



## Job Ready Assessment Blueprint

# Computer Technology



Test Code: 4022 / Version: 01

**“Measuring What Matters”**

## Specific Competencies and Skills Tested in this Assessment:

### Professional Standards, Ethics, and Business Practices

- Identify professional standards and etiquette
- Demonstrate awareness of copyright laws and licensing
- Identify characteristics of computer ethics (i.e., Internet, confidentiality, user policies, billing practices)

### General Computer Knowledge/Concepts

- Identify and convert between different number systems (i.e., binary, hexadecimal, octal, decimal)
- Identify basic computer terminology (i.e., software, hardware, networking, and security)
- Demonstrate familiarity with basic programming concepts
- Demonstrate understanding of troubleshooting skills
- Identify and apply general safety procedures
- Demonstrate familiarity with basic project management and system analysis concepts



### PC (Personal Computer) Hardware Knowledge

- Identify current technologies (i.e., processors, memory, storage, interfaces)
- Demonstrate understanding of different printing technologies
- Display knowledge of input devices (cameras, scanners, keyboard and mouse)
- Exhibit knowledge of output devices (i.e., CRT, LCD, printer, iPod, flash media)
- Display knowledge of communication devices (i.e., modem, NIC, hub, router)
- Differentiate between servers, workstations, laptops

**Specific Competencies and Skills continued:****PC (Personal Computer) Software Knowledge**

- Exhibit familiarity with personal computer operating systems
- Demonstrate familiarity with common software applications
- Exhibit familiarity with email software and etiquette
- Demonstrate proficiency with web browsing software (i.e., search engine items, HTML, JAVA script, XML)
- Demonstrate familiarity with utility software

**Networking and Data Communications**

- Recognize various network types and topologies
- Identify network protocols and LAN access methods
- Demonstrate familiarity with network services (VPN, video conferencing, file/printer sharing, DNS, DHCP, web services)
- Identify data communications media (i.e., Ethernet, 10BASE-T, wireless, cable, satellite)
- Identify various Internet connectivity methods (i.e., cable modem, DSL, T1, dial-up, WiFi)

**Security**

- Exhibit working knowledge of software security (passwords, anti-malware, etc.)
- Demonstrate understanding of security procedures (physical and logical)

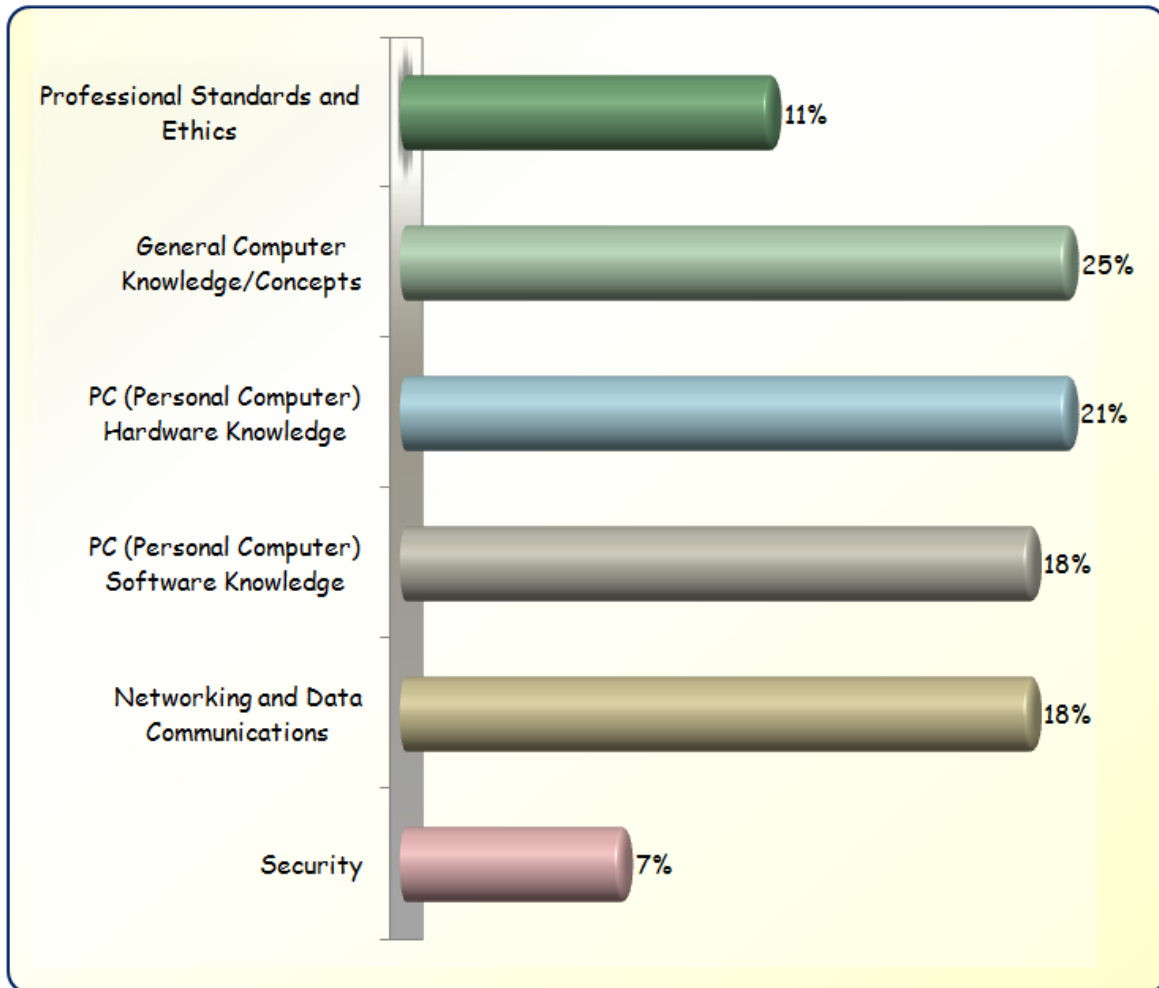


### Written Assessment:

Administration Time: 3 hours

Number of Questions: 159

### Areas Covered:



## Sample Questions:

NOS stands for

- A. network optimization system
- B. network overseer system
- C. network optical system
- D. network operating system

ROM is widely used for

- A. temporarily storing of application data
- B. increasing performance of video cards
- C. buffering communications
- D. storing system firmware

The default port for a web server is

- A. 20
- B. 25
- C. 80
- D. 143

A national or global network of computers is called a

- A. LAN
- B. WAN
- C. MAN
- D. PAN

A boot sector virus generally stores itself in the

- A. MBR
- B. FAT
- C. root directory
- D. BIOS



## Performance Assessment:

**Administration Time:** 3 hours

**Number of Jobs:** 4

### Areas Covered:

#### 31% File Management Using Windows GUI

Make folders on flash drive, locate/copy files to SYSTEM folder, create/save files to SYSTEM folder, create a folder tree on the SYSTEM folder, copy specified files, print files, rename extensions, submit specified material, and time to complete Job 1.

#### 15% Word Processing Applications

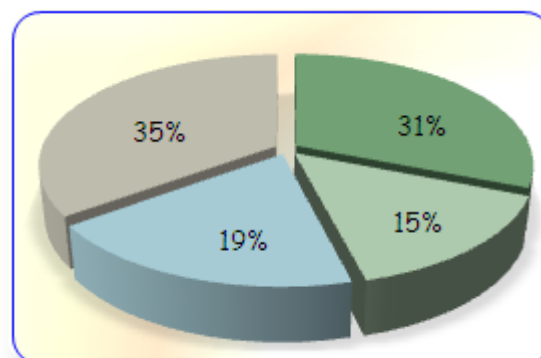
Prepare a draft copy of a letter, save and print draft letter, edit letter per instructions, and time to complete Job 2.

#### 19% Spreadsheet Applications

Spreadsheet set-up and layout, spreadsheet contents, format spreadsheet for printing, print spreadsheet showing formulas, print spreadsheet showing all values, and time to complete Job 3.

#### 35% Network Connectivity

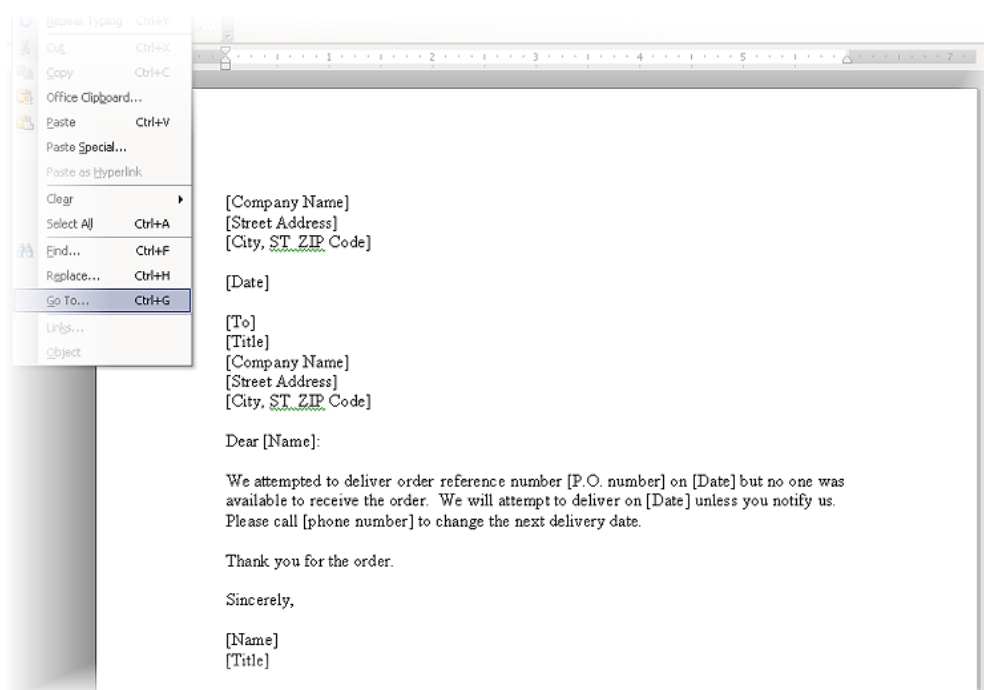
Set proxy server for Internet access, identify and record the proxy server address and port, computer name, working group or domain, IP address and subnet mask, DNS server, DNS suffix, DHCP server, MAC address; verify and record connectivity to server; trace a route to the server; and time to complete Job 4.



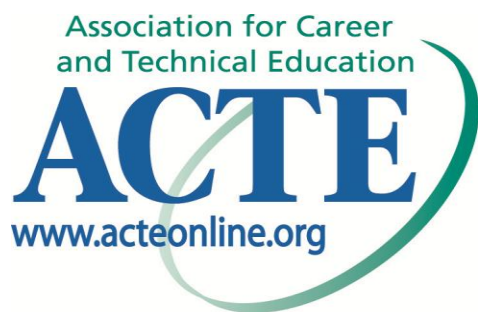
**Sample Job:** Word Processing

**Maximum Time:** 45 minutes

**Participant Activity:** The participant will use a word processing application to type a business letter using the formatting directions provided. These directions include using various functions such as the thesaurus and spell checker.



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!