

# Computer Systems Technology 1 (8622)

## Computer Systems Technology 1 (8622) CST1

### A Demonstrating Personal Qualities and Abilities CST1.1

- 1 Demonstrate creativity and innovation. CST1.1.1
  - 2 Demonstrate critical thinking and problem solving. CST1.1.2
  - 3 Demonstrate initiative and self-direction. CST1.1.3
  - 4 Demonstrate integrity. CST1.1.4
  - 5 Demonstrate work ethic. CST1.1.5
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### B Demonstrating Interpersonal Skills CST1.2

- 6 Demonstrate conflict-resolution skills. CST1.2.6
  - 7 Demonstrate listening and speaking skills. CST1.2.7
  - 8 Demonstrate respect for diversity. CST1.2.8
  - 9 Demonstrate customer service skills. CST1.2.9
  - 10 Collaborate with team members. CST1.2.10
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### C Demonstrating Professional Competencies CST1.3

- 11 Demonstrate big-picture thinking. CST1.3.11
- 12 Demonstrate career- and life-management skills. CST1.3.12
- 13 Demonstrate continuous learning and adaptability. CST1.3.13
- 14 Manage time and resources. CST1.3.14
- 15 Demonstrate information-literacy skills. CST1.3.15
- 16 Demonstrate an understanding of information security. CST1.3.16
- 17 Maintain working knowledge of current information-technology (IT) systems. CST1.3.17
- 18 Demonstrate proficiency with technologies, tools, and machines common to a specific occupation. CST1.3.18
- 19 Apply mathematical skills to job-specific tasks. CST1.3.19
- 20 Demonstrate professionalism. CST1.3.20
- 21 Demonstrate reading and writing skills. CST1.3.21
- 22 Demonstrate workplace safety. CST1.3.22

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**D Examining All Aspects of an Industry** CST1.4

- 23 Examine aspects of planning within an industry/organization. CST1.4.23
- 24 Examine aspects of management within an industry/organization. CST1.4.24
- 25 Examine aspects of financial responsibility within an industry/organization. CST1.4.25
- 26 Examine technical and production skills required of workers within an industry/organization. CST1.4.26
- 27 Examine principles of technology that underlie an industry/organization. CST1.4.27
- 28 Examine labor issues related to an industry/organization. CST1.4.28
- 29 Examine community issues related to an industry/organization. CST1.4.29
- 30 Examine health, safety, and environmental issues related to an industry/organization. CST1.4.30

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**E Addressing Elements of Student Life** CST1.5

- 31 Identify the purposes and goals of the student organization. CST1.5.31
- 32 Explain the benefits and responsibilities of membership in the student organization as a student and in professional/civic organizations as an adult. CST1.5.32
- 33 Demonstrate leadership skills through participation in student organization activities, such as meetings, programs, and projects. CST1.5.33
- 34 Identify Internet safety issues and procedures for complying with acceptable use standards. CST1.5.34

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**F Exploring Work-Based Learning** CST1.6

- 35 Identify the types of work-based learning (WBL) opportunities. CST1.6.35
- 36 Reflect on lessons learned during the WBL experience. CST1.6.36
- 37 Explore career opportunities related to the WBL experience. CST1.6.37
- 38 Participate in a WBL experience, when appropriate. CST1.6.38

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**G Investigating Careers** CST1.7

- 39 Describe the primary responsibilities of a computer systems technician. CST1.7.39
- 40 Research career opportunities in computer systems technology. CST1.7.40
- 41 Explain IT industry certifications. CST1.7.41

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## **H Developing Communication Skills and Ethics** CST1.8

- 42 Explain the ethical and legal aspects of working with computer technology. CST1.8.42
- 43 Describe the customer-support environment and technician responsibilities. CST1.8.43
- 44 Demonstrate communication skills used in customer service. CST1.8.44

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## **I Demonstrating Safe Lab Procedures and Tool Use** CST1.9

- 45 Explain the purpose of safe working conditions and procedures. CST1.9.45
- 46 Demonstrate safe tool and material use in the lab. CST1.9.46

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## **J Examining Personal Computer Hardware** CST1.10

- 47 Describe a computer system. CST1.10.47
- 48 Describe computer components. CST1.10.48
- 49 Describe external ports and cables. CST1.10.49
- 50 Describe input devices. CST1.10.50
- 51 Describe output devices. CST1.10.51
- 52 Explain system resources and their purposes. CST1.10.52

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## **K Assembling a Personal Computer** CST1.11

- 53 Install the power supply. CST1.11.53
- 54 Demonstrate how to attach components to the motherboard and install the motherboard. CST1.11.54
- 55 Install internal drives. CST1.11.55
- 56 Install adapter cards. CST1.11.56
- 57 Connect internal cables. CST1.11.57
- 58 Assemble the computer case. CST1.11.58
- 59 Boot the computer. CST1.11.59
- 60 Replace computer components. CST1.11.60

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## **L Exploring the Fundamentals of Operating Systems** CST1.12

- 61 Explain the purpose of an operating system. CST1.12.61
- 62 Compare purpose, limitations, and compatibilities of operating systems. CST1.12.62
- 63 Determine operating system based on customer needs. CST1.12.63
- 64 Prepare for operating system installation. CST1.12.64
- 65 Install an operating system. CST1.12.65
- 66 Navigate a graphical user interface (GUI). CST1.12.66

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**M Examining Preventive Maintenance and Troubleshooting** CST1.13

- 67 Explain the purpose of preventive maintenance and system security management. CST1.13.67
- 68 Apply common preventive-maintenance techniques for operating systems. CST1.13.68
- 69 Identify basic procedures for troubleshooting operating systems. CST1.13.69
- 70 Identify tools and software to perform preventive maintenance. CST1.13.70

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**N Examining Laptops** CST1.14

- 71 Compare desktop and laptop characteristics. CST1.14.71
- 72 Describe the components of a laptop. CST1.14.72
- 73 Compare desktop and laptop components. CST1.14.73
- 74 Describe how to configure laptops. CST1.14.74
- 75 Explain common preventive-maintenance techniques for laptops and portable devices. CST1.14.75
- 76 Explain troubleshooting and repair procedures for laptops. CST1.14.76

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**O Examining Printers** CST1.15

- 77 Describe the types of printers currently available. CST1.15.77
- 78 Describe potential safety hazards and safety procedures associated with printers. CST1.15.78
- 79 Describe the installation and configuration process for printers. CST1.15.79
- 80 Configure a local printer. CST1.15.80
- 81 Configure a network printer. CST1.15.81
- 82 Explain procedures for upgrading printers. CST1.15.82
- 83 Demonstrate common preventive-maintenance techniques for printers. CST1.15.83
- 84 Troubleshoot local and network printers. CST1.15.84

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**P Exploring Networks** CST1.16

- 85 Explain the principles of networking. CST1.16.85
- 86 Describe types of networks. CST1.16.86
- 87 Describe networking concepts and technologies. CST1.16.87
- 88 Describe the physical components of a network. CST1.16.88
- 89 Describe LAN topologies and architectures. CST1.16.89
- 90 Identify standards organizations. CST1.16.90
- 91 Identify IEEE standards. CST1.16.91
- 92 Compare Open System Interconnection (OSI) and Transmission Control Protocol/Internet Protocol (TCP/IP) data models. CST1.16.92
- 93 Configure a network interface controller (NIC). CST1.16.93
- 94 Identify technologies used to establish connectivity. CST1.16.94
- 95 Construct an Ethernet cable. CST1.16.95
- 96 Identify common network problems and solutions. CST1.16.96

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**Q Exploring Cloud Computing and Virtualization** CST1.17

- 97 Compare cloud computing concepts. CST1.17.97
- 98 Examine the types of virtualization. CST1.17.98
- 99 Determine the benefits and drawbacks of cloud computing and virtualization. CST1.17.99
- 100 Examine the use cases for cloud computing and virtualization. CST1.17.100
- 101 Differentiate between measured service and metered service. CST1.17.101