

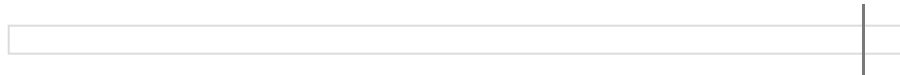
Exam Report: B.6 CompTIA 220-901 Certification Practice Exam

Date: 6/6/2017 11:13:25 am
Time Spent: 39:04 of 01:30:00

Candidate: Stangl, Thomas (Email: tstangl@calarttech.edu)

Overall Performance

Your Score: 69%



Passing Score: 95%

View results by: Objective Analysis Individual Responses

Individual Responses

▼ Question 1: Correct

Which of the following statements are true regarding power supply wattage? (Select two.)

- The watt rating indicates how much power can be supplied to various devices.
- The wattage requirement for each individual circuit uses formula $W = V \times A$.
- A system's wattage requirement does not depend on the amount of devices in the system.
- The lower the wattage rating, the more amps a power supply can deliver.
- A system's wattage requirement equals the highest wattage requirement for a single individual circuit.

Explanation

Power supplies are rated in watts. The watt rating indicates how much power can be supplied to various devices. The more devices you have in your computer, the more wattage you will require. You can calculate the system's wattage requirements using the following method:

1. Find the watt requirement for each component by multiplying volts by amps ($W = V \times A$).
2. Add each value together to find the total watt requirements.

References

LabSim for PC Pro, Section 3.2.

[pcpro2016_all_questions_en.exm PC16_POWER_SUPPLY_03]

▼ Question 2: Incorrect

Which of the following is typically used for large data backups of servers?

- DVD-R
- DLT tape
- CD-R
- RAID

Explanation

DLT tape systems are used primarily for backups. The large storage capacity of these systems makes them ideal for server backups. CD-R and DVD-R do not provide sufficient storage capacity for server backups. RAID is a data protection method that preserves data on hard disks if one disk in a set fails. It is not considered a backup mechanism.

References

LabSim for PC Pro, Section 5.1.

[pcpro2016_all_questions_en.exm TAPE BACKUP]

▼ Question 3: Correct

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

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

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 4: Correct

What type of RAM might slow system performance because it holds memory addresses or data to improve stability on systems with more than 1 GB of RAM before it is transferred to the memory controller?

- Parity RAM
- Unbuffered
- EEPROM
- ➔ Buffered

Explanation

Buffered (or registered) RAM has a buffer that holds memory addresses or data before it is transferred to the memory controller. Buffered RAM improves stability on systems with a lot of RAM (over 1 GB) but it might slow system performance.

Unbuffered memory does not have a buffer to hold memory addresses or data before it is transferred to the memory controller. Unbuffered memory can be found in servers and high-end workstation. Parity memory is a type of memory that checks for common kinds of internal data corruption. It does not correct internal data corruption. Non-parity memory does not perform error checking. EEPROM is RAM chip that holds non-volatile memory used in computers and other electronic devices to store relatively small amounts of data.

References

LabSim for PC Pro, Section 3.8.

[pcpro2016_all_questions_en.exm BUFFERED VS UNBUFFERED_01]

Question 5: Correct

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

- 4:3 aspect ratio
- 16:10 aspect ratio
- ➔ 5:4 aspect ratio
- 1600 x 1200
- ➔ 1280 x 1024

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 6: Correct

What is a ZIF socket?

- A socket used to secure RAM
- A socket with a series of pins on the bottom in concentric squares
- A socket used to mount a video card
- ➔ A special socket for inserting and securing a processor

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 7: Correct

Which of the following could be detrimental while flashing the BIOS?

- Low humidity
- Application of power
- High humidity
- ➔ Loss of power

Explanation

Losing power while flashing the BIOS could cause permanent problems with the computer. Some computers switch into standby mode after a certain time period. Be sure to disable standby mode before attempting a BIOS upgrade.

References

LabSim for PC Pro, Section 3.10.

[pcpro2016_all_questions_en.exm FLASHING THE BIOS]

▼ Question 8: Correct

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

- ➔ Keep the ambient temperature below 80°F.
- ➔ Bundle cables together and secure unused cables to the case.
- 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.
- 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 9: Incorrect

Your laser printer prints a vertical black line on every page. You change the toner cartridge but the problem does not go away. What is the most likely problem?

- The paper is poor quality.
- ➔ A corona wire is dirty.
- The photosensitive drum.
- The fuser assembly is damaged.

Explanation

If a corona wire is dirty, it might not create a uniform charge. As a result, the toner might not be attracted correctly to the photosensitive drum or paper. A vertical stripe is a typical symptom of this problem. Be careful when cleaning a corona wire because they are delicate.

References

LabSim for PC Pro, Section 7.6.

[pcpro2016_all_questions_en.exm TRB_PRINTER_10]

▼ **Question 10:** Correct

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

- Ammeter
- Crimper
- ➔ Loopback plug
- Multimeter

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 11:** Incorrect

Which tool would you use in Windows Vista/7 to manage network connections?

- My Network Places
- Internet Options
- ➔ Network and Sharing Center
- Network Neighborhood

Explanation

Use the Network and Sharing Center in Windows Vista/7 to view and manage network connections. My Network Places is in Windows XP, and Network Neighborhood is in Windows 98. Use Internet Options to configure Internet and Internet Explorer settings.

References

LabSim for PC Pro, Section 6.6.

[pcpro2016_all_questions_en.exm MANAGE CONNECTIONS_01]

▼ **Question 12:** Correct

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?

- SSH
- SMTP
- SNMP
- LDAP
- TFTP

➔ FTP

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 13: Correct

Which component in a laser printer prepares the photosensitive drum for writing by causing it to receive a negative electrostatic charge?

- Organic photoconductor (OPC) drum
- Fuser
- Transfer corona

➔ Primary corona

Explanation

The primary corona (also called the main corona or the charge corona) prepares the photosensitive drum for writing by causing it to receive a negative electrostatic charge. Depending on the printer, the primary corona will be wires or rollers. The Organic photoconductor (OPC) drum is just another name for the photosensitive drum. The transfer corona (sometimes called the secondary corona) charges the paper to attract the toner. Fusing rollers attach the toner to the paper by pressing and melting it.

References

LabSim for PC Pro, Section 7.1.

[pcpro2016_all_questions_en.exm PRINTER_12]

▼ Question 14: Correct

Which of the following printers would produce the highest print quality?

- 24-pin
- 300 DPI
- ➔ 600 DPI
- 18-pin

Explanation

The dots per inch (DPI) describe the level of detail produced by a printer. The higher the DPI, the higher the print quality.

References

LabSim for PC Pro, Section 7.1.

[pcpro2016_all_questions_en.exm PRINTER_03]

Question 15: Correct

Which of the following video card connectors provides digital video output? (Select two.)

S-video

➔ HDMI

DVI-A

Composite

➔ DVI-D

Explanation

High-Definition Multimedia Interface (HDMI) is a digital video and audio connector used for high-definition digital audio and video. A DVI-D (digital video-digital) connection provides digital output. A DVI-I (digital video-integrated) connection also provides digital output as it sends both a digital and an analog signal. Most video cards have DVI-I ports that allow you to connect both digital and analog monitors. A DVI-A (digital video-analog) connection is used only for analog video signals, and will be found on cables but rarely (if ever) a video card itself. A composite video connection on a video card provides analog, video-only TV output in a single channel. S-video (separate-video, Y/C, or S-VHS) supply analog, video-only TV output in two channels. An HDTV connector supplies analog, video-only TV output in three separate channels.

References

LabSim for PC Pro, Section 4.4.

[pcpro2016_all_questions_en.exm DIGITAL VIDEO CONNECTORS]

Question 16: Correct

You have been asked to implement a RAID 5 solution for an engineer's desktop workstation. What is the minimum number of hard disks that can be used to configure RAID 5?

➔ 3

5

4

2

6

Explanation

A RAID 5 array stripes data and parity information across multiple hard disks. To complete a RAID 5 array, a minimum of three hard disks is required. A RAID 0 and RAID 1 can both be implemented with a minimum of two hard disks.

References

LabSim for PC Pro, Section 5.4.

[pcpro2016_all_questions_en.exm RAID 5_02]

Question 17: Correct

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.
- ➔ She has turned Num Lock on causing numbers to be sent from the keyboard instead of letters.
- The keyboard must be replaced.
- The CPU is in power-save mode causing all login attempts to be denied.

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 18: Correct

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

- USB
- ➔ SATA
- PATA
- Firewire
- SCSI

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 19: Incorrect

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

- ➔ Tractor feed
- ➔ Platen
- Thermal ink ribbon
- Nozzles
- Drum

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]

▼ Question 20: Incorrect

Which of the following devices allows network communications to be transmitted over existing AC power lines?

- Power over Ethernet
- Ethernet multiplexer
- AC Circuit Switch
- AC-enabled switch

➔ Ethernet over Power

Explanation

An *Ethernet over Power* device allows for network communications to be transmitted over existing AC power lines. An Ethernet over Power device is plugged in to one AC power outlet, and a second Ethernet over Power device is connected to the same AC circuit. These devices multiplex the AC copper power lines to transmit digital network signals at a frequency higher than the AC electrical power already on the circuit.

References

LabSim for PC Pro, Section 6.4.

[pcpro2016_all_questions_en.exm NETWORK COMPONENTS_02]

▼ Question 21: Correct

A user has called to complain that he can't connect to your organization's wireless network from his laptop. You know that the wireless signal is strong in his location. What should you do?

- Realign the wireless antenna in the laptop's bezel.
- Install a USB wireless adapter.
- Return the laptop to the manufacturer for servicing.

➔ Check to see if the wireless adapter is switched off.

Explanation

You should first check to see if the wireless adapter was inadvertently switched off. Many laptops include a physical on-off switch for the wireless adapter that can be easily bumped.

Installing a USB adapter should be done only after verifying that the integrated wireless adapter is malfunctioning and not just switched off. The same holds true for returning the laptop to the manufacturer. Alignment of the wireless adapter antenna is not a task typically performed by a PC technician.

References

LabSim for PC Pro, Section 8.1.

[pcpro2016_all_questions_en.exm NOTEBOOK FEATURES_01]

▼ **Question 22:** Correct

Assuming all other processor specifications are the same, which of the following processor sizes will consume the least amount of power?

- 65 nm
- 90 nm
- 45 nm
- ➔ 32 nm

Explanation

A 32 nm (nanometer) processor will consume the least amount of power (all other things being equal). A smaller process size means smaller transistors, which translates into a smaller CPU die with more transistors and less power consumption.

References

LabSim for PC Pro, Section 3.5.

[pcpro2016_all_questions_en.exm PROC POWER CONSUMPTION]

▼ **Question 23:** Correct

You are providing telephone support for a user who is trying to connect a computer to a projector. You know that the projector only has a VGA port.

How would you describe the connector that the user should look for?

- D-shaped with 25 pins
- ➔ D-shaped with 15 pins
- Rectangle with one beveled corner
- Round with 6 pins

Explanation

VGA ports, also called DE-15 ports, are named for their characteristic D-shape and 15 pins.

A D-shaped port with 25 pins describes a parallel ports. A round port with 6 pins describes a PS/2 port. A rectangle port with one beveled corner describes a DisplayPort.

References

LabSim for PC Pro, Section 1.3.

[pcpro2016_all_questions_en.exm PC16_COMPUTER_PORTS_04]

▼ **Question 24:** Correct

Device manufacturers are constantly finding bugs, vulnerabilities, or better ways for their devices to communicate with the operating system. Because of this, what should you do before you install a new device?

- Obtain the latest driver from the manufacturer's website as soon as possible after installing the device.
- Let the installation program find the latest driver and download it during installation.
- ➔ Obtain the latest driver from the manufacturer's website before installing the device.
- Use the driver included on the installation disc from the manufacturer.

Explanation

Obtain the latest driver before installation. Instead of using the driver included on the installation disc, check the manufacturer's website for the latest driver.

References

LabSim for PC Pro, Section 4.6.
[pcpro2016_all_questions_en.exm DRIVER INSTALLATION]

▼ Question 25: Correct

Which of the following is a characteristic of a multi-processor system?

- Shared L2 cache
- Multiple cores on the same die
- Ability to use over 4 GB of memory
- ➔ Multiple processor sockets on the motherboard

Explanation

A multiple-processor system has multiple CPUs, with each CPU requiring a different processor socket on the motherboard.

A multi-core system is a processor with multiple CPUs on the same die. A multi-core system uses a single processor socket for multiple CPUs. L2 cache might be shared between two or more cores in a multi-core system, but would not be shared in a multiple processor solution. 64-bit processors are required to be able to use more than 4 GB of memory.

References

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

▼ Question 26: Correct

You have been asked to recommend a printer that will be used in a travel agency. The printer will be used to print airline tickets. Each ticket has four pages (multi-part, carbon-based forms), and the same information must show up on all four pages with a single pass of the printer. Which printer type would you recommend?

- Laser
- Ink Jet
- Dye sublimation
- ➔ Impact

Explanation

Because dot matrix (impact) printers strike the image onto paper, they are good printers to use when carbon-copy documents are being printed. A dye sublimation printer uses film-embedded dye. Laser printers use lasers and electrical charges to transfer images to paper. Ink jet printers spray ink from ink stored in a reservoir.

References

LabSim for PC Pro, Section 7.1.
[pcpro2016_all_questions_en.exm PRINTER_08]

▼ Question 27: 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

~~Hardware installation or removal~~ First boot of a new computer

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

~~First boot of a new computer~~ 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 28: Correct

Which of the following is an advantage of purchasing a motherboard with integrated graphics and audio?

- Reduced need for device drivers
- Fewer system resources used
- Faster communication between sound and video devices
- Higher-quality components

➔ Lower overall system cost

Explanation

Purchasing a motherboard with integrated components typically results in a lower overall cost. Even though the motherboard might cost a little bit more, you will save on the cost of purchasing additional devices.

Integrated components are typically not as powerful or have as many features as their dedicated counterparts. Some integrated components, such as integrated graphics, share system resources. Device drivers are still required for integrated components.

References

LabSim for PC Pro, Section 3.3.

[pcpro2016_all_questions_en.exm PC16_MOTHERBOARDS_01]

▼ **Question 29:** Incorrect

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



1	2	3
Dual displays	✓ Screen orientation	Touchpad (on/off)
Touchpad (on/off)		Wireless (on/off)
4	5	6
✓ Bluetooth (on/off)	Wireless (on/off)	✓ Play/Pause media
	Dual displays	

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 30:** Incorrect

When you try to read a particular DVD-R disc that was burned in a different computer, you receive an error message. Other DVD discs work fine in your drive. Which of the following is the most likely problem?

- ➔ The disc is dirty or scratched.
- Your drive's laser is misaligned.
- The drive spins too fast for the media.
- ~~The disc was created in a computer that uses different regional settings.~~

Explanation

If the problem occurs with only one disc, the problem is likely with the disc itself. Make sure the disc is clean, and that the drive supports the disc format. If other discs are working just fine, then the laser is probably not misaligned and the disc is probably not spinning too fast.

References

LabSim for PC Pro, Section 5.10.

[pcpro2016_all_questions_en.exm TRB DVD-R_01]

▼ **Question 31:** Correct

Which of the following is the best definition for a LAN?

- ➔ A network in a small geographic area, like in an office.
- The interconnection of components, such as laptops, printers, keyboards, and other wireless devices within a personal range (typically 10 meters or less).
- An extension of a private network over a shared or public network such as the Internet.
- A network whose computers and servers are separated geographically, but still connected.

Explanation

A LAN is a network in a small geographic area, like in an office.

A WAN is a network whose computers and servers are geographically far apart but still connected. A PAN (personal area network) is the interconnection of components, such as laptops, mobile devices, printers, mice, keyboards, and other Bluetooth equipped devices, using some form of wireless technology within a personal range (typically 10 meters or less). A VPN is the extension of a private network over a shared or public network such as the Internet.

References

LabSim for PC Pro, Section 6.1.

[pcpro2016_all_questions_en.exm PC 2016 WHAT IS LAN?]

▼ Question 32: Correct

You have installed a new computer with a quad-core 64-bit processor, 6 GB of memory, and a PCIe video card with 512 MB of memory. After installing the operating system, you see less than 4 GB of memory showing as available in Windows. What should you do?

- Flash the BIOS.
- ➔ Install a 64-bit version of the operating system.
- Disable the AGP aperture in the BIOS.
- Update the memory controller driver in Device Manager.

Explanation

In this scenario, the most likely cause is the operating system being a 32-bit operating system. You must use a 64-bit operating system to use memory above 4 GB. The AGP aperture is a method for sharing system memory with an AGP (not PCIe) video card. With shared memory, some of the memory is used by the video card and is not available for the system. You do not update memory controller drivers.

References

LabSim for PC Pro, Section 3.9.

[pcpro2016_all_questions_en.exm TRB MEMORY_04]

▼ Question 33: Incorrect

Which type of printer uses lasers and electrical charges to transfer images to paper?

- ➔ Laser
- Thermal inkjet (bubble jet)
- Dot matrix
- Piezoelectric crystal inkjet

Explanation

A laser printer uses lasers and electrical charges to transfer images to paper. A thermal inkjet printer applies heat to the ink in print head nozzles causing the ink to boil and expel itself from the nozzle. A piezoelectric printer uses pressure, not heat, to apply the ink. A dot matrix printer uses pins striking the ink ribbon to transfer the ink.

References

LabSim for PC Pro, Section 7.1.

[pcpro2016_all_questions_en.exm PRINTER_11]

▼ **Question 34:** Incorrect

You recently upgraded a client's older workstation from Windows 7 to Windows 10. The client has called to complain that the interface is very slow. For example, after clicking on the Start button, the Start Menu slowly appears on the screen. How can you fix this problem without upgrading the hardware itself?

- ~~Increase the hardware acceleration settings.~~
- Increase the color depth of the display.
- Increase the resolution of the display.

➔ Set the visual effects for best performance.

Explanation

You need to adjust the visual effects for best performance. This will disable animation, shading, and fading effects used by Windows. Doing so reduces the load on the older hardware used in the client's systems and should increase the performance of the user interface. However, the best resolution to this problem would be to install a newer video adapter in the system.

Changing the resolution setting changes the size of text and windows in relation to the screen. Changing the color depth affects the number of colors that can be displayed at one time. Increasing the video acceleration settings increases the amount of processing done by the video card instead of the CPU.

References

LabSim for PC Pro, Section 4.5.

[pcpro2016_all_questions_en.exm TRB DISPLAY_04]

▼ **Question 35:** Incorrect

Which of the following wireless communication technologies can be described as follows?

- Has a very limited transmission range, of less than two inches
- Used with credit cards and passports
- Slower than other wireless technologies
- Constantly emitting a signal

Infrared in diffuse mode

➔ NFC

Bluetooth

IEEE 1394

~~Infrared in line-of-sight mode~~

Explanation

Near Field Communication, or NFC, uses the 13.56 MHz frequency and has a very short range—in order for devices to communicate, they have to be within two inches of each other. NFC chips are being used for such applications as passports and credit cards to contain all the information about the passport holder or the credit card account. NFC chips use encryption algorithms to secure the connection but are constantly emitting a signal and use a much slower transmission speed than other wireless technologies.

References

LabSim for PC Pro, Section 6.9.

[pcpro2016_all_questions_en.exm NFC]

▼ Question 36: Correct

One of your users has called to complain about her notebook computer. She reports that it displayed a message indicating that the battery was low, then it shut down by itself even though it was plugged into a wall outlet. What should you check first?

- Verify that the power management settings in the BIOS are configured properly.
- ➔ Verify that the AC adapter LED light is lit when plugged into the wall outlet.
- Verify that the power management settings in Windows are configured properly.
- Verify that the battery will accept a charge.

Explanation

You should first verify that the notebook's AC adapter LED light is lit. The problem with the notebook system is that it's running on battery, not on AC power. The user indicated that the system is plugged into the wall outlet--therefore, AC current from the wall isn't making it into the notebook. This could be caused by a loose plug, a malfunctioning AC adapter, or a power outage. Checking the LED light will quickly help you determine if this is the case.

References

LabSim for PC Pro, Section 8.4.

[pcpro2016_all_questions_en.exm TRB NOTEBOOK_03]

▼ Question 37: Correct

Which IEEE wireless standards specify transmission speeds up to 54 Mbps? (Select two.)

- Bluetooth
- 802.11b
- ➔ 802.11g
- 802.1x
- ➔ 802.11a

Explanation

Both the 802.11a and the 802.11g wireless standards specify maximum transmission speeds up to 54 Mbps. Bluetooth is a wireless standard commonly used to connect peripheral devices and operates at 720 Kbps. The 802.11b wireless standard provides transmission speeds of 11 Mbps. 802.1x is a wireless security standard that provides an authentication framework for 802-based networks.

References

LabSim for PC Pro, Section 6.8.

[pcpro2016_all_questions_en.exm 802.11A_802.11G]

Question 38: Incorrect

You manage a network that has multiple internal subnets. You connect a workstation to the 192.168.1.0 subnet using 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 : 255.255.255.0

Default Gateway. : 192.168.2.1

DNS Servers. : 192.168.2.20

What is the most likely cause of the problem?

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

Explanation

In this example, the default gateway address is incorrect. The default gateway address must be on the same subnet as the IP address for the host. The host address is on the 192.168.1.0/24 subnet, but the default gateway address is on the 192.168.2.0 subnet.

References

LabSim for PC Pro, Section 6.14.

[pcpro2016_all_questions_en.exm TRB NETWORKING_13]

Question 39: Correct

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

You have completed this lab and may go on to the next question.

Launch Lab

You completed the lab correctly.

View Lab Report

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.
- Disable the floppy drive as a bootable device because the computer has no floppy drive.

Note: To restart the simulated computer, click the **Send Ctrl + Alt + Del** button at the bottom of the screen.

References

LabSim for PC Pro, Section 3.10.

[pcpro2016_all_questions_en.exm BIOS_EXM_BOOT-PB]

▼ **Question 40:** Correct

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

- IDE
- PCIe
- Mini-PCI
- ➔ SATA
- 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 41:** Correct

Which computer function takes data through a series of procedures as defined by a set of instructions?

- ➔ Processing
- Output
- Storage
- Networking

Explanation

Processing is the flow of data through a series of procedures as defined by a set of instructions.

Storage is the act of saving or maintaining data. Output is the processes of presenting, displaying, or giving data. Networking is the practice of connecting two or more computers.

References

LabSim for PC Pro, Section 1.3.

[pcpro2016_all_questions_en.exm PC16_COMPUTING_BASICS_02]

▼ **Question 42:** Correct

Which of the following are features of Basic Rate ISDN (BRI)? (Select three.)

- ➔ Dial-up connection
- ➔ One control channel
- Up to 24 data channels
- Three control channels
- ➔ Two data Channels
- Always-on connection

Explanation

Basic Rate ISDN service is a dial-up service consisting of two 64 Kbps data (bearer) channels and a single control (delta) channel. The two data channels can be used independently of each other or bonded together to provide a total bandwidth of 128 Kbps. Primary Rate ISDN (PRI) shares many of the features of BRI, but includes up to 24 data channels.

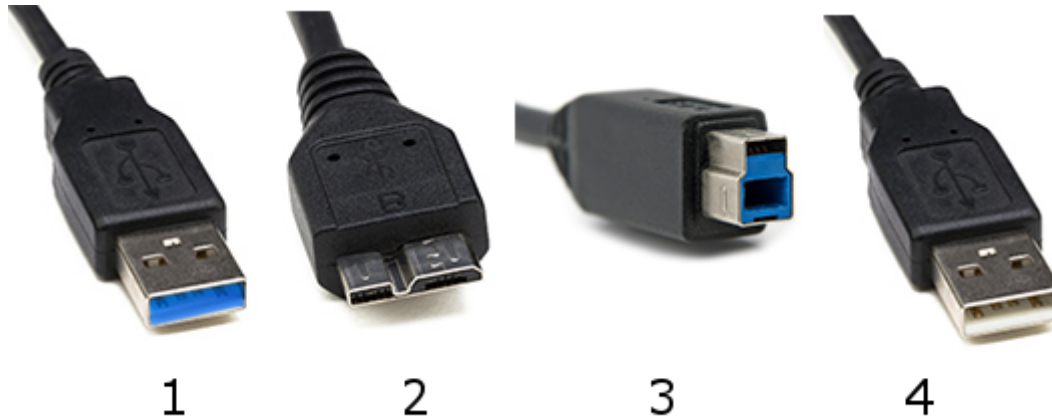
References

LabSim for PC Pro, Section 6.10.

[pcpro2016_all_questions_en.exm ISDN_BRI_01]

▼ Question 43: 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

2

microUSB

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 44: Correct

You need to replace the power supply in your home desktop computer.

Which of the following specifications are the most likely to affect your power supply choice? (Select three.)

- ➔ Form factor
- ➔ Output wattage
- Input voltage
- Output voltage
- ➔ Type and number of connectors

Explanation

When choosing a power supply:

- Select the power supply form factor that matches the motherboard and case form factor (ATX, Micro-ATX, Mini-ITX, etc.).
- Make sure that the power supply has the correct type and number of power connectors for all of your devices.
- Select a power supply with sufficient watts to power all devices. The higher the watts, the more internal and external devices that can be supported.

Nearly all power supplies can accept between 110 and 230 volts AC input. Use the switch on the back to specify the input power. All power supplies output +/-5 and +/-12 volts DC power.

References

LabSim for PC Pro, Section 3.2.

[pcpro2016_all_questions_en.exm PC16_POWER_SUPPLY_08]

▼ Question 45: Correct

You have just upgraded the CPU on your computer. You consulted the motherboard documentation to make sure the CPU is compatible with the motherboard. You turned the system on and it locks up shortly after startup.

Which steps should you take first? (Select two.)

- Replace the CMOS battery.
- ➔ Make sure the CPU is seated and oriented properly, and locked into the socket.
- Test the power supply using a multimeter.

- ➔ Look for something that could be causing the new CPU to overheat.
- Make sure the power cord is plugged in and the power supply switch is in the on position.

Explanation

The most common issues that occur when a new CPU has been installed are

1. The system locks up because it gets too hot. You should check for the following:

- The heatsink and fan are not placed correctly or are in poor condition
- Thermal paste or the thermal pad have not been used between the processor and the heatsink
- The heatsink is not firmly attached to the processor

2. The system locks up because the CPU is not properly seated or is oriented incorrectly.

References

LabSim for PC Pro, Section 3.6.

[pcpro2016_all_questions_en.exm PROC_TRB_04]

▼ Question 46: 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 a USB cable to connect the device to the cellular network through a cable modem
- ➔ 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 a USB transmitter to connect the device directly to the cellular network through a satellite
- Use the device's wi-fi to connect to the cellular network through a cable modem's wi-fi antennae
- Use an integrated transmitter to connect the device directly to the cellular network through a satellite
- ➔ Use the device's wi-fi to connect to the network through a cellular wi-fi hot spot
- ➔ Use a USB cable to connect the device to the network through a smartphone

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 47:** Correct

You are troubleshooting network connectivity issues on a Windows workstation. Which command would you use to view the MAC address of the network adapter?

- ipconfig
- ➔ ipconfig /all
- netstat
- ping
- nslookup

Explanation

Use ipconfig /all to view detailed network configuration information. The /all switch shows additional information not shown by using ipconfig alone. Ping sends an ICMP echo request/reply packet to a remote host. Nslookup resolves (looks up) the IP address of a host name. Netstat displays network connections, routing information, and network statistics.

References

LabSim for PC Pro, Section 6.14.

[pcpro2016_all_questions_en.exm TRB NETWORKING_18]

▼ **Question 48:** Incorrect

Examine the following output:

Server: helicuplar.xct.takro.net

Address: 209.53.4.130

Name: westsim.com

Address: 64.78.193.84

Which command produced this output?

- ➔ nslookup
- ipconfig
- netstat
- tracert

Explanation

The output is from the nslookup command on a Windows Server system. Nslookup is a tool that allows you to send manual DNS resolution requests to a DNS server. The output displays the IP address and hostname of the DNS server that performed the resolution, and the IP address and hostname of the target specified for resolution. Nslookup can be a useful tool when troubleshooting DNS name resolution problems. The ipconfig utility is used on a Windows system to view the TCP/IP configuration of network interfaces. Netstat is used to view protocol connections that have been established by the system, as well as what incoming TCP/IP ports are in use by the system. Tracert is a tool used to view information on the route a packet takes as it traverses the network to a remote host.

References

LabSim for PC Pro, Section 6.14.

[pcpro2016_all_questions_en.exm TRB NETWORKING_25]

▼ **Question 49:** Incorrect

Your home network is connected to the Internet through a 512 Mbps DSL line. Your ISP provided you with a small office/home office (SOHO) router that provides four 100 Mbps Ethernet ports for your home office and one DSL port for connecting the network to the Internet. The SOHO router has a built-in DHCP server that is used to automatically configure workstations with an IP address, default gateway address, and DNS server address. However, today you are unable to access the Internet. The browser reports that it can't find the URLs you are requesting. Using the ipconfig command, you've verified that the workstation is receiving correct IP address parameters. You tried entering tracert 137.65.1.2 at a command prompt and found that you're able to reach this server on the Internet without any issues. What is causing this problem?

- Your ISP's DSL service may be down.
- The SOHO router isn't working properly.
- ~~Automatic Private IP Addressing (APIPA) has assigned a non-routable IP address to your workstation.~~
- Your built-in DHCP server isn't working properly.

➔ Your ISP's DNS server is down.

Explanation

Because your workstation is able to receive correct IP parameters from the built-in DHCP server, you know that the home office side of the SOHO router is working correctly. The fact that you're able to trace the route from your workstation to a server on the Internet using its IP address indicates that routing is working properly. This, coupled with the browser error message, would indicate that the most likely problem is a down or malfunctioning DNS server. You could test this hypothesis by trying to access a Web site using an IP address in the URL instead of a domain name.

References

LabSim for PC Pro, Section 6.14.

[pcpro2016_all_questions_en.exm TRB NETWORKING_06]

▼ **Question 50:** Incorrect

You want to upgrade the memory modules in a notebook computer. What are the most common ways to access the memory slots? (Select two.)

- ➔ Open a panel on the bottom of the notebook.
- Remove a side panel and pull out the tray holding the memory.
- Remove the LCD panel.
- ➔ Remove the keyboard.
- ~~Remove the bezel.~~

Explanation

You can typically view or add memory to a laptop by removing the access panel on the bottom of the notebook. Some models have one slot accessible from the bottom, and a second slot accessible under the keyboard. Hard drives and optical drives are replaced by removing the slide-out tray (on the front or the side) that holds the device. 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_16]

▼ **Question 51:** Correct

Which generation of SATA storage devices does the following?

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

eSATAp

➔ SATA3

SATA

SATA2

eSATA

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 52:** Incorrect

Which of the following is an upgrade to the SODIMM standard?

DDR3

DDR4

SODIMM2

➔ UniDIMM

Explanation

UniDIMM (Universal DIMM) is a specification for DIMMs and is designed to carry DRAM chips. UniDIMMs can be populated with either DDR3 or DDR4 chips, but do not support any additional memory control logic. Because of this, the computer's memory controller must support both DDR3 and DDR4 memory standards. UniDIMM:

- Is an upgrade to the current SODIMM standard
- Allows mobile platform users to use both DDR3 and DDR4

References

LabSim for PC Pro, Section 3.7.

[pcpro2016_all_questions_en.exm UNIDIMM]

▼ **Question 53:** Correct

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 54: Correct

After installing a new SSD drive in your system, you determine that TRIM functionality has not been enabled on the drive by the Windows operating system. You need to manually turn TRIM on. Given that the volume on the drive has been assigned a drive letter of E:, which command should you use at the command prompt to do this?

- chkdsk E: /R
- fsutil behavior query DisableDeleteNotify
- bootrec /rebuildbcd
- ➔ fsutil behavior set DisableDeleteNotify 0

Explanation

If it is disabled, you can manually enable TRIM on an SSD drive by entering **fsutil behavior set DisableDeleteNotify 0**.

The fsutil behavior query DisableDeleteNotify can be used to detect whether TRIM is enabled, but it doesn't actually turn it on. The chkdsk e: /R command will check the E: drive for bad sectors and try to recover readable data. The bootrec /rebuildbcd command is used to rebuild the boot configuration data.

References

LabSim for PC Pro, Section 5.10.

[pcpro2016_all_questions_en.exm TRB_DISK_STORAGE_TOOLS_02]

▼ Question 55: Incorrect

Your lobby receptionist uses a laptop computer to complete her day-to-day tasks. You are concerned about the security of her system. What should you do? (Select two.)

- ~~Enable passcodes on the laptop.~~
- ➔ Secure the laptop to the desk using a cable lock.
- ➔ Configure the laptop with a biometric fingerprint scanner.
- Enable remote wipe on the laptop.

Explanation

Because the laptop is used in an insecure reception area, you should consider doing the following to secure the laptop:

- Secure the laptop to the desk using a cable lock. This makes it more difficult to steal the laptop.
- Configure the laptop with a biometric fingerprint scanner. This makes it more difficult to access information on the laptop.

Using remote wipe and passcode features are more commonly used on tablet devices, not laptops.

References

LabSim for PC Pro, Section 8.1.

[pcpro2016_all_questions_en.exm NOTEBOOK FEATURES_03]

▼ Question 56: Correct

You are in the process of configuring a new computer. The motherboard has four memory slots and supports dual-channel memory. You install two memory modules. When you boot the computer, the BIOS recognizes both modules, but the memory is not configured to run in dual-channel mode. What should you do?

- Add continuity modules to unused memory slots.
- ➔ Move the modules to the correct motherboard slots.
- Change the CAS latency to a higher setting.
- Replace the memory with dual-channel capable memory.

Explanation

To use dual-channel memory, you will need to install memory in the correct slots. Depending on the motherboard, the two slots might be next to each other, or alternating. Consult the motherboard documentation for the correct configuration. Dual-channel support is mainly a function of the motherboard (e.g., the memory controller), not the memory itself. Continuity modules are used with Rambus RAM; if continuity modules were required on this system, none of the memory would have been detected. The CAS latency is used for memory timing. You might modify the timing if the system is unstable at the current memory timing settings.

References

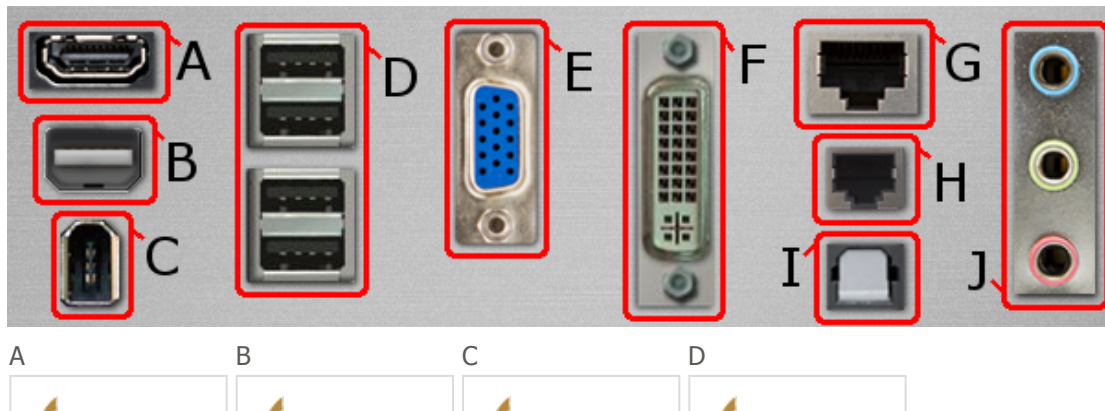
LabSim for PC Pro, Section 3.9.

[pcpro2016_all_questions_en.exm TRB MEMORY_02]

▼ Question 57: Correct

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.)



✓ HDMI	✓ Thunderbolt	✓ IEEE 1394	✓ USB
E	F	G	H
✓ VGA	✓ DVI	✓ RJ45	✓ RJ11
I	J		
✓ 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 58: Incorrect

You are building an HTPC (home theater PC) that will be connected to an HDTV. You want to be able to play Blu-ray movies on the HTPC.

Which of the following features should you make sure your video card and HDTV support?

- OpenGL
- ATSC
- DirectX
- ➔ HDCP

Explanation

High-bandwidth digital content protection (HDCP) is a method for protecting digital media, such as Blu-ray movies, from being intercepted and copied. When playing protected content from a PC, the optical device, video card, and external display must all support HDCP.

Both DirectX and OpenGL are API collections that are used to improve graphic, animation, and multimedia creations. ATSC is a signal standard used to broadcast digital TV signals.

References

LabSim for PC Pro, Section 3.12.

[pcpro2016_all_questions_en.exm PC16_VIDEO_CARDS_04]

▼ Question 59: Incorrect

You are putting together a system for a graphic artist and need to make sure you get a display that meets her needs. The display needs to have very good color reproduction quality and viewing angles. The display needs to run cool and be power efficient.

Which type of display is most likely to meet these needs?

- LCD display with TN panel
- ~~OLED display with wide angle viewing~~
- Plasma display with no motion blur

➔ LCD display with IPS panel

Explanation

LCD displays with IPS panels have the best color reproduction quality and viewing angles among LCDs. TN panels have imperfect color reproduction due to the fact that only 6-bits per color can be displayed and have poor viewing angles. LCDs with IPS panels use far less power and run much cooler than plasma displays. They are more expensive than LCDs with TN panels but are still more affordable than OLED displays.

References

LabSim for PC Pro, Section 4.4.

[pcpro2016_all_questions_en.exm LCD: TN VS IPS_02]

▼ Question 60: Incorrect

Which of the following statements about the Dynamic Host Configuration Protocol (DHCP) are true? (Select two.)

- ➔ It can deliver a DNS server address in addition to the host IP address.
- ~~The DHCP server detects workstations when they attach to the network and automatically delivers IP addressing information to them.~~
- It can only deliver IP addresses to hosts.
- ➔ A workstation must request addressing information from a DHCP server.
- It cannot be configured to assign the same IP address to the same host each time it boots.

Explanation

DHCP servers deliver IP addresses as well as other host configuration information to network hosts. DHCP can be configured to assign any available address to a host, or it can assign a specific address to a specific host. DHCP clients, typically workstations, must send a request to a DHCP server before it will send IP addressing information to them.

References

LabSim for PC Pro, Section 6.6.

[pcpro2016_all_questions_en.exm DHCP_01]

▼ Question 61: Correct

You want to use a wireless keyboard and mouse with your laptop computer. Which method should you choose?

- IEEE 1394
- 802.11g wireless
- USB
- PS/2
- ➔ Bluetooth

Explanation

Bluetooth would be the best choice because it has a high transfer rate and because it automatically detects other Bluetooth devices in the area and creates an encrypted PAN between them. 802.11g is a wireless networking standard for communicating between computers, not for connecting wireless devices to a computer. PS/2, IEEE 1394 (Firewire), and USB are all wired connection standards.

References

LabSim for PC Pro, Section 6.9.

[pcpro2016_all_questions_en.exm BLUETOOTH_01]

▼ Question 62: Incorrect

What is the maximum cable length for the IEEE 1394a standard?

- 3 meters
- 100 meters
- 5 meters
- ➔ 4.5 meters

Explanation

The maximum cable length for the IEEE 1394a standard is 4.5 meters. The maximum cable length for the IEEE 1394b standard is 100 meters.

References

LabSim for PC Pro, Section 4.3.

[pcpro2016_all_questions_en.exm IEEE 1394A STANDARD]

▼ Question 63: Correct

You are looking at a high-density (three-row) female DB-15 connector on the computer as shown in the figure below. What device uses this connector?



- USB storage devices
- IEEE 1284 printers
- ➔ VGA/SVGA monitors
- External modems that use a serial port

Explanation

A VGA/SVGA monitor uses a high-density (three-row) female DB-15 connector on the computer. Serial devices, such as external modems, connect to a male DB-9 connector. IEEE 1284 parallel devices, such as printers, connect to DB-25 connectors. USB storage devices use USB connectors.

References

LabSim for PC Pro, Section 1.3.

[pcpro2016_all_questions_en.exm PC16 VGA CONNECTOR-PB]

▼ Question 64: Incorrect

A customer has called to complain that the colors in photos she has printed on the color inkjet

printer your store sold her don't match the colors in the originals. Assuming the customer is using a Windows workstation, what should you do to resolve the issue? (Select two.)

- Run the Windows FIXCOLR utility to automatically calibrate the driver's color settings.
- ➔ Use the Color Management tab of the printer driver to calibrate the driver's color settings.
- ~~Instruct the customer to upgrade to a color laser printer.~~
- ➔ Download and install the latest printer drivers.
- Use Driver Rollback to restore an earlier version of the printer driver.
- ~~Educate the customer on the limitations of inkjet printers.~~

Explanation

You should download and install the latest printer driver, then use the Color Management tab to adjust the driver's color settings. Many times, installing the latest driver alone will fix color issues. If not, then you can manually adjust the color settings until they match the original.

References

LabSim for PC Pro, Section 7.6.

[pcpro2016_all_questions_en.exm TRB_PRINTER_03]

▼ Question 65: Correct

You are installing networking cable in the air space between the ceiling and the roof of a building. Which type of cabling should you use?

- Multi-mode fiber
- STP
- PVC
- ➔ Plenum

Explanation

Plenum cable is fire resistant and non-toxic, making it optimal for wiring above ceiling tiles. PVC cable cannot be used to wire above ceilings because it is toxic when burned. Both STP and fiber optic cables can be rated for plenum areas, but are not in themselves fire resistant.

References

LabSim for PC Pro, Section 6.3.

[pcpro2016_all_questions_en.exm PLENUM]

▼ Question 66: Correct

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



You have completed this lab and may go on to the next question.

Launch Lab

You completed the lab correctly.

View Lab Report

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 67: Correct

Which of the following are characteristics of Bluetooth? (Select two.)

- ➔ Ad hoc connections
- Line-of-sight transmission
- 5.75 GHz radio wireless
- ➔ 2.4 GHz radio wireless
- Red spectrum light waves

Explanation

Bluetooth is a wireless networking standard that uses 2.4 GHz radio waves. These are the same type of radio waves used with 802.11 wireless networking, so radio transmission can go through walls (not limited to line-of-sight connections). Bluetooth uses ad hoc connections between devices. Infrared uses red spectrum light waves and is limited to line-of-sight transmissions.

References

LabSim for PC Pro, Section 6.9.

[pcpro2016_all_questions_en.exm BLUETOOTH_03]

▼ Question 68: Correct

After arriving at work, you turn on your computer to begin your day. Instantly, you see smoke and smell a strange odor coming from the computer.

What should you do?

- Log in and check the Event Viewer
- Call the IT director
- ➔ Shut off the system immediately

- Open the computer case and look for dust buildup

Explanation

If you see smoke or smell something burning, shut off the system immediately to prevent damage or hazards.

While inspecting your computer, you should look for dust buildup on components and clean them as necessary. The Event Viewer shows past system events and error messages.

References

LabSim for PC Pro, Section 3.4.

[pcpro2016_all_questions_en.exm TRB SMOKE]

▼ Question 69: Correct

You're troubleshooting a malfunctioning notebook computer system. The user has indicated that the LCD screen suddenly became dark and difficult to read while he was downloading a large file through his wireless network card while the system was plugged in at his desk. You've checked the system and determined that the backlight has stopped working. Which of the following could be the cause? (Choose two.)

- ➔ The inverter in the LCD assembly has malfunctioned.
- The extended download placed high demands on the system DC power; causing the BIOS to shut off the backlight.
- The wireless network card is emitting radio signals that interfere with the backlight; causing it to stop functioning.
- ➔ The cold cathode fluorescent lamp has burned out and needs to be replaced.

Explanation

The two main problems encountered with LCD backlights are a burned out CCFL or a malfunctioning inverter. It's also possible to have a power management setting that turns off the backlight to save power; however, it would only be applied if the system were running on battery.

References

LabSim for PC Pro, Section 8.4.

[pcpro2016_all_questions_en.exm TRB NOTEBOOK_22]

▼ Question 70: Correct

You are the network administrator of a branch office of your company. The branch office network is part of a WAN that covers most of the United States. Users have been complaining that they are unable to access resources over the WAN at the main headquarters. You suspect that one of the routers between your office and the main headquarters is not working properly. What TCP/IP utility can you use to see if a router is not working properly?

- nslookup
- nbtstat
- netstat
- ➔ tracert

Explanation

Tracert shows you the series of routers that are used between the source and destination computers. If a router is not functioning, tracert can help you find which router is not working by

showing you the last router it was successfully able to contact. 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. Use Nslookup to find the IP addresses of a particular computer using DNS lookup.

References

LabSim for PC Pro, Section 6.14.

[pcpro2016_all_questions_en.exm TRB NETWORKING_26]

▼ Question 71: Correct

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?

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

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 72: Correct

Which of the following is true of most newer SATA drives?

- They can be plugged into a system without shutting down the computer, but not removed without shutting down.
- ➔ They can be added to or removed from a system without shutting down the computer.
- They can be added to or removed from a system without shutting down the computer, but they must be enabled from Device Manager.
- After you install the latest driver from Device Manager, they can be added to or removed from a system without shutting down the computer.

Explanation

Most newer SATA drives are hot swappable, which means

- They can be added and removed without shutting down the computer
- Windows automatically detects the device, configures a driver (if one is not already installed), and enables the device

References

LabSim for PC Pro, Section 4.6.

[pcpro2016_all_questions_en.exm HOT SWAP SATA]

▼ Question 73: Incorrect

You're trying to access your office network with your Windows workstation from home using your organization's virtual private network (VPN). Your DSL modem has connected to your ISP, but you can't connect to your office network. You issue the ipconfig command from the command prompt and learn that your system has been assigned an IP address of 169.254.1.12. What's causing the problem?

- Your organization's VPN is down.
- Your ISP's DNS server isn't working properly.
- ➔ Your ISP's DHCP server isn't working properly.
- Your modem doesn't support the v.56 standard, which is needed for VPN access.
- Your organization's firewall is filtering VPN connections.

Explanation

Anytime you see a network interface assigned an IP address in the 169.254.0.1 to 169.254.255.254 range, you know that it was unable to acquire an IP address from a DHCP server. Automatic Private IP Addressing (APIPA) on the workstation automatically took over and assigned an IP address in the range listed above. Because of this, the workstation isn't configured with the correct router and DNS server addresses, and can't access the company's VPN.

References

LabSim for PC Pro, Section 6.14.

[pcpro2016_all_questions_en.exm TRB NETWORKING_04]

▼ Question 74: Correct

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

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 75: Correct

You purchased a new LED monitor for your computer. On the back of the monitor you see the following port (pictured below).

Which type of cable should you use to connect the monitor to your computer?



- DVI cable
- DisplayPort cable
- HDMI cable
- VGA cable

Explanation

The pictured port is a DisplayPort, and uses a DisplayPort cable. DisplayPorts are used by HD displays, such as LED and LCD monitors. DisplayPorts can be identified by their rectangular shape, with one beveled corner.

HDMI ports have two beveled corners and are a bit smaller than DisplayPorts. VGA ports have three rows of 5 pin holes. DVI ports are larger than other video ports and have up to 24 pin holes.

References

LabSim for PC Pro, Section 1.3.

[pcpro2016_all_questions_en.exm PC16_COMPUTER_PORTS_02-PB]

▼ Question 76: Correct

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

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

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 77: Incorrect

Match the mobile operating systems on the left with the descriptions on the right. Each mobile operating system may be used once, more than once, or not at all.

Closed source and second most popular mobile device operating system

iOS

Device manufacturers are countless

Google Android

Open source and most popular mobile device operating system

Android

Device manufacturers include Microsoft, Samsung, and HTC

Windows

Devices solely designed and developed by Apple

iOS

Closed source and second least popular mobile device operating system

Windows

Explanation

The following mobile device operating systems are commonly available with the following feature highlights:

Android

- Is open source, the leader in mobile device operating systems
- Google Play Store has the most mobile apps
- Android manufacturers are countless, including Samsung, Sony, HTC, LG, Motorola, etc.

iOS

- Is closed source, second in mobile device operating systems
- Close competitor to Google in AppStore mobile app count
- iOS devices or iPhones are solely designed and developed by Apple

Windows

- Is closed source, far behind Android and iOS in mobile device operating system popularity
- Windows Store has fewest mobile apps
- Microsoft Mobiles (formerly Nokia) are the leading Windows Phone providers. Though Samsung and HTC have launched Windows phone devices in the past.

Google is not a mobile device operating system; Google uses the Android operating system.

References

LabSim for PC Pro, Section 8.5.

[pcpro2016_all_questions_en.exm MOBILE_DEVICE_08-PB]

Question 78: Correct

Your company has decided to hire a full-time video editor. You have been asked to find a system with the level of display quality needed by someone who will be working with video all day.

Which of the following video card specifications will have the greatest impact on display quality? (Select two.)

- Resolution
- Refresh rate
- Display connector type
- GPU configuration
- Memory

Explanation

The quality of video is determined by both the video card and the external display. When selecting a video card, the following specifications should be considered:

- **Resolution:** the number of pixels displayed on the screen. A higher resolution means that more information can be shown on the screen (screen "real estate"). A video card is rated by its max resolution, which is the highest possible resolution it can display (e.g., 1920 × 1080 or 4096 × 2160). A video editor is going to need as much real estate as you can afford.
- **Refresh rate:** the number of times in one second that the GPU draws a frame. Refresh rates are measured in hertz. A refresh rate of 70 Hz or lower may cause eye fatigue. An optimal refresh rate is between 75 Hz and 85 Hz.

The display specifications should match the video card specifications.

Memory, GPU configuration, and display connection type are all factors that will contribute to video performance or compatibility with the display. But these factors do not directly determine the display quality.

References

LabSim for PC Pro, Section 3.12.

[pcpro2016_all_questions_en.exm DISPLAY_SETTINGS_02]

▼ Question 79: Correct

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

- ➔ Filters or splitters
- ➔ RJ-11 connectors
- Analog modem
- F-type connectors
- RG-6 cable

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 80: Correct

Which of the following features are typically available through TRS ports on a sound card? (Select two.)

- HDMI audio
- IEEE 1394
- S/PDIF audio
- ➔ Speaker out



🔊 Microphone in

Explanation

TRS ports on a sound card accept 3.5 mm (1/8") plugs for analog audio input and output. The number of ports on the sound card depends on the type of support (e.g., 5.1 surround support).

An IEEE 1394 port is used to connect FireWire devices. S/PDIF audio is supplied through either a TOSLINK optical port or an RCA port. HDMI audio is supplied through an HDMI port.

References

LabSim for PC Pro, Section 3.10.

[pcpro2016_all_questions_en.exm PC16_AUDIO_02]

▼ Question 81: Correct



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

You have completed this lab and may go on to the next question.

Launch Lab

You completed the lab correctly.

View Lab Report

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 82: Correct

Which of the following terms describes a PC card that you can insert and remove without rebooting the computer?

- AT attachment
- Hot-play
- ➔ Hot-swappable
- Plug-and-Play

Explanation

Inserting and removing PC cards without rebooting the computer is called hot-swapping. This feature is also called dynamic reconfiguration. Plug-and-Play devices are automatically detected by the system and the driver is automatically loaded. Unless the bus and the device is hot-swappable, Plug-and-Play devices should be added or removed with the system shut down. AT Attachment (ATA) is the standard interface for transferring data from storage devices such as hard disk drives and optical drives.

References

LabSim for PC Pro, Section 3.11.

[pcpro2016_all_questions_en.exm HOT SWAPPABLE CARD]

▼ Question 83: Correct

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?

- ➔ 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.
- Purchase a new monitor with a DVI-D port.
- 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 84: Correct

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 USB port.
- 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 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 85: Incorrect

What is the maximum range of the Bluetooth 2.0 specification for Class 1 devices?

- 300 M
- 50 M
- 10 M
- 30 M
- ➔ 100 M

Explanation

Bluetooth version 2.0 class 1 devices have a maximum range of about 100 meters. Earlier versions had a maximum range of only about 10 meters.

References

LabSim for PC Pro, Section 6.9.

[pcpro2016_all_questions_en.exm BLUETOOTH_02]

▼ Question 86: Correct

You have been asked to implement a network infrastructure that will accommodate failed connections. Which of the following network topologies provides redundancy for a failed link?

- ➔ Mesh
- Bus

Ring

Star

Explanation

In a mesh topology, each network device is interconnected to all other network nodes. This creates multiple data paths and in the event of a failed link, the data has an alternate route to arrive at its destination.

The star topology connects network devices to the network with a single patch cable and the failure of a patch cable will make the connected device unavailable. The bus topology has a single point of failure, if there is a break in the network media, the network will be unavailable. A single break in a physical ring topology will disable the network.

References

LabSim for PC Pro, Section 6.1.

[pcpro2016_all_questions_en.exm PC 2016 MESH TOPOLOGY_02]

▼ Question 87: Correct

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

USB ports

➔ Docking station

Firewire ports

Infrared wireless

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 88: Incorrect

Which type of software-generated problems can indicate that a software bug is causing a memory error? (Select three.)

Registry error

Parity interrupt

➔ Page fault

➔ Exception error

Incorrect memory count

➔ General-protection fault

Explanation

Software-generated memory problems include the following:

- Exception error
- General-protection fault
- Page fault

Registry errors indicate that parts of the registry are written to faulty sections of RAM. Parity interrupt usually indicates a failing module or discrepancies between new and old memory. An incorrect memory count can happen with incompatible memory installation; remember to avoid combining dual-bank with single-bank memory.

References

LabSim for PC Pro, Section 3.9.

[pcpro2016_all_questions_en.exm TRB MEMORY_06]

▼ Question 89: Correct

Which expansion slot is best for high-end dedicated video cards?

- PCI-X
- ➔ PCIe x16
- PCIe x1
- AGP

Explanation

The PCIe x16 expansion bus is the preferred bus for high-speed video cards.

A PCIe x1 slot is not as fast as a PCIe x16 slot, and most video cards are designed for the x16 slot. AGP is an older interface that is not used anymore. The PCIe bus was created to replace the PCI-X bus and, as such, has faster data transmissions.

References

LabSim for PC Pro, Section 3.3.

[pcpro2016_all_questions_en.exm PC16_MOTHERBOARDS_03]

▼ Question 90: Correct

You want to use a wireless printer at home. The printer will be used by two computers in two different rooms. Which interfaces could be used to do this?

- Infrared (IrDA)
- ➔ Wireless Ethernet
- IEEE 1284
- IEEE 1394
- USB

Explanation

You could use an 802.11 wireless Ethernet connection for the printer. 802.11 wireless Ethernet has a greater range than infrared, and will go through walls. The other interfaces are wired interfaces. IEEE 1394 is Firewire. IEEE 1284 is parallel.

References

LabSim for PC Pro, Section 6.9.

[pcpro2016_all_questions_en.exm BLUETOOTH_06]