Exam Report: B.6 CompTIA 220-901 Certification Practice Exam

Date: 7/18/2017 2:45:30 pm Candidate: Stangl, Thomas (Email: tstangl@ciat.edu)
Time Spent: 3:22 of 01:30:00

Overall Performance

Your Score: 14%

Passing Score: 95%

View results by: Objective Analysis Individual Responses

Individual Responses

Question 1: Incorrect

Your organization uses an 802.11g wireless network. Recently, other tenants installed the following equipment in your building:

- A wireless television distribution system running at 2.4 GHz
- A wireless phone system running at 5.8 GHz
- A wireless phone system running at 900 MHz
- An 802.11a wireless network running in the 5.725 - 5.850 GHz frequency range
- An 802.11n wireless network running in the 5.8 GHz frequency range.

Since this equipment was installed, your wireless network has been experiencing significant interference. Which system is to blame?

- The 900 MHz wireless phone system.
- The 802.11a wireless network.
- The 802.11j wireless network.
- The wireless TV system.
- ~~The 5.8 GHz wireless phone system.~~

Explanation

Because the 802.11g standard operates within the 2.4 GHz to 2.4835 GHz radio frequency range, the most likely culprit is the wireless TV distribution system running at 2.4 GHz.

References

LabSim for PC Pro, Section 6.14.
[pcpro2016_all_questions_en.exm PC 2016 WIRELESS TV SYSTEM]

Question 2: Correct

You have just purchased a new laptop with built-in 802.11 wireless and Bluetooth capabilities. When you boot into Windows, you do not see a Bluetooth adapter listed in Device Manager. What should you do first?

- Replace the wireless card in the laptop.
- Update the device driver in Windows.
- Enable the Bluetooth device in Device Manager.
- Enable Bluetooth in the BIOS/UEFI configuration.

Explanation

You can enable and disable built-in devices in the system BIOS/UEFI configuration. Check the BIOS/UEFI configuration first before trying to replace components. You cannot enable the device or update the driver in Windows until Windows can see the device. With the device disabled in the BIOS/UEFI configuration, Windows does not know that the device exists.

References

LabSim for PC Pro, Section 8.4.
[pcpro2016_all_questions_en.exm TRB NOTEBOOK_05]

Question 3: Incorrect

Which of the following IP addresses have a default subnet mask of 255.255.0.0? (Select three.)

- [ ] 191.168.2.15
- [ ] 129.0.0.1
- [ ] 228.62.18.6
- [ ] 168.16.5.1
- [ ] 123.254.19.6
- [x] ~~1.6.45.254~~

Explanation

IP addresses are divided into classes. The most common of these are classes A, B, and C. Each address class has a different default subnet mask. To identify the class of an IP address, look at its first octet. Class A networks use a default subnet mask of 255.0.0.0 and have 0-126 as their first octet. Class B networks use a default subnet mask of 255.255.0.0 and have 128-191 as their first octet. Class C networks use a default subnet mask of 255.255.255.0 and have 192-223 as their first octet. In this question, the IP addresses that fall in the Class B IP address range are 191.168.2.15, 129.0.0.1, and 168.16.5.1.

References

LabSim for PC Pro, Section 6.5.
[pcpro2016_all_questions_en.exm SUBNETMASKING_01]

Question 4: Incorrect

Which component lets you use a notebook system as a desktop system by making it possible to connect a normal-sized external mouse, keyboard monitor, and speakers?

- ( ) Built-in Bluetooth
- ( ) Infrared wireless
- ( ) Docking station
- ( ) USB ports
- (•) ~~Firewire ports~~

Explanation

A docking station lets you use the notebook systems as a desktop system. The docking station includes special ports that connect to the back of the notebook and let you use normal-sized external mouse, keyboard, monitor, and speakers.

References

LabSim for PC Pro, Section 8.1.
[pcpro2016_all_questions_en.exm NOTEBOOK FEATURES_04]

Question 5: Incorrect

Which Blu-ray standard defines rewritable disks?

- BD-R
- BD-RE
- BD-ROM
- ~~BD-R/RW~~

Explanation

BD-RE is the Blu-ray standard which defines rewritable disks. BD-ROM is the read-only standard and BD-R is the recordable standard. R/RW is used to designate rewritable CD and DVD discs, not Blu-ray discs.

References

LabSim for PC Pro, Section 5.3.
[pcpro2016_all_questions_en.exm BLU RAY REWRITABLE]

Question 6: Correct

Which of the following recommendations should you follow when placing wireless access points (WAPs) to provide wireless access for users within your company building?

- Place WAPs in the basement.
- Place multiple WAPs in the same area.
- Place WAPs near outside walls.
- Place WAPs above where most clients are.

Explanation

Devices often get better reception from WAPs that are above or below. If possible, place WAPs higher up to avoid interference problems caused by going through building foundations. For security reasons, do not place WAPs near outside walls. The signal will extend outside beyond the walls. Placing the WAP in the center of the building decreases the range of the signals available outside of the building. When using multiple WAPs, place access points evenly through the area, taking care to minimize the overlap of the broadcast area while ensuring adequate coverage for all areas.

References

LabSim for PC Pro, Section 6.8.
[pcpro2016_all_questions_en.exm WIRELESS_10]

Question 7: Incorrect

You've just installed a new video card in a employee's Windows workstation. When you power the system on and load the OS, everything on the screen looks enlarged and pixelated. You try to change the resolution, but the only available option is 640x480.

Which of the following will resolve this problem?

- Download and install the latest driver from the video card manufacturer's website.
- Verify that the system BIOS is compatible with the video card.

- Reboot the system into Safe Mode.
- ~~Upgrade the monitor to one that supports a higher refresh rate.~~

Explanation

You should download and install the latest video driver from the manufacturer's website. Because Windows didn't have the appropriate driver, it used a generic driver instead, which supports a very limited resolution.

Windows Safe Mode is used to troubleshoot system issues and disables all unnecessary software and drivers. A monitor's refresh rate does not affect a systems max resolution. If BIOS compatibility was an issue, nothing would be displayed on the monitor.

References

LabSim for PC Pro, Section 3.12.
[pcpro2016_all_questions_en.exm PC16_VIDEO_CARDS_TRB_01]

Question 8: Correct

Which connector is most commonly used to connect printers to desktop PC systems?

- USB
- 802.11 wireless card
- Firewire
- Ethernet network card
- IEEE 1284

Explanation

Most printers use a USB connector to connect directly to a desktop PC system.

In the past, IEEE 1284 connectors were the most commonly used connectors, but that is no longer the case. A limited number of Firewire printers are available, but they are not as common as USB. 802.11 wireless and Ethernet cards are used to connect printers to computer networks.

References

LabSim for PC Pro, Section 7.3.
[pcpro2016_all_questions_en.exm PRT_INSTALL_CONFIG_04]

Question 9: Incorrect

Which of the following processor features is used to dynamically reduce power consumption based on current operating conditions?

- Overclocking
- Hyper-threading
- Throttling
- Multi-core
- ~~Caching~~

Explanation

Throttling modifies the operating characteristics of a processor based on current conditions.

Overclocking is a feature offered on special motherboards that causes the processor to operate at a higher speed. A multi-core processor has multiple processor cores integrated into a single

processor package. Hyper-threading is a feature of some Intel processors that allows the CPU to process threads in parallel. Caching, when used to describe processors, is a temporary storage area for data that is waiting for the processor.

References

LabSim for PC Pro, Section 3.14.
[pcpro2016_all_questions_en.exm THROTTLING]

Question 10: Incorrect

You need to connect a monitor that provides an HDMI port and a VGA port to a video adapter in a PC system that uses a DVI-D connector.

Which option would provide the best display quality at the lowest cost?

- Purchase a new monitor with a DVI-D port.
- Use an adapter to connect the monitor HDMI port to the DVI-D connector on the PC.
- It's not possible to connect this monitor to this PC.
- ~~Use an adapter to connect the monitor VGA port to the DVI-D connector on the PC.~~

Explanation

Using an adapter to connect the DVI-D connector on the video adapter to the HDMI port would provide the best quality output at the lowest cost. Because DVI-D and HDMI both use digital signaling, the signal is not degraded during conversion. In fact, HDMI was specifically designed to support DVI-D signaling. DVI-D to HDMI converters can be purchased for less than $20.00 USD.

Using a DVI-D to VGA adapter would allow you to connect the video board to the monitor; however, this type of adapter must convert digital signals to analog signals, which would likely degrade the signal slightly. Purchasing a new monitor with a DVI-D port would provide a high-quality signal but would cost much more than the other alternatives.

References

LabSim for PC Pro, Section 3.12.
[pcpro2016_all_questions_en.exm PC16_VIDEO_CARDS_05]

Question 11: Incorrect

You have just set up a new laser printer for the company president on her Windows workstation. You have installed the printer and the drivers, what should you do next?

- Share the printer over the network with the rest of the organization.
- Document the steps you took to complete the configuration.
- Edit the printer properties to configure device-specific settings.
- ~~Report to your supervisor that the job was completed.~~

Explanation

After installing a printer, you should configure device-specific settings before performing any further tasks. Documenting the steps you took to complete the configuration and reporting to your supervisor that the job was completed are good things to do, but not until after you have configured device-specific settings. Sharing the printer over the network is not required unless specified in the implementation plan or statement of work.

References

LabSim for PC Pro, Section 7.2.
[pcpro2016_all_questions_en.exm PRT_CONFIG_03]

Question 12: Incorrect

Which of the following are options for connecting a computing device, such as a notebook computer or a tablet, to a cellular network? (Select all that apply.)

- [ ] Use an integrated transmitter to connect the device directly to the cellular network through a satellite
- [ ] Use a USB cable to connect the device to the network through a smartphone
- [ ] Use a USB transmitter to connect the device directly to the cellular network through a satellite
- [ ] Use an integrated cellular antennae to connect the device directly to the cellular network
- [ ] Use a USB cellular antennae to connect the device directly to the cellular network
- [ ] Use the device's wi-fi to connect to the cellular network through a cable modem's wi-fi antannae
- [ ] Use a USB cable to connect the device to the cellular network through a cable modem
- [x] Use the device's wi-fi to connect to the network through a cellular wi-fi hot spot

Explanation

You can connect a computing device, such as a notebook computer or a tablet, to a cellular network by using any of these four options:

- Use a USB cable to connect the device to the network through a smartphone
- Use the device's wi-fi to connect to the network through a cellular wi-fi hot spot
- Use a USB cellular antennae to connect the device directly to the cellular network
- Use an integrated cellular antennae to connect the device directly to the cellular network

A transmitter antennae, or a dish, to communicate with a satellite will connect you to a satellite network, not a cellular network. Connecting to the cable service will also not connect you to a cellular network. Cable is a separate type of networking service.

References

LabSim for PC Pro, Section 6.10.
[pcpro2016_all_questions_en.exm CELLULAR_02]

Question 13: Incorrect

What are two major disadvantages to overclocking the CPU? (Select two.)

- [ ] Increased heat output
- [ ] Increased memory requirements
- [ ] Decreased performance
- [ ] Voided warranty
- [x] ~~Decreased compatibility with other devices~~

Explanation

Overclocking the CPU increases heat output and can compromise the CPU's warranty.

Overclocking increases (not decreases) performance. Memory settings can be adjusted to match overclocking, but memory requirements are not affected.

References

LabSim for PC Pro, Section 3.6.
[pcpro2016_all_questions_en.exm OVERCLOCKING_01]

Question 14: Correct

You have a laptop with a dual core processor with the following characteristics:

- 1024 MB L2 cache
- 125 Watts
- 45nm process size

You want to upgrade the processor to one that uses less power. Which of the following characteristics would most likely identify a processor that uses less power?

- Single core processor
- 32nm process size
- 512 MB L2 cache
- 90 Watts

Explanation

Power consumption for a processor is measured in Watts. A 90 Watt processor will consume less power than a 125 Watt processor. It is possible that a single core processor, one with less cache, or one with a smaller process size will consume less power. However, only the Watt rating will tell you for sure how much power the processor requires.

References

LabSim for PC Pro, Section 3.2.
[pcpro2016_all_questions_en.exm UPGRADE CPU LESS POWER]

Question 15: Incorrect

Which of the following drive configurations uses striping without fault tolerance?

- Expanded volume set
- RAID 0
- RAID 1
- ~~RAID 5~~

Explanation

RAID 0 uses disk striping and offers no fault tolerance. Disk striping breaks data into units and stores the units across a series of disks by reading and writing to all disks simultaneously. A failure of one disk in the set means all data is lost. This is the fastest of all RAID types. RAID 5 also uses disk striping, but provides fault tolerance for a single disk failure. RAID 1 provides fault tolerance but does not use striping. An expanded volume set is a volume that spans more than one hard drive. An expanded volume set also offers no fault tolerance, yet does not use striping.

References

LabSim for PC Pro, Section 5.4.
[pcpro2016_all_questions_en.exm RAID 0_01]

Question 16: Incorrect

Which tool in Windows would you use to browse all networks and shared folders to which a user has access? (Select three.)

- [ ] Computer
- [ ] Device Manager
- [ ] Computer Management
- [ ] Network Neighborhood
- [ ] Windows Explorer
- [x] Network

Explanation

Network acts as a built-in network browser showing all networks and shared folders to which the user has access. This same information can be viewed in Computer and Windows Explorer. Network Neighborhood was used in previous Windows versions, but was replaced by My Network Places in Windows 2000, Me, and XP and by Network in Windows Vista and Windows 7. Computer Management and Device Manager are used to manage hardware and software in the Windows system and can't be used to browse the network.

References

LabSim for PC Pro, Section 6.14.
[pcpro2016_all_questions_en.exm TRB NETWORKING_01]

Question 17: Incorrect

Which of the following are true regarding a dual-channel memory bandwidth configuration? (Select two.)

- [ ] Bandwidth is double.
- [ ] Bandwidth is increased by 5-15%.
- [ ] The memory controller must support dual-channels.
- [x] ~~Only DDR2 memory is supported.~~

Explanation

Dual-channel systems increase the memory bandwidth by only 5-15%, although it does have a 100% theoretical increase. Dual-channel support is mainly a function of the motherboard (e.g., the memory controller), not the memory itself. DDR, DDR2, and DDR3 can all work in dual-channel systems (depending on the memory supported by the motherboard); a triple channel system can only use DDR3.

References

LabSim for PC Pro, Section 3.8.
[pcpro2016_all_questions_en.exm DUAL CHANNEL]

Question 18: Incorrect

Which of the following commands verifies that TCP/IP is working correctly on the local computer?

- ( ) nslookup localhost
- ( ) ping -a localhost
- ( ) ping 127.0.0.1
- (•) ~~netstat~~

Explanation

Use ping 127.0.0.1 to test the TCP/IP configuration of the local system. The special address of 127.0.0.1 is a loopback address that identifies the local host. A successful ping test to the local host identifies that TCP/IP is correctly configured. Use nslookup to find the IP address for a given hostname. Use ping -a to find the hostname for a given IP address. Netstat shows IP-related statistics.

References

LabSim for PC Pro, Section 6.14.
[pcpro2016_all_questions_en.exm TRB NETWORKING_15]

Question 19: Correct

What type of USB 3.0 connector is shown here?

- (selected) Type-A
- Type-B
- Micro-B

Explanation

The blue tab indicates that the connector is a USB 3.0 Type-A connector and capable of USB 3.0 speeds. USB 3.0 Type-A connectors are backwards compatible with all previous USB versions.

The USB 3.0 Type-B connector is larger in size and designed to carry both data and power. Due to their increased size, USB 3.0 Type-B connectors cannot be plugged into older USB Type-B ports. However, USB 3.0 peripherals that use this port are able to accept older USB Type-B connectors.

The USB 3.0 Micro-B connector is used by portable devices, such as compact external storage devices, digital cameras, or smartphones.

References

LabSim for PC Pro, Section 4.2.
[pcpro2016_all_questions_en.exm USB 3-PB]

Question 20: Correct

You have a computer with an onboard LAN adapter. The LAN adapter has failed and you are unable to connect the computer to the network. What should you do?

- Replace the motherboard.
- Add a network card using an AGP slot.
- Clear the CMOS settings.
- (selected) Add a network card using a PCI slot.

Explanation

In this case, you should install a network adapter in a PCI slot. Your computer would then use the new network adapter instead of the one integrated on the motherboard. While installing the new card, you should disable the onboard LAN adapter to prevent it from showing in Device Manager. Replacing the motherboard is too expensive when compared to installing a new expansion card. AGP slots are used for video cards, not network cards. Clearing the CMOS settings erases the configuration information but does not fix the LAN adapter that is not functioning.

References

LabSim for PC Pro, Section 6.2.
[pcpro2016_all_questions_en.exm PCI NETWORK ADAPTER]

Question 21: Incorrect

To improve system performance, you have configured a motherboard to run with a higher multiplier than what the CPU is specified to use. Since doing this, the system has become unstable and crashes frequently.

What should you do to restore system stability?

- Back off on the overclocking settings until the system runs in a stable manner.
- Replace the CMOS battery to make sure the real-time clock has the correct time.
- Make sure the BIOS firmware supports the overclocking settings you're using.
- ~~Make sure the switch on the power supply is set to the correct voltage.~~

Explanation

Configuring a motherboard to run with a higher multiplier than what the CPU is specified to use is called *overclocking*. If the system becomes unstable and crashes frequently, the multiplier may be set higher than the CPU can handle. To resolve this, lower the multiplier until the system becomes stable again.

The real-time clock on the motherboard is not a factor in this scenario and has no role in overclocking. If the power supply is set to the wrong voltage, system components can be damaged but not cause the behavior described in the scenario. BIOS firmware is not factor in overclocking issues.

References

LabSim for PC Pro, Section 3.6.
[pcpro2016_all_questions_en.exm PROC_TRB_03]

Question 22: Incorrect

You want to allow your users to download files from a server running the IP protocol. You want to protect access to the files by requiring user authentication to access specific directories on the server. Which IP protocol should you implement to provide this capability?

- LDAP
- TFTP
- FTP
- SMTP
- SSH
- ~~SNMP~~

Explanation

You should implement the File Transfer Protocol (FTP). It enables file transfers and supports user authentication. The Trivial File Transfer Protocol (TFTP) also enables file transfer, but does not support user authentication. The Simple Mail Transfer Protocol (SMTP) is used to transfer email message from email clients to email servers. The Lightweight Directory Access Protocol is used to access information about network resources stored in a directory server. The Secure SHell protocol (SSH) is used to securely access the console prompt of a remote computer system. The Simple Network Management Protocol (SNMP) is used to remotely monitor and manage network devices and hosts.

References

LabSim for PC Pro, Section 6.5.
[pcpro2016_all_questions_en.exm FTP PROTOCOL]

Question 23: Incorrect

Which of the following will ensure optimal system cooling? (Select three.)

- [ ] Bundle cables together and secure unused cables to the case.
- [ ] Keep the ambient temperature below 80°F.
- [ ] Remove unused expansion slot covers to increase air flow.
- [ ] Stack hard drives next to each other.
- [ ] Leave space between the case and any walls or obstructions.
- [x] ~~Remove the side panel on the case.~~

Explanation

Consider the following recommendations to ensure optimal system cooling:

- Keep the case free of dust and debris. Excess dust can restrict airflow and prevent proper heat transfer.
- Reduce the number of airflow obstructions.
  - Employ proper cable management (e.g., bundle cables together and secure unused cables to the case).
  - Space out multiple hard disk drives instead of stacking them next to each other.
- Maintain appropriate ambient temperatures. Optimal ambient temperatures are between 60 and 80 degrees Fahrenheit.
- Ensure proper ventilation; leave space between the computer and any walls or desks.
- Preserve negative pressure inside the case by keeping all covers and shields installed (e.g., unused expansion cards, I/O shield, front drive bays).

References

LabSim for PC Pro, Section 3.14.
[pcpro2016_all_questions_en.exm PC16_COOLING_02]

Question 24: Incorrect

You are a PC technician for a national computer retailer. You are asked to build each of the systems listed on the right. You need to use the most appropriate hardware components to ensure that each of these systems will fulfill its intended role.

Drag and drop the most appropriate list of components on the left to the system type on the right that needs those components to accomplish the work it is expected to do. (One list of components will not be the most appropriate for any of the systems listed on the right.)

Home Office Server

- 2 TB RAID 5 disk array
- 600W power supply

- No audio adapter
- Integrated video adapter

Gaming PC

- 1000W power supply
- 1 TB SATA HD
- Dual SLI 6GB PCIe video adapters
- 5.1 channel surround sound adapter
- Liquid CPU cooler

Home Theater PC

- HDMI output
- Compact form factor
- 5.1 channel surround sound adapter
- TV tuner adapter

Virtualization Workstation

- AMD 12-core, 4 GHz CPU
- 4 TB SATA HD
- 32 GB DDR4 RAM
- Hardware-assisted virtualization

Thin Client Workstation

- Intel Celeron dual-core , 2.7 GHz CPU
- 500 GB SATA HD
- 2 GB DDR3 RAM
- Few or no applications installed

Audio/Video Editing Workstation

- Intel Core i7 six-core, 3.4 GHz CPU
- 2 TB SSD SATA HD
- 16 GB DDR4 RAM
- High-end audio adapter with speaker system
- High-end video adapter with dual displays

Explanation

Audio/video editing workstation:

- Select the most powerful processor that you can afford. Audio and video editing applications require a great deal of processing power. A 64-bit multi-core processor should be the minimum processor considered.
- Implement a high-end video adapter with dual displays. Audio and video editing applications require extensive video processing and screen real estate.
- Implement a high-end audio adapter and speaker system.
- Implement a very large and very fast hard disk drive. Audio and video editing applications require extensive disk space and speed. You may want to consider using an SSD drive instead of a traditional hard disk.

Virtualization workstation:

- Virtualization hosts require extensive RAM and CPU processing power. Each virtual machine running on the system must share the system processor and RAM; therefore, you need to implement the maximum amount of RAM supported by the motherboard in dual- or triple-channel mode.
- A 64-bit multi-core processor should be the minimum processor considered. You may want to consider a system with multiple processors.
- (Video and audio performance are of secondary concern.)

Gaming system:

- Gaming applications require a great deal of processing power. A 64-bit multi-core processor should be the minimum processor considered.
- Gaming applications can cause the systems processor, RAM, and video adapter to generate

excessive heat. You should implement a high-end cooling solution to dissipate this heat.
• Implement a high-end video adapter with a GPU. Gaming applications require a great deal of video processing.
• Implement a high-end audio adapter with a surround-sound speaker system.

Home theater system:

• Implement a high-end audio adapter with a surround-sound speaker system.
• Implement a video adapter with a TV tuner and HDMI output.
• To save space, you may want to select a system that uses the Home Theater PC (HTPC) compact form factor.

Thin client:

• A thin client only needs to be able to connect to a remote desktop session. As such, it needs to meet only the minimum requirements for running Windows locally.
• A thin client workstation needs to be optimized to run only very basic applications. Ensure the system has enough processing power, disk space, and RAM to support the applications that will be installed on it.
• Install the fastest network adapter supported by the network it will be connected to. Gigabit speeds (or faster) are recommended. This will help ensure that the remote desktop session provides a reasonable end-user experience.

Home or small office server:

• A home or small office server is typically used for media streaming, file sharing, and printer sharing. As such, you should install the fastest network adapter supported by the network it will be connected to. Gigabit speeds (or faster) are recommended.
• You should implement a storage solution that provides both speed and redundancy to protect data. You should consider using a RAID array that uses striping (for performance) along with mirroring or parity (for protection). RAID 5, RAID 1+0, or RAID 0+1 would be good choices.
• A 64-bit multi-core processor should be the minimum processor considered.
• Implement the recommended amount of RAM for your server operating system in dual- or triple-channel mode.

References

LabSim for PC Pro, Section 10.1.
[pcpro2016_all_questions_en.exm IMPL_04-PB]

Question 25: Incorrect

Which type of interface is typically used for internal wireless networking cards in laptops?

- Firewire
- PCI
- USB
- Mini-PCI
- ~~ExpressCard~~

Explanation

Most internal wireless network cards in laptops connect using a mini-PCI interface. USB, Firewire, and ExpressCard are external buses for external devices.

References

LabSim for PC Pro, Section 8.2.
[pcpro2016_all_questions_en.exm NOTEBOOK_COMPONENTS_18]

Question 26: Incorrect

There are critical times when memory problems often manifest themselves.

Match the critical times on the left with the corresponding descriptions on the right of the causes of the memory problems.

This can require more memory and can cause problems if there is not enough memory at this time

[ ] Software installation

Memory is not properly seated, missing, or the motherboard is defective

[ ] First boot of a new computer

Incompletely or improperly doing this can cause errors that appear to be memory related

[ ] Hardware installation or removal

The memory is not compatible and was not installed and configured properly

[ ] Memory upgrade

Explanation

At these critical times memory problems can manifest themselves:

- First boot of a new computer - memory is not properly seated, missing, or the motherboard is defective.
- After a memory upgrade - ensure that the memory is compatible and was installed and configured properly.
- After software installation - new software can require more memory and can cause problems if there is not enough memory for the software.
- After hardware installation or removal - incompletely or improperly installed hardware can cause errors that appear to be memory related.

References

LabSim for PC Pro, Section 3.9.
[pcpro2016_all_questions_en.exm CRITICAL TIMES-PB]

Question 27: Incorrect

You are setting up a small network in your office with one Windows server and 50 Windows workstations. You want to spend as little time as possible configuring the workstations with IP addressing information. What should you do?

- Install the DHCP service on your server.
- Assign each user an IP address and instruct the user to enter the IP address in his or her computer.
- Install the DHCP service on each workstation.
- ~~Install the WINS service on your server.~~

Explanation

The DHCP protocol allows you to assign IP addresses automatically. In this scenario, you should configure the DHCP service to run on the network server. The DHCP client on each workstation can then contact the DHCP server when the workstations connect to the network to be automatically assigned IP addressing information. You could instruct each user to manually enter IP addressing information but there is a higher chance of error and will likely require more administrative overhead.

References

LabSim for PC Pro, Section 6.6.
[pcpro2016_all_questions_en.exm DHCP_02]

Question 28: Incorrect

You have a computer system with an Intel Core i3 processor that operates at 3.7 GHz. You would like to upgrade to a faster processor, but you don't want to replace the motherboard. Which of the following should you do first?

- Read the motherboard documentation to identify which processors are supported.
- Install the processor.
- Edit the CMOS.
- Configure jumpers on the motherboard to increase the clock speed.
- ~~Replace the VRM.~~

Explanation

The first thing you need to do before purchasing and installing a new processor is to verify with the motherboard documentation that the new processor is supported by your existing motherboard. After you have determined that the new processor is supported by the motherboard, you can take additional steps such as installing the processor, editing the CMOS, configuring jumpers, and replacing the VRM if necessary.

References

LabSim for PC Pro, Section 3.5.
[pcpro2016_all_questions_en.exm INSTALLING FASTER PROC]

Question 29: Correct

Your system crashes at various times, sometimes on startup, sometimes when running a software application, sometime when a certain group of applications is running. You suspect a malfunctioning CPU but none of the common issues seem to be present. You have not configured overclocking. There is no overheating. The CPU is seated correctly and locked into its socket.

What can you do to definitively determine if the CPU is causing the system crashes?

- Downgrade to a CPU that has fewer cores and is less demanding on your system resources.
- Switch to a comparable CPU from a different manufacturer.
- Throttle the processor to reduce the operating frequency and minimize power consumption.
- Replace the suspect CPU with a known good CPU of the same make and model.

Explanation

Replacing the suspect CPU with a known good CPU of the same make and model is the best way to determine if the CPU is the problem. There is only one variable in this test. If the system stops crashing after the CPU was replaced, it is safe to assume that the suspect CPU was not functioning properly.

Any other course of action introduces more variables to the environment. If intermittent problems continue to occur, you are no closer to finding the cause.

References

LabSim for PC Pro, Section 3.6.
[pcpro2016_all_questions_en.exm PROC_TRB_06]

Question 30: Incorrect

Which interface is primarily used for internal hard drives in modern desktop PC systems?

- SATA
- PATA
- USB
- SCSI
- ~~Firewire~~

Explanation

SATA is primarily used for internal hard drives in modern desktop PC systems. PATA (also called EIDE, IDE, and ATAPI) is a parallel ATA interface and was the most common interface used for hard disks and CD/DVD drives in the past, but not in modern PC systems. USB and Firewire are interface standards for connecting various external devices, including external hard drives. SCSI is commonly used for server storage, but is rarely used for hard disks in modern desktop systems.

References

LabSim for PC Pro, Section 5.2.
[pcpro2016_all_questions_en.exm SATA INTERNAL HD]

Question 31: Incorrect

Your network follows the 1000Base-T specifications for Gigabit Ethernet. What is the maximum cable segment length allowed?

- 412 meters
- 2,000 meters
- 1,000 meters
- 100 meters
- ~~500 meters~~

Explanation

Gigabit Ethernet using twisted pair cables (either Cat 5e or Cat 6) has a maximum cable segment length of 100 meters. Tip: All Ethernet networks that use twisted pair cable (Ethernet, Fast Ethernet, and Gigabit Ethernet) have a distance limitation of 100 meters.

References

LabSim for PC Pro, Section 6.4.
[pcpro2016_all_questions_en.exm 1000BASE-T_01]

Question 32: Incorrect

If a printer is connected directly to a Windows workstation, what can be done to allow other workstations on the same network to send print jobs to this printer?

- The printer can only be shared by disconnecting it from the workstation and connecting it to the network.
- Configure the printer to be a shared printer.
- Configure the workstation as a print driver.
- ~~Configure the printer to be a print server.~~

Explanation

You can configure a printer attached to a Windows workstation as a network printer by configuring it to be a *shared printer*. This is done by accessing the Devices and Printers panel on the workstation; then opening the printer's Properties window and configuring the settings on the Sharing tab.

References

LabSim for PC Pro, Section 7.3.
[pcpro2016_all_questions_en.exm PRT_NETWORK_03]

Question 33: Incorrect

You are removing screws within a computer, but several have fallen into places you can't reach. Which tool would help retrieve the small screws?

- IC extractor
- Screwdriver
- Extension magnet
- ~~Needle-nose pliers~~

Explanation

An extension magnet is a small magnet on a collapsible rod that is used to retrieve screws that have fallen into a computer case or other areas you cannot reach. An IC extractor is a tweezer-like tool, usually spring loaded in the open position, used to remove integrated circuit chips. Unless the lost parts are in an easily accessible location, a screwdriver or pair of pliers would be unlikely to help you retrieve them.

References

LabSim for PC Pro, Section 2.3.
[pcpro2016_all_questions_en.exm PC 2016 EXT MAGNET]

Question 34: Incorrect

Which kind of connector do you use to connect a modem to a standard telephone line?

- RG-58
- RJ-11
- F-type
- ~~RJ-45~~

Explanation

A standard telephone line connector is an RJ-11. RJ-45 jacks are used for Ethernet twisted pair cables. Video cards and monitors with a built-in TV tuner have an F-type video connector. RG-58 is used for 10Base2 Ethernet networking (also called Thinnet).

References

LabSim for PC Pro, Section 6.3.
[pcpro2016_all_questions_en.exm RJ-11]

Question 35: Incorrect

Which type of interface is most commonly used for internal hard disks in notebook systems?

- PCIe

SATA

IDE

Mini-PCI

~~USB~~

Explanation

Most laptop internal hard disks use SATA interfaces, however the connectors might be customized for the small form factor of the laptop. PCIe (PCI Express) is a new bus for desktop systems. At one time, most internal hard disks used the IDE interface, but this is no longer true. The bus size is too large for laptop computers. Mini-PCI slots are normally used for wireless devices, not storage devices. USB and Firewire connections are typically external connections.

References

LabSim for PC Pro, Section 8.2.
[pcpro2016_all_questions_en.exm NOTEBOOK_COMPONENTS_07]

Question 36: Incorrect

Which of the following problems is common for dot matrix printers?

Paper scraps are caught in the feed mechanism.

The print head is clogged with dry ink.

The corona wire is broken.

~~The printer is out of toner.~~

Explanation

Dot matrix printers that use perforated, tractor feed paper commonly get paper scraps caught in the tractor feed mechanism. You will need to remove the paper scraps for the printer to resume normal operation. Print heads are used on inkjet printers, and often get clogged with dried ink. Toner and corona wires are used in laser printers.

References

LabSim for PC Pro, Section 7.5.
[pcpro2016_all_questions_en.exm PRT_MAINT_02]

Question 37: Incorrect

A host wants to send a message to another host with the IP address 115.99.80.157. IP does not know the hardware address of the destination device. Which protocol can be used to discover the MAC address?

ARP

DHCP

BOOTP

~~DNS~~

Explanation

Hosts use the Address Resolution Protocol (ARP) to discover the hardware address of a host.

References

LabSim for PC Pro, Section 6.2.
[pcpro2016_all_questions_en.exm NET PROTOCOLS_01]

Question 38: Incorrect

You manage a network that has multiple internal subnets. You connect a workstation to the 192.168.1.0 subnet, which uses the default subnet mask. This workstation can communicate with some hosts on the private network, but not with other hosts. You run ipconfig /all and see the following:

Ethernet adapter Local Area Connection:

Connection-specific DNS Suffix . : mydomain.local

Description . . . . . : Broadcom network adapter

Physical Address. . . . . : 00-AA-BB-CC-74-EF

DHCP Enabled . . . . . : No

Autoconfiguration Enabled. . . : Yes

IPv4 Address . . . . . : 192.168.1.102(Preferred)

Subnet Mask. . . . . : 255.255.0.0

Default Gateway . . . . . : 192.168.1.1

DNS Servers . . . . . : 192.168.1.20 192.168.1.27

What is the most likely cause of the problem?

- Incorrect subnet mask
- Incorrect IP address
- Incorrect default gateway
- ~~Incorrect DNS server address~~

Explanation

In this example, the network is using a mask of 255.255.255.0 (24-bits), but the workstation is configured to use a mask of 255.255.0.0.

References

LabSim for PC Pro, Section 6.14.
[pcpro2016_all_questions_en.exm TRB NETWORKING_12]

Question 39: Incorrect

Which of the following is an error detection technique that can detect errors with only one bit?

- ~~ECC~~
- Parity
- Non-parity
- EDO

Explanation

Parity error detection can only detect errors with only one bit, while Error Correcting Code (ECC) can detect errors with more than one bit. EDO is not a type of error correction, it is a type of memory that can start a new access cycle while keeping the data output of the previous cycle active.

References

LabSim for PC Pro, Section 3.9.
[pcpro2016_all_questions_en.exm PARITY]

Question 40: Incorrect

To answer this question, complete the lab using information below. Launch Lab

You did not complete the lab correctly.

You work part-time at a computer repair store. You are in the process of configuring a new system. You would like to install the operating system on a RAID array that provides both fault tolerance and improved performance.

Your task in this lab is to:

- Add the *minimum* number of disks to the computer to create the RAID array that meets the scenario requirements. Do not remove extra disks from the Shelf.
- Connect all disks to the motherboard and provide power for the disks.
- Boot the computer and configure a RAID array using the motherboard RAID configuration utility.
  - Choose the RAID level based on the scenario requirements.
  - Configure the array to use all of the disk space on the installed disks.

References

LabSim for PC Pro, Section 5.4.
[pcpro2016_all_questions_en.exm RAID2-PB]

Question 41: Incorrect

What is the maximum data transfer rate of an IEEE 1394a device?

- 200 Mbps
- 800 Mbps
- 1600 Mbps
- 400 Mbps
- ~~100 Mbps~~

Explanation

The maximum transfer rate of an IEEE 1394 device is 400 Mbps.

References

LabSim for PC Pro, Section 4.3.
[pcpro2016_all_questions_en.exm IEEE 1394A MAX DATA]

Question 42: Incorrect

You have a legacy non-Plug-and-Play device that must be installed under Windows. What interface do you use to manage the configuration of this device after it has been installed?

- Device Manager
- System Information
- BIOS configuration program
- ~~Add/Remove Hardware control panel applet~~

Explanation

After a device has been installed, use Device Manager to modify non-Plug-and-Play parameters such as IRQ, memory address, and DMA channel.

References

LabSim for PC Pro, Section 3.11.
[pcpro2016_all_questions_en.exm NON-PLUG AND PLAY DEVICES]

Question 43: Incorrect

During the POST, you receive a message stating: Keyboard not present. Press F1 to continue. What are the most likely causes of this error message? (Select two.)

- Incorrect keyboard data in the CMOS
- A broken F1 key
- A poor keyboard connection
- An outdated BIOS
- A stuck key on the keyboard

Explanation

If the keyboard is not detected during the POST, the keyboard is probably not attached to the computer correctly. Check that the keyboard is securely connected to the keyboard port. While a bad keyboard will also result in this error, you should first check the keyboard connection to the computer before replacing the keyboard. This error is also commonly caused by a stuck key on the keyboard.

References

LabSim for PC Pro, Section 4.7.
[pcpro2016_all_questions_en.exm TRB KEYBOARD]

Question 44: Incorrect

Which of the following methods can be used to connect a printer to a network? (Select two.)

- Plug a network cable into your printer's serial port.
- Connect your printer to an external print server device that is connected to the network.
- Plug a network cable into your printer's USB port.
- Plug an Ethernet cable into the network port in the printer.
- ~~Plug a USB-to-Ethernet adapter in your printer's USB port.~~

Explanation

There are two common ways to make a printer a network printer. Most printers come with an integrated network card or have a slot for adding a network card. Otherwise it is possible to connect it to the network using an external printer server. The external print server functions as a gateway between the printer's parallel interface and the network topology. While a USB-to-Ethernet adapter can be used to connect a workstation to a wired network, it won't work with a printer as software drivers must be loaded on the host for the adapter to work.

References

LabSim for PC Pro, Section 7.3.
[pcpro2016_all_questions_en.exm PRT_NETWORK_01]

Question 45: Correct

Which of the following battery types offers the greatest storage capacity in the smallest amount of space?

- Nickel Metal Hydride (NiMH)
- Lithium Ion (Li-Ion)
- Carbon
- Nickel Cadmium (Ni-Cad)

Explanation

Lithium Ion (Li-Ion) batteries offer the greatest storage capacity in the smallest amount of space. Nickel Cadmium (Ni-Cad) and Nickel Metal Hydride (NiMH) batteries take up more physical space than Lithium Ion batteries. Carbon batteries are small, but have significantly less charge than Lithium Ion batteries. They are commonly used in remote controls, flashlights, toys, or transistor radios, where the power drain is not too heavy.

References

LabSim for PC Pro, Section 8.3.
[pcpro2016_all_questions_en.exm NOTEBOOK_COMPONENTS_02]

Question 46: Incorrect

You are configuring an ADSL connection. Which of the following will be part of the configuration? (Select two.)

- [ ] RJ-11 connectors
- [ ] Filters or splitters
- [ ] RG-6 cable
- [ ] F-type connectors
- [x] ~~Analog modem~~

Explanation

To connect to the Internet through a DSL connection:

- Install an internal DSL card in a single computer, or connect a DSL router to the phone line.
- Use a phone cable with an RJ-11 connector to connect the DSL card or router to the phone line. For ADSL, place filters (splitters) on the line everywhere that an analog phone is used.
- Do not install a filter on the line connected to the DSL router.

Analog modems are used for dial-up Internet access. F-type connectors and RG-6 cable are used

for cable Internet access.

References

LabSim for PC Pro, Section 6.10.
[pcpro2016_all_questions_en.exm ADSL_02]

Question 47: Incorrect

A user reports that they are unable to access their Firewire drive after moving the PC from beneath the desk to the top of the desk. What is the most likely cause of this problem?

- Incorrect FireWire driver
- An external power source must be added
- Card is not properly seated
- ~~IRQ conflict~~

Explanation

In moving the computer, it is likely that the card became jostled and is no longer properly seated in the expansion slots. None of the other options would have been affected in just moving the computer. FireWire does not use IRQs for configuration. Simply moving the computer such a short distance would not require adding an external power supply if it wasn't needed before. Moving the computer does not change drivers used for devices.

References

LabSim for PC Pro, Section 3.11.
[pcpro2016_all_questions_en.exm TRB PC_02]

Question 48: Incorrect

You just replaced the motherboard in your computer. Now your computer will not start. You press the power button on the system case, but nothing happens; there are no sounds or lights.

What should you do?

- Connect the power button to the motherboard.
- Make sure the memory is properly seated.
- Connect the processor fan to the motherboard.
- ~~Make sure a keyboard and mouse is plugged in.~~

Explanation

The system case power button connects to jumper pins on the motherboard. When you press the power button, the cable sends the power on signal to the computer. If the power button was connected, you would typically hear fans start up and see lights come on as the system boots. Even without a processor fan, memory, or a keyboard or mouse, you would still see or hear something if the system had power.

References

LabSim for PC Pro, Section 3.9.
[pcpro2016_all_questions_en.exm TRB MB_01]

Question 49: Incorrect

Which feature makes it possible to close some notebook computers and still use the touchscreen?

- Removable touchscreen

- Dual display
- 180 degree rotating touchscreen
- ~~External touchscreen~~

Explanation

Some notebooks have special touchscreens that can rotate 180 degrees, allowing the notebook to close and the screen to still be visible. Some notebooks have a removable touchscreen. This turns the notebook into a tablet.

References

LabSim for PC Pro, Section 8.1.
[pcpro2016_all_questions_en.exm NOTEBOOK SCREEN ROTATE]

Question 50: Correct

Which of the following objects is installed between the system case and the motherboard's back I/O ports?

- Standoffs
- Fan
- Heat spreader
- Faceplate

Explanation

The I/O shield (also called a faceplate) is placed between the motherboard and the system case. The shield protects the case from dust and debris.

Standoffs are placed between the motherboard and the case and prevent the motherboard circuits from touching the system. Heat spreaders are placed on memory modules to help cool them. Fans are installed in the system case, but not between the system case and the back I/O panel. The support manual is a booklet that contains information about the motherboard.

References

LabSim for PC Pro, Section 3.3.
[pcpro2016_all_questions_en.exm PC16_MOTHERBOARD_INST_02]

Question 51: Incorrect

You have installed a device in your system and have run the Add a device wizard from the Control Panel. Under what circumstance would it be appropriate to continue with the wizard if the device was not discovered?

- The device driver was installed before the device was installed.
- The device connects to the USB bus.
- The device does not support plug and play.
- ~~The device does not require a driver.~~

Explanation

If the legacy device is not detected, you need to select the driver files manually by continuing the wizard. All devices require a driver.

USB devices are plug and play. To install a USB device, install the driver, and then connect the device. The device will be automatically detected and configured.

References

LabSim for PC Pro, Section 4.6.
[pcpro2016_all_questions_en.exm INSTALL NON PLUG AND PLAY]

Question 52: Incorrect

Which of the following are true of the SXGA screen resolution? (Select two.)

- [ ] 16:10 aspect ratio
- [ ] 4:3 aspect ratio
- [ ] 5:4 aspect ratio
- [ ] 1280 x 1024
- [x] ~~1600 x 1200~~

Explanation

A SXGA (super extended) display has a resolution of 1280 x 1024 and an aspect ratio of 5:4. VGA has a resolution of 1024 x 768, and UXGA has a resolution of 1600 x 1200. Widescreen aspect ratios include "W" in the name. For example, WUXGA has a 16:10 aspect ratio (resolution of 1920 x 1200).

References

LabSim for PC Pro, Section 4.4.
[pcpro2016_all_questions_en.exm SXGA RESOLUTION]

Question 53: Incorrect

All members of the Sales team use laptop computers while traveling to connect to the Internet. Each laptop has a built-in wireless network card that supports 802.11b/g/n. You have trained each user to be able to create new wireless connections in order to connect to wireless networks in airports and at hotels. You get a call from one user stating that her wireless connection no longer works. She has checked the wireless configuration and she knows it to be correct because other sales people at the same location are able to connect. What should you do first?

- ( ) Have her verify that the wireless card's hardware switch is in the On position.
- ( ) Have her update the drivers for the wireless card.
- ( ) Have her manually configure the wireless card to use only 802.11b.
- (•) ~~Have her purchase a USB wireless card to use until you can check the problem yourself.~~

Explanation

Have the user verify that the wireless card's hardware switch is in the On position. Many built-in wireless cards can be turned off and on using a switch or button on the laptop case. Because this is a common problem and easy to check, you should do this first before trying other solutions.

References

LabSim for PC Pro, Section 8.4.
[pcpro2016_all_questions_en.exm TRB NOTEBOOK_18]

Question 54: Incorrect

You have just finished upgrading the CPU in your desktop system. After running the system for about 10 minutes, the system locks up and automatically restarts.

Which should you do first to troubleshoot the problem? (Select two.)

- [ ] Check the power supply voltage switch.
- [ ] Check the CPU fan power.
- [ ] Remove any unneeded components and run the system.
- [ ] Replace the power supply.
- [x] Make sure the heat sink is properly mounted and has thermal paste.

Explanation

System lockups and restarts can be caused by several problems, including the an overheated processor. Because the CPU has just been replaced, this is the most likely cause of the problem. First, you should make sure the CPU fan is running. After that, you should check if the heat sink is properly mounted and has thermal between it and the CPU.

References

LabSim for PC Pro, Section 3.14.
[pcpro2016_all_questions_en.exm PC16_COOLING_TRB_01]

Question 55: Incorrect

You would like to upgrade the processor in your system to a 64-bit processor. Which of the components will you most likely need to upgrade as well to take full advantage of the new processor?

- ( ) Operating system
- ( ) RAM
- ( ) BIOS
- (•) ~~Hard disk~~

Explanation

The motherboard and the operating system must be able to support the processor in use. Many 64-bit CPUs can run a 32-bit version of the operating system. However, the operating system will run only in 32-bit mode and will not take full advantage of the 64-bit processor. Even if you stick with the 32-bit operating system, chances are you will need to upgrade the hardware abstraction layer (HAL) to one that is compatible with the 64-bit processor. The BIOS must support the 64-bit processor. However, when you upgrade the motherboard, you will get a new BIOS chip, so upgrading the BIOS will not be an issue.

References

LabSim for PC Pro, Section 3.5.
[pcpro2016_all_questions_en.exm UPGRADING PROCESSOR]

Question 56: Incorrect

You've enabled Remote Desktop on a Windows workstation. Which port must be opened in the server's firewall to allow remote clients to access the desktop?

- ( ) 110
- ( ) 123
- ( ) 3389
- (•) ~~389~~

Explanation

The RDP protocol runs on port 3389 by default. Port 110 is used by the POP3 protocol. Port 389 is used by the LDAP protocol. Port 123 is used by the NTP protocol.

References

LabSim for PC Pro, Section 6.5.
[pcpro2016_all_questions_en.exm PORT 3389]

Question 57: Incorrect

Which generation of SATA storage devices does the following?

- Supports up to 6 Gbps data transfer rates
- Addresses solid state drives

SATA3

eSATAp

eSATA

SATA2

~~SATA~~

Explanation

SATA3 support up to 6 Gbps (600 MBps). It mainly addresses solid state drives with SATA (hard disk drives are not capable of sending data at this rate).

SATA1 is the original SATA standard. It provided for 1.5 Gbps (150 MBps) data transfer. SATA2 supports up to 3 Gbps (300 MBps). eSATA is a subset of other standards specifically for externally connected devices. eSATAp (also known as Power over eSATA or Power eSATA) is meant to replace eSATA. It combines the functionality of an eSATA and a USB port with a source of power in a single connector.

References

LabSim for PC Pro, Section 5.2.
[pcpro2016_all_questions_en.exm SATA3]

Question 58: Incorrect

What is a ZIF socket?

A socket used to mount a video card

A socket with a series of pins on the bottom in concentric squares

A special socket for inserting and securing a processor

~~A socket used to secure RAM~~

Explanation

Newer motherboards use a ZIF (Zero Insertion Force) socket for inserting the processor. A ZIF socket has a lever or screw that opens to install the processor and closes to lock the processor into place. A Pin Grid Array (PGA) has a series of pins on the bottom in concentric squares.

References

LabSim for PC Pro, Section 3.5.
[pcpro2016_all_questions_en.exm ZIF SOCKET]

Question 59: Incorrect

You have just installed a new device in your Windows system. After installation, you can't use the

device. You check Device Manager and find an icon for the device with a yellow exclamation mark over it. What should you do?

- Download the latest driver from the manufacturer's Website.
- Enable the device.
- Reinstall the device.
- Run the Add Legacy Hardware wizard and manually configure the device.
- ~~Replace the device.~~

Explanation

The first thing to try would be to obtain the latest driver for the device. In this scenario, Windows detected the device, a suitable driver for it. Use the Add Legacy Hardware wizard to install legacy (non Plug and Play) devices. An icon with a black down-arrow over it indicates a disabled device. Replacing the device should only be done after performing other troubleshooting tasks.

References

LabSim for PC Pro, Section 4.7.
[pcpro2016_all_questions_en.exm TRB_DEVICE_02]

Question 60: Incorrect

You need to replace the video card in a laptop. What is the first step?

- Remove the display wires if the video card is integrated into the motherboard.
- Find a service manual with correct disassembly procedures.
- Remove the access panel at the bottom of the laptop.
- Remove the bezel.
- ~~Remove the keyboard.~~

Explanation

Before replacing the video card, find the documentation to determine the location of screws and to identify installation sequences for accessing the system components. On most notebooks, you access the video card by removing the keyboard. Some video cards are integrated on the motherboard and cannot be replaced. If the video card can be replaced, you will need to disconnect the display wires. You can typically view or add memory to a laptop by removing the access panel on the bottom of the notebook. The bezel is the case in which the LCD screen is set, and typically houses the antenna for wireless network cards.

References

LabSim for PC Pro, Section 8.2.
[pcpro2016_all_questions_en.exm NOTEBOOK_COMPONENTS_17]

Question 61: Incorrect

You are in the process of building a new computer. You would like to configure your computer to use SLI to improve performance when playing your favorite game.

Which of the following will be part of the configuration process? (Select three.)

- [ ] Connect at least one monitor to the graphics card.
- [ ] Purchase a motherboard with integrated video and an AGP 8x slot.
- [ ]

Purchase a motherboard with two (or more) PCIe x16 slots.

Purchase two graphics cards with SLI and similar specifications.

~~Purchase a motherboard with integrated video and an add-on card that supports the ATSC standards.~~

Explanation

For increased performance, especially in games, you can install multiple video cards and link those cards together so that multiple GPUs draw a single screen. Scalable Link Interface (SLI) from NVIDIA and CrossFireX from AMD are two different methods for linking video cards.

In most cases you will need to install identical video cards, or at least video cards with very similar specifications. Cards are linked using a special bridge clip or through software (depending on the implementation). Both the motherboard and the video cards must support the selected method (either SLI or CrossFireX). The motherboard must have at least two 16x PCIe slots. Some motherboards are able to link an onboard graphic controller an video card installed in a single PCIe slot. Connect the monitor to an output port on the first video card. ATSC signals are digital TV signals and are not used for SLI.

References

LabSim for PC Pro, Section 3.12.
[pcpro2016_all_questions_en.exm SLI]

Question 62: Correct

You have a network port in an office that connects to the server room using wires strung through the ceiling. Which tool would you use to verify that a signal can be sent from one end to the other?

Multimeter

Power supply tester

IC extractor

Cable tester

Explanation

A cable tester verifies that a network can carry a signal from one end to the other, and that all wires within the connector are in their correct positions. A multimeter can also be used to test network cables, but it is much more cumbersome than using a cable tester. A power supply tester is specifically designed to test DC current flowing from most connectors coming from a PC power supply. An IC extractor is a tweezer-like tool, usually spring loaded in the open position, used to remove integrated circuit chips.

References

LabSim for PC Pro, Section 6.14.
[pcpro2016_all_questions_en.exm TRB NETWORKING_03]

Question 63: Incorrect

A customer wants to add an additional video card to her computer so she can play the latest computer games.

Which of the following statements are true of a multi-GPU configuration? (Select two.)

Linking only shares memory resources, not GPU resources.

An SLI video card can be linked with a CrossFire video card.

Linking video cards also provides additional video output ports.

- [ ] The motherboard should support either SLI or CrossFire.
- [x] For the best performance, both video cards should be identical.

Explanation

For increased performance, especially in games, multiple video cards can be linked together using a special bridge clip. This allows multiple GPUs to draw a single screen. For the best performance, both video cards should be identical. In addition, the motherboard must be compatible with either SLI (used by NVIDA cards) or CrossFire (used by AMD cards).

Because each cards is sharing the processing load, the memory banks and GPU in both video cards are being used. In a multi-GPU configuration, the secondary (bottom) card's display connectors are typically disabled.

References

LabSim for PC Pro, Section 3.12.
[pcpro2016_all_questions_en.exm PC16_VIDEO_CARDS_02]

Question 64: Incorrect

Which of the following is an advantage of connecting a printer to a network?

- ( ) Printing speed is increased.
- ( ) Troubleshooting costs are decreased.
- ( ) Multiple users can print to the same printer.
- (•) ~~You can use a less-costly printer.~~

Explanation

Connecting a printer to a network lets multiple users print to the same printer. Network printers are often more expensive than non-networked printers. In many cases, you can purchase networked or non-networked versions of the same printer. While it is common to purchase a larger and a faster printer to be used on the network, network printers by themselves are not faster than equivalent non-networked printers.

References

LabSim for PC Pro, Section 7.3.
[pcpro2016_all_questions_en.exm PRT_NETWORK_02]

Question 65: Incorrect

What method does an SDHC card use for storing data?

- ( ) Reprogrammable memory
- ( ) Magnetic tape
- ( ) Reflective surface and optical readers
- (•) ~~Magnetic disks and platters~~

Explanation

Flash devices store information using programmable, non-volatile flash memory. Common flash devices are MMC, SD, SDHC, and XD memory cards as well as USB thumb drives. DLT drives use magnetic tape. Hard disks and floppy disks use magnetic disks and platters. Optical drives use a reflective surface and optical readers.

References

LabSim for PC Pro, Section 5.1.
[pcpro2016_all_questions_en.exm SDHC]

Question 66: Incorrect

Which port on a sound card should you connect a non-amplified microphone to?

- Mic In
- Line Out
- Line In
- ~~Speaker Out~~

Explanation

Connect a non-amplified microphone to a sound card's Mic In (microphone in) port.

The speaker out connector sends signals to external speakers. This signal is amplified and the computer and the speakers can control the sound level. The line out connectors send unamplified audio signals to other sound devices. The line in connector receives signals from the line out port of other audio devices.

References

LabSim for PC Pro, Section 3.10.
[pcpro2016_all_questions_en.exm PC16_AUDIO_01]

Question 67: Incorrect

You have just built a new system from scratch. You turn the computer on but the system boot fails and sounds a beep code.

What might be the issue?

- New and old memory has been mixed
- Memory not installed or not detected
- Incompatible memory was installed
- ~~The system includes unsupported memory~~

Explanation

If memory was not installed in the new computer or was not detected during boot up, system boot will fail and sound a beep code.

If unsupported memory was installed, the system will boot but the display will be blank. If incompatible memory was installed, such as combining dual-bank with single-bank memory, the system will boot but the memory count will be incorrect. If a mix of new and old memory was used, the system will boot but will display a memory error message.

References

LabSim for PC Pro, Section 3.9.
[pcpro2016_all_questions_en.exm TRB MEMORY_05]

Question 68: Incorrect

To answer this question, complete the lab using information below. Launch Lab

You did not complete the lab correctly.

Recently, you implemented a wireless network at your home. However, without additional configuration, the wireless access point will allow connections from *any* laptop or mobile device. You need to secure the wireless network from unauthorized connections.

In addition, you suspect that wireless access points used by your neighbors are interfering with your access point. You've discovered that they are using channels 2 and 5 for their wireless networks.

Your task in this lab is to secure the wireless network as follows:

- Use **PoliceSurveillanceVan** for the SSID. **Note**: The SSID name is case sensitive.
- Disable SSID broadcasts.
- Set the channel such that it doesn't conflict with access points in neighboring homes.
- Use **WPA2-PSK** authentication, with **AES** for encryption.
- Configure **S3CuR31!** as the security key. **Note**: The security key is case sensitive.
- Only allow devices with following hardware addresses to connect to the wireless network:
  - **00:87:FC:E2:E5:D2**
  - **00:50:56:C0:00:08**
  - **00:87:FC:E2:E5:F2**
- Change the administrator authentication credentials on the wireless access point to:
  - Username: **@dm1n**
  - Password: **p@SSw@Rd**

To view and configure the wireless access point, use Internet Explorer and go to **192.168.0.100**. Enter username: **admin** and password: **password**.

References

LabSim for PC Pro, Section 6.8.
[pcpro2016_all_questions_en.exm WIRELESS3-PB]

Question 69: Incorrect

To answer this question, complete the lab using information below. Launch Lab

You did not complete the lab correctly.

You are preparing a new computer for operating system installation. Complete the following tasks:

- Modify the boot order so that the computer boots first from the optical drive and second from the hard drive.

References

LabSim for PC Pro, Section 3.10.
[pcpro2016_all_questions_en.exm BIOS_EXM_BOOT-PB]

Question 70: Incorrect

You need to connect a new USB scanner to the USB port on your computer. What should you do?

- Connect the scanner to the USB port.
- Start the Add a Device wizard, then connect the scanner to the USB port.
- Install the scanner drivers, then connect the scanner to the USB port and complete the Add a Device wizard when it pops up.
- ~~Connect the scanner to the USB port. Complete the Add a Device wizard which includes installing the drivers.~~

Explanation

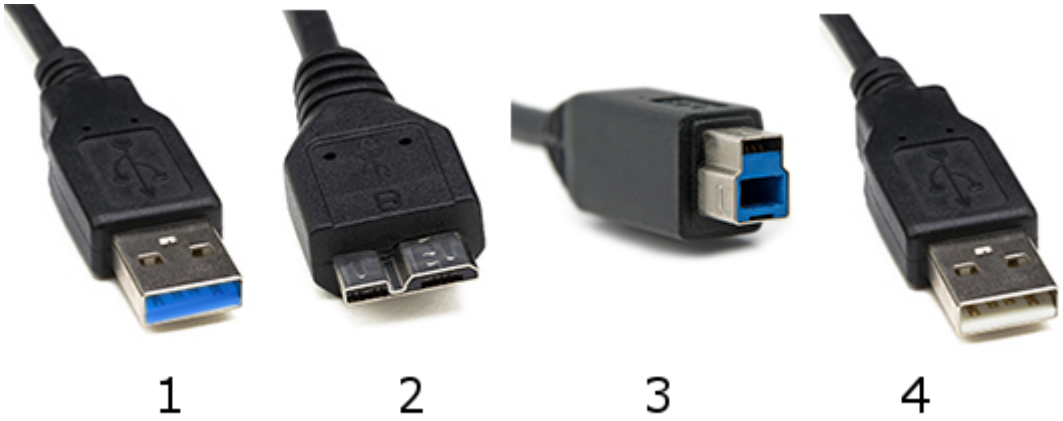
To install USB devices, start by installing the driver. Then connect the device to the USB port. The operating system will detect the device and configure it automatically. The driver is used to tell the operating system how to communicate with the device.

References

LabSim for PC Pro, Section 4.2.
[pcpro2016_all_questions_en.exm INSTALL USB_02]

Question 71: Incorrect

Match the USB connector types on the left with the image labels on the right. (Not all USB connector types will be used.)



1

USB 3.0 Type-A

USB 3.0 Micro-B

3

USB 3.0 Type-B

4

USB 2.0 Type-A

Explanation

Connector 1 is a USB 3.0 Type-A connector. The blue tab indicates that the connector is a USB 3.0 Type-A connector and capable of USB 3.0 speeds. USB 3.0 Type-A connectors are backwards compatible with all previous USB versions.

Connector 2 is a USB 3.0 Micro-B connector. The USB 3.0 Micro-B connector is used by portable devices, such as compact external storage devices, digital cameras, or smartphones.

Connector 3 is a USB 3.0 Type-B connector. The USB 3.0 Type-B connector is larger in size and designed to carry both data and power. Due to their increased size, USB 3.0 Type-B connectors cannot be plugged into older USB Type-B ports. However, USB 3.0 peripherals that use this port are able to accept older USB Type-B connectors.

Connector 4 is a USB 2.0 Type-A rectangular connector that generally plugs directly into the computer or a hub. Almost all USB cables have one Type-A connector on one of the ends.

References

LabSim for PC Pro, Section 4.2.
[pcpro2016_all_questions_en.exm USB 3 CONNECTORS-PB]

Question 72: Incorrect

You have a system that has been overheating. Which of the following actions will not help to keep the system cool?

- Cleaning off the inside of the computer case.
- Removing the case side panel.
- Adding thermal paste or a thermal pad between the CPU and the heat sink.
- Installing heat spreaders and heat sinks on internal components.
- ~~Installing a water cooling system.~~

Explanation

Removing the case side panel will not keep a system from overheating. The system case has been specially designed to maximize air flow across system components. By removing the side panel, you modify the air flow path and reduce its effectiveness. In addition, removing the side panel allows more dust to accumulate. Dust acts as an insulator and traps heat close to components. Cleaning off the inside of the computer case, installing heat spreaders and heat sinks on internal components, installing a water cooling system, and adding thermal paste or a thermal pad between the CPU and the heat sink are all good ways to help keep a system cool.

References

LabSim for PC Pro, Section 3.14.
[pcpro2016_all_questions_en.exm COOLING_02]

Question 73: Incorrect

Match the notebook Fn key icon labels on the left to the corresponding keys, numbered on the

right.

1 Touchpad (on/off)

2 Screen orientation

3 Wireless (on/off)

4 Bluetooth (on/off)

5 Dual displays

6 Play/Pause media

Explanation

The notebook Fn key icons are used as follows:

- 1. Turn the touchpad on or off
- 2. Change the screen orientation
- 3. Turn the wireless on or off
- 4. Turn Bluetooth on or off
- 5. Enable dual displays
- 6. Play or pause media

References

LabSim for PC Pro, Section 8.1.
[pcpro2016_all_questions_en.exm FN KEY ICONS-PB]

Question 74: Incorrect

Which expansion bus is best for high-speed, high-resolution, three-dimensional graphics?

- PCIe
- PCI
- VESA Local Bus
- ~~AGP~~

Explanation

A PCI Express (PCIe) expansion bus is best for high-speed, high-resolution, three-dimensional graphics. The PCIe standard supports a data rate that is dramatically faster than AGP. VESA is an older graphics interface that was replaced by AGP many years ago. PCI and ISA are typically used for non-video expansion cards. While PCI can be used for video, PCIe offers better performance.

References

LabSim for PC Pro, Section 3.11.
[pcpro2016_all_questions_en.exm PCIE EXPANSION BUS]

Question 75: Correct

Which RAID configuration level provides increased performance using only two disks?

- RAID 1
- RAID 5

RAID 2

RAID 0

Explanation

RAID 0 (striping) uses two or more disks and provides an increase in performance but not fault tolerance. RAID 1 (mirroring) uses two disks to provide fault tolerance but not an increase in performance. RAID 5 uses a minimum of three disks and provides both fault tolerance and an increase in read performance.

References

LabSim for PC Pro, Section 5.4.
[pcpro2016_all_questions_en.exm RAID 0_02]

Question 76: Incorrect

When you try to boot your computer, it hangs after POST. When you access the UEFI setup program, you see that the date is several years behind and the time is set to 12:01 am.

What is the most likely problem?

A RAM module has become unseated from its socket.

The UEFI firmware is corrupt.

The motherboard battery has failed.

~~The UEFI firmware is outdated.~~

Explanation

The system Time and date are managed by the Real Time Clock (RTC) in the BIOS/UEFI firmware. If the motherboard battery goes dead, the RTC reverts back to a default date and time. In addition, the BIOS/UEFI may lose all of its configuration settings.

References

LabSim for PC Pro, Section 3.4.
[pcpro2016_all_questions_en.exm TRB CMOS]

Question 77: Incorrect

A user is trying to log into Windows on her notebook computer. She enters the correct password for her user account, but the system won't let her authenticate, claiming the wrong password has been entered. What's causing the problem?

She has entered the wrong password too many times, causing Intruder Detection in Windows to lock the system.

The Scroll Lock key has been pressed, locking all input from the keyboard.

The CPU is in power-save mode causing all login attempts to be denied.

She has turned Num Lock on causing numbers to be sent from the keyboard instead of letters.

~~The keyboard must be replaced.~~

Explanation

The most likely cause of this user's problem is that the Num Lock key sequence for the notebook system has been pressed causing the keyboard to send numbers in the place of letters. Turning Num Lock off should fix the problem. When Intruder Detection is enabled, no logon attempts will be allowed, even if the correct password is used.

References

LabSim for PC Pro, Section 8.4.
[pcpro2016_all_questions_en.exm TRB NOTEBOOK_16]

Question 78: Incorrect

Which service can you use on your network to automatically assign IP addresses to hosts and to help prevent the same address from being assigned to two different hosts?

- DHCP
- TCP
- ICMP
- ~~IGMP~~

Explanation

You can use the Dynamic Host Configuration Protocol (DHCP) to set up a DHCP server that will assign IP addresses automatically to network hosts. DHCP servers will not assign the same IP address to two different hosts. ICMP is chiefly used by networked computers' operating systems to send error messages. The Transmission Control Protocol (TCP) is one of the core protocols of the Internet protocol suite. The Internet Group Management Protocol (IGMP) is a communications protocol used to manage the membership of Internet Protocol multicast groups.

References

LabSim for PC Pro, Section 6.6.
[pcpro2016_all_questions_en.exm DHCP_03]

Question 79: Incorrect

What is the maximum transmission speed for Bluetooth v3 and v4 devices?

- 11 Mbps
- 1 Mbps
- 24 Mbps
- ~~3 Mbps~~

Explanation

Bluetooth v3 and v4 devices have a maximum transmission speed of up to 24 Mbps.

Bluetooth v1.2 devices have a maximum transmission speed of up to 1 Mbps. Bluetooth v2 devices have a maximum transmission speed of up to 3 Mbps. The wireless standard 802.11b transmits data at a rate of up to 11 Mbps.

References

LabSim for PC Pro, Section 6.9.
[pcpro2016_all_questions_en.exm BLUETOOTH_04]

Question 80: Correct

A user is having problems connecting to other computers using host names. Which of the following commands will help you troubleshoot this problem?

- arp
- nbtstat
-

netstat

nslookup

Explanation

Use Nslookup to troubleshoot DNS name resolution problems. Use Arp to view information about MAC addresses and their corresponding IP addresses. Netstat (network statistics) is a command-line tool that displays network connections (both incoming and outgoing), routing tables, and a number of network interface statistics. Use Nbtstat to help troubleshoot NetBIOS name resolution problems.

References

LabSim for PC Pro, Section 6.14.
[pcpro2016_all_questions_en.exm TRB NETWORKING_16]

Question 81: Incorrect

Which of the following terms refers to a network resource sharing model that uses access control lists saved on each computer? (Select two.)

- [ ] Peer-to-peer
- [ ] Workgroup
- [ ] Client/server
- [ ] Directory
- [x] ~~Domain~~

Explanation

Access to shared resources are controlled separately on each computer in the workgroup or peer-to-peer models. For example, each computer in a peer-to-peer network maintains its own set of user accounts.

A domain is a collection of computers that share a common security database. Access is controlled by maintaining access control lists in a centralized directory. The client/server model places shared resources on a server. Resources are accessed by clients.

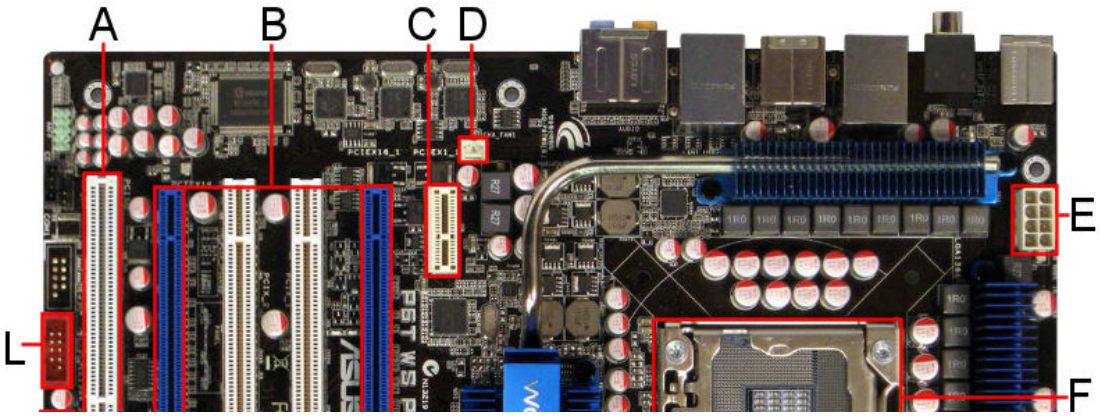
References

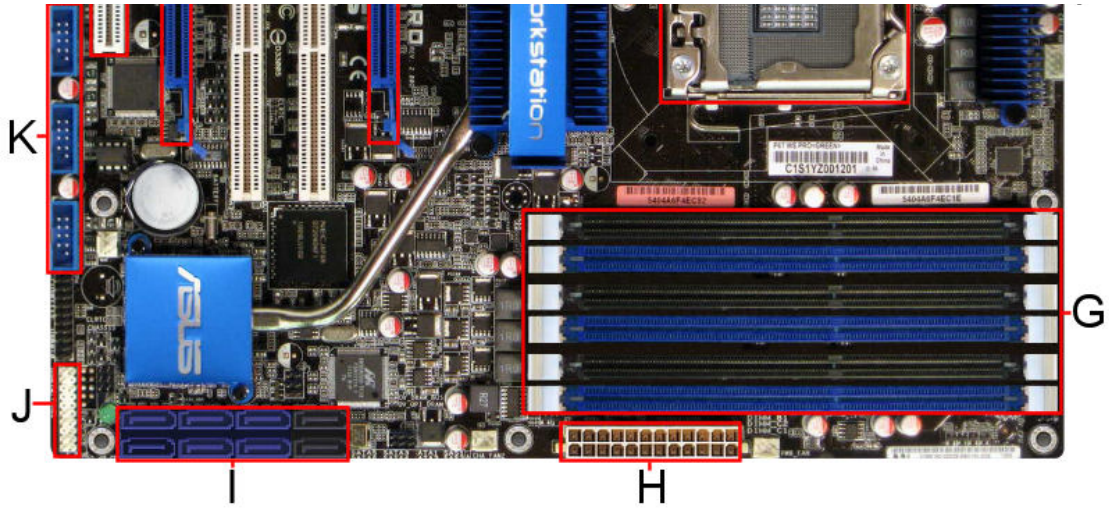
LabSim for PC Pro, Section 6.1.
[pcpro2016_all_questions_en.exm PC 2016 NETWORK MODEL]

Question 82: Incorrect

Consider the following diagram of a typical motherboard.

Drag the label on the left to the letter on the right that best identifies the associated connector.





A	B	C	D	E	F	G
PCI	PCIe x16	PCIe x1	Case fan power	CPU power	CPU	Memory

H	I	J	K	L
Power supply	SATA	Front/top panel	USB	IEEE 1394

Explanation

The connectors on the motherboard have the following functions:

- PCI slots: Used to connect PCI expansion boards.
- PCIe slots: Used to connect PCIe expansion boards.
- CPU fan power: Used to provide DC power to the CPU fan.
- CPU power: Provides additional DC power to the processor itself.
- CPU socket: Provides an interface for connecting the CPU to the motherboard.
- Memory slots: Provides an interface for connecting memory modules to the motherboard.
- Power supply connector: Provides an interface for connecting the power supply (PSU) to the motherboard.
- SATA connectors: Used to connect SATA storage devices.
- Front panel connectors: Used to connect front panel buttons and lights to the motherboard.
- IEEE 1394: Used to connect external FireWire devices.
- USB: Used to connect external USB devices.

References

LabSim for PC Pro, Section 3.3.
[pcpro2016_all_questions_en.exm PC16_MOTHERBOARDS_05-PB]

Question 83: Correct

You want to build a new system that supports 6 GB of memory. Which of the following will be the most important consideration when building the computer?

- Triple channel memory support
- ECC memory
- DDR3 memory
- 64-bit processor

Explanation

To use over 4 GB of memory, you will need a 64-bit processor and a 64-bit operating system. 32-bit processors support up to (or slightly below) 4 GB of memory. While 6 GB of memory will likely use DDR2, DDR3, or DDR4, this is not a requirement. Triple channel memory uses three memory controllers to improve memory performance. ECC memory includes error correction on the memory.

References

LabSim for PC Pro, Section 3.8.
[pcpro2016_all_questions_en.exm 6 GB MEMORY]

Question 84: Incorrect

You recently purchased a new sound card and installed it in a free PCI slot in your computer. You plug in your old speakers, but you don't get any sound. You have checked all cable connections and they are secure. You have also ensured that the speaker volume is appropriately adjusted and isn't muted. What should you do next?

- Replace your sound card.
- Replace the speakers.
- Check the vendor's Web site for an updated driver.
- ~~Manually change the IRQ settings for the card.~~

Explanation

Check the vendor Web site for an updated driver before further troubleshooting. Because the speakers worked before, you likely would not need to replace the speakers. PCI cards are plug-and-play, meaning that you should not need to manually configure resources such as IRQs. You should troubleshoot the problem completely before you resort to replacing the sound card.

References

LabSim for PC Pro, Section 3.10.
[pcpro2016_all_questions_en.exm SOUND CARD DRIVER]

Question 85: Incorrect

Which of the following types of Internet connection services can allow you to be truly mobile while maintaining your Internet connection?

- Cellular
- Mobile hot spot
- ISDN BRI
- Satellite
- ~~Wi-Fi~~

Explanation

Cellular networking uses the cellular phone infrastructure for Internet access. The computing device, such as a notebook or tablet, must have a cellular antennae to connect directly to the cellular network. You can travel anywhere and stay connected to the network, as long you are within the coverage area of the cellular service provider. You can also connect a computing device to a cellular network by tethering it to a smartphone or by using a smartphone as a wi-fi hot-spot.

Mobile hot-spots are devices that can be used to connect to a cellular network. Wi-fi is a technology that provides wireless access to a computer network but is limited to the range of the wireless access point. Satellite networking requires a satellite dish, which is not truly mobile. ISDN is a land line based technology.

References

LabSim for PC Pro, Section 6.10.
[pcpro2016_all_questions_en.exm CELLULAR_03]

Question 86: Incorrect

What is the biggest advantage of 64-bit processors over 32-bit processors?

- The ability to use over 4 GB of memory
- Support for hyper-threading
- The ability to run multiple applications at the same time
- ~~Use of the IA-32 instruction set~~

Explanation

The biggest advantage of 64-bit processors over 32-bit processors is in the amount of memory they can use. 32-bit processors have a limit of 4GB. 64-bit processors have a theoretical limit of 16 EB. 32-bit processors use the IA-32 instruction set (also referred to as x86). Applications typically perform better on 64-bit systems, but this is not the biggest advantage. Hyper-threading is a feature of some Intel processors that allows a single processor to run threads (instructions) in parallel, as opposed to processing threads linearly, and is not dependent on whether the processor is 32- or 64-bit.

References

LabSim for PC Pro, Section 3.5.
[pcpro2016_all_questions_en.exm 64-BIT VS 32-BIT]

Question 87: Incorrect

A user has created a complex spreadsheet on her workstation containing many graphs and charts. She sent the document to an older network laser printer that is shared by everyone in her department. When she picked up the output only the top half of each page was printed and the bottom half was blank. What should you do?

- Update the printer driver on her workstation.
- Ask the network administrator to increase the speed of the network link in her department.
- Install additional memory in the printer.
- Instruct her to not create such complex print jobs.
- ~~Install additional memory in her workstation.~~

Explanation

If only part of a page is printed on a laser printer (and the rest of the page is blank), you most likely need to add memory in the printer. This is especially true if it happens when complex graphical documents are printed, but printing works correctly with text-only documents. In rare circumstances, updating the printer driver could also fix the issue, but this is unlikely. The speed of the network link does not affect the quality of the printer output.

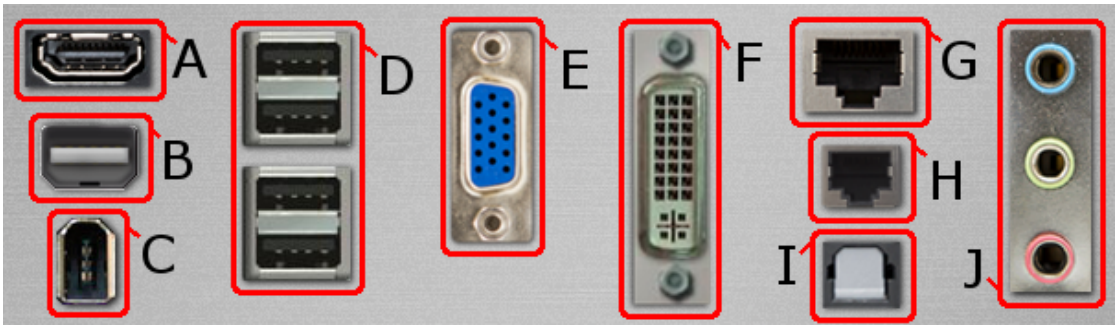
References

LabSim for PC Pro, Section 7.6.
[pcpro2016_all_questions_en.exm TRB_PRINTER_NEW_01]

Question 88: Incorrect

Consider the external ports for a typical PC system (pictured below).

Drag the port type on the left to the letter on the right that best identifies it. (Each type can be used once.)



A	B	C	D	E	F	G
HDMI	Thunderbolt	IEEE 1394	USB	VGA	DVI	RJ45

H	I	J
RJ11	Fiber S/PDIF	Audio Jack

Explanation

In this example, the computer back panel has the following ports:

- HDMI - connects HDMI display devices
- Thunderbolt - combines PCI Express (PCIe) and DisplayPort signals into a single interface
- IEEE 1394 - connects devices that require fast communication speeds
- USB - connects external USB devices (e.g., keyboard, mouse, printer, and storage devices)
- VGA - connects VGA display devices
- DVI - connects DVI display devices
- RJ45 - connects the computer to an Ethernet network
- RJ11 - used by telephones and modems to send analog signals
- Fiber S/PDIF - sends a digital audio signal to high-end audio devices, such as home theatre systems
- Audio jacks - connects analog audio devices (e.g., speakers, headphones, microphones)

References

LabSim for PC Pro, Section 1.3.
[pcpro2016_all_questions_en.exm PC16_COMPUTER_PORTS_05-PB]

Question 89: Incorrect

A printer is behaving erratically and you suspect a faulty parallel port. Which tool can you use to test the parallel port?

- Loopback plug
- Multimeter
- Ammeter
- ~~Crimper~~

Explanation

A loopback plug allows an output signal to be returned as input. Loopback plugs are used to test serial and parallel ports. A crimper is used to crimp different wiring configurations. A multimeter measures electrical properties such as voltage, amps, and resistance. An ammeter is an instrument that measures the flow of electric current in a circuit.

References

LabSim for PC Pro, Section 2.3.
[pcpro2016_all_questions_en.exm PC 2016 LOOPBACK PLUGS 2]

Question 90: Incorrect

Which of the following components are found in dot matrix printers? (Select two.)

- [ ] Tractor feed
- [ ] Drum
- [ ] Platen
- [ ] Thermal ink ribbon
- [x] ~~Nozzles~~

Explanation

Dot matrix printers use a tractor feed to pull paper through the printer. The print head pins strike an ink ribbon, pressing the ink into the paper. A platen is a metal plate behind the printer ribbon that is necessary because of the force of the pins striking the paper. Thermal ink ribbons are used in thermal printers. Dot matrix printers are impact printers, using force (not heat) to transfer ink. Nozzles are used in inkjet printers to transfer ink to the paper. A drum is used in a laser printer for transferring toner to the paper.

References

LabSim for PC Pro, Section 7.1.
[pcpro2016_all_questions_en.exm PRINTER_09]