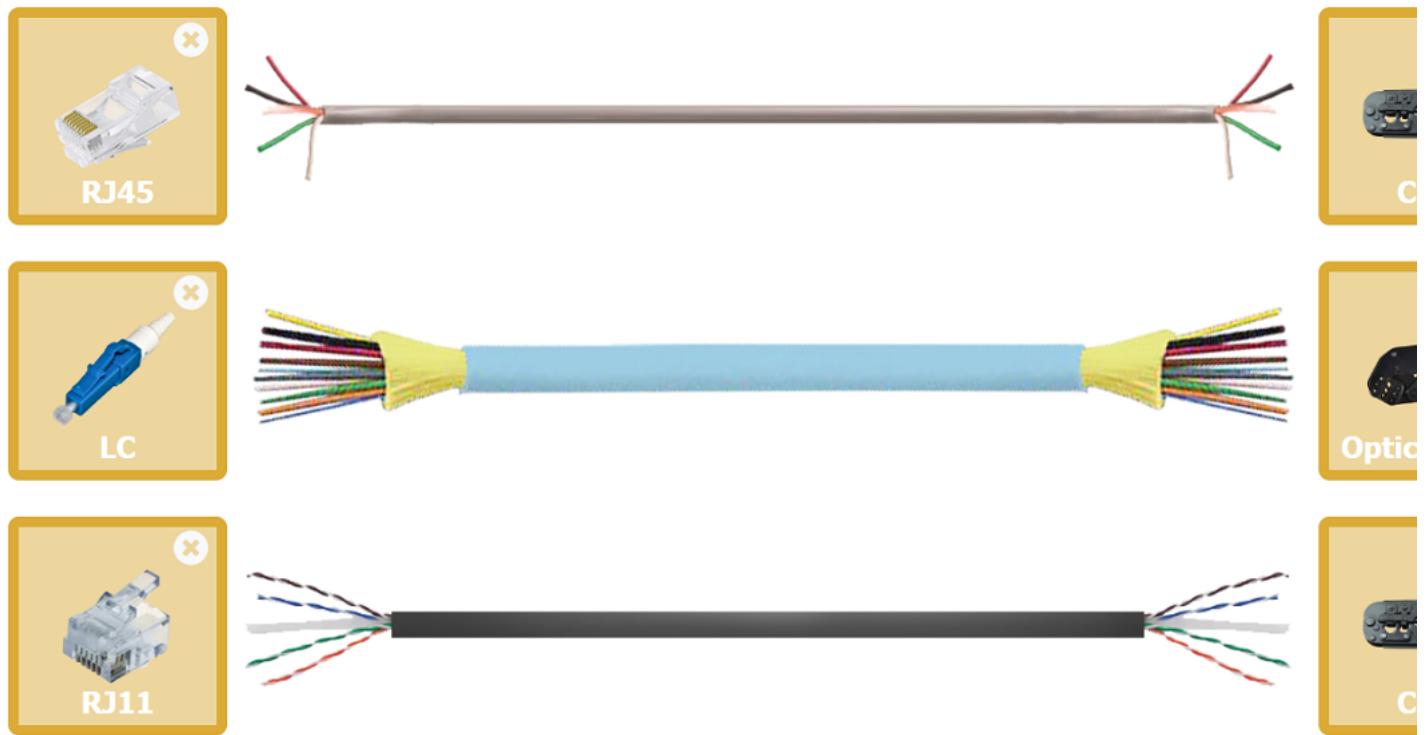
A . See the solution below in Explanation

Answer: A

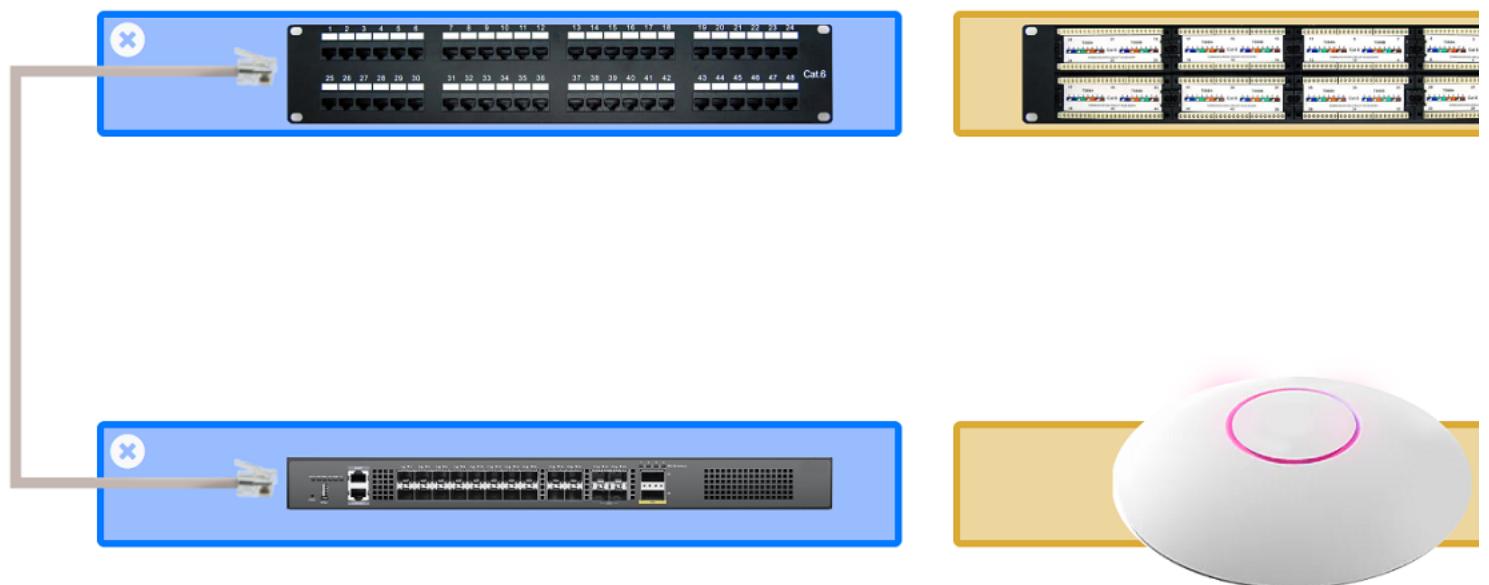
Explanation:

Check the exhibit diagram for both parts.

Connectors



Part 2



Question: 131

Which of the following solutions can help users who have the current Windows operating systems run legacy applications that are not supported under the latest applications?

- A . AppLocker
- B . Type 1 hypervisors
- C . Sandbox
- D . Application virtualization

Answer: D

Question: 132

A user is having trouble accessing files on the network. A technician suspects the issue is a result of a failed NIC_. Which of the following steps should the technician take to troubleshoot this issue?

- A . Document key findings, actions, and outcomes
- B . Establish a theory of probable cause.
- C . Test the theory to determine the cause_
- D . Identify the problem and act
- E . Verify system functionality

Answer: C

Explanation:

The answer is C. Test the theory to determine the cause.

According to the CompTIA A+ troubleshooting methodology, the steps to troubleshoot any problem are:

Identify the problem and act

Establish a theory of probable cause

Test the theory to determine the cause

Establish a plan of action to resolve the problem and implement the solution

Verify system functionality and implement preventive measures

Document key findings, actions, and outcomes

In this scenario, the technician has already identified the problem (trouble accessing files on the network) and established a theory of probable cause (a failed NIC). The next step is to test the theory to determine the cause, which involves verifying whether the NIC is working properly or not.

Some possible ways to test the theory are:

[Check the physical connection and status of the NIC port and cable](#)¹²

[Check the link state and speed of the NIC using ethtool or ip commands](#)²

[Check the configuration and state of the NIC using nmcli, teamdctl, or teamnl commands2](#)

[Check the driver and firmware of the NIC using lspci, modinfo, or dmesg commands2](#)

[Check the logs for any errors or warnings related to the NIC using journalctl or grep commands2](#)

[Uninstall and reinstall the NIC driver using Device Manager or modprobe commands13](#)

[Replace the NIC or cable with a known good one and test again13](#)

If any of these tests confirm that the NIC is faulty, then the technician can proceed with the next step of establishing a plan of action to resolve the problem and implement the solution. If none of these tests reveal any issues with the NIC, then the technician can eliminate it as a probable cause and look for other possible causes. Therefore, option C is the correct answer.

Question: 133

A cloud engineer, who is designing a cloud architecture, needs to ensure the solution is able to immediately fail over to another region in case of an outage and also scale up in the event of high utilization. Which of the following should the engineer Implement? (Select two).

- A . High availability
- B . Elasticity
- C . Cold storage
- D . Machine learning
- E . Metered utilization
- F . Virtualization

Answer: A, B

Explanation:

The answer is

A) High availability and B. Elasticity.

[High availability is the ability of a system to remain operational and accessible with minimal or no downtime, even in the event of failures, disasters, or disruptions. High availability can be achieved by designing a system that has redundancy, fault tolerance, and disaster recovery capabilities. For example, a cloud engineer can design a system that replicates data and resources across multiple regions, zones, or availability domains, and uses load balancing and failover mechanisms to distribute the workload and handle failures gracefully12.](#)

[Elasticity is the ability of a system to scale up or down automatically in response to changes in demand or utilization. Elasticity can be achieved by designing a system that can dynamically allocate and deallocate resources based on predefined metrics, policies, or triggers. For example, a cloud engineer can design a system that uses auto-scaling groups, horizontal or vertical scaling strategies, and on-demand or spot instances to optimize the performance and cost of the system32.](#)

By implementing high availability and elasticity, a cloud engineer can ensure that the solution is able to immediately fail over to another region in case of an outage and also scale up in the event of high utilization. These are two important aspects of building reliable and scalable cloud architectures. Therefore, options A and B are the correct answers.

Question: 134

A user's wireless laptop stopped working. A technician replaced the wireless card, but the wireless range is now limited. Which of the following should the technician perform next?

- A . Verify the antenna's connection.
- B . Switch from a 2.4GHz band to a 5GHz band
- C . Change the channels of the Wi-Fi card settings.
- D . Upgrade the wireless driver.

Answer: A

Explanation:

A limited wireless range after replacing the wireless card could indicate that the antenna is not properly connected to the card, or that the antenna is damaged or obstructed. According to the web search results, some possible steps to troubleshoot and verify the antenna's connection are:

[Open the laptop case and locate the wireless card and the antenna wires. Make sure that the wires are securely attached to the card's connectors, and that they are not loose or broken12.](#)

[Check the position and orientation of the antenna. Make sure that it is not blocked by any metal objects, walls, or other sources of interference. Adjust the angle or location of the antenna if possible to improve the signal strength3.](#)

[Replace the antenna with a new one or a compatible one from another device. Test the wireless range and performance with the new antenna2.](#)

Question: 135

A technician is replacing a failed drive in a RAID 5 array. Which of the following is the first step the technician should take before hot swapping the drive out of the array?

- A . Document the replacement date.
- B . Shut down the array
- C . Safely dispose of the failed drive.
- D . Perform a full backup

Answer: D

Explanation:

The answer is D. Perform a full backup.

Before replacing a failed drive in a RAID 5 array, the technician should perform a full backup of the data on the array to ensure that no data is lost during the hot swapping process. Hot swapping is the process of replacing a drive without shutting down the system or the array, which allows for faster recovery and minimal downtime. However, hot swapping also involves some risks, such as accidentally removing the wrong drive, damaging the new drive, or encountering another drive failure during the rebuild process. Therefore, performing a full backup is a precautionary measure that can prevent data loss in case of any unexpected errors or complications.

The other options are not the first steps that the technician should take before hot swapping the drive. Documenting the replacement date is a good practice, but it is not as important as backing up the data.

a) Shutting down the array is not necessary for hot swapping, and it may cause more disruption to the system or the users. Safely disposing of the failed drive is a step that should be done after replacing it, not before.

[Hot-swapping the hard drives when the RAID crashes | QNAP, section "Install a new drive to rebuild RAID 5 by hot swapping": "Important: Do not install a new drive when the system is not in degraded mode, otherwise you may encounter unexpected system failures."](#)

[Hot Swapping hard drives on Raid 5 with data on them - Spiceworks Community, reply by Magnus369: "Part of that slowness would be the raid level you are using. Highly doubt you can change it without losing data either, but your writes are going to be atrociously slow due to having to figure out parity across 11 drives for each write you do. While you may have a ton of space, it's unstable and subject to self destruction."](#)

[hard drive - How do I Change a damaged Disk in a Raid 5 array - Server Fault, answer by Chris S: "If you have another disk failure during rebuild you will lose all your data."](#)

Question: 136

A regularly used laser printer is printing vertical lines on each page_ Which of the following should the technician do first?

- A . Lower the printing contrast.
- B . Change the paper type
- C . Install a new fuser.
- D . Replace the toner cartridge

Answer: D

Explanation:

The answer is D. Replace the toner cartridge.

Vertical lines on a laser printer output are usually caused by a faulty or empty toner cartridge, a dirty or damaged drum unit, or a clogged or obstructed laser glass. According to the web search results, some possible steps to

troubleshoot and resolve this issue are:

[Check the toner level and replace the toner cartridge if it is low or empty1.](#)

[Remove the toner cartridge and inspect the drum unit for any signs of damage, such as scratches, cracks, or toner buildup. Clean the drum unit with a soft cloth or replace it if it is damaged23.](#)

[Locate the laser glass, which is a narrow strip of glass under the scanner lid or inside the printer. Clean the laser glass with a lint-free cloth moistened with water and remove any dust, dirt, or debris that might block the laser beam24.](#)

Question: 137

A classroom projector, which is turned on, displays a flashing LED code but does not have any video output. Which of the following should a technician do to resolve the issue?

- A . Replace the bulb.
- B . Adjust the input resolution_
- C . Clean the air filter.
- D . Change the input source.

Answer: C

Explanation:

The answer is C. Clean the air filter.

A flashing LED code on a projector usually indicates a problem with the projector's hardware, such as the lamp, the fan, the temperature sensor, or the air filter. According to the web search results, some possible causes and solutions for this problem are:

[Projector is too hot: Make sure that the vents and air filter are not clogged with dust or obstructed by nearby objects. Clean or replace the air filter. Make sure the environmental temperature is not too hot12.](#)

[Projector has overheated and turned off: Leave it turned off to cool down for five minutes. Make sure that the vents and air filter are not clogged with dust or obstructed by nearby objects. Clean or replace the air filter. If operating the projector at high altitude, turn on High Altitude Mode12.](#)

[Low air flow through the projector or air filter: Make sure that the vents and air filter are not clogged with dust or obstructed by nearby objects. Clean or replace the air filter12.](#)

[Projector Light Status](#)

[Projector Light Status](#)

Question: 138

A user tries to turn on a computer but gets the following error message: Bootable device not found. The computer had no issues yesterday Which of the following is the most likely reason for this error?

- A . The HDD is malfunctioning.
- B . The mouse and keyboard are not connected.
- C . A misconfigured boot device is in the BIOS.
- D . The network cable is unplugged

Answer: A

Explanation:

The most likely reason for this error is

- A) The HDD is malfunctioning.

A bootable device not found error usually indicates that the system cannot access or detect the hard disk that contains the operating system files. This could be due to a physical or logical damage to the hard disk, such as bad sectors, corrupted partitions, or faulty cables. According to the web search results, some possible causes and solutions for this error are:

[Hard drive connection issue: Check the cabling and power supply to the hard drive and make sure they are properly connected12.](#)

[Corrupt hard drive partitions: Use a Windows installation media to scan and repair the corrupt system files using the System File Checker \(SFC\) tool1.](#)

[Damaged hard drive: Replace the hard drive with a new one and reinstall the operating system2.](#)

[Incorrect boot sequence in the BIOS: Enter the BIOS or UEFI settings menu and change the boot order to make sure that the system drive is in the first position13.](#)

[Damaged MBR \(Master Boot Record\): Use a Windows installation media to repair the Windows bootloader using the Diskpart tool1.](#)

Question: 139

A systems administrator hears a clicking noise coming from a storage array that has a RAID configuration_ No LEDs are illuminated on the array but the logs show several hard drive errors. Which of the following should the systems administrator do to quickly eliminate the clicking?

- A . Reinstall the drive.
- B . Replace the bad drive.
- C . Reset the RAID software
- D . Run a chkdeik on the drive.

Answer: B

Explanation:

The correct answer is B. Replace the bad drive.

A clicking noise coming from a hard drive is a sign of a mechanical failure, which can cause data loss or corruption. Replacing the bad drive as soon as possible is the best way to prevent further damage and restore the RAID array to a healthy state. Reinstalling the drive, resetting the RAID software, or running a chkdeik on the drive will not fix the underlying hardware problem and may even worsen the situation. Therefore, option B is the correct answer.

[CompTIA A+ Core 1 \(220-1101\) Certification Study Guide, page 131: "Clicking noises indicate that the hard drive is failing mechanically."](#)

[RAID configuration on Linux - Amazon Elastic Compute Cloud, section "Replace a failed volume in a RAID 0 array": "If one of the volumes in your RAID 0 array fails, you must replace it as soon as possible to avoid data loss."](#)

Question: 140

Which of the following is the most likely use case for client-side virtualization for a software developer?

- A . Increasing the application performance
- B . Enhancing the security of physical machines
- C . Reducing the operational costs
- D . Testing on different operating systems

Answer: D

Explanation:

The most likely use case for client-side virtualization for a software developer is D. Testing on different operating systems.

Client-side virtualization is a type of virtualization that allows a single physical machine, such as a laptop or a desktop, to run multiple virtual machines, each with its own operating system and applications. Client-side virtualization can provide several benefits, such as:

Increasing the application performance by allocating more resources to the virtual machine that runs the application.

Enhancing the security of physical machines by isolating the virtual machines from each other and from the host machine, and preventing malware or attacks from spreading or affecting the data.

Reducing the operational costs by consolidating multiple physical machines into one, and saving on hardware, software, and energy expenses.

However, the most likely use case for client-side virtualization for a software developer is testing on different operating systems. This means that a software developer can use client-side virtualization to create and run different virtual machines with different operating systems, such as Windows, Linux, or Mac OS, and test how

their software works and performs on each of them. This can help the software developer to ensure the compatibility, functionality, and quality of their software across different platforms and environments. It can also help the software developer to debug and fix any issues or errors that may arise on different operating systems.

For more information about client-side virtualization and its use cases, you can refer to the following web search results: [What Is Client-Side Virtualization?], [Client-Side Virtualization: Benefits and Challenges], [How Client-Side Virtualization Can Help Developers].

Question: 141

A customer reports that, after a technician replaced a laptop screen, the laptop is only able to connect to a Wi-Fi network if it is positioned very close to a wireless access point. Which of the following

should the technician verify first?

- A . The internal antennas are connected.
- B . The device has the latest OS updates.
- C . The wireless device drivers are the latest version
- D . Airplane mode is disabled.
- E . The battery is charging.

Answer: A

Explanation:

The internal antennas are the components that allow the laptop to receive and transmit wireless signals from and to the wireless access point. The internal antennas are usually located inside or around the laptop screen, and they are connected to the wireless network card or adapter by thin wires or cables. If the internal antennas are disconnected, damaged, or misaligned, the laptop may experience wireless connectivity issues, such as low signal strength, limited range, or intermittent connection.

In this scenario, a customer reports that, after a technician replaced a laptop screen, the laptop is only able to connect to a Wi-Fi network if it is positioned very close to a wireless access point. This could indicate that the technician accidentally disconnected or damaged the internal antennas during the screen replacement process, and that the laptop is not receiving enough wireless signals from the wireless access point. Therefore, the first thing that the technician should verify is that the internal antennas are properly connected and positioned inside or around the laptop screen.

To verify and reconnect the internal antennas, the technician should follow these steps :

Turn off the laptop and disconnect it from any power source or external device.

Remove the battery and any screws that secure the laptop screen bezel.

Carefully pry off the laptop screen bezel and expose the internal antennas.

Check if the internal antennas are intact and securely connected to the wireless network card or adapter. The internal antennas may have different colors or labels, such as black, white, gray, main, aux, or 1, 2.

If the internal antennas are disconnected or loose, reconnect them to the corresponding connectors on the wireless network card or adapter. Make sure that they snap into place and that there is no gap or bend in the wires or cables.

If the internal antennas are damaged or broken, replace them with compatible ones. Make sure that they have the same length and shape as the original ones.

Realign and reposition the internal antennas inside or around the laptop screen. Make sure that they do not interfere with any other component or cable, and that they follow the original path and direction.

Reattach the laptop screen bezel and secure it with screws.

Reinsert the battery and turn on the laptop.

Test the wireless connectivity and performance of the laptop.

Question: 142

A company in a large building uses a wireless network for its workstations. After a new company moves into the building on the floor below, the old company's wireless network begins experiencing connectivity issues. Which of the following is the most likely cause?

- A . External interference
- B . Port flapping
- C . High latency
- D . Limited connectivity

Answer: A

Explanation:

The most likely cause of the wireless network connectivity issues is

- A) External interference.

External interference is any signal or noise that disrupts or degrades the quality of a wireless network. External interference can come from various sources, such as other wireless networks, cordless phones, microwaves, Bluetooth devices, or electrical appliances. External interference can affect the wireless network performance, reliability, and security, by causing issues such as signal loss, packet drops, latency, or interference.

In this scenario, a company in a large building uses a wireless network for its workstations. After a new company moves into the building on the floor below, the old company's wireless network begins experiencing connectivity issues. This could indicate that the new company's wireless network is using the same or overlapping frequency channel as the old company's wireless network, and creating external interference. Wireless networks use radio frequency channels to transmit and receive data, and each channel has a certain bandwidth and range. If two or more wireless networks use the same or overlapping channel, they may interfere with each other and cause congestion or collision.

To resolve this issue, the old company's network technician should change the wireless network channel to a different one that is less crowded or more compatible with the wireless network standard. The technician should also check the wireless network settings and features, such as SSID (Service Set Identifier), encryption, authentication, or power level, and adjust them if necessary. The technician should also scan the wireless environment and identify the sources and levels of external interference, and try to avoid or minimize them if possible.

For more information about external interference and how to prevent or reduce it, you can refer to the following web search results: [What Is Wireless Interference?], [How to Find the Best WiFi Channel for Your Router], [How to Reduce Wireless Interference].

Question: 143

A user needs a technician's help connecting a laptop to a projector. The projector is old and only has analog input. Which of the following cable types should the technician use to connect the laptop to the projector?

- A . HDMI
- B . RS-232
- C . VGA
- D . DisplayPort

Answer: C

Explanation:

VGA stands for Video Graphics Array, and it is a type of cable that can be used to transmit analog video signals between devices, such as laptops, monitors, or projectors. VGA cables have 15 pins arranged in three rows, and they are usually color-coded blue. VGA cables can support resolutions up to 2048 x 1536 pixels, but they have low quality and limited color depth compared to modern digital standards such as HDMI or DisplayPort.

A projector is a device that projects an image or a video onto a large surface, such as a wall or a screen. A projector can have different types of input ports, such as VGA, HDMI, DVI, or USB. A projector can also have different types of output technologies, such as LCD, DLP, or LED.

In this scenario, the user needs a technician's help connecting a laptop to a projector. The projector is old and only has analog input. This means that the projector can only accept analog video signals, and not digital ones. Therefore, the technician should use a VGA cable to connect the laptop to the projector, as it is the most common type of analog video cable. The technician should also make sure that the laptop and the projector have compatible VGA ports, and that the laptop's display settings are adjusted to match the projector's resolution and aspect ratio.

Question: 144

A technician is trying to fix a computer that fails to boot even when all the RAM is removed. Which of the following should the technician do next to troubleshoot the issue?

- A . Inspect the motherboard for swollen capacitors.
- B . Replace the CMOS battery_
- C . Swap the power supply if it is inoperable.
- D . Check to see if the HDD power connectors are well seated

Answer: C

Explanation:

The next step that the technician should do to troubleshoot the issue is C. Swap the power supply if it is inoperable.

A power supply is a device that converts the alternating current (AC) from the wall outlet into direct current (DC) that the computer components can use. A power supply is essential for the computer to boot and function properly. A faulty or inadequate power supply can cause various issues, such as no power, no display, random shutdowns, or beeping sounds.

In this scenario, the technician is trying to fix a computer that fails to boot even when all the RAM is removed. RAM stands for Random Access Memory, and it is a type of memory that stores data and instructions for the processor to access and process. RAM is also essential for the computer to boot and function properly. A faulty or incompatible RAM can cause various issues, such as no boot, no display, blue screen, or beeping sounds.

One of the basic troubleshooting techniques for a computer that fails to boot is to remove all the RAM modules and try to boot with one module at a time in different slots. This can help to identify if the problem is caused by a bad RAM module or a bad RAM slot. If the computer still fails to boot even when all the RAM is removed, it means that the problem is not related to the RAM, but to another component.

The next step that the technician should do is to swap the power supply if it is inoperable. This means that the technician should test the power supply with a multimeter or a power supply tester, and replace it with a known good one if it is faulty or insufficient. This can help to determine if the problem is caused by a bad power supply or a bad motherboard.

The other options are not the next steps that the technician should do, because they are less likely or less effective. Inspecting the motherboard for swollen capacitors (option A) may be helpful if the problem is caused by a damaged or defective motherboard, but it requires opening the computer case and visually examining the motherboard components. Replacing the CMOS battery (option B) may be necessary if the problem is caused by a low or dead CMOS battery, but it usually affects only the BIOS settings and not the boot process. Checking to see if the HDD power connectors are well seated (option D) may be useful if the problem is caused by a loose or faulty HDD connection, but it usually affects only the data access and not the boot process.

For more information about troubleshooting power supply and boot issues, you can refer to the following web search results: [How to Troubleshoot a Computer That Won't Turn On], [How to Test a Power Supply Using a Multimeter], [How to Fix a Computer That Shows No Sign of Power], [How to Troubleshoot Beep Codes].

Question: 145

A laptop's external webcam software is running, but neither images nor videos can be viewed. Which of the following should a technician do first?

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

Answer: A

Explanation:

The first step that a technician should do is

- A) Reseat the webcam.

Reseating the webcam means unplugging and plugging back the webcam into the laptop's USB port. This can help to ensure that the webcam is properly connected and recognized by the laptop. Reseating the webcam is a simple and quick troubleshooting technique that can solve many common issues, such as loose or faulty connections, power or bandwidth problems, or driver or software conflicts.

Reseating the webcam is the first step that a technician should do, because it follows the principle of starting with the easiest and most obvious solution before moving on to more complex and time-consuming ones. Reseating the webcam can also help to isolate the problem and eliminate other possible causes.

The other options are not the first steps that a technician should do, because they are more disruptive or less effective. Restarting the computer and running system diagnostics (option B) may be helpful if the problem is caused by a software or hardware error, but it may also cause data loss or interruption of other tasks. Reinstalling the webcam software and drivers (option C) may be necessary if the problem is caused by a corrupted or outdated software or driver, but it may also introduce compatibility or configuration issues. Researching new webcam firmware (option D) may be useful if the problem is caused by a firmware bug or vulnerability, but it may also pose security or stability risks.

For more information about troubleshooting external webcams, you can refer to the following web search results: [How to Fix Webcam Problems on Your Laptop], [How to Troubleshoot Webcam Issues on Windows 10], [How to Fix Common Webcam Problems].

Question: 146

Which of the following should the label on a network jack faceplate refer to?

- A . MAC address
- B . Patch panel port
- C . Switch port in use
- D . VLAN identification

Answer: B

Explanation:

A network jack faceplate is a device that covers and protects the network jack or outlet on a wall or a floor. A network jack or outlet is a physical interface that allows a network cable, such as an Ethernet cable, to be plugged into a network device, such as a computer or a printer. A network jack faceplate usually has one or more ports that correspond to different types of network cables, such as RJ-45, RJ-11, or coaxial.

A label on a network jack faceplate should refer to the patch panel port that the network jack or outlet is connected to. A patch panel is a device that connects multiple network cables in an organized and convenient way. A patch panel has a number of ports that correspond to different cables, such as Ethernet, coaxial, or fiber-optic cables. A patch panel can help simplify the wiring and management of a network, as well as provide flexibility and scalability for adding or changing network devices.

By labeling the network jack faceplate with the patch panel port, the network technician can easily identify and trace the cable that is connected to the network jack or outlet. This can help to troubleshoot and resolve network issues, such as connectivity, performance, or configuration problems. It can also help to avoid confusion or errors when installing or modifying network cables.

Question: 147

Which of the following devices would a punchdown tool most likely be utilized on?

- A . Cable modem
- B . Managed switch
- C . POE injector
- D . Patch panel

Answer: D

Explanation:

A patch panel is a device that connects multiple network cables in an organized and convenient way. A patch panel has a number of ports that correspond to different cables, such as Ethernet, coaxial, or fiber-optic cables. A patch panel can help simplify the wiring and management of a network, as well as provide flexibility and scalability for adding or changing network devices.

A punchdown tool is a tool that can be used to terminate network cables into a patch panel. A punchdown tool has a blade that cuts and pushes the wires into the slots or contacts of the patch panel. A punchdown tool can help create a secure and reliable connection between the network cables and the patch panel.

Question: 148

A technician is troubleshooting a network issue and needs to check the status of a local network device in the least disruptive manner possible_ Which of the following tools should the technician use to accomplish this task?

- A . Network tap
- B . Cable tester

- C . Multimeter
- D . Tone generator

Answer: A

Explanation:

A network tap is a device that can be used to monitor and analyze the traffic and data that pass through a network. A network tap can be inserted between two network devices, such as a switch and a router, and capture the packets that flow in both directions. A network tap can then send a copy of the packets to another device, such as a laptop or a server, for inspection and troubleshooting. A network tap can help diagnose and resolve network issues, such as performance, security, or configuration problems.

A network tap is the least disruptive tool for checking the status of a local network device, because it does not interfere with the normal operation of the network. A network tap does not alter or block the packets that it captures, and it does not introduce any latency or noise to the network. A network tap can also operate in stealth mode, which means that it is invisible to the network devices and cannot be detected by hackers or attackers.

Question: 149

A network technician is working to locate an end user's Cat 6 cable within a network rack. The server rack is poorly documented, and a cable management system has not been implemented. Which of the following would be the best tool to best identify the correct cable?

- A . Cable tester
- B . Network tap
- C . Toner probe
- D . Loopback plug

Answer: C

Explanation:

The best tool to identify the correct cable is C. Toner probe.

A toner probe is a device that can be used to locate and trace a specific cable within a network rack or a wall outlet. A toner probe consists of two parts: a tone generator and a tone detector. The tone generator is connected to one end of the cable and sends an audible signal through the cable. The tone detector is used to scan the other end of the cable and pick up the signal. The tone detector emits a sound or a light when it detects the signal, indicating the correct cable.

A toner probe can be useful for network technicians who need to locate an end user's Cat 6 cable within a network rack that is poorly documented and has no cable management system. A Cat 6 cable is a type of twisted pair cable that can support high-speed data transmission over Ethernet networks. A network rack is a frame that holds network equipment, such as servers, switches, routers, or patch panels. A cable management system is a set of devices or methods that organize and secure the cables within a network rack.

The other options are not the best tools to identify the correct cable, because they have different purposes or limitations. A cable tester (option A) is a device that can be used to test the functionality and quality of a cable, such as its continuity, resistance, or interference. A cable tester can help diagnose and troubleshoot faulty cables, but it cannot locate or trace specific cables within a network rack. A network tap (option B) is a device that can be used to monitor and analyze the traffic and data that pass through a network. A network tap can help capture and inspect network packets, but it cannot locate or trace specific cables within a network rack. A loopback plug (option D) is a device that can be used to test the functionality and connectivity of a port or an interface. A loopback plug can help verify if a port or an interface is working properly, but it cannot locate or trace specific cables within a network rack.

For more information about toner probes and other network tools, you can refer to the following web search results: [What Is a Toner Probe?], [What Is Cat 6 Cable?], [What Is a Network Rack?], [What Is a Cable Tester?], [What Is a Network Tap?], [What Is a Loopback Plug?].

Question: 150

A technician received a help desk ticket from a user who is unable to browse the internet_ Which of the following troubleshooting steps should the technician perform first?

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

Answer: D

Explanation:

The correct answer is D. Identify the problem.

The first troubleshooting step that the technician should perform is to identify the problem. This means that the technician should gather information from the user and the system, and analyze the symptoms and the error messages to determine the nature and the scope of the issue. Identifying the problem can help to define the expected outcome, establish a theory of probable cause, and plan a course of action.

The other options are not the first troubleshooting steps, but they are part of the troubleshooting process that should be performed after identifying the problem. Establishing a plan of action (option A) means that the technician should devise a strategy to resolve the issue, based on the theory of probable cause and the available resources. Testing the theory (option C) means that the technician should verify if the theory of probable cause is correct, by performing tests or experiments on the system or its components. Documenting the findings (option B) means that the technician should record and report the results of each troubleshooting step, as well as the final solution and outcome.

For more information about troubleshooting steps and best practices, you can refer to the following web search results: [Troubleshooting Steps for Beginners], [Troubleshooting Methodology], [How to Troubleshoot Like an Expert].

Question: 151

An administrator is replacing a cable that uses a DB9 connector. Which of the following cables is the administrator replacing?

- A . Parallel
- B . Serial
- C . Optical
- D . USB

Answer: B

Explanation:

The correct answer is B. Serial.

A serial cable is a type of cable that can be used to connect devices that use serial communication, which is a method of sending data one bit at a time over a single wire. Serial cables are often used for console access to network devices, such as routers, switches, firewalls, or servers, when other methods of connection, such as SSH (Secure Shell), are not available or not working.

A DB9 connector is a type of connector that has nine pins and is commonly used for serial cables. DB stands for D-subminiature, which is a family of connectors that have a D-shaped metal shield and different numbers of pins. DB9 connectors are also known as DE-9 connectors, as they belong to the E size category of D-subminiature connectors. DB9 connectors can support various serial standards, such as RS-232, RS-422, or RS-485.

A parallel cable is a type of cable that can be used to connect devices that use parallel communication, which is a method of sending data multiple bits at a time over multiple wires. Parallel cables are often used for connecting printers or scanners to computers, but they are not commonly used for network devices or serial connections.

An optical cable is a type of cable that can be used to transmit data using light signals over fiber-optic strands. Optical cables can offer high-speed, high-bandwidth, and low-interference data transmission over long distances. Optical cables are often used for network communication, such as Ethernet, or audio/video transmission, such as HDMI or TOSLINK.

A USB cable is a type of cable that can be used to connect devices that use the Universal Serial Bus (USB) standard, which is a protocol that allows data and power transmission between devices. USB cables can support various types of devices, such as keyboards, mice, cameras, flash drives, or chargers. USB cables have different versions and connectors, such as USB-A, USB-B, USB-C, or Micro-USB.

Therefore, the only cable that uses a DB9 connector is a serial cable. For more information about cables and connectors, you can refer to the following web search results: [What Is a Serial Cable?], [What Is a Parallel Cable?], [What Is an Optical Cable?], [What Is a USB Cable?].

Question: 152

An integrated webcam on a user's laptop broke, so a technician installed a temporary, external webcam. Since the external webcam installation, other users can only see part of the user's face during videoconferences. Which

of the following best describes the reason for this issue?

- A . The webcam is not on a level surface
- B . The webcam driver should be updated.
- C . The webcam is plugged into the wrong USB port
- D . The webcam is not compatible with the OS.

Answer: A

Explanation:

The most likely reason for this issue is

- A) The webcam is not on a level surface.

A webcam is a device that captures and transmits video and audio signals over the internet. A webcam can be integrated or external, depending on whether it is built-in or attached to the computer. A webcam can be used for various purposes, such as videoconferencing, streaming, or recording.

An integrated webcam is a webcam that is embedded in the monitor or the bezel of the laptop. An integrated webcam usually has a fixed position and angle, and it can be adjusted by tilting or rotating the laptop screen. An integrated webcam may have advantages such as convenience, portability, and compatibility, but it may also have disadvantages such as low quality, limited features, or vulnerability to damage.

An external webcam is a webcam that is connected to the computer via a cable or a wireless connection. An external webcam usually has a clip or a stand that allows it to be placed on a level surface or attached to the monitor or the laptop. An external webcam may have advantages such as high quality, advanced features, or flexibility, but it may also have disadvantages such as inconvenience, cost, or compatibility issues.

In this scenario, an integrated webcam on a user's laptop broke, so a technician installed a temporary, external webcam. Since the external webcam installation, other users can only see part of the user's face during videoconferences. This could indicate that the external webcam is not properly positioned or aligned to capture the user's full face. The most likely cause of this issue is that the webcam is not on a level surface, and it is either too high or too low, or too far or too close to the user.

To resolve this issue, the user should adjust the position and angle of the external webcam until it captures their full face clearly and accurately. The user should also check the settings and features of the external webcam, such as zoom, focus, resolution, or brightness, and modify them if necessary. The user should also test the video and audio quality of the external webcam before joining a videoconference .

The other options are not the most likely causes of this issue, because they are not related to the partial face problem. A webcam driver should be updated (option B) if the webcam is not recognized or functioning properly by the computer. A webcam driver is a software component that enables the communication and interaction between the webcam and the operating system. A webcam is plugged into the wrong USB port (option C) if the webcam does not receive enough power or bandwidth from the computer. A USB port is a physical interface that allows data and power transmission between devices. A webcam is not compatible with the OS (option D) if the webcam does not work with the operating system installed on the computer. An operating system is a software program that manages the hardware and software resources of the computer.

For more information about webcams and how to use them effectively, you can refer to the following web search results: [What Is a Webcam?], [Integrated vs External Webcams: Which One Is Better?], [How to Set Up Your

[Webcam for Video Calls], [How to Look Good on Video Calls], [What Is a Device Driver?], [What Is a USB Port?], [What Is an Operating System?].

Question: 153

A technician is working to replace a single DDR3 RAM module on a laptop that has two occupied slots. When the technician tries to turn on the laptop, the computer starts beeping and does not pass POST. The technician double-checks the newly installed RAM and notices a motherboard message indicating low voltage. Which of the following is the most likely cause of this issue?

- A . Faulty power adapter
- B . Incorrect BIOS settings
- C . Failing CMOS battery'
- D . Unsupported memory

Answer: D

Explanation:

Memory modules are physical components that store data and instructions for the computer to access and process. Memory modules have different specifications and features, such as type, speed, capacity, voltage, and form factor. These specifications and features must be compatible with the motherboard and the processor of the computer, otherwise the memory modules may not work properly or cause errors.

In this scenario, the technician is working to replace a single DDR3 RAM module on a laptop that has two occupied slots. DDR3 stands for Double Data Rate 3, and it is a type of memory technology that offers faster performance and lower power consumption than its predecessors. DDR3 RAM modules have different variants, such as DDR3L, DDR3U, or DDR3R, which have different voltage requirements. For example, DDR3L operates at 1.35V, DDR3U operates at 1.25V, and DDR3R operates at 1.5V.

When the technician tries to turn on the laptop, the computer starts beeping and does not pass POST. POST stands for Power-On Self-Test, and it is a process that checks the hardware components and functionality of the computer before loading the operating system. If POST detects an error or a failure, it may produce a series of beeps or codes to indicate the problem. The number and pattern of beeps or codes may vary depending on the manufacturer or model of the computer.

The technician double-checks the newly installed RAM and notices a motherboard message indicating low voltage. This means that the motherboard is not receiving enough power from the memory module to operate normally. This could indicate that the memory module is not compatible with the motherboard or the processor, or that it is defective or damaged. The most likely cause of this issue is that the technician installed an unsupported memory module that has a lower voltage than what the motherboard or the processor requires.

To resolve this issue, the technician should remove the newly installed RAM module and replace it with a compatible one that has the same voltage as the existing ones. The technician should also check the specifications and features of the motherboard and the processor to ensure that they support the type, speed, capacity, and form factor of the memory modules. The technician should also follow proper safety precautions when handling memory modules, such as wearing an anti-static wrist strap, avoiding physical damage or static discharge, and aligning the notches correctly.

Question: 154

A technician is creating a consecutive range of IP addresses that a server can select from to fulfill requests from network clients. Which of the following is the technician creating?

- A . DHCP scope
- B . Static IP list
- C . DNS A records
- D . Automatic private IP addressing

Answer: A

Explanation:

The correct answer is A. DHCP scope.

A DHCP scope is a consecutive range of IP addresses that a DHCP server can select from to fulfill requests from network clients. A DHCP server is a device that automatically assigns IP addresses and other network configuration parameters to devices that request them. A DHCP scope defines the pool of available IP addresses, as well as the subnet mask, default gateway, DNS servers, and lease duration for each IP address. A DHCP scope can also include exclusions, reservations, and policies to customize the IP address allocation process¹².

A static IP list is a list of IP addresses that are manually assigned to devices and do not change over time. A static IP list does not require a DHCP server, but it requires more administrative effort and coordination to avoid conflicts or errors. A static IP list is not a consecutive range of IP addresses that a server can select from³.

DNS A records are DNS records that map a domain name to an IPv4 address. DNS is a system that translates human-readable domain names into machine-readable IP addresses. DNS A records are not a range of IP addresses that a server can select from, but a way of resolving domain names to IP addresses.

Automatic private IP addressing (APIPA) is a feature of Windows that allows devices to self-assign an IP address in the absence of a DHCP server or a static IP configuration. APIPA uses the 169.254.0.0/16 address range, which is reserved for link-local communication. APIPA does not create a range of IP addresses that a server can select from, but a fallback mechanism for devices that cannot obtain an IP address from another source.

For more information about DHCP scopes and other related topics, you can refer to the following web search results: [DHCP Scope - NETWORK ENCYCLOPEDIA](#), [Managing Microsoft DHCP Scope and other Components - ATA Learning](#), [Dynamic Host Configuration Protocol \(DHCP\)](#) | Microsoft Learn.

Question: 155

A technician recently installed a new printer that is being shared over the network via a 64-bit Windows Print Server. Two users, who have computers with a legacy OS, are unable to print to this new printer. Which of the following should the technician do to resolve this issue?

- A . Enable 32-bit drivers on the Print Server.
- B . Enable Print Spooler and restart the computer.
- C . Run Windows Update on the users' computers_
- D . Update the computers to a 64-bit driver.

Answer: A

Explanation:

The correct answer is

- A) Enable 32-bit drivers on the Print Server.

A print server is a computer or device that manages the printing requests from multiple clients over a network. A print server can share one or more printers with different types of clients, such as Windows, Mac, or Linux. However, to ensure compatibility and functionality, the print server must have the appropriate drivers for each printer and each client1.

A driver is a software component that enables the communication and interaction between a device and an operating system. A driver must match the specifications and features of the device, as well as the architecture and version of the operating system. A driver that is incompatible with either the device or the operating system may cause errors, malfunctions, or performance issues2.

In this scenario, the technician installed a new printer that is being shared over the network via a 64-bit Windows Print Server. This means that the print server has a 64-bit operating system and a 64-bit driver for the printer. However, two users who have computers with a legacy OS (an older or outdated operating system) are unable to print to this new printer. This may be because their computers have a 32-bit operating system and require a 32-bit driver for the printer.

To resolve this issue, the technician should enable 32-bit drivers on the Print Server. This means that the technician should install and configure a 32-bit driver for the printer on the print server, in addition to the existing 64-bit driver. This way, the print server can support both 64-bit and 32-bit clients, and allow them to print to the same printer34.

To enable 32-bit drivers on a Windows Print Server, the technician can follow these steps4:

On the print server, open Control Panel and select Devices and Printers.

Right-click on the printer that needs a 32-bit driver and select Printer Properties.

Click on the Sharing tab and check the box that says Share this printer.

Click on Additional Drivers and check the box that says x86 (for 32-bit).

Click OK and follow the instructions to install and configure the 32-bit driver.

For more information about print servers, drivers, and compatibility issues, you can refer to the following web search results: What is a Print Server?, What is a Device Driver?, How to Install Additional Drivers for Shared Printers, How to Enable 32-Bit Drivers on Windows Server.

Question: 156

A technician is troubleshooting a laptop that shuts down intermittently. When the laptop is repositioned, the technician notices a noise coming from inside of it. The technician removes the bottom cover.

Which of the following should the technician do next?

- A . Turn on the laptop and move it again to replicate the issue.
- B . Reseat the memory modules and the SSD.
- C . Remove the internal battery and look for loose parts.
- D . Inspect the connections for a damaged cable.

Answer: A

Explanation:

The correct answer is A. Turn on the laptop and move it again to replicate the issue.

One of the basic troubleshooting techniques is to reproduce the problem and observe the symptoms. This can help to identify the cause and the solution of the issue. By turning on the laptop and moving it again, the technician can verify if the noise is related to the laptop's movement, and if it affects the laptop's performance or stability. The noise could indicate a loose or damaged component, such as a fan, a hard drive, or a cable, that needs to be fixed or replaced.

The other options are not the best next steps, because they do not confirm the source of the problem, and they may cause more damage or complications. Reseating the memory modules and the SSD (option B) may be helpful if the laptop has booting or performance issues, but it is unlikely to solve the noise problem. Removing the internal battery and looking for loose parts (option C) may be risky if the technician does not follow proper safety precautions, such as disconnecting the power cord and wearing an anti-static wrist strap. Inspecting the connections for a damaged cable (option D) may be part of the troubleshooting process, but it should be done after replicating the issue and narrowing down the possible causes.

[For more information about laptop troubleshooting steps, you can refer to the following web search results:](#)
[Computer Basics: Basic Troubleshooting Techniques, Use a fix-it tool with Windows 10, 6 Ways to Troubleshoot a Computer.](#)

Question: 157

Which of the following scenarios best illustrate a need for VDI? (Select two).

- A . An IT engineer who is designing and showcasing organization user experiences for multiple clients
- B . A company that needs to store 10PB worth of data
- C . A manufacturing plant that has high turnover
- D . A bank that has security concerns regarding employee activity
- E . A payment processor that is planning on implementing virtual currency
- F . An application developer who needs to configure network settings for an application

Explanation:

The scenarios that best illustrate a need for VDI are A and D.

VDI can provide several benefits for different use cases, such as:

Enhancing security and compliance by centralizing and encrypting data and applications on the server, rather than on the endpoint devices. This can prevent data loss, theft, or leakage, as well as reduce the risk of malware or unauthorized access. This is especially important for organizations that deal with sensitive or regulated information, such as banks, healthcare providers, or government agencies123.

Improving flexibility and mobility by allowing users to access their desktops and applications from any device, location, or network. This can enable remote work, bring your own device (BYOD) policies, or disaster recovery scenarios. This is especially useful for organizations that have distributed or mobile workforce, such as IT engineers, consultants, or sales representatives123.

Reducing costs and complexity by simplifying the management and maintenance of desktops and applications. This can lower the hardware, software, and energy expenses, as well as the IT staff workload. This is especially beneficial for organizations that have large or diverse desktop environments, such as schools, call centers, or manufacturing plants123.

Based on these benefits, the scenarios that best illustrate a need for VDI are:

A) An IT engineer who is designing and showcasing organization user experiences for multiple clients. This scenario requires flexibility and mobility, as the IT engineer needs to access different desktop environments and applications from various devices and locations. VDI can enable the IT engineer to create and switch between multiple virtual desktops on the same server, and to access them from any client device with an internet connection1.

D) A bank that has security concerns regarding employee activity. This scenario requires security and compliance, as the bank needs to protect its data and applications from internal and external threats. VDI can enhance the security of the bank's desktop environment by storing and encrypting all data and applications on the server, rather than on the endpoint devices. VDI can also provide granular control and monitoring of user access and activity2.

The scenarios that do not illustrate a need for VDI are:

B) A company that needs to store IOPB worth of data. This scenario does not require VDI, as VDI is not a storage solution but a desktop virtualization solution. VDI can help reduce the storage requirements of endpoint devices by storing data on the server, but it does not provide storage capacity or performance for large-scale data processing or analysis. The company may need a different type of cloud service, such as storage as a service (SaaS) or big data as a service (BDaaS), to store and manage its massive amount of data4.

C) A manufacturing plant that has high turnover. This scenario does not require VDI, as VDI is not a human resource solution but a desktop virtualization solution. VDI can help reduce the costs and complexity of managing desktops and applications for a large number of users, but it does not address the root causes of high turnover, such as low wages, poor working conditions, or lack of training. The manufacturing plant may need to improve its human resource policies and practices to retain its employees.

E) A payment processor that is planning on implementing virtual currency. This scenario does not require VDI, as VDI is not a payment solution but a desktop virtualization solution. VDI can help improve the security and flexibility of accessing desktops and applications over the internet, but it does not provide the functionality or compatibility for processing virtual currency transactions. The payment processor may need a different type of cloud service, such as blockchain as a service (BaaS) or cryptocurrency as a service (CaaS), to implement and manage its virtual currency platform.

F) An application developer who needs to configure network settings for an application. This scenario does not require VDI, as VDI is not a development solution but a desktop virtualization solution. VDI can help provide different desktop environments and applications for testing purposes, but it does not provide the tools or resources for developing or configuring applications. The application developer may need a different type of cloud service, such as platform as a service (PaaS) or software development as a service (SDaaS), to create and deploy applications.

Question: 158

A company's cloud server has recently become unresponsive due to overwhelming e-commerce traffic. Which of the following cloud technologies could be dynamically assigned to mitigate this issue?

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

Answer: D

Question: 159

Which of the following ports allows for secure communications?

- A . 20
- B . 22
- C . 23
- D . 25

Answer: B

Explanation:

The correct answer is B. 22.

Port 22 is the default port for SSH (Secure Shell), a protocol that allows secure and encrypted remote login and command execution over a network. SSH uses public key cryptography to authenticate the client and the server, and to encrypt the data exchanged between them. SSH can be accessed through different ports, depending on the configuration of the server and the client. The default port for SSH is 22, but it can be changed to any other port for security reasons1.

Port 20 is the default port for FTP (File Transfer Protocol) data transfer, a protocol that allows file transfer between a client and a server over a network. FTP uses two ports: one for data transfer (port 20) and one for control commands (port 21). FTP does not provide encryption or authentication, and it is vulnerable to various attacks, such as packet sniffing, spoofing, or brute force. To secure FTP connections, protocols such as FTPS (FTP over SSL) or SFTP (SSH File Transfer Protocol) can be used.2.

Port 23 is the default port for Telnet, a protocol that allows remote login and command execution over a network. Telnet does not provide encryption or authentication, and it sends data in plain text, which can be easily intercepted or modified by attackers. Telnet is considered obsolete and insecure, and it should be replaced by SSH or other secure protocols.3.

Port 25 is the default port for SMTP (Simple Mail Transfer Protocol), a protocol that allows sending and receiving email messages over a network. SMTP does not provide encryption or authentication, and it can be exploited by spammers or hackers to send malicious or unwanted emails. To secure SMTP connections, protocols such as SMTPS (SMTP over SSL) or STARTTLS (Transport Layer Security) can be used.

Therefore, port 22 is the only port that allows for secure communications by default, as it uses SSH protocol. For more information about ports and their security, you can refer to the following web search results: How to secure your TCP/IP ports, What is an SSL port? A technical guide for HTTPS, HTTPS Port: What It Is, How to Use It, and More (2023).

Question: 160

A user is connecting to a network via a Bluetooth hot-spot. Which of the following best describes this type of network?

- A . SAN
- B . WAN
- C . LAN
- D . PAN

Answer: D

Explanation:

The correct answer is D. PAN.

A PAN, or Personal Area Network, is a type of network that connects devices within a short range, usually less than 10 meters, and is used by an individual. A PAN can be wireless or wired, and it can enable data transmission between devices without requiring an internet connection. A PAN can also be connected to a LAN or a higher level network, where one device acts as a gateway.

A Bluetooth hotspot is an example of a wireless PAN, where a device such as a smartphone or a laptop can create a network with other Bluetooth-enabled devices nearby. A Bluetooth hotspot can allow devices to share files, access the internet, or use peripherals such as printers or speakers.

A SAN, or Storage Area Network, is a type of network that connects storage devices such as hard disks, tape drives, or optical drives to servers. A SAN provides high-speed data transfer and access to large amounts of data.

A SAN is usually used in data centers or enterprises that need to store and manage huge volumes of data.

A WAN, or Wide Area Network, is a type of network that connects devices over a large geographical area, such as across cities, countries, or continents. A WAN can use different technologies and media to transmit data, such as fiber-optic cables, satellite links, or radio waves. A WAN can also consist of multiple LANs or other types of networks. The internet is the largest example of a WAN.

A LAN, or Local Area Network, is a type of network that connects devices within a limited area, such as within a building or a campus. A LAN can use wired or wireless technologies to transmit data, such as Ethernet cables, Wi-Fi routers, or switches. A LAN can enable devices to share resources, such as printers, scanners, or files.

[For more information about the types of networks and their differences, you can refer to the following web search results: 11 Types of Networks: Understanding the Differences, Types of Computer Networks, Types of network - Introduction to networks.](#)

Question: 161

A technician is unable to connect to a network device via SSH. Which of the following cables should the technician use as an alternative connection method with a laptop?

- A . Serial
- B . HDMI
- C . Parallel
- D . Lightning

Answer: A

Explanation:

The correct answer is

A) Serial.

A serial cable is a type of cable that can be used to connect a laptop to a network device via a serial port. A serial port is a physical interface that allows data transmission between devices using serial communication, which is a method of sending data one bit at a time over a single wire. Serial ports are often used for console access to network devices, such as routers, switches, firewalls, or servers, when other methods of connection, such as SSH (Secure Shell), are not available or not working.

SSH is a protocol that allows secure and encrypted remote login and command execution over a network. SSH uses public key cryptography to authenticate the client and the server, and to encrypt the data exchanged between them. SSH can be accessed through different ports, depending on the configuration of the server and the client. The default port for SSH is 22, but it can be changed to any other port for security reasons.

HDMI (High-Definition Multimedia Interface) is a type of cable that can be used to transmit audio and video signals between devices, such as laptops, monitors, TVs, or projectors. HDMI cables support high-definition video and audio formats, and can also carry Ethernet and power signals. HDMI cables are not suitable for connecting to network devices via SSH, as they are designed for multimedia purposes.

Parallel cables are a type of cable that can be used to connect devices that use parallel communication, which is a method of sending data multiple bits at a time over multiple wires. Parallel cables are often used for connecting printers or scanners to computers, but they are not commonly used for network devices or SSH connections.

Lightning cables are a type of cable that can be used to connect Apple devices, such as iPhones, iPads, or iPods, to computers or chargers. Lightning cables support data transfer and power delivery, and can also be used with adapters to connect to other types of ports, such as USB or HDMI. Lightning cables are not compatible with network devices or SSH connections, as they are specific to Apple products.

[Therefore, the only cable that can be used as an alternative connection method with a laptop when SSH is not working is a serial cable. Serial cables can provide console access to network devices and allow configuration and troubleshooting commands to be executed. For more information about SSH and its alternatives, you can refer to the following web search results: Alternatives to SSH, How To Configure Custom Connection Options for your SSH Client, Understanding the SSH Encryption and Connection Process, How to Use Public Key Authentication with SSH.](#)

Question: 162

A graphic designer wants to purchase a laptop that provides the most accurate color spectrum available when viewed from as many different angles as possible. Which of the following display types would best meet the graphic designer's requirements?

- A . LCD
- B . Plasma
- C . OLED
- D . VGA

Answer: C

Explanation:



Explore

The correct answer is C. OLED.

OLED stands for Organic Light-Emitting Diode, and it is a type of display technology that uses organic compounds to create light and color. Unlike LCD (Liquid Crystal Display) or Plasma displays, OLED does not require a backlight or a filter to produce images. This means that OLED can offer higher contrast, wider color gamut, and better viewing angles than other display types.

LCD displays use liquid crystals that are sandwiched between two polarizing filters and illuminated by a backlight. The liquid crystals can change their orientation and block or allow light to pass through the filters. LCD displays can have different panel types, such as IPS (In-Plane Switching), VA (Vertical Alignment), or TN (Twisted Nematic), which affect the color accuracy, response time, and viewing angles of the display.

Plasma displays use gas-filled cells that are electrically charged to create plasma, which emits ultraviolet light. The ultraviolet light then excites phosphors that emit visible light and color. Plasma displays can produce deep blacks and high contrast, but they are also prone to image retention, screen burn-in, and high power consumption.

VGA stands for Video Graphics Array, and it is not a display type but a video interface standard that was introduced in 1987. VGA can transmit analog signals from a computer to a monitor, but it has low resolution and limited color depth compared to modern digital standards such as HDMI or DisplayPort.

Therefore, OLED is the best display type for graphic designers who want the most accurate color spectrum and the widest viewing angles. OLED displays can also be thinner and lighter than LCD or Plasma displays, which makes them ideal for laptops. However, OLED displays are also more expensive and less durable than other display types, and they may suffer from image retention or burn-in over time.

Question: 163

An IT technician is working on a help desk ticket concerning a user's inability to create a virtual machine. The technician has already checked the RAM and HDD space in the user's machine. Which of the following settings should the technician check NEXT to help troubleshoot the issue?

- A . BitLocker
- B . MSConfig
- C . BIOS
- D . Secure Boot

Answer: C

Explanation:

One of the possible settings that could prevent a user from creating a virtual machine is BIOS (Basic Input/Output System). BIOS is a firmware that controls how hardware components interact with each other and with software applications. Some BIOS settings may need to be changed or enabled to allow virtualization, such as VT-x (Intel Virtualization Technology) or AMD-V (AMD Virtualization). The other options are not related to virtualization settings. Verified Reference: [How To Enable Virtualization In BIOS Settings].

Question: 164

A user indicates that a laptop is not performing well. A technician determines the laptop has a conventional HDD and that installing a SSD will improve the laptop's performance. Which of the following lists of steps describes what the technician should do to complete the upgrade with the LEAST amount of downtime?

- A . 1. Remove the HDD and install the SSD in the laptop.
2. Install the operating system and necessary applications on the SSD.
3. Connect the HDD to the laptop using a USB enclosure.
4. Copy over all of the user's data.
- B . 1. Leave the HDD in place.
2. Install the SSD in an empty drive bay.
3. Leave all data intact on the HDD.
4. Confirm the SSD is accessible in the operating system.
- C . 1. Connect the SSD to the laptop using a USB enclosure.
2. Clone the HDD to the SSD using cloning software.
3. Remove the HDD.
4. Install the SSD.
- D . 1. Remove the HDD and install the SSD in the laptop.
2. Install the operating system and necessary applications on the SSD.
3. Install the HDD in a USB enclosure.
4. Provide the external HDD for the user to access the old data.

Answer: C

Explanation:

The best way to complete the upgrade with the least amount of downtime is to clone the HDD to the SSD using cloning software, and then replace the HDD with the SSD. This way, the user does not have to reinstall the operating system and applications, or copy over their data manually. The other options would either take more time or result in data loss or inaccessibility. Verified Reference: [How to Upgrade Your Laptop's Hard Drive to an SSD].

Question: 165

A bank wants to leverage cloud computing but would like a cloud solution in which infrastructure is shared with businesses in the same industry. Which of the following cloud models would BEST address the bank's need?

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

Answer: D

Explanation:

A community cloud model is a cloud solution in which infrastructure is shared among organizations that have common interests, goals, or concerns, such as security, compliance, or industry standards. This model would best address the bank's need to leverage cloud computing while maintaining a high level of security and privacy for its data and transactions. The other cloud models are not suitable for this scenario, as they either do not offer

enough control over the infrastructure (public cloud), or do not allow for sharing of resources among similar organizations (private cloud and hybrid cloud). Verified Reference: [What Is Community Cloud?]

Question: 166

An integrated webcam on a user's laptop broke, so a technician installed a temporary, external webcam. Since the external webcam installation, other users can only see part of the user's face during videoconferences. Which of the following BEST describes the reason for this issue?

- A . The webcam is not on a level surface.
- B . The webcam driver should be updated.
- C . The webcam is plugged into the wrong USB port.
- D . The webcam is not compatible with the OS.

Answer: A

Explanation:

The most likely reason for the issue is that the webcam is not on a level surface, which causes the camera angle to be distorted. The user should adjust the position of the webcam so that it is aligned with the laptop screen and captures the user's face fully. The other options are not relevant to this issue, as they would not affect the camera angle or visibility of the user's face. Verified Reference:How to Position Your Webcam Correctly.

Question: 167

Which of the following is an advantage that OLED displays have over LCD displays?

- A . The color does not degrade over time.
- B . The power consumption is lower.
- C . The power contrast results in finer grayscale levels.
- D . A backlight is utilized.

Answer: B

Explanation:

OLED (Organic Light Emitting Diode) displays have lower power consumption than LCD (Liquid Crystal Display) displays because they do not require a backlight to produce light. Each pixel in an OLED display can emit its own light, which also allows for higher contrast and finer grayscale levels. However, OLED displays are more prone to color degradation over time than LCD displays, which use filters to create colors. Verified Reference:OLED vs LCD: How to choose the right display for your phone.

Question: 168

A technician has verified full system functionality and implemented preventive measures. Which of the following represents the NEXT step the technician should take according to the best practice methodology?

- A . Establish a theory of probable cause.
- B . Document the findings, actions, and outcomes.
- C . Perform a format and system restore.
- D . Refer to the vendor's instructions for guidance.

Answer: B

Explanation:

The best practice methodology for troubleshooting is to follow these steps:

Identify the problem.

Establish a theory of probable cause.

Test the theory to determine cause.

Establish a plan of action to resolve the problem and implement the solution.

Verify full system functionality and implement preventive measures.

Document the findings, actions, and outcomes. Since the technician has already verified full system functionality and implemented preventive measures, the next step is to document the findings, actions, and outcomes. Verified Reference: CompTIA A+ Certification Exam Objectives, page 8.

Question: 169

A user called the help desk to report an issue with a laptop. Recently, the user has been unable to click the buttons on the track pad or press some keys on the keyboard. The technician inspects the laptop but does not find any physical damage caused by the user. Which of the following is the MOST likely cause of the issue?

- A . Damaged digitizer
- B . Swollen battery
- C . Distended capacitors
- D . Failed accelerometer

Answer: B

Explanation:

The most likely cause of the issue is that the laptop has a swollen battery, which is a condition where the battery expands due to gas buildup inside the cells. A swollen battery can cause physical damage to the laptop, such as

pushing against the track pad or keyboard and preventing them from functioning properly. The technician should inspect the battery and replace it if it is swollen. A damaged digitizer is not the cause of the issue, as the digitizer is a component that converts touch input into digital signals, and it does not affect the track pad or keyboard.
Distended capacitors are not the cause either, as capacitors are electronic components that store electric charge, and they do not affect the track pad or keyboard. A failed accelerometer is not the cause as well, as an accelerometer is a sensor that measures acceleration, and it does not affect the track pad or keyboard. Reference: <https://www.comptia.org/blog/what-is-a-laptop-battery>.

Question: 170

A user reports a monitor, keyboard, mouse, and headset are no longer functioning. The user has restarted the laptop and tested an alternative headset and monitor, but the issue persists. The technician notices the user has a printer, USB-C hub, and AC adapter plugged into the laptop. Which of the following should the technician do to MOST likely resolve the issue?

- A . Verify the AC adaptor voltage.
- B . Repair the operating system.
- C . Replace the user's USB-C hub.
- D . Reinstall the drivers for affected devices.
- E . Make sure the printer is not drawing too much power.

Answer: C

Explanation:

The most likely cause of the issue is that the user's USB-C hub is faulty or incompatible with the laptop. The USB-C hub is a device that allows the user to connect multiple peripherals to the laptop using a single USB-C port. If the hub is not working properly, it may prevent the monitor, keyboard, mouse, and headset from functioning. The technician should replace the user's USB-C hub with a new one that is compatible with the laptop and test the peripherals again. Verifying the AC adapter voltage will not help with the issue, as the AC adapter is used to power the laptop, not the peripherals. Repairing the operating system will not help either, as the issue is not related to software. Reinstalling the drivers for affected devices may not help, as the issue may be caused by the hub, not the devices. Making sure the printer is not drawing too much power is irrelevant, as the printer is not connected to the hub or affecting the other peripherals. Reference: <https://www.comptia.org/blog/what-is-usb-c>

Question: 171

A technician has noticed that a monitored server is receiving a disk failure notice during startup. When the technician clicks to continue, the machine still seems to startup into Windows but at a much slower speed. The technician looks at the BIOS information and sees the machine utilizes a RAID 5 configuration. Which of the following does the technician MOST likely need to perform?

- A . Reinstall the HDD drivers.
- B . Rebuild The RAID.

C . Replace the failed drivers.

D . Restart the system.

Answer: B

Explanation:

The disk failure notice during startup indicates that one or more disks in the RAID array have failed. The machine still seems to startup into Windows but at a much slower speed because the RAID 5 configuration can tolerate one disk failure and still operate, but with reduced performance and reliability. The technician most likely needs to rebuild the RAID, which means replacing the failed disk(s) and restoring the data from the parity information. Reinstalling the HDD drivers will not fix the disk failure. Replacing the failed drivers is not a valid option, as drivers are software, not hardware. Restarting the system will not fix the disk failure either. Reference: <https://www.comptia.org/blog/what-is-raid-0-1-5-6-10>

Question: 172

A technician is building a video production workstation that will consist of two high-end GPUs. The technician is reusing an existing ATX case. Which of the following should the technician select as the MOST appropriate power supply type?

- A . 400W external power supply
- B . 2x 600W redundant power supplies
- C . 1.200W modular power supply
- D . 1.500W uninterruptible power supply

Answer: C

Explanation:

A video production workstation that will consist of two high-end GPUs will require a lot of power and a modular power supply. A modular power supply allows the technician to connect only the cables that are needed for the components, which reduces clutter and improves airflow. A 1,200W power supply should be enough to power the two GPUs and other components, but the exact wattage depends on the specifications of the GPUs and other components. A 400W external power supply is not enough to power the workstation and may not be compatible with the ATX case. Two 600W redundant power supplies are unnecessary and may not fit in the ATX case. A 1,500W uninterruptible power supply (UPS) is a device that provides backup power in case of a power outage, but it is not a replacement for a power supply unit (PSU). Reference: <https://www.comptia.org/blog/what-is-a-power-supply-unit>

Question: 173

A network engineer recently deployed a new application server in a cloud environment. Which of the following should be implemented to prevent a single point of failure within the system?

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

Answer: C

Explanation:

High availability is a design principle that ensures a system or service can operate continuously without significant downtime or disruption. High availability can be achieved by implementing redundancy, failover, load balancing, and backup strategies. High availability can prevent a single point of failure within the system, which means that if one component fails, another one can take over its function. Rapid elasticity is the ability to scale up or down the resources of a system according to the demand, but it does not prevent a single point of failure. RAID is a method of storing data across multiple disks to provide redundancy and performance, but it does not prevent a single point of failure at the server level. Shared resources are the resources that are pooled and accessed by multiple users or systems, but they do not prevent a single point of failure either. Reference: <https://www.comptia.org/blog/what-is-cloud-computing>

Question: 174

A user submitted a help desk ticket to report that the Wi-Fi connection drops every time the microwave is used. A technician suspects the issue is related to interference. Which of the following should the technician do to provide the BEST long-term solution for the issue?

- A . Change the Wi-Fi operation channel.
- B . Configure the Wi-Fi AP to 5GHz.
- C . Increase the power output of the AP.
- D . Change the SSID to hidden.

Answer: B

Explanation:

The issue is related to interference from the microwave, which operates at 2.4GHz, the same frequency as some Wi-Fi channels. To avoid this interference, the technician should configure the Wi-Fi access point (AP) to use a 5GHz band, which has more channels and less interference from other devices. Changing the Wi-Fi operation channel may not solve the problem if the microwave interferes with multiple channels. Increasing the power output of the AP may not overcome the interference and may cause more interference to other devices. Changing the SSID to hidden does not affect the interference at all, and may make it harder for users to connect to the network. Reference: <https://www.comptia.org/blog/what-is-wifi-6-and-why-is-it-important>

Question: 175

A server administrator is building a new application server. Which of the following RAID levels provides MAXIMUM performance and redundancy?

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

Answer: D

Explanation:

[RAID 10 is a combination of RAID 1 and RAID 0, which provides both performance and redundancy. RAID 1 mirrors data across two or more disks, while RAID 0 stripes data across two or more disks. RAID 10 combines these two methods to create a mirrored stripe set, which can tolerate multiple disk failures as long as they are not in the same mirror. RAID 10 requires at least four disks and offers better performance than RAID 5, which uses parity to provide redundancy.](https://www.comptia.org/blog/what-is-raid-0-1-5-6-10) Reference: <https://www.comptia.org/blog/what-is-raid-0-1-5-6-10>

Question: 176

Which of the following 802.11 Wi-Fi protocols utilizes the 5.0GHz frequency and has the BEST speed and reception?

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

Answer: B

Explanation:

802.11 ax is a wireless networking protocol that utilizes the 5.0GHz frequency and has the best speed and reception among the options given. 802.11 ax offers higher data rates, lower latency, increased capacity, and improved power efficiency than previous protocols. It is also known as Wi-Fi 6 or High Efficiency Wireless (HEW). 802.11a also uses the 5.0GHz frequency, but it is an older protocol that has lower speed and reception than 802.11 ax. 802.11b/g/n use the 2.4GHz frequency, which is more crowded and prone to interference than the 5.0GHz frequency. 802.11n can use both frequencies, but it is also slower and less efficient than 802.11 ax. Reference: <https://www.comptia.org/training/books/a-core-1-220-1101-study-guide> (page 82)

Question: 177

A user built a new PC with parts sourced from a popular online vendor. The system boots to the OS and basic browsing works, but whenever the user opens a 4K video or starts to play a game, the system immediately shuts down. Which of the following is the MOST likely cause of this issue?

- A . The video card was installed in the wrong PCIe slot.
- B . The CPU heat sink was attached without adequate thermal paste.
- C . The SSD drives do not have enough Pagefile.
- D . The system does not have enough RAM for 4K video.

Answer: B

Explanation:

Thermal paste is a substance that fills in any gaps between a CPU and its heat sink, which is a device that dissipates heat from the CPU. Without adequate thermal paste, the CPU may overheat and cause the system to shut down automatically to prevent damage. This is especially likely when running 4K video or games, which are more demanding and generate more heat. The technician should check if the CPU heat sink was attached properly and apply enough thermal paste to ensure good contact and heat transfer. Reference: [https://partners.comptia.org/docs/default-source/resources/a-core-series-combined-content-guide \(page 28\)](https://partners.comptia.org/docs/default-source/resources/a-core-series-combined-content-guide (page 28))

Question: 178

Which of the following wireless networking protocols will support both 2.4GHz and 5GHz devices?

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

Answer: B

Explanation:

802.11 ax is a wireless networking protocol that supports both 2.4GHz and 5GHz devices, as well as backward compatibility with previous 802.11 standards. 802.11 ax offers higher data rates, lower latency, increased capacity, and improved power efficiency than previous protocols. It is also known as Wi-Fi 6 or High Efficiency Wireless (HEW). Reference: [https://www.comptia.org/training/books/a-core-1-220-1101-study-guide \(page 82\)](https://www.comptia.org/training/books/a-core-1-220-1101-study-guide (page 82))

Question: 179

A user is attempting to connect a streaming media device to a hotel's free wireless internet. However, the user is unable to pass through the captive portal. Which of the following would MOST likely allow the user to connect the device to the internet?

- A . Connecting to the hotspot on the user's device
- B . Disabling the Wi-Fi security on the device
- C . Asking the hotel to disable the captive portal on the Wi-Fi
- D . Adjusting the date and time stamps on the device to reflect another country

Answer: A

Explanation:

A captive portal is a web page that requires users to agree to terms and conditions, enter credentials, or provide payment information before accessing a wireless network. Some devices, such as streaming media devices, may not have a web browser or a user interface to interact with the captive portal. One possible solution is to connect to the hotspot on the user's device, such as a smartphone or a tablet, and use it as a bridge to access the internet through the wireless network. The user's device can authenticate with the captive portal and share its internet connection with other devices via Wi-Fi, Bluetooth, or USB. Reference: <https://partners.comptia.org/docs/default-source/resources/a-core-1-content-guide> (page 12)

Question: 180

A technician is setting up three web servers for a retail company that takes online orders for its products. Which of the following network host services should the technician use to ensure the servers' resources will be utilized efficiently?

- A . UTM appliance
- B . AAA server
- C . Spam gateway
- D . Load balancer

Answer: D

Explanation:

A load balancer is a network device or service that distributes incoming network traffic across multiple servers, based on various criteria, such as availability, capacity, performance, or location. A load balancer can ensure that the servers' resources will be utilized efficiently, as well as improve reliability, scalability, and security. A load balancer can be hardware-based or software-based, or a combination of both. Reference: <https://www.comptia.org/training/books/a-core-1-220-1101-study-guide> (page 79)

Question: 181

A SOHO customer would like to purchase network hardware to enhance security. The hardware should perform stateful packet inspection. Which of the following would BEST address the customer's need?

- A . Switch

- B . Firewall
- C . Router
- D . Proxy

Answer: B

Explanation:

A firewall is a network device that performs stateful packet inspection, which means it analyzes incoming and outgoing network traffic based on predefined rules and filters, and allows or blocks packets based on their source, destination, protocol, port, or content. A firewall can enhance security by preventing unauthorized access, blocking malicious traffic, enforcing policies, and logging events. A firewall can be hardware-based or software-based, or a combination of both. Reference: <https://www.comptia.org/training/books/a-core-1-220-1101-study-guide> (page 78)

Question: 182

A customer reports that, after a technician replaced a laptop screen, the laptop is only able to connect to a Wi-Fi network it is positioned very close to a wireless access point Which of the following should the technician verify FIRST?

- A . The internal antennas are connected.
- B . The device has the latest OS updates.
- C . The wireless device drivers are the latest version.
- D . Airplane mode is disabled.
- E . The battery is charging.

Answer: A

Explanation:

The internal antennas are the components that allow the laptop to receive and transmit wireless signals. If the internal antennas are not connected properly, the laptop may have a weak or no Wi-Fi signal. The technician should verify that the internal antennas are connected to the wireless card and routed correctly inside the laptop case. The internal antennas may have been disconnected or damaged during the screen replacement. The device having the latest OS updates, the wireless device drivers being the latest version, airplane mode being disabled, and the battery being charging are not related to the issue, as they do not affect the physical connection of the internal antennas. Reference: <https://www.comptia.org/blog/what-is-a-laptop-antenna>

Question: 183

A customer has a Wi-Fi-capable laptop to use when traveling for work Which of the following will allow the laptop to stay connected when the user travels?

- A . Cellular card
- B . Wi-Fi extender
- C . Bluetooth
- D . GPS

Answer: A

Explanation:

A cellular card is a device that allows a laptop to connect to the internet using a cellular network, such as 4G or 5G. A cellular card can provide internet access when the user travels and does not have access to a Wi-Fi network. A cellular card may require a subscription plan from a cellular service provider. A Wi-Fi extender is a device that boosts the signal of an existing Wi-Fi network, but it does not provide internet access by itself. Bluetooth is a wireless technology that allows devices to communicate over short distances, but it does not provide internet access either. GPS is a satellite-based system that provides location and navigation information, but it does not provide internet access as well. Reference: <https://www.comptia.org/blog/what-is-a-cellular-card>

Question: 184

A technician is attempting to fix a computer that does not turn on when the power button is pressed. Which of the following should the technician perform NEXT to troubleshoot the issue?

- A . Verify the output voltages from the power supply unit.
- B . Open the computer cabinet and replace the power button.
- C . Remove and reconnect all cables that are plugged into the motherboard
- D . Reseat the power cable and confirm the outlet is providing energy.

Answer: D

Explanation:

The first step in troubleshooting a computer that does not turn on when the power button is pressed is to check if there is any power going to the computer. The technician should reseat or reconnect the power cable to ensure it is firmly attached to both ends, and confirm that the outlet or power strip is providing energy by using a multimeter or another device. This can eliminate any issues with loose or faulty connections or power sources, and help isolate the problem further. Reference: [https://partners.comptia.org/docs/default-source/resources/a-core-series-combined-content-guide \(page 28\)](https://partners.comptia.org/docs/default-source/resources/a-core-series-combined-content-guide (page 28))

Question: 185

A user reports that all print jobs sent to a laser printer have random and incorrect characters throughout the pages. Which of the following actions should the technician do to resolve this issue?

- A . Replace the fuser.

- B . Adjust the rollers.
- C . Update the driver.
- D . Shake the toner

Answer: C

Explanation:

One of the possible causes of random and incorrect characters appearing on print jobs sent to a laser printer is an outdated or corrupted driver. The driver is a software component that communicates between the operating system and the printer, and converts data into a format that the printer can understand. If the driver is outdated or corrupted, it may send incorrect or garbled data to the printer, resulting in poor print quality or errors. The technician should update the driver to the latest version from the manufacturer's website, or uninstall and reinstall it if necessary. Reference: <https://www.comptia.org/training/books/a-core-1-220-1101-study-guide> (page 47)

Topic 4, Exam Pool D

Question: 186

Users report that all copies produced on a copier have a solid black line, but printing is unaffected. Which of the following is the MOST likely cause?

- A . Failing imaging drum
- B . A scratch on the scanning bed
- C . Bad output tray
- D . Damaged (user)

Answer: B

Explanation:

A scratch on the scanning bed of a copier can cause a solid black line to appear on all copies, as the scanner cannot read the original document properly through the scratch. The scratch can also reflect light and create noise in the scanned image. The printing function is unaffected by the scratch, as it does not use the scanning bed. The technician should inspect and clean the scanning bed, and replace it if necessary. Reference: <https://partners.comptia.org/docs/default-source/resources/a-core-1-content-guide> (page 16)

Question: 187

A technician needs to configure a printer for network communications. 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 . IMEI
- G . IP address
- H . Drivers

Answer: C, D, G

Explanation:

To configure a printer for network communications, the technician must configure its network settings, such as gateway, subnet mask, and IP address. The gateway is the IP address of the router or device that connects the printer to other networks or the internet. The subnet mask is a value that defines which part of the IP address identifies the network and which part identifies the host or device on that network. The IP address is a unique identifier that allows the printer to communicate with other devices.

Question: 188

Which of the following network devices operates as a bridge function?

- A . Hub
- B . Wireless access point
- C . Transceiver
- D . Media converter

Answer: D

Explanation:

A media converter is a network device that operates as a bridge function, which means it connects two different types of network media, such as copper and fiber optic cables, and converts signals between them. This allows network devices that use different media types to communicate with each other over long distances or in different environments, without requiring major changes or upgrades to the existing network infrastructure.

Reference: <https://www.comptia.org/training/books/a-core-1-220-1101-study-guide> (page 73)

Question: 189

A user reports a repetitive clicking noise is coming from a personal laptop. A technician notes the laptop's inputs are severely delayed. Which of the following should the technician replace to resolve the issue?

- A . The memory
- B . The storage device

- C . The integrated keyboard
- D . The battery

Answer: B

Explanation:

A repetitive clicking noise coming from a laptop is usually a sign of a failing hard disk drive (HDD), which is a type of storage device that uses spinning platters and moving heads to read and write data. A failing HDD can also cause severe delays in input and output operations, as well as data loss or corruption. The technician should replace the HDD with a new one or upgrade it to a solid state drive (SSD), which is another type of storage device that uses flash memory and has no moving parts. Reference: <https://partners.comptia.org/docs/default-source/resources/a-core-series-combined-content-guide> (page 24)

Question: 190

A customer brings a phone top a repair shop because it is experiencing extreme slowness and applications are crashing. A technician attempts to install a diagnostic application. but the installation fails. Which of the following should the technician do FIRST to troubleshoot the issue?

- A . Check the storage space.
- B . Inspect the screen for damage.
- C . Install the latest updates.
- D . Recalibrate the digitizer.

Answer: A

Explanation:

One of the possible causes of extreme slowness and application crashes on a phone is low or insufficient storage space. This can affect the performance and functionality of the phone, as well as prevent new applications from being installed or updated. The technician should check the storage space on the phone and see if there is enough free space available for the diagnostic application and other operations. The technician should also advise the customer to delete or move any unnecessary or unused files, apps, or data from the phone to free up some space. Reference: <https://partners.comptia.org/docs/default-source/resources/a-core-1-content-guide> (page 10)

Question: 191

Which of the following does a DHCP reservation MOST likely apply to?

- A . Smart TV
- B . Mobile device
- C . Workstation
- D . Printer

Answer: D

Explanation:

A DHCP reservation is a feature that allows a DHCP server to assign a specific IP address to a specific device on a network, based on its MAC address. This ensures that the device always receives the same IP address, even if it is disconnected or rebooted. A DHCP reservation is most likely applied to a printer, as it can make it easier for users to find and connect to the printer on the network, without having to change the printer settings or deal with IP address conflicts. Reference: <https://www.comptia.org/training/books/a-core-1-220-1101-study-guide> (page 84)

Question: 192

A company would like to take advantage of the cost savings of cloud computing by only paying for the resources used. Which of the following will BEST address this need?

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

Answer: C

Explanation:

Metered utilization is a cloud feature that allows cloud providers to charge customers based on their actual consumption of resources, such as CPU time, storage space, bandwidth, or transactions. This enables customers to pay only for the resources they use, rather than a fixed or flat rate, which can reduce costs and increase efficiency. Metered utilization can also provide more transparency and accountability for both cloud providers and customers, as they can track and monitor their resource usage and billing. Reference: <https://partners.comptia.org/docs/default-source/resources/a-core-1-content-guide> (page 97)

Question: 193

Following a scheduled power outage, users report they cannot access the local intranet. A technician is able to ping the IP address of the server that is hosting the website. Which of the following services is MOST likely offline?

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

Answer: B

Explanation:

DNS stands for Domain Name System and is a service that translates domain names (such as www.example.com) into IP addresses (such as 192.168.1.100) that computers can use to communicate over a network. If the DNS server is offline, users may not be able to access websites or other network resources by using their domain names, even if they are online and reachable by their IP addresses. The technician should check if the DNS server is running and configured correctly, or use an alternative DNS server if possible. Reference: <https://www.comptia.org/training/books/a-core-1-220-1101-study-guide> (page 81)

Question: 194

A user's laptop is experiencing severe slowdowns when operating process-intensive tasks. Which of the following memory upgrades is compatible with a laptop?

- A . DIMM
- B . ECC RAM
- C . Virtual RAM
- D . SODIMM

Answer: D

Explanation:

SODIMM stands for Small Outline Dual In-line Memory Module and is a type of memory module that is compatible with laptops and other small devices. SODIMMs are smaller and thinner than DIMMs (Dual In-line Memory Modules), which are typically used for desktop PCs and servers. Upgrading or adding SODIMMs can increase the amount of RAM available for a laptop, which can improve its performance and speed when running process-intensive tasks. Reference: <https://partners.comptia.org/docs/default-source/resources/a-core-series-combined-content-guide> (page 24)

Question: 195

A technician needs to increase the available RAM on a virtual workstation. Which of the following should the technician do?

- A . Increase the ECC memory timings in the BIOS.
- B . Upgrade to the latest DDR5 modules.
- C . Clear the temporary files on the workstation's boot drive.
- D . Use a hypervisor to adjust the resource allocation.

Answer: D

Explanation:

A hypervisor is a software layer that manages and allocates resources for virtual machines (VMs) on a physical host machine. A technician can use a hypervisor to adjust the resource allocation for a virtual workstation, such as increasing the amount of RAM assigned to it from the available pool of memory on the host machine. This can improve the performance and functionality of the virtual workstation without requiring any hardware changes or modifications. Reference: <https://www.comptia.org/training/books/a-core-1-220-1101-study-guide> (page 59)

Question: 196

An IT manager is evaluating ticket resolution times. While reviewing the data, the manager notices repetitive issues are taking longer than expected to resolve. Which of the following changes should the manager implement to resolve repetitive issues more quickly?

- A . Require the technicians to spend more time testing theories to determine the root causes of issues.
- B . Require the technicians to verify full system functionality when resolving issues.
- C . Require the technicians to gather more information when speaking with users about issues.
- D . Require the technicians to document the findings, action, and outcomes of issues.

Answer: D

Explanation:

By documenting the findings, action, and outcomes of issues, the technicians can create a knowledge base that can be used to resolve similar issues in the future more quickly and efficiently. The documentation can also help identify patterns or trends that can lead to preventive measures or root cause analysis. Documenting the issues can also improve communication and collaboration among technicians and users, as well as provide evidence of service quality and performance. Reference: <https://partners.comptia.org/docs/default-source/resources/a-core-1-content-guide> (page 4)

Question: 197

A user who is facilitating a videoconference reports that the participants can be heard. However, when the user attempts to speak, none of the participants can hear the user. Which of the following is the FIRST step the technician should take?

- A . Restart the Videoconference.
- B . Replace the laptop.
- C . Check the audio inputs.
- D . Try another microphone.

Answer: C

Explanation:

The technician should check that the audio inputs are configured correctly for the videoconference software and that they are not muted or disabled. The technician should also make sure that the microphone is plugged in properly and that it is not faulty or damaged. If possible, the technician should test the microphone on another device or use another microphone on the same device to isolate the problem. Reference: <https://partners.comptia.org/docs/default-source/resources/a-core-1-content-guide> (page 11)

Question: 198

A user's Windows computer started running slowly after the installation of a CAD program. The computer has intermittent timeouts and often has to be rebooted to restore functionality. The computer seems to work correctly if the application is not running. Which of the following should the technician do NEXT to help troubleshoot the issue? (Select TWO).

- A . Replace the video card.
- B . Research the requirements of the application.
- C . Install a new case fan.
- D . Run chkdsk on the HDD.
- E . Check the Event Viewer logs.
- F . Reinstall the application.

Answer: B, E

Explanation:

The technician should research the requirements of the CAD program to see if the computer meets them or needs any upgrades or updates to run it properly. The technician should also check the Event Viewer logs to see if there are any errors or warnings related to the application or system performance that could indicate the cause of the problem or suggest a solution. Reference: <https://www.comptia.org/training/books/a-core-1-220-1101-study-guide> (pages 43, 47)

Question: 199

A technician is preparing laptops for deployment to a medical department. The laptops require SSD-level encryption to be enabled, but BitLocker refuses to turn it on. An error message states that a BIOS-level setting has not been turned on. Which of the following should the technician check FIRST when troubleshooting this issue?

- A . Recorder the priority in Widows Boot Manager.
- B . Check to make sure Secure Boot is turned on.
- C . Ensure that the Trusted Platform Module enabled.
- D . Verify that the latest updates are installed.

Answer: C

Explanation:

The Trusted Platform Module (TPM) is a hardware component that provides cryptographic functions and secure storage for encryption keys, passwords, and certificates. BitLocker requires a TPM to be enabled and activated in the BIOS or UEFI settings of the laptop in order to use SSD-level encryption. The technician should check that the TPM is enabled and activated before trying to turn on BitLocker. Reference:

[https://partners.comptia.org/docs/default-source/resources/a-core-series-combined-content-guide \(page 34\)](https://partners.comptia.org/docs/default-source/resources/a-core-series-combined-content-guide (page 34))

Question: 200

A virtual file server in the cloud is configured to automatically add compute resources during times of high load on the server. Which of the following describes this cloud feature?

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

Answer: C

Explanation:

Rapid elasticity is a cloud feature that allows cloud services to scale up or down automatically according to demand or load on the server, without requiring manual intervention or configuration changes by users or administrators. This enables cloud services to provide optimal performance and efficiency at all times, as well as reducing costs by only using resources when needed. Reference: [https://www.comptia.org/training/books/a-core-1-220-1101-study-guide \(page 98\)](https://www.comptia.org/training/books/a-core-1-220-1101-study-guide (page 98))

Question: 201

A technician responds to a user who has reported that a laptop is too hot. The technician notices the laptop is not able to sit level on the workspace. What of the following BEST describes the issue with the laptop?

- A . The docking station is improperly installed.
- B . The hard drive is disconnected.
- C . The CPU fan is too powerful.
- D . The battery is damaged.

Answer: D

Explanation:

A damaged battery can cause a laptop to overheat and swell, making it unable to sit level on the workspace. A swollen battery can also pose a fire hazard and damage other components of the laptop, such as the

motherboard or keyboard. The technician should replace the battery as soon as possible and dispose of it properly according to local regulations. Reference: [https://partners.comptia.org/docs/default-source/resources/a-core-series-combined-content-guide \(page 25\)](https://partners.comptia.org/docs/default-source/resources/a-core-series-combined-content-guide (page 25))

Question: 202

A technician is working on a desktop PC and wants to verify its NIC is functional. Which of the following should the technician use?

- A . Cable tester
- B . Loopback Plug
- C . Toner probe
- D . Network tap

Answer: B

Explanation:

A loopback plug is a device that can be used to test the functionality of a network interface card (NIC) by sending and receiving data packets from itself. The loopback plug connects to the NIC's port and simulates a network connection without requiring another device or cable. The technician can use a loopback plug to verify that the NIC is able to transmit and receive data without errors or interruptions. Reference: [https://www.comptia.org/training/books/a-core-1-220-1101-study-guide \(page 76\)](https://www.comptia.org/training/books/a-core-1-220-1101-study-guide (page 76))

Question: 203

A printer technician receives a support request for a laser printer that sometimes cuts off the bottom of the print job. During troubleshooting the technician notices that affected jobs are set for 8.5in x 14in (216mm x 356mm) paper and only print from a particular paper tray. Which of the following actions should the technician perform NEXT?

- A . Verify that the printing trays are correctly set.
- B . Swap printer trays until the print jobs complete as expected.
- C . Replace the tray rollers to ensure proper alignment.
- D . Reset the default to use 8.5in x 11in (216mm x 279mm) paper

Answer: A

Explanation:

The most likely cause of the problem is that the printing trays are not configured to match the paper size of the print jobs. The technician should verify that the printing trays are correctly set for 8.5in x 14in (216mm x 356mm) paper and that the printer driver settings match the tray settings. This will ensure that the printer can feed and

print the paper correctly without cutting off any part of the document. Reference:
<https://partners.comptia.org/docs/default-source/resources/a-core-1-content-guide> (page 16)

Question: 204

Which of the following virtualization technologies allows Linux and Windows operating system to run concurrently?

- A . Test environment
- B . Sandbox
- C . Legacy OS
- D . Cross-platform

Answer: D

Explanation:

Cross-platform virtualization allows different operating systems, such as Linux and Windows, to run on the same hardware or software platform. This enables users to access applications and data from different operating systems without switching devices or rebooting. Reference: <https://www.comptia.org/training/books/a-core-1-220-1101-study-guide> (page 59)

Question: 205

Which of the following wireless technologies is used by mobile devices to process payments at kiosks?

- A . Wi-Fi 6
- B . Bluetooth
- C . NFC
- D . RFID

Answer: C

Explanation:

NFC stands for near-field communication, which is a wireless technology that allows two devices to exchange data when they are in close proximity (usually within a few centimeters). NFC is commonly used by mobile devices to process payments at kiosks, such as Apple Pay or Google Pay. Wi-Fi 6 is a wireless standard that provides faster speed and lower latency than previous versions of Wi-Fi. Bluetooth is a wireless technology that allows devices to communicate over short distances (usually within 10 meters). RFID stands for radio-frequency identification, which is a wireless technology that uses radio waves to identify and track objects that have RFID tags attached to them.

Question: 206

A user has noticed high CPU temperatures when gaming. The user would like to lower the CPU temperature, and cost is not an issue. Which of the following should the user do to BEST cool the CPU while keeping noise to a minimum?

- A . Upgrade the thermal paste.
- B . Use a copper heat sink.
- C . Upgrade the CPU fan.
- D . Install liquid cooling.

Answer: D

Explanation:

Liquid cooling is a method of cooling the CPU by circulating a liquid through a closed loop that absorbs heat from the CPU and transfers it to a radiator. Liquid cooling is more effective and quieter than air cooling, which uses a fan and a heat sink. However, liquid cooling is also more expensive and complex to install. Upgrading the thermal paste, using a copper heat sink, or upgrading the CPU fan are ways to improve air cooling, but they will not lower the CPU temperature as much as liquid cooling. Reference: <https://www.comptia.org/certifications/a#examdetails> <https://www.comptia.org/blog/what-is-liquid-cooling>

Question: 207

A video game developer is requesting a new desktop computer with eight sticks of memory. The developer wants the desktop computer to take advantage of all available memory bandwidth without sacrificing performance. Which of the following would be the BEST solution?

- A . Triple-channel with DDR5 ECC RAM
- B . Quad-channel with DDR4 RAM
- C . Quad-channel with DDR5 SODIMM
- D . Dual-channel with DDR4 RAM

Answer: B

Explanation:

Quad-channel memory architecture allows the CPU to access four memory modules simultaneously, increasing the memory bandwidth and performance. DDR4 RAM is a type of memory that has higher speed and lower power consumption than DDR3. SODIMM is a smaller form factor of memory that is typically used in laptops, not desktops. ECC RAM is a type of memory that can detect and correct errors, but it is more expensive and slower than non-ECC RAM. Triple-channel memory architecture is less common and less efficient than quad-channel. Reference: <https://www.comptia.org/certifications/a#examdetails> <https://www.comptia.org/blog/what-is-ddr4-ram> <https://www.comptia.org/blog/what-is-quad-channel-memory>

Question: 208

A technician is troubleshooting a laptop that is unable to browse the internet when connected to the company's wireless network. The technician has verified network connectivity is functional when using an Ethernet cable. Which of the following should the technician use to check if the laptop's wireless NIC is functional?

- A . Hotspot
- B . Near-field communication
- C . Ethernet tap
- D . Spectrum analyzer

Answer: A

Explanation:

A hotspot is a wireless access point that provides internet access to devices that are connected to it. The technician can use a hotspot to check if the laptop's wireless NIC is functional by connecting the laptop to the hotspot and then trying to browse the internet. If the laptop is able to browse the internet, then the wireless NIC is functional.

Near-field communication (NFC) is a wireless technology that allows two devices to communicate with each other when they are in close proximity. NFC is not typically used to check if a wireless NIC is functional.

An Ethernet tap is a device that is used to monitor network traffic. An Ethernet tap is not typically used to check if a wireless NIC is functional.

A spectrum analyzer is a device that is used to measure the frequency spectrum of a signal. A spectrum analyzer is not typically used to check if a wireless NIC is functional.

Therefore, the correct answer is A. Hotspot.

Question: 209

A natural disaster occurred, and the storage system for the development team is unrecoverable. The technician is preparing replacement storage arrays that include a hypervisor with the capacity to support several virtual machines. Two separate bays are available, and both should be utilized.

Requirements for the primary array include the following:

- * No need to be scalable
- * Very fast on reads
- * Fault tolerance of one drive
- * Ability to function with only one drive
- * Easily recoverable data

- * High redundancy
- * Minimum number of drives

Requirements for the secondary array include the following:

- * Fault tolerance of one drive
- * Total space of 600G3
- * Best write performance
- * Minimum number of drives

Instructions:

Drag and Drop the appropriate Hard Drives. Then Open each array to complete the configuration.



Answer:



Question: 210

Which of the following components houses the MX record?

- A . DNS
- O B . VLAN
- C . DHCP
- D . SMTP

Answer: A

Explanation:

The domain name system (DNS) is the component that houses the MX record. The MX record is a type of DNS record that specifies which mail server is responsible for receiving email messages for a domain name. VLAN is an acronym for virtual local area network, which is a logical subdivision of a network that allows devices to communicate as if they were on the same physical segment. DHCP is an acronym for dynamic host configuration protocol, which is a network protocol that assigns IP addresses and other configuration parameters to devices on a network automatically. SMTP is an acronym for simple mail transfer protocol, which is a network protocol that allows sending and receiving email messages over TCP/IP networks.

Question: 211

A user is traveling to another country and will be unable to get personal cell phone service after the plane lands. Which of the following should the user update to resolve the issue?

- A . CDMA
- B . PRL
- C . MDM
- D . GPS

Answer: B

Explanation:

Updating the preferred roaming list (PRL) is what a user should do to resolve the issue of being unable to get personal cell phone service after traveling to another country. The PRL is a database that contains information about cell towers and frequencies that a phone can use in different areas. Updating the PRL can improve the phone's ability to connect to local networks and avoid roaming charges. CDMA is a type of cellular technology that uses code division multiple access to transmit data over radio frequencies. MDM is an acronym for mobile device management, which is a type of software solution that allows remote management and security of mobile devices. GPS is an acronym for global positioning system, which is a satellite-based navigation system that provides location and time information

Question: 212

A technician is upgrading a computer OS from Windows 7 to Windows 10. During the OS installation, the system is not able to find the hard drive. Which of the following can the technician do to MOST likely fix the issue?

- A . Change the partition to MBR
- B . Load the HDD drivers using a flash drive.
- C . Upgrade the RAM modules.
- D . Replace the hard drive.

Answer: B

Explanation:

Loading the hard disk drive (HDD) drivers using a flash drive is the most likely action that can fix the issue of a computer not being able to find the hard drive during an OS installation from Windows 7 to Windows 10. The HDD may have a different interface or controller than what Windows 10 supports by default, such as SATA or RAID, which would require loading additional drivers during the installation process. The technician can use a flash drive to load the drivers from another device or source. Changing the partition to MBR, upgrading the RAM modules, or replacing the hard drive are not likely to fix the issue, as they are not related to the HDD drivers

Question: 213

A service technician replaced the gateway, and a user is now unable to access the SOHO wireless network. Which of the following steps should the technician take to resolve the issue?

- A . Assess the network cables for damage.
- B . Disable Bluetooth connections.
- C . Update the firmware.
- D . Check if the password and SSID are correct

Answer: D

Explanation:

Checking if the password and SSID are correct is the best step that the technician should take to resolve the issue of a user being unable to access the SOHO wireless network after replacing the gateway. The new gateway may have a different password and SSID than the old one, which would prevent the user from connecting to the wireless network. The technician should verify that the user has entered the correct password and SSID for the new gateway. Assessing the network cables for damage, disabling Bluetooth connections, or updating the firmware are not likely to solve the issue, as they are not related to the wireless network authentication

Question: 214

A technician receives an alert indicating all VMs are down. After some troubleshooting, the technician discovers the network is out of space. To resolve the issue, the technician decides to add more space. Which of the following network types will the technician be working with?

- A . SCSI
- B . NAC
- C . SAN
- D . WISP

Answer: C

Explanation:

A storage area network (SAN) is the type of network that the technician will be working with when adding more space to resolve the issue of all VMs being down due to the network being out of space. A SAN is a network that provides access to consolidated and block-level data storage, which can be used for virtualization and backup purposes. SCSI is a type of interface that connects devices such as hard drives and optical drives to a computer. NAC is a type of security solution that controls access to a network based on policies and device compliance. WISP is a type of internet service provider that delivers wireless broadband access over long distances.

Question: 215

While on a VoIP call, one user is unable to understand the other because the audio is breaking up. Which of the following BEST describes what is occurring on the call?

- A . High latency
- B . External interference
- C . No connectivity
- D . Port flapping

Answer: A

Explanation:

High latency is what best describes what is occurring on a VoIP call when one user is unable to understand the other because the audio is breaking up. Latency is the delay between sending and receiving data over a network, and high latency can cause poor quality or interruptions in VoIP calls. External interference, no connectivity, or port flapping are not likely to cause audio breaking up, but rather complete loss of signal or connection.

Question: 216

A laptop does not have any audio output from the built-in speakers. The Windows Device Manager shows a down arrow for the audio device. Which of the following will correct this audio issue?

- A . Replacing the speakers
- B . Increasing the volume
- C . Enabling the audio device
- D . Updating the driver

Answer: C

Explanation:

Enabling the audio device is the correct action to correct an audio issue where a laptop does not have any audio output from the built-in speakers and Windows Device Manager shows a down arrow for the audio device. A down arrow indicates that the audio device is disabled and needs to be enabled by right-clicking on it and selecting Enable device. Replacing the speakers, increasing the volume, or updating the driver are unlikely to solve the issue if the audio device is disabled.

Question: 217

A technician is working with a user to set up scanning. The user requires the scans to be viewable on the network for the entire department. Which of the following settings on the MFP should the technician edit to BEST address the user's request?

- A . Scan to email
- B . Server message block
- C . Secured prints
- D . Web services
- E . Printer share

Answer: B

Explanation:

Server message block (SMB) is the setting on the multifunction printer (MFP) that the technician should edit to best address the user's request of making the scans viewable on the network for the entire department. SMB is a network protocol that allows file sharing and printer access among different devices on a network. The technician can configure the MFP to scan to a shared folder on the network using SMB. Scan to email is a feature that allows the MFP to send scanned documents as email attachments, which may not be viewable by everyone in the department. Secured prints is a feature that allows the MFP to print documents only after entering a PIN or password, which does not address the user's request. Web services is a feature that allows the MFP to access online services such as cloud storage or email, which may not be viewable by everyone in the department either. Printer share is not a setting on the MFP, but a feature that allows a device to share its printer with other devices on a network

Question: 218

Which of the following cables should be used to terminate ST connectors on each end?

- A . Optical fiber
- B . Coaxial
- C . Shielded twisted pair
- D . HDMI

Answer: A

Explanation:

Optical fiber is the type of cable that should be used to terminate ST connectors on each end. ST connectors are commonly used for fiber optic cables, which transmit data using light pulses. Coaxial, shielded twisted pair, and HDMI are not types of cables that use ST connectors, but different types of connectors and transmission methods.

Question: 219

A user reports that a computer has a virus on it. Which of the following is the FIRST step the technician should take?

- A . Determine a plan of action to resolve the problem.
- B . Run antivirus software to remove the virus from the computer.
- C . Ask the user about the symptoms the computer is experiencing.
- D . Make a backup of the user's data on an external drive.

Answer: C

Explanation:

Asking the user about the symptoms the computer is experiencing is the first step the technician should take when a user reports that a computer has a virus on it. This step helps the technician to gather information and identify the problem before determining a plan of action to resolve it. Running antivirus software, making a backup of the user's data, or determining a plan of action are not the first steps, but possible actions that can be taken after identifying the problem.

Question: 220

A bank wants to leverage cloud computing but would like a cloud solution in which infrastructure is isolated from other businesses. Which of the following cloud models would BEST address the bank's need?

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

Answer: C

Explanation:

A private cloud is a cloud computing model that provides services and resources to a specific organization or group over a private network. A private cloud can offer more security and control than other cloud models, as well as customized infrastructure that suits the organization's needs. A bank would most likely choose a private cloud model to leverage cloud computing while maintaining isolation from other businesses. A public cloud is a cloud computing model that provides services and resources to anyone over the internet. A hybrid cloud is a combination of public and private cloud services that share data and resources.

Question: 221

A business purchased a new multifunction printer that will be used to photocopy documents with hundreds of pages. A technician is configuring the printer. Which of the following features should the technician ensure is set up?

- A . SMB
- B . PCL
- C . ADF
- D . SSH

Answer: C

Explanation:

Automatic document feeder (ADF) is a feature that allows a multifunction printer to photocopy documents with hundreds of pages automatically without requiring manual intervention. ADF scans multiple pages from a stack of

documents and feeds them into the printer one by one. SMB is a network protocol that allows file sharing and printer access among different devices on a network. PCL is a printer language that controls how data is formatted for printing. SSH is a network protocol that allows secure remote access to another device over an encrypted connection.

Question: 222

The GPS on a user's phone has been unreliable. Which of the following will MOST likely resolve the issue?

- A . Enabling high-accuracy mode
- B . Replacing the battery
- C . Disabling Wi-Fi connections
- D . Utilizing a third-party map application

Answer: A

Explanation:

Enabling high-accuracy mode is the most likely action to resolve the issue of unreliable GPS on a user's phone. High-accuracy mode uses multiple sources of location data, such as Wi-Fi, cellular networks, and Bluetooth, to improve the accuracy and reliability of GPS. Replacing the battery, disabling Wi-Fi connections, or utilizing a third-party map application are unlikely to fix the GPS issue, as they are not directly related to the GPS function

Question: 223

A technician is replacing all RJ45 cables in a customer environment. Which of the following are the BEST tools to execute the task? (Select TWO).

- A . Optical fiber tester
- B . Scissors
- C . Cable tester
- D . Crimper
- E . Coaxial cable
- F . Screwdriver

Answer: C, D

Explanation:

A cable tester and a crimper are the best tools to execute the task of replacing all RJ45 cables in a customer environment. A cable tester can be used to check the continuity and quality of a cable, and a crimper can be used to attach RJ45 connectors to the ends of a cable. An optical fiber tester is a tool that can be used to test fiber optic cables, which are not RJ45 cables. Scissors are not a tool for replacing cables, but for cutting them. A coaxial cable

is a type of cable that has a single copper conductor at its center, which is not an RJ45 cable either. A screwdriver is not a tool for replacing cables, but for fastening or loosening screws.

Question: 224

A new HD webcam's image only updates one or two times per second. The specifications indicate the webcam is capable of updating 30 frames per second. Which of the following is MOST likely causing the issue?

- A . The USB 2.0 port has insufficient bandwidth.
- B . The Thunderbolt connector is not compatible.
- C . The VGA cable does not support a digital signal.
- D . The connection should --- instead of STP.

Answer: A

Explanation:

The USB 2.0 port has insufficient bandwidth to support a high-definition webcam that can update 30 frames per second. USB 2.0 has a maximum theoretical bandwidth of 480 Mbps, which may not be enough for HD video streaming. The user should try using a USB 3.0 port or a Thunderbolt connector, which have higher bandwidths and can support HD webcams. The Thunderbolt connector is compatible with USB devices, so it is not the cause of the issue. The VGA cable and the STP cable are not related to the webcam, as they are used for video output and network connection respectively.

Question: 225

An end user needs to upgrade the hard drive on a laptop and wants one that is fast and shock resistant. Which of the following is the BEST option for this end user?

- A . Hybrid HHD/SSD
- B . 5,400rpm HDD
- C . 7,200rpm HDD
- D . NVMe SDD

Answer: D

Explanation:

A non-volatile memory express (NVMe) solid state drive (SSD) is the best option for an end user who wants to upgrade the hard drive on a laptop and wants one that is fast and shock resistant. NVMe SSDs use flash memory and PCIe interface to achieve high performance and low latency. SSDs are also more shock resistant than hard disk drives (HDDs) because they have no moving parts. Hybrid HDD/SSD combines both technologies but does not offer

the same speed or capacity as pure SSDs.A 5,400rpm HDD or a 7,200rpm HDD are slower and less shock resistant than SSDs

Question: 226

Which of the following frequency bands do 802.11b and 802.11g operate in?

- A . 1GHz
- B . 2.4GHz
- C . 5GHz
- D . 6GHz

Answer: B

Explanation:

The frequency bands that 802.11b and 802.11g operate in are 2.4GHz bands, which allow for longer range but lower speed than higher frequency bands such as 5GHz or 6GHz bands used by newer standards such as 802.11a/n/ac/ax.

Question: 227

A help desk technician receives a ticket stating a printer has jammed several times today. The technician removes the jammed paper and notices the paper supply is low and the paper in the tray is wrinkled. Which of the following MOST likely caused the paper jams?

- A . High latency
- B . Page orientation
- C . Driver mismatch
- D . Multipage misfeed

Answer: D

Explanation:

A multipage misfeed is when more than one sheet of paper feeds into the printer at once, causing paper jams or misprints. A multipage misfeed can be caused by low paper supply or wrinkled paper in the tray, as reported by the user in this case. High latency is not related to paper jams, but to network delays or slow performance. Page orientation refers to whether the page is printed in portrait or landscape mode, which does not affect paper jams either. Driver mismatch could cause printing errors or compatibility issues, but not paper jams.

Question: 228

A user is unable to perform contactless payments with a phone. Which of the following functions is MOST likely causing the issue?

- A . NFC
- B . Hotspot
- C . Bluetooth
- D . USB

Answer: A

Explanation:

Near field communication (NFC) is a function that enables contactless payments with a phone by allowing it to communicate with compatible devices within close proximity. If NFC is not working properly, the user will not be able to perform contactless payments with the phone. Hotspot is a feature that allows a device to share its internet connection with other devices via Wi-Fi, Bluetooth, or USB. Bluetooth is a wireless technology that allows devices to connect and exchange data over short distances. USB is a standard interface that connects devices such as keyboards, mice, flash drives, etc.

Question: 229

Which of the following cloud-computing concepts describes an application that is hosted on the internet but can be used and configured as needed internally per organization?

- A . Hybrid cloud
- B . Public cloud
- C . IaaS
- D . SaaS
- E . PaaS

Answer: E

Explanation:

Platform as a service (PaaS) is a cloud-computing concept that describes an application that is hosted on the internet but can be used and configured as needed internally per organization. PaaS provides a platform for developing, testing, deploying, and managing applications without having to maintain the underlying infrastructure or software. Hybrid cloud is a combination of public and private cloud services that share data and resources. Public cloud is a cloud computing model that provides services and resources to anyone over the internet. Infrastructure as a service (IaaS) is a cloud computing model that provides servers, storage, networking, and software over the internet.

Question: 230

Using the output below:

```
IPv4 Address: 172.25.1.39
Subnet Mask: 255.255.255.0
Router: 172.25.1.252
Name Server: 172.25.1.4
```

Which of the following is the default gateway?

- A . 172.25.1.252
- B . 172.25.1.39
- C . 172.25.1.4
- D . 255.255.255.0

Answer: A

Explanation:

The default gateway is the IP address of the router or device that connects a network to another network or the internet. In the output below, the default gateway is 172.25.1.252, as shown in the line "Default Gateway : 172.25.1.252". The other IP addresses are not default gateways, but either local IP addresses (172.25.1.39 and 172.25.1.4) or subnet masks (255.255.255.0).

Question: 231

A technician is working to connect an RS-232 serial signature pad to a customer's ultralightweight laptop. Which of the following should the technician use to install the device?

- A . Port replicator
- B . Wi-Fi Direct
- C . Hotspot
- D . USB-C cable

Answer: D

Explanation:

A USB-C cable is the best option for installing an RS-232 serial signature pad to an ultralightweight laptop. USB-C is a universal connector that supports various protocols and devices, including serial devices. A port replicator is a device that expands the connectivity options of a laptop by providing additional ports. Wi-Fi Direct is a wireless technology that allows devices to connect directly without a router or access point. Hotspot is a feature that allows a device to share its internet connection with other devices via Wi-Fi, Bluetooth, or USB.

Question: 232

A technician is troubleshooting a classroom projector that shuts down after fifteen minutes of use. Which of the following should the technician do to resolve the issue?

- A . Replace the video input cable.
- B . Change the bulb.
- C . Clean the air filter.
- D . Swap the power cord.

Answer: C

Explanation:

Cleaning the air filter is the best action to resolve the issue of a projector that shuts down after fifteen minutes of use. A dirty air filter can cause overheating and trigger the projector's thermal protection mechanism. Replacing the video input cable, changing the bulb, or swapping the power cord are unlikely to solve the overheating issue

Question: 233

A technician connects a new computer to the internet and then opens the wiring closet. Even though all of the wires are terminated, nothing in the wiring closet is labeled. Which of the following tools should the technician use to complete the task?

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

Answer: C

Explanation:

A toner probe is a tool that can be used to trace and identify cables in a wiring closet. The technician can use a toner probe to find the cable that connects the new computer to the internet. A cable tester is a tool that can be used to check the continuity and quality of a cable. A loopback plug is a tool that can be used to test network ports or cables by sending and receiving signals from the same device. A punchdown tool is a tool that can be used to terminate wires into a patch panel or jack.

Question: 234

A user uploads a file to a storage location that is accessible via a web browser and a client application. The user's coworkers can access the file as well. The service that the file is stored with is provided by a third party for a

monthly fee. The third party's service is available to any business or consumer who would like to use the service. Which of the following BEST describes the type of service that is in use?

- A . Hybrid cloud
- B . Infrastructure as a service
- C . Public cloud
- D . Private cloud

Answer: C

Explanation:

A public cloud is a cloud computing model that provides services and resources to anyone over the internet. The service that the user uploads a file to is an example of a public cloud service, as it is accessible via a web browser and a client application, allows multiple users to access the file, and is provided by a third party for a monthly fee.
A hybrid cloud is a combination of public and private cloud services that share data and resources. Infrastructure as a service is a cloud computing model that provides servers, storage, networking, and software over the internet. Private cloud is a cloud computing model that provides services and resources to a specific organization or group over a private network

Question: 235

A technician is installing a USB Wi-Fi card. Which of the following would be the MOST appropriate way for the technician to receive the latest official drivers for the device?

- A . Download the drivers from the vendor's website.
- B . Allow the OS to install the drivers automatically.
- C . Utilize a third-party, non-OEM driver.
- D . Run the autoinstall CD.

Answer: A

Explanation:

The most appropriate way for the technician to receive the latest official drivers for a USB Wi-Fi card is to download them from the vendor's website. This ensures that the drivers are compatible, updated, and secure.
Allowing the OS to install the drivers automatically may not provide the latest or best drivers for the device.
Utilizing a third-party, non-OEM driver could cause compatibility or security issues. Running the autoinstall CD could install outdated or unnecessary software along with the drivers

Question: 236

A company uses legacy accounting software, and no replacement is available. Which of the following virtualization solutions will the company MOST likely select?

- A . Network
- B . Storage
- C . Desktop
- D . Sandbox

Answer: D

Explanation:

A sandbox is a virtualization solution that allows a legacy application to run in an isolated environment without affecting other applications or systems. A sandbox can emulate an older operating system or hardware configuration that is compatible with the legacy software. A hybrid cloud is a combination of public and private cloud services that share data and resources. Infrastructure as a service is a cloud computing model that provides servers, storage, networking, and software over the internet. Public cloud is a cloud computing model that provides services and resources to anyone over the internet. Private cloud is a cloud computing model that provides services and resources to a specific organization or group over a private network.

Question: 237

A desktop support technician receives an escalated ticket regarding a computer that displays the following message upon booting up: The amount of system memory has changed. Which of the following components is failing?

- A . GPU
- B . HDD
- C . RAM
- D . CPU

Answer: C

Explanation:

The message "The amount of system memory has changed" indicates that there is a problem with the random access memory (RAM) modules in the computer. The RAM may be loose, faulty, or incompatible with the motherboard or other components. The GPU, HDD, and CPU are not directly related to system memory and would not cause this message to appear.

Question: 238

A user is having an issue with the touch screen on a mobile device. When the user touches the screen, the intended target is not selected. Which of the following would be the BEST action for a technician to take to resolve the issue?

- A . Calibrate the touch screen.

- B . Reset the mobile device.
- C . Replace the LED screen.
- D . Update the mobile device.

Answer: A

Explanation:

Calibrating the touch screen is the best action to resolve the issue of inaccurate touch input. Calibration adjusts the touch screen's sensitivity and alignment to match the user's touch. Resetting the mobile device could erase user data and settings and may not fix the touch screen issue. Replacing the LED screen or updating the mobile device are unnecessary and costly actions that may not solve the problem.

Question: 239

Which of the following network options would work BEST to ensure a client-side virtual machine cannot access the rest of the network?

- A . NAT mode
- B . Bridge mode
- C . Direct mode
- D . Host-only mode

Answer: D

Explanation:

Host-only mode is a network option that isolates a client-side virtual machine from the rest of the network. It allows the virtual machine to communicate only with the host machine and other virtual machines on the same host. NAT mode allows the virtual machine to share the host's IP address and access the network through it. Bridge mode allows the virtual machine to have its own IP address and connect directly to the network. Direct mode is not a valid network option for virtual machines.

Question: 240

A user reports that a computer will not turn on. The technician verifies the power cord and the outlet the computer are plugged into are both working properly. Which of the following is the hardware component that has MOST likely failed?

- A . PSU
- B . CPU
- C . RAM
- D . GPU

Answer: A

Explanation:

The power supply unit (PSU) is the component that converts AC power from the outlet to DC power for the computer. If the PSU fails, the computer will not turn on. The CPU, RAM, and GPU are not directly related to the power supply and would not prevent the computer from turning on.

Question: 241

A user wants RAID to be configured on a desktop to allow the fastest speed and maximum storage capacity. Which of the following RAID types should a technician configure to accommodate this request?

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

Answer: A

Explanation:

RAID 0 is a configuration that stripes data across multiple disks without parity or redundancy. It provides the fastest speed and maximum storage capacity among the RAID types listed, but it also has no fault tolerance. RAID 1 mirrors data across two disks, providing redundancy but halving the storage capacity. RAID 5 stripes data across three or more disks with parity, providing fault tolerance but reducing the storage capacity by one disk. RAID 10 combines mirroring and striping across four or more disks, providing both speed and redundancy but reducing the storage capacity by half.

Question: 242

A technician is attempting to connect the wired LANs at two nearby buildings by installing a wireless point-to-point connection. Which of the following should the technician consider?

- A . NFC protocol data rate
- B . RFID frequency range
- C . Bluetooth version compatibility
- D . Allowable limits for transmit power

Answer: D

Explanation:

When installing a wireless point-to-point connection between two buildings, the technician should consider the allowable limits for transmit power, which vary depending on the country or region. Exceeding these limits could interfere with other wireless devices or violate regulations. NFC protocol data rate, RFID frequency range, and Bluetooth version compatibility are not relevant for a wireless point-to-point connection.

Question: 243

A user reports a tablet restarts on its own every five to ten minutes. In addition, the tablet has intermittent issues with charging. The technician gives the user a new power adapter and charging cable, and the technician also tries resetting the OS. but the issue persists. Which of the following is the MOST likely cause of the issue?

- A . Water damage
- B . Incorrect OS version
- C . Faulty battery
- D . Damaged charging port

Answer: C

Explanation:

A faulty battery could cause a tablet to restart on its own and have intermittent issues with charging. Water damage could also cause these symptoms, but it is not the most likely cause unless there is evidence of liquid exposure. Incorrect OS version could cause compatibility or performance issues, but not charging problems. Damaged charging port could prevent the tablet from charging, but not cause it to restart randomly.

Question: 244

A technician verifies the slow boot time and slow OS performance of a tower server with a RAID 5 on a PCIe RAID card that does not support hot swapping. Which of the following steps should the technician take NEXT to verify RAID health?

- A . Verify S.M.A.R.T. operation on the RAID card.
- B . Replace the failed drive while users are connected
- C . Physically clean the HDDs and connectors.
- D . Shut down the server and check the RAID controller's status.

Answer: D

Explanation:

Since the RAID card does not support hot swapping, the technician needs to shut down the server and check the RAID controller's status to verify RAID health. S.M.A.R.T. is a feature of hard drives, not RAID cards. Replacing the failed drive while users are connected could cause data loss or corruption. Physically cleaning the HDDs and connectors is unlikely to solve the slow boot time and performance issues.

Question: 245

A technician is troubleshooting connectivity issues and needs to promiscuously route a copy of traffic to a separate machine for analysis. Which of the following physical tools would BEST accomplish this task?

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

Answer: C

Explanation:

A network tap is a physical device that allows promiscuous monitoring of network traffic by creating a copy of the data packets for analysis. A toner probe is used to trace and identify cables. A Wi-Fi analyzer is used to measure wireless signal strength and interference. A loopback plug is used to test network ports or cables by sending and receiving signals from the same device.

Question: 246

An administrator chose a shared-tenant model for a cloud deployment. Which of the following is the MOST likely reason the administrator chose this model?

- A . Cost savings
- B . Highly available
- C . Dedicated hardware
- D . Increased security

Answer: A

Explanation:

The shared-tenant model for a cloud deployment, also known as a multi-tenant model, allows multiple customers to use the same resources and infrastructure of the cloud service provider, with each customer's data and applications isolated from one another. This model is often chosen for cost savings, as resources are shared and users only pay for what they use. Therefore, the MOST likely reason that an administrator chose this model is A. Cost savings.

Question: 247

Every time a user sends a print job, the user must walk over to the printer and press OK before the job will print. The same issue is occurring for multiple users. Which of the following is the MOST likely cause of the issue?

- A . The wrong network printer queue is being used.
- B . The network printer is on the wrong VLAN.
- C . A The default paper type has been changed.
- D . The print server has outdated print drivers.

Answer: C

Explanation:

The message prompting to press 'OK' indicates that the printer is waiting for a user input. This suggests that there is some issue with the printer settings, and the most probable cause is that the default paper type has been changed, and the printer needs the user to confirm the paper type before proceeding with the print job. This is a common issue that can occur when the default paper type is not set correctly or has been changed without the user's knowledge.

Question: 248

Which of the following handles touch-screen operation on a mobile device?

- A . Stylus
- B . Liquid crystal display
- C . Processor
- D . Digitizer

Answer: D

Explanation:

[A digitizer is a component that handles touch-screen operation on a mobile device. It is a layer of material that detects and converts the touch of a finger or a stylus into an electrical signal that can be processed by the device. A digitizer works with a display screen to create a touch-screen interface that allows a user to interact with the device by touching pictures or words on the screen.](#)

Question: 249

Which of the following describes the BEST use case for a client-side hypervisor?

- A . By For a software developer who is required to test an application in many environments
- B . When the data center environment is out of resources for a new server
- C . As a cost-saving measure to allow multiple users on one computer
- D . To provide a backup to cloud-based solutions during internet failures

Answer: A

Explanation:

A client-side hypervisor is a virtual machine monitor (VMM) that resides in and virtualizes a user's computer, allowing it to run multiple operating systems (or virtual machines) on shared hardware¹². A client-side hypervisor can be useful for a software developer who needs to test an application in many environments, such as different versions of Windows, Linux, or Mac OS. By using a client-side hypervisor, the developer can switch between different virtual machines without rebooting the computer or using multiple physical devices³.

Question: 250

A technician is configuring a desktop computer, and the hard drive must be encrypted. Which of the following will the technician need to verify is enabled to complete this configuration?

- A . ATX
- B . NIC
- C . TPM
- D . ARM

Answer: C

Explanation:

TPM stands for Trusted Platform Module, which is a hardware component that securely stores encryption keys and other sensitive data¹². TPM can be used to enable hard drive encryption, which is a technology that encrypts the data stored on a hard drive using sophisticated mathematical functions³⁴. Hard drive encryption protects the data from unauthorized access in case the hard drive is lost, stolen, or tampered with.

Question: 251

Which of the following is an unsecure remote access protocol?

- A . SSH
- B . HTTPS
- C . SFTP
- D . Telnet

Answer: D

Explanation:

Telnet is an unsecure remote access protocol that allows a user to connect to a remote device and execute commands on it12.Telnet does not encrypt the data that is transmitted between the user and the device, which means that anyone who intercepts the network traffic can read the information, including usernames and passwords12.Telnet also does not authenticate the user or the device, which means that anyone can impersonate either party and gain unauthorized access1.

Question: 252

A drive failed on a server that was leveraging a RAID disk configuration. The server administrator would like to rebuild the array so it can withstand a potential multidrive failure in the future. Which of the following RAID configurations will the administrator MOST likely select?

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

Answer: D

Explanation:

RAID stands for Redundant Array of Independent Disks, which is a technology that combines multiple disks into a logical unit to improve performance, reliability, or both. There are different types of RAID levels that use different methods of data distribution and redundancy.

RAID 0 is a level that stripes data across multiple disks without any redundancy. It offers the highest performance but no fault tolerance. If any disk fails, the entire array is lost.

RAID 1 is a level that mirrors data across two disks. It offers the lowest performance but the highest fault tolerance. It can survive the failure of one disk.

RAID 5 is a level that stripes data across multiple disks with parity information. It offers a balance between performance and fault tolerance. It can survive the failure of one disk, but not two or more disks.

RAID 10 is a level that combines RAID 1 and RAID 0. It creates a striped array of mirrored pairs. It offers high performance and high fault tolerance. It can survive the failure of one disk in each pair, or multiple disks in different pairs.

Therefore, if the server administrator wants to rebuild the array to withstand a potential multidrive failure in the future, RAID 10 is the most likely choice.

Question: 253

A user receives the following error when trying to reboot a computer:

```
System RAID Controller FW v1.2
A disk member in an array has failed or is not responding
Port      Device ID    Description          Status
sata0     disk0        Generic 500 SATA III   OK
sata1     disk1        Generic 500 SATA III   Not Found
```

Which of the following is the MOST likely cause of this error message?

- A . Corrupted bootloader
- B . Faulty RAID controller
- C . Failed hard drive
- D . Incorrect storage device driver

Answer: C

Explanation:

The error message 'Reboot and Select Proper Boot Device' indicates that the computer cannot find the boot device that contains the operating system¹². This can happen if the hard drive that stores the operating system is damaged or failed, and the BIOS cannot detect it or read from it²³. A failed hard drive can also cause other symptoms such as clicking noises, corrupted files, or slow performance⁴.

Question: 254

A user's desktop computer slows down after a few minutes of use, and the fans alternate between silent and very loud. Which of the following is MOST likely failing, therefore causing these symptoms?

- A . CPU fan
- B . Memory
- C . Power supply
- D . Hard drive

Answer: A

Explanation:

A CPU fan is a component that cools down the CPU, which is the main processor of the computer. If the CPU fan is failing, it can cause the computer to slow down and the fans to alternate between silent and very loud¹². This is because the CPU fan cannot maintain a consistent speed and airflow to keep the CPU at a safe temperature. When the CPU gets too hot, it throttles its performance to avoid overheating, which results in a slower computer. The other fans in the computer also try to compensate for the lack of cooling from the CPU fan by spinning faster and louder².

Question: 255

A user is unable to connect a mobile phone while in a car. However, a second mobile Device is able To connect in The same car, WHICH of the Following settings should the user check on the first phone?

- A . Wi-Fi
- B . Hotspot
- C . Bluetooth
- D . Location

Answer: C

Explanation:

To connect a mobile phone to a car, you need to pair them using Bluetooth, which is a wireless technology that allows secure local networks between devices1. If one phone can connect to the car but another cannot, it means that the first phone has Bluetooth enabled and paired with the car, while the second phone does not. Therefore, the user should check the Bluetooth settings on the second phone and make sure it is turned on and discoverable21.

Question: 256

Which of the following video cables can carry an audio signal?

- A . HDMI
- B . S-Video
- C . VGA
- D . DVI

Answer: A

Explanation:

This is because HDMI (High-Definition Multimedia Interface) is a digital video cable that can also carry audio signals1. HDMI cables are commonly used to connect devices like Blu-ray players, game consoles, and streaming boxes to HDTVs and monitors. The other options are not capable of carrying audio signals.VGA (Video Graphics Array) is an analog video cable that only carries RGBHV signals12.S-Video (Super Video) is another analog video cable that carries separate luminance and chrominance signals1.DVI (Digital Visual Interface) is a digital video cable that can carry either analog or digital signals, but not audio1.

Question: 257

A user reports that a printer is leaving streaks on printed pages. The paper type and the toner have been replaced. Which of the following should the technician check NEXT to resolve the issue?

- A . System board
- B . Paper tray
- C . Memory
- D . Fuser

Answer: D

Explanation:

This is because the fuser is the part of the printer that heats and melts the toner onto the paper. If the fuser is defective or dirty, it can cause streaks or smudges on printed pages. The system board and the memory are not related to the quality of the print output. The paper tray may cause paper jams or misfeeds, but not streaks on the paper.

Question: 258

A customer has contacted you about building two new desktops. The first desktop will be a gaming workstation. The customer requirements include:

Playing the newest games at a high frame rate

Fast game load times

Enough storage to have several games installed at once

High-end audio

No concern about cost

Running the current Windows OS

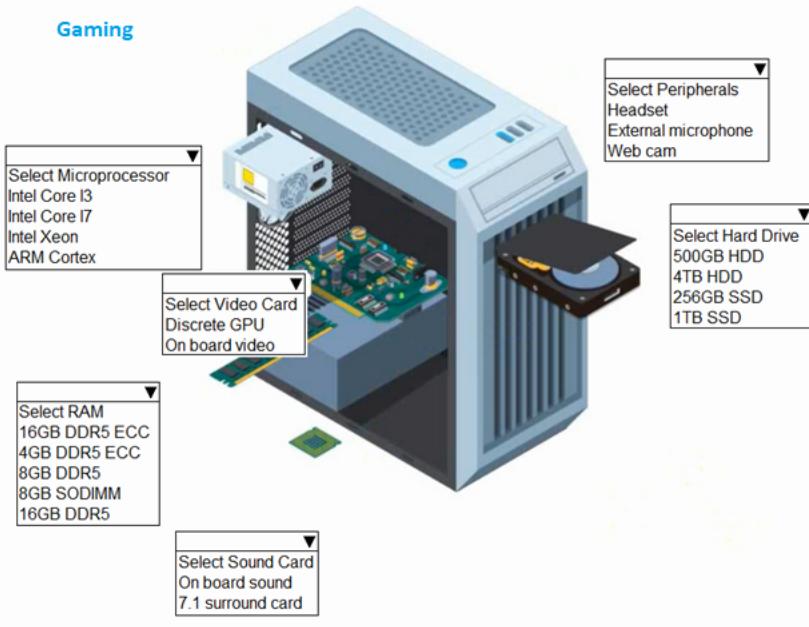
The second workstation will be a family workstation. The requirements include:

Capability for word processing, videoconferencing, and basic web surfing

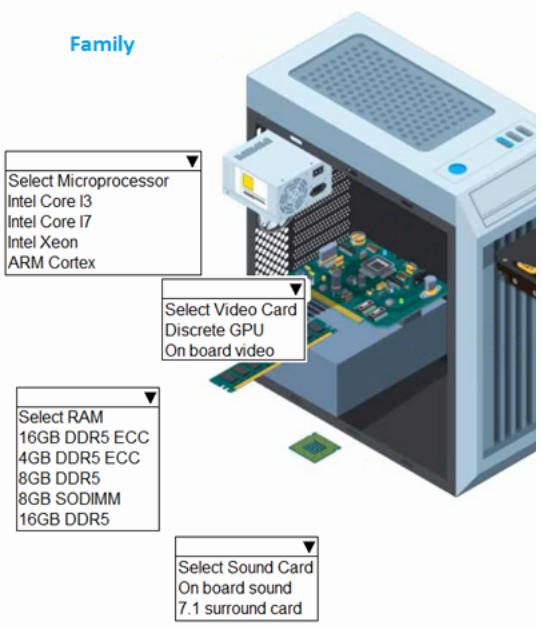
Minimal cost, as long as it meets the requirements

Running the current Windows OS

Gaming

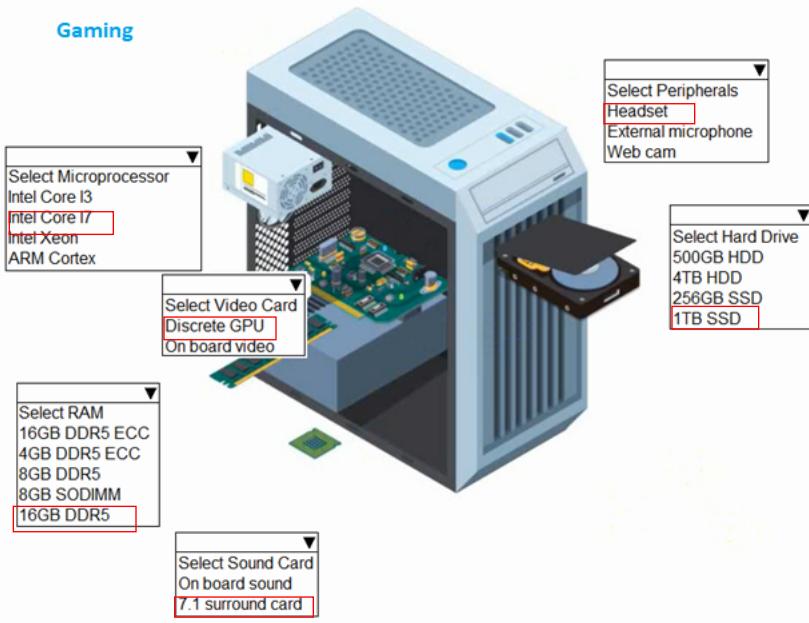


Family

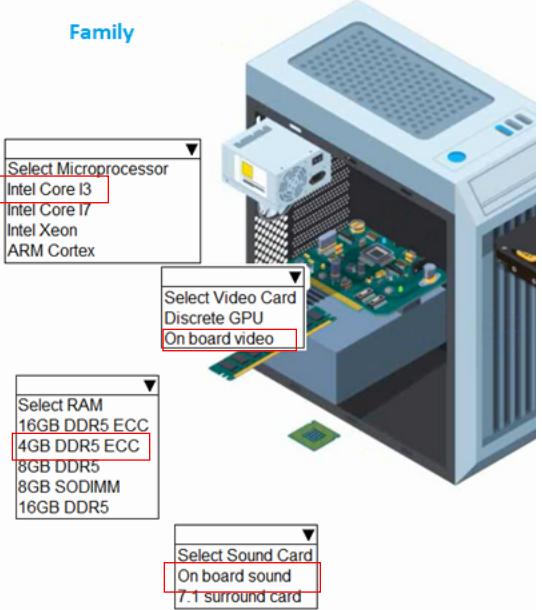


Answer:

Gaming

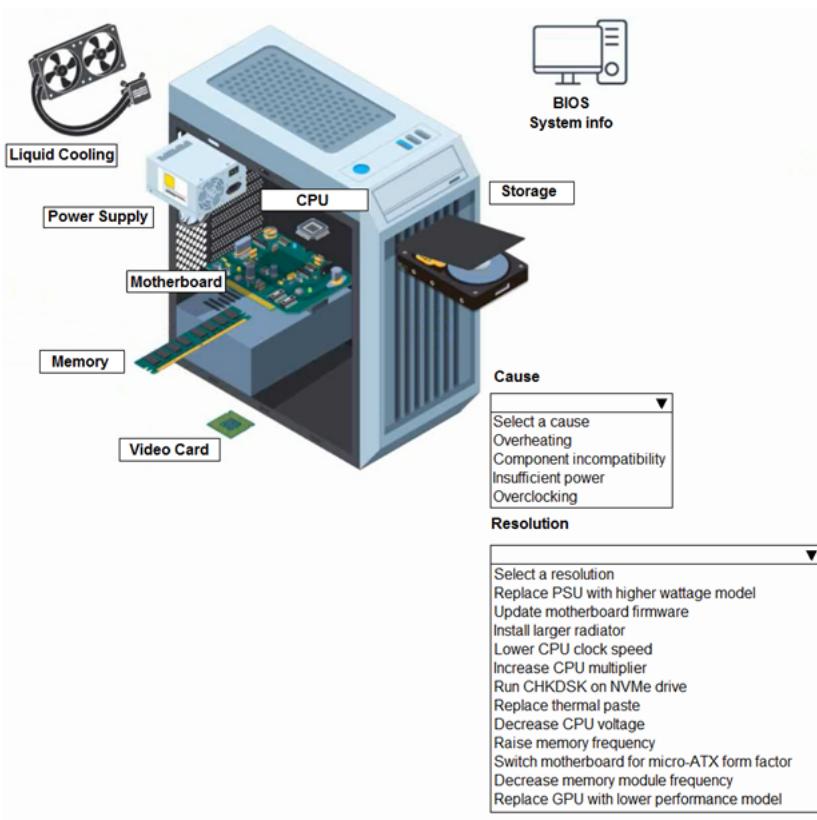


Family

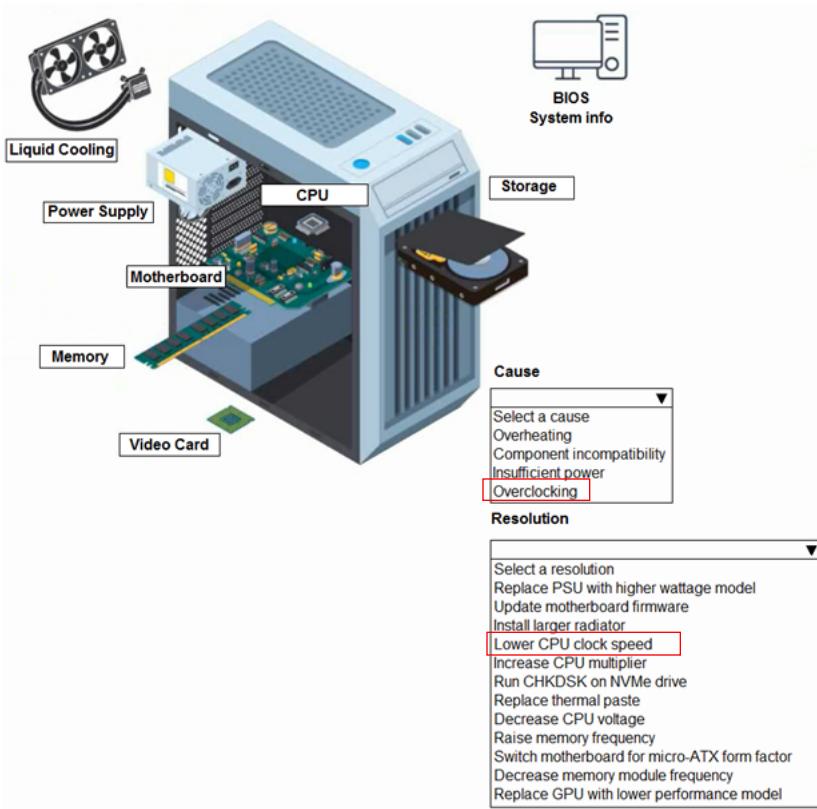


Question: 259

A customer built a computer for gaming, sourcing individual components and then assembling the system. The OS starts up, but within a few minutes the machine locks up. The customer brought the computer to a technician to diagnose the issue.



Answer:



Question: 260

A technician who works in a high-security environment needs to set up a laptop with triple monitors for a new security employee. All USB ports are disabled due to security policies. Which of the following should the technician do to BEST meet the requirements?

- A . Install a splitter cable
- B . Install a discrete graphics card.
- C . use an HDMI switch.
- D . Implement a docking station.

Answer: D

Explanation:

This is because a docking station can connect multiple monitors to a laptop without using USB ports, which are disabled in this scenario. A splitter cable would only allow two monitors to be connected, not three. A discrete graphics card would require opening the laptop and installing hardware, which may not be feasible or allowed in a high-security environment. An HDMI switch would only allow one monitor to be active at a time, not all three simultaneously.

Question: 261

To which of the following should a technician connect individual pairs of a Cat 6 cable in order to provide a connection to a switch?

- A . Access point
- B . Patch panel
- C . Hub
- D . Firewall
- E . Wall jack

Answer: B

Explanation:

A patch panel is a mounted hardware unit containing ports used to manage cable connections. The individual pairs of a Cat 6 cable are terminated on the patch panel, which then provides a central location for cable management and organization. The patch panel is then connected to the switch using a patch cable.

Question: 262

A field technician for an airport receives a support ticket that states customers are having issues viewing a screen that displays information about departing flights. While checking the case history, the technician sees that all flight information screens were recently moved when the terminal gates were remodeled. Which of the following actions should the technician perform after verifying the screen has power?

- A . Ensure the input connections to the screen are secure.
- B . Swap cables with a screen that works.
- C . Check to see if the device outputting the data is turned on.
- D . Determine if the screen is compatible with the output device.

Answer: A

Explanation:

The technician should ensure the input connections to the screen are secure1. The screen may not be receiving the signal from the device outputting the data if the input connections are not secure1. Swapping cables with a screen that works is not likely to be the correct option1

Question: 263

A help desk technician plugged in a user's new computer to a network port After a few minutes the computer showed an APIPA address. Which of the following is the MOST likely reason this happened?

- A . The WLAN is disabling the NIC card.
- B . The network cable is not attached.
- C . The PC is unable to contact a DHCP server
- D . The DHCP server is using addresses in the range of 169.254.254.1.

Answer: C

Explanation:

The most likely reason for a computer showing an APIPA address after being plugged into a network port is that the PC is unable to contact a DHCP server1. Automatic Private IP Addressing (APIPA) is a DHCP fail-safe that protects a computer system from failure. It invokes a standby mechanism for local Internet Protocol version 4 (IPv4) networks supported by Microsoft Windows. With APIPA, DHCP clients can obtain IP addresses even when DHCP servers are not functional1. The other options are less likely to be the cause of the issue1.

Question: 264

Which of the following BEST describes a lab environment in which virtual machines can be created, rebooted, and shut down without affecting the production network?

- A . SCADA
- B . Sandbox
- C . Honeypot
- D . Hybrid cloud

Answer: B

Explanation:

A sandbox is a lab environment in which virtual machines can be created, rebooted, and shut down without affecting the production network. This allows for testing and experimentation without the risk of damaging the production environment123..

Question: 265

An IT technician is inspecting the internal components of a desktop computer to assess a suspected power issue with the motherboard. Which of the following connectors should the IT technician inspect further?

- A . RJ45
- B . Straight tip
- C . DB9
- D . Molex

Answer: D

Explanation:

The connector that the IT technician should inspect further isMolex. The Molex connector is used to provide power to the motherboard and other components in the computer.If there is a suspected power issue with the motherboard, the IT technician should inspect the Molex connector to ensure that it is properly connected and providing power to the motherboard1

Question: 266

Which of the following components houses the MX record?

- A . DNS
- B . VLAN
- C . DHCP
- D . SMTP

Answer: A

Explanation:

The MX record is housed in theDNS(Domain Name System) which is responsible for translating domain names into IP addresses and vice versa.The MX record specifies the mail server responsible for accepting email messages on

behalf of a domain name and is a resource record in the DNS123.

Question: 267

A desktop support technician is building a new desktop that features the fastest internal storage. Which of the following BEST suits this request?

- A . SATASSD
- B . SATA HDD
- C . M2PCIeNVMeSSD
- D . PCIe SATA HDD

Answer: C

Explanation:

M2PCIeNVMeSSD. M.2 PCIe NVMe SSDs are the fastest internal storage devices available for desktops. They are faster than SATA SSDs and PCIe SATA HDDs.

Question: 268

A technician is troubleshooting an issue involving lines appearing down copied pages, but printed pages sent directly to the copier render as intended. Which of the following is the MOST likely cause of this issue?

- A . Empty imager drum
- B . Overheated system fuser
- C . Scratched scanner glass
- D . Third-party toner

Answer: C

Explanation:

If lines appear down copied pages but printed pages sent directly to copier render as intended, it could be due to scratched scanner glass which can cause lines or streaks on copied pages.

If there are lines appearing on copied pages, but not on printed pages sent directly to the copier, the issue is most likely caused by a scratch on the scanner glass. Reference: <https://www.pacificoffice.com/how-to-fix-lines-on-copier/>

Question: 269

A user's touch-screen tablet is having an issue with the screen orientation. Which of the following is MOST likely causing this issue?

- A . The screen rotation is locked
- B . The screen protector on the tablet is damaged
- C . The touch-screen digitizer is malfunctioning
- D . The inverter is misconfigured

Answer: A

Explanation:

The screen rotation is locked. If a user's touch-screen tablet is having an issue with screen orientation, it could be due to screen rotation being locked in device settings.

If the screen rotation is locked, the touch-screen tablet will not rotate the screen when the device is turned. This can usually be unlocked in the settings or by pressing a specific key combination. Reference: <https://www.howtogeek.com/254132/how-to-enable-screen-rotation-on-windows-10/>

Question: 270

A technician needs to install RAM into a rackmount server that will be used as a VM host. Which of the following would be BEST to install?

- A . SODIMM
- B . VRAM
- C . DDR4
- D . ECC

Answer: D

Explanation:

When installing RAM into a server that will be used as a VM host, it is recommended to install ECC (Error-Correcting Code) RAM to help prevent errors that can cause virtual machines to crash. Reference: <https://www.servermonkey.com/blog/ecc-vs-non-ecc-ram-what-are-the-differences.html>

When installing RAM into a rackmount server that will be used as a VM host, it would be best to install ECC (Error Correcting Code) RAM which can detect and correct common types of data corruption.

Question: 271

A customer called the help desk to request information about how to increase the volume on a laptop using only a keyboard. Which of the following keys would MOST likely allow this to be done?

- A . Alt
- B . Fn
- C . Tab
- D . Ctrl

Answer: B

Explanation:

To increase the volume on a laptop using only a keyboard, a user can press and hold down the Fn key while pressing one of the function keys (usually F1-F12) that has an icon representing volume up.

Question: 272

New memory modules were installed in several Windows desktops but some users are still reporting performance issues. Upon investigation, a systems administrator notices the desktop has not recognized the new memory modules. Which of the following should the systems administrator perform to help resolve this issue?

- A . Configure appropriate settings within the BIOS
- B . Replace the RAM
- C . Modify the boot. ini file.
- D . Install the required drivers through the Control Panel

Answer: A

Explanation:

To resolve the issue of new memory modules not being recognized, the systems administrator should configure appropriate settings within the BIOS. This can include enabling memory mapping or setting memory speed and timings. Reference: CompTIA A+ Certification Exam Objectives, 220-1101 Section 1.8

Configure appropriate settings within the BIOS. If new memory modules were installed in several Windows desktops but some users are still reporting performance issues and the desktop has not recognized the new memory modules, the systems administrator should configure appropriate settings within the BIOS to help resolve this issue.

Question: 273

A technician is on site troubleshooting a customer's laptop. The technician needs to download a software update but the company's proxy is blocking updates. Which of the following would be the MOST appropriate action for the technician to take to get the update?

- A . Connect to a hotspot
- B . Request a traffic exemption.

- C . Change the DNS address to 1.1.1.1
- D . Update the Group Policy settings

Answer: B

Explanation:

If a technician is on site troubleshooting a customer's laptop and needs to download a software update but the company's proxy is blocking updates, the most appropriate action for the technician to take would be to request a traffic exemption from the company's IT department.

Question: 274

An organization keeps receiving spam that appears to come from its own domain. No accounts have been compromised. Which of the following will BEST mitigate this issue?

- A . DNS
- B . S/MIME
- C . SPF
- D . SSID

Answer: C

Explanation:

The BEST solution to mitigate spam that appears to come from an organization's own domain is to implement SPF (Sender Policy Framework). SPF is an email validation protocol designed to detect and prevent email spoofing, which is a common tactic used by spammers. By publishing SPF records in the organization's DNS (Domain Name System), the recipient's mail server can check if an incoming email originated from a valid source. If the email fails SPF authentication, it can be blocked or flagged as spam. Therefore, SPF helps to prevent email spoofing and mitigate the risk of spam coming from an organization's own domain.

Question: 275

The motherboard on a user's company laptop was recently replaced. Now the user is unable to log in using the fingerprint reader. The fingerprint reader is working but it does not recognize the user's fingerprint. Which of the following should a technician perform FIRST to fix the issue?

- A . Restore the system to a previous recovery point
- B . Reinstall the fingerprint software
- C . Access the BIOS and clear the TPM
- D . Update the drivers and the fingerprint software
- E . Flash the newest BIOS firmware that is available

Answer: B

Explanation:

If a user is unable to log in using the fingerprint reader on a company laptop after the motherboard was replaced, it could be due to an issue with the fingerprint software. The first step to fix the issue would be for the technician to reinstall the fingerprint software.

Question: 276

A technician is troubleshooting a laptop that has a blank LCD panel. The technician shines a flashlight into the LCD and sees a faint image. Which of the following BEST describes the issue?

- A . Defective inverter
- B . Incomplete video driver
- C . Incorrect input source
- D . Burned-out bulb

Answer: A

Explanation:

An inverter is a device that converts DC power from the laptop's battery or AC adapter to AC power for the backlight of the LCD panel. If the inverter is defective, the backlight will not work and the LCD panel will appear blank or very dim. The user can still see a faint image if they shine a flashlight into the LCD because the LCD itself is still working.

Question: 277

A user's track pad has stopped working. Which of the following should the user do to resolve the track pad's functionality?

- A . Reinstall the mouse drivers
- B . Use the Function key.
- C . Calibrate the digitizer
- D . Configure the mouse settings.

Answer: B

Explanation:

The correct answer is B. Use the Function key.

The explanation is that some laptops have a Function key (Fn) that can be used to toggle the track pad on or off. This can be useful if the user wants to use an external mouse instead of the track pad, or if the track pad is accidentally activated by palm movements. The user should look for a Fn key on their keyboard and a track pad icon on one of the other keys, such as F5 or F9, and press them together to enable or disable the track pad.

Question: 278

A user is looking for a way to increase the total RAM in a system without upgrading the hardware. Which of the following should the user perform to complete this task?

- A . Run a burn-in application
- B . Create a VM.
- C . Install hardware-tuning software.
- D . Set up virtual memory.

Answer: D

Explanation:

Virtual memory is a software-based memory management system that allows a computer to use hard disk storage space as RAM. This can be used to increase the total RAM in a system without upgrading the hardware. To set up virtual memory, the user should go to the System Properties window and select the Advanced tab. In the Performance section, click on the Settings button, which will open the Performance Options window. Then, click on the Advanced tab and click on the Change button in the Virtual memory section. Finally, select the option to Automatically manage paging file size for all drives, and then click OK to save the changes.

Question: 279

A tier one technician has spent the past thirty minutes troubleshooting an issue with an end user's network connection. After a solution was implemented, the end user rebooted the system, tested the issue, and confirmed the issue was resolved. Which of the following should the technician do NEXT?

- A . Document the findings, actions, and solution in the company knowledge base
- B . Advise the user to try the solution before contacting the help desk if the issue happens again
- C . Establish a theory of probable cause
- D . Escalate the issue to the tier two support team for resolution.

Answer: A

Explanation:

[According to the Official CompTIA A+ Core 1 Study Guide \(220-1101\), the correct answer is A. Document the findings, actions, and solution in the company knowledge base.](#)

The explanation is that after resolving an issue, a technician should always document what was done and how it was fixed. This helps to create a record of the problem and its solution for future reference and also to share knowledge with other technicians.

<https://www.comptia.org/training/books/a-core-1-220-1101-study-guide>

By documenting the findings, actions, and solution in the company knowledge base, it will help to ensure that if the issue happens again, the technician or a different technician will be able to quickly and easily find the solution and resolve the issue. Additionally, it is important to document the solution so that the same issue does not need to be troubleshooted multiple times in the future.

Question: 280

A user's laptop is running out of disk space and requires a new hard drive. The user wants to replace the existing hard drive with the fastest possible 1 TB HDD. A technician assesses the user's hardware and determines the connections that are available. Which of the following drive types should the technician recommend as the BEST choice?

- A . 1TB NVMe SSD
- B . 1TB flash drive
- C . 1TB SATA SSD
- D . 1TB SAS

Answer: A

Explanation:

The best choice for the user's laptop is a 1TB NVMe SSD. NVMe (Non-Volatile Memory Express) is a high-performance storage protocol designed specifically for solid-state drives (SSDs). It is significantly faster than SATA SSDs and SAS hard drives, making it ideal for users who need fast storage for their laptop. NVMe SSDs also have lower latency and higher bandwidth than traditional hard drives, making them well-suited for data-intensive tasks such as video editing, gaming, and running multiple applications simultaneously. Additionally, NVMe offers more reliable data reliability than traditional hard drives, and is less susceptible to performance degradation over time.

Question: 281

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 traveling?

- A . Enable the GPS service to ensure accurate location detection.
- B . Update the PRL when getting to a new location.
- C . Configure less location checks using cellular location services,
- D . use the offices' Wi-Fi IP addresses as the geolocation mechanism.

Answer: C

Explanation:

The best action for the salesperson to take in order to view weather forecasts while traveling and minimize the battery drain on their mobile device is to configure fewer location checks using cellular location services. This can be done by adjusting the settings for the weather application to limit how often it checks for updates and uses location services. This will help to conserve the battery on the device and keep the application from consuming too much power.

Question: 282

A technician recently received a written warning for causing a system-wide outage. The outage was a result of an unscheduled patch being manually pushed during production hours. Which of the following could have MOST likely prevented the technician from receiving the warning?

- A . Following corporate procedures
- B . Testing before deployment
- C . Documenting the findings
- D . Establishing a plan of action

Answer: A

Explanation:

Following corporate procedures would have been the most likely factor that could have prevented the technician from receiving the written warning. Following established procedures, such as change management, helps ensure that changes made to the production environment are thoroughly tested, approved, and implemented in a controlled and safe manner, reducing the risk of system-wide outages and other unintended consequences.

Question: 283

An insurance company wants to implement cloud computing and would like a cloud solution in which the infrastructure is shared with businesses in the same industry. Which of the following cloud models BEST addresses the company's need?

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

Answer: A

Explanation:

The cloud model that BEST addresses the company's need is the Community cloud model. A community cloud is a cloud infrastructure in which multiple organizations share resources and services based on common operational and regulatory requirements. The concept of a community cloud is akin to a community garden, where different individuals grow produce on a single piece of shared land1.

Question: 284

Which of the following connectors can be plugged into a Thunderbolt 3 port on a laptop?

- A . miniUSB
- B . microUS3
- C . USB-A
- D . USB-C

Answer: C

Explanation:

Thunderbolt 3 is a USB-C port, so any device with a USB-C connector can be plugged into it. MiniUSB, microUSB and USB-A are not compatible with Thunderbolt 3.

Question: 285

A software developer used client-side virtualization on a server to configure a web application. Although the application is working locally on the software developer's PC, other users on the LAN are not able to access the application. Which of the following would allow other users to access the application?

- A . Bridge networking
- B . Application virtualization
- C . Virtual desktop
- D . Site-to-site VPN

Answer: A

Explanation:

Client-side virtualization is used to run an application or process on a separate virtual machine, isolated from the main operating system. To allow other users on the LAN to access the application, the software developer should configure a bridge networking connection between the virtual machine and the LAN. This will allow the virtual

machine to communicate with other computers on the network. Application virtualization, virtual desktop, and site-to-site VPN are not necessary steps for allowing other users to access the application.

Question: 286

Which of the following options provides correct information about 2.4GHz and 5GHz wireless frequencies? (Select TWO)

- A . 2.4GHz has less interference. 5GHz transmits inlower speed.
- B . 2.4GHz penetrates solid objects more effectively. 5GHz provides faster data connections.
- C . 2.4GHz has a higher data rate. 5GHz has 23 channels.
- D . 2.4GHz has 11 channels. 5GHz has no data interference.
- E . 2.4GHz has a higher coverage area. 5GHz has higher bandwidth.
- F . 2.4GHz has a higher bandwidth. 5GHz has lower transmit power.

Answer: B, E

Explanation:

The correct answers are B. 2.4GHz penetrates solid objects more effectively. 5GHz provides faster data connections and E. 2.4GHz has a higher coverage area. 5GHz has higher bandwidth. The 2.4GHz frequency has a lower data rate compared to 5GHz, but it can penetrate solid objects more effectively and has a higher coverage area. The 5GHz frequency, on the other hand, provides faster data connections and has higher bandwidth, but it has fewer channels and lower transmit power.

Topic 3, Exam Pool C

Question: 287

The owner of a restaurant reports that wireless network connections are lost intermittently throughout the day. Which of the following steps should a technician take to troubleshoot the issue? (Select TWO).

- A . Identify the location of devices that utilize 2.4GHz.
- B . Check to see if the phones are IJTP or STP lines.
- C . Test to see if the copper electrical Wires are causing interference.
- D . Map all of the wireless signals in the restaurant.
- E . Verify T568B is being used in the wiring closet patch panel.
- F . Schedule timed router reboots throughout the day.

Answer: A, D

Explanation:

The correct answers are A. Identify the location of devices that utilize 2.4GHz and D. Map all of the wireless signals in the restaurant. In order to troubleshoot the issue, the technician should first identify the location of devices that utilize the 2.4GHz frequency, as this can cause interference with the wireless signal. Additionally, the technician should map all of the wireless signals in the restaurant in order to identify any potential sources of interference. Checking to see if the phones are IJTP or STP lines, testing to see if the copper electrical wires are causing interference, verifying T568B is being used in the wiring closet patch panel, and scheduling timed router reboots throughout the day are not necessary steps for troubleshooting this issue.

Question: 288

A technician responds to a help desk ticket that indicates a user's workstation is not booting. The technician initially suspects a failed hard drive. The technician performs diagnostics and confirms the hard drive is fully operational.

Which of the following steps should the technician complete NEXT?

- A . Reinstall the operating system.
- B . Configure a new RAID array.
- C . Report the status of the drive and close the ticket.
- D . Consider another possible cause of the issue.
- E . Restore the latest backup of the system.

Answer: D

Explanation:

Since the hard drive appears to be functioning normally, the technician should investigate other potential causes of the issue. This could include checking the BIOS settings, verifying the connections to the hard drive, and testing the RAM. Once these steps have been completed, the technician can then take the necessary steps to resolve the issue.

Question: 289

A technician set up a new access point and has noticed significant latency on the selected channel. Which of the following tools can assist with locating the BEST channel to use?

- A . Wi-Fi analyzer
- B . Netstat
- C . Net use
- D . Traceroute
- E . Network tap

Answer: A

Explanation:

A Wi-Fi analyzer is a tool that can be used to scan the local area for available wireless networks and can provide information such as signal strength, interference, and available channels. It can also be used to locate the best channel to use for a given access point, which can help to reduce latency and improve performance.

Question: 290

A company wants to give third-party developers access to the corporate network through desktop environments that the company can control. Which of the following can BEST achieve these requirements?

- A . Sandbox
- B . VDI
- C . Private cloud
- D . SaaS

Answer: B

Explanation:

VDI is a technology that allows a company to provide desktop environments to third-party developers while still maintaining control over the corporate network. VDI creates virtual desktops on a remote server, and each user gets their own desktop environment that is isolated from the other users. This allows the company to maintain control over the corporate network, as the virtual desktops are not directly connected to the corporate network.

Question: 291

A systems administrator is attempting to resolve a ticket regarding an issue with an email server. The administrator is covering for a coworker who was previously working on the ticket. The coworker already gathered facts about the issue and spoke with users concerning their missing emails. The coworker also discovered the email server's retention policy was updated shortly before users first noticed the issue. Which of the following should the systems administrator do NEXT to resolve the email issue?

- A . Escalate the ticket to a higher level to resolve the email server issue.
- B . Test a theory to determine the cause of the email server issue.
- C . Establish a theory of probable cause for the email server issue.
- D . Create a plan of action to resolve the email server issue.

Answer: C

Explanation:

Before attempting to resolve the issue, it is important to first determine the cause or probable cause of the issue, so that a plan of action can be developed. In this case, the fact that the retention policy was updated shortly before users first noticed the issue suggests that this could be the cause of the issue. The systems administrator should investigate this further to determine if this is indeed the cause of the email server issue.

Question: 292

A user has decided to build a new computer with parts purchased from a popular online vendor. The user has referenced online resources to assemble the unit. However, when the user presses the power button, the new computer does not load the operating system's installer. Instead, the onboard speaker beeps and immediately reports an issue on the screen. Which of the following is the MOST likely issue with the new build?

- A . The user did not plug in the processor's fan.
- B . The user did not apply thermal paste to the CPU.
- C . The user did not seat the GPU correctly.
- D . The user did not install the power supply.

Answer: A

Explanation:

If a computer is not booting and the onboard speaker emits beeps, it can indicate a hardware issue. One of the most common causes of beep codes is overheating, which can occur if the processor's fan is not properly installed and running. The processor's fan is responsible for cooling the processor and preventing damage to the internal components.

Question: 293

A technician is setting up a laptop with an encrypted hard drive. The laptop will securely store a PIN that the user will input at log-on. Which of the following must be installed to set up this configuration?

- A . TPM
- B . HSM
- C . UEFI
- D . ARM

Answer: A

Explanation:

TPM stands for Trusted Platform Module, and it is a special chip installed on a computer's motherboard that stores encryption keys, passwords, and digital certificates. It can also securely store a user's PIN, allowing them to access the laptop without having to enter the PIN every time they log on. TPM is a secure way to store and protect sensitive data, making it ideal for use in laptops that need to securely store a PIN.

Question: 294

A technician is working on a critical warehouse machine that will not turn on. The technician has determined the power supply for the machine failed. The warehouse manager is looking for a solution that will prevent downtime in the future. Which of the following devices should the technician install to meet this requirement?

- A . Grounded power supply
- B . Modular power supply
- C . 220V power supply
- D . Redundant power supply

Answer: D

Explanation:

A redundant power supply is a device that provides two or more power supplies connected in parallel so that when one fails, the other one will take over to ensure continuous power. This is ideal for critical warehouse machines that require a reliable power source and are at risk of downtime in the event of a power failure. Installing a redundant power supply will help to reduce the chances of an unexpected power outage and keep the machine running.

Question: 295

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.

Answer: C

Explanation:

Utilizing a grounding strap is the safest way to replace RAM on a server that has a redundant power supply. This is because the grounding strap prevents electrostatic discharge (ESD) when handling the RAM, which can cause damage to the RAM and the server. Therefore, it is important to always use a grounding strap when handling RAM or other sensitive components.

Question: 296

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

Answer: B

Explanation:

Punchdown tools are used to connect wires to keystone jacks, patch panels and other communication hardware. When adding a new line at the demarcation point, a technician would use a punchdown tool to punch the wire into the keystone jack or patch panel, completing the connection.

Question: 297

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.

Answer: D

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: 298

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.

Answer: D

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: 299

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.

Answer: D

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: 300

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

Answer: A

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: 301

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.

Answer: D

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: 302

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

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: 303

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

Answer: B

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.

Question: 304

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

Answer: B, C

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.

Question: 305

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

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

Answer: A

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.

Question: 306

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.

Answer: C

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: 307

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

Answer: D

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 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.

Question: 308

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

Answer: C

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.

Question: 309

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.

Answer: C

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: 310

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

Answer: A

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.

Question: 311

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

Answer: B

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: 312

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

Answer: C

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 data1.](#)

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, 220-1101, Chapter 13

Question: 313

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

Answer: D

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: 314

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

Answer: B

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, 220-1101, Chapter 3

Question: 315

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

Answer: D

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 100 metres. However, lower-specification cables can often be successfully used, particularly with the shorter cable lengths required in a typical home.

Question: 316

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

Answer: A

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: 317

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.

Answer: A

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: 318

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

Answer: D

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.

Therefore, the technician should ensure that the power supply they select has a wattage rating that is sufficient to power all the components in the gaming computer. It is always a good practice to select a power supply with a wattage rating that exceeds the estimated power usage of t

Question: 319

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

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

Answer: B

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: 320

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.

Answer: A

Explanation:

Every computer has a CMOS battery and when you remove that battery, your computer will work almost the same as before. The only difference is you won't be able to save any settings in the BIOS, which includes the date and time. If your PC is not booting after removing CMOS, you need to make sure that you have your CPU and RAM connected because it's not possible for your system to boot without those.. Your motherboard and computer will be able to boot just fine even without a CMOS battery present. The only issue is all your BIOS settings will be reset and the time and date will be inaccurate. You will also be unable to save BIOS settings.

Question: 321

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

Answer: C

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: 322

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

Answer: A

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.[123](#)

Question: 323

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

Answer: C, D, G

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: 324

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

Answer: D

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: 325

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

Answer: A

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: 326

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

Answer: D, F

Explanation:

[The appropriate connection types for connecting an external keyboard to an Android tablet areUSB-C and Bluetooth123.](#)

Question: 327

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 comptia.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.

Answer: B

Question: 328

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

Answer: A

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: 329

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

Answer: B

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' computers1.

Question: 330

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.

Answer: A

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>

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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: 331

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

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

Answer: C

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: 332

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.

Answer: C

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: 333

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.

Answer: C

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: 334

A technician is inspecting a projector that is displaying fuzzy images. Which of the following actions would provide the BEST solution?

- A . Adjusting the lens
- B . Changing the filter
- C . Replacing the video cable

D . Reseating the lamp

Answer: A

Explanation:

Adjusting the lens is the best solution to improve image quality in a projector. The lens can become misaligned over time or during transportation, causing the image to appear fuzzy.

Question: 335

Which of the following network types would be used in a server room to connect virtual servers to high-speed storage?

- A . WAN
- B . PAN
- C . MAN
- D . SAN

Answer: D

Explanation:

A Storage Area Network (SAN) is a dedicated, high-speed network that connects servers to data storage devices. SANs are used in server rooms to provide high-speed storage access to virtual servers.

Question: 336

A user reports a cell phone is getting hot. Which of the following are MOST likely to be possible causes? (Select THREE).

- A . Using the device as a Wi-Fi hotspot
- B . A cracked screen
- C . A failing battery
- D . Less than 15% free storage space on the phone
- E . Privileged control
- F . Recurring prompts to install OS updates
- G . Granting too many application camera permissions
- H . Too many open applications

Answer: A, C, H

Explanation:

Using the device as a Wi-Fi hotspot, a failing battery, and too many open applications are the most likely causes of the cell phone getting hot. These actions require the phone to use more power and processing, causing it to heat up.

Question: 337

A technical lead wants to migrate all common business applications, including email and fileshares, to the cloud. Which of the following cloud concepts should be used?

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

Answer: C

Explanation:

The cloud concept that should be used for migrating all common business applications, including email and fileshares, to the cloud is Software as a Service (SaaS).

Question: 338

An IT manager is requesting that the company buy new cables to be used with F-type connectors that are already in house. Which of the following cables should the company buy?

- A . Coaxial out
- B . Plenum
- C . Cat 5e
- D . Fiber

Answer: A

Explanation:

The company should buy Coaxial cables to be used with F-type connectors.

Question: 339

A new version of Windows was released and a piece of software vital to the engineering department will not run on the new version. Which of the following is the BEST option to enable this department to be able to continue

using this software?

- A . Do not upgrade any workstations within the organization.
- B . Upgrade all workstations and provide a virtual environment for the legacy software.
- C . Upgrade all workstations except those used by the engineering department.
- D . Purchase new workstations for the engineering department.

Answer: B

Explanation:

Upgrading all workstations and providing a virtual environment for the legacy software is the best option, as it allows the engineering department to continue using the vital software while also upgrading to the latest version of Windows. This also ensures that the rest of the organization can take advantage of the latest software and security features.

Question: 340

A technician made several upgrades to a computer and then determined the power supplied by the PSU is insufficient. Which of the following would MOST likely cause the insufficiency? (Select TWO).

- A . Replacing the HDD with an SSD
- B . Upgrading the firmware
- C . Adding an optical drive
- D . Adding more RAM
- E . Adding a CMOS battery
- F . Upgrading the graphics card

Answer: D, F

Explanation:

If a technician made several upgrades to a computer and then determined the power supplied by the PSU is insufficient, the upgraded graphics card and adding more RAM would most likely cause the insufficiency. Upgrading the graphics card and adding more RAM can increase the power consumption of a computer, which can cause the power supplied by the PSU to be insufficient.

Adding more RAM and upgrading the graphics card are the most likely causes of the insufficiency of power supplied by the PSU. These upgrades require more power to operate efficiently and can cause the PSU to become insufficient.

Question: 341

A user sends a print job to a network printer, and the print job uses double the amount of paper as expected. Which of the following should the user configure to get the expected result?

- A . Duplex
- B . Collate
- C . Landscape
- D . Transparency

Answer: A

Explanation:

The user should configure the print job to use the Duplex option, which will print on both sides of the paper and reduce the amount of paper used.

Question: 342

A technician was called in to look at a user's PC. The user reported the PC was very sluggish. The HDD light on the PC was constantly on without blinking. The PC itself was slow receiving input and took a very long time to load the OS. The technician also noticed updates had failed. Which of the following is MOST likely the cause of these issues?

- A . The hard disk drivers have been corrupted
- B . The HDD cables need reseating.
- C . A RAID disk failed.
- D . The HDD has no free space.

Answer: D

Explanation:

If a user's PC is very sluggish, the HDD light on the PC is constantly on without blinking, the PC itself is slow receiving input, and it takes a very long time to load the OS, the HDD has no free space is most likely the cause of these issues. When the hard disk drive (HDD) has no free space, the computer may become slow and unresponsive. The technician should check the amount of free space on the HDD and delete any unnecessary files to free up space.

Question: 343

A technician is troubleshooting intermittent fuzzy video on a computer using a VGA to DisplayPort adapter to connect to a monitor. The monitor with a VGA connector was previously working fine for another user. The technician replaces the adapter; however, the issue persists. Which of the following should the technician do NEXT?

- A . Use another brand of VGA to DisplayPort adapter.
- B . Research the issue further and formulate a new hypothesis to test.
- C . Ask the user additional clarifying questions regarding the issue.
- D . Document the action taken and the outcome.

Answer: C

Explanation:

<https://spryzensecurity.medium.com/what-is-troubleshooting-methodology-40cec6b6494>

The technician should ask the user additional clarifying questions regarding the issue. This will help to identify any other potential causes of the issue, such as software configuration or compatibility issues, before attempting any further troubleshooting steps.

Question: 344

A hardware technician is configuring a laptop, and the network administrator requires the network settings to be static. The technician successfully pings the servers by IP address but cannot ping the UNC path. Which of the following is the cause of this issue?

- A . Domain Name System
- B . Gateway
- C . Subnet
- D . IP address

Answer: A

Explanation:

The cause of the issue is likely due to a DNS resolution issue. While the technician can ping the servers by IP address, they cannot ping the UNC path, indicating an issue with the name resolution. This can be resolved by configuring the correct DNS server settings.

Question: 345

The IT department at an insurance brokerage needs to acquire laptops that have built-in fingerprint readers in order to create a more secure environment. Which of the following would be the MOST secure way to implement the fingerprint readers?

- A . Grant all registered employees access to each machine.
- B . Restrict device access to only the user to whom the laptop is assigned.
- C . Limit device access to departments and guest users.
- D . Give each team member a USB drive that bypasses the reader to allow guest users to log in.

Answer: B

Explanation:

The most secure way to implement fingerprint readers would be to restrict device access to only the user to whom the laptop is assigned. This ensures that only authorized personnel have access to the device, reducing the risk of unauthorized access and data breaches.

Question: 346

Which of the following would MOST likely be used to connect one or more devices to the internet in a SOHO?

- A . Hub
- B . Ethernet gateway
- C . Wireless access point
- D . Router

Answer: D

Explanation:

A router is a device that connects one or more networks, such as a home or small office network, to the internet. It allows multiple devices to share a single internet connection and provides network address translation (NAT) to enable communication between the devices on the local network and the internet. A hub, Ethernet gateway, or wireless access point does not provide this functionality.

A router is the most likely device to be used to connect one or more devices to the internet in a SOHO. A router can provide network address translation (NAT), firewall protection, and other features that are important for securing and managing a network. Reference: CompTIA A+ Certification Exam Guide, pg. 355

Question: 347

A technician is implementing a SOHO wireless solution with three access points. Which of the following actions would avoid high latency?

- A . Enabling and configuring a 5GHz antenna
- B . Configuring separate IP ranges
- C . Enabling multiple SSIDs
- D . Configuring all devices with different channels

Answer: D

Explanation:

If a technician is implementing a SOHO wireless solution with three access points and wants to avoid high latency, the technician should configure all devices with different channels. By configuring all devices with different channels, the technician can ensure that the wireless signals from each access point do not interfere with each other, which can cause high latency.

Question: 348

A technician is selling up a projector (or 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 on 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.

Answer: B

Explanation:

If a user is unable to connect a laptop to a projector or videoconferencing system and sees the error message 'No source found,' the next step should be to check the display settings on the computer and set them to extend/duplicate. This will ensure that the laptop's display is being output to the external device. Reference: CompTIA A+ Certification Exam Guide, pg. 514

Question: 349

An end user discovered that the touch-screen features on a Windows device have stopped working. Which of the following should a technician check?

- A . Performance monitor
- B . Tablet/PC settings
- C . System configuration
- D . Display settings

Answer: B

Explanation:

If the touch-screen features on a Windows device have stopped working, a technician should check the Tablet/PC settings. The Tablet/PC settings contain options for configuring the touch-screen features on a Windows device. By checking the Tablet/PC settings, the technician can ensure that the touch-screen features are enabled and configured correctly.

If the touch-screen features on a Windows device have stopped working, a technician should check the Tablet/PC settings. The touch-screen settings may have been disabled or there may be a driver issue that needs to be resolved. Reference: CompTIA A+ Certification Exam Guide, pg. 536

Question: 350

A user reports limited or no connectivity on a laptop. A technician runs ipconfig /all with the following result:

```
IPv4 connectivity...limited or none
IPv4 address...169.254.254.1
subnet mask...255.255.0.0
default gateway...
```

Which of the following is the MOST likely cause of this issue?

- A . DHCP failure
- B . ARP cache
- C . DNS resolution
- D . Duplicate IP address

Answer: A

Question: 351

Which of the following types of devices MOST often uses a Thunderbolt cable?

- A . Linux PC
- B . Android mobile
- C . Apple laptop
- D . Chromebook

Answer: C

Explanation:

[Thunderbolt cables are commonly used to connect Apple laptops to external displays or other devices. While Thunderbolt is available on some Windows and Chromebook devices, it is most commonly associated with Apple products. Reference: https://www.intel.com/content/www/us/en/products/docs/io/thunderbolt/thunderbolt-technology-general.html](https://www.intel.com/content/www/us/en/products/docs/io/thunderbolt/thunderbolt-technology-general.html)

Question: 352

Which of the following 802.11 standards supports both 5GHz and 2.4GHz channel frequencies?

- A . 802.11a
- B . 802.11ac
- C . 802.11b
- D . 802.11g

Answer: B

Explanation:

802.11ac is the 802.11 standard that supports both 5GHz and 2.4GHz channel frequencies. 802.11ac is the latest wireless networking standard that operates in both the 5GHz and 2.4GHz frequency bands. It provides higher wireless network speeds and better reliability compared to previous standards, such as 802.11a, 802.11b, and 802.11g. The 802.11a standard operates exclusively in the 5GHz band, while the 802.11b and 802.11g standards operate exclusively in the 2.4GHz band.

Question: 353

Which of the following cables replaced the Apple 30-pin connector and is also reversible?

- A . USB-C
- B . Lightning
- C . miniUSB
- D . DisplayPort

Answer: B

Explanation:

Lightning Connector: Apple introduced this brand-new connector back in 2012. It is over 80% smaller than the 30-pin connector and is reversible.

https://www.cablewholesale.com/support/technical_articles/whats_your_port.php#:~:text=Lightning%20Connect

Question: 354

A technician is tasked with upgrading a laptop's RAM. Which of the following steps should the technician take FIRST?

- A . Confirm that both the current and new memory are from the same brand.
- B . Run a diagnostic test on the current memory.

- C . Verify the memory requirements of the motherboard.
- D . Connect an electrostatic discharge strap.

Answer: C

Explanation:

If a technician is tasked with upgrading a laptop's RAM, the technician should verify the memory requirements of the motherboard first. The motherboard of the laptop will have specific requirements for the type and amount of RAM that can be installed. By verifying the memory requirements of the motherboard, the technician can ensure that the new RAM is compatible with the laptop.

Before upgrading a laptop's RAM, a technician should verify the memory requirements of the motherboard to ensure the new RAM is compatible. The type, speed, and maximum capacity of the RAM should be checked to ensure it meets the requirements of the motherboard. Reference: CompTIA A+ Certification Exam Guide, pg. 347-348

Question: 355

The Chief Executive Officer wants to ensure company data is stored in a manner that provides the company with complete control over how the data is managed. Which of the following is the BEST cloud deployment model for this request?

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

Answer: D

Explanation:

A private cloud deployment model provides the company with complete control over how the data is managed. This is because a private cloud is managed solely by the organization and resides on-premises or in a data center. Therefore, a private cloud deployment model is the best option for this scenario.

Question: 356

A technician is diagnosing a workstation that shuts down unexpectedly during a boot-up test. Which of the following is the MOST likely cause for this symptom?

- A . Faulty CMOS battery
- B . OS update issue
- C . Overheating

D . Faulty RAM

Answer: C

Explanation:

If a workstation shuts down unexpectedly during a burn-in test, overheating is the most likely cause. This is because a burn-in test is designed to stress the components of the workstation, which can generate a lot of heat. Therefore, overheating is the correct answer. Reference: CompTIA A+ Certification Exam Guide, Ninth Edition, page 120

Question: 357

A technician is configuring a new CAD workstation that has four large hard drives. The workstation will be used to edit large, critical files, so the storage configuration should be both fast and redundant. Which of the following RAID levels BEST meets these requirements?

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

Answer: D

Explanation:

RAID 10 combines the benefits of RAID 0 and RAID 1. It uses a striped configuration across multiple disks (similar to RAID 0) to provide high-speed read and write access. Additionally, it also mirrors the striped array onto a second set of drives (similar to RAID 1), providing redundancy in case of a drive failure.

Question: 358

A user entered a help desk ticket stating the latest calendar updates have not appeared on the user's corporate mobile device for several days, even though updates do appear on the user's laptop. Which of the following actions will MOST likely enable calendar alerts?

- A . Checking that the ringer volume on the device is high enough to be audible
- B . Ensuring the corporate password is saved correctly in the calendar application
- C . Installing a third-party calendar application and synchronizing it with the corporate calendar
- D . Remotely wiping the mobile device and reinstalling all applications

Answer: B

Question: 359

A startup company is outgrowing its current office space and is requiring employees to work remotely. The company must comply with government-enforced requirements to safeguard all aspects of data, so the IT department plans to maintain complete control over users' operating systems. Which of the following should the IT department implement?

- A . VDI
- B . IaaS
- C . VPN
- D . SaaS

Answer: A

Explanation:

The IT department should implement VDI. Virtual Desktop Infrastructure (VDI) is a technology that allows users to access a desktop operating system from a remote location. VDI provides complete control over users' operating systems, which is important for safeguarding data. VDI also provides a secure way to access data from remote locations, which is important for compliance with government-enforced requirements.

Question: 360

Which of the following are default ports for HTTP and HTTPS traffic? (Select TWO).

- A . 23
- B . 25
- C . 80
- D . 143
- E . 389
- F . 443

Answer: C, F

Question: 361

A user calls the help desk for assistance configuring an Android phone with a new NFC-enabled speaker that will be used for an upcoming conference call. The user was unable to direct the phone's audio to the NFC speaker. Which of the following sequences should the help desk technician walk the customer through to accomplish this task?

A . Enable NFC on the speaker. Ensure the speaker is less than 33ft (10m) from the Android phone. On the phone's Bluetooth settings menu for Connected Devices, select Pair New Device. Tap to accept the connection to the speaker when the prompt is displayed on the phone's screen.

B . Enable NFC and Bluetooth on the Android phone. From the Android phone's Bluetooth settings menu for Connected Devices, select the Previously Connected Devices option. Select a listed device that most closely matches the speaker. Tap to accept the connection to the speaker when the prompt is displayed on the phone's screen.

C . Enable NFC and Bluetooth on the Android phone. Tap and hold the Android phone to the spot on the speaker where the NFC logo is displayed. Accept the connection to the speaker when the prompt is displayed on the phone's screen.

D . Enable Wi-Fi on the speaker. Enable Wi-Fi on the Android phone. Tap and hold the Android phone to the spot on the speaker where the NFC logo is displayed. Accept the connection to the speaker when the prompt is displayed on the phone's screen.

Answer: A

Question: 362

A user attempted to install an application on a desktop, and the installation attempt failed. A technician compares these installation files to those on another user's machine and finds the files are different. Which of the following should the technician do NEXT?

- A . Attempt to reinstall the application.
- B . Verify the system functionality.
- C . Test the functionality of the antivirus.
- D . Complete the final report.
- E . Determine the source of the installation file.

Answer: A

Question: 363

A user wants a second monitor installed on a laptop. The VGA/DVI or HDMI cables have already been connected. Which of the following should the technician do to configure the laptop to show both screens?

- A . Power cycle the laptop.
- B . Plug in the monitor to the USB port.
- C . Adjust the monitor display settings.
- D . Power cycle the monitor.

Answer: C

Explanation:

[To configure the laptop to show both screens, the technician should adjust the monitor display settings. On Windows 10 or 11, the technician can select the Start menu, then open Settings, then select Display. The PC should automatically detect the monitors and show the desktop. If the monitors are not detected, the technician can select Multiple displays, then Detect. The technician can then use the dropdown list next to the image of the desktop to choose how the screen will project across the displays.](#)

Question: 364

A department sends in a ticket to report a printer is not working. The responding technician sees paper stuck to the fuser, which is much hotter than normal. The (user was just installed a few weeks ago. as indicated by the service history. Which of the following should the technician do NEXT?

- A . Disconnect the printer power for troubleshooting.
- B . Install a printer roller kit.
- C . Replace the overheating fuser.
- D . Replace the paper with thicker paper stock.

Answer: A

Explanation:

The first step in troubleshooting a printer issue is to disconnect the printer power to avoid electric shock or further damage to the printer. The technician can then inspect the fuser and determine if it needs to be replaced or repaired. Installing a printer roller kit or replacing the paper with thicker paper stock will not solve the problem of the overheating fuser. Replacing the fuser without disconnecting the power is dangerous and not recommended. Reference: <https://www.comptia.org/certifications/a#examdetails>
<https://www.comptia.org/blog/what-is-a-fuser>

Question: 365

A user on the marketing team uses various multimedia applications that consume a lot of memory. The user needs to install more RAM to run these applications effectively. When the user opens the computer case, the user sees four slots in two sets of colors. Which of the following memory types is MOST likely required?

- A . Dual-channel
- B . Triple-channel
- C . Single-channel
- D . Quad-channel
- E . Error correction code RAM

Answer: A

Explanation:

The two sets of colors on the motherboard indicate that it supports dual-channel memory, which doubles the bandwidth available to the memory controller. Dual-channel memory requires two identical memory modules to be installed in pairs in the correct slots to work effectively. In this case, the user can install two identical RAM modules to enable dual-channel memory, which will provide better performance when using multimedia applications that consume a lot of memory.

Question: 366

Which of the following commonly uses NFC?

- A . Contactless payments
- B . IoT devices
- C . Inventory tracking
- D . Tethering

Answer: A

Explanation:

NFC (Near Field Communication) is a wireless communication technology that is commonly used for contactless payments, mobile payments, and other mobile transactions. It allows two devices to communicate with each other when they are placed in close proximity.

Contactless payments commonly use NFC (Near Field Communication). NFC is a wireless communication technology that allows two devices to communicate with each other when they are in close proximity. Contactless payments use NFC to enable customers to make payments by simply tapping their contactless card or mobile device on a payment terminal.

Question: 367

A desktop support technician is tasked with upgrading a laptop so that it has the fastest data access possible. Which of the following BEST satisfies this requirement?

- A . mSATASSD
- B . M.2NVMeSSD
- C . 2.5SATASSD
- D . 2.5SASHHD

M . 2 NVMe SSD provides the fastest data access possible for a laptop. It is a high-performance solid-state drive that connects directly to the motherboard through an M.2 slot.

Answer: B

Question: 368

A help desk technician has been tasked with installing an IP phone in a small office with an unmanaged switch. When connected to an RJ45 receptacle, the phone does not boot. Which of the following is the QUICKEST way to resolve this issue?

- A . Upgrade the Ethernet cable to the latest specification.

- B . Replace the phone.
- C . Install a PoE injector.
- D . Change ports on the switch.

Answer: C

Explanation:

<https://intellinetnetwork.eu/pages/what-is-a-poe-injector>

The quickest way to resolve the issue is to install a Power over Ethernet (PoE) injector to provide power to the IP phone. An unmanaged switch does not provide PoE, so an injector is needed to power the phone.

Question: 369

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

Answer: B

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: 370

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

Answer: A

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: 371

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

Answer: B

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: 372

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.

Answer: D

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: 373

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

Answer: B

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: 374

A technician installs a new printer for a workstation and tries to print a test page, but the page does not print. The technician looks at the print queue and notices that the printer is called 'Generic Printer.' Which of the following BEST describes what the technician should do to fix this issue?

- A . Connect the printer with a USB cable rather than over the network.
- B . Install the appropriate printer drivers for the OS.
- C . Install the correct toner in the printer.
- D . Set the printer trays to allow duplex printing

Answer: B

Explanation:

The technician should install the appropriate printer drivers for the OS to enable the computer to communicate with the printer. The generic printer name suggests that the drivers are missing or not installed correctly.

Question: 375

A technician is replacing a computer with a connected point-of-sale system using a 9-pin serial adapter. The new computer does not have a 9-pin serial port. Which of the following ports can an adapter be installed on in order to connect to the point-of-sale system?

- A . HDMI
- B . Bluetooth
- C . USB
- D . Lightning

Answer: C

Explanation:

A USB to 9-pin serial adapter can be used to connect the new computer to the point-of-sale system using a USB port. USB is a common and versatile port type found on most computers.

If a technician is replacing a computer with a connected point-of-sale system using a 9-pin serial adapter and the new computer does not have a 9-pin serial port, an adapter can be installed on the USB port in order to connect to the point-of-sale system. A USB-to-serial adapter can be used to connect a serial device to a USB port on a computer.

Question: 376

Which of the following allows all VMs in a virtual environment to have RAM allocated for use?

- A . Measured service
- B . Containerization
- C . Synchronization
- D . Resource pooling

Answer: D

Explanation:

The concept described in the question is related to virtualization and resource management in a virtual environment. The approach that allows all virtual machines (VMs) to have memory (RAM) allocated for use is known as resource pooling. Therefore, the correct answer is D: 'Resource pooling.' This approach allows resources to be allocated dynamically to VMs based on their current needs, and ensures that resources are used efficiently in the virtual environment.

Resource pooling is a technique used in virtualization to share resources among multiple virtual machines (VMs). With resource pooling, RAM can be allocated dynamically to VMs as needed, allowing all VMs in a virtual environment to have RAM allocated for use.

Question: 377

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

Answer: A

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: 378

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

Answer: A

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: 379

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

Answer: C

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: 380

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.

Answer: C

Explanation:

The MOST efficient next step the technician should do is to test the output resolution. The issue of a projector that will not display any images could be related to the output resolution. If the output resolution is not

[compatible with the projector, the projector will not display any images](#)
[1.Calibrating the image, replacing the bulb, or cleaning the fans may not be effective](#)
[1.](#)

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: 381

A thermal printer that is used to print order buckets in a factory has been experiencing issues following the failure of the air 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.

Answer: A

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: 382

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.

Answer: A

Explanation:

CompTIA 6-Step Troubleshooting Process:

1. Identify the problem.
2. Establish a theory of probably cause. (Question the 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: 383

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.

Answer: D

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: 384

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

Answer: B

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.

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: 385

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 copy-protected sources in the projector's settings.

Answer: C

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: 386

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.

Answer: B

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

Topic 2, Exam Pool B

Question: 387

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 enable?

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

Answer: B

Explanation:

[SMTP \(Simple Mail Transfer Protocol\) uses port 25 to send email messages between servers12.](#)

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: 388

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

Answer: B

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: 389

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 transports 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 charging.

Answer: B

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: 390

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.

Answer: A

Explanation:

The 2.4 GHz 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: 391

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

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

Answer: B

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: 392

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

Answer: D

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: 393

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

Answer: C

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: 394

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

Answer: D

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: 395

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

Answer: A

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 amperage123.

Question: 396

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

Answer: A

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: 397

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

Answer: B

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: 398

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

Answer: B, C

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: 399

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

Answer: A, A

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 220-1101, Page 376

Question: 400

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

Answer: B

Explanation:

[The tool that the technician should use to see all drives isDiskmgmt. 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 computer12.

Question: 401

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.

Answer: A

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 220-1101, Page 323

Question: 402

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

Answer: D

Explanation:

The MOST efficient next step the technician should complete is to install an updated printer driver on the print server12.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: 403

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

Answer: D

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: 404

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 filement is loaded, preventing it from sticking correctly
- E . The fuser assembly is not calibrated properly, causing it to impact the paper too hard

Answer: B

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 220-1101, Page 361

Question: 405

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

Answer: B

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 220-1101, Page 405

Question: 406

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 . OHCP pool configuration
- B . MAC filtering list
- C . Wireless protocol settings
- D . ONS servers

Answer: B

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 220-1101, Page 332

Question: 407

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

Answer: B

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: 408

A small ISP has hired a new technician Joe, the new technician, is being trained to configure customers' home networks. The training instructor gives the technician a starter kit with cables, cable ends, and other network equipment and asks him 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 and connect all components accordingly.

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

SOHO Starter Kit

Step 1 Step 2 Show Question Reset All Answers

Connectors

- RJ11
- RJ45
- F Connector

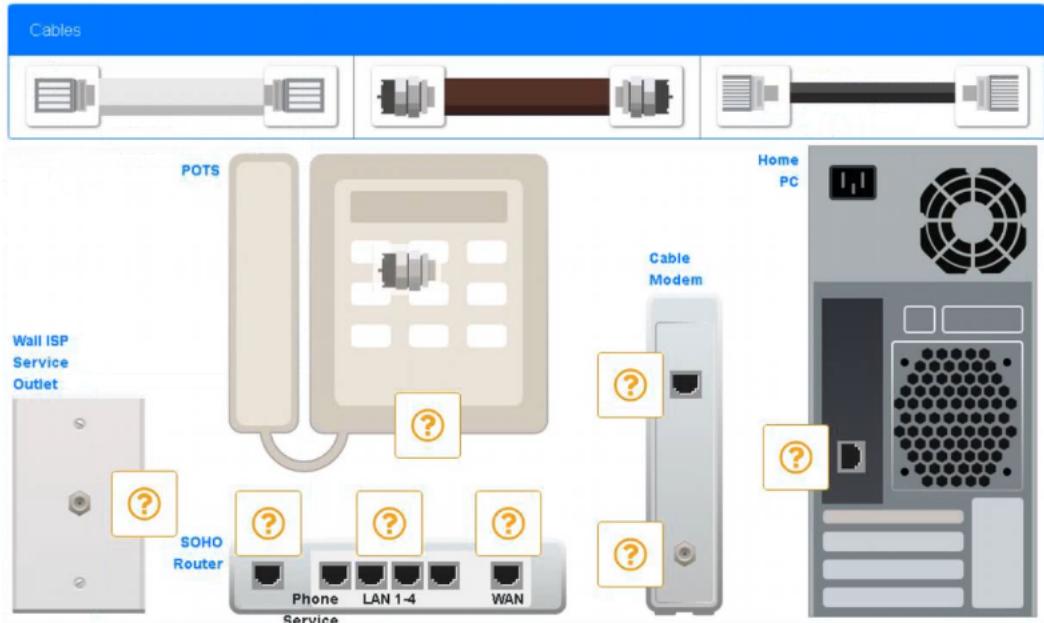
Tools

- Crimping tool
- 剥线钳
- Marker

The diagram illustrates a SOHO Starter Kit with three main connection steps:

- Step 1:** Stripping and inserting four wires (Red, Blue, Green, Yellow) into an RJ45 connector.
- Step 2:** Crimping the RJ45 connector onto a cable.
- Step 3:** Inserting the RJ45 plug into a blue rectangular port.

Other components shown in the kit include an RJ11 connector, an F connector, and various tools such as a crimping tool,剥线钳 (stripping pliers), and a marker.

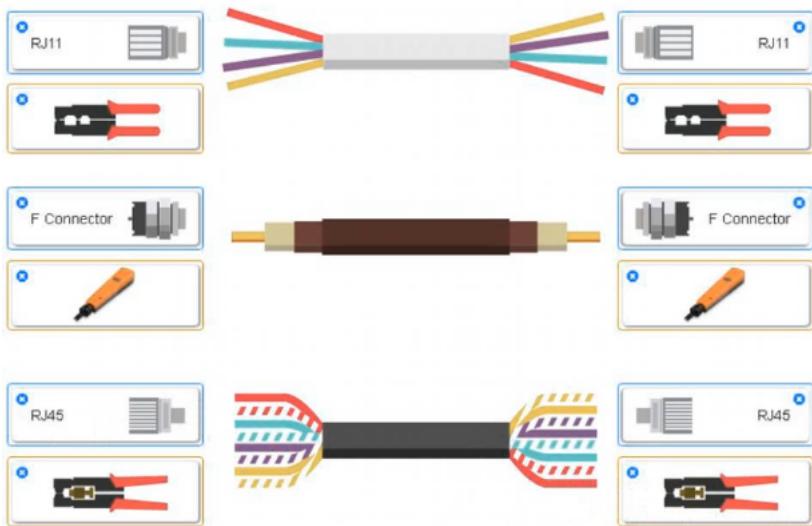


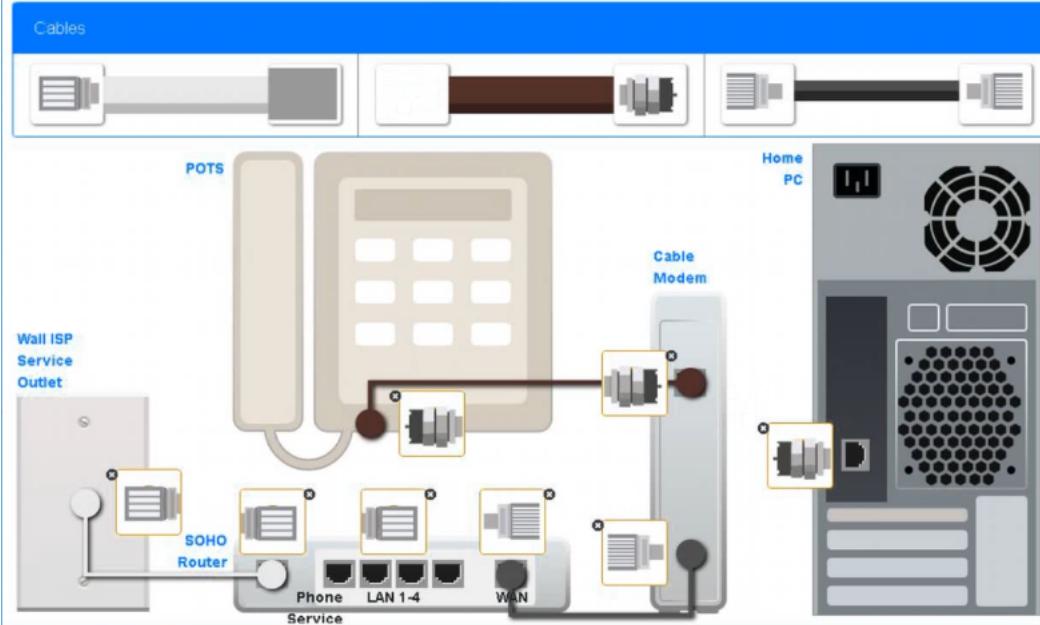
A . See the answer below in explanation part

Answer: A

Explanation:

Answer of both steps below.





Question: 409

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: HomeWiFi (Also called the SSID)

Wireless Channel: 1

Disable SSID Broadcast:

802.11g Only Mode:

Wireless Security Mode

Security Mode: Enable WPA2 Wireless Security (enhanced)

WPA2

Passphrase: CompTIA

Confirmed Passphrase: CompTIA

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: default (Also called the SSID)

Wireless Channel: 6

Disable SSID Broadcast:

802.11g Only Mode:

Wireless Security Mode

Security Mode: Disable Wireless Security (not recommended)

Laura's Wireless Configuration

WIRELESS SETUP NETWORK FILTER ADMINISTRATOR TOOLS

Turn MAC Filtering ON:

Allow the following MAC Addresses

A . See the explanation below

Answer: A

Explanation:

solution as

Wireless Configuration

Wireless Setup Network Filter Administrator Tools

WIRELESS NETWORK SETTINGS:

Enable Wireless:

Wireless Network Name: HomeWiFi (Also called the SSID)

Wireless Channel: 1

Disable SSID Broadcast:

802.11g Only Mode:

WIRELESS SECURITY MODE:

Security Mode: Enable WPA2 Wireless Security (enhanced)

WPA2:

Passphrase: CompTIA

Confirmed Passphrase: CompTIA

Save Settings

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



Wireless Configuration

Wireless Setup Network Filter Administrator Tools

ADMIN PASSWORD

Please enter the same password into both boxes for confirmation.

Password: Secure\$1

Verify Password: Secure\$1

Save Settings

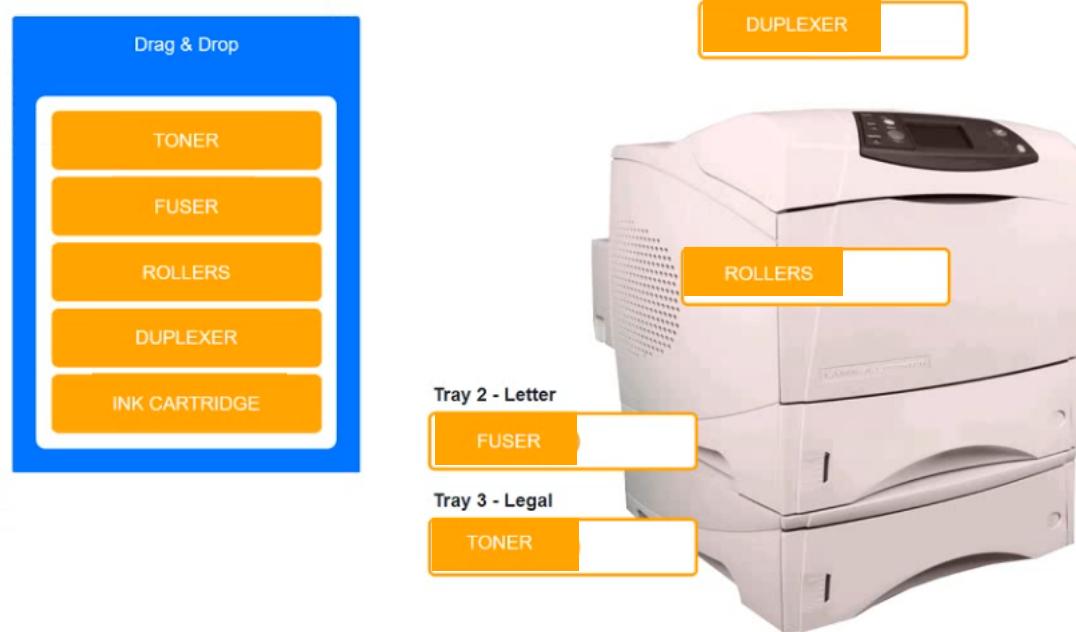


Question: 410

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.



Answer:



Question: 411

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.

Answer: C

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: 412

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

Answer: B

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: 413

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

Answer: B

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: 414

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.

Answer: B

Explanation:

Based on the information provided in the question, the MOST likely component that needs to be replaced is A. power adapter. If a laptop has been working as expected for several years but suddenly stops working when it is plugged into a wall outlet, it is possible that the power adapter has failed and is no longer able to provide power to the laptop. In this case, replacing the power adapter would likely resolve the issue.

The other components listed in the options (battery, system fan, and hard drive) could also potentially fail and cause issues with a laptop's performance. However, based on the specific scenario described in the question (the laptop suddenly stops working when plugged into a wall outlet), it seems most likely that the issue is related to the power adapter.

If the laptop has been working as expected for several years and suddenly stops working, the power adapter is the most likely component that needs to be replaced. Over time, the power adapter can become worn or damaged, resulting in a loss of power to the laptop. Reference: CompTIA A+ Certification Exam Guide, Ninth Edition, Chapter 3

Question: 415

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

Answer: A

Explanation:

Rapid elasticity is only suitable for a domain whose resource requirements suddenly up and down for a specific time interval. Referring to the question the 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: 416

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.

Answer: D

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: 417

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

Answer: C

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: 418

A user reports that a PC occasionally falls 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.

Answer: A

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: 419

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 effective without sacrificing system performance?

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

Answer: B

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: 420

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

Answer: B

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: 421

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

Answer: A, D

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: 422

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.

Answer: B

Explanation:

he 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: 423

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.

Answer: C

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: 424

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.

Answer: D

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 accurately12.

Question: 425

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

Answer: A

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: 426

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

Answer: D

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: 427

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

Answer: B

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: 428

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.

Answer: A

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: 429

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

Answer: A

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: 430

A technician needs to improve a workstation's overall response time for frequently used applications and data without removing the current hard drive. Which of the following storage devices should the technician install to BEST accomplish the objective?

- A . M.2
- B . SAS

- C . HDD
- D . SCSI

Answer: A

Explanation:

Installing an M.2 SSD will improve a workstation's overall response time for frequently used applications and data without removing the current hard drive. M.2 drives are faster and more efficient than traditional hard drives, making them a good option for increasing overall performance. Reference: CompTIA A+ Certification Exam Core 1 Exam Objectives - 1.5 Given a scenario, configure storage devices and use appropriate media

Question: 431

A user in a medical office contacts a technician regarding a printer that is used to print A4-sized labels. After the labels are printed, they mistakenly contain white space in the middle of the page. Which of the following would MOST likely be the cause?

- A . Contaminated fuser
- B . Worn rollers
- C . A misfeed
- D . Page orientation

Answer: D

Explanation:

The most likely cause of the issue is that the page orientation is incorrect. The printer may be set to print labels in a different orientation than the orientation of the label sheet.

Question: 432

A technician goes to a classroom to troubleshoot a projector that occasionally powers off. The technician recreates the issue and notices the projector will not power back on until approximately 15 minutes have passed. After 15 minutes of being powered on, the projector shuts off again. Which of the following should the technician perform NEXT to resolve the issue?

- A . Clean the filter.
- B . Adjust the standby timeout.
- C . Check the power cable connection.
- D . Replace the bulb.

Answer: A

Explanation:

Based on the given information, it seems that the projector is experiencing issues with overheating or a faulty power supply. The fact that it shuts off and cannot be turned back on until it has cooled down for 15 minutes suggests that the projector is overheating or there is a problem with the power supply. Therefore, the next logical step would be to clean the filter to ensure proper ventilation and airflow, as a dirty filter can cause overheating.

Question: 433

Client-side virtualization guest machines have security requirements similar to physical machines, but they also need to ensure separation from other guest machines. Which of the following BEST describes this client-side guest security requirement?

- A . Isolation
- B . Authentication
- C . Hardening
- D . Authorization

Answer: A

Explanation:

Client-side virtualization guest machines require isolation from other guest machines to maintain their security. Isolation ensures that each virtual machine is separated from others and runs its own operating system and applications, making it less vulnerable to attacks from other guest machines. Reference: CompTIA A+ Certification Exam Objectives 220-1102 - Virtualization and cloud computing - 4.1

Question: 434

Which of the following BEST describes the main function of a web server?

- A . Storing files and controlling user access
- B . Setting up personal mailboxes and calendars
- C . Providing IP addresses and printing services
- D . Hosting home pages and business portals

Answer: D

Explanation:

A web server is a software application that serves HTTP (Hypertext Transfer Protocol) requests by delivering web pages and other files to users' web browsers. The main function of a web server is to host home pages and

Question: 435

An organization is looking to upgrade the processing ability for its computers. Most users report that whenever multiple applications are being utilized, the system's response time slows down drastically. When only one application is open, the response time is acceptable. Which of the following should be upgraded FIRST?

- A . SSD
- B . CPU
- C . HDD
- D . RAM

Answer: D

Explanation:

The component that should be upgraded first is the RAM. When multiple applications are being utilized, the system's response time slows down drastically. This is because the computer is running out of memory. Upgrading the RAM will allow the computer to store more data in memory, which will improve performance when multiple applications are being used123.

Question: 436

An end user reports that the time and date on a desktop resets after shutdown, and subsequently, the device reboots. The next day, the desktop does not load the OS and is stuck at a black screen with the following message:

Date/Time Not Set
Press F1 to Run Setup

Which of the following would be the BEST action to take next?

- A . Change the motherboard.
- B . Reseat the motherboard power connections.
- C . Replace the CMOS battery.
- D . Restore the BIOS to factory default settings.

Answer: C

Question: 437

A user submitted a support ticket that states all of the printouts from a laser printer appear to have double images imposed on them. A review of past printer support tickets shows that maintenance kit has not been installed in more than a year. Which of the following printer consumables is MOST likely causing the issue?

- A . Separation pad
- B . Transfer roller
- C . Ink cartridge
- D . Fuser

Answer: D

Explanation:

<https://www.vingle.net/posts/4651722>

Question: 438

A user contacts the help desk in reference to a failing thumbprint scanner. The user states the scanner was functioning correctly yesterday. Which of the following troubleshooting steps should be performed FIRST after the ticket has been filed?

- A . Inquire about possible changes.
- B . File a damage report.
- C . Requisition a new scanner.
- D . Attempt to clean the scanner.

Answer: A

Explanation:

<http://www.221021.com/Hardware/input-output-devices/32310.html>

1. Identify the problem.

Gather information from the user, identify user changes, and, if applicable, perform backups before making changes.

Inquire regarding environmental or infrastructure changes.

2. Establish a theory of probable cause (question the obvious).

If necessary, conduct external or internal research based on symptoms.

3. Test the theory to determine the cause.

Once the theory is confirmed, determine the next steps to resolve the problem.

If the theory is not confirmed, re-establish a new theory or escalate.

4. Establish a plan of action to resolve the problem and implement the solution.

Refer to the vendor's instructions for guidance.

5. Verify full system functionality and, if applicable, implement preventive measures.

6. Document the findings, actions, and outcomes.

Question: 439

A technician identified an issue on a workstation, obtained details from the user, and made a backup of the system. Which of the following should the technician do NEXT?

- A . Determine the next steps to resolve the issue and document it.
- B . Design a plan of action to resolve the issue and implement the solution.
- C . Document the findings, actions, and outcomes.
- D . Establish a theory of probable cause, researching internally or externally as needed.

Answer: D

Explanation:

After the issue has been identified and the backup of the system has been made, the next step is to establish a theory of probable cause. This involves researching the issue to determine the root cause of the problem. This can involve researching internally (e.g. referring to the system logs) or externally (e.g. searching online). Once the probable cause has been identified, the technician can then move on to the next step of designing a plan of action to resolve the issue and implementing the solution.

Question: 440

An administrator is configuring a corporate-owned smartphone for a new manager. The company requires the ability to wipe the phone's data remotely in the event of loss or theft and the capability to approve applications installed on the phone. Which of the following tools would BEST meet this need?

- A . Tethering to a corporate-owned laptop
- B . WPA2-Enterprise wireless
- C . Corporate enterprise email
- D . Mobile device management

Answer: D

Explanation:

Mobile Device Management (MDM) is a software solution that allows companies to manage and secure mobile devices used in the corporate environment. MDM provides features such as remote data wipe, application management, and device security policies to ensure data protection and compliance with company policies.

Reference: CompTIA A+ Certification Exam Objectives 220-1101 - Mobile device hardware and operating systems - 2.8

Question: 441

A user brings an older laptop to the help desk and reports issues with the keyboard. Upon inspection, the technician does not see any external damage but notices that many keystrokes do not register in a word processor. The laptop works fine when the technician tests it with an external keyboard. Which of the following actions would MOST likely resolve the issue?

- A . Disable the sticky keys feature.
- B . Clean the keyboard.
- C . Reset the BIOS settings to default.
- D . Charge the laptop.

Answer: B

Explanation:

The most likely action that would resolve the issue is to clean the keyboard. Sometimes dust, hair, and other debris can affect keyboard functionality. The technician can try to clean the keyboard as much as possible, which may be enough to get the keyboard back in working order

Question: 442

A user failed to gain access to a building's entrance after security measures at the entrance were upgraded last week. The company implemented the 13.56MHz frequency short band, and users can now utilize their mobile devices to authenticate. Which of the following has to be enabled for the mobile device to authenticate?

- A . Bluetooth
- B . Biometrics
- C . NFC
- D . PIN

Answer: C

Explanation:

NFC (Near Field Communication) is a technology used for short-range wireless communication between devices, typically used for contactless payments and authentication. In this scenario, the 13.56MHz frequency short band was implemented, and users can authenticate using their mobile devices, which requires NFC to be enabled on

the device. Reference: CompTIA A+ Certification Exam Objectives 220-1101 - Mobile device network and device synchronization - 4.4

Question: 443

Upon booting a workstation, a technician hears a distinct clicking sound after power is applied to the motherboard. Which of the following would MOST likely be the cause?

- A . RAID
- B . SSD
- C . S.M.A.R.T
- D . HDD

Answer: D

Explanation:

The clicking sound is the sound of a damaged disk in the HDD

A clicking sound from a hard disk drive typically indicates a mechanical failure, such as the read/write head hitting a physical obstruction or a problem with the disk motor. This can cause the drive to fail to initialize or not be recognized by the system during booting.

Question: 444

A technician needs to add storage to a workstation. The workstation does not have room to add any internal storage, so the technician plans to add an external storage device. Which of the following connection types should the technician MOST likely use?

- A . SCSI
- B . eSATA
- C . PCIe
- D . NVMe

Answer: B

Explanation:

eSATA is the best choice for adding external storage as it offers a fast transfer rate and is specifically designed for external storage devices. SCSI is an older interface that is rarely used today, PCIe is typically used to add expansion cards to a computer, and NVMe is a newer interface for high-speed solid-state storage, but it is typically used for internal storage devices.

Question: 445

A technician powers on a PC and its monitor and sees the following error message:

No input signal detected

The display lights on the computer are on. Which of the following is a possible solution?

- A . Changing the BIOS settings
- B . Changing the connector setting on the monitor
- C . Checking the power plug on the monitor
- D . Checking the power plug on the PC

Answer: B

Explanation:

Changing the connector setting on the monitor is a possible solution for a PC and its monitor that display the error message 'No input signal detected'. This error can be caused by an incorrect input selected on the monitor, so changing the connector setting to the correct input should resolve the issue. Reference: CompTIA A+ Certification Exam Objectives 1001, 1.10

Top of Form

Regenerate response

Bottom of Form

Question: 446

A user's mobile phone gets really hot to the touch and does not retain a charge. The user also reports that the phone is very slow, especially while charging. Which of the following is MOST likely causing these symptoms?

- A . Broken charging port
- B . Digitizer failure
- C . CPU overheating
- D . Defective battery

Answer: D

Explanation:

A defective battery is the most likely cause of a mobile phone that gets really hot to the touch, does not retain a charge, and is slow while charging. A defective battery can cause the phone to overheat and may also cause performance issues. Reference: CompTIA A+ Certification Exam Objectives 1001, 2.14

Question: 447

A remote user reports connectivity issues with the local internet provider. Even after a technician reboots the modem supplied by the ISP, the issue persists. Which of the following would BEST establish the connection in minimal time?

- A . Radio frequency ISP
- B . Neighbor's Wi-Fi
- C . Mobile hotspot
- D . Fiber optic

Answer: C

Explanation:

Using a mobile hotspot is the best way to establish an internet connection in minimal time for a remote user who is experiencing connectivity issues with the local internet provider. A mobile hotspot can be set up quickly and provides a reliable connection using cellular data. Reference: CompTIA A+ Certification Exam Objectives 1001, 3.4

Question: 448

A technician unboxed a new computer, plugged it in to a UPS, and connected the requested peripherals. The computer lights and fans turn on, but the technician hears three loud, consecutive beeps during boot. Which of the following actions will remediate the issue?

- A . Replacing the power supply
- B . Replacing the UPS
- C . Changing the CMOS battery
- D . Reseating the RAM

Answer: D

Explanation:

Three beeps indicate a 'base memory read/write test error'. Check out 'beep codes' for more information.

https://en.wikipedia.org/wiki/Power-on_self-test#POST_beep_codes_on_CompTIA_A.2B_certification_exam

Reseating the RAM is the best course of action to remediate the issue of three consecutive beeps during boot, as it may indicate a RAM failure or loose connection. By reseating the RAM, the technician can ensure that the connection is secure and the computer should boot normally. Reference: CompTIA A+ Certification Exam Objectives 1001, 1.9

Question: 449

An IT manager discovered that hundreds of pages of printed materials are being recycled each day because the materials are left on the printer tray instead of being picked up by users. Which of the following would BEST prevent this waste?

- A . Send friendly reminders to not print unnecessarily.
- B . Enable duplex printing to reduce paper utilization.
- C . Bill each department for the excess material cost.
- D . Require a code or badge before releasing a print job.

Answer: D

Explanation:

By requiring a code or badge before releasing a print job, it ensures that only authorized personnel can collect the printouts. This method is effective in preventing waste and in keeping sensitive documents confidential. Sending reminders, enabling duplex printing, and billing departments are useful strategies for reducing paper utilization but may not necessarily prevent waste caused by uncollected printouts.

Requiring a code or badge before releasing a print job is the best solution to prevent the waste of printed materials, as it ensures that only the user who initiated the print job is able to pick up the printed materials. This can be achieved by implementing print release software or requiring users to enter a PIN code at the printer.
Reference: CompTIA A+ Certification Exam Objectives 1001, 2.10

Question: 450

Which of the following is a valid use for PaaS?

- A . Off-site backups
- B . An application development environment
- C . A virtual server installation and configuration model
- D . A web application for asset management

Answer: B

Explanation:

PaaS (Platform as a Service) is a cloud computing model in which a provider offers a platform that allows developers to create, run, and manage applications without the complexity of building and maintaining the infrastructure. An application development environment is a valid use for PaaS. Reference: CompTIA A+ Certification Exam Objectives 1001, 1.7

Question: 451

A customer reports that access to the network fileshare has become much slower than usual, but local applications do not seem to have trouble. The technician checks the download bandwidth and finds no issues. Which of the following should the technician check NEXT?

- A . Level of network utilization
- B . Customer use of two-factor authentication
- C . Amount of local drive space
- D . RAID array drive health

Answer: A

Explanation:

The technician should check the level of network utilization to determine if there is an excessive amount of traffic that may be causing the slow access to the network fileshare. This can be done using network monitoring tools to track the amount of data being transmitted on the network. Reference: CompTIA A+ Certification Exam Objectives 1001, 2.9

Question: 452

Which of the following network devices is used to separate broadcast domains?

- A . Switch
- B . Wireless access point
- C . Router
- D . Hub

Answer: C

Explanation:

A router (option C) is a network device that is used to separate broadcast domains. A broadcast domain is a logical division of a computer network in which all nodes can reach each other by broadcast at the data link layer. Routers operate at the network layer of the OSI model and use routing tables to determine the best path for forwarding packets between different networks.

By separating broadcast domains, routers can help to reduce network congestion and improve performance. When a router receives a broadcast packet on one of its interfaces, it does not forward the packet to any other interfaces. This means that only devices within the same broadcast domain as the sender will receive the broadcast packet.

Question: 453

A user's computer is not receiving a network connection. The technician confirms that the connection seems to be down and looks for the user's port on the patch panel. The port and patch panel are not labeled. Which of the following network tools should the technician use to identify the port?

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

Answer: C

Explanation:

Toner Probe Many cable testers also incorporate the function of a toner probe, which is used to identify a cable from within a bundle. This may be necessary when the cables have not been labeled properly. The tone generator is connected to the cable using an RJ45 jack and applies a continuous audio signal on the cable. The probe is used to detect the signal and follow the cable over ceilings and through ducts or identify it from within the rest of the bundle.

Question: 454

A company wants to use client-side visualization for application testing. Which of the following configurations would BEST support this goal?

A)

CPU 2.5GHz - 4 cores
16GB DDR4 RAM
1TB SSD

B)

CPU 3.2GHz - 1 core
16GB DDR4 RAM
4TB SSD

CPU 2.5GHz - 2 cores
16GB DDR4 RAM
4x 1TB HDD RAID 5

D)

CPU 3.2GHz - 4 cores
8GB DDR4 RAM
500GB HDD

- A . Option A
- B . Option B

- C . Option C
- D . Option D

Answer: A

Question: 455

A remote user called the help desk to report a notification indicating there is limited or no connectivity. The user can access local file folders and other local machines but none of the organization's servers or network items. Web pages do not appear to function either. Which of the following is the MOST likely cause of the issue?

- A . The user's internet connection is down.
- B . The user's domain account is locked out.
- C . The user's switch has stopped working.
- D . The user's IP address needs to be renewed.

Answer: A

Explanation:

Based on the information provided in the scenario, the most likely cause of the issue is that the user's internet connection is down (option A). This would explain why the user is unable to access any of the organization's servers or network items and why web pages are not functioning. However, since the user can still access local file folders and other local machines, it suggests that their local network is still functioning.

The user can access local file folders and other local machines but none of the organization's servers or network items, indicating that the issue is with the user's internet connection, not with the user's domain account, switch, or IP address.

When a user receives a notification indicating that there is limited or no connectivity, it means that their device is unable to establish a connection to the network. In this scenario, the user can access local file folders and other local machines but is unable to access any of the organization's servers or network items and web pages are not functioning. This suggests that the issue is with the user's internet connection.

An internet connection allows a device to communicate with other devices and servers outside of its local network. If the internet connection is down or not functioning properly, the device will be unable to access any resources outside of its local network. This would explain why the user in this scenario can still access local resources but is unable to access any of the organization's servers or network items.

Question: 456

A technician needs to fix a Cat 5 cable issue. The cable, which is connected to a network jack, fails when it is moved around. Which of the following items must the technician use to fix the issue? (Select TWO).

- A . Scissors
- B . Network tap

- C . Magnetized screwdriver
- D . Tone generator
- E . RJ45 connector
- F . Crimper

Answer: E, F

Explanation:

To fix a Cat 5 cable issue where the cable fails when it is moved around, the technician would need to use an RJ45 connector(option E) and a crimper(option F). The technician can use the crimper to attach a new RJ45 connector to the end of the cable, which should resolve the issue.

An RJ45 connector(option E) is a type of connector commonly used for Ethernet networking. It is an 8-position, 8-contact (8P8C) modular plug and jack that is used to terminate Cat 5 and other types of twisted pair cables. A crimper(option F) is a tool used to attach connectors to the ends of cables. In this case, the technician would use the crimper to attach a new RJ45 connector to the end of the Cat 5 cable.

When a cable fails when it is moved around, it often indicates that there is a problem with the connector at the end of the cable. By attaching a new RJ45 connector using a crimper, the technician can ensure that the cable has a secure and reliable connection.

Question: 457

A user submitted a ticket to report an issue with a new printer that is no longer accepting new print jobs. The technician verifies the printer is on and notices the printer LCD screen has the following error message:

Paper Jam, Jam in fuser.

Which of the following is the MOST efficient next step the technician should complete?

- A . Apply a maintenance kit to the printer
- B . Check the printer paper path to locate any obstructions.
- C . Turn the printer on and off to see if the error clears.
- D . Replace the fuser.

Answer: B

Explanation:

The MOST efficient next step the technician should complete is to check the printer paper path to locate any obstructions1. The error message "Paper Jam, Jam in fuser" indicates that there is a paper jam in the fuser2. The fuser is one of the parts of a laser printer most likely to fail without giving any explicit message2.

The printer LCD screen indicates a paper jam in the fuser. The most efficient next step the technician should complete is to check the printer paper path to locate any obstructions. Applying a maintenance kit or replacing the fuser may not be necessary if the issue is caused by a paper jam.

Question: 458

An engineer is experiencing unexpected reboots on a graphics workstation when rendering complex 3-D models. The workstation is configured with a 115V power supply that is rated at 200W and connected to a UPS. The central processing unit contains 16 hyperthreaded cores, and a discrete graphics solution utilizing an 8-pin power connector is installed in a PCI Express x16 slot. Which of the following indicates where the technician should begin troubleshooting?

- A . The UPS, as 115V is insufficient for the configuration and should be increased to 220V
- B . The power supply, as 200W is insufficient when the GPU is heavily tasked
- C . The graphics card, as it is the component that triggers the unexpected reboots
- D . The motherboard, as only standard PCI slots should be used for high-end graphics cards, not PCI Express slots

Answer: B

Explanation:

The unexpected reboots on a graphics workstation when rendering complex 3-D models may be caused by insufficient power supply. The workstation is configured with a 115V power supply that is rated at 200W, which may not be enough when the GPU is heavily tasked. The technician should begin troubleshooting by checking the power supply.

Question: 459

A user acquired a new workstation and is attempting to open multiple large Excel files simultaneously. The user is not experiencing the expected performance when executing such large requests. Which of the following should a technician do FIRST?

- A . Increase the swap partition.
- B . Upgrade the CPU in the workstation.
- C . Upgrade the power supply in the workstation.
- D . Upgrade the RAM in the workstation.

Answer: D

Explanation:

Opening multiple large Excel files simultaneously requires a large amount of RAM. Upgrading the RAM in the workstation should improve performance. Reference: CompTIA A+ Certification Exam Guide, Ninth Edition, Chapter 9

Question: 460

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.

Answer: A

Explanation:

The flashing green and orange LEDs on the NIC indicate connection issues. The technician should first check for loose connections, pinched bends, and physical damage, which are the most common causes of connection problems. Reference: CompTIA A+ Certification Exam Guide, Ninth Edition, Chapter 14

Question: 461

A Microsoft Windows user is preparing to work in another country and needs to comply with corporate policy for data protection when copying files to portable media.

- a. Which of the following solutions would MOST likely satisfy this requirement?
- A . A USB 3.1 flash drive with BitLocker to Go installed
 - B . An SD memory card with NTFS
 - C . An xD memory card with ext3
 - D . A portable hard drive with FAT32

Answer: A

Explanation:

Using a USB 3.1 flash drive with BitLocker to Go installed is the best option for complying with corporate policy for data protection when copying files to portable media. Reference: CompTIA A+ Certification Exam Guide, Ninth Edition, Chapter 12

Question: 462

A technician replaced a motherboard on a server, and now the 64-bit hypervisor is not loading correctly. Which of the following needs to be enabled for the hypervisor to run?

- A . Hardware prefetcher
- B . Hyperthreading
- C . vPro
- D . VT-d

Answer: D

Explanation:

https://techlibrary.hpe.com/docs/iss/proliant-gen10-uefi/s_enabling_VT-d.html

Enabling VT-d (Virtualization Technology for Directed I/O) in the server's BIOS settings is required for the hypervisor to run properly. Reference: CompTIA A+ Certification Exam Guide, Ninth Edition, Chapter 11

Question: 463

An organization has some computers running macOS and some computers running Windows. The computers running macOS also need to run a piece of software that is only available on Windows. Which of the following BEST describes the solution for running Windows software on a computer running macOS?

- A . Operating system spoofing
- B . Remote software provisioning
- C . Indirect software implementation
- D . Cross-platform virtualization

Answer: D

Explanation:

Cross-platform virtualization would be the best solution for running Windows software on a computer running macOS. This involves running a virtual machine (VM) on the macOS computer, which emulates a Windows environment and allows the Windows software to be installed and run within the VM.

Cross-platform virtualization allows a computer running macOS to run Windows software. It involves creating a virtual machine on the macOS computer and installing a Windows operating system on it. Reference: CompTIA A+ Certification Exam Guide, Ninth Edition, Chapter 1

Question: 464

A technician is setting up a new desktop computer and will be installing the hard drive directly on the motherboard without using cables to connect it. Which of the following will the technician be installing?

- A . Thunderbolt
- B . eSATA

C . M.2

D . SCSI

M . 2 is a form factor for solid-state drives (SSDs) that enables direct attachment to the motherboard without the need for cables. Thunderbolt is a high-speed interface that supports data transfer, video output, and charging. eSATA is an external interface for connecting SATA devices. SCSI is an older interface standard for connecting hard drives, printers, and other peripherals.

Installing a hard drive directly on the motherboard without using cables is usually done with an M.2 slot.

Reference: CompTIA A+ Certification Exam Guide, Ninth Edition, Chapter 5

Answer: C

Question: 465

Several users who share a multifunction printer in an office have reported unintended, thin, vertical lines that cover the entire height of every page printed from the printer. Which of the following steps should a technician complete in order to MOST likely resolve this issue?

- A . Replace the printer paper with a new ream.
- B . Clear the print spooler on each computer.
- C . Reinstall the printer driver on each computer
- D . Perform the drum-cleaning procedure.

Answer: D

Explanation:

Thin, vertical lines on every printed page are usually caused by a dirty drum or toner cartridge. Performing the drum-cleaning procedure will likely resolve the issue. Reference: CompTIA A+ Certification Exam Guide, Ninth Edition, Chapter 18

Question: 466

A technician is configuring a workstation to be used as a VM host. After installing the necessary software, the technician is unable to create any VMs. Which of the following actions should be performed?

- A . Disable the BIOS password.
- B . Enable TPM.
- C . Enable multithreading.
- D . Enable Fast Startup.

Answer: B

Explanation:

If you want to install Windows 11 on a virtual machine using Hyper-V, you will have to use a "Generation 2" VM and enable the "trusted platform module" (TPM) and Secure Boot options. Otherwise, the OS won't install.

Starting with Windows 11, Microsoft is changing the system requirement and making TPM 2.0 and Secure Boot a prerequisite to perform an in-place upgrade or clean install the new version on any device. This is in addition to the new 4GB of RAM and at least 64GB of storage.

:quoted from here:

<https://pureinfotech.com/enable-tpm-secure-boot-hyperv-install-windows-11/>

Furthermore, Multithreading is not a requirement for hyper-v hosting.

To create virtual machines on a workstation, the technician needs to enable Trusted Platform Module (TPM) in the system BIOS. TPM is a hardware-based security feature that helps protect the system from unauthorized access and tampering. It is required for many virtualization technologies, including Hyper-V, VirtualBox, and VMware. Reference: CompTIA A+ Certification Exam Objectives - 220-1102: 2.7 Explain the basics of virtualization.

Question: 467

A user reports that printed receipts have black smudges over the entire image. The text is still present but is very dark and sometimes illegible. Which of the following are the MOST likely cause and solution for the printer issue?

- A . The ribbon is jammed and is rubbing on the paper. Clear the bad ribbon and feed it through properly.
- B . The printhead is too hot. Adjust the temperature down and retry printing.
- C . The printer is loaded with the wrong type of paper. Replace the receipt paper with carbon paper.
- D . The blue ink cartridge was loaded with black ink. Put in the correct ink and clean the printhead.

Answer: A

Explanation:

The black smudges over the entire image on a printed receipt are most likely caused by a jammed ribbon that is rubbing on the paper. The solution is to clear the bad ribbon and feed it through the printer properly. Ribbon jams can be caused by various issues, such as incorrect installation or a damaged ribbon. Reference: CompTIA A+ Certification Exam Objectives - 220-1101: 4.5 Given a scenario, troubleshoot common printer problems.

Question: 468

A user connects a smartphone to a laptop. Which of the following types of networks has the user created?

- A . PAN
- B . MAN
- C . WLAN
- D . LAN

Answer: A

Explanation:

When a user connects a smartphone to a laptop, they create a Personal Area Network (PAN). A PAN is a type of network used for communication between devices in close proximity to each other, typically within a range of a few meters or less. This type of network is commonly used for wireless communication between personal devices, such as connecting a smartphone to a laptop for file sharing or internet access. Reference: CompTIA A+ Certification Exam Objectives - 220-1001: 1.1 Explain common connectors and their uses.

Question: 469

While implementing a non-carrier-grade wireless backhaul, a technician notices the current channel selection is extremely 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 unlocked by the vendor.
- D . The device requires a firmware update to unlock the channel.

Answer: A

Explanation:

The most likely reason that the technician is unable to select the channel with almost no RF pollution is that it is reserved for licensed band use. Some channels are reserved for specific purposes and require a license to use. These licensed bands are typically used for critical infrastructure, public safety, or military operations, and unlicensed devices are not allowed to use them. Reference: CompTIA A+ Certification Exam Objectives - 220-1001: 3.3 Compare and contrast common networking hardware devices.

Question: 470

A technician needs to recommend an internet connection for a customer who travels around the world and wants to have connectivity while visiting remote camping locations. Some of the locations the customer visits have limited or unreliable cellular service. Which of the following connection types should the technician recommend?

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

Answer: A

Explanation:

The connection type that the technician should recommend is Satellite. Satellite internet is a good option for people who travel around the world and want to have connectivity while visiting remote camping locations. It works by using terminals which can give you internet access in remote locations as long as they have a line of sight to the satellite in orbit above12.

Since the customer travels to remote camping locations with limited or unreliable cellular service, the best recommendation is satellite internet connection. Satellite internet uses a dish to connect to satellites orbiting the earth, which can provide coverage anywhere in the world as long as there is a clear line of sight to the satellite. This is especially useful in remote areas where traditional terrestrial connections are not available. Reference: CompTIA A+ Certification Exam Objectives - 220-1101: 1.6 Given a scenario, evaluate connection type and bandwidth.

Question: 471

A user on a SOHO network is unable to watch online videos, even at 240 pixels. The technician runs ipconfig from the user's computer and records the following:

```
Connection-specific DNS Suffix .: lan
Link-local IPv6 Address.....: fe80::1585:7fb2:b05f:7102%12
IPv4 Address.....: 192.168.1.131
Subnet Mask.....: 255.255.255.0
Default Gateway.....: 192.168.1.1
```

The technician then connects a test laptop to the router via the user's Cat 5 cable and records the following information:

```
Download: 85 mbps
Upload: 22 mbps
Ping: 28 ms
```

Which of the following is MOST likely causing the user's issue?

- A . Incorrect IP address
- B . Faulty NIC
- C . Misconfigured default gateway
- D . Bad network cable

Answer: B

Explanation:

Based on the information recorded by the technician, the network connection appears to be functioning normally. The user's computer is properly configured with an IPv4 address, subnet mask, and default gateway, which should allow the user to access the internet and online videos. The high download and upload speeds and low ping time

recorded from the test laptop also indicate that the network is working well. However, the user's inability to watch online videos suggests that there might be an issue with the network card (NIC) on the user's computer. The NIC might be faulty or malfunctioning, which is preventing the computer from receiving and processing the video data. The technician should try replacing the NIC to resolve the issue.

Question: 472

A customer reports that a computer is never able to reach more than a 100Mbps transfer data rate, even when using a Gigabit LAN card. While troubleshooting, the technician notices the network cable needs to be replaced. Which of the following cable categories is limiting the transfer speed?

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

Answer: A

Explanation:

Cat 5 cable is limited to a maximum data transfer rate of 100Mbps, while Cat 5e, Cat 6, and Cat 6a cables support Gigabit Ethernet (1000Mbps) and higher speeds. Even though the LAN card is capable of Gigabit speeds, it cannot achieve that speed when using a Cat 5 cable. Upgrading to a Cat 5e or higher cable would allow the computer to achieve Gigabit speeds. Reference: CompTIA A+ Certification Exam: Core 1 - Page 196

Question: 473

A field technician has been dispatched to a site with an internet outage. Upon arriving, the technician discovers that the POTS lines are not working as well. Which of the following technologies is the site MOST likely using?

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

Answer: C

Explanation:

DSL (Digital Subscriber Line) uses POTS (Plain Old Telephone Service) lines to provide high-speed internet access. If the POTS lines are not working, it could cause an internet outage for DSL customers. Fiber and cable internet typically use different types of infrastructure, while satellite internet is not reliant on POTS lines. Reference: CompTIA A+ Certification Exam: Core 1 - Page 231

Question: 474

Which of the following should the data center hardware technician implement to ensure maximum uptime for customers' virtual machines?

- A . Line conditioner
- B . AC voltage regulator
- C . Uninterruptible power supply
- D . Cloud storage backup

Answer: C

Explanation:

An uninterruptible power supply (UPS) can help ensure maximum uptime for customers' virtual machines by providing a backup power source in case of a power outage or other power-related issues. A line conditioner and AC voltage regulator are designed to stabilize the power supply, but do not provide backup power. Cloud storage backup is a way to backup data, but does not directly impact uptime. Reference: CompTIA A+ Certification Exam: Core 1 - Page 159

Question: 475

Which of the following components enables the input on a mobile device's touch screen?

- A . OLED
- B . Digitizer
- C . Inverter
- D . CMOS sensor

Answer: B

Explanation:

The digitizer is the component that enables input on a mobile device's touch screen. It is a transparent layer that sits over the screen and detects the location of touch inputs. OLED (Organic Light Emitting Diode) is a type of display technology. Inverter is a component used in older LCD displays to provide power to the backlight. CMOS (Complementary Metal-Oxide-Semiconductor) sensor is a type of image sensor used in digital cameras and smartphones to capture images. Reference: CompTIA A+ Certification Exam: Core 1 - Page 177

Question: 476

An organization maintains various record types, including health and criminal justice records. Which of the following cloud environments is the organization MOST likely to use to limit the attack surface?

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

Answer: D

Explanation:

Private cloud environments are designed for use by a single organization and offer the greatest control over security and access to data. They are typically used for sensitive or confidential data, such as health and criminal justice records. Public cloud environments are shared by multiple organizations and offer less control over security and access to data. Hybrid cloud environments combine public and private clouds, while community clouds are shared by multiple organizations with similar needs. Reference: CompTIA A+ Certification Exam: Core 1 - Page 234

Question: 477

A customer is using a satellite internet connection that is experiencing slowness. A technician notices high latency while pinging, but the download test is performing perfectly with very good download speeds. Which of the following represents the NEXT action the technician should perform?

- A . Restart the modem and run an online internet connection and speed diagnostic tool.
- B . Guide the customer on how to upgrade the internet plan with the provider in order to improve latency.
- C . Explain to the customer this is not an issue; this situation is normal for this type of internet connection.
- D . Replace the modem because it is not working correctly based on the test result.

Answer: A

Explanation:

The technician should restart the modem and run an online internet connection and speed diagnostic tool1. High latency is a common issue with satellite internet connections, and it can cause slow internet speeds2. Restarting the modem can help to resolve the issue1. The technician should also run an online internet connection and speed diagnostic tool to check the connection and speed1. Guiding the customer on how to upgrade the internet plan with the provider in order to improve latency is not likely to be the correct option2.

High latency while pinging can indicate a problem with the modem or the connection between the modem and the satellite. Restarting the modem can often resolve connectivity issues. Running an online internet connection and speed diagnostic tool can help identify any other issues with the connection. Upgrading the internet plan may not resolve latency issues and may not be necessary if the download test is performing perfectly with very good download speeds. High latency is not normal for satellite internet connections, so replacing the modem based on this one test result is premature. Reference: CompTIA A+ Certification Exam: Core 1 - Page 102

Question: 478

Which of the following utilizes TCP ports 20/21 and transfers data in cleartext?

- A . SNMP
- B . SSH
- C . FTP
- D . Telnet

Answer: C

Explanation:

FTP (File Transfer Protocol) uses TCP ports 20/21 and transfers data in cleartext, which means the data is not encrypted and can be read by anyone who intercepts it. This makes FTP insecure for transferring sensitive information. SSH (Secure Shell), on the other hand, uses port 22 and encrypts data, making it more secure. SNMP (Simple Network Management Protocol) uses ports 161/162 and is used to monitor network devices. Telnet uses port 23 and transfers data in cleartext, making it insecure. Reference: CompTIA A+ Certification Exam: Core 1 - Page 199

Question: 479

An online retailer would like to add capacity to support increased sales. Additional servers have been installed. Which of the following should be used to ensure each new server is being properly utilized?

- A . Virtualization
- B . Clustering
- C . Load balancer
- D . Round-robin DNS

Answer: C

Explanation:

<https://www.resonatenetworks.com/2020/04/29/clustering-vs-load-balancing-whats-the-difference/>

A load balancer distributes network traffic evenly across multiple servers, ensuring each server is being properly utilized. This helps to prevent overloading of any individual server, which can cause downtime or slow response times for users. In this scenario, adding a load balancer would be the best way to ensure the new servers are being properly utilized. Reference: CompTIA A+ Certification Exam: Core 1 - Page 181

Question: 480

A company just bought a printer capable of automatically printing on both sides of the paper. After installation, however, the technician can only print on both sides of the paper manually. Which of the following should the technician do to fix the issue?

- A . Install the most recent firmware upgrade available for the printer.
- B . Contact the vendor for a hardware replacement.
- C . Reinstall the printer software and drivers, and then restart the printer.
- D . Read the installation manual and configure duplex settings.

Answer: D

Explanation:

The issue described in the question is most likely due to an incorrect configuration of the printer's duplex settings. To enable automatic duplex printing, the technician needs to read the printer's installation manual to understand how to configure the printer's duplex settings correctly. Once the settings are configured, the printer should be able to print on both sides of the paper automatically.

To fix the issue of a newly installed printer capable of automatically printing on both sides of the paper but only printing on both sides manually, the technician should read the installation manual and configure duplex settings. Duplex printing settings can be configured in the printer driver software, which can be accessed through the printer settings in the Control Panel. Installing the most recent firmware upgrade available for the printer, contacting the vendor for a hardware replacement, or reinstalling the printer software and drivers and restarting the printer will not resolve the issue.

Question: 481

Which of the following technologies can allow multiple networks to traverse a switch?

- A . VLAN
- B . VRRP
- C . VPN
- D . DHCP

Answer: A

Explanation:

[The technology that allows multiple networks to traverse a switch is VLAN \(Virtual Local Area Network\) which is a logical grouping of devices on the same network regardless of their physical location 12.](#)

Virtual Local Area Network (VLAN) technology can allow multiple networks to traverse a switch. A VLAN is a logical network created within a physical network that can separate traffic and allow multiple networks to coexist on the same physical network infrastructure. VRRP (Virtual Router Redundancy Protocol), VPN (Virtual Private Network), and DHCP (Dynamic Host Configuration Protocol) do not allow multiple networks to traverse a switch. Reference: CompTIA A+ Certification Exam: Core 1 - Objective 3.2

Question: 482

A user requested upgrades to a company-issued laptop to increase its performance while working with a large database stored on drive C. Which of the following tasks should a systems administrator complete to BEST meet this goal? (Select TWO).

- A . Configure RAID 1.
- B . Install a hybrid drive.
- C . Upgrade to 1GB NIC.
- D . Increase the RAM.
- E . Migrate to a SSD.
- F . Upgrade the power supply.

Answer: D, E

Explanation:

To increase the performance of a laptop working with a large database stored on drive C, a systems administrator should increase the RAM and migrate to an SSD. Increasing the RAM will help the laptop to better handle the large database, while migrating to an SSD will improve the speed at which the laptop can access the database. Configuring RAID 1, installing a hybrid drive, upgrading to a 1GB NIC, and upgrading the power supply will not directly improve the laptop's performance when working with a large database. Reference: CompTIA A+ Certification Exam: Core 1 - Objective 3.1

Question: 483

Which of the following standards supports MIMO technology?

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

Answer: D

Explanation:

The 802.11n wireless networking standard supports Multiple Input Multiple Output (MIMO) technology. MIMO technology uses multiple antennas on both the transmitting and receiving devices to improve wireless performance by increasing the amount of data that can be transmitted simultaneously. 802.11a, 802.11b, and 802.11g do not support MIMO technology. Reference: CompTIA A+ Certification Exam: Core 1 - Objective 3.3

Question: 484

A user, who is attempting to give a presentation via a projector in a conference room, reports the projector has video but no audio. Which of the following will MOST likely resolve the issue?

- A . Changing the input on the projector to VGA
- B . Changing the output on the PC to DVI
- C . Modifying the projector's refresh rate
- D . Utilizing an HDMI connection

Answer: D

Explanation:

The issue of video but no audio on a projector in a conference room can be resolved by utilizing an HDMI connection between the PC and the projector. HDMI supports both video and audio signals and is commonly used to connect a PC to a projector for presentations. Changing the input on the projector to VGA, changing the output on the PC to DVI, or modifying the projector's refresh rate will not resolve the issue. Reference: CompTIA A+ Certification Exam: Core 1 - Objective 2.5

Question: 485

Which of the following would an administrator use to migrate virtual machines from on premises to the cloud?

- A . IaaS
- B . SaaS
- C . DBaaS
- D . DRaaS

Answer: A

Explanation:

An administrator would use Infrastructure as a Service (IaaS) to migrate virtual machines from on-premises to the cloud. IaaS is a cloud computing service that provides virtualized computing resources, such as servers, storage, and networking, that can be used to deploy and run applications in the cloud. By using IaaS, an administrator can create a virtual machine in the cloud and migrate the existing virtual machine from on-premises to the cloud. Reference: CompTIA A+ Certification Exam: Core 1 - Objective 3.3