



## IT Chapter 6: Laptops & Portable Devices

### Online Study Questions - Key

Test Questions are BLUE

| CUR          | Question                                                                                    | Answer                                                                 |
|--------------|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| <b>6.0</b>   | <b>Introduction</b>                                                                         |                                                                        |
|              | 1. What laptop established the form factor for all modern laptops? (graphic)                | MAC Powerbook 100 - 1991                                               |
| <b>6.1</b>   | <b>Describe laptops and other portable devices</b>                                          |                                                                        |
|              | 2. What cell phones called that have many built-in PDA capabilities?                        | Smartphones                                                            |
| <b>6.1.1</b> | <b>Identify some common uses of laptops</b>                                                 |                                                                        |
|              | 3. What are two reasons that a laptop would be a better choice than a desktop computer?     | Size<br>portability                                                    |
| <b>6.1.2</b> | <b>Identify some common uses of PDAs and Smartphones</b>                                    |                                                                        |
|              | 4. What is an electronic personal organizer with tools to help organize information?        | PDA                                                                    |
|              | 5. What device combines cell phone and computer functions in a single, handheld device?     | Smartphones                                                            |
| <b>6.1.2</b> | <b>Worksheet</b>                                                                            |                                                                        |
| <b>6.2</b>   | <b>Identify and describe the components of a laptop</b>                                     |                                                                        |
|              | 6. What type of display screen is in the lid of a laptop?                                   | integrated                                                             |
| <b>6.2.1</b> | <b>Describe the components found on the outside of the laptop</b>                           |                                                                        |
|              | 7. Why do laptops and desktops use the same types of ports?                                 | so that peripherals can be interchangeable                             |
|              | 8. What indicates Bluetooth, battery and standby mode?                                      | three LEDs on the top of the laptop                                    |
| <b>6.2.1</b> | <b>Explore the Virtual Laptop</b>                                                           |                                                                        |
| <b>6.2.2</b> | <b>Describe the components found on the inside of the laptop</b>                            |                                                                        |
|              | 9. What type of design do laptops have?                                                     | clamshell                                                              |
|              | 10. What type of monitor is built-in on a laptop?                                           | LCD                                                                    |
|              | 11. How can you change between a laptop display and the desktop monitor?                    | A function key on the laptop keyboard toggles between the two monitors |
|              | 12. What tells the CPU to conserve power by extinguishing the backlight and turning off the | The LCD cutoff switch                                                  |

|              |                                                                                                                                 |                                                                                                            |
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|              | LCD?                                                                                                                            |                                                                                                            |
|              | 13. What should you check if you open the laptop and the screen remains dark?                                                   | The switch is broken or dirty                                                                              |
| <b>6.2.2</b> | <b>Explore the Virtual Laptop - Keyboard</b>                                                                                    |                                                                                                            |
| <b>6.2.3</b> | <b>Describe the components found on the laptop docking station</b>                                                              |                                                                                                            |
|              | 14. What do you have access to when you plug the laptop into the base station, ?                                                | power and the attached peripherals.                                                                        |
|              | 15. What is the difference between a docking station and a port replicator?                                                     | Port replicators are usually smaller than docking stations and do not have speakers or PCI slots           |
|              | 16. On the back of the docking station are two laptop ports that are used primarily for communication and network connectivity? | Modem port                                                                                                 |
|              |                                                                                                                                 | Ethernet port                                                                                              |
| <b>6.2.3</b> | <b>Worksheet – Docking Stations</b>                                                                                             |                                                                                                            |
|              | <b>Optional Activity: Virtual Laptop Docking Station</b>                                                                        |                                                                                                            |
| <b>6.3</b>   | <b>Compare and contrast desktop and laptop components</b>                                                                       |                                                                                                            |
|              | 17. Which type of computer has standardized components?                                                                         | Desktop laptop                                                                                             |
|              | 18. Which type of computer usually has components that have a standard form factor?                                             | Desktop laptop                                                                                             |
|              | 19. Which type of computer has proprietary components?                                                                          | Desktop laptop                                                                                             |
| <b>6.3.1</b> | <b>Compare and contrast desktop and laptop motherboards</b>                                                                     |                                                                                                            |
|              | 20. What is the major difference between desktop and laptop motherboards?                                                       | Desktop motherboards have <u>standard form factors</u>                                                     |
|              |                                                                                                                                 | The standard size and shape allow motherboards from different manufacturers to be <u>interchangeable</u> . |
|              |                                                                                                                                 | <u>Laptop</u> motherboards vary by manufacturer and are <u>proprietary</u> .                               |
| <b>6.3.2</b> | <b>Compare and contrast desktop and laptop processors</b>                                                                       |                                                                                                            |
|              | 21. Why do laptop processors use CPU throttling to modify the clock speed?                                                      | to reduce power consumption and heat.                                                                      |
| <b>6.3.3</b> | <b>Compare and contrast desktop and laptop power management</b>                                                                 |                                                                                                            |
|              | 22. What recharges a laptop battery?                                                                                            | The laptop power management                                                                                |

|              |                                                                                                                             |                                                                                                                                              |
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|              | 23. What are the two methods of power management?                                                                           | <ul style="list-style-type: none"> <li>Advanced Power Management (APM)</li> <li>Advanced Configuration and Power Interface (ACPI)</li> </ul> |
|              | 24. What is the current standard?                                                                                           | ACPI                                                                                                                                         |
|              | 25. Which power management system is controlled by the operating system?                                                    | APM    ACPI                                                                                                                                  |
| <b>6.3.4</b> | <b>Compare and contrast desktop and laptop expansion capabilities</b>                                                       |                                                                                                                                              |
|              | 26. What are the four ports used on a desktop to attach peripheral devices?                                                 | serial, parallel, USB, and FireWire ports                                                                                                    |
|              | 27. What two standards make it possible to connect and remove external components without the need to power off the system? | USB and FireWire                                                                                                                             |
|              | 28. What do laptops use the PC card slot for?                                                                               | to connect to peripheral devices using the CardBus standard.                                                                                 |
|              | 29. What are four devices that connect using PC Cards?                                                                      | Memory                                                                                                                                       |
|              |                                                                                                                             | Modems                                                                                                                                       |
|              |                                                                                                                             | Hard drives                                                                                                                                  |
|              |                                                                                                                             | Network cards                                                                                                                                |
|              | 30. What is the standard for PC Cards?                                                                                      | PCMCIA                                                                                                                                       |
|              | 31. What PC card has 34-pin and 54-pin configurations?                                                                      | PC ExpressCards                                                                                                                              |
| <b>6.4</b>   | <b>Explain how to configure laptops</b>                                                                                     |                                                                                                                                              |
| <b>6.4.1</b> | <b>Describe how to configure power settings</b>                                                                             |                                                                                                                                              |
|              | 32. What is the current range in hours that a laptop battery can last without recharging?                                   | 2 to 10 hours                                                                                                                                |
|              | 33. What four conditions are affected by configuring power settings in BIOS?                                                | <ul style="list-style-type: none"> <li>System states</li> </ul>                                                                              |
|              |                                                                                                                             | <ul style="list-style-type: none"> <li>Battery and AC modes</li> </ul>                                                                       |
|              |                                                                                                                             | <ul style="list-style-type: none"> <li>Thermal management</li> </ul>                                                                         |
|              |                                                                                                                             | <ul style="list-style-type: none"> <li>CPU PCI bus power management</li> </ul>                                                               |
|              | 34. In Windows XP, where do you enable the ACPI power management to allow the OS to                                         | in BIOS                                                                                                                                      |

|                                  |                                                                                                                                            |                                                                                                                                                                                                                                                                                                               |
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|                                  | configure all of the power management states?                                                                                              |                                                                                                                                                                                                                                                                                                               |
|                                  | 35. How do you configure the power settings?                                                                                               | click:<br>Start > Control Panel ><br><u>Power Options</u>                                                                                                                                                                                                                                                     |
|                                  | 36. What are a collection of settings that manage the power usage of the computer called?                                                  | <b>Power Schemes</b>                                                                                                                                                                                                                                                                                          |
|                                  | 37. Which two devices can be individually configured to power off after a laptop has been idle for a given period of time?                 | <b>hard drive and the display</b>                                                                                                                                                                                                                                                                             |
|                                  | 38. What are your two options if you do not want to completely shutdown the laptop?                                                        | Standby or Hibernate Sleep                                                                                                                                                                                                                                                                                    |
|                                  | 39. Which mode conserves battery power, but allows the end-user to power on quickly?                                                       | Standby Hibernate                                                                                                                                                                                                                                                                                             |
|                                  | 40. Which mode saves documents and applications to a temporary file on the hard drive?                                                     | Standby <b>Hibernate</b>                                                                                                                                                                                                                                                                                      |
|                                  | 41. Which warning will initiate a forced standby, hibernate, or shut down?                                                                 | Low Battery Alarm<br><br>Critical Battery Alarm                                                                                                                                                                                                                                                               |
| <b>Worksheet: ACPI Standards</b> |                                                                                                                                            |                                                                                                                                                                                                                                                                                                               |
| <b>6.4.2</b>                     | <b>Describe the safe installation and removal of laptop components</b>                                                                     |                                                                                                                                                                                                                                                                                                               |
|                                  | 42. True/False? Always disconnect power and remove the battery before installing or removing laptop components that are not hot-swappable. | <b>True/False</b>                                                                                                                                                                                                                                                                                             |
|                                  | 43. What are the four steps to replace a laptop battery?                                                                                   | <ol style="list-style-type: none"> <li>1. Move the battery lock to the <u>unlocked</u> position.</li> <li>2. Hold the <u>release lever</u> in the unlock position and remove the battery.</li> <li>3. <u>Insert</u> the battery.</li> <li>4. Make sure that both battery levers are <u>locked</u>.</li> </ol> |
|                                  | 44. What is another name for laptop expansion memory?                                                                                      | <b>SODIMM</b>                                                                                                                                                                                                                                                                                                 |
|                                  | 45. What is meant by a laptop device being hot-swappable?                                                                                  | <b>Computer does not need to be turned off in order to install device</b>                                                                                                                                                                                                                                     |
|                                  | 46. Which three internal laptop components may                                                                                             | the PC Card                                                                                                                                                                                                                                                                                                   |

|                                                                 |                                                                                                                                                               |                                     |
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|                                                                 | be designed as a hot-swappable device?                                                                                                                        | Optical Drive<br>USB devices        |
|                                                                 | 47. Are the following three devices hot-swappable, or NOT hot swappable on some laptops? (1) internal hard drive, (2) RAM (3) battery                         | Hot swappable<br>NOT hot swappable  |
| <b>Optional Activity: Virtual Laptop Components and Devices</b> |                                                                                                                                                               |                                     |
| <b>6.5</b>                                                      | <b>Compare the different mobile phone standards</b>                                                                                                           |                                     |
|                                                                 | 48. When cell phones first were introduced, what was the standard?                                                                                            | Analog digital                      |
|                                                                 | 49. Today, what are most cell phone standards?                                                                                                                | Analog digital                      |
|                                                                 | 50. When was the first generation of cell phones introduced?                                                                                                  | 1980s                               |
|                                                                 | 51. When using digital signals, what do they convert the voice to?                                                                                            | 0s and 1s                           |
|                                                                 | 52. What is the generation of cell phones called that switched from analog to digital standards?                                                              | second generation (2G)              |
|                                                                 | 53. What standards allowed cell phones to send and receive text, photos, and video?                                                                           | 3G                                  |
| <b>6.6</b>                                                      | <b>Identify common preventive maintenance techniques for laptops &amp; portable devices</b>                                                                   |                                     |
|                                                                 | 54. True/False? Spilling liquid or dropping debris onto the keyboard cannot cause severe internal damage.                                                     | True False                          |
| <b>6.6.1</b>                                                    | <b>Identify appropriate cleaning procedures</b>                                                                                                               |                                     |
|                                                                 | 55. What device should be cleaned with a soft, lint-free cloth that is lightly moistened with water?                                                          | laptop and keyboard                 |
|                                                                 | 56. What should be used to clean the vents?                                                                                                                   | Compressed air                      |
|                                                                 | 57. True/False? Do not spray cleaning solution directly onto the LCD display                                                                                  | True False                          |
| <b>6.6.2</b>                                                    | <b>Identify optimal operating environments</b>                                                                                                                |                                     |
|                                                                 | 58. Where should you store your laptop?                                                                                                                       | In a padded case                    |
|                                                                 | 59. What is the ideal room temperature for a laptop?                                                                                                          | between 45 to 90 degrees Fahrenheit |
| <b>6.7</b>                                                      | <b>Describe how to troubleshoot laptops and portable devices</b>                                                                                              |                                     |
|                                                                 | 60. True/False? Because many portable devices change rapidly in design and functionality, portable devices are often more expensive to repair than to replace | True False                          |
|                                                                 | 61.                                                                                                                                                           |                                     |
| <b>6.7.1</b>                                                    | <b>Review the troubleshooting process</b>                                                                                                                     |                                     |
|                                                                 | 62. What type of questions should the technician ask to gather the most information from the customer?                                                        | Open                                |

|              |                                                                                                                                         |                                                                            |
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| <b>6.7.2</b> | <b>Identify common problems and solutions</b>                                                                                           |                                                                            |
|              | 63. Your laptop LCD screen will not show anything. You think a projector was attached to it. What can you do to show the laptop screen? | Disconnect external monitors and use the Function keys to activate the LCD |
|              | <b>Worksheet:: Research Laptop Problems Research laptop issues</b>                                                                      |                                                                            |
| <b>6.8</b>   | <b>Summary</b>                                                                                                                          |                                                                            |
| <b>QUIZ</b>  | <b>06: Online Quiz (9 questions)</b>                                                                                                    |                                                                            |