Exam Report: 3.12.6 Practice Questions

Date: 3/6/2020 10:21:50 pm
Time Spent: 21:39

Candidate: Garsteck, Matthew
Login: mGarsteck

Overall Performance

Your Score: 40%

Passing Score: 80%

View results by: Objective Analysis Individual Responses

Individual Responses

Question 1: Incorrect

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

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

- [x] ~~GPU configuration~~
- [ ] Refresh rate
- [ ] Memory
- [ ] Display connector type
- [x] Resolution

Explanation

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

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

The display specifications should match the video card specifications.

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

References

TestOut PC Pro - 3.12 Video
[e_vid_pp6.exam.xml Q_VID_SPECS_01]

Question 2: Correct

Match the video card types on the left with the appropriate characteristics on the right. Each video card type is used more than once.

Installed in an expansion slot on the motherboard.

Dedicated video cards

Has a GPU and a dedicated high-speed video memory bank.

- [x] Dedicated video cards

Are more powerful and more expensive.

- [x] Dedicated video cards

GPU is integrated with another hardware component, such as a motherboard or CPU.

- [x] Integrated video cards

Shares system memory for graphic processing.

- [x] Integrated video cards

Are much cheaper and less powerful.

- [x] Integrated video cards

Explanation

Video cards process graphical information for output to an external display. Video cards can be implemented as a dedicated expansion board or integrated with other components (such as the motherboard or CPU).

Dedicated video cards:

- Are installed in an expansion slot on the motherboard.
- Have a GPU and a dedicated high-speed video memory bank.
- Are more powerful than integrated video cards, but are also more expensive.

Integrated video cards:

- Integrate the GPU with another hardware component (such as a motherboard or CPU).
- Share system memory for graphic processing.
- Are much cheaper than dedicated video cards, but are also less powerful.

References

TestOut PC Pro - 3.12 Video
[e_vid_pp6.exam.xml Q_VID_SPECS_02]

Question 3: Correct

A customer wants to add an additional video card to her computer so she can play the latest computer games. As a result, this system will now have a multi-GPU configuration.

Which of the following statements are true? (Select TWO).

- [x] The motherboard should support either SLI or CrossFire.
- [ ] Linking video cards also provides additional video output ports.
- [x] For the best performance, both video cards should be identical.
- [ ] Linking only shares memory resources, not GPU resources.
- [ ] An SLI video card can be linked with a CrossFire video card.

Explanation

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

Because each cards is sharing the processing load, the memory banks and GPU in both video cards are

being used. In a multi-GPU configuration, the secondary (bottom) card's display connectors are typically disabled.

References

TestOut PC Pro - 3.12 Video
[e_vid_pp6.exam.xml Q_VID_SPECS_03]

Question 4: Incorrect

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

Which of the following options would provide the BEST display quality at the lowest cost?

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

Explanation

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

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

References

TestOut PC Pro - 3.12 Video
[e_vid_pp6.exam.xml Q_VID_SPECS_05]

Question 5: Incorrect

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

Which of the following will MOST likely be part of the configuration process? (Select THREE).

- Purchase a motherboard with integrated video and an add-on card that supports the ATSC standards.
- Purchase a motherboard with integrated video and an AGP 8x slot.
- ~~Purchase a 7200 rpm or better hard drive.~~
- Purchase two graphics cards with SLI and similar specifications.
- ~~Purchase a 1200 watt power supply.~~
- Purchase a motherboard with two (or more) PCIe x16 slots.
- Connect at least one monitor to the graphics card.

Explanation

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

In most cases, you will need to install identical video cards, or at least video cards with very similar

specifications. Cards are linked using a special bridge clip or through software (depending on the implementation). Both the motherboard and the video cards must support the selected method (either SLI or CrossFireX). The motherboard must have at least two 16x PCIe slots. Some motherboards are able to link an onboard graphic controller and video card installed in a single PCIe slot. Connect the monitor to an output port on the first video card. ATSC signals are digital TV signals and are not used for SLI. Power supply output requirements are not dependent on graphic card power requirements. Hard drive speed is independent of SLI.

References

TestOut PC Pro - 3.12 Video
[e_vid_pp6.exam.xml Q_VID_SPECS_06]

Question 6: Correct

You are in the process of building a new computer. You would like to configure your computer to use Crossfire to improve performance when playing your favorite game. Which of the following will be part of the configuration process?

- Purchase a video card that supports HDCP.
- Purchase two identical video cards.
- Purchase a video card that supports the ATSC standards.
- Purchase a video card that supports the NTSC standards.

Explanation

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

In most cases you will need to install identical video cards, or at least video cards with very similar specifications. Cards are linked using a special bridge clip or through software (depending on the implementation). The motherboard and the video cards must each support the selected method (either SLI or CrossFire). The motherboard must have multiple 16x PCIe slots. Connect the monitor to an output port on the first video card. Select a video card that supports NTSC for analog video capture or analog TV tuner capabilities. Select a video card that supports ATSC for digital TV. HDCP is a copy-protection method that prevents playback of protected content (such as movies on Blu-ray discs) on devices that do not support HDCP.

References

TestOut PC Pro - 3.12 Video
[e_vid_pp6.exam.xml Q_VID_SPECS_07]

Question 7: Correct

The CEO of your small company has asked you to connect his laptop computer to the small conference room LED TV. The CEO will be showing a new promotional video that demonstrates the new company strategy through images and sound.

Which of the following cable types would work BEST for connecting his laptop to the display?

- DVI
- HDMI
- Composite
- VGA

Explanation

HDMI is the default cable standard for newer electronic devices, such as Blu-Ray players and LED TVs. HDMI can carry both digital video and audio signals. Most modern computers include an HDMI port.

DVI and VGA only supports video signals. Composite cables support video, but not audio.

References

TestOut PC Pro - 3.12 Video
[e_vid_pp6.exam.xml Q_VID_SPECS_09]

Question 8: Incorrect

You have a friend who is offering to sell the monitor and video card from his gaming system along with several PC games. The games have fast-moving graphics, and you want to be able to play them on your own home system. The monitor he is selling is an LCD TN with a 144-Hz refresh rate. The video card he is selling supports a max refresh rate of 144 Hz. You're sure you want to buy the games, but you have a couple of other choices when it comes to the monitor and the video card.

The monitor in your current system has a 60 Hz refresh rate. The video card has a max refresh rate of 75 Hz. This configuration has always worked fine for watching videos. You're also looking at new 60-Hz LCD IPS monitors and several high-end video cards with max refresh rates of up to 240 Hz.

Which of the following will MOST likely allow you to play the games on your home system with the best gaming experience possible?

- Buy your friend's games, monitor, and video card. Swap out both your video card and monitor.
- Buy the games from your friend and spend some extra money on the newer 144-Hz LCD IPS monitor and one of the newer 240 fps video cards. Swap out both your video card and monitor.
- ~~Buy the games and use your existing card and monitor.~~
- Buy the games and the monitor from your friend. Swap out just your current monitor and use your existing video card.

Explanation

The LCD TN monitor with the 144-Hz refresh rate along with the video card with a max refresh rate of 144 Hz will give you the best gaming experience compared to the other options. Remember that in order to achieve a specific refresh rate, the following components must all support the same maximum refresh rate:

- Display device
- Video card
- Display cable

Fast-moving graphic applications, such as games, perform best with a refresh rate of 120 Hz or higher, which is covered by this option. Also, LCD TN panel monitors have a much faster response time, which makes them superior for gaming when compared to LCD IPS panel monitors.

The newer video card with a max refresh rate of 240 Hz has some advantages over the older card, but not in combination with the LCD IPS panel monitor. Either option where you keep the 60 Hz monitor, the 75 Hz card, or both will limit system performance to the rate of the slowest component, which will not be sufficient for the fast-moving graphics in the games.

References

TestOut PC Pro - 3.12 Video
[e_vid_pp6.exam.xml Q_VID_SPECS_10]

Question 9: Incorrect

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

- [ ] HDMI
- [x] ~~DVI-A~~
- [x] DVI-D
- [ ] Composite
- [ ] S-video

Explanation

High-Definition Multimedia Interface (HDMI) is a digital video and audio connector used for high-definition digital audio and video. A DVI-D (digital video-digital) connection provides digital output.

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

References

TestOut PC Pro - 3.12 Video
[e_vid_pp6.exam.xml Q_VID_SPECS_11]

Question 10: Incorrect

A TV station needs to view and capture high-definition television (HDTV) signals on their computer. This allows the host's staff to prepare audio and sound bites for the show. The station has purchased a TV tuner card but cannot get it to capture video or sound.

Which of the following is MOST likely causing the card to function improperly?

- They purchased a NTSC card, but did not connect the card to the TV feed cable.
- ~~They purchased a NTSC card, which is not compatible with the slots available in the motherboard.~~
- They purchased an ATSC card, but did not connect the card to the existing video card.
- They purchased an ATSC card, but did not connect the card to the TV feed cable.

Explanation

An ATSC (Advanced Television Systems Committee) card is used to capture high-definition television (HDTV). To receive ATSC signals the TV must be hooked up to some type of external antenna, such as a coax cable referred to as the TV feed. The ATSC card does not need to be connected to the existing video card. NTSC (National Television System Committee) is used to capture analog signals.

References

TestOut PC Pro - 3.12 Video
[e_vid_pp6.exam.xml Q_VID_SPECS_12]

Question 11: Correct

You work for a company that provides technical support for customers. One customer calls wanting to know how to adjust their monitor so they can have the sharpest and most detailed images, words, and icons.

Which Control Panel setting should you adjust to BEST meet the customer's needs?

- Color depth
- Ease of access
- Resolution
- Refresh rate

Explanation

With resolution, the greater number of pixels you have in an image, the better quality the image. The higher the resolution number is, the greater number of pixels it has. For example, 1920 X 1200 has a clearer, sharper resolution than 1024 X 768.

Increasing the color depth displays more colors, which improves the quality of the image, but not necessarily the text. The refresh rate is the number of times per second an image displayed on a screen

needs to be regenerated. Adjusting this will not change the overall image clarity. In Windows 7, Ease of access lets you adjust settings, such as Start On-Screen Keyboard, Start Narrator, contrast settings, and magnifier settings. Although some of these setting may make it easier to see, they won't necessarily make the images and text sharper or more detailed.

References

TestOut PC Pro - 3.12 Video
[e_vid_pp6.exam.xml Q_VID_SPECS_13]

Question 12: Incorrect

You want to be able to watch and record live TV on your computer. Your computer already has a video card, so you want to purchase an additional card that provides TV tuner input capabilities.

Which of the following should MOST likely be part of the configuration process? (Select TWO).

- [ ] Connect the TV input to the tuner card using a DMS-59 connector.
- [x] ~~Purchase a card that supports NTSC.~~
- [ ] Connect the TV input to the tuner card using coaxial cable and F-type connectors.
- [ ] Purchase a card that supports ATSC.
- [x] ~~Link the TV tuner card to the video card using a bridge clip.~~

Explanation

A TV tuner allows your video card to accept a cable TV input and change channels from within the computer. In North America, digital TV signals are sent using the ATSC standard. When purchasing a new TV tuner, make sure it supports ATSC.

NTSC is an analog standard that was used in North America but has been replaced by ATSC. Video cards and monitors with a built-in TV tuner have an F-type cable TV connector. The DMS-59 connector is used to allow multiple video ports from a single connection. The DMS-59 connector uses a special cable that splits the signal into separate video interfaces. You do not need to link the TV tuner card to the video card; the TV tuner is used for input, while the video card is used for output. Bridge clips are used for multi-GPU configurations.

References

TestOut PC Pro - 3.12 Video
[e_vid_pp6.exam.xml Q_VID_INST_01]

Question 13: Correct

You are installing a high-end PCIe x16 video card in a new computer. The video card has connectors for two displays. The card also has dual fans to cool the unit.

Which of the following will MOST likely be part of the installation?

- ( ) Enable the motherboard's integrated graphics in the BIOS.
- ( ) Enable the video card's second monitor connector in the BIOS.
- (•) Connect a 6- or 8-pin power connector to the video card.
- ( ) Connect a CrossFire bridge cable to the video card.

Explanation

Most high-end PCIe x16 video cards require a special 6-pin or 8-pin power connector for additional power. Be sure to connect the power after inserting the card in the system and prior to turning the system on.

If the motherboard has integrated graphics, it should be disabled in the BIOS when installing a dedicated video card. CrossFire bridge cables are used when installing two video cards in a multi-GPU configuration. Multiple display connectors on a video card do not need to be configured or enabled.

References

TestOut PC Pro - 3.12 Video
[e_vid_pp6.exam.xml Q_VID_INST_02]

Question 14: Incorrect

You have just installed a new video card in Mark's computer. When you power on the computer, Windows automatically detects the new device and tries to locate an applicable device driver. Unfortunately, Windows cannot locate the required driver.

Which of the following would be the BEST administrative tool to fix Mark's computer?

- Resource Monitor
- Computer Management
- ~~System Configuration~~
- Component Services

Explanation

From Windows Administrative Tools, you can open Computer Management > System Tools > Device Manager, from which the device driver for the new video card can be installed.

System Configuration controls the initial startup, the boot files, and services loaded along with other tasks.

Component Services is used to access the local Event Viewer to examine Administrative Events and system logs.

Resource Monitor is a utility that displays information about the use of hardware and software resources in real time.

References

TestOut PC Pro - 3.12 Video
[e_vid_pp6.exam.xml Q_VID_INST_05]

Question 15: Incorrect

A customer would like you to install a high-end video card suitable for gaming.
Your installation and configuration SHOULD include which of the following? (Select THREE).

- [x] Install new the video drivers from CD and then install updated drivers from the internet.
- [ ] Disable the integrated graphics in all cases so they do not interfere with the new video card.
- [ ] Disable power to the integrated graphics.
- [ ] Link the integrated graphics to the new high-end video card using the bridge clip.
- [x] Configure the PC to use the integrated graphics if available and needed.
- [ ] Ensure that the video card is compatible with the expansion slot.
- [x] ~~Add additional RAM to your computer to accommodate the new card's demands.~~

Explanation

It is imperative that you always ensure that the video card is compatible with the expansion slot in which the video card will be installed. In some cases, you may have to disable the integrated graphics. However, if possible, you should configure the computer to default back to the integrated graphics if the new high-end graphics card fails or is removed. Otherwise, you may not be able to access the BIOS/UFI firmware to change the computer back to the integrated graphics. Some high-end graphic cards may require a connection to the power supply, but you do not need to disable power to the integrated

graphics. You typically only need twice as much system memory as your graphics car has VRAM. Since this computer has 16GB RAM and the card is only 4GB, no additional RAM is required.

References

TestOut PC Pro - 3.12 Video
[e_vid_pp6.exam.xml Q_VID_INST_06]