



Computer Technology

General Assessment Information

Blueprint Contents

| | |
|---|------------------------------------|
| General Assessment Information | Sample Written Items |
| Written Assessment Information | Performance Assessment Information |
| Specific Competencies Covered in the Test | Sample Performance Job |

Test Type: The Computer Technology assessment is included in NOCTI's Teacher assessment battery. Teacher assessments measure an individual's technical knowledge and skills in a proctored proficiency examination format. These assessments are used in a large number of states as part of the teacher licensing and/or certification process, assessing competency in all aspects of a particular industry. NOCTI Teacher tests typically offer both a written and performance component that must be administered at a NOCTI-approved Area Test Center. Teacher assessments can be delivered in an online or paper/pencil format.

Revision Team: The assessment content is based on input from subject matter experts representing the following states: California, Kentucky, Missouri, New Jersey, North Dakota, Oklahoma, Pennsylvania, and Virginia.



11.1006- Computer
Support Specialist



Career Cluster 11-
Information Technology



15-1151.00- Computer
User Support Specialists

Written Assessment

NOCTI written assessments consist of questions to measure an individual's factual theoretical knowledge.

Administration Time: 3 hours

Number of Questions: 148

Number of Sessions: This assessment may be administered in one, two, or three sessions.

Areas Covered



Specific Standards and Competencies Included in this Assessment

Professional Standards, Ethics, and Business Practices

- Identify professional standards and etiquette, including social media
- Demonstrate awareness of copyright laws, licensing, and intellectual freedoms and properties
- Identify characteristics of computer ethics (e.g., Internet, confidentiality, user policies, billing practices)
- Demonstrate effective technical and professional communication skills

General Computer Knowledge and Concepts

- Identify and convert between different number systems (e.g., binary, hexadecimal, decimal)
- Identify basic computer terminology (e.g., software, hardware, networking, and security)
- Identify basic concepts of computer programming (e.g., flow charts, general knowledge)
- Demonstrate understanding of troubleshooting skills
- Identify and apply general safety procedures
- Demonstrate familiarity with basic task management, prioritization, and planning

PC (Personal Computer) Hardware Knowledge

- Identify various technologies (e.g., processors, memory, storage, interfaces, mobile devices)
- Demonstrate understanding of different printing technologies
- Exhibit knowledge of input devices (e.g., cameras, scanners, keyboards, mice)
- Exhibit knowledge of output devices (e.g., LCD, printers, tablets, external storage, entertainment devices)
- Display knowledge of communication devices (e.g., modem, NIC, hub, switch, router)
- Differentiate between servers, workstations, and virtual clients

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Specific Standards and Competencies (continued)

PC (Personal Computer) Software Knowledge

- Exhibit familiarity with operating systems
- Demonstrate familiarity with common software applications
- Exhibit knowledge of email software
- Demonstrate ability to install and maintain computer software
- Demonstrate proficiency with web browsing software (e.g., search engine items, HTML, Javascript, XML, plug-ins)
- Demonstrate familiarity with utility software (e.g., defrag, chkdsk, system restore)



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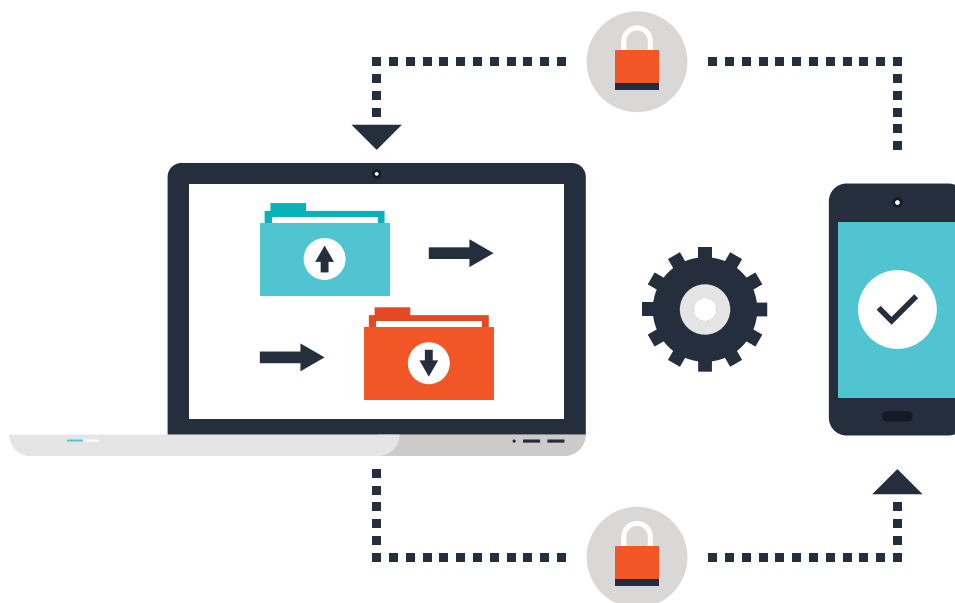
Specific Standards and Competencies (continued)

Networking and Data Communications

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

Security

- Exhibit knowledge of information security, passwords, firewalls, and malicious software
- Exhibit knowledge of secure PKI, SSL, and Web communications
- Demonstrate understanding of security concepts



Sample Questions

Once a user purchases software with a single-use license, the user may

- A. copy the software to another DVD or thumb drive to be used as a back-up
- B. allow a coworker to copy the software onto another computer
- C. allow a family member to copy the software onto another computer
- D. copy the software to a network for further distribution

Organizing a solution that proceeds from the general to the specific is called

- A. the modular approach
- B. the end result of structured programming
- C. simple sequence logic
- D. top-down design

What software is required to access .pdf files?

- A. Real Player
- B. DirectX
- C. Acrobat Reader
- D. Internet Explorer

Which of the following transmits data using light pulses?

- A. Ethernet cables
- B. satellite systems
- C. fiber optic cables
- D. coaxial cables

Select the most secure password from the list below.

- A. 078uhBU*38
- B. PassWord
- C. qwerty1
- D. 93niGhkL

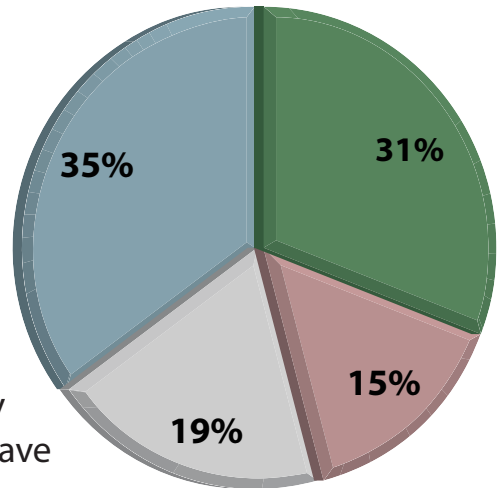
Performance Assessment

NOCTI performance assessments allow individuals to demonstrate their acquired skills by completing actual jobs using the tools, materials, machines, and equipment related to the technical area.

Administration Time: 3 hours

Number of Jobs: 4

Areas Covered:



31% File Management Using Windows GUI

Participant will make folders on a flash drive, locate/copy and create/save specified files to SYSTEM folder, create/save specified files to the root of SYSTEM and create a folder tree on SYSTEM, copy files into Test.txt, Print Test.txt and write name on it, rename .txt extensions to .doc extensions, save a copy of SYSTEM to DATA1, and submit material to evaluator.

15% Word Processing Applications

Participant will prepare, save and print, and edit a draft letter, then print, save and submit the completed letter.

19% Spreadsheet Applications

Participant will set up a spreadsheet, with correct content, format the spreadsheet for printing, print showing formulas, print showing all values, and save and submit the completed spreadsheet.

35% Network Connectivity

Participant will set the proxy server for Internet access, identify and record the proxy server address and port, the computer name, computer workgroup or domain, IP address and subnet mask, the DNS server and suffix, DHCP server, MAC address, and connectivity to the server, trace a route to the server, submit the completed worksheet to the evaluator, and turn in flash drive.

Sample Job

Word Processing Applications

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.

