Exam Report: B.4 Domain 3: Mobile Devices, All Questions

Date: 6/21/2017 5:31:00 pm          Candidate: Stangl, Thomas (Email: tstangl@calarttech.edu)
Time Spent: 7:07

## Overall Performance

Your Score: 70%

View results by: ◯ Objective Analysis   ⬤ Individual Responses

## Individual Responses

### ▼ Question 1:          <u>Correct</u>

The integrated mouse, the small monitor, and the compact nature of the keyboard are impeding your work when you use a notebook, but you still need a system that is portable if necessary. What is your best option?

- ◯ Buy a small, lightweight desktop computer.
- ➡ ⬤ Buy a docking station for your notebook.
- ◯ Switch to a tablet device.
- ◯ Buy the biggest notebook possible so you don't feel so confined.
- ◯ Connect an external keyboard, mouse, and monitor when necessary.

### Explanation

A docking station lets you use notebook systems as a desktop system. The docking station includes special ports that connect to the back of the notebook and let you use normal-sized external mouse, keyboard, monitor, and speakers. The docking station provides a quick and easy way to connect these peripheral devices. While you could connect these devices manually each time, using the docking station will be more convenient.

### References

LabSim for PC Pro, Section 8.2.
[pcpro2016_all_questions_en.exm NOTEBOOK_COMPONENTS_04]

### ▼ Question 2:          <u>Incorrect</u>

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

- ⬤ ~~ExpressCard/34~~
- ◯ USB
- ➡ ◯ Mini-PCI
- ◯ Firewire

### Explanation

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

### References

LabSim for PC Pro, Section 8.2.
[pcpro2016_all_questions_en.exm NOTEBOOK_COMPONENTS_06]

▼ **Question 3:**                        <u>Correct</u>

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

  ○ Mini-PCI

➡ ● SATA

  ○ USB

  ○ PCIe

  ○ IDE

## Explanation

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

## References

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

▼ **Question 4:**                        <u>Incorrect</u>

Which of the following are characteristics of the ExpressCard /54 form factor. (Select two.)

  ☑ ~~Rectangular shape~~

  ☐ 68-pin connector

➡ ☐ 34mm wide at the connector

➡ ☐ L shape

  ☑ ~~54mm wide at the connector~~

## Explanation

ExpressCard /54 are L shaped cards that are 34mm wide at the connector end, but 54mm wide on the outside edge. ExpressCard /34 are rectangular cards that are 34mm wide. Older PC Cards used a 68-pin connector.

## References

LabSim for PC Pro, Section 8.2.
[pcpro2016_all_questions_en.exm NOTEBOOK_COMPONENTS_08]

▼ **Question 5:**                        <u>Incorrect</u>

Your laptop has an ExpressCard /54 slot. Which of the following is true? (Select two.)

➡ ☐ You can use an ExpressCard /34 card or an ExpressCard /54 card in the laptop.

  ☑ ~~You can only use an ExpressCard /54 card.~~

➡ ☐ Compatible ExpressCards for the laptop include cards which are rectangular-shaped.

  ☑ ~~Compatible ExpressCards for the laptop only include the L-shaped cards.~~

## Explanation

The ExpressCard /54 slot accepts both ExpressCard /34 or ExpressCard /54 cards. ExpressCard /34 are rectangular-shaped cards, and ExpressCard /54 are L-shaped cards.

## References

LabSim for PC Pro, Section 8.2.
[pcpro2016_all_questions_en.exm NOTEBOOK_COMPONENTS_09]

▼ **Question 6:**                    _Incorrect_

Which of the following input devices uses a stylus?

⃝ Trackpoint

⃝ Touch pad

⦿ ~~Touch screen~~

➡ ⃝ Digitizer

## Explanation

A digitizer pad is used in Tablet PCs to receive input. Input is written onto the pad with a stylus pen, then those motions are transferred into data that is processed by the system. A touchpad and a touch screen uses your fingers to receive input to move or click the mouse. A trackpoint or pointing stick is a knob that moves the cursor.

## References

LabSim for PC Pro, Section 8.2.
[pcpro2016_all_questions_en.exm NOTEBOOK_COMPONENTS_10]

▼ **Question 7:**                    Correct

Which of the following is an extra button or knob on a laptop keyboard that moves the mouse cursor?

⃝ Touch pad

⃝ ExpressCard

⃝ Digitizer

➡ ⦿ Point stick

## Explanation

Pointing sticks (also called a trackpoint) are small knobs in the center of the keyboard. Pushing on this knob moves the cursor. The touchpad is located below the keyboard. Moving your finger across the pad moves the mouse. You can also tap the touchpad to click the mouse. A digitizer pad is used in Tablet PCs to receive input. Input is written onto the pad with a stylus pen, then those motions are transferred into data that is processed by the system. An ExpressCard is an expansion card for laptops.

## References

LabSim for PC Pro, Section 8.2.
[pcpro2016_all_questions_en.exm NOTEBOOK_COMPONENTS_11]

▼ **Question 8:**                    Correct

The power cord for the laptop has a block on it (sometimes called a brick). What does this block do?

⃝ Provides a hub for peripheral USB devices.

- ◉ Converts AC power to DC power
- ○ Converts DC power to AC power
- ○ Provides direct power for CCFL-backlit LCD monitors

## Explanation

The block (also known as a brick) converts alternating current (AC) from the wall outlet to direct current (DC) used by the computer's internal components. CCFL-backlit LCD monitors use AC power. An inverter must convert the DC power from the block to AC power. An LED-backlit LCD monitor uses the DC power from the block.

## References

LabSim for PC Pro, Section 8.2.
[pcpro2016_all_questions_en.exm NOTEBOOK_COMPONENTS_12]

▼ **Question 9:**          Correct

An internal laptop keyboard is generally connected to the laptop's system board using a:

- ○ Mini-molex connector
- ○ USB connector
- ◉ Ribbon cable
- ○ PS/2 port

## Explanation

A laptop keyboard is generally connected to the system board using a flat, ribbon-like cable. PS/2 ports are used to attach external devices, such as keyboards and mice, to older laptops. USB connectors are used to connect external keyboards to a laptop. The power cable for floppy drives uses a mini-molex connector.

## References

LabSim for PC Pro, Section 8.2.
[pcpro2016_all_questions_en.exm NOTEBOOK_COMPONENTS_13]

▼ **Question 10:**          Correct

You have a notebook computer with a built-in wireless network card. One day it stops working. Because the network card is integrated onto the motherboard, you do not want to replace the entire motherboard. What can you use to connect to the wireless network? (Select two.)

- ☐ Enable the Bluetooth adapter on the notebook.
- ☑ Insert an ExpressCard wireless network card.
- ☐ Install a PCI wireless network card.
- ☐ Enable the infrared port on the notebook.
- ☑ Insert a wireless USB network card.

## Explanation

You can add devices to a notebook computer using USB or ExpressCard interfaces. You cannot add a PCI card to a notebook. The infrared port would not be able to connect to the wireless network as it uses a different signal type to communicate between devices. Bluetooth is used to connect to personal area networks (PANs), not LANs.

LabSim for PC Pro, Section 8.2.
[pcpro2016_all_questions_en.exm NOTEBOOK_COMPONENTS_14]

▼ **Question 11:**               <u>Correct</u>

You have been told to replace the hard drive on a laptop computer that has a drive bay accessible from the outside of the computer. Which of the following should you do after powering down the system? (Select two.)

➡ ☑ Unplug the AC power

   ☐ Disconnect the mouse

   ☐ Disconnect the keyboard

   ☐ Remove the system RAM

➡ ☑ Remove the battery

## Explanation

Before servicing the laptop, all power should be removed from the unit, including AC and the battery. There is no need to disconnect the keyboard or mouse, or remove the memory.

## References

LabSim for PC Pro, Section 8.2.
[pcpro2016_all_questions_en.exm NOTEBOOK_COMPONENTS_15]

▼ **Question 12:**               <u>Incorrect</u>

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

➡ ☐ Remove the keyboard.

➡ ☑ Open a panel on the bottom of the notebook.

   ☐ Remove the LCD panel.

   ☑ ~~Remove the bezel.~~

   ☐ Remove a side panel and pull out the tray holding the memory.

## Explanation

You can typically view or add memory to a laptop by removing the access panel on the bottom of the notebook. Some models have one slot accessible from the bottom, and a second slot accessible under the keyboard. Hard drives and optical drives are replaced by removing the slide-out tray (on the front or the side) that holds the device. The bezel is the case in which the LCD screen is set, and typically houses the antenna for wireless network cards.

## References

LabSim for PC Pro, Section 8.2.
[pcpro2016_all_questions_en.exm NOTEBOOK_COMPONENTS_16]

▼ **Question 13:**               <u>Correct</u>

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

   ◯ Remove the keyboard.

➡ ◉ Find a service manual with correct disassembly procedures.

○ Remove the access panel at the bottom of the laptop.

○ Remove the display wires if the video card is integrated into the motherboard.

○ Remove the bezel.

## Explanation

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

## References

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

▼ **Question 14:**              Incorrect

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

➡ ○ Mini-PCI

○ PCI

○ USB

○ Firewire

◉ ~~ExpressCard~~

## Explanation

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

## References

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

▼ **Question 15:**              Correct

You need to replace the hard disk in your laptop computer. Which of the following hard drive sizes would you likely choose for the laptop?

○ 3.5"

○ 5.25"

➡ ◉ 2.5"

○ 1.25"

## Explanation

Notebook hard drives and SSD drives are typically 2.5". 3.5" drives are normal sized drives for desktop computers. 5.25" are older hard drives and floppy drives.

## References

LabSim for PC Pro, Section 8.2.

[pcpro2016_all_questions_en.exm NOTEBOOK_COMPONENTS_19]

▼ **Question 16:**                    <u>Correct</u>

You have removed the bezel from a notebook display that has stopped functioning. You see a DC to AC power inverter at the base of the screen.

What does this tell you about what type of display this must be?

➡ ◉ This is an LCD display that uses CCFL backlighting

    ◯ This is a Plasma display that does not use backlighting

    ◯ This is an LED display that does not use backlighting

    ◯ This is an LCD display that uses LEDs for backlighting

## Explanation

The inverter looks like a long, rectangular circuit board and is used to convert DC power into the AC power used by the fluorescent tubes for the CCFL backlighting. The inverter is usually located at the base of the screen.

LED backlighting does not use a power inverter.

## References

LabSim for PC Pro, Section 8.2.
[pcpro2016_all_questions_en.exm NOTEBOOK_COMPONENTS_20]

▼ **Question 17:**                    <u>Correct</u>

Which type of mobile device are fitness tracker wrist bands, smartwatches, smartglasses, and virtual reality headsets?

    ◯ Phablets

    ◯ e-Readers

    ◯ Tablets

    ◯ Smart phones

➡ ◉ Wearable devices

## Explanation

Wearable devices are a type of mobile device meant to be worn somewhere on the body. These devices range from being as simple as a fitness tracker wrist band to as complex as smartglasses or virtual reality headsets. Most wearable devices are designed to interface with another device. For example, a smartwatch by itself has a limited set of functionality; however, smartwatches are designed to connect to smartphones using Bluetooth. Doing this unlocks additional functionality, such as reading texts or answering phones calls through the smartwatch.

## References

LabSim for PC Pro, Section 8.5.
[pcpro2016_all_questions_en.exm MOBILE_DEVICE_07]

▼ **Question 18:**                    <u>Incorrect</u>

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

Closed source and second most popular mobile device operating system

✓ iOS

Device manufacturers are countless

| ~~Google~~ | Android |

Open source and most popular mobile device operating system

| ✔ Android |

Device manufacturers include Microsoft, Samsung, and HTC

| ~~Google~~ | Windows |

Devices solely designed and developed by Apple

| ✔ iOS |

Closed source and second least popular mobile device operating system

| ✔ Windows |

## Explanation

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

Android

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

iOS

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

Windows

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

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

## References

LabSim for PC Pro, Section 8.5.
[pcpro2016_all_questions_en.exm MOBILE_DEVICE_08-PB]

▼ **Question 19:**                    <u>Correct</u>

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

➡ ◉ Check to see if the wireless adapter is switched off.

○ Return the laptop to the manufacturer for servicing.

○ Install a USB wireless adapter.

○ Realign the wireless antenna in the laptop's bezel.

## Explanation

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

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

## References

LabSim for PC Pro, Section 8.1.
[pcpro2016_all_questions_en.exm NOTEBOOK FEATURES_01]

▼ **Question 20:**                          <u>Correct</u>

A user needs to use her laptop to give a presentation using a video projector. She called asking you how to switch the display to the external monitor port on her laptop. What should you tell her?

○ Increase the screen brightness until the display appears on the video projector.

○ The laptop should have automatically detected the external display and redirected video output to it.

➡ ◉ Press the Fn key along with the function key on the notebook keyboard with a monitor on it.

○ This can't be done. A special adapter must be installed in a USB slot on the laptop.

## Explanation

To redirect the video display to an external video projector, you should press the Fn key along with the function key on the notebook keyboard with a monitor on it.

A special adapter is usually not required as long as you have the correct cable to connect the laptop to the video projector. Some laptops will automatically detect the external display device when its connected and switch the video output to it, but most require you to manually make the switch.

## References

LabSim for PC Pro, Section 8.1.
[pcpro2016_all_questions_en.exm NOTEBOOK FEATURES_02]

▼ **Question 21:**                          <u>Incorrect</u>

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

➡ ☑ Configure the laptop with a biometric fingerprint scanner.

☐ Enable remote wipe on the laptop.

➡ ☐ Secure the laptop to the desk using a cable lock.

☑ ~~Enable passcodes on the laptop.~~

## Explanation

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

• Secure the laptop to the desk using a cable lock. This makes it more difficult to steal the laptop.

• Configure the laptop with a biometric fingerprint scanner. This makes it more difficult to access information on the laptop.

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

### References

LabSim for PC Pro, Section 8.1.
[pcpro2016_all_questions_en.exm NOTEBOOK FEATURES_03]

▼ **Question 22:**               Correct

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

○ USB ports

○ Firewire ports

○ Built-in Bluetooth

➡ ◉ Docking station

○ Infrared wireless

### Explanation

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

### References

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

▼ **Question 23:**               Correct

Laptop memory uses SODIMM and UniDIMM packages with SDRAM and DDR/DDR2/DDR3/DDR4 memory.

What are these modules sometimes called?

○ MacroDIMMs

○ MiniDIMMs

➡ ◉ MicroDIMMs

○ TinyDIMMs

### Explanation

The SODIMM and UniDIMM memory module packages with SDRAM and DDR/DDR2/DDR3/DDR4 are sometimes called *MicroDIMMs*.

### References

LabSim for PC Pro, Section 8.1.
[pcpro2016_all_questions_en.exm NOTEBOOK FEATURES_05]

▼ **Question 24:**               Correct

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

○

○ Dual display

➡ ◉ 180 degree rotating touchscreen

○ Removable touchscreen

○ External touchscreen

## Explanation

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

## References

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

▼ **Question 25:**                    Correct

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



| 1 | 2 | 3 |
|---|---|---|
| ✔ Touchpad (on/off) | ✔ Screen orientation | ✔ Wireless (on/off) |

| 4 | 5 | 6 |
|---|---|---|
| ✔ Bluetooth (on/off) | ✔ Dual displays | ✔ Play/Pause media |

## Explanation

The notebook Fn key icons are used as follows:

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

## References

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

▼ **Question 26:**                    Correct

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

➡ ◉ Lithium Ion (Li-Ion)

○ Nickel Metal Hydride (NiMH)

○ Carbon

○

○   Nickel Cadmium (Ni-Cad)

## Explanation

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

## References

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

▼ **Question 27:**                    Correct

Which of the following battery types has the greatest need to be completely drained before being recharged?

➡  ◉   Nickel Cadmium (Ni-Cad)

   ○   Carbon

   ○   Nickel Metal Hydride (NiMH)

   ○   Lithium Ion (Li-Ion)

## Explanation

Nickel Cadmium (Ni-Cad) batteries experience a memory effect. If the battery is not completely drained before being recharged, the remaining charge in the battery eventually becomes unusable. Draining the battery completely on occasion ensures that the battery can access its full capacity. Nickel Metal Hydride (NiMH) and Lithium Ion (Li-Ion) batteries do not have the memory effect and do not need to be completely drained. However, all batteries have a specific lifetime. After a period of time, the battery becomes less able to hold a charge and should be replaced.

## References

LabSim for PC Pro, Section 8.3.
[pcpro2016_all_questions_en.exm NOTEBOOK_COMPONENTS_03]