801EXAM -RTF

Exam A

QUESTION 1
How can you reduce the chance of ESD? (Select the two best answers.)

A. Use an antistatic wrist strap.
B. Raise the temperature in the room.
C. Touch an unpainted portion of the computer case.
D. Lower the humidity.
E. Plug the computer into an AC outlet.

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:
The best answers (A and C) are to use an antistatic wrist strap and to touch an unpainted portion of the computer case. The alligator clip of the wrist strap should be connected to an unpainted portion of the computer case. Other things that can help reduce electro-static discharge (ESD) include using an antistatic mat, raising the humidity, working in a non-carpeted area, wearing rubber-soled shoes, and using antistatic spray. Going beyond this, you might see antistatic wrist straps that connect to specific earth grounding points used in computer labs. As to the incorrect answers: The temperature will not have an effect on ESD, and lowering the humidity will make ESD more likely. It is not necessary to keep the computer plugged into an AC outlet. You should not plug the computer into an AC outlet because you might not know if the outlet is wired properly, and a surge could be dangerous. The two most important points to remember are to use an antistatic strap, and touch an unpainted portion of the case.

QUESTION 2
Which of the following disperses heat but requires no moving parts?

A. Heat sink
B. CPU fan
C. Case fan
D. Liquid cooling system

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 3
Why should VoIP not be used with satellite Internet?

A. Bandwidth limitations
B. Difficult to install
C. Latency
D. Cost

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
The number one problem with satellite Internet is latency. Because the signal must travel to a satellite in orbit

around the Earth, there can be an unacceptable delay (between .5 and 5 seconds) that makes VoIP difficult to use properly. Essentially, anything you or the other caller say could overlap due to the latency, making conversation quite problematical. Satellite Internet usually has enough bandwidth to support VoIP; although, some connections are limited to a 28.8 Kbps upload through a phone line. It is not difficult to install (on the end user's side at least), plus the cost can be comparable to some other Internet services.

QUESTION 4
A customer wants to control several computers with a single set of input devices. What solution should you provide for them?

A. Barcode reader
B. Smartcard reader
C. Ethernet switch
D. KVM

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
KVM stands for Keyboard, Video, and Mouse. A KVM is a switch that enables the connection of one keyboard, monitor, and mouse. However, the KVM has connections for several computers, which can be selected by pressing a button on the KVM. A barcode reader is a scanning device that can read and interpret information from barcodes and send that information to the computer. A smartcard reader is a device that reads smart identification cards when they are swiped and sends that information to an authenticating system. A different type of switch, the Ethernet switch, is a common LAN device that enables the connectivity of multiple computers for the purpose of networking.

QUESTION 5
Which the following would best be used for high-end graphics cards?

A. PCIe
B. PCI
C. AGP
D. ISA

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 6
Which of the following materials should a computer never be placed on?

A. Wood
B. Carpet

C. Plastic

D. Tile

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 7
Of the following default ports, which one is used by the TELNET protocol?

A. 23

B. 25

C. 80

D. 110

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
TELNET uses port 23 by default. It is a deprecated protocol that should be avoided and disabled if it is found to be running on a computer. Newer computer operating systems remove TELNET altogether, but you should still know it for the exam and the field. Port 25 is used by SMTP (Simple Mail Transfer Protocol). Port 80 is used by HTTP (Hypertext Transfer Protocol). Port 110 is used by POP3 (Post Office Protocol version 3).

QUESTION 8
Which of the following is the latest type of memory for a computer?

A. RAMBUS

B. DRAM

C. DDR

D. SDRAM

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
DDR is the latest type of memory for a personal computer. DDR stands for Double Data Rate and is a derivative of SDRAM (Synchronous Dynamic RAM). It's rare to find Rambus nowadays because DDR is the most common. DRAM stands for dynamic random access memory. The rest of the memory types listed in the answers are types of DRAM. Usually, if you install a stick of memory (SIMM or DIMM) it will be DRAM.

QUESTION 9
Which of the following can be potential sources of EMI? (Select the two best answers.)

A. Flat-panel televisions

B. AC power lines

C. Cordless phones

D. Electric motors

E. Faraday cage

Correct Answer: BD
Section: (none)
Explanation

Explanation/Reference:
AC power lines and electric motors can be potential sources of electromagnetic interference (EMI). They can cause various computer and networking equipment to malfunction if they are in close proximity to each other. Flat-panel televisions, as opposed to CRTs, are not large sources of EMI; they generally do not affect the usage of computers. Cordless phones also do not affect computers. Like flat-panel televisions they use a small amount of electricity and therefore emit a small amount of EMI. However, cordless phones can be a source of radio frequency interference (RFI). A Faraday cage is a shielded enclosure that is generally meant to keep static, radio transmissions, and interference, outside of a working area.

QUESTION 10
Which type of cable needs to be fire resistant?

A. STP
B. Coaxial
C. Plenum
D. UTP

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Plenum cable is required to be fire resistant; it should not emit toxic fumes if it is exposed to high temperatures. Regular unshielded twisted-pair cable is covered with a PVC jacket. When this burns it creates a toxic smoke. Plenum cable combats this by using a covering (Teflon or other similar material) that is more fire resistant. A plenum is any airway where fire can spread. Municipal code requires fire resistant cable in a plenum. STP (shielded twisted-pair) cable uses an aluminum shield that surrounds the individual wires; however, this is inside the PVC jacket, making it just as susceptible to fire as UTP. Coaxial cable also has a PVC jacket.

QUESTION 11
Which wireless standard has the shortest indoor range?

A. 802.11a
B. 802.11b
C. 802.11g
D. 801.11n

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
802.11a has the shortest indoor range at approximately 115 ft (35 m). 802.11b and g are not far behind though, with an indoor range of 125 ft (38 m). 802.11n has the greatest range of the four at 230 ft (70 m).

QUESTION 12
Which of the following types of storage media can hold the most data?

A. Blu-ray
B. DLT
C. DVD-ROM

D. SD card

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Digital Linear Tape can hold more data than any of the other answers. With storage capacities that approach a terabyte, it can hold much more than the other solutions. Common DLT capacities include 160 GB, 300 GB, and 800 GB. Blu-ray discs typically hold up to 50 GB. DVD-ROM discs can hold between 4.7 and 17 GB of data. Common SD card capacities are 32, 64, and 128 GB.

QUESTION 13
Which type of Internet connection provides typical downstream networking speeds of 5 to 12 Mbps utilizing phone lines?

A. ADSL
B. VPN
C. Bluetooth
D. 802.3u

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Asymmetric Digital Subscriber Line (ADSL) is a type of Internet connection that offers downstream networking speeds of 1.5, 5, 8, 12, and 24 Mbps. Upstream rates will be slower, as implied by the name asymmetric. ADSL uses a phone line to send data. VPN stands for virtual private network, which enables users to connect to the main office from a remote location in a secure fashion. The speed of the VPN connection will be based on the type of Internet connection. Bluetooth is not a type of Internet connection; instead it is a short distance wireless technology that enables devices such as mobile phones and headsets to be used together. 802.3u is a type of Ethernet that enables local area networking at 100 Mbps.

QUESTION 14
Which of the following is a common power rating for a desktop PC that runs office applications?

A. 12 volts
B. 400 watts
C. 120 volts
D. 900 watts

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
400 watts is a common power rating for a standard desktop PC. This is enough to power all the devices a typical office user might need. Power ratings are measured in watts. There are 900-watt power supplies, but something that powerful would be necessary only for a custom PC or advanced workstation. Volts measure electric potential, not power ratings. 12 volts is one of the DC voltages that the power supply sends to the motherboard and through SATA and Molex connections. 120 volts is the standard voltage of an AC outlet in the United States and in many other countries. The power supply converts this AC power to DC power that the motherboard, CPU, and other devices can utilize.

QUESTION 15
You have a PCIe card that you need to install. The card's documentation says that it requires a x4 slot. The

computer you are installing to has only x1 and x16 slots. What should you do?

A. Install the card to the x1 slot and get normal performance.
B. Install the card to the x16 slot and get four times the performance.
C. Install the card to the x1 slot and get half the performance.
D. Install the card to the x16 slot and get normal performance.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
The card should be installed to the x16 slot, not the x1 slot. When this is done, it will get normal performance as if it were connected to a x4 slot. It will not get four times the performance. A PCIe x4 card will not fit in a x1 slot, the slot is too small. But conversely, most PCIe cards can be installed to a higher level slot. It's important to plan well; if you think you might be using a x4 card in the future, attempt to get a motherboard that has a x4 slot. Most motherboards have only one PCIe x16 slot, and it is usually used by the video card, which could limit your options in a scenario such as this one.

QUESTION 16
Your boss asks you to replace his laptop's 500 GB hard drive with a new 640 GB hard drive. What interface would you most likely use?

A. PATA
B. SATA
C. IDE
D. SCSI

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
You would most likely use a Serial ATA (SATA) interface. First, because it is the most common type of interface in today's laptops. Second, it is more likely to find a 640 GB SATA hard drive than a 640 GB Parallel ATA (PATA) hard drive. IDE stands for Integrated Device Electronics. PATA and IDE are synonymous in this scenario. SCSI stands for Small Computer System Interface. SCSI drives are more common on specialized PCs and are rare inside laptops.

QUESTION 17
Which type of printer requires special paper to operate?

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

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
The thermal printer requires special paper to operate. The specially coated paper is heated by a thermal print head to create images and text. Laser, inkjet, and impact printers do not require special paper to operate. Though impact printers have perforated edges used to help feed the paper, it is still the same type of paper that laser and inkjet printers use.

QUESTION 18
What is the recommended maximum cable length for USB 2.0?

A. 15 meters
B. 10 meters
C. 7 meters
D. 5 meters

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
The recommended maximum cable length for USB 2.0 devices is 5 meters (16 feet). USB 1.1 has a limitation of 3 meters for devices running at low speed (1.5 Mbps) whereas USB 1.1 at full speed (12 Mbps) and USB 2.0 is 5 meters. As of the writing of this book, USB 3 length is not specified, but cables are generally no longer than 3 meters (10 feet) in length.

QUESTION 19
What should be used when installing or upgrading a CPU to ensure that heat will be dissipated efficiently through the heat sink?

A. Thermal compound
B. Power supply
C. Case fan
D. Fire extinguisher

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 20
How should you attempt to demonstrate professionalism when dealing with a customer? (Select the three best answers.)

A. Avoid distractions.
B. Retain a chain of custody.
C. Avoid being judgmental.
D. Leave documentation to the customer.
E. Meet expectations that the customer sets for you.

Correct Answer: ACE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 21
What type of card would you use to record off-air television programs?

A. Wireless card

B. Video capture card
C. POST card
D. PCIe video card

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 22
What is the maximum data transfer rate of IEEE 1394a?

A. 400 Mbps
B. 480 Mbps
C. 800 Mbps
D. 1600 Mbps

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
The maximum data transfer rate of IEEE 1394a is 400 Mbps. IEEE 1394a is essentially an improved version of FireWire 400. 480 Mbps is the data rate of USB 2.0; 800 Mbps is the speed of FireWire 800/IEEE 1394b; and 1600 Mbps is the speed of FireWire S1600.

QUESTION 23
Which of the following IP addresses is private?

A. 8.58.12.192
B. 173.169.254.1
C. 192.168.58.11
D. 11.23.185.57

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
The only address listed that is private is 192.168.58.11. This is part of the private range of Class C addresses that encompasses 192.168.x.x. Another common example of a private class C address would be 192.168.1.1, often used by SOHO routers. The address 8.58.12.192 is Class A and is public. Class A private IPs would start with the number 10. The address 173.169.254.1 is a Class B address. The private range for Class B is 172.16.x.x–172.31.x.x. The address 11.23.185.57 is another Class A public address. Addresses that start with 169.254 are private Class B addresses applied by APIPA on Windows clients.

QUESTION 24
Which type of memory module has 240 pins?

A. SODIMM DDR3
B. DDR
C. SODIMM DDR2
D. DDR2

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
DDR2 (and DDR3) used in a personal computer has 240 pins, but remember that DDR2 and DDR3 are not compatible with each other. The original DDR standard has 184 pins. Don't confuse DDR used in a PC with SODIMM DDR used in a laptop. SODIMM DDR3 has 204 pins, not 240. SODIMM DDR2 has 200 pins. Be sure to know the differences between laptop and PC memory, and remember to use the version of DDR that will be compatible with the motherboard.

QUESTION 25
Which type of RAID stripes data across three or more disks along with parity?

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

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
RAID 5 stripes data and parity across three or more disks. It is a fault tolerant method of data storage known as striping w/parity. RAID 0 stripes data only and can be used with two or more disks. Because it does not use parity, it is not fault tolerant. RAID 1 (mirroring) uses two disks only and writes an exact copy of all data to each disk; it is a fault tolerant method. RAID 10 (or RAID 1+0) is a stripe of mirrors. It is two sets of mirrors that are striped, but without parity. This would require a minimum of four disks.

QUESTION 26
What is the greatest number of primary partitions on a single physical hard drive?

A. 1
B. 2
C. 3
D. 4

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
A single physical hard drive can have four primary partitions maximum. If you decide to incorporate an extended partition, you could do so but will be limited to three primary partitions. Extended partitions can have many logical drives, allowing you to add more drive letters to your hard drive scheme.

QUESTION 27
Which of the following types of PCs would need a powerful CPU, high-end video card, and as much RAM as possible?

A. Home theater PC
B. CAD workstation
C. Virtualization workstation
D. Thin client

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
A computer-aided design (CAD) workstation runs powerful software that must render complicated three dimensional graphics. Because of this, it should have a powerful CPU, high-end video card, and as much RAM as possible. Home theater PCs don't necessarily need any of the three items in the question but often have a surround sound audio card, a video card with HDMI output, a TV tuner/video capture card, and a small form factor such as micro-ATX. A virtualization workstation must have as much RAM as possible, and as many CPU cores as possible, but a high-end video card is usually not necessary. A thin client is used for basic applications and therefore doesn't need any of the three. Another type of computer that could benefit from all three requirements would be a gaming PC.

QUESTION 28
You are tasked with upgrading the RAM in a customer's laptop. What type of memory should you select?

A. SODIMM
B. DDR3
C. RIMM
D. SDRAM

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 29
Which of the following is the correct data connector for an internal SATA hard drive?

A. 7-pin
B. 15-pin
C. 34-pin
D. 40-pin

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
SATA hard drives use a 7-pin data connector. For power they use a 15-pin connector. 34-pin ribbon cables are used to transfer data to a floppy drive. 40-pin ribbon cables are used to transfer data to an IDE drive.

QUESTION 30
A frustrated customer calls you about a PC that is not functioning properly. What should you ask the user?

A. "What were you doing when the computer crashed?"
B. "Don't use that computer until it's fixed."
C. "What was the last thing that occurred before the computer stopped functioning properly?"
D. "What was the last thing you did before the computer stopped functioning properly?"

Correct Answer: C
Section: (none)

Explanation

Explanation/Reference:

QUESTION 31
Which type of RAM is used to solve memory errors?

A. ECC
B. Parity
C. Non-parity
D. Non-ECC

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 32
What does Hyper-Threading do?

A. It works only on PCs with more than one core.
B. It enables two independent CPUs to work on the same task simultaneously.
C. It enables the computer operating system to work on multiple tasks simultaneously.
D. It allows a processor to work with two independent computer instructions at once.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 33
Which printing technology uses multilayer carbonless copy paper?

A. Dot matrix
B. Print spooling
C. Inkjet
D. Thermal

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Dot matrix printers can use multilayer carbonless copy paper. This is because the printhead of a dot matrix printer can physically strike through multiple pieces of paper. Nowadays there are also carbonless multipart forms for laser printers as well. Print spooling is when documents are queued on a hard drive while waiting to be sent to a printer. Inkjet and thermal printers do not use multilayer copy paper normally.

QUESTION 34
Which one of the following DDR modules is a DDR3 module?

A. PC1600
B. PC2700
C. PC5300
D. PC8500

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
PC8500 (or more accurately PC3-8500) is the only one listed that can possibly be DDR3. It is also known as DDR3- 1066 and can transfer 8,533 MB/s. PC8500 could also be PC2-8500, a type of DDR2 that also transmits 8,533 MB/s; however the question was asking for a type of DDR3, not DDR2. PC5300 (also known as PC2-5300) is DDR2.
PC2700 and PC1600 are from the original DDR standard.

QUESTION 35
In the electro photographic printing process, which one of the following printers uses a charged corona wire?

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

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
The laser printer uses a charged corona wire in the electrophotographic printing process. In the conditioning stage, a negative charge is applied to the primary corona wire. In the transferring stage a second corona wire is applied a positive charge. The laser printer is the only printer listed that uses a corona wire. Impact printers use force to transfer ink onto paper usually by utilizing a printhead. Inkjet printers store ink in a cartridge and propel the ink onto the paper. Thermal printers produce text and images by heating specially coated thermal paper.

QUESTION 36
Which sockets could be used by a Core i5 CPU? (select two)

A. 1155
B. 775
C. Socket M
D. 1366
E. 1156

Correct Answer: AE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 37
What is the most secure type of wireless communication?

A. WPA2

B. WPA
C. WEP
D. SSID

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Wi-Fi Protected Access version 2 (WPA2) is the most secure of the wireless encryption protocols listed. If you have a choice between WPA2, WPA, and WEP, select WPA2. Avoid the Wireless Equivalent Privacy (WEP) protocol as it is outdated. An SSID is a Secure Set Identifier, which is the name of the wireless network. To aid in securing the network, your first and best solution will be WPA2 encryption, but you could also disable the SSID so that the wireless network cannot be seen through normal methods.

QUESTION 38
Which networking technology has the highest potential throughput?

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

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 39
Which of the following CPU types is manufactured by AMD?

A. Pentium
B. Celeron
C. Core i7
D. Phenom

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 40
You are attempting to set up a laptop that will display through a projector. Nothing is appearing on the projector screen. What should you press to enable viewing on the projector screen?

A. Power button
B. Control+ESC
C. Function keys
D. ALT+Insert

Correct Answer: C

QUESTION 41
Which of the following types of RAM can transfer 12,800 MB/s?

A. DDR3-1600
B. DDR3-1333
C. DDR2-1066
D. DDR2-800

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
DDR3-1600, also known as PC3-12800, can transfer 12,800 MB/s (12.8 GB/s.) Of the answers listed, it can do the most transfers per second, 1.6 billion in total. Two of the answers were DDR2, and two of the answers were DDR3. DDR2-800 has a transfer rate of 6,400 MB/s. DDR2-1066 has a transfer rate of 8,533 MB/s. DDR3-1333 has a transfer rate of 10,667 MB/s.

QUESTION 42
What command would you use to verify the IP address of a gateway on a local computer?

A. PING
B. IPCONFIG
C. NET USE
D. NETSTAT

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
IPCONFIG is the command you should use on a local computer to find out the IP address of a gateway device. When you run an IPCONFIG, the basic information that comes up includes the IP address of the local system, its subnet mask, and the default gateway. PING is used to test connectivity to other computers on the network. NET USE enables the mapping of network drives within the command prompt. NETSTAT shows all current network connections from the local computer to remote computers.

QUESTION 43
Which chip is responsible for maintaining the data flow between a SATA hard drive and the processor?

A. BIOS
B. Northbridge
C. FSB
D. Southbridge

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 44
Which video resolution type should you use to attain a resolution of 1600×1050?

A. WSXGA+
B. UXGA
C. SXGA
D. SVGA

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Widescreen Super eXtended Graphics Array Plus (WSXGA+) is the resolution type you should select if you want to configure a resolution of 1600×1050. Make sure that the video card and monitor you decide on can support WSXGA+. Ultra eXtended Graphics Array (UXGA) has a maximum resolution of 1600×1200; a 4:3 screen ratio as opposed to the widescreen 16:10 ratio of WSXGA+. Super eXtended Graphics Array (SXGA) has a maximum resolution of 1280×1024. Super Video Graphics Array (SVGA) is an older standard that supports only a maximum of 800×600.

QUESTION 45
Which one of the following types of printers allows for the lowest cost per page?

A. Dot matrix
B. Inkjet
C. Laser
D. Thermal

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
The laser printer has the lowest cost per page of the four listed answers. Laser printers and their corresponding toner cartridges are designed to be long-lasting, and print many pages before needing maintenance or replacement. The dot matrix printer requires special perforated paper and needs to have the printing ribbon changed more often than a toner cartridge. The inkjet printer ink cartridges do not last nearly as long as the laser printer's toner cartridge, plus inkjet printers are not known for their durability. Thermal printers can be expensive and require more costly, specially coated paper.

QUESTION 46
What is an example of EMI?

A. Degraded network performance due to network cables and AC power cables in close proximity
B. Degraded network performance due to too many Bluetooth devices being used in close proximity
C. Degraded network performance due to smartphone usage in close proximity
D. Degraded network performance due to poorly punched down network cables

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
One example of EMI is when degraded network performance occurs due to networking cables and AC power

cables in close proximity to each other. The electromagnetic interference from the AC power cables could leak over to the network cables and cause data transmission failures. There are several ways to protect against this including running networking cables within shielded conduit; running the AC power cables within shielded conduit; using shielded twisted-pair (STP) networking cables; using BX-encased AC power cables; or using a combination of any of those. Networking cables should be kept away from any electrical connections, all electrical cables, and electronic devices. Bluetooth devices are meant to be used in close proximity to each other, especially class II and class III devices; they do not use enough electricity to create EMI within the network. The same holds true for smartphones. Poorly punched down network cables could cause intermittent data transmission issues and degraded network performance, but the cause of the degraded network performance in that case is the improper punch downs themselves, not EMI.

QUESTION 47
You need to retrieve e-mail on a laptop using Microsoft Outlook. Which protocol should you use to retrieve the e-mail?

A. SMTP
B. FTP
C. POP3
D. PING

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Post Office Protocol version 3 (POP3) is used within Microsoft Outlook to retrieve e-mail. It is the most common e- mail retrieving protocol. It is also possible to use IMAP for the retrieval of e-mail, and HTTP if you have a web- based e-mail service. The Simple Mail Transfer Protocol (SMTP) is used to send mail. The File Transfer Protocol (FTP) is used to send and receive files to and from a remote computer. PING is a command-line function used to test whether another computer on the network can be communicated with.

QUESTION 48
You are required by a customer to configure energy-saving measures on a laptop for when it switches to battery power. What utility should you configure?

A. MSCONFIG
B. DXDIAG
C. BIOS
D. ACPI

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
To configure energy-saving measures on a laptop, you should configure the Advanced Configuration and Power Interface (ACPI). Most of today's operating systems are ACPI-compliant, so you can configure energy-saving measures, and battery power options, from directly within the operating system. The older Advanced Power Management (APM) system required you to access the BIOS directly. MSCONFIG is a Windows utility that is used to enable and disable programs and services, and modify the way the system boots. DXDIAG is a Windows utility that enables you to analyze and configure your video card and other video devices.

QUESTION 49
Which of the following are digital, audio only formats? (Select the two best answers.)

A. WMA
B. AVI

C. WPA

D. AAC

E. MOV

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:
Of the listed answers, only Windows Media Audio (WMA) and Advanced Audio Coding (AAC) are digital, audio-only formats. WMA is used primarily by Microsoft, whereas AAC is used mostly by Apple. Another example of a digital, audio-only format is the MP3, which is used more openly by various operating systems and programs. Audio Video Interleaved (AVI) as the name implies can contain video and audio. The same is true for .MOV, part of the QuickTime File Format. WPA stands for Wi-Fi Protected Access and deals with wireless networking encryption.

QUESTION 50
Which of the following would you install into an AGP slot on a motherboard?

A. Memory

B. Video card

C. CPU

D. Soundcard

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 51
You want to add a network printer in Windows 7. Which of the following ports is the best solution?

A. TCP/IP

B. LPT1

C. USB

D. COM1

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
If you want to add a network printer in Windows 7, you should create a TCP/IP port connection. This is done in Devices and Printers by right-clicking the printer, selecting Printer Properties, selecting the Ports tab, and clicking Add Port. From there you select Standard TCP/IP Port. The TCP/IP port enables computers to connect to remote printers on the network that have an IP address. All the other answers are ports on a local computer that would allow connectivity only to the local computer. LPT1 is an older 25-pin parallel port used for printers. USB enables localized printers and could possibly enable printers on a network via a print server w/USB port. But in an organization, and even in SOHO, networking the best solution is the TCP/IP solution. COM1 is not normally used with printers, but instead for devices such as dial-up modems.

QUESTION 52
Which connector is most used with POTS lines?

A. RJ45
B. RJ11
C. BNC
D. SC

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 53
You need to test a newly installed printer from Windows. Where is the location of the Print Test Page button?

A. In the Print Spooler service
B. In Administrative Tools
C. On the General tab of the printer's Properties page
D. On the Ports tab

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
The Print Test Page button is located on the General tab of any printer's Properties page. It is easily accessible simply by right-clicking the printer and selecting Properties. Always print a test page after you install a printer to make sure it is printing properly! The Print Spooler service is used on a computer to queue multiple documents for sending to the printer; in the Services section of Computer Management, it can be started and stopped and enabled or disabled. Administrative Tools gives access to such consoles as the Computer Management window and Print Management. The Ports tab is where you would make the logical port connection for the printer.

QUESTION 54
You are required to perform preventative maintenance on a laser printer. What should be replaced? (Select the three best answers.)

A. Toner
B. Fuser
C. Pickup rollers
D. Paper
E. Paper trays
F. Transfer bar

Correct Answer: BCF
Section: (none)
Explanation

Explanation/Reference:
The fuser, pickup rollers, and transfer bar should be replaced. These are normally contained within a printer maintenance kit.

QUESTION 55
What is the purpose of a power inverter?

A. Backup source of power
B. Converts AC to DC
C. Provides regulated AC voltage
D. Protects against surges

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
A power inverter is used to convert alternating current (AC) power to direct current (DC) power. Of the many examples, devices that use an inverter include UPSs, air conditioning units, and switched power supplies in PCs. The PC power supply actually makes use of a transformer (which essentially steps down power), a rectifier, and an inverter, working together to convert AC to DC. An example of a backup source of power would be a UPS or a gas generator. A device that provides regulated AC voltage would be a line conditioner (or UPS). A device that protects against surges would be--you guessed it: a surge protector (or surge suppressor); although UPSs can protect against surges as well.

QUESTION 56
Which of the following is affected the least by EMI?

A. Twisted pair
B. Coaxial
C. STP
D. Fiber

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 57
What is the most common form factor used by HTPCs?

A. AT
B. ATX
C. microATX
D. Pico-ITX

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 58
Which of the following does not have to do with virtualization?

A. VMware
B. Hypervisor
C. Virtual PC
D. CAD/CAM

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
The only answer that does not have anything to do with virtualization is CAD/CAM, short for computer-aided design/computer-aided manufacturing. CAD/CAM computers must run on their own individual physical platform because they require so many resources. All the other answers deal with virtualization: the creation of a virtual hardware platform, an OS, a storage platform, or a network resource. VMware and Virtual PC are commercial virtualization applications that allow you to run virtual operating systems within your OS, or directly within a bare metal hypervisor. The hypervisor is the manager that houses guest operating systems within virtualization software. It can be Type I (bare-metal), which runs directly on top of the PCs hardware; or Type II (hosted), which runs within the current OS.

QUESTION 59
One of the computers in your warehouse often requires the replacement of power supplies, CPUs, and optical drives. What tool can help to prevent these types of hardware faults?

A. Compressed air
B. Antistatic wrist straps
C. Rescue disk
D. Multimeter

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 60
Which solution would provide the best cooling to the CPU?

A. Heat sink
B. Liquid cooling
C. CPU fan
D. Case fan

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 61
Which of the following best describes a quad-core processor?

A. PC with four unique processors
B. CPU with four cache memory locations
C. PC with two dual-core CPUs
D. CPU package with four CPU cores

Correct Answer: D
Section: (none)

Explanation

Explanation/Reference:

QUESTION 62
A customer has asked you to set up a network printer that will be connected to a print server. The customer would like the default configuration set to duplex printing for all users. Which of following will allow you to configure this?

A. Configure the settings through the printer's web interface.
B. Configure the settings from the users' printer properties.
C. Configure the settings through the computer's Control Panel.
D. Configure the printer from the users' page setup menu.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
You should configure the settings through the printer's web interface. The printer should either come with software that can be installed, or it can be accessed directly through a web browser. Either way, you would not use the operating system's printer properties window. After you access the web interface, you can configure whatever type of printing the users might need including duplex printing. This question has little to do with the users, the user's computers, or Windows. You might need to configure the print server as well.

QUESTION 63
You are required to install an operating system to a remote PC without the use of any physical media such as CD-ROMs. What should you use to complete the task?

A. TELNET
B. FTP
C. PXE
D. NET USE

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
You should use the Preboot Execution Environment (PXE) to boot the computer from the network and locate a server and an image on the network to install from. Of course, the network adapter must be PXE-compatible. This is one way of installing Windows or other operating systems over the network. TELNET is a deprecated protocol used to remotely control other systems from the command line. FTP is a protocol that enables the transfer of files between remote computers. NET USE is the command you would use to map a network drive.

QUESTION 64
Which of these is a feature of a docking station?

A. Provides built-in power surge protection
B. Provides additional connectivity
C. Expands the laptop memory
D. Provides a second monitor

Correct Answer: B
Section: (none)

Explanation

Explanation/Reference:

QUESTION 65
What type of adapter card is used to connect external hard disk drives?

A. eSATA
B. PCIe x16
C. PATA
D. Network

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 66
Which of the following is a valid IPv6 address?

A. FE08::279B::91A1/122
B. 9031:8611::5468/64
C. ABC0::0011/130
D. FE0G:8B1D::0001/64

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
9031:8611::5468/64 is the only valid IPv6 address listed. The /64 tells you it uses stateless address auto-configuration (SLAAC). FE08::279B::91A1/122 is incorrect because there are two double colons; IPv6 addresses can have only one double colon within the address. Also, the /122 subnet is incorrect. Common subnets include /64, /56, and /48. ABC0::0011/130 is incorrect because of the subnet /130. FE0G:8B1D::0001/64 is incorrect because there is a G in the number, hexadecimal numbers are 09 and AF only.

QUESTION 67
Which of the following optical media has the largest storage space?

A. Hard drive
B. DVD-ROM
C. Blu-Ray
D. DVD-18

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 68

Which one of the following is a valid APIPA address?

A. 192.168.1.1
B. 10.1.1.1
C. 172.16.1.1
D. 169.254.1.1

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 69
You've just set up 10 computers in a small LAN. They're all the same make and model that will remotely turn on using Wake-on-LAN (WOL). Eight computers wake up as they are supposed to, but two systems do not wake correctly. What is the most likely problem with the two systems?

A. The network adapter settings in Windows are incorrect.
B. WOL is not enabled in the BIOS.

C. The two computers do not support WOL functionality.
D. The two computers' gateway IP address is configured incorrectly.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
The most likely cause of this problem is that WOL is not enabled in the BIOS. Because it is the BIOS, the setting needs to be configured individually on each computer. Keep in mind that the computers' BIOS and network adapter must support WOL, but in this scenario all the computers are the same make and model, so they should all have the same functionality. They just need to all be configured the same way. Network adapter settings in Windows could possibly be the culprit for waking issues, for example, when you deal with magic packets, but WOL functionality usually resides in the BIOS. Even if the computers had an incorrectly configured gateway IP address, they should still be woken up by other computers on the LAN. However, they will have problems accessing the Internet or other networks outside of the LAN.

QUESTION 70
One of your customers tells you of some trouble accessing the company wireless network with a laptop. The person could access the network yesterday before they went on the road with a laptop. What is most likely cause of the problem?

A. The laptop battery needs to be recharged.
B. The wireless network is down.
C. The laptop's wireless antenna is disconnected.
D. The laptop's wireless switch is off.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
The most likely cause is that the laptop's wireless switch is off. It's common for a user to turn off wireless connectivity when the person leaves the office because it is more secure and saves power. This switch (or button) is usually located directly above the keyboard and is often accompanied by a LED indicator. If the battery needs to be recharged, the laptop should still work normally as long as it is plugged into an AC outlet; if not, then the system would not boot. It is unlikely that the wireless network would be down, but if you find that the laptop wireless switch is on, and everything appears to be configured properly, you might want to check the wireless network itself, especially if other people have trouble accessing it. The laptop's wireless antenna is usually embedded within a card inside the laptop and cannot easily be disconnected. In some cases the laptop may use an external wireless adapter, which might be wholly disconnected, or the actual antenna can become unscrewed, but again this is rare.

QUESTION 71
Which wireless standards operate at a maximum of 54 Mbps? (Select the two best answers.)

A. 802.11a
B. 802.11b
C. 802.11g
D. 802.11n
E. 802.11x

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:
The IEEE wireless standard 802.11a and 802.11g operate at a maximum of 54 Mbps but on different frequencies. 802.11b has a maximum of 11 Mbps; 802.11n has a maximum of approximately 600 Mbps; and 802.11x is not an IEEE wireless standard.

QUESTION 72
Which of the following storage media types has no moving parts?

A. Tape drive
B. PATA magnetic hard drive
C. DVD-ROM
D. Flash

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 73
Why do CRT monitors have a degauss feature?

A. To reset the monitor to factory default settings
B. To automatically adjust the display settings for optimal performance
C. To increase video monitor brightness
D. To remove magnetic fields

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
The degauss feature within a CRT monitor's on-screen display (OSD) menu has the purpose to remove stray magnetic fields. Most monitors have a reset option within the OSD that can restore the monitor to its factory default settings, but this does not degauss the monitor. Some monitors have different preset modes that can be selected from the OSD, such as normal and optimal. The OSD also has options to increase or decrease monitor brightness.

QUESTION 74
What is the data transfer rate of USB 3.0?

A. 480 Kbps
B. 12 Mbps
C. 480 Mbps
D. 5.0 Gbps

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 75
Based on the following information, which address is most likely the DNS server?

A. 192.168.1.115
B. 255.255.255.0
C. 192.168.1.1
D. 151.198.0.38

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 76
Which of the following ports is commonly used for RS-232 connections?

A. USB
B. DB-9
C. Parallel
D. SCSI

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
RS-232 connections commonly use the serial 9-pin DB-9 port (which is more accurately referred to as a DE-9

port.) This port is uncommon on today's PCs, but there are many organizations that still utilize devices that require an RS- 232 connection to be programmed and tested; so there is a good chance that you will still see this port in action in the field. USB is a common replacement for devices that previously used RS-232 connections and PS/2 connections, but it utilizes a quite different 4-pin port. Parallel connections (for example LPT1) are rarer than RS-232 connections and were historically used mainly with printers. SCSI connections are still in use today, but there are several different types of SCSI ports. RS-232 and USB connections are both serial in data transfer (one bit at a time) whereas LPT1 and most SCSI connections send data in parallel (8 bits at a time or multiples of 8).

QUESTION 77
What is the best way for a technician to prevent ESD when installing RAM?

A. Wear a grounded wristband.
B. Touch grounded metal before making contact with components.
C. Make sure the AC plug has a ground post.
D. Wear rubber-soled shoes.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 78
One of the users in your organization complains that their fingers are sticky, green, and a bit irritated after using a mouse. You find out that the mouse was cleaned but with an unknown solution. Where can you go to find out information about what solution was used on the mouse?

A. Procedures manual
B. Fire department
C. Facilities department of the organization
D. MSDS

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 79
Which of the following protocols does not depend on an acknowledgment of receipt from the sender?

A. HTTP
B. UDP
C. TCP
D. IP

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
The User Datagram Protocol (UDP) is a connectionless protocol. Unlike the Transmission Control Protocol (TCP) it does not need acknowledgment for each packet sent. It is used especially in the streaming of media. In

this scenario, by the time an acknowledgment (ACK) receipt got back to the sender, it would be too late to re-send the packet because many other packets have already been streamed. UDP streaming sessions expect a percentage of bounced, dropped, and otherwise undeliverable packets as part of the technology. HTTP stands for Hypertext Transfer Protocol, used to display website information within a browser program. IP is the Internet Protocol, the second half of TCP/IP that deals primarily with IP addresses and packets.

QUESTION 80
Which of the following ports is used by default by RDP?

A. 53
B. 1723
C. 3389
D. 8080

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
The Remote Desktop Protocol (RDP) is a Microsoft program that enables a person to remotely control another system; it uses port 3389 by default. Port 53 is used by the Domain Naming System (DNS). Port 1723 is used by the Point-to-Point Tunneling Protocol (PPTP). Port 8080 is an alternative for HTTP, instead of the standard port 80.

QUESTION 81
Which of these connector types are typically used on LCD displays? (Select the two best answers.)

A. DVI
B. XGA
C. HDMI
D. USB
E. VGA

Correct Answer: AE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 82
Which of the following is the fastest cache in a computer?

A. L1
B. L2
C. L3
D. L4

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 83

You just arrived at a user's desk and are about to start troubleshooting a problem. The user's desk is covered with papers, and you can see that some of these papers are probably confidential in nature. What should you do first ?

A. Work around the papers and resolve the problem.
B. Refuse to work until the user has cleared the desk.
C. Put the confidential papers in a neat pile.
D. Ask the user to clear the desk of confidential papers.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 84
What type of printer uses a fuser to print documents?

A. Inkjet
B. Dot matrix
C. Laser
D. Thermal

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 85
Of the following, which is a limitation of terrestrial microwave broadband connections?

A. They require line of sight.
B. They cannot be used in remote locations.
C. It is a receive-only transmission.
D. The speed is less than dial-up.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Terrestrial microwave broadband connections require line of sight to communicate. Say a business owns two buildings across the street from each other and want to connect the buildings' networks without involving a telecommunications company and any wires. They could put parabolic antennae (similar to satellite dishes) on each building, and as long as they are facing each other, the two buildings' networks can communicate. They can be used in remote locations, but it will most likely be rare; however, this is not a limitation of the technology. Microwave broadband connections can transmit or receive information. The speed will be far greater than dial-up, but less than fiber-optic connections, and some cable Internet connections.

QUESTION 86
Which one of the following commands can obtain an IP address from a DHCP server?

A. PING t

B. NSLOOKUP

C. IPCONFIG /RENEW

D. MSCONFIG

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
IPCONFIG /RENEW is used on a Windows OS to obtain an IP address from a DHCP server. IPCONFIG /
RELEASE can be used to temporarily remove the IP address from the Windows OS. The two are often used to
troubleshoot a client attempting to get an IP address from a DHCP server. PING t tests whether another
computer on the network is alive; the t switch means that the ping is continuous and doesn't end until you press
CTRL+C. NSLOOKUP can find the name servers including DNS servers and can tell you the IP addresses of
corresponding domain names among other things. MSCONFIG is the Microsoft System Configuration tool that
enables you to change boot settings and enable/disable applications at startup.

QUESTION 87
Which of the following is the fastest expansion bus on a laptop?

A. PCMCIA

B. PC Card Type III

C. Infrared

D. ExpressCard

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Of the listed answers, the fastest expansion bus on a laptop is ExpressCard. ExpressCard can make use of
PCI Express mode, which sends information at 2.5 Gbps (250 MB/s). Compare this to a PC Card Type III
running in CardBus mode at 133 MB/s. PCMCIA is the organization that develops the standards for PC Card
technology; though the two terms are often used interchangeably. Infrared is far slower than ExpressCard.

QUESTION 88
You need to transfer data from a laptop's older IDE drive to a new SATA drive. What pin configurations would
you need on the adapter that will be connected between both drives?

A. 40-pin and 15-pin

B. 44-pin and 7-pin

C. 40-pin and 7-pin

D. 44-pin and 15-pin

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
If you transfer data between an older laptop IDE drive and a newer laptop SATA drive, you need an adapter that
is 44-pin IDE on one end and 7-pin SATA on the other. Remember that laptops' hard drives have a slightly
different connector than the standard PC IDE drive. A PC's IDE drive will be 40-pin. SATA power connectors
are 15-pin, but the data connector is 7-pin. This does not take into account all power requirements for both
drives. Usually an adapter kit will be used for this type of data transfer.

QUESTION 89

Which of the following can increase the efficiency in which programs execute?

A. Defrag
B. Disk Cleanup
C. Task Manager
D. Task Scheduler

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
The Disk Defragmenter in Windows can take fragmented sections of a hard drive and rearrange them in a contiguous fashion, allowing programs to execute faster, and allowing the hard drive to work more efficiently. Disk Cleanup removes temporary files. Task Manager enables you to stop processes and applications and view the performance of the computer. Task Scheduler enables you to run particular programs at specific times.

QUESTION 90
What is the recommended method to clean a laptop's screen?

A. Paper towel and water
B. Dry lint-free cloth
C. Water with mild detergent
D. Rubbing alcohol and a tissue

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 91
One of your technicians is on a service call and is dealing with a furious customer who has been shouting loudly. The technician tries but cannot calm the customer down. What should the technician do next?

A. Let the customer continue to shout; sooner or later the customer will get tired and calm down.
B. Call the supervisor and complain.
C. Leave the customer site, and document the incident.
D. Shout back at the customer and remain in control of the situation.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 92
What tools would you use to test an AC outlet? (Select the two best answers.)

A. Multimeter
B. Tweezers
C. PSU tester
D. Receptacle tester

E. POST tester

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:
To test an AC outlet, you should use either a receptacle tester or a multimeter. Plastic tweezers are an excellent tool to use if you drop a screw within a computer; however, never stick tweezers in an AC outlet. A PSU tester is used to test power supplies. POST card testers are used to test computers that will not boot properly, or have nothing on the display when they boot.

QUESTION 93
You have been tasked with running a network extension to the warehouse that is 50 meters (164 feet) away. The proposed path will take the network extension near several fluorescent light fixtures and a large electric motor. What type of cable would be best for this environment?

A. Unshielded twisted-pair
B. Coaxial
C. Fiber-optic
D. Shielded twisted-pair

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 94
What protocol uses port 443?

A. SMTP
B. FTP
C. RDP
D. HTTPS

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Hypertext Transfer Protocol Secure (HTTPS) uses port 443 by default. An example of this is when you open your web browser and log in to your bank. SMTP, which stands for Simple Mail Transfer Protocol, uses port 25 by default. FTP, which stands for File Transfer Protocol, uses port 21 by default. RDP, which stands for Remote Desktop Protocol, uses port 3389 by default.

QUESTION 95
What happens in the writing stage of the laser printing process?

A. A rubber blade removes excess toner from the drum.
B. A negative charge is applied to the drum by the primary corona wire.
C. The laser is activated and exposes the drum.
D. The surface of the drum is applied with negatively charged toner.
E. The toner is transferred to paper as the drum rolls over it.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
During the writing stage of the laser printing process, the laser is activated, and it exposes the drum as the drum spins. This dissipates the negative charge toward the center of the drum, and the written areas of the drum will have a lesser negative charge. This is also known as the exposing stage. A rubber blade removes excess toner from the drum during the cleaning stage. A negative charge is applied to the drum by the primary corona wire during the conditioning stage, which is also known as the charging stage. The surface of the drum is applied with negatively charged toner during the developing stage. The toner is transferred to paper as the drum rolls over it during the transferring stage. Though not listed in the answers, finally, the toner is fused to the paper and pressurized during the fusing stage, and the paper exits the printer.

QUESTION 96
You are working on a server that has several hard drives connected to a SCSI card. The card does not appear to be functioning at top efficiency. You determine that the card requires an update to its embedded code. What is this referred to as? (Select the best answer.)

A. Operating system
B. Driver files
C. Firmware
D. Shareware

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
An update to a card's embedded code is known as a firmware update. Firmware is somewhere between hardware and software. It is not an OS, and it is not driver files that are loaded within an OS. More accurately, it is code that has been written that will be installed to a ROM chip in an adapter card, or in a motherboard. SCSI cards, just like motherboards, have their own BIOS. It can be accessed when the system first boots. Shareware is free software that can be downloaded from the Internet and shared with other users without any licensing or payment required. Although firmware is usually free as well, it is for specific devices, whereas the term shareware applies to software, such as applications and games, which can be downloaded and used by anyone.

QUESTION 97
Which of the following memory types can fit in a 168-pin DIMM slot?

A. SDRAM
B. DDR
C. DDR2
D. SODIMM

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
The older original SDRAM is 168-pin. DDR is 184-pin. DDR2 is 240-pin. SODIMMs do not fit in a DIMM slot; they must be installed into a laptop's SODIMM slot and have 200 pins.

QUESTION 98
In which of the following is a CR 2032 CMOS battery usually found?

A. Portable printers
B. Smartphones
C. Bluetooth mice
D. Desktops

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 99
What kind of adapter card can use a RJ45 connector?

A. Sound
B. NIC
C. Video
D. Dial-up modem

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 100
What should you not plug a laser printer into?

A. UPS
B. Power strip
C. Surge suppressor
D. Line conditioner

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 101
Of the following lists, what is the best group of configurations for a Home Theater PC, a Thick Client, and a Gaming PC?

A. HOME THEATER PC: Dual core CPU, 2 GB RAM, 250 watt HTPC, TV tuner, 250 GB SSD. THICK CLIENT: Quad core CPU, 8 GB RAM, 800 watt Full ATX, Liquid Cooling, 250 GB SSD. GAMING PC: Dual core CPU, 4 GB RAM, 400 watt ATX, Windows 7 32-bit, 1 TB SATA
B. HOME THEATER PC: Dual core CPU, 6 GB RAM, 250 watt HTPC, TV tuner, 250 GB SSD. THICK CLIENT: Dual core CPU, 2 GB RAM, 250 watt ATX, Windows 7 32-bit, 250 GB SATA. GAMING PC Quad core CPU, 8 GB RAM, 800 watt Full ATX, Liquid Cooling, 1 TB SATA
C. Home THEATER PC: Single core CPU, 2 GB RAM, 250 watt HTPC, TV tuner, 250 GB SATA. THICK CLIENT: Hex core CPU, 16 GB RAM, 800 watt Full ATX, Video Capture Card, 250 GB SSD. GAMING PC: Dual core CPU, 16 GB RAM, 800 watt mini-ATX, Windows Vista 32-bit, 3 TB SATA

D. HOME THEATER PC: Quad core CPU, 16 GB RAM, 1000 watt HTPC, virtualization software, 1 TB SATA.THICK CLIENT: Dual core CPU, 2 GB RAM, 250 watt Full ATX, dual NICs, no hard drive. GAMING PC:Pentium IV CPU, 8 GB RAM, 400 watt ATX, specialized audio card, RAID array

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation: The best answer includes a gaming rig that has the fastest CPU and the most RAM. The gaming PC would also use the highest power PSU, while the HTPC would use an HTPC-type PSU, most likely micro-ATX or mini-ITX. The HTPC special requirement would be a TV tuner (and probably an HDMI output). The thick client special requirement would be Windows 7 32-bit, if you can call that special. The gaming PC special requirement would be liquid cooling or other specialized cooling solution. Other important notes here include the usage of a quiet SSD drive by the HTPC, and the fact that the HTPC should have a decent amount of RAM. The thick client is simply a basic PC used for things such as access to the Internet, and Microsoft Office usage.

QUESTION 102
Which scenario can be described as memory modules divided into two banks, only one of which can be seen by the computer at any time?

A. Single-sided
B. Double-sided
C. ECC
D. Non-ECC

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation: Double-sided memory modules have their chips divided into two "sides," known as banks. Only one side can be seen by the computer at any time. Single-sided memory modules have a single "bank" of memory chips, and the computer's memory controller can access all of the chips at once, unlike double-sided memory. ECC stands for Error Correction Code, a type of RAM that can detect and correct errors, protect against random inconsistencies in data transfer, and in general is meant to improve reliability. It is used commonly in servers, but not in PCs. Non- ECC cannot detect or correct errors, but is by far the more common type of RAM module in PCs and laptops.

QUESTION 103
Which of the following connector types would you use with a SCSI device? (Select the three best answers.)

A. 68-PIN
B. 25-PIN
C. BNC
D. DIN-6
E. Composite
F. 50-pin

Correct Answer: ABF
Section: (none)
Explanation

Explanation/Reference:
SCSI devices will either use a 68-pin connection (common), a 50-pin connection, or a 25-pin connection (less common). BNC is an older type of networking connector used in coaxial, thinnet, and 10BASE2 networks. It has

other applications, such as in video, but it is unlikely that you will see this connector. DIN-6 (also sometimes written as Din-6) is a type of connector used by keyboards and video. For example, the older PS/2 keyboard and mouse connectors used a mini-DIN 6-pinconnector. Composite video signals can be obtained by using video cables with either RCA connectors or BNC connectors.

QUESTION 104
Which protocol is relied upon most by Active Directory? (Select the best answer.)

A. SMB
B. HTTP
C. LDAP
D. WINS

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Of the listed answers, the Lightweight Directory Access Protocol (LDAP) is relied upon most by Active Directory. LDAP deals with directory lists such as the users within a Microsoft Active Directory domain, or the users' email addresses listed within a Microsoft Exchange server. Server Message Block (SMB) is a protocol that allows shared access to files; it is important to any computer running Windows, not just computers that are in charge of, or connect to, a Microsoft Active Directory domain. SMB is also known as the Common Internet File System (CIFS). HTTP stands for Hypertext Transfer Protocol, used to transfer data from a web server to a client computer's web browser. WINS stands for Windows Internet Naming Service, a name resolution technology that converts NetBIOS names to IP addresses. It is somewhat deprecated, and rarely used; its successor is the Domain Name System (DNS)

QUESTION 105
What voltage does an orange pin indicate?

A. +12 V
B. +5 V
C. –5 V
D. +3.3 V

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Orange signifies +3.3 volts. Red indicates +5 volts, and yellow is +12 volts; –5 volts would be the white optional wire.

QUESTION 106
Which motherboard form factor measures 12 inches × 9.6 inches?

A. microATX
B. BTX
C. ATX
D. ITX

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
ATX boards measure 12 inches × 9.6 inches.

QUESTION 107
 Which expansion bus uses lanes to transfer data?

A. PCI
B. PCI-X
C. PCIe
D. AGP

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
PCIe (PCI Express) uses serial lanes to send and receive data.

QUESTION 108
Which does a PCIe x16 slot connect to? (Select the two best answers.)

A. RAM
B. Southbridge
C. USB 3.0 controller
D. Northbridge
E. Processor

Correct Answer: DE
Section: (none)
Explanation

Explanation/Reference:
PCIe x16 connects to the northbridge on AMD systems and older Intel systems. On newer Intel systems it connects to the processor.

QUESTION 109
Which of these are serial technologies? (Select all that apply.)

A. USB
B. IEEE 1394
C. PCIe
D. PCI

Correct Answer: ABC
Section: (none)
Explanation

Explanation/Reference:
The only one listed that is not a serial technology is PCI, which is a 32-bit parallel technology.

QUESTION 110
Which component supplies power to the CMOS when the computer is off?

A. Lithium battery
B. POST

C. Power supply
D. BIOS

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
The lithium battery supplies power to the CMOS when the computer is off. This is because the CMOS is volatile and

QUESTION 111
To implement a secure boot process, which device should be listed first in the Boot Device Priority screen?

A. Floppy drive
B. CD-ROM
C. USB
D. Hard drive

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
To ensure that other users cannot boot the computer from removable media, set the first device in the Boot Device Priority screen to hard drive.

QUESTION 112
What is the term for how the BIOS readies the computer for and initiates the booting of the operating system?

A. Bootlegging
B. Booting
C. Bootstrapping
D. POST

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Bootstrapping is accomplished by the BIOS. It is defined as one system readying the computer and leading to another larger system.

QUESTION 113
Which of the following is used by the CPU to communicate with system memory?

A. Southbridge
B. BIOS
C. Northbridge
D. PCIe

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
The northbridge is used by the CPU to communicate with system memory (RAM). Remember that on newer Intel motherboards, the northbridge functionality is built into the CPU.

QUESTION 114
Before installing a motherboard, what should you do? (Select the best answer.)

A. Install the processor.
B. Verify that it is compatible with the case.
C. Employ ESD prevention methods.
D. Test the motherboard with a multimeter.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Always employ ESD prevention methods before working with any components inside the computer. Although A and B are correct, they are not the best answers.

QUESTION 115
Which of these is the speed of the CPU?

A. External clock speed
B. DMI transfer rate
C. Internal clock speed
D. Bus speed

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
The internal clock speed is the speed of the CPU, for example 2.4 GHz. The external clock speed is the speed of the FSB (not used in newer motherboards). The DMI data transfer rate is the amount of data transmitted between the CPU and chipset, for example 20 Gbps. The bus speed (base clock) is what the internal clock speed is based off. An example of a base clock system bus speed would be 100 MHz.

QUESTION 116
Which of the following sockets work with an i7 processor?

A. AM2
B. 1366
C. 940
D. 775

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Intel's LGA 1366 socket can house a Core i7 CPU. (The 1155 and 1156 could as well.) LGA 775 is an older Intel socket. AM2 and 940 are AMD sockets.

QUESTION 117
Which is the fastest cache memory?

A. L2
B. L3
C. HTTP
D. L1

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
L1 is the fastest cache memory and is located within the CPU's core.

QUESTION 118
What does Hyper-Threading do?

A. It gives you multiple cores within the CPU.
B. It enables for four simultaneous threads to be processed by one CPU core.
C. It enables for two simultaneous threads to be processed by one CPU core.
D. It is a high-speed connection from the CPU to RAM.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Hyper-Threading allows for an operating system to send two simultaneous threads to be processed by a single CPU core. The OS views the CPU core as two virtual processors. Multiple cores would infer multicore technology that means that there are two physical processing cores within the CPU package. The high-speed connection used by AMD from the CPU to RAM is HyperTransport.

QUESTION 119
What seals the tiny gaps between the CPU cap and the heat sink?

A. Thermal jelly
B. Peanut butter and jelly
C. 3-in-1 house oil
D. Thermal compound

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Thermal compound is used to seal the small gaps between the CPU and heat sink. Did I ever tell you about the time I found grape jelly inside a customer's computer?

QUESTION 120
What is the amount of power required to cool the computer?
○ A. FSB
○ B. TDP
○ C. MMX
○ D. TDK

A.

B.

C.

D.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:
TDP (Thermal design point) is the amount of power required to cool a computer and is linked directly to the amount of heat a CPU creates.

QUESTION 121
Which kind of socket incorporates "lands" to ensure connectivity to a CPU?

A. PGA
B. Chipset
C. LGA
D. Copper

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
LGA (Land Grid Array) is the type of socket that uses "lands" to connect the socket to the CPU. PGA sockets have pinholes that make for connectivity to the CPU's copper pins.

QUESTION 122
Which of these is a difference between clock speed and bus speed?

A. The clock speed is the external speed of the CPU; it is the same as the bus speed.
B. The clock speed matches the RAM speed.
C. The clock speed is the internal speed of the CPU.
D. The bus speed is the speed of the CPU.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
The clock speed (also known as clock rate) is the internal speed of the CPU, for example the Core i5-2400 runs at 3.1 GHz by default.

QUESTION 123
When deciding on a CPU for use with a specific motherboard, what does it need to be compatible with?

A. Case
B. Socket
C. Wattage range
D. PCI slots

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
The CPU needs to be compatible with the socket of the motherboard. The case doesn't actually make much of a difference when it comes to the CPU. (Just make sure it's large enough!) There is no wattage range, but you should be concerned with the voltage range of the CPU, and PCI slots don't actually play into this at all because there is no direct connectivity between the two.

QUESTION 124
Which technology divides the RAM slots into colors?

A. ECC
B. Parity
C. Double-sided
D. Dual channel

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Dual-channel memory configurations have two RAM slots of a particular color, each one of which is placed in a different channel; these are collectively known as banks.

QUESTION 125
Which of these is the delay it takes for a memory module to start sending data to the memory controller?

A. DDR
B. Propagation
C. Latency
D. FSB

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Latency is the delay between the memory module and the memory controller, usually rated as CL and a number.

QUESTION 126
What is the transfer rate of DDR2-800?

A. 6,400 MB/s
B. 8,533 MB/s
C. 5,333 MB/s
D. 800 MHz

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
DDR2-800 can transfer 6,400 MB/s; DDR2-1066 transfers 8,533 MB/s. DDR2-667 transfers 5,333 MB/s. MHz is sometimes used to refer to the amount of megatransfers per second; in this case, the RAM can do 800 MT/s.

QUESTION 127
Which of these would you find internal to the CPU?

A. DRAM
B. DIMM
C. SDRAM
D. SRAM

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
One function of SRAM is to act as CPU cache. L1 cache would be internal to the CPU or in the core. L2 would be on-die.

QUESTION 128
What is the transfer rate of DDR3-1600?

A. 6,400 MB/s
B. 12,800 MB/s
C. 14,933 MB/s
D. 17,066 MB/s

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
The transfer rate of DDR3-1600 is 12,800 MB/s. DDR3-800 is 6,400 MB/s. DDR3-1866 is 14,933 MB/s. DDR3-2133 is 17,066 MB/s.

QUESTION 129
Which chip designates where data will be stored in RAM?

A. Southbridge
B. Northbridge
C. CPU
D. DRAM

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
The northbridge, specifically the memory controller chip, is in charge of storing and retrieving data to and from RAM. Even though new systems use a memory controller that is part of the CPU, it is not the CPU that is in charge of this. The CPU knows what bytes it wants but not the location of those bytes.

QUESTION 130
How many pins are on a DDR3 memory module?

A. 168
B. 184
C. 240
D. 200

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
DDR3 is a 240-pin architecture. 168-pin is the original SDRAM, 184-pin is the first version of DDR (DDR1), and you can find 200-pin architectures in laptops; they are known as SODIMMs.

QUESTION 131
Where can you view how much RAM you have in the computer? (Select all that apply.)

A. Task Manager
B. My Computer
C. System Properties
D. BIOS

Correct Answer: ACD
Section: (none)
Explanation

Explanation/Reference:
The BIOS displays what type of RAM you have and the amount. Windows has several locations in which you can discern how much RAM there is, including the Task Manager, System Properties, and System Information.

QUESTION 132
How should you hold RAM when installing it?
○ A. By the edges
○ B. By the front and back
○ C. With tweezers
○ D. With an Integrated Circuit (IC) puller

A.
B.
C.
D.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:
Hold RAM by the edges to avoid contact with the pins, chips, and circuitry.

QUESTION 133
What tool would you use to test the amount of voltage that comes from an AC outlet?
○ A. Multimeter
○ B. Voltage detector
○ C. Receptacle tester
○ D. Impedance tester

A.
B.
C.
D.

Correct Answer:

Explanation/Reference:
The multimeter is the only testing tool that can display voltage numerically.

QUESTION 134
Which of the following is a representation of potential energy?

A. Wattage
B. Voltage
C. Impedance
D. Amperage

Correct Answer: B

Explanation/Reference:
Voltage is a representation of potential energy; an analogy for voltage would be water pressure in a pipe.

QUESTION 135
Which wire when tested should display zero volts on a multimeter?

A. Neutral
B. Hot
C. Ground
D. Red

Correct Answer: C

Explanation/Reference:
When testing the ground wire with a multimeter, it should display a reading of zero volts.

QUESTION 136
Which device should you use to protect against power outages?

A. Multimeter
B. UPS
C. FedEx
D. Surge protector

Correct Answer: B

Explanation/Reference:
The UPS is the only item listed that protects the computer from power outages like blackouts and brownouts.

QUESTION 137
You want a cost-effective solution to the common surges that can affect your computer. Which device would be the best solution?

A. UPS

B. Surge protector
C. Power strip
D. Line conditioner

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
The surge protector is the right solution at the right price. A UPS is a possible solution but costs more than a surge protector. A line conditioner also would be a viable solution but, again, is overkill. And a power strip doesn't necessarily have surge protection functionality.

QUESTION 138
Which of these is an unexpected increase in voltage?

A. Sag
B. Blackout
C. Spike
D. Whiteout

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Power spikes (or a surges) are an unexpected increase in voltage. A sag is a decrease in voltage, a blackout is a power outage, and a whiteout is actually a blizzard, which could result in a blackout!

QUESTION 139
Which device tests multiple wires of a power supply at the same time?

A. Multimeter
B. Power supply tester
C. Line conditioner
D. Surge protector

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
The power supply tester tests 3.3 V, 5 V, –5 V, 12 V, and –12 V simultaneously. A multimeter tests only one wire at a time. Line conditioners and surge protectors are preventative devices, not testing devices.

QUESTION 140
Which power connector would be used to power an IDE hard drive?

A. Molex
B. Mini
C. P1
D. P8/P9

Correct Answer: A
Section: (none)

Explanation

QUESTION 141
Which of the following uses a 24-pin main motherboard power connector?

A. ATX
B. ATX 12V 1.3
C. ATX 12V 2.0
D. ATX 5V 2.0

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
ATX 12V 2.0 combined the 20-pin and 4-pin connectors used in ATX 12V 1.3 into one 24-pin connector.

QUESTION 142
What voltages are supplied by a Molex power connector?

A. 12 V and 5 V
B. 5 V and 3.3 V
C. 3.3 V and 1.5 V
D. 24 V and 12 V

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Molex connectors provide 12 volts and 5 volts. There are four wires: Yellow is 12 V, red is 5 V, and two blacks which are grounds.

QUESTION 143
What is the maximum data transfer rate of SATA revision 1.0?

A. 1.5 Mbps
B. 300 MB/s
C. 150 MB/s
D. 1.5 GB/s

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
SATA Revision 1.0 can transfer a maximum of 150 MB/s; though most devices won't ever attain that maximum. The standard specifies the transmission of 1.5 Gbps (notice the lowercase 'b' for bits); 300 MB/s is the data transfer rate of SATA Revision 2.0.

QUESTION 144
Which of these is the delay it takes for the hard drive to access a particular sector on the disk?

A. Actuator
B. Latency
C. Lag
D. Propagation

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Latency is the delay it takes for the hard drive to access the data; it is directly related to the rotational speed (RPM) of the disk.

QUESTION 145
What should you do first to repair a drive that is acting sluggish?

A. Remove the drive and recover the data.
B. Run Disk Cleanup.
C. Run Disk Defragmenter.
D. Scan for viruses.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Attempt to defragment the disk. If it is not necessary, Windows lets you know. Then you can move to other options such as scanning the drive for viruses.

QUESTION 146
How much data can a SATA revision 3.0 drive transfer per second?

A. 1.5 Gb/s
B. 3.0 Gb/s
C. 4.5 Gb/s
D. 6.0 Gb/s

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
SATA Revision 3.0 drives can transfer 6.0 Gb/s. Revision 1.0 does 1.5 Gb/s. Revision 2.0 does 3.0 Gb/s.

QUESTION 147
How many pins are there in a SATA drive's data and power connectors?

A. 40 and 4
B. 8 and 16
C. 7 and 15
D. 80 and 4

Correct Answer: C
Section: (none)

Explanation

Explanation/Reference:
The SATA drive uses a 7-pin data connector and a 15-pin power connector. Ultra ATA IDE hard drives have a 40-pin data connector and 4-pin power connector. The IDE drive's cable might have 80 conductors or wires, but it still physically connects through 40 pins.

QUESTION 148
What kind of cable does a floppy drive use?

A. 40-pin IDE
B. 80-pin IDE
C. 34-pin IDE
D. 168-pin IDE

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
The floppy drive uses a 34-pin ribbon cable to transfer data. IDE hard drives use a 40-pin ribbon cable; 168-pin refers to the amount of pins in SDRAM.

QUESTION 149
What is the maximum data transfer rate of an Ultra3 SCSI device?

A. 320 MB/s
B. 160 MB/s
C. 640 MB/s
D. 300 MB/s

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Ultra3 SCSI can transfer a maximum of 160 MB/s. Ultra-320 SCSI can transfer 320 MB/s, Ultra-640 can transfer 640 MB/s, and SAS (Serial Attached SCSI) and SATA Revision 2.0 can transfer 300 MB/s.

QUESTION 150
In a two drive IDE configuration, drive 0 would be the _____, and drive 1 would be the _____.

A. Slave, master
B. Cable select, slave
C. Slave, single
D. Master, slave

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
In PATA IDE two-drive configurations, drive 0 would be the master and drive 1 would be the slave. Cable select is a drive mode that autoconfigures drives as master or slave depending on their cable position. Single means a single drive configuration with no configuration necessary.

QUESTION 151
What is a standard connector for an external SCSI device?

A. 240 pin
B. 68 pin
C. 40 pin
D. 7 pin

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
External SCSI connections often have 68 pins. DDR2 and DDR3 have 240 pins. IDE data cables have 40 pins. SATA data cables have 7 pins.

QUESTION 152
Which of the following is hot-swappable?

A. Floppy drive
B. Tape drive
C. Hard drive
D. DVD drive

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Hard drives can be hot-swappable. This is common in NAS devices and advanced servers. It is not common in PCs. Tape drives, floppy drives, and DVD drives are not hot-swappable. However, they use media that can be inserted and removed while the computer is on. Tricky, eh? Be ready for these types of questions.

QUESTION 153
What devices would use a SCSI cable? (Select the two best answers.)

A. SSD
B. Tape drive
C. Floppy drive
D. IDE drive
E. Hard drive

Correct Answer: BE
Section: (none)
Explanation

Explanation/Reference:
The best answers are tape drives and hard drives. Not IDE or SATA drives, but SCSI drives themselves.

QUESTION 154
What does the x refer to in Compact Disc technology?

A. 150 KB/s
B. 1.32 MB/s
C. 133 MB/s

D. 4.5 MB/s

Correct Answer: ACDCABADCAADBADCAADBBDADDBADAAAAAAAACCBDABADC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 155
Which of the following has the largest potential for storage capacity?

A. CD-R
B. CD-RW
C. DVD-RW
D. Blu-ray

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Blu-ray, at a maximum of 50 GB has the largest storage capacity. CDs top out just under 1 GB. DVDs have a maximum of 17 GB.

QUESTION 156
What is the maximum capacity of a Blu-ray disc?

A. 700 MB
B. 4.7 GB
C. 17 GB
D. 50 GB

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Standard 12cm Blu-ray discs have a maximum capacity of 50 GB. A typical CD capacity is 700 MB; 4.7 GB is the capacity of the common DVD-5, and 17 GB is the capacity of a DVD-18 (using both sides).

QUESTION 157
If a user wants to write information more than one time to a DVD, which type should you recommend? (Select all that apply.)

A. DVD-R
B. DVD–RW
C. DVD+RW
D. DVD+R

Correct Answer: BC
Section: (none)
Explanation

Explanation/Reference:
DVD–RW and DVD+RW are the rewritable versions of DVDs. DVD-R and DVD+R are write-once formats.

QUESTION 158
What should you do before physically removing a USB flash drive? (Select the best answer.)

A. Turn it off.
B. Shut down Windows.
C. Format the drive.
D. Use the Safely Remove icon.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
In Windows you can either double-click the Safely Remove Hardware icon in the System Tray (Notification Area) or right-click it to bring up the Safely Remove Hardware window. From there click Stop to shut down power to the device. Shutting off Windows is another possibility but not the best answer because it is time-consuming.

QUESTION 159
How are most solid-state media formatted by the manufacturer?

A. As FAT32
B. As NTFS
C. As FAT16
D. As FAT12

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
FAT32 is the most common file system used on solid-state media such as USB flash drives, SD cards, and CF cards. FAT16 is another possibility but less common. Users have the option to reformat most of these devices as NTFS if they want.

QUESTION 160
What is the main difference between SD and SDIO?

A. SD cards are faster.
B. SDIO cards incorporate input/output functionality.
C. SD cards incorporate input/output functionality.
D. SDIO cards can identify a user's cell phone.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
SDIO cards integrate I/O functionality into a standard SD card. They are basically the same speed as SD cards. Answer D is referring to SIM cards, not SDIO cards.

QUESTION 161
What kind of controller is built into a CF card?

A. SATA
B. IDE
C. ATA
D. SCSI

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
An ATA controller is built into the CF card and many other solid-state technologies.

QUESTION 162
Which kinds of ports can typically be found on a laptop? (Select all that apply.)

A. RJ45
B. USB
C. IEEE 1284
D. DVI

Correct Answer: ABD
Section: (none)
Explanation

Explanation/Reference:
RJ45, USB, and DVI ports are all common on a laptop. However, IEEE 1284 printer ports are not common.

QUESTION 163
What kind of video technology do most laptops incorporate currently?

A. TFT Active Matrix
B. Passive Matrix
C. CRT
D. TFT Passive Matrix

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
TFT active matrix LCDs are the most common in laptops today. Passive matrix screens have been discontinued; although you might see an older laptop that utilizes this technology. There is no TFT passive matrix, and cathode ray tubes (CRTs) were used only on the first laptops many years ago. Due to a CRT's weight and heavy power usage, it is not a good solution for laptops.

QUESTION 164
What is a common resolution on today's laptops?

A. 640×480

B. 800×600
C. 1280×800
D. 2048×1536

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
1280×800 (WXGA) is a common resolution used by today's laptops. 640×480 and 800×600 are older VGA modes that can't fit much on the screen. 2048×1536 (QXGA) is a higher resolution than most laptops' video adapters can display.

QUESTION 165
If a user wanted to stretch their desktop across two monitors, what Windows technology would they look for?

A. Multiple monitor
B. Video replication
C. SideCar
D. DualView

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
DualView enables a laptop running Windows to stretch the desktop across two monitors. It is a basic version of Multiple Monitor that is only available on desktop PCs. SideCar is a third-party hardware/software solution that enables a desktop PC or laptop to stretch the desktop over multiple monitors but is not included in Windows.

QUESTION 166
What is the most common battery used by today's laptops?

A. Double AA batteries
B. Lithium-ion (Li-ion)
C. Nickel-metal hydride (NiMH)
D. Nickel-cadmium (NiCd)

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
There are a few different types of batteries that a laptop might use including Lithium-ion (Li-ion), Nickel-metal hydride (NiMH), and Nickel-cadmium (NiCd), but Lithium-ion is by far the most common. Believe it or not, some laptops (namely children's) can run on 4 AA batteries, but it is not common or feasible in today's business environments.

QUESTION 167
Where would a user go to modify the battery alarms in Windows?

A. Display Properties window
B. Power Properties window
C. BIOS
D. Power Options window

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
To change the thresholds for battery alarms, a user would access the Power Options window.

QUESTION 168
Which of the following has the fastest data transfer rate?

A. CardBus
B. ExpressCard PCIe
C. PC Card
D. ExpressCard USB

Correct Answer: BCADCDCADAAAAABADBCADBDBCADBDCCADBA
Section: (none)
Explanation

Explanation/Reference:

QUESTION 169
Which of the following are ways that a laptop can communicate with other computers? (Select all that apply)

A. Bluetooth
B. WLAN
C. Ultraviolet
D. Cellular WAN

Correct Answer: ABD
Section: (none)
Explanation

Explanation/Reference:
Laptops can communicate with other computers through Bluetooth, WLAN, IrDA, and Cellular WAN wireless connections, plus wired connections like Ethernet (RJ45) and dial-up (RJ11).

QUESTION 170
What is the pinout for a stick of SO-DIMM DDR RAM?

A. 200
B. 168
C. 144
D. 204

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
DDR SODIMM modules have 200 pins. Desktop SDRAM has 168 pins. SODIMM SDRAM has 144 pins, and DDR3 SODIMMs have 204 pins.

QUESTION 171

How many pins are in a laptop's PATA hard drive?

A. 40
B. 200
C. 68
D. 44

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
A laptop's PATA hard drive has a 44-pin IDE connection that includes the four power pins.

QUESTION 172
How are SODIMMs installed to a laptop?

A. By pressing straight down
B. Into a ZIF socket
C. On a 45-degree angle
D. On a 90-degree angle

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
SODIMMs are installed to a laptop at a 45-degree angle unlike a desktop's DDR memory that is installed by pressing straight down. ZIF sockets refer to CPUs.

QUESTION 173
What should you do when upgrading a CPU in a laptop? (Select all that apply.)

A. Check documentation to see if the CPU is supported.
B. Install more RAM.
C. Employ antistatic measures.
D. Remove the system board.

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:
When upgrading a CPU in a laptop, check for laptop documentation to see if the faster CPU is supported; then employ ESD prevention measures. More RAM is not necessary when upgrading a CPU, but it could help the laptop get the best out of the CPU if an open memory slot is available. Usually the system board does not have to be removed to replace or upgrade a CPU.

QUESTION 174
Which level of RAID uses two disks only?

A. RAID 0
B. RAID 1
C. RAID 5
D. Striping

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
RAID 1 (mirroring) uses two disks only. RAID 0 (striping) can use two disks or more, and RAID 5 (striping with parity) can use three disks or more.

QUESTION 175
Which level of RAID stripes data and parity across three or more disks?

A. RAID 0
B. RAID 1
C. RAID 5
D. Striping

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
RAID 5 stripes data and parity across three or more disks. RAID 0 does not stripe parity, it stripes data only and can use two disks or more. RAID 1 uses two disks only. Striping is another name for RAID 0.

QUESTION 176
Which level of RAID contains two sets of mirrored disks that are then striped?

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

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
RAID 10 contains two sets of mirrored disks that are then striped. RAID 0 is a set of two or more disks that stripe data. RAID 1 is a mirror. RAID 5 is striping with parity.

QUESTION 177
Which expansion bus slot is typically white in color?

A. PCIe
B. AGP
C. PCI
D. LCD

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Peripheral Component Interconnect (PCI) slots are usually white in color. PCIe are often black or blue, AGP slots are often brown, and LCD is a type of monitor.

QUESTION 178
Which of the following supports digital only connections?

A. DVI-A
B. DVI-D
C. DVI-I
D. VGA

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
DVI-D supports digital-only connections, which are common on newer LCDs. DVI-A supports analog-only. DVI-I supports both digital and analog, and VGA is an analog connection.

QUESTION 179
When installing a video card, what should you do before inserting the card into the slot?

A. Connect cables.
B. Install drivers.
C. Test.
D. Prepare the slot.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Before inserting the card into the slot, prepare the slot by manipulating any locking mechanism and removing the appropriate slot cover(s).

QUESTION 180
Which of the following uses a TFT active-matrix display? (Select all that apply.)

A. LCD
B. CRT
C. Projector
D. Laptop

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:
Liquid Crystal Displays normally use the TFT active-matrix technology. Laptops have LCDs so they use the same technology.

QUESTION 181
Where is the best place to get the latest driver for a video card?

A. Microsoft
B. CD-ROM
C. A friend

D. Manufacturer's website

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
The manufacturer's website is the best place to get the latest driver. The disc supplied with the card is usually satisfactory, but it will not be the latest driver.

QUESTION 182
How many colors are there if the color depth in Windows is set to 24 bit?

A. 16
B. 65,536
C. 16,777,216
D. 24

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
24-bit color is equal to 16,777,216 colors in total, otherwise known as 224 power. Sixteen colors would be 4-bit, 65,536 colors would be 16-bit, and there is no setting that allows for 24 colors.

QUESTION 183
A computer is set to 1280×1024 resolution. Which standard is it using?

A. XGA
B. SXGA
C. UXGA
D. WXGA

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Super eXtended Graphics Array (SXGA) resolution is 1280×1024.

QUESTION 184
What resolution does Windows use when started in Safe Mode?

A. 800×600
B. 1024×768
C. 640×480
D. 1280×800

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Safe Mode boots the computer with a minimal set of drivers including the video driver. Due to this, the resolution is set to 640×480 VGA mode.

QUESTION 185
What is a common refresh rate for an LCD?

A. 30 Hz
B. 60 Hz
C. 200 Hz
D. 60 MHz

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
A typical refresh rate for LCDs is 60 Hz.

QUESTION 186
What is the maximum amount of monitors Windows allows in a Multiple Monitor environment?

A. 10
B. 2
C. 4
D. 1

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
The Multiple Monitor feature in Windows 7/Vista/XP supports up to 10 monitors. A laptop supports a lesser version of Multiple Monitor known as DualView, which supports a maximum of 2 monitors.

QUESTION 187
What types of cables are used to connect speakers/audio devices to a sound card? (Select all that apply.)

A. 1/8-inch mini-jacks
B. DVI
C. S/PDIF
D. RCA

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:
The colored connectors on the back of the sound card are known as TRS 1/8-inch mini-jacks. S/PDIF is the optical output (and possibly input) found on the back of the sound card. DVI is a video port, and RCA is another port that can be used for video and audio but won't be found on the back of a sound card; however, RCA might be found on I/O drives that are loaded into the front of a computer in a 5.25-inch bay, enabling for greater connectivity on the computer's front panel.

QUESTION 188
Which of the following are commonly used expansion buses for sound cards? (Select all that apply.)

A. AGP
B. PCI

C. PCIe
D. AMR

Correct Answer: BC
Section: (none)
Explanation

Explanation/Reference:
PCI Express (x1) and PCI are common expansion buses for sound cards. AGP is for video-only, and AMR, although it used to be utilized for combination sound/modem cards, is rarely seen today.

QUESTION 189
What standard is followed by most sound card manufacturers for the colors of the 1/8 mini-jacks?

A. PCI
B. PC 99
C. PC 100
D. PCIe

Correct Answer: BCCCCDBADCDADCADAC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 190
What is the total data rate of an audio CD?

A. 320 kbps
B. 160 kbps
C. 1411 kbps
D. 9.6 Mbps

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
1411 kbps is the total data rate (or bit rate) of an audio CD. 320 kbps is the maximum data rate for MP3, 160 kbps is a common data rate for WMA files, and 9.6 Mbps is the total data rate of DVD-Audio.

QUESTION 191
What is the data transfer rate (speed) of USB 3.0?

A. 12 Mbps
B. 400 Mbps
C. 480 Mbps
D. 5 Gbps

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

5 Gbps is the data rate for USB 3.0; 12 Mbps is the data rate for USB version 1.1; and 400 Mbps is the data rate of IEEE 1394a (FireWire 400). USB 2.0 has a maximum data transfer rate of 480 Mbps.

QUESTION 192
What is the maximum amount of USB devices a computer can support?

A. 4
B. 63
C. 127
D. 255

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
USB can support up to 127 devices on one computer. However USB hubs will be necessary to go beyond the amount of USB ports (usually 4 or 6) commonly found on a system. FireWire supports up to 63 devices.

QUESTION 193
Which type of USB connector is normally found on a desktop PC or laptop?

A. Type A
B. Type B
C. Type C
D. Type D

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Type A connectors are almost always included on desktop PCs and laptops.

QUESTION 194
What is the maximum data transfer rate of IEEE 1394a?

A. 400 Mbps
B. 800 Mbps
C. 1,600 Mbps
D. 3,200 Mbps

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
IEEE 1394a specifies a maximum data transfer rate of 400 Mbps. IEEE 1394b specifies 800 Mbps, 1,600 Mbps, and 3,200 Mbps.

QUESTION 195
You just installed a bar code reader to a laptop. What should you do next?

A. Adjust the light wavelength.
B. Test the reader by reading bar codes.

C. Program the reader to recognize codes.

D. Point the bar code reader at someone.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
After physical installation and installing the driver for the device, program the reader to recognize the codes.

QUESTION 196
What does a KVM do?

A. Connects a computer to Bluetooth-enabled devices

B. Allows multiple users to share a single computer

C. Networks multiple computers together

D. Connects multiple computers to save resources

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
KVM connects multiple computers to a single keyboard, mouse, and monitor. This way, fewer resources in the way of peripherals (input/output devices) are necessary to use the computers.

QUESTION 197
You are installing a wireless keyboard to a PC. What does the PC require?

A. Bluetooth dongle

B. Infrared connection

C. Ethernet connection

D. USB port

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Wireless keyboards and mice often use Bluetooth to transmit to a PC or laptop. The computer must either have a built-in Bluetooth antenna or a Bluetooth dongle connected to a USB port for the keyboard to function.

QUESTION 198
Which of the following is the best type of custom computer for use with ProTools?

A. CAD/CAM workstation

B. Audio/Video Workstation

C. Gaming PC

D. HTPC

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

The audio/video workstation is the type of custom computer that would use ProTools, Logic Pro, and other music and video editing programs.

QUESTION 199
What do CAD/CAM workstations require most?

A. Liquid cooling and RAM
B. TV tuner and silent hard drive
C. Surround sound card and joystick
D. Powerful CPU and RAM

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
CAD/CAM workstations most require a powerful CPU and RAM. Liquid cooling, surround sound cards, and joysticks are required by gaming PCs. TV tuners and silent hard drives are needed by HTPCs.

QUESTION 200
Your organization needs to run Windows 7 in a virtual environment. The OS is expected to require a huge amount of resources for a powerful application it will run. What should you install Windows 7 to?

A. Type 2 hypervisor
B. Gaming PC
C. Type 1 hypervisor
D. Thin client

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
If the virtual operating system needs a lot of resources, the best bet is a "bare metal" type 1 hypervisor. Type 2 hypervisors run on top of an operating system and therefore are not as efficient with resources. Gaming PCs have lots of resources but are not meant to run virtual environments. Thin clients have the least amount of resources.

QUESTION 201
What are some of the elements of a home server PC? (Select the two best answers.)

A. Liquid cooling
B. Fast network adapter
C. The best CPU
D. RAID array
E. Gamepad

Correct Answer: BD
Section: (none)
Explanation

Explanation/Reference:
Home server PCs require a fast network adapter for the quick transfer of files over the network and a RAID array to offer fast and reliable access to data.

QUESTION 202

Which type of printer uses a photoelectric drum?

A. Impact
B. Dot-Matrix
C. Laser
D. Inkjet

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
The laser printer is the only type of printer that uses a photoelectric drum.

QUESTION 203
During which step of the laser printing process is the transfer corona wire involved?

A. Developing
B. Transferring
C. Fusing
D. Cleaning

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
The transfer corona wire gets involved in the laser printing process during the transferring step.

QUESTION 204
Which stage of the laser printing process involves extreme heat?

A. Fusing
B. Transferring
C. Exposing
D. Writing

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
The fusing step uses heat (up to 400 degrees Fahrenheit/200 degrees Celsius) and pressure to fuse the toner permanently to the paper.

QUESTION 205
What is the most common type of consumer-based printer?

A. Thermal printer
B. Laser printer
C. Thermal inkjet
D. Impact printer

Correct Answer: C
Section: (none)

Explanation

Explanation/Reference:
The thermal inkjet is the most common type of printer used in the consumer market today. Don't confuse a thermal inkjet (often simply referred to as an inkjet) with a thermal printer.

QUESTION 206
What is the rubber roller that feeds the paper past the print head known as?

A. HVPS
B. Cartridge
C. Spring
D. Platen

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
The platen is the rubber roller that feeds the paper past the print head in thermal printers.

QUESTION 207
What is a common amount of pins in a dot-matrix printer's print head?

A. 40
B. 24
C. 8
D. 84

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Dot-matrix printer print heads usually have 24 pins or 9 pins.

QUESTION 208
When connecting a laser printer's power cable, what type of device is not recommended?

A. Surge protector
B. Line conditioner
C. UPS
D. AC outlet

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
An uninterruptible power supply (UPS) is not recommended for laser printers due to the high draw of the laser printer. When using a surge suppressor, the laser printer should be the only device connected to it.

QUESTION 209
When finished installing a new printer and print drivers, what should you do? (Select all that apply.)

A. Calibrate the printer.

B. Install the print drivers.
C. Check for compatibility.
D. Print a test page.

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:
After the printer is installed, meaning it has been connected, and the drivers have been installed, you should calibrate the printer (if necessary) and print a test page. Before starting the installation, you should check for compatibility with operating systems, applications, and so on.

QUESTION 210
Which is the faster option for spooling documents?

A. Print directly to the printer.
B. Start printing immediately.
C. Start printing after the last page is spooled.
D. Start printing after the separator page.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Start Printing Immediately is the faster print option when spooling documents. Print Directly to the Printer doesn't use the spooling feature, and there is no Start Printing After the Separator Page.

QUESTION 211
What command turns off the print spooler?

A. net disable print spooler
B. net stop print spooler
C. net restart spooler
D. net stop spooler

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
The command net stop spooler stops or turns off the print spooler service.

QUESTION 212
What is it known as when two printers are joined together so that they can work as a team?

A. Printer pooling
B. Printer spooling
C. pscript.sep
D. Printer joining

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Printer pooling is when two or more printers are combined to get print jobs out faster.

QUESTION 213
Which of the following is a group of computers located in a small area?

A. LAN
B. WAN
C. PAN
D. MAN

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
local area network (LAN) is a group of computers such as a SOHO network located in a small area. A wide area network (WAN) is a group of one or more LANs spread over a larger geographic area. A personal area network (PAN) is a smaller computer network used by smartphones and other small computing devices. A metropolitan area network (MAN) is a group of LANs in a smaller geographic area of a city.

QUESTION 214
Which of the following are most often used to connect a group of computers in a LAN? (Select the two best answers.)

A. Hub
B. Switch
C. Bridge
D. WAP

Correct Answer: BD
Section: (none)
Explanation

Explanation/Reference:
Computers in a LAN are connected together by a central connecting device; the most common of these are the switch and the wireless access point (WAP). Hubs are deprecated devices; the predecessor of the switch. A bridge is used to connect two LANs together or separate a single LAN into two sections.

QUESTION 215
What device contains multiple hard drives and is connected directly to the network?

A. Internet appliance
B. Router
C. NAS
D. Firewall

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Network attached storage (NAS) devices contain multiple hard drives and connect directly to the network. Internet appliances are small devices that enable quick and easy connectivity to the Internet. A router is used to connect two or more networks together. A Firewall is a hardware appliance or software that protects one or

more computers from unwanted intrusion.

QUESTION 216
Which of the following allows voice communication over IP-based networks?

A. Firewall
B. Modem
C. NAS
D. VoIP

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Voice over Internet Protocol (VoIP) is a technology that allows for voice communication over IP-based networks. A firewall is a device or software that protects computers from threats on the Internet. A modem is a device that allows a computer to connect to the Internet by way of a standard phone line. Network attached storage (NAS) is a device that serves data and connects directly to the network.

QUESTION 217
What network topology is the most common?

A. Ring
B. Star
C. Bus
D. Mesh

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
The star topology is the most common; it is when computers are wired to a central connecting device such as a switch. The ring is when computers are connected to a single cable in a circular fashion. A bus topology is when computers are connected to a single cable that has a starting and ending point. Mesh is when computers have multiple connections to each other.

QUESTION 218
What network topology combines the characteristics of two other topologies?

A. Hybrid
B. Star
C. Bus
D. Mesh

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
The hybrid topology combines the characteristics of two other topologies; for example the star-bus or hierarchical star

QUESTION 219
Which of the following network devices moves frames of data between a source and destination based on their

MAC addresses?

A. Hub
B. Switch
C. Router
D. Modem

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
A switch sends frames of data between computers by identifying the systems by their MAC addresses.

QUESTION 220
Which of the following would be suitable for 1000 Mbps networks? (Select all that apply.)

A. Category 3
B. Category 5
C. Category 5e
D. Category 6

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:
Category 5e and Category 6 are suitable for 1000 Mbps networks. Category 3 is suitable for 10 Mbps networks only. Category 5 is suitable for 100 Mbps networks.

QUESTION 221
Which type of cable would you use if you were concerned about EMI?

A. Plenum-rated
B. UTP
C. STP
D. Coaxial

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
STP (shielded twisted pair) is the only cable listed here that can reduce electromagnetic interference. Plenum-rated cable is used where fire code requires it; it doesn't burn as fast, releasing less PVCs into the air.

QUESTION 222
Which type of cable can connect a computer to another computer directly?

A. Straight-through
B. Crossover
C. Rolled
D. 568B

Correct Answer: B

Explanation/Reference:
Crossover cables are used to connect like devices: computer to computer or switch to switch. Straight-through cables (the more common patch cable) connect unlike devices, for example from a computer to a switch. Rolled cables were not mentioned yet, which allow a PC to communicate with the console port of a corporate router. 568B is the typical wiring standard you will see in twisted-pair cables. A crossover cable uses the 568B wiring standard on one end and 568A on the other end.

QUESTION 223
Which of the following cables has a core diameter of 62.5 microns?

A. Single-mode
B. Category 6
C. Multimode
D. STP

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Multimode cable has a core diameter of either 50 or 62.5 microns. Single-mode is between 8 to 10 microns. Category 6 is twisted pair and uses between 22 and 24 gauge copper wire. STP is shielded twisted pair.

QUESTION 224
Which connector would you use for cable Internet?

A. LC
B. F-connector
C. BNC
D. RJ45

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Cable Internet connections would use RG-6 coaxial cable (usually) with an F-connector on the end. LC is a type of fiber optic connector. BNC is an older connector type used by coaxial networks. RJ45 is the connector used on twisted-pair patch cables.

QUESTION 225
Which tool would you use to test a network adapter not connected to the network?

A. Punch down tool
B. Cable tester
C. Loopback plug
D. Tone and probe

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

To test a network adapter without a network connection, you would use a loopback plug. This simulates a network connection. Punch down tools are used to punch individual wires to a patch panel. Cable testers such as continuity testers will test the entire length of a terminated cable. The tone and probe kit also tests a cable's length but only one pair of wires.

QUESTION 226
Which protocol uses port 22?

A. FTP
B. TELNET
C. SSH
D. HTTP

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
SSH (Secure Shell) uses port 22, FTP uses port 21, TELNET uses port 23, and HTTP uses port 80.

QUESTION 227
Which of these addresses needs to be configured to enable a computer access to the Internet or to other networks?

A. Subnet mask
B. Gateway address
C. DNS address
D. MAC address

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
The gateway address must be configured to enable a computer access to the Internet through the gateway device. By default, the subnet mask defines the IP address's network and host portions. The DNS server takes care of name resolution, and the MAC address is the address that is burned into the network adapter; it is configured at the manufacturer.

QUESTION 228
The IP address 128.0.0.1 would be part of what IPv4 class?

A. Class A
B. Class B
C. Class C
D. Class D

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
The IP address 128.0.0.1 is part of the Class B range that encompasses 128–191. Class A is 1–126. Class C is 192–223. Class D is 224–239.

QUESTION 229

What technology assigns addresses on the 169.254.0.0 network number?

A. DHCP
B. Static IP
C. APIPA
D. Class B

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
If you see an address with 169.254 as the first two octets, then it is Automatic Private IP Addressing (APIPA). The Dynamic Host Configuration Protocol (DHCP) assigns IP addresses automatically to clients but by default does not use the 169.254 network number. Static IP addresses are configured manually by the user in the IP Properties window. Class B is a range of IP networks from 128 through 191.

QUESTION 230
What type of IPv6 address is commonly assigned to client computers?

A. Unicast
B. Anycast
C. Multicast
D. FF00

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Unicast addresses beginning with FE80::/10 are commonly assigned to client computers automatically. Anycast and multicast addresses are assigned to a group of interfaces; the difference being that anycast packets are delivered to the first interface only, and multicast packets are delivered to all interfaces. FF00::/8 is the address range of multicast packets.

QUESTION 231
You want to test the local loopback IPv6 address. Which address would you use?

A. 127.0.0.1
B. ::1
C. FE80::/10
D. ::0

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
You would use the ::1 address. That is the local loopback address for IPv6. 127.0.0.1 is the local loopback for IPv4. FE80::/10 is the range of unicast auto-configured addresses. ::0 is not valid but looks similar to how multiple zeroes can be truncated with a double colon.

QUESTION 232
Which of these would be used for streaming media?

A. TCP

B. RDP
C. UDP
D. DHCP

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
User Datagram Protocol (UDP) is used for streaming media. It is connectionless, whereas TCP is connection-oriented and not a good choice for streaming media. RDP is the Remote Desktop Protocol used to make connections to other computers. DHCP is the Dynamic Host Configuration Protocol used to assign IP addresses to clients automatically.

QUESTION 233
Which port is used by the IMAP protocol?

A. 53
B. 80
C. 110
D. 143

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
The Internet Message Access Protocol (IMAP) uses port 143. DNS uses port 53. HTTP uses port 80. POP3 uses port 110. Know those ports!

QUESTION 234
Which protocol sends and receives information in an encrypted manner by default?

A. FTP
   ○ B. HTTP
   ○ C. HTTPS
   ○ D. POP3

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:
Hypertext Transfer Protocol Secure (HTTPS) sends information like HTTP but over a secure channel via SSL or TLS. The other three protocols do not encrypt the data by default.

QUESTION 235
Which IP address can be a gateway for a computer using the IP address 10.58.64.192 and a subnet mask of 255.255.255.0?

A. 10.58.64.255
B. 10.58.64.1
C. 10.58.64.0
D. 10.59.64.1

Correct Answer: B

Explanation/Reference:
The gateway address should be 10.58.64.1. This question got a bit trickier. This not a Class A network we are dealing with. It is a classless network; the network number is 10.58.64 because we are using the 255.255.255.0 subnet mask. So the gateway cannot be on the 10.59.64 network; the gateway needs to be on the same network number as the client IP addresses. We cannot use 255 or 0 as the last digit of the IP address because 255 is the broadcast, and 0 is the network number.

QUESTION 236
Which Internet service makes use of PSTN?

A. Dial-up
B. ISDN
C. DSL
D. Cable Internet

Correct Answer: A

Explanation/Reference:
Dial-up internet connections make use of the public switched telephone network (PSTN), and POTS phone lines. ISDN was developed to meet the limitations of PSTN. DSL provides faster data transmissions over phone lines (or separate data lines.) Cable Internet is a broadband service that offers higher speeds than DSL; it is provided by cable TV companies.

QUESTION 237
Which Internet service is wireless and has a range of 50 kilometers?

A. Fiber optic
B. WiMAX
C. Satellite
D. Wi-Fi

Correct Answer: B

Explanation/Reference:
WiMAX is a wireless Internet service that has a maximum range of approximately 50 kilometers. Fiber optic is a type of cable. Satellite is wireless but it has a far greater range. Wi-Fi is wireless but it deals with the LAN and is usually limited to approximately 250 meters (800 feet) outdoors.

QUESTION 238
Which 802.11 version has a maximum data rate of 54 Mbps and uses the 2.4 GHz frequency range?

A. 802.11a
B. 802.11b
C. 802.11g
D. 802.11n

Correct Answer: C

Explanation/Reference:
802.11g uses the 2.4 GHz range and has a maximum rate of 54 Mbps. 802.11a also has a rate of 54 Mbps but uses the 5 GHz range. 802.11b is 11 Mbps. 802.11 is 600 Mbps max.

QUESTION 239
Which of the following forwards an external network port to an internal IP address/port on a computer on the LAN?

A. Port triggering
B. Port forwarding
C. DMZ
D. WPS

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Port forwarding is used to forward external network ports to an internal IP and port. This is done so a person can host services such as FTP internally. Port triggering allows you to specify outgoing ports that a computer on the LAN uses for special applications. The DMZ is an area that is protected by the firewall but separate from the LAN. Servers are often placed here. WPS is Wi-Fi Protected Setup; it is used to make wireless network connections easier for the user by employing an 8 to 10 digit pin.

QUESTION 240
Which of the following is described as the simultaneous sending and receiving of network data?

A. Half-duplex
B. Latency
C. PoE
D. Full-duplex

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Full-duplex is when a network adapter (or other device) can send and receive information at the same time. Half-duplex is when only sending or receiving can be done at one time. Latency is the delay it takes for data to reach a computer from a remote location. PoE is Power over Ethernet, a technology that allows devices to receive data and power over an Ethernet network cable.

QUESTION 241
If a power supply fails, what should you do?

A. Replace it.
B. Repair it.
C. Use a different computer.
D. Switch it to a different voltage setting.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

Replace the power supply. It can be dangerous to try to repair it and is not cost-effective to the company.

QUESTION 242
Which of the following are ways to avoid ESD? (Select three.)

A. Use an antistatic wrist strap.
B. Use a vacuum cleaner.
C. Use an antistatic mat.
D. Touch the chassis of the computer.

Correct Answer: ACD
Section: (none)
Explanation

Explanation/Reference:
Antistatic wrist straps, mats, and touching the chassis of the computer are all ways to stop ESD. Vacuum cleaners can cause damage to components.

QUESTION 243
You walk into the server room and see a person lying on the floor with a live electrical wire draped over. What should you do first?

A. Run out and call 911.
B. Grab the wire and fling it off the person.
C. Grab the person and drag them out from under the wire.
D. Grab a piece of wood and use it to move the wire off the person.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
The first thing you should do is get a wooden stick, rope, or something similar (every server room should have one), and use it to CAREFULLY move the wire off of the person. In reality, the first thing you should do is to breathe, and not make any rash decisions because in the heat of the moment, you might think a bit less clearly than you are right now. Anyways, after the wire is removed, you should call 911 and then attempt to offer first aid to the victim. DO NOT ever touch a live wire or anything that the live wire is coming into contact with.

QUESTION 244
What document can aid you if a chemical spill occurs?

A. MSKB
B. MSDS
C. MCSE
D. DSS

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
The material safety data sheet (MSDS) defines exactly what a chemical is, what the potential hazards are, and how to deal with them.

QUESTION 245
A co-worker complains that after the cleaning crew has come through, the keyboard irritates his hands and

leaves some green residue. What should you do?

A. Call the fire department.
B. Contact the facilities department.
C. Contact the manufacturer of the keyboard.
D. Call OSHA and complain.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Contact the facilities department to see if they have the MSDS for the cleaner. You and/or the facilities department should then treat the irritation according to the MSDS. If this does not work, and the problem gets worse, bring the co-worker to the emergency room. Remove the keyboard from the work environment.

QUESTION 246
You find illegal materials on a customer's computer. Your boss commands you to preserve computer evidence until he gets to the scene. What is your boss asking you to begin?

A. Documentation
B. Chain of custody
C. First response
D. EMI prevention

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Your boss is asking you to begin the process of a chain of custody: the chronological paper trail of evidence. It is a form of documentation, but a specific one. You were the first responder. These cases will be rare, but you should understand the terminology and what to do if you find illegal materials.

QUESTION 247
How will speaking with a lot of jargon make a technician sound?

A. Competent
B. Insecure
C. Smart
D. Powerful

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Too much computer jargon can make an end user think that you do not have the qualifications needed and are masking it with techno-babble.

QUESTION 248
A customer experiences a server crash. When you arrive, the manager is upset about this problem. What do you need to remember in this scenario?

A. Stay calm and do the job as efficiently as possible.
B. Imagine the customer in his underwear.

C. Avoid the customer and get the job done quickly.

D. Refer the customer to your supervisor.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
There isn't much you can do when a customer is upset except stay calm and fix the problem!

QUESTION 249
Which of the following are good ideas when dealing with customers? (Select two.)

A. Speak clearly.

B. Ignore them.

C. Avoid distractions.

D. Explain to them what they did wrong.

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:
Speak clearly so that customers understand you, and avoid distractions so that the customers know they have your complete attention.

QUESTION 250
You are a field technician working at a customer's site. One of the workers asks you to load a copy of an organization's purchased software on a personal laptop. What should you do first?

A. Verify that the installation is allowed under the company's licensing agreement.

B. Act as though you are distracted and ignore the user.

C. Leave the premises and inform the police.

D. Tell the worker that installing unlicensed software is illegal.

E. Notify the worker's manager of a security breach.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
You should first check if the company allows installations of paid software on personal computers or laptops. If it is allowed, go ahead and do the installation. If not, then you should refuse, and notify your manager of the occurrence.

QUESTION 251
What is the correct boot sequence for a PC?

A. POST, CPU, power good, boot loader, OS

B. POST, power good, CPU, boot loader, OS

C. Power good, POST, boot loader, CPU, OS

D. Power good, CPU, POST, boot loader, OS

Correct Answer: D
Section: (none)

Explanation

Explanation/Reference:
The power needs to be good before anything else can be checked. The CPU is tested and initialized, and then POST runs. If POST passes, then the bootloader program starts the OS.

QUESTION 252
Which of the following is a correct PC startup sequence?

A. POST, initialization, bootup
B. Initialization, bootup, POST
C. Bootup, POST, initialization
D. Initialization, POST, bootup

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

http://www.gratisexam.com/