

Telecommunications Technician (1-58)

Senior Telecommunications Technician (1-85)

Use the rating scales to rate questions 1-24

Respond to each of the following statements by indicating how the statement applies to you. You are required to respond to every statement by marking one option from the scales provided.

In responding to each statement, you may refer to your FORMAL EDUCATION, FORMAL TRAINING COURSES, and/or WORK EXPERIENCE whether paid or volunteer.

Years of experience

- **More than 6 years experience performing this task**
- **More than 5 years but less than 6 years experience performing this task**
- **More than 3 years but less than 5 years experience performing this task**
- **More than 1 year but less than 3 years experience performing this task**
- **More than 6 months but less than 1 year experience performing this task**
- **0 to 6 months experience performing this task**

Level at which the task was performed

- **Supervised and/or trained others on task**
- **Performed task as a lead or as an expert**
- **Worked independently on task**
- **Worked under direction on or assisted with task (e.g. managers, leads, instructors) not performed**

1	Installing communications wiring and cabling (e.g., copper, fiber, coax, waveguide) and associated connectors to ensure reliable connections between various pieces of electronic equipment for communications systems.
2	Maintaining communications wiring and cabling (e.g., copper, fiber, coax, waveguide) and associated connectors to ensure reliable connections between various pieces of electronic equipment for communications systems.
3	Repairing communications wiring and cabling (e.g., copper, fiber, coax, waveguide) and associated connectors to ensure reliable connections between various pieces of electronic equipment for communications systems.
4	Installing communications and emergency warning equipment in public safety vehicles and testing equipment to ensure proper operation and compliance with State and Federal law.

5	Maintaining communications and emergency warning equipment in public safety vehicles and test equipment to ensure proper operation and compliance with State and Federal law.
6	Repairing communications and emergency warning equipment in public safety vehicles and test equipment to ensure proper operation and compliance with State and Federal law.
7	Modifying communications equipment and test equipment to improve the efficiency of communications systems in accordance with Federal Communications Commission (FCC) rules and/or industry standards.
8	Maintaining communications equipment and test equipment to improve the efficiency of communications systems in accordance with Federal Communications Commission (FCC) rules and/or industry standards.
9	Troubleshooting and repairing communications equipment and test equipment to improve the efficiency of communications systems in accordance with Federal Communications Commission (FCC) rules and/or industry standards.
10	Maintaining circuits and components of communications equipment using proper methods (e.g., computer interface, end to end tests, electronic theory knowledge) to ensure functionality of equipment.
11	Verifying that electronic test equipment (e.g., radio frequency service monitors, computers, oscilloscopes, metering panels, audio test sets) is functioning within manufacturer specifications to ensure reliable test results.
12	Performing preventative maintenance on a regular basis in order to ensure proper operation of communications equipment in accordance with Federal Communications Commission (FCC) regulations.
13	Analyzing causes of radio frequency interference (e.g., intermodulation, de-sense, on-carrier interference) within communications systems using test equipment in order to identify the source.
14	Eliminating or minimizing sources of radio frequency interference (e.g., intermodulations, de-sense, on-carrier interference) using applicable methods (e.g., repositioning antennas, removal of rust, retuning transmitter, grounding) within communications systems in accordance with Federal Communications Commission (FCC) rules and regulations and industry standards.
15	Maintaining Direct Current (DC) power systems (e.g., solar systems, battery systems, low voltage disconnect units, uninterruptable power supply) to ensure proper operation of communications systems.
16	Monitoring backup Alternating Current (AC) power systems (e.g., generators, transfer panels) and reporting discrepancies to the responsible party.
17	Downloading files and programs from computer networks to support field operations for communications systems.
18	Programming personalities into communications equipment using compatible computers with communications systems in accordance with Federal Communications Commission (FCC) rules and regulations.

19	Documenting job-related activities (e.g., service orders, location of equipment, repair parts, weekly time sheets, travel claims, Federal Communications Commission (FCC) licenses, vehicle logs) in order to maintain communications records and assist with billing.
20	Setting operational parameters on communications equipment using computers to define functions, enter data, or process information.
21	Communicating and illustrating layouts of equipment (e.g., electrical distribution, site access maps, special site considerations and needs, interconnect drawings) using drawings, schematics, or other documentation to assist with the maintenance and engineering of communications systems.
22	Conducting visual observations of conditions in order to report safety issues (e.g., fire dangers, gas leaks, structural damage to radio sites, heating and cooling equipment operation, general site cleanliness, rodent infestations) to ensure continued functionality of communications systems.
23	Communicating with clients regarding communications equipment to ensure that systems are being properly maintained.
24	Demonstrating equipment to clients and explaining proper operation in response to any inquiries or complaints.

Use the rating scales to rate questions 25-57

Respond to each of the following statements by indicating how the statement applies to you. You are required to respond to every statement by marking one option from the scale provided.

In responding to each statement, you may refer to your FORMAL EDUCATION, FORMAL TRAINING COURSES, and/or WORK EXPERIENCE whether paid or volunteer.

Years of experience

- I have applied this knowledge or ability for more than 6 years.
- I have applied this knowledge or ability for at least 5 years but less than 6 years.
- I have applied this knowledge or ability for at least 3 years but less than 5 years.
- I have applied this knowledge or ability for at least 1 year but less than 3 years.
- I have applied this knowledge or ability for less than 1 year.
- I do not possess this knowledge or ability.

25	Knowledge of techniques (e.g., soldering, connectorizing, interpreting schematic diagrams) used in the installation and modification of communications equipment and systems at the component level to ensure proper operation of equipment.
26	Ability to modify and assemble communications equipment to properly interface with communications systems in accordance with manufacturer specifications and engineering instructions.

27	Knowledge of the methods of repair, diagnosis, and maintenance of communications equipment and systems at the component level to ensure proper operation of equipment.
28	Knowledge of troubleshooting techniques for communications equipment and systems at the component level to resolve equipment operation problems.
29	Knowledge of manufacturer software applications (e.g., consoles, logging recorders, radio programming) to effectively configure and repair communications equipment.
30	Knowledge of operational configurations of hardware (e.g., consoles, logging recorders, repeaters/base stations) within communications systems to ensure proper operations.
31	Knowledge of wiring, cabling, and connectors associated with communications systems to successfully interconnect various pieces of equipment.
32	Knowledge of the laws, rules, and regulations of the Federal Communications Commission (FCC) relating to radio and microwave communications to ensure compliance.
33	Knowledge of safety procedures with regards to climbing, carrying, and lifting to reduce risk of injury.
34	Knowledge of safety procedures to reduce risk of injury associated with hand and power tools (e.g., soldering, drills, grinder).
35	Knowledge of safety procedures to reduce risk of injury applicable to working with electrical energy (e.g., radio frequency radiation exposure, electrical shock).
36	Knowledge of Electrical Static Discharge (ESD) safety procedures to prevent damage to electronic components.
37	Ability to interpret and apply the laws, rules, and regulations of the Federal Communications Commission (FCC) relating to radio and microwave communications to ensure compliance.
38	Ability to use basic algebra and electronic formulas to prepare various reports, summaries, and electronic calculations.

39	Ability to diagnose problems with radio, microwave, and communications systems at the component level to ensure operability of equipment.
40	Ability to detect, eliminate, and prevent sources of radio frequency interference using test equipment on radio, microwave, and communications systems to assure proper operation.
41	Ability to use a computer to service radio and microwave equipment and communications systems (e.g., program, align, edit).
42	Ability to use precision instruments for measuring radio frequencies, power, deviation, modulation, and other parameters as required by the Federal Communications Commission (FCC).
43	Knowledge of computer operating system software (e.g., Linux, Windows, DOS) to meet work requirements.
44	Knowledge of networking principles [e.g., Transmission Control Protocol/Internet Protocol (TCP/IP), User Datagram Protocol (UDP), Ethernet networks, routing protocols, File Transfer Protocol (FTP), Simple Network Management Protocol (SNMP), Dynamic Host Control Protocol (DHCP)] to manage, configure, and troubleshoot problems on communications systems.
45	Knowledge of various types of computer component hardware (e.g., hard drives, Random Access Memory (RAM), optical drives, processors, Personal Computer (PC) architectures) to diagnose and repair computer-based communications systems.
46	Ability to diagnose, configure, and repair computer-based communications systems.
47	Ability to assemble various configurations of simple networks to assist with connectivity and communications needs.
48	Knowledge of digital transmission formats [e.g., Digital Signal 3 (DS3), Digital Signal 1 (DS1), Digital Signal 0 (DS0), Trunk-level 1 (T1)] and protocols [e.g., bipolar with eight-zero substitution (B8ZS), Voice Over Internet Protocol/Radio Over Internet Protocol (VoIP/RoIP)] to meet communications needs.

49	Ability to test digital transmission formats [e.g., Digital Signal 3 (DS3), Digital Signal 1 (DS1), Digital Signal 0 (DS0), Trunk-level 1 (T1)] and protocols [e.g., bipolar with eight-zero substitution (B8ZS), Voice Over Internet Protocol/Radio Over Internet Protocol (VoIP/RoIP)] to meet communications needs.
50	Knowledge of private line testing methods to ensure that line levels, loss, and frequency response are within specifications.
51	Knowledge of antenna system testing methods (e.g., wattmeter, return-loss-bridge, spectrum analyzer) to ensure that antenna system components (e.g., isolators, cavities, coaxial cable, antenna) are operating within design specifications.
52	Knowledge of conductance testing to determine the condition of a battery bank.
53	Ability to maintain trunking systems (e.g., Motorola, EF Johnson, General Electric (GE)/Harris) to ensure proper operation.
54	Ability to maintain simulcast systems to ensure proper operation.
55	Ability to read and comprehend technical manuals, schematics, drawings, manufacturer specifications, and troubleshooting guides used in the installation, configuration, and repair of communications equipment.
56	Ability to interpret and analyze test results, computer printouts, and trouble reports to determine possible equipment repair needs and/or required repair methods.
57	Ability to create/edit drawings, schematics, or other documentation that illustrate layouts of equipment (e.g., electrical distribution, site access maps, special site considerations and needs, interconnect drawings) to maintain accurate records.

Use the rating scales to rate questions 57-77

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Years of experience

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- 0 to 6 months experience performing this task

Level at which the task was performed

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- Worked independently on task
- Worked under direction on or assisted with task (e.g. managers, leads, instructors)
- Not performed

58	Training personnel regarding emerging technologies in order to meet client operational needs.
59	Encouraging and motivating personnel using team building activities, challenging assignments, and recognition in order to enhance productivity.
60	Delegating tasks to assigned personnel to ensure efficient management of workloads.
61	Providing feedback to supervisors regarding subordinate technician performance, training needs, disciplinary problems, and other job-related tasks.
62	Training assigned personnel in the operation and maintenance of electronic test equipment (e.g., radio frequency service monitors, computers, oscilloscopes, metering panels, audio test sets) to enable testing and troubleshooting of communications systems.
63	Leading and coordinating assigned personnel to ensure that services are completed on schedule.
64	Coordinating with agencies during scheduled and unscheduled maintenance to alleviate unnecessary service interruptions.
65	Prioritizing workload to ensure critical assignments are completed within deadlines.
66	Overseeing the maintenance of assigned equipment, service vehicles, and other equipment to ensure proper care, inventory and use, effectiveness and efficiency.
67	Overseeing the ordering and purchasing of parts necessary for efficient completion of daily functions within a communications shop.
68	Evaluating communications equipment and making recommendations to engineers and/or agencies regarding technologies that improve or enhance system operation.

69	Reviewing technical documentation (e.g., reports, correspondence, work packages) and drawings (e.g., equipment layouts, electrical distribution, site access maps, microwave baseband flow) to ensure accuracy.
70	Maintaining technical documentation (e.g., reports, correspondence, work packages) and drawings (e.g., equipment layouts, electrical distribution, site access maps, microwave baseband flow) to ensure shop records are complete and accurate.
71	Ensuring billing documents (e.g., timesheets, completed work orders, re-bill parts) submitted by technicians are processed and delivered in a timely fashion.
72	Creating, modifying, and programming parameters of communications equipment using compatible computers with communications systems.
73	Developing and preparing alignment procedures, test methods, and documentation to support proper system level setting and equipment operation.
74	Verifying that Federal Communications Commission (FCC) licenses are posted in accordance with FCC rules and regulations.
75	Reviewing alignment procedures, test methods, and documentation to support proper system level setting and equipment operation.
76	Observing conditions and documenting, reporting and/or resolving safety issues to ensure that communications systems operate reliably.
77	Managing and scheduling shop workload demands to ensure that work assignments and projects are completed in compliance with relevant policies and procedures.

Use the rating scales to rate questions 77-85

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- I have applied this knowledge or ability for less than 1 year.
- I do not possess this knowledge or ability.

78	Skill to consistently establish and maintain priorities in order to complete projects and assignments within timelines.
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79	Knowledge of effective leadership principles, practices and techniques to plan, oversee, and direct the work activities of personnel.
80	Ability to identify performance issues with assigned personnel and communicate effectively with the supervisor to implement measures that improve performance.
81	Ability to plan, organize, act as lead for, and direct the work activities of personnel to ensure quality, quantity, and timeliness standards are met.
82	Knowledge of departmental policies regarding personnel and the procedures used to lead personnel (e.g., breaks, leave, overtime).
83	Knowledge of various on the job training methods used to improve the performance of personnel.
84	Ability to facilitate meetings (e.g., area meetings, shop meetings) and discussions to ensure participants are active and remain focused on the intended topic.
85	Ability to provide detailed instructions for assigned personnel to ensure comprehension and proper completion of tasks.