

## Chapter 9: Printers

After completion of this chapter, students should be able to:

- Describe the types of printers currently available.
- Describe the installation and configuration process for printers.
- Describe the potential safety hazards and safety procedures associated with printers and scanners.
- Install and configure a local printer.
- Describe how to share a printer on a network
- Identify and apply common preventive maintenance techniques for printers
- Troubleshoot printers.

### 9.0 Introduction

1. What do printers do?
2. What 3 tasks might a technician be asked to do by a customer?

### 9.1 Describe the types of printers currently available

9.1.1.1 Describe characteristics and capabilities of printers

3. Which type of printer uses electrostatic spray technology?
4. What criteria is used when selecting a printer?
5. How is the speed of a printer measured?
6. How does a printer produce color?
7. CMYK is the acronym for a color system composed by four colors
8. How is the quality of printing measured?

9. Explain what is MTBF (mean time between failures)?
10. What is included in the total cost of ownership (TCO)?

#### 9.1.1.2 Wired Printer Connection Types

11. What is serial data transfer?
12. What is parallel data transfer?
13. What is the current standard for parallel printer ports?
14. What are other names for Firewire?
15. What is Firewire?
16. How many devices can Firewire support?
17. What is the data transfer rate of Firewire?
18. What interface do most network printers use to connect to a network or wireless interface?

#### **9.2.1 Types of Printers**

##### 9.2.1.1 Describe inkjet printers

19. What are the two types of inkjet nozzles?
20. What forces ink out through a thermal nozzle?
21. How long should you avoid touching a printout from an inkjet printer and why?

22. What are the advantages of an inkjet printer?

23. What are the disadvantages of an inkjet printer?

#### 9.2.1.2 Describe laser printers

24. What is a laser printer?

25. What is the electrophotographic drum?

26. What are the seven steps of the laser printing process?(sketch it)

27. What takes place during the charging phase?

28. What is the primary corona?

29. What is the charge of the primary corona?

30. What is the charge applied to the drum during the exposing process?

31. What happens in the fusing phase

32. What are the advantages of a laser printer?

#### 9.2.1.3 Describe thermal printers

33. Where are thermal printers used?

34. What happens to thermal paper when it is heated?

35. What is an advantage of a thermal printer?

36. What are the disadvantages of a thermal printer?

#### 9.2.1.4 Describe dot matrix printers

37. How do impact printers work? (sketch it)

38. What are two examples of impact printers?

39. What are some advantages of impact printers?

40. What are some disadvantages of impact printers?

41. What is the highest quality of print produced by a dot matrix printer?

### 9.3.1 Installing and Configuring Printers

42. What is included on an installation CD?

43. What is a local printer?

44. What is a network printer?

45. Why should you never connect a printer to a UPS?

46. What are printer drivers?

47. What is PDL?

48. What are the advantages of postscript?

49. Where can you download printer drivers?

50. What are the 4 steps to follow when installing a printer driver?

51. What does the test page confirm?

52. How do you send a file to the printer from the command line in Windows XP?

53. Why would you test a printer from the printer panel?

54. How do you designate a default printer in Windows 7?

55. How is most optimization completed?

56. What do print spool settings do?

57. Why is calibration important?

58. What is firmware?

59. How can you improve printing speed and allow the printer to handle more complex print jobs?

**9.3.1.2 Lab – Install a Printer in Windows 7**

**9.3.1.3 Lab – Install a Printer in Windows Vista**

**9.3.1.4 Lab – Install a Printer in Windows XP**

**9.4.1 Describe how to share a printer**

60. What does printer sharing do?

61. What are the steps to enable a computer to share a printer in Windows 7?

62. Wireless printers allow hosts to connect and print wirelessly using what?

63. How do wireless printers designed for 802.11 standards connect to the wireless network?

64. What is the maximum distance apart of devices for infrared printing?

65. What is the purpose of a print server?

66. What are the three functions of a print server?

67. What are the three types of print servers?

68. What is an advantage of using a hardware print server?

69. What is a dedicated PC print server?

70. What resources does a dedicated print server need to have available to meet the request of the print clients?

#### **9.4.2.3 Lab – Share a Printer In Windows 7**

#### **9.4.2.4 Lab – Share a Printer in Windows Vista**

#### **9.5.1 Identify and apply common preventive maintenance techniques for printers**

71. Where can you find the maintenance schedule for a printer?

72. What needs to be done before you start any type of maintenance on a printer?

73. What replacement parts might be included in a maintenance kit for laser printers?

74. When you install new parts or replace toners and cartridges, visually inspect all internal components and perform what tasks?

75. Why should you avoid refilling ink cartridges?

76. Where can you find information on the ink levels?

77. What do you use to wipe off dirt, paper dust, and spilled ink on the exterior of a printer?

78. What preventative maintenance will extend the life of a thermal printer?

79. What are the operating environment guidelines?

#### 9.6.1 Troubleshooting processes for printers

80. What are the steps in the troubleshooting process?