



Job Ready Assessment Blueprint

Computer Repair Technology



Test Code: 3415 / Version: 01

“Measuring What Matters”

Specific Competencies and Skills Tested in this Assessment:

Installing, Configuring, Upgrading

- Install, configure, optimize, and upgrade system board, power supplies, and cooling systems
- Differentiate characteristics of various processor and memory types
- Display familiarity with CMOS setup and BIOS upgrade
- Identify functionality, install, and configure storage device options
- Identify and describe characteristics of various peripherals and ports used
- Display knowledge of operating system and licensing requirements



Diagnosing and Troubleshooting

- Display familiarity with processor and memory faults
- Demonstrate ability to isolate and resolve power supply, system board, and battery failures
- Display ability to identify and resolve storage device issues
- Identify uses of troubleshooting utilities
- Troubleshoot and resolve video issues
- Demonstrate ability to isolate and resolve peripheral and connectivity failures
- Identify tools, diagnostic procedures, and troubleshooting techniques for operating systems and recovery

Preventive Maintenance

- Identify and implement proper personal and equipment safety procedures, including those involving ESD events
- Differentiate between line conditioners, UPS (uninterruptible power supply), and surge protectors
- Select and perform proper file backup procedures
- Utilize, monitor, and analyze various system utilities
- Install and maintain current software patches, service packs, and upgrades
- Install and maintain current antivirus, spyware, and/or malware software
- Identify proper disposal procedures (i.e., batteries, monitors)

Specific Competencies and Skills continued:

System Boards, Processors, and Memory

- Identify processor compatibility, architecture, and upgrade issues
- Identify and differentiate memory characteristics and upgrade issues
- Identify and differentiate system board characteristics and upgrade issues

I/O (Input-Output) Devices

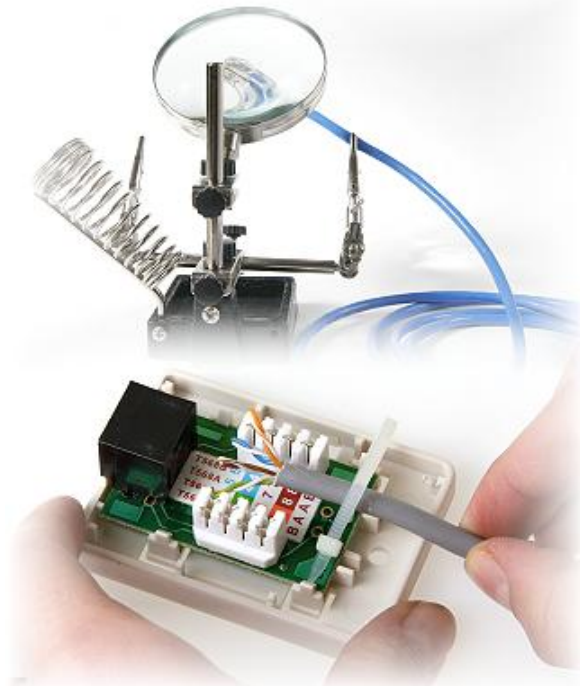
- Display understanding of human interface devices
- Identify uses of various input devices (i.e., digital camera, scanner, biometric devices)
- Identify various I/O connectivity methods

Printing

- Identify and differentiate various printer methodologies
- Identify various printer connectivity methods

Basic Networking

- Install, configure, and troubleshoot Network Interface Cards (NICs)
- Install, configure, and troubleshoot analog and digital connections
- Install, configure, and troubleshoot wired and wireless connections
- Identify various network topologies
- Identify various network access methods
- Differentiate between a client/server and a peer-to-peer network



Specific Competencies and Skills continued:

Security

- Identify and remove viruses and trojans
- Identify and remove spyware, adware, and malware
- Apply various anti-spam techniques
- Isolate and resolve firewall issues
- Implement physical security plan for equipment
- Identify proper use of logical security

Customer Support and Ethics

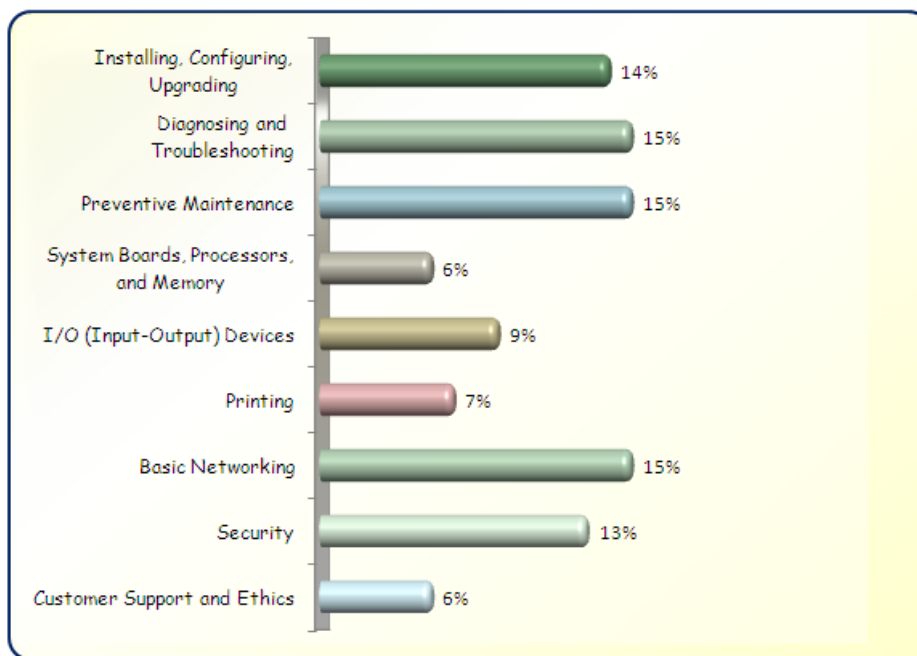
- Practice professional communication and customer service skills
- Practice ethical use of software and hardware
- Demonstrate professional behavior and appearance

Written Assessment:

Administration Time: 3 hours

Number of Questions: 155

Areas Covered:



Sample Questions:

The BIOS POST can detect

- A. poor monitor quality
- B. sound card failure
- C. mouse failure
- D. a bad memory module

Windows XP provides a backup utility that allows backups to tape, zip drives, and

- A. offsite storage
- B. Excel spreadsheets
- C. Word documents
- D. recordable DVDs

An example of primary storage memory is

- A. the hard drive
- B. a DVD
- C. a CD-ROM
- D. RAM

An example of a barcode reader is a

- A. mouse
- B. keyboard
- C. touch screen
- D. pen wand

Public locations where wireless Internet access is available are called

- A. hubs
- B. access points
- C. local area networks
- D. hot spots



Performance Assessment:

Administration Time: 2 hours and 15 minutes

Number of Jobs: 3

Areas Covered:

20% Device Identification

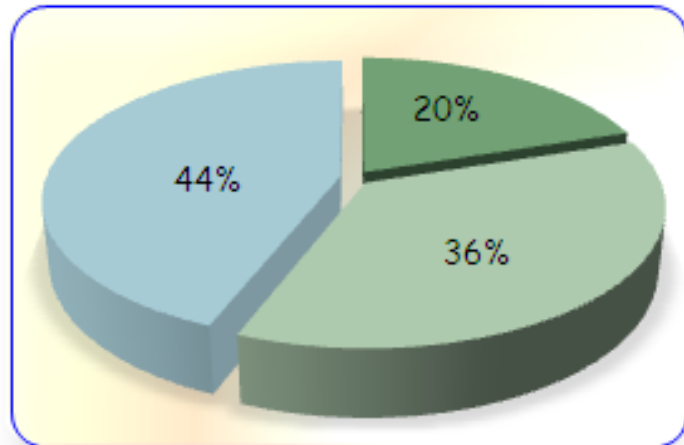
Participant is to correctly identify computer features

36% Network Connectivity

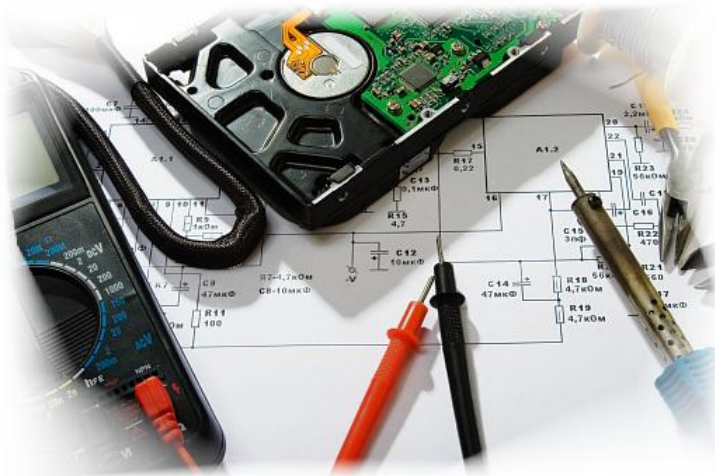
Install, configure, and connect the NIC, use IPCONFIG to check the IP address, PING the network device (school specified address) with zero packet loss. Use of correct tools and appropriate safety procedures.

44% Install New Hardware/Troubleshooting

Diagnose and document computer faults, device manager verified correction of computer faults, document recommendations.



- Sample Job:** Device Identification
- Maximum Time:** 45 minutes
- Participant Activity:** The test participant will identify each feature of the computer and record the name next to the correct letter.



The Association for Career and Technical Education (ACTE), the leading professional organization for career and technical educators, commends all students who participate in career and technical education programs and choose to validate their educational attainment through rigorous technical assessments. In taking this assessment you demonstrate to your school, your parents and guardians, your future employers and yourself that you understand the concepts and knowledge needed to succeed in the workplace. Good Luck!