CompTIA A Core 1 Exam Guide to Computing Infrastructure 10th edition Andrews Test Bank

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Name:_____ Class:_____ Date:_____

Ch 02: All About Motherboards

Multiple Choice

1. Brandon purchased a new processor online as an upgrade. When he purchased the processor, he made sure that it used the same socket his computer's motherboard used. But he did not check to see whether the motherboard chipset was compatible. What will happen if you install a processor on a motherboard that can fit the socket but is the wrong chipset?

a. Damage to both the processor and the motherboard.
b. The computer will work fine.
c. The computer will power on but will fail POST.
d. You will not be able install the processor in the wrong motherboard.

ANSWER: a

FEEDBACK:

a. Correct. Installing a processor that fits the socket of a motherboard but is not compatible with the motherboard's chipset can damage both the processor and the chipset. You need to make sure the processor is compatible with the chipset before installing and testing the processor.
b. Incorrect. The computer will not turn on or run POST. Because of the incompatibility of the motherboard and the processor, the code required to start the computer will not be able to load into the processor. There could also be an incompatibility issue with power to the processor, causing the processor to become damaged.
c. Incorrect. Because of the incompatibility of the motherboard and the processor, the code required to start the computer will not be able to load into the processor. There could also be power issues that could damage the processor.
d. Incorrect. You might be able to install a processor in a socket that was not built for the processor. Therefore, it is important to pay attention to the documentation and verify the processor will work with the chipset on your motherboard.

POINTS: 1
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
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2. What socket do Coffee Lake processors use?

a. LGA2011
b. LGA1151 version 2
c. LGA1150
d. LGA1151 version 1

ANSWER: b

FEEDBACK:

a. Incorrect. Fourth and fifth generation Broadwell and Haswell processors work with LGA2011 processor sockets.
b. Correct. Coffee Lake processors work with revised versions of LGA1151 sockets and the new 300 series chipsets.
c. Incorrect. Fourth and fifth generation Broadwell and Haswell processors work with LGA1150 processor sockets.
d. Incorrect. Kaby Lake and Skylake processors use the first version of the LGA1151 socket.

POINTS: 1
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False

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3. What type of socket ensures that even force is applied when it is being installed in the socket?
   a. ZIF
   b. FM2
   c. LGA
   d. AM3

ANSWER: a
FEEDBACK:
   a. Correct. ZIF, or zero insertion force socket, ensures that even force is applied when the processor is being installed in the socket. This is a feature on modern motherboards for both Intel and AMD processors.
   b. Incorrect. FM2 is the socket design for AMD processors. FM2 is a pin grid array socket.
   c. Incorrect. LGA, or land grid array, is the socket design for Intel processors.
   d. Incorrect. AM3 is the socket design for AMD processors. AM3 is a pin grid array socket.

POINTS: 1
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
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4. What configuration can you find for PCIe slots?
   a. x1
   b. x4
   c. x16
   d. x8
   e. All of these

ANSWER: e
FEEDBACK:
   a. Incorrect. This is one type of configuration of PCIe slots.
   b. Incorrect. This is one type of configuration of PCIe slots.
   c. Incorrect. This is one type of configuration of PCIe slots.
   d. Incorrect. This is one type of configuration of PCIe slots.
   e. Correct. PCIe card slots are commonly configured as x1, x4, x8, and x16 representing the number of lanes used for input/output. Some slots may be configured to run differently.

POINTS: 1
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
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5. The PCI Express Version 4.0 can provide up to what amount of throughput with 16 lanes for data?
   a. 8 GB/sec

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b. 16 GB/sec
c. 32 GB/sec
d. 64 GB/sec

ANSWER: c

FEEDBACK:
a. Incorrect. PCI Express Version 2.0 is limited up to 8 GB/sec throughput speed.
b. Incorrect. PCI Express Version 3.0 is limited up to 16 GB/sec throughput speed.
c. Correct. PCI Express Version 4.0 is limited up to 32 GB/sec throughput speed.
d. Incorrect. PCI Express Version 5.0 is limited up to 63 GB/sec throughput speed.

POINTS: 1
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
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6. At what point during the motherboard installation should you install the motherboard drivers?
a. After Windows successfully boots without errors
b. Before applying power for the first time
c. After the POST successfully completes
d. Only if you get a blue screen of death when Windows boots

ANSWER: a

FEEDBACK:
a. Correct. You need to verify Windows will boot without errors and there are no conflicts reported.
b. Incorrect. You will need power to start the system. There are several steps before you can install the motherboard drivers.
c. Incorrect. After POST successfully completes and you verify there are no errors, you should verify that Windows will start with no errors before you install the motherboard drivers.
d. Incorrect. If you encounter the blue screen of death when Windows boots, you will need to troubleshoot the computer before you install the motherboard drivers.

POINTS: 1
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
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7. What is a possible remedy if your system hangs at odd times or during the boot?
a. Install new CMOS RAM
b. Remove the TPM chip
c. Flash the BIOS/UEFI
d. Format the hard disk

ANSWER: c

FEEDBACK:
a. Incorrect. You cannot install new CMOS RAM. Trying to install or remove chips may damage the motherboard.
b. Incorrect. Do not remove the TPM chip if equipped. Removing the chip may damage the

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motherboard.

c. Correct. Flashing the BIOS/UEFI or updating the firmware may resolve system hangs.

d. Incorrect. You should check for other symptoms and remedies before formatting the hard disk.

POINTS: 1
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
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8. What must your motherboard have to use BitLocker Encryption in Windows 7/8/10 which will ensure that your hard drive cannot be used in another computer?

a. LoJack
b. BIOS/UEFI password
c. Encrypted USB
d. TPM chip

ANSWER: d
FEEDBACK:

a. Incorrect. LoJack is a service that can lock your laptop or delete all data through a remote connection. Unfortunately, the hard drive can be removed prior to locking or deleting data.

b. Incorrect. The BIOS/UEFI password does not encrypt all content on the hard drive. A hacker can move the hard drive to another computer and still access the unencrypted data.

c. Incorrect. An encrypted USB drive does not work with Bitlocker Encryption. The encryption is carried on the USB drive, accessed by password, and only encrypts the contents on the USB drive. This will not prevent your hard drive from being used in another computer.

d. Correct. TPM, or Trusted Platform Module chip, is required to use BitLocker to encrypt the hard drive to prevent usage on another computer.

POINTS: 1
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
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9. What should you do if you want to be able to locate your laptop in the event of loss or theft and give it a command through the Internet to lock it or delete data?

a. Subscribe to LoJack for Laptops
b. Set a BIOS supervisor and user password
c. Enable the GPS module in the BIOS/UEFI
d. Enable the TPM chip in the BIOS/UEFI

ANSWER: a
FEEDBACK:

a. Correct. Subscribing to LoJack for Laptops will enable you to locate and give it a command to lock it or delete data.

b. Incorrect. Setting the BIOS/UEFI supervisor and user password may help secure your computer, but it will not allow you to remotely locate and secure data.

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c. Incorrect. Enabling a GPS module in the BIOS/UEFI will allow you receive information from GPS satellites and possibly calculate the device's geographical location, but it will not allow you to remotely locate and secure data.
d. Incorrect. Enabling a TPM chip in the BIOS/UEFI will help with encrypting the hard drive, but it will not allow you to remotely locate and secure data.

POINTS: 1
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
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10. What has occurred if you see the message, "Chassis Intruded! System has halted." the next time you start your computer?

a. The hard drive has failed
b. Windows has not been activated
c. The case has been opened
d. The POST test has failed

ANSWER: c
FEEDBACK:

a. Incorrect. A failed hard drive will not produce this message. This message indicates a problem other than a failed hard drive.
b. Incorrect. Windows activation errors produce different messages. This message indicates a problem other than a Windows activation issue.
c. Correct. The intrusion detection alert feature in the BIOS/UEFI was triggered by opening the locked case.
d. Incorrect. POST test failures are indicated by flashes and beeps. This message indicates a problem other than a POST test failure.

POINTS: 1
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
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11. Which setting can be configured via the BIOS/UEFI screen?

a. Windows driver status
b. Set desktop background
c. Screen saver timeout value
d. Change the boot sequence

ANSWER: d
FEEDBACK:

a. Incorrect. Windows driver status can be configured in the Windows Control Panel.
b. Incorrect. Desktop background can be can be set in the Windows Control Panel.
c. Incorrect. Screen saver timeout can be configured in the Windows Control Panel.
d. Correct. Boot sequence can be changed in the BIOS/UEFI screen.

POINTS: 1
QUESTION TYPE: Multiple Choice

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12. Which of the following represents a method for accessing the BIOS/UEFI setup program?
    a. Boot Windows and go to Control Panel
    b. Set a motherboard jumper and start the computer
    c. Press a key or combination of keys during the BIOS/UEFI POST
    d. Boot to the BIOS setup floppy disk

ANSWER: c
FEEDBACK:
a. Incorrect. Windows and Control Panel do not allow access to the BIOS/UEFI.
b. Incorrect. Setting a jumper allows you to flash, configure, or boot from recovery.
c. Correct. You may access the BIOS/UEFI setup program by pressing a key or combination of keys, depending on the computer.
d. Incorrect. This method is only used on vintage computers. Modern computers have the BIOS/UEFI embedded on the motherboard.

POINTS: 1
QUESTION TYPE: Multiple Choice
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13. Where do today's computers store almost all motherboard configuration data?
    a. BIOS/UEFI ROM
    b. CMOS RAM
    c. DIMM RAM
    d. HDD

ANSWER: b
FEEDBACK:
a. Incorrect. The BIOS/UEFI does not have ROM.
b. Correct. CMOS RAM is where most motherboard configuration data is stored. While it is stored in RAM storage, the CMOS battery ensures the computer does not lose its memory due to power loss.
c. Incorrect. DIMM RAM is used for applications and operating systems. Motherboard configuration data is not stored here as it loses all memory when it is powered off.
d. Incorrect. Hard drives may store long term information, including drivers, but most of the motherboard configuration data is stored elsewhere.

POINTS: 1
QUESTION TYPE: Multiple Choice
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14. Where must virtualization be enabled for VM (virtual machine) software to work?
    a. Windows Control Panel

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b. BIOS/UEFI
c. TPM chip
d. Jumper

ANSWER: b

FEEDBACK:
a. Incorrect. Windows Control Panel allows you to change settings for Windows, but it does not enable virtualization.
b. Correct. Most computers require that virtualization be enabled in the BIOS/UEFI.
c. Incorrect. The TPM chip controls hard drive encryption with BitLocker. It does not enable virtualization.
d. Incorrect. Setting the jumper will allow you to make changes to the BIOS/UEFI, but it will not enable virtualization.

POINTS: 1
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
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15. Which motherboard slot should you install a new high-end graphics card in?
a. PCI Express 3.0 x16 slot (PCIE2: x16 mode)
b. PCI Express 2.0 x16 slot (PCIE4: x4 mode)
c. PCI Express 2.0 x1 slot
d. PCI slot

ANSWER: a

FEEDBACK:
a. Correct. The PCI Express 3.0 x16 slot (PCIE2: x16 mode) would make use of all data lanes and would be the best choice.
b. Incorrect. You can install your video card here, but it may run better in another slot.
c. Incorrect. You can install your video card here, but it may run better in another slot.
d. Incorrect. While video cards are made for PCI slots, PCIe slots are used for high-end graphics cards due to the higher data throughput.

POINTS: 1
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
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16. The LGA1151 socket and latest Coffee Lake chipset support what type of RAM?
a. DDR3
b. DDR3 (only if low voltage)
c. DDR4
d. DDR5

ANSWER: c

FEEDBACK:
a. Incorrect. DDR3 RAM is not currently supported by the Coffee Lake chipset.
b. Incorrect. DDR3 RAM is not currently supported by the Coffee Lake chipset even if it is low voltage.

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c. Correct. DDR4 is currently the only supported RAM by the Coffee Lake chipset.
d. Incorrect. DDR5 RAM is not currently supported by the Coffee Lake chipset.

POINTS: 1
QUESTION TYPE: Multiple Choice
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17. Which statement is NOT true regarding Coffee Lake chipsets?
a. The Coffee Lake LGA1151 socket is backwards compatible with earlier generation processors.
b. The Coffee Lake LGA1151 socket uses the same number of pins, but pin usage is different
c. The Coffee Lake LGA1151 socket provides more wattage for processors.
d. The Coffee Lake LGA1151 socket supports only DDR4 memory.

ANSWER: a
FEEDBACK:
a. Correct. The Coffee Lake LGA1151 socket is not backwards compatible with earlier generation processors. While it has the same number of pins, the pin usage is different.
b. Incorrect. The Coffee Lake LGA1151 socket DOES have the same number of pins, but pin usage is different than the prior version.
c. Incorrect. The Coffee Lake LGA1151 socket DOES provide more wattage for processors.
d. Incorrect. The Coffee Lake LGA1151 socket ONLY supports DDR4 memory.

POINTS: 1
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
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18. What is the set of rules and standards that any two entities use for communication?
a. Bus
b. Protocol
c. Traces
d. Lanes

ANSWER: b
FEEDBACK:
a. Incorrect. The bus is the system of pathways used for communication and the protocol and methods used for transmission.
b. Correct. Protocol is the set of rules and standards that any two entities use for communication.
c. Incorrect. Traces are the circuits or paths that enable data, instructions, timing signals, and power to move from component to component on the board.
d. Incorrect. Lanes are used to describe how PCI Express ports handle information.

POINTS: 1
QUESTION TYPE: Multiple Choice
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19. Motherboards may contain which of the following ports on the I/O panel?
    a. Multiple USB ports
    b. PS/2 mouse and keyboard ports
    c. RJ-45 LAN port
    d. Video ports (HDMI, DVI, or DisplayPort)
    e. All of these

ANSWER: e

FEEDBACK:
a. Incorrect. Multiple USB ports may be found on the I/O panel. More ports may be available.
b. Incorrect. PS/2 mouse and keyboard ports may be found on the I/O panel. More ports may be available.
c. Incorrect. RJ-45 LAN ports may be found on the I/O panel. More ports may be available.
d. Incorrect. Video ports may be found on the I/O panel. More ports may be available.
e. Correct. Multiple USB ports, PS/2 mouse and keyboard ports, video ports, sound ports, RJ-45 LAN ports, and eSATA ports may be found on the I/O panel.

POINTS: 1
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
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Multiple Response

20. When you build a computer from parts, you usually start by deciding on which two parts listed below?
    a. video card
    b. processor
    c. motherboard
    d. RAM
    e. case

ANSWER: b, c

FEEDBACK:
a. Incorrect. The selection of the video card comes much later in the process; the video card compatibility will be driven by other considerations in the new computer.
b. Correct. The processor is one of the first decisions that must be made when building a computer from parts.
c. Correct. The motherboard is one of the first decisions that must be made when building a computer from parts.
d. Incorrect. The amount and type of RAM available to the system is designated by the amount of DIMMs, type, operating system requirements, and application needs.
e. Incorrect. The selection of the case comes after the selection of other key components, needs, and application.

POINTS: 1
QUESTION TYPE: Multiple Response
HAS VARIABLES: False

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21. What are the two different methods for partitioning hard drives?
    a. Extended Partitioning Scheme (EPS)
    b. Master Boot Record (MBR)
    c. Standard Partition Layout (SPL)
    d. GUID Partition Table (GPT)

ANSWER: b, d

FEEDBACK:
a. Incorrect. EPS or EFI System Partition is not a method for partitioning a hard drive. EPS is part of partitioning that contains boot loaders or kernel images for installed operating systems and various other files used in the boot process.
b. Correct. MBR is an older method of partitioning hard drives that allows four partitions and is limited to 2 TB drives.
c. Incorrect. SPL is not a method for partitioning a hard drive.
d. Correct. GPT is a newer method of partitioning hard drives that will allow up to 128 partitions on the hard drive and must be used on drives larger than 2 TB.

POINTS: 1
QUESTION TYPE: Multiple Response
HAS VARIABLES: False
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22. What two different passwords can be set to lock down a computer from unauthorized access?
    a. supervisor password
    b. email password
    c. screen saver password
    d. user password

ANSWER: a, d

FEEDBACK:
a. Correct. Setting the supervisor password in the BIOS/UEFI can help prevent unauthorized access.
b. Incorrect. Setting an email password will prevent unauthorized access to your email, but not the computer.
c. Incorrect. Setting a screen saver password will prevent unauthorized access while you are away, but the computer can still be accessed through other means.
d. Correct. Setting the user password in the BIOS/UEFI can help prevent unauthorized access.

POINTS: 1
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