JOB READY ASSESSMENT BLUEPRINT

TELECOMMUNICATIONS – PILOT

Test Code: 1039
Version: 01

Specific Competencies and Skills Tested in this Assessment:

Transmission
Distinguish between types of fiber
Identify light source components
Recognize transmission terms
Explain the function of light sources
Explain how electrical signal flows through copper cable
Explain how signal propagates through optical cable
Identify light source requirements by system
Identify transmission rate factors

Outside Plant Facilities
Identify fiber system outside plant
Identify coaxial cable system outside plant
Identify twisted pair copper outside plant
Describe differences in connection between copper and fiber
Describe fiber construction
Describe coax construction

Safety
Use caution with fiber optic lasers
Apply ANSI classifications to fiber optic lasers
Identify organizations/publications related to industry safety
Bond the telephone system to ground
Identify personal protective equipment
Use caution in splicing fiber

Telecommunications continued

Maintenance/Trouble
Avoid installation trouble
Troubleshoot for dial tone at the NID
Troubleshoot possible sources of signal loss
Explain dB loss
Measure dB loss
Calculate dB loss
Interpret dB loss
Estimate what dB loss should be
Identify the reason for bonding cable
Explain loss over fiber
Identify differences in troubleshooting fiber and copper
Recognize fiber optic transmission problems
Recognize broadband transmission problems
Identify the differences between Db-mV and Db
Splice 25 twisted copper pairs per PIC color code

History
Demonstrate knowledge of telephony history

Competitive Advantage
Make suggestions to customers based on customer equipment
Prepare to recognize change
Discuss advantages of fiber over copper

Telecommunications continued

Written Assessment:

Administration Time: 3 hours
Number of Questions: 150

Areas Covered:

25%	Transmission
17%	Outside Plant Facilities
13%	Safety
32%	Maintenance/Trouble
5%	History
8%	Competitive Advantage

Sample Questions:

What is the symbol for refractive index?

A. z
B. n
C. r
D. i

What type of coaxial cable is used in underground installations?

A. non-flooded
B. messengered
C. non-messengered
D. flooded, non-messengered

Which laser classification produces enough radiation to be a fire hazard?

A. Class I
B. Class II
C. Class III
D. Class IV

What is the best method for making a hole in carpet?

A. drill from below
B. drill from above
C. use a carpet punch
D. use a scratch awl

What are the three steps needed to convert an analog signal to a digital format?

A. modulation, conversion, and modulation
B. sampling, quantizing, and encoding
C. modulation, conversion, and encoding
D. sampling, conversion, and encoding

Performance Assessment:

Administration Time: 2 hours
Number of Jobs: 3

Areas Covered:

2% **Tool/Material/Equipment Identification**
Tool identification.

52% **Install A Residential Phone Service and Phone Jack With Live Dial Tone**
Anchoring hardware, mounting of phone jack, network interface device, distribution terminal, Serving Area Interface (SAI) on F2 side, Serving Area Interface (SAI) on F1 side, and dial tone.

46% **Troubleshoot A Fault In A Residential Phone Service**
First test point, second test point, written description of fault, fault correction, and dial tone detection.

Sample Job: Install A Residential Phone Service and Phone Jack with Live Dial Tone

Maximum Job Time: 1 hour

Participant Activity: Using specifications provided by the evaluator for the location, network interface device, distribution terminal, binding post, and phone jack height, the participant will install a residential phone service and phone jack with a live dial tone using the instructions provided.